

ORIGINAL AGREEMENT

FC-4943D, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS, CURBS, AND GUTTERS



Atlanta, Georgia

**Shirley Franklin
Mayor
City of Atlanta**

**Joseph Basista
Commissioner
Department of Public Works**

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Chief Procurement Officer
Department of Procurement**

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FC – 4943D, Annual Contract to Construct Sidewalks
Driveways, Curbs, and Gutters

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CITY/CONTRACTOR AGREEMENT

Contractor: SD & C, Inc.

Contract No.: FC-4943D, Annual Contract to Construct Sidewalks, Driveways, Curbs, and Gutters,

Address: 809 Park North Blvd.
Clarkston, Georgia 30021

(T) (404) 508-2481

(F) (404) 508-2483

Contact: Tony Adibe

This Agreement made and entered into this the 2nd day of October 2009, by and between the City of Atlanta, a municipal corporation of the State of Georgia, (hereinafter the "**City**") and SD & C, Inc. (hereinafter the "**Contractor**").

WITNESSETH:

WHEREAS, the City desires to engage Contractor to perform all Work required by the Contract Documents for **FC-4943D, Annual Contract to Construct Sidewalks, Driveways, Curbs, and Gutters**, (the "**Project**"); and

WHEREAS, Contractor has the necessary personnel and facilities to perform the Work; and

WHEREAS, the Department of Public Works has recommended Agreement award to Contractor; and

WHEREAS, by resolution adopted by the City Council of the City on September 21, 2009, and approved by the Mayor, attached hereto, marked "Exhibit C" and made a part hereof by reference, the Mayor was authorized to enter into an Agreement with said Contractor for said Work.

NOW, THEREFORE, for and in consideration of the mutual Agreement between the parties hereinafter, and for other good and valuable consideration, the parties hereto do agree as follows:

1.

The City hereby engages Contractor to perform, and Contractor agrees to perform for the City, all Work required by the Agreement Documents relative to the Project. Contractor shall commence the Work within ten (10) calendar days after receipt of Notice to Proceed and shall substantially complete within the time stated in the Bid Solicitation.

2.

- a) Contractor represents that it has, or will secure at its own expenses, all personnel required to perform all Work to be completed under this Agreement;
- b) All the Work required hereunder will be performed by Contractor or under the direct supervision of Contractor. All personnel engaged in the Work by Contractor shall be fully qualified and shall be authorized or permitted under applicable State and local law to perform such Work;
- c) None of the Work or services covered by this Agreement shall be transferred, assigned, or subcontracted by Contractor without the prior written consent of the City.

3.

The Agreement Documents relative to this Agreement consist of:

- This City-Contractor Agreement (Part I);
- General Conditions (Part II);
- Scope of Service (Part III);
- Equal Business Opportunity Program (Appendix A):
 - Policy Statement;
 - Equal Business Opportunity (EBO) M/FBE Availability;
 - Equal Business Opportunity Program Reminders;
 - Covenant of Non-discrimination (EBO-1);
 - Subcontractor Contact Form (EBO-2);
 - Equal Business Opportunity Subcontractor Project Plan (EBO-3)
 - First Source Jobs Information (Form-4);
 - First Source Jobs Agreement (Form-5);
- Insurance/Bonding Requirements (Appendix B);
- Contractor's Disclosure Form and Questionnaire (Appendix C);
- Georgia Security and Immigration Compliance Act of 2006 (Appendix D);
- Bid Schedule and Bid Data (Exhibit A);
- Required Submittals (Exhibit B);
- Legislation (Exhibit C); and
- Addenda (Exhibit D).

These collectively form the Agreement, and are all as fully a part of the Agreement as if attached to this Agreement or repeated herein.

4.

All reports, information, data, or other documents, given to, prepared by or assembled by Contractor under this Agreement shall be kept confidential and shall not be made available to any individual or organization by Contractor without the prior written approval of the City.

5.

The City may, from time to time, request changes in the Scope of Work to be performed by Contractor hereunder. No such change, including any increase or decrease in the amount of the compensation, which may be mutually agreed upon by and between the City and Contractor, shall be effective and enforceable until and unless a written amendment or change order to this Agreement has been executed by both parties and attached hereto.

6.

Contractor warrants that it has not employed or retained any company or person, other than a bona fide employee working for Contractor to solicit or secure this Agreement; and that it has not paid or agreed to pay any person, company, association, corporation, individual or firm, other than a bona fide employee working for Contractor any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or making of this Agreement. For the breach or violation of the above warranty and upon a finding after notice and hearing, the City shall have the right to terminate this Agreement without liability and, at its discretion, to deduct from the Agreement price or otherwise recover, the full amount of such fee, commission, percentage, gift or consideration.

7.

During the performance of this Agreement, Contractor agrees to comply with all provisions of Part 2, Chapter 2, Article X, Division 11, including Section 2-1441 of the Code of Ordinances ("**Ordinance**"), City of Atlanta, and to warrant the following:

- a) The Contractor shall not discriminate against any employee, or applicant for employment because of race, color, creed, religion, sex, domestic relationship status, parental status, familial status, sexual orientation, national origin, gender identity, age, disability, or political affiliation. As used here, the words "shall not discriminate" shall mean and include, without limitation, the following:

Recruited whether by advertising or other means; compensated, whether in the form of rates of pay, or other forms of compensation; selected for training, including apprenticeship; promoted; upgraded; demoted; downgraded; transferred; laid off; and terminated.

The Contractor agrees to and shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by the City setting forth the provisions of the non-discrimination clause.

- b) The Contractor shall, in all solicitation or advertisement for employees, placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for the employment without regard to race, color, creed, religion, sex, domestic relationship status, parental status, familial status, sexual orientation, national origin, gender identity, age, disability, or political affiliation.
- c) The Contractor shall send to each labor union or representative of workers with which the Contractor has a collective bargaining agreement or other contract or understanding a notice advising the labor union or worker's representative of the Contractor commitments under the Equal Employment Opportunity Program of the City and under the Code of Ordinances and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The Contractor shall register all workers in the skilled trades, who are below the journeyman level, with the U.S. Bureau of Apprenticeship and Training.
- d) The Contractor shall furnish all information and reports required by the Contract Compliance Officer pursuant to the Code of Ordinances, and shall permit access to the books, records and accounts of the Contractor during the normal business hours by the contracting agency and the Contract Compliance Officer for the purpose of investigation so as to ascertain compliance with the program.
- e) The Contractor shall take such reasonable action with respect to any Subcontractor as the City may direct, as a means of enforcing the provisions of paragraphs (a) through (h) herein, including penalties and sanctions for non-compliance; provided, however, that in the event the Contractor becomes involved in or is threatened with litigation as may be necessary to protect the interest of the City and to effectuate the Equal Employment Opportunity Program of the City; and, in the case of contracts receiving federal assistance, the Contractor or the City may request the United States to enter into such litigation to protect the interest of the United States.
- f) The Contractor and its Subcontractors, if any, shall file compliance reports at reasonable times and intervals with the City in the form and to the extent prescribed by the Contract Compliance Officer of the City. Compliance reports filed at such time directed shall contain information as to employment practices, policies, programs and statistics of the Contractor and its Subcontractors.
- g) The Contractor shall include the provisions of paragraphs (a) through (h) of this Equal Employment Opportunity Clause in every subcontract or purchase order which materially affects the Project so that such provisions will be binding upon each such Subcontractor or vendor.

- h) A finding, as hereinafter provided, that a refusal by the Contractor or subcontractor to comply with any portion of this program, as herein provided and described, may subject the offending party to any or all of the following penalties:
- (1) Withholding from the Contractor in violation all future payments under the involved public contract until it is determined that the Contractor or Subcontractor is in compliance with the provisions of the Agreement.
 - (2) Refusal of all future bids for any public contract with the City or any of its departments or divisions until such time as the Contractor or Subcontractor demonstrates that there has been established and there shall be carried out all of the provisions of the program as provided in this article.
 - (3) Cancellation of the public Agreement.
 - (4) In a case in which there is substantial or material violation, or the threat of substantial or material violation, of the compliance procedure therein set forth or as may be provided for by this Agreement, an appropriate proceeding may be brought to enforce these provisions, including the enjoining of Contractor, Subcontractor, or other organizations, individuals or groups who prevent or seek to prevent directly or indirectly compliance with the policy as herein provided.

8.

During the performance of this Agreement, Contractor agrees to comply with Part 2, Chapter 2, Article X, Division 12, including Sections 2-1441 through 2-1460 of the Code of Ordinances of the City of Atlanta, the Equal Business Opportunity (“EBO”) Program and to warrant the following:

“The Contractor agrees to engage non-discriminatory practices in all efforts to meet the M/FBE availability sited in this Agreement by making available opportunities for Minority Business Enterprises (“**MBE**”), African American Business Enterprises (“**AABE**”), Hispanic Business Enterprises (“**HBE**”), Asian Business Enterprises (“**ABE**”) and Native American Business Enterprises (“**NABE**”) and Female Business Enterprises (“**FBE**”) for utilization in the work set forth within this Agreement and shall take the following action as part of their good faith efforts:

1. Notification to M/FBEs that the Contractor has subcontracting opportunities available and maintenance of records of the M/FBE responses.

2. Maintenance by the Contractor of a file of the names and addresses of each Subcontractor contracted and action taken with respect to each such contract.
3. Dissemination of the Contractor EBO policy externally by informing and discussing it with all management and technical assistance sources; by advertising in news media and by notifying and discussing it with Subcontractor and Supplier.
4. Specific and continuing written and oral recruitment efforts directed at M/FBE Contractor organizations, M/FBE assistance organizations.
5. Sub-divisions for the contract economically feasible segments as practical to allow the greatest opportunity for participation by M/FBEs.
6. Increasing where possible the number of aggregate purchase items so as to eliminate the requirement of front-end purchases material for as many M/FBE Subcontractors as possible.
7. Adoption of the EBO Plan submitted in its response to the Invitation for Bids or Requests for Proposals obligations under this Agreement, as approved by the Office of Contract Compliance.
8. Submission of monthly reports on the forms and to the extent required by the Director of the Office of Contract Compliance, to be due on or before the 5th day of each month following the award of the Work set forth in this Agreement.
9. The Contractor further agrees that breach of the EBO provisions contained herein shall subject them to any or all of the following penalties:
 - a). Withholding of ten percent (10%) of all future payments under the involved eligible project until it is determined that the Contractor is in compliance.
 - b). Withholding of all future payments under the involved Project until it is determined that the Contractor is in compliance.
 - c). Refusal of all future bids or offers for any eligible project with the City of Atlanta or any of its department or divisions until such time as the Contractor demonstrates that there has been established and there shall be carried out all of the EBO provisions contained herein.
 - d). Cancellation of the eligible project.

9.

The City agrees to pay Contractor for the Work performed pursuant to this Agreement on an as needed basis per the unit price as stated in the Bid Form hereinafter attached as Exhibit A, for amount not to exceed One Million Five Hundred Nine Thousand Eight Hundred Ten Dollars and Sixty Two Cents (**\$1,509,810.62**).

10.

Contractor shall commence the Work within ten (10) calendar days after receipt of Notice to Proceed. The term of the Agreement is for two (2) years with two (2) one (1) year renewal options.

11.

Contractor, by the execution of this Agreement, acknowledges that it is possessed of that degree of care, learning, skill, and ability which is ordinarily possessed by other members of its profession and further contracts that in the performance of the duties herein set forth, it will exercise such degree of care, learning, skill and ability as is ordinarily employed by Contractor under similar conditions and like circumstances and shall perform such duties without neglect.

12.

Contractor agrees to obtain and maintain during the entire term of this Agreement all of the insurance called for in the Agreement Documents, with the City as an additional insured in each policy of public liability and property damage insurance, and shall furnish to the City a certificate of insurance showing required coverage. The cancellation of any policy of insurance required by this Agreement shall meet the requirements of notice under the laws of the State of Georgia as presently set forth in the Georgia Code.

13.

In addition to its agreement to obtain and maintain the insurance as set forth herein above, the Contractor agrees that to the fullest extent permitted by law, the Contractor shall at his sole cost and expense indemnify, defend, satisfy all judgments and hold harmless the City, the Designer, the Engineer, and their agents and employees from and against all claims, damages, actions, judgments, costs, penalties, liabilities, losses and expenses, including, but not limited to, attorneys' fees arising out of or resulting from the performance of the Work, provided that any such claim, damage, action, judgment, cost, penalty, liability, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom; and (2) is caused in whole or in part by any act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would

otherwise exist as to any party or person described in Appendix B, Insurance and Bonding Requirements, Paragraph F.

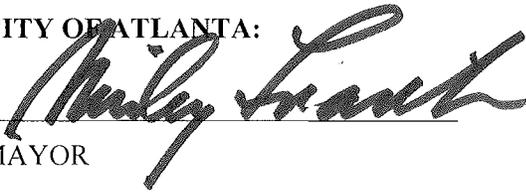
In any and all claims against the City, the Engineer or any of their agents or employees by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation in Appendix B, Insurance and Bonding Requirements, Paragraph F, shall not be limited in any way, including, but not limited by, the limits of the liability insurance required under this Agreement and the Agreement Documents, nor limited by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workers' or workmens' compensation acts, disability benefit acts or other employee benefit acts.

14.

The Contractor shall obtain, at its own expense, all permits and licenses required by all municipal, state and federal authorities now in force, or which may hereafter be in force, pertaining to the performance of the work called for by this Agreement. The Agreement Documents, including this Agreement, constitute the entire and integrated Agreement between the City and the Contractor and may be amended only by written instrument approved by both parties. The parties agree that this Agreement shall not become binding on the City, and the City shall incur no liability upon the same, until this Agreement has been executed by the Mayor, officially sealed by the Municipal Clerk and delivered to Contractor.

IN WITNESS WHEREOF, the City and Contractor have executed this Original Agreement by their duly authorized officers, as of the date first above written.

CITY OF ATLANTA:

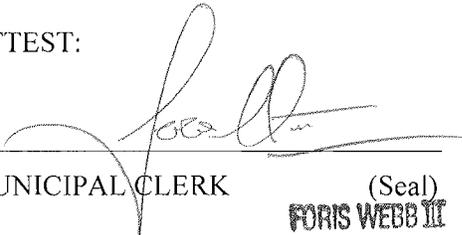

MAYOR

CONTRACTOR:

SD & C, INC.

PRESIDENT/VICE PRESIDENT

ATTEST:


MUNICIPAL CLERK (Seal)
FORIS WEBB III
DEPUTY MUNICIPAL CLERK

ATTEST:


SECRETARY/ASST. SECRETARY
(affix corporate seal)

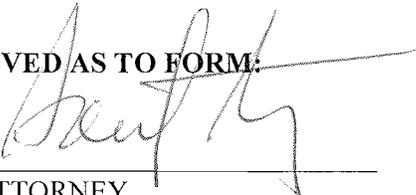
RECOMMENDED:


COMMISSIONER, DEPARTMENT OF
PUBLIC WORKS

APPROVED:


CHIEF PROCUREMENT OFFICER

APPROVED AS TO FORM:


CITY ATTORNEY

PART II

GENERAL CONDITIONS

FC-4943, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS, CURBS AND GUTTERS

PART II

GENERAL CONDITIONS

GC-1 AGREEMENT AND AGREEMENT DOCUMENTS

The General Conditions, Special Conditions, Technical Provisions, Drawings, Changes, and all other parts of the Agreement Documents are complementary, and a requirement occurring in one shall be as binding as though occurring in all. The parts of the Agreement are complementary and describe and provide for completion of the Work. The table of contents, titles, headings, running headlines and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the Agreement Documents and in no way affect, and shall not be considered in the interpretation of the provisions to which they refer.

The physical conditions indicated in the Agreement Documents are the result of site investigations by borings and testing at the locations shown.

Execution of the Agreement by the Contractor is a representation that the Contractor has visited the Site, become familiar with the local conditions under which the Work is to be performed, and has correlated personal observations with the requirements of the Agreement Documents.

The intent of the Agreement Documents is to include all items necessary for the proper execution and completion of the Work. Work not specifically covered in the Agreement Documents shall be required if it is consistent therewith and reasonably inferable therefrom as being necessary to produce the intended results. Words and abbreviations which have well-known technical or trade meanings are used in the Agreement Documents in accordance with such recognized meanings.

If and to the extent of any inconsistency, ambiguity, conflict, discrepancy or error in the Agreement Documents (a "discrepancy"), Contractor shall immediately notify the Owner in writing and seek clarification from the Owner (within 24 hours of discovery). In the event that the Owner fails to clarify such discrepancy within a reasonable time under the circumstances, Contractor shall proceed with the Work and give precedence to the Agreement Documents in the following order of priority:

- (1) Written modifications (including without limitation Change Orders and Change Directives) issued after execution of the Agreement;

- (2) Legislation;
- (3) Addenda issued in writing prior to the execution of the Agreement;
- (4) the Agreement;
- (5) Addendum, if any, to the General Conditions and Special Conditions;
- (6) Special Conditions;
- (7) the General Conditions;
- (8) the Specifications; and
- (9) the Plans and Drawings.

If the application of the foregoing procedure fails to resolve the discrepancy, then unless Contractor sought and obtained the clarification of the discrepancy prior to entering this Agreement, then the discrepancy shall be resolved by construing the provision in favor of the Owner and in such a manner as will further the Owner's best interests and which may impose the more expensive or greater obligation upon Contractor. When Contractor fails to provide this notice and seek clarification, Contractor assumes full responsibility to correct or adjust work performed pursuant to Agreement Documents known, or which should have been known, to contain such a discrepancy.

Without limiting the duty of the Contractor regarding review of the Agreement Documents, in the event of a conflict, error or discrepancy within the Agreement Documents, the Documents shall be given precedence in the following order:

- Legislation
- City-Contractor Agreement;
- Performance Bond;
- Payment Bond;
- Bid Guarantee;
- Affidavit;
- Bid Form;
- General Conditions;
- Special Conditions;
- Appendix A - Requirements of the Office of Contract Compliance;
- Appendix B – Insurance Requirements;
- Technical Specifications for the Project;

Part II, General Conditions
FC-4943, Annual Contract to Construct
Sidewalks, Driveways, Curbs and Gutters

Detail Drawings shall govern over general drawings. Figures or dimensions written on drawings shall govern over scaled distances. The details are not to scale.

In case of discrepancy between small-scale detail and large-scale detail, the large-scale detail shall govern. On any of the Plans where a portion of the Work is drawn out and the remainder is shown in outline, the parts drawn out shall apply also to all other like portions of the Work.

Where the word "similar" occurs on the Plans, it shall have a general meaning and not be interpreted as being identical, and all details shall be worked out in relation to their location and their connection with other parts of the Work.

The dimensions and descriptions given on the Plans for adjacent work by others are based on the design Drawings. The Contractor shall verify all as-built conditions and information.

GC-2 ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

During the progress of the Work, the Engineer may issue additional instructions and Drawings supplemental to those listed in the Special Conditions, showing additional details required for the performance of the Work, and may issue revised Drawings pursuant to Change Orders, or for correction of errors in the Plans. The additional instructions and Drawings thus supplied will become a part of the Agreement Documents. Contractor shall carry out the Work in accordance with the additional instructions and Drawings.

GC-3 DEFINITIONS

The following terms as used in this Agreement are respectively defined, as follows:

Abandonment - Shall mean the permanent termination of the use of, or of service from in or on a facility.

Approved, Directed, Ordered, Or Their Derivatives - Approved, as directed, or ordered by the Engineer or the City, unless otherwise clearly indicated.

Acceptance - The formal written acceptance by the City of the completed Work.

Addenda - Revisions to the Proposal Documents issued by the City prior to opening of the Bid.

Agreement - See "City-Contractor Agreement."

Agreement Documents - The Agreement Documents include the following:

City-Contractor Agreement;
Performance Bond;
Payment Bond;
Bid Guarantee;
Affidavits;
Appendix A - Requirements of the Office of Contract Compliance;
Appendix B – Insurance Requirements;
Appendix D – Georgia Security and Immigration Compliance Act of 2006
Bid;
Bid Schedule;
Bid Data;
General Conditions;
Special Conditions;
Technical Specifications for the Project; and
Plans for the Project.
Any Addenda thereto or Modification thereof (as defined in the General Conditions).

Agreement Price - The price or prices for the Work or items of Work set forth in the Bid.

Agreement Time - The number of calendar days stated in the Agreement Documents for the Substantial Completion of the Work or Final Completion of the Work, or the achievement of a specific interim milestone, as the context may require.

Application for Payment - The form accepted by the City which is to be used by Contractor in requesting progress payments or final payment and which is to include such supporting documentation as is required in the Agreement Documents.

Bid - The offer or bid of the Bidder submitted in the prescribed manner on the prescribed form setting forth the prices for the Work to be performed together with supplemental information as required by the Agreement Documents.

Bidder - Any person, firm, partnership, corporation or any combination thereof submitting a Bid for the Work.

Bonds - Bid, Performance Bonds, Payment Bonds, and other instruments of security furnished by the Bidder or Contractor and his surety in accordance with the Agreement Documents.

Change - Any change in the Work authorized by the Engineer.

Part II, General Conditions
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Change Order - A written order to the Contractor, prepared by the Engineer and issued by the City for changes in the Work within the general scope of the Agreement Documents, adjustment of Agreement Prices, extension of Agreement Time, or reservation of determination of a time extension.

City - Shall mean the City of Atlanta, Georgia, and shall include all agencies, establishments or officials of the government of the City.

City-Contractor Agreement - The written agreement for the performance of and payment for the Work, which includes by reference and is a part of the Agreement Documents, executed on behalf of the City and the Contractor.

City's Contractor - Shall mean the legally authorized representative of the City, a private contractor, or other concerned agency performing Work under a direct Agreement with the City.

Construction - Shall mean the actual site preparation, building and all related Work, including facility relocation and adjustments.

Construction Easement/Temporary Easement - Any space or area dedicated to the City or other entity for the purpose of utilities or location of utilities for a specific period of time.

Construction Equipment - Equipment used in the performance of the Work but not incorporated therein.

Contractor - Any firm, partnership, corporation, joint venture, LLC or any combination thereof who enters into a contractual Agreement with the City. This excludes Subcontractors/Sub-consultants. Contractor shall include the union of both the architectural firm and the construction company.

Day - A calendar day of twenty-four (24) hours lasting from midnight one (1) day to midnight the next day.

Department - Shall mean the Department of Public Works

Designer - City of Atlanta

Drawings - That part of the Agreement Documents which show the outlines, characteristics and Scope of the Work to be performed. The term is used interchangeably with the word "Plans" and includes Standard Details and Drawings.

Engineer - City of Atlanta or duly authorized representative.

Part II, General Conditions
FC-4943, Annual Contract to Construct
Sidewalks, Driveways, Curbs and Gutters

Equipment - Equipment incorporated or to be incorporated in the Work.

Force Account - A method of payment, other than lump sum or unit price, for Work ordered by Change Order and paid for in accordance with force account procedures indicated in "Force Account" Section of the General Conditions.

General Conditions - Requirements pertaining to this Agreement which will be required of the successful Contractors.

General Requirements - Conditions pertaining to this Agreement which will be required of the successful Contractors.

Inspector - The authorized representative of the Engineer assigned to make detailed inspection of any or all portions of the Work or Materials thereof.

Materials - Materials incorporated or to be incorporated in the Work unless otherwise clearly indicated.

Notice of Award - The written notice of the acceptance of the Proposal from the City to a Bidder.

Notice to Proceed ("NTP") - Written communication issued by the City to the Contractor authorizing it to proceed with the Work and establishing the date of commencement of the Agreement time and on which the Contractor shall start to perform his obligations in accordance with the Agreement Documents.

Owner - Same as "City" above.

Permanent Easement - Any space or area to the City or other entity for the purpose of constructing and/or maintain existing or future utilities.

Plans - That portion of the Agreement Documents describing in drawings, the shape, dimensions and other similar requirements governing the completion of the various portions of the Work, prepared by the Designers and including revisions thereto. The term is used interchangeably with the word "Drawings."

Project - The Project is identified in the City-Contractor Agreement, and is the total construction of which the Work performed under the Agreement Documents may be the whole or a part.

Public Space/Public Right-of-Way - Shall mean the area between private property lines under the jurisdiction of the City, county, state or federal government, including, but not limited to, an alley, roadway, median, sidewalk, public way, or any combination thereof.

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Replacement Facility - Shall mean that facility, meeting the Department's current standards, which will be constructed or provided, as a consequence of the rearrangement of an existing facility or portion thereof.

Resident Engineer - The City's Engineer who is assigned to the Project Site or any part thereof.

Responsive Bid - A Bid which is accurate and complete, with respect to Bid Schedules and information submitted relative to the technical qualifications, financial responsibility and is able to comply with Equal Opportunity and other requirements of the Agreement Documents.

Scope of Work - See "Work."

Sidewalk Area - Shall mean that portion of a street between the curb lines and the adjacent property lines intended primarily for the use of pedestrians whether paved or in use.

Site of the Work - The areas required for the performance of the Work.

Special Conditions - General Requirements which are unique to a particular Agreement and which supplement, modify or delete items covered in General Conditions.

Specifications - That portion of the Agreement Documents describing in words the technical requirements governing the completion of the various portions of the Work.

Standards - Shall mean those current Standards of Engineering analysis and design, including installation and Material Specifications, which the City utilizes in the design and construction of its own projects.

State - The State of Georgia.

Subcontractor - An individual, firm, corporation or any combination thereof having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at the site. Subcontractor shall not mean Supplier.

Substantial Completion - The date certified by the Engineer when all or a part of the Work, identified in the Engineer's certification, is sufficiently completed in accordance with the requirements of the Agreement Documents so that the identified portion of the Work can be utilized for the purposes for which it is intended.

Supplier - Any individual, firm, or corporation who supplies material or equipment for the Work (including that fabricated to a special design) but who does not perform labor at the Site.

Temporary Facility - Shall mean a facility constructed for whatever purpose, and not intended to be permanent.

Utility - Shall mean and include all public, private, or cooperatively owned lines, facilities and systems for producing, transmitting or distributing communications, power, electricity, heat, gas, oil, crude products, water, steam, waste, storm water, and other similar commodities, such as public owned fire and police signal systems, which directly or indirectly serve the public or any part thereof.

Work - All the services specified, indicated, shown, or contemplated by the Agreement Documents, and furnishing by the Contractor of all Materials, Equipment, labor, methods, processes, construction and manufacturing materials and equipment, tools, plants, supplies, power, water, transportation and other things necessary to complete such services in accordance with the Agreement Documents.

Working Days - Monday, Tuesday, Wednesday, Thursday, and Friday.

Written Notice - A written statement transmitted from one party to an authorized representative of another party in accordance with Section GC-16.

GC-4 APPLICABLE CODES, SPECIFICATIONS, AND STANDARDS

GC-4.1 General:

All codes, Specifications, and standards referred to in the Agreement Documents shall mean, and are intended to be, the latest editions, amendment, and revisions of such reference standard in effect as of the date of the Invitation to Bid for this Agreement.

GC-4.2 Standards:

Reference to a technical society, institution, association, or governmental authority, or pronoun in place of them, is made in the Agreement Documents in accordance with the following abbreviations:

ANSI	American National Standards Institute;
ASTM	American Society for Testing and Materials;
AWS	American Welding Society State;
AASHTO	American Association of State Highway and Transportation Officials;
ACI	American Concrete Institute;

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AFBMA	Anti-Friction Bearing Manufacturer's Association;
AI	Asphalt Institute;
AISI	American Iron and Steel Institute;
AISC	American Institute of Steel Construction;
AMCA	Air Moving and Conditioning Association;
API	American Petroleum Institute;
ASME	American Society of Mechanical Engineers;
ASTM	American Society for Testing and Materials;
AWG	American (Brown and Sharpe) Wire Gauge;
AWS	American Welding Society;
AWWA	American Water Works Association;
CRSI	Concrete Reinforcing Steel Institute;
DOT	Georgia Department of Transportation ("GDOT");
EPA	Environmental Protection Agency (Federal);
EPD	Environmental Protection Division (Georgia State);
MARTA	Metropolitan Atlanta Rapid Transit Authority;
NACE	National Association of Civil Engineers;
NFPA	National Fire Protection Association;
NSF	National Sanitary Foundation;
OSHA	Occupational Safety and Health Administration; and
UL	Underwriter's Laboratories Incorporated.

GC-5 ADEQUACY OF DESIGN

Before placing its Bid to the City, and continuously after the execution of the Agreement, the Contractor shall carefully study and compare the Agreement Documents and shall at once report to the Engineer, any error, ambiguity, inconsistency or omission that may be discovered, including any requirement which may be contrary to any law, ordinance, rule, regulation, or order of any public authority bearing on the performance of the Work. By submitting its Bid for the Agreement and the Work under it, the Contractor agrees that the Agreement Documents, along with any supplementary written instructions issued by or through the Engineer that have become a part of the Agreement Documents, appear accurate, consistent, and complete insofar as can be reasonably determined. If the Contractor has reported in writing any error, inconsistency or omission, and has promptly stopped the affected Work until instructed, and has otherwise followed the instructions of the Engineer, the Contractor shall not be liable to the City, for any damage resulting from any such errors, inconsistencies or omissions in the Agreement Documents. The Contractor shall perform no portion of the Work at any time without Agreement Documents or, where required, approved shop Drawings, product data, or samples for such portion of the Work.

No claims shall be made by the Contractor based on claims of defects, errors, omissions, ambiguities or inconsistencies in the Agreement Documents which were

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reasonably discoverable by a review of the Agreement Documents and correlation thereof with the actual conditions at the Project site. No observation of the Engineer or City, and no inspections, tests or approval shall relieve the Contractor from his obligation to perform the Work in strict conformity with the Agreement Documents.

GC-6 CITY OF ATLANTA ORDINANCES

The Contractor will be bound by the provisions of all City of Atlanta Ordinances. It is the Contractor's responsibility to be aware of and adhere to all existing or future ordinances which are in effect during the performance of the Agreement.

GC-7 PERMITS AND REGULATIONS

All applicable state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Agreement throughout, to the extent that such requirements do not conflict with federal laws or regulations. All Work performed within the right of way of the GDOT shall be in accordance with GDOT regulations, policies, and procedures.

Contractor shall be solely responsible for securing all permits for the Work.

The Contractor must still apply for and secure said permits and schedule inspections. The Contractor shall give all notices and comply with all permits, laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn and specified.

The Contractor agrees to protect and indemnify and hold harmless the City, its offices, agents and employees, the Designer and the Engineer against any claim or liability arising from or based on the violation of any law, ordinance, regulation, order, or decree affecting the conduct of the Work whether by himself or by his agents or employees.

If any permit, license or certificate expires or is revoked, terminated or suspended as a result of any action on the part of the Contractor, it shall neither be entitled to any additional compensation, nor to an extension of Agreement Time.

GC-8 TAXES

The Contractor shall pay all sales, retail, occupational, service, excise, old age benefit and unemployment compensation taxes, consumer, use and other similar taxes as well as any other taxes or duties on the Material, Equipment and labor for the Work or portions thereof provided by the Contractor which are legally enacted by any municipal,

county, federal or state authority or department or agency thereof at the time Bids are received, whether or not yet effective.

All records maintained by the Contractor pertaining to such taxes and levies and payment thereof shall be made available to the City at reasonable times for inspection, audit and copying.

GC-9 ARREARS TO OFFSET DEBT AGAINST CITY

No money shall be paid by the City upon any claim, debt, demand or account whatsoever, to any person, firm, or corporation who is in arrears to the City for taxes; and the City shall be entitled to counterclaim and offset any such debt, claim, demand or account in the amount of taxes so in arrears, and no assignment or transfer of such debt, claim, demand, or account after the said taxes are due, shall affect the right of the City to so offset the said taxes against the same.

GC-10 LIENS

The Contractor will furnish the City with evidence, satisfactory to the City that all persons who have done Work or furnished materials in performance of this Agreement have been fully paid, before he shall demand final payment due or unpaid under this Agreement. In case such evidence is not furnished an amount necessary to meet the lawful claims of the persons, aforesaid may be retained from any monies due or that may become due the said Contractor under this Agreement until the lawful claims aforesaid shall be fully discharged or satisfactorily secured, and it is understood and agreed that the City assumes no obligation nor in any way undertakes to pay such lawful claim out of any funds due or that may become due the said Contractor, out of its own funds.

GC-11 ASSIGNMENTS

The Contractor shall retain personal control and shall give personal attention to the fulfillment of this Agreement. The Contractor shall not assign the whole or any part of this Agreement or any monies due or to become due hereunder without written consent of the City. In case the Contractor assigns all or any part of any monies due or to become due under this Agreement, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms, and corporations for services rendered or materials supplied for the performance of the Work called for in this Agreement.

GC-12 PATENTS AND ROYALTIES

The Contractor shall indemnify and hold harmless the City and its officers, agents, servants, and employees from liability or all claims of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Agreement, including its use by the City, unless otherwise specifically stipulated in the Agreement Documents.

If the Contractor uses any design, device or Materials covered by letters, trademarks, patent or copyright, he shall provide for such use by suitable agreement between the City and the holder of such design, device or Material. It is mutually agreed and understood that, without exception, the Agreement Price shall include all royalties or costs arising from the use of such design, device, or Materials in any way involved in the Work. The Contractor or his sureties or both shall indemnify and hold harmless the City, its officers and employees from any and all claims for infringement by reason of the use of such patented or copyrighted design, device or Materials or any trademark or copyright in connection with Work agreed to be performed under this Agreement and the Contractor shall indemnify the City for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution of the Work or after completion of the Work.

GC-13 OUT-OF-STATE CONTRACTORS

If the lowest responsive Bidder is a foreign corporation, partnership, or sole proprietorship, the Bidder hereby irrevocably appoints the Secretary of State of Georgia as its agent for services of all legal process for the purpose of this Agreement only, and shall obtain all required certificates and licenses required by the Georgia Law.

GC-14 CONTRACTOR'S OBLIGATIONS

A. Supervision and Construction Procedures

1. The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures; and shall coordinate all portions of the Work under the Agreement, subject to overall coordination of the Engineer. All Work under the Agreement shall be performed in a skillful and workmanlike manner.
2. The Contractor shall be responsible to the City for the acts and omissions of the Contractor's employees, Subcontractors and their agents and

employees, and any other persons performing any of the Work under a contract with the Contractor.

3. The Contractor shall not be relieved from the Contractor's obligations to perform the Work in accordance with the Agreement Documents by the activities or duties of the Engineer in the administration of the Agreement, or by inspections, tests or approvals required or performed under Paragraphs GC-30 or GC-36 by persons other than the Contractor.

B. Labor and Materials

1. Unless otherwise provided in the Agreement Documents, the Contractor shall provide and pay for all labor, Materials, Equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent, and whether or not incorporated or to be incorporated in the Work.
2. The Contractor shall, at all times, enforce strict discipline and good order among the Contractor's employees and Subcontractors and shall not employ on the Work any Subcontractor, unfit person or anyone not skilled in the task assigned them. The City may, by Written Notice, require the Contractor to remove from the Work any Subcontractor or employee the City deems incompetent, careless, or otherwise objectionable.
3. All Work at the site shall be performed during regular working hours, except upon the City's written consent given after prior Written Notice.

C. Contractor's Construction Schedule

Contractor shall comply with all scheduling requirements set forth in the Bidding Document.

D. Conditions Affecting the Work

The Contractor shall be responsible for having taken all steps necessary to ascertain the nature and location of the Work and the general and local conditions which can affect the Work or the cost thereof. Failure by the Contractor to fully acquaint himself with conditions which may affect the Work, including but not limited to conditions relating to transportation, handling, storage of Materials, availability of labor, water, roads, weather, topographic and subsurface conditions, other separate contracts to be entered into by the City relating to this Project which may effect the Work of the Contractor, applicable provisions of law; and the character and availability of equipment and facilities needed prior to and during the prosecution of the Work, shall not relieve the Contractor of his responsibilities under the Agreement Documents and shall not constitute a basis for an equitable adjustment under any circumstances. The

City assumes no responsibility for any understanding or representations concerning conditions made by any of his officers, agents, or employees prior to the execution of the Agreement, unless such understanding or representations are expressly stated in the Agreement Documents.

GC-15 RIGHT OF ENTRY

The City reserves the right to enter the Site of the Work herein contracted for, by such agent or agents as they may elect, for the purpose of inspecting the Work, or for the purpose of installing such collateral Work as the City may desire. The Contractor shall cooperate and coordinate with other contractors prosecuting other phases of the construction. Furthermore, if deemed necessary by the Engineer, the Contractor will incorporate critical access issues of other City contractors directly into the daily Work schedule, such that no phase of the Project(s) are delayed or impacted.

GC-16 NOTICES

Except as otherwise expressly provided in the Specifications, any notice, order, instruction, claim, or other written communication required or permitted to be given under this Agreement shall be deemed to have been delivered or received:

1. Upon personal delivery to the Contractor or his authorized representative, or to the City, as the case may be, which delivery may be accomplished by in person hand delivery, or via bona fide overnight express service. Service by facsimile transmission does not constitute notice in accordance with this Agreement.
2. Five (5) days after depositing in the United States mail a letter which is either certified or registered, addressed to the Contractor, the City at his official address, for use under this Agreement, as the case may be.

For purposes hereof, the address of Contractor shall be the business address given in his Bid, and the address of the City shall be as designated in the notice to begin the Work. Either party may change his address at any time by Written Notice to the other of the change.

GC-17 SAFETY PRECAUTIONS AND PROGRAMS

The City, the Engineer, or their agents, employees or representatives are not responsible for the means, methods, techniques, sequences or procedures utilized by the Contractor, or for the safety precautions and programs in connection with the Work.

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work.

GC-18 SAFETY OF PERSONS AND PROPERTY

- A. The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:
 - 1. All employees on the Work and all other persons who may be affected thereby;
 - 2. All the Work and all Materials and Equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of the Contractor's Subcontractors;
 - 3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction; and
 - 4. The Work of the City or other separate contractors.
- B. The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss.
- C. The Contractor shall erect and maintain, as required by existing conditions and the progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities.
- D. When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.
- E. The Contractor shall promptly remedy all damage or loss to any property referred to in Clauses GC-18 A.2 and 18 A.3 caused in whole or in part by the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and for which the Contractor is responsible under Clauses GC-18 A.2 and 18 A.3, except damage or loss

attributable to the acts or omissions of the City, the Engineer or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Insurance Section of the General Conditions.

- F. The Contractor shall employ a project safety coordinator who shall devote full time toward accident prevention during construction. The qualifications of the project safety coordinator shall be submitted to the City for approval prior to assignment to the Work and shall include:
1. Five (5) years of construction loss control/safety experience in heavy construction;
 2. Registered Professional Engineer in the State of Georgia;
 3. Certified safety professional;

Also advisable:

1. Professional Member of the American Society of Safety Engineers (ASSE);
2. Associate in Risk Management (ARM); and
3. Associate in Loss Control Management (ALCM).

- G. The Contractor shall not load or permit any part of the Work to be loaded so as to endanger its safety.

GC-18.1 Emergencies

In any emergency affecting the safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency Work, shall be determined as provided in Changes Orders in the General Conditions.

GC-18.2 Miscellaneous

- A. The Contractor acknowledges that he is fully aware of the contents and requirements of Official Code of Georgia Annotated § 25-9-1 through § 25-9-12, Blasting or Excavating Near Underground Gas Pipes and Facilities, any amendments thereto and rules and regulations issued pursuant thereto, and the Contractor shall fully comply therewith. The Contractor agrees and acknowledges that any failure on his part to adhere to said laws, rules and regulations shall not only be a violation of law but shall also be a breach of

Agreement and specific violation of the provisions of this Section GC-17 which pertains to safety precautions.

- B. The Contractor acknowledges that he is fully aware of the contents and requirements of Official Code of Georgia Annotated § 46-3-30 through § 46-3-39, Safeguards Against Contact with High Voltage Lines, any amendments thereto and rules and regulations issued pursuant thereto, and the Contractor shall fully comply therewith. The Contractor also confirms that representatives of the Contractor have visited the site of the Work and have taken into consideration the location of all electric power lines on and adjacent to all areas onto which the Agreement Documents require or permit the Contractor to Work, to store materials or to stage operations, and that the Contractor has obtained from the owner or owners of the aforesaid electric power lines advice in writing as to the amount of voltage carried by the aforesaid lines. The Contractor agrees that any failure on its part to adhere to said laws, rules and regulations shall not only be a violation of the law but shall also be a breach of Agreement and specific violation of the provisions under Section GC-17 above, which pertains to safety precautions.
- C. The Contractor acknowledges and agrees that he is the person responsible under the law and that he is the person employing or directing others to perform labor within the meaning of Official Code of Georgia Annotated § 34-1-1, Labor and Industrial Relations. He acknowledges and agrees likewise that he will comply with said law.
- D. The Contractor shall protect all Work, including but not limited to, excavations and trenches, from rain water, surface water, and backup of drains and sewers. The Contractor shall furnish all labor, pumps, shoring, enclosures, and Equipment necessary to protect and keep the Work free of water.
- E. The provisions, terms and conditions of this Section GC-18.2, although very specific, are in no way intended to limit the general requirements hereof or the applicability of laws relating to Work conditions, safety or accident prevention and no specific provision or combination of specific provisions in any of said subsections or in any other parts or sections of the Agreement Documents shall be deemed to limit the obligations or responsibility of the Contractor contained in general provisions with respect thereto or in laws, statutes, acts, rules or regulations which are applicable thereto but which are not specifically referred to in any part of the Agreement Documents.

GC-19 USE OF PREMISES AND CLEAN UP

A. Contractor expressly undertakes at no additional cost to the City:

1. To store his Materials, Supplies and Equipment at the Site of the Work in such orderly fashion and in such locations as approved by the Engineer that will not unduly interfere with the progress of the Work or the Work of any other contractors, or the activities of City personnel.
2. To clean up all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that all times the Site of the Work shall present a neat orderly and workmanlike appearance. No items shall be left or discarded elsewhere on the Site, or any other City sites. Items that are to be discarded shall be removed to approved dump areas.
3. To remove all surplus material, false Work, temporary structures, including foundations thereof, plants any description and debris of every nature resulting from his operations, and to put the Site in a neat, orderly condition before final payment. Such final cleanup Work shall be performed within the time specified for completion of Work, with such exceptions as may be approved in writing by the City. Unless otherwise provided in the Specifications, Contractor shall clean any portion of Work for which a separate time for completion is specified and the Site thereof to the above standards within the specified time, with such exceptions as may be approved in writing by the City.
4. To affect all cutting, fitting or patching of his Work required to make the same to conform to the plans and specifications and except with the consent of the City, not to cut or otherwise alter the Work of any other contractor.

B. Contractor shall, at no additional cost to the City:

1. Coordinate all of the Contractor's operations with, and secure approval from, the City before using any portion of the Site. Contractor shall assume full responsibility for any damage to any such land or area, or to the City or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work.

2. Cause its agents and employees to park their vehicles only at locations directed by the City. Contractor's agents and employees shall clean vehicles leaving the Site so as not to muddy roads in the vicinity of the Site. Vehicles shall be brought to the Site only in connection with necessary Work on the Project. In no event shall vehicles be brought to the Site outside normal working hours unless the City gives specific written permission in advance.
3. In connection with Contractor's operations, provide for the free flow of traffic over roads or streets in or adjacent to the Site. The Contractor shall keep roads and streets free from obstructions of any character that might present a hazard or interference with traffic and in such condition that traffic can be adequately accommodated. When operations in connection with the Work necessitates the closing of traffic lanes, Contractor shall arrange in advance with the City, any adjacent property owners affected, and appropriate local authorities for such closing and shall provide as necessary appropriate barricades, signs, markers, flares and other devices as may be required by the Engineer or the local authorities for traffic guides and public safety.
4. Provide facilities for its use and only at locations approved or directed by the City. Unless otherwise specified in the Agreement Documents, Contractor shall provide all power and lighting necessary for its Work, complying in all cases with local and national electrical codes, OSHA regulations, and any other applicable laws. The City shall direct the point or points to be used for service connection. Contractor shall provide telephone facilities for his own use and only at locations approved or directed by the City.
5. Unless otherwise specifically provided in the Agreement Documents, Contractor shall provide his own temporary facilities, including an office and a watertight, closed area for storage and protection of Materials and Equipment to be used for, or incorporated in, the Work, except as specifically agreed in the Agreement Documents. Contractor's shanties, material storage rooms, field offices and the like will be approved by the City and placed in locations designated by the City. If it becomes necessary during the course of the Work for Contractor to relocate his field operations, it will do so in an expeditious manner and at no additional cost.

6. Contractor shall take measures to control the blowing or spreading of dust, smoke, dirt, mud and refuse from its Work to avoid nuisance and inconvenience to others whether on or off the Site. These measures shall be in compliance with, without being limited to, all applicable laws, and shall be subject to the City's approval. Contractor shall furnish all necessary labor and Materials such as water, approved chemicals, and Equipment.
7. Contractor shall be responsible for the removal or drainage of all water interfering with the proper prosecution of his Work. It shall, at all times, assure such drainage and shall not be a nuisance or inconvenience to the City, other contractors or their Work, or the occupants or users of any other public or private area on or off the Site. This paragraph supplements, and does not supersede, any drainage or dewatering called for elsewhere in the Agreement Documents.
8. Contractor shall not use permanent installed systems without permission of the City. If such permission is granted prior to completion of the Work, Contractor shall restore all parts of the system used by replacing materials, traps, valves, filters, motors, lamps, and the like to the extent that the City considers them to have been damaged or if their usefulness has been impaired or diminished by their temporary use by Contractor.
9. No part of any surface shall be loaded during construction with more weight than it can safely bear at the time. Should damage occur through violation of this requirement by Contractor, it shall be solely liable for such damage and any consequence.
10. It shall be Contractor's responsibility to receive and unload his Materials and pay all charges therefor, including, without limitation, demurrage or charges for delays in loading. Contractor shall instruct vendors or Suppliers making such deliveries exactly where they shall go. Contractor shall constantly keep the City advised of his Material delivery schedule and shall update it as required by the City so that Materials will be available to complete the Work on time. The Contractor shall schedule Material deliveries so as to interfere as little as possible with anyone else's Work on the Project but within the normal Work hours. Contractor shall require that Materials and Equipment delivered shall be identified with Contractor's name, purchase order, and identification numbers, as

required by the Engineer. Contractor shall sign for all Materials delivered and shall be responsible for their safekeeping.

GC-20 PROTECTION OF AGREEMENT WORK

Contractor shall be responsible for:

1. Maintenance and protection of Work until final completion and acceptance, including, but not limited to, the storage of Materials and Equipment, erection of temporary structures and provisions for drainage as necessary to protect Work from injury, damage or loss.
2. Any injury, damage, or loss to Work resulting from the action of the elements or any other cause, irrespective of fault or negligence, excepting only such injury, damage, or loss as is caused solely by the negligence of willful misconduct of the City.
3. Protection of its Work and materials and the Work and materials of his Subcontractors from damage or injury from the weather.
4. Exercising due care to avoid injury or damage to the Work of other contractors on site.

Any portion of Work suffering injury, damage, or loss for which Contractor is responsible under 1, 2, 3 or 4, above, will be considered defective and shall be corrected or replaced without additional cost to City.

GC-21 DEFECTS IN THE WORK AND UNAUTHORIZED WORK

Contractor shall promptly remove from the premises all Work rejected by the City for failure to comply with Agreement Documents, whether incorporated in the construction or not, and Contractor shall promptly replace and re-execute the Work in accordance with Agreement Documents and without expense to City and shall bear the expense of making good all Work of other contractors destroyed or damaged by such removal, or replacement. All removal and replacement Work shall be done at Contractor's expense.

Any Work which may be done or Materials ordered by Contractor prior to receipt of Notice to Proceed, incorporation of previously rejected Work, Work done contrary to or regardless of the instruction of the City, extra Work performed without written authority from the City, Work done beyond the limits shown on the Plans, except as herein specified, or any extra Work done without written authority from the City, will be

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considered as unauthorized and will not be paid for unless accepted in writing by the City. Work so done may be ordered removed or replaced at the Contractor's expense.

If the Contractor defaults or neglects to carry out all or any part of the Work in accordance with the Agreement Documents, and fails within three (3) days after receipt of Written Notice from the City to commence and continue correction of such default or neglect with diligence and promptness, the City may, after three (3) days following receipt by the Contractor of an additional Written Notice and without prejudice to any other remedy the City may have, make good such deficiencies and may further elect to perform and to complete all or any part of Work thereafter through such means as the City may select, including the use of a new contractor. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor, the cost of correcting such deficiencies. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the City on demand.

Minor, inconsequential defects may be waived in writing by the City, but the City's failure or refusal to exercise such authority shall not be subject to claim by Contractor. If a waiver will result in an appreciable saving of costs to Contractor, including costs of Work in place and potential costs of rejection and replacement under this clause, it will be made only upon an equivalent adjustment in compensation pursuant to Clause GC-42. Other defects may be waived only as expressly authorized by Special Conditions or Technical Provisions which make provision for relief to the City for such waiver.

GC-22 GUARANTEE OF WORK AND MATERIALS

- A. The Contractor warrants to the City and the Engineer that all materials and equipment furnished under this Agreement will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Agreement Documents. All Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Engineer, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. This warranty is not limited by any other provision of the Agreement Documents. The Warranties set forth in this paragraph and elsewhere in the Agreement Documents shall survive final acceptance of the Work.

- B. Contractor shall warrant to Owner that all goods or equipment which Contractor is required to purchase under the Agreement and which contain embedded codes, chips, microprocessors, microcontrollers, clock circuits (including

integrated circuits), computer operating systems, computer software, custom application programming, or other similar systems/technologies that calculate date or time data shall be Year 2000 Compliant in that they shall correctly and without failure, malfunction, or need for operator intervention, display, calculate, compute, and process date or time data before, during, and beyond December 31, 1999, including leap year.

- C. If within one (1) year after the Date of Final Completion and Final Acceptance of the Work by the City, or within such longer period of time as may be prescribed by law or by the term of any applicable special warranty required by the Agreement Documents, any of the Work is found to be defective or not in accordance with the Agreement Documents, the Contractor shall correct it promptly after receipt of a Written Notice from the City to do so, unless the City has previously given the Contractor written acceptance of such condition. This obligation shall survive both final payment for the Work or designated portion thereof and termination of the Agreement. The City shall give such notice promptly after discovery of the condition.
- D. Without limiting the responsibility or liability of the Contractor under the Agreement, all warranties given by manufacturers on Materials or Equipment incorporated in the Work are hereby assigned by the Contractor to the City. If requested, the Contractor shall execute formal assignments of said manufacturer's warranties to the City. The Contractor shall not obtain any Materials or Equipment under warranties, which do not run directly to the benefit of the City, and all such warranties shall be directly enforceable by the City.
- E. The foregoing warranties, and those contained elsewhere in the Agreement Documents or implied by law, shall be deemed cumulative and not alternative or exclusive. No one or more of them shall be deemed to alter or limit any other.

GC-23 TERMINATION OF AGREEMENT

GC-23.1 Bankruptcy or Insolvency

If Contractor is adjudged as bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for Contractor or for any of his property, or if he filed a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he refuses or fails to prosecute Work or any separable part thereof, with such diligence as will insure its completion within Agreement Time, or if he fails to complete said Work within said time, or if he disregards laws, ordinances, rules, regulations, directions or orders of any

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public body having jurisdiction over Work or if he disregards the authority of the City, or if he otherwise violates any provision of Agreement Documents, then City may terminate the Agreement without prejudice to any other right or remedy after giving Contractor a minimum of fifteen (15) days to either undertake the Work or pay the City for doing so.

If the surety does not commence performance thereof within fifteen (15) days from the date of the mailing to such surety of notice of termination, City may take over Work and prosecute the same to completion by contract or by Force Account for the account and the expense of Contractor and Contractor and his surety shall be liable to City for any excess cost incurred thereby, and in such event City may take possession of and utilize in completing Work, such materials, appliances, and plant as may be on the Site of Work and necessary therefor.

- (1) Preserve all Materials, Drawings and records and Plans at Site of the Work until notified in writing of those items, which will be used in completing Work.
- (2) Upon receipt of the foregoing notice, remove from Site of the Work all construction materials, equipment and plant not designated for use in such notice.
- (3) Assist the City in making an inventory of all Materials and Equipment in storage at the Site of Work, in route to the Site of Work, in storage or manufactured at other locations, and on order from Suppliers.

GC-23.2 City's Right to Stop the Work

If the Contractor fails to correct defective Work as required by the Agreement Documents, or fails to carry out the Work or supply labor or Materials in accordance with the Agreement Documents, the City, in writing, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the City and the Engineer to stop the Work shall not give rise to any duty on the part of the City to exercise this right for the benefit of the Contractor or any other person or entity.

GC-23.3 Termination by the City for Contractor Default

- A. If the Contractor is adjudged as bankrupt, or makes a general assignment for the benefit of creditors, or if a receiver is appointed on account of the Contractor's insolvency, or if the Contractor refuses or fails, except in cases for which extension of time is provided, to supply enough properly skilled workers or proper Materials, or fails to make prompt payment to Subcontractors or for Materials or

labor, or disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a material violation of a provision of the Contract Documents, and fails within seven (7) days after receipt of written notice to commence and continue correction of such default, neglect or violation with diligence and promptness, the City, may, after seven (7) days following receipt by the Contractor of an additional Written Notice and without prejudice to any other remedy the City may have, terminate the employment of the Contractor and take possession of the Site and of all Materials, Equipment, tools, construction Equipment and machinery thereon owned by the Contractor and may finish the Work by whatever methods the City may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the Work is finished.

- B. If the unpaid balance of the Agreement Price exceeds the costs of finishing the Work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the City on demand. This obligation for payment shall survive termination of the Agreement.
- C. Termination of this Agreement pursuant to this GC-23 may result in disqualification of Contractor from bidding on future City contracts.

GC-23.4 Termination for Convenience of City

- A. The City may, at any time upon thirty (30) days Written Notice to the Contractor, terminate (without prejudice to any right or remedy of the City) the whole or any portion of the Work for the convenience of the City.
- B. If, after the Contractor has been terminated for default pursuant to Paragraph GC-23.3, it is determined that none of the circumstances set forth in Paragraph GC-23.3 exist, then such termination shall be considered a termination for convenience pursuant to Paragraph GC-23.4 A.
- C. If the City terminates the whole or any portion of the Work pursuant to Paragraph GC-23.3 A, then the City shall only be liable to the Contractor for those costs reimbursable to the Contractor in accordance with Paragraph GC-23.4 D, plus a markup of ten percent (10%) on the actual fully accounted costs recovered under Paragraph GC-23.4 D; provided, however, that if it appears that the Contractor would have sustained a loss on the entire Agreement had it been completed, no profit shall be included or allowed hereunder and an appropriate adjustment shall be made reducing the amount of settlement to reflect the indicated rate of loss.

D. If the City terminates the whole or any portion of the Work pursuant to Paragraph GC-23.3 A, the City shall pay the Contractor the amounts determined by the Engineer as follows:

1. An amount for supplies, services, or property accepted by the City pursuant to Clause GC-23.4 C.6, (or sold or acquired pursuant to Clause GC-23.5 C.7), and not heretofore paid for, and to the extent provided in the Agreement such amount shall be equivalent to the aggregate price for such Supplies or services computed in accordance with the price or prices specified in the Contract, appropriately adjusted for any saving of freight or other charges; and
2. The total of:
 - (a) The cost incurred in the performance of the Work terminated, including initial costs and preparatory expense allocable thereto, but exclusive of any costs attributable to supplies or services paid or to be paid for under Clauses GC-23.4 D.1 or GC-23.4 D.2(b);
 - (b) The cost of settling and paying claims arising out of the termination of Work under subcontracts or orders, pursuant to Clause GC-23.4 C.5, which are properly chargeable to the terminated portion of the Agreement (exclusive of amounts paid or payable on account of completed items of equipment delivered or services furnished by Subcontractors or vendors prior to the effective date of the notice of termination, which amounts shall be included in the costs payable under (a) above); and
 - (c) The reasonable costs of settlement, including accounting, legal, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the Agreement and for the termination and settlement of subcontracts thereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of property allocable to this Agreement.

E. The total sum to be paid to the Contractor under this Paragraph GC-23.4 shall not exceed the Agreement Price as reduced by the amount of payments otherwise made, by the Agreement Price of Work not terminated and as

otherwise permitted by the Agreement. Except for normal spoilage, and except to the extent that the City shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor, as provided in this Paragraph GC-23.4, the fair value, as determined by the City, of property which is destroyed, lost, stolen, or damaged so as to become undeliverable to the City, or to a buyer pursuant to Clause GC-23.5 C.7.

GC-23.6 General Termination Provisions

- A. If the City terminates the whole of any part of the Work pursuant to Paragraph GC-23.3, then the City may procure, upon such terms and in such manner as the City may deem appropriate, supplies or services similar to those so terminated, and the Contractor shall be liable to the City for any excess costs for such similar supplies or services. The Contractor shall continue the performance of this Agreement to the extent not terminated hereunder.
- B. Should the Contractor default under any of the provisions of the Agreement, the Contractor and its surety will pay to the City such reasonable attorneys' fees as the City may expend as a result thereof and all costs, expenses and filing fees incidental thereto.
- C. After receipt of a notice of termination from the City, pursuant to Paragraph GC-23.3 or GC-23.4, and except as otherwise directed by the City, the Contractor shall:
 - 1. Stop Work under the Agreement on the date and to the extent specified in the notice of termination;
 - 2. Place no further orders or subcontracts for Materials, services, or facilities, except as may be necessary for completion of such portion of the Work under the Agreement as is not terminated;
 - 3. Terminate all orders and subcontracts to the extent that they relate to the performance of Work terminated by the notice of termination;
 - 4. Assign to the City in the manner, at the times and to the extent directed by the City, all of the rights, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case the City shall have the right, at its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;

5. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the City to the extent the Engineer may require, which approval or ratification shall be final for all the purposes of this Clause;
6. Transfer title and deliver to the entity or entities designated by the City, in the manner, at the times and to the extent, if any, directed by the City, and to the extent specifically produced or specifically acquired by the Contractor for the performance of such portion of the Work as had been terminated:
 - (a) The fabricated or unfabricated parts, Work in progress, partially completed supplies, and Equipment, Materials, parts, tools, dies, jigs, and other fixtures, completed Work, supplies and other material produced as part of, or acquired in connection with the performance of the Work terminated by the notice of termination; and
 - (b) The completed or partially completed Plans, Drawings, information, and other property related to the Work;
7. Use his best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorized by the City, any property of the types referred to in Clause GC-23.5 C.6; provided, however, that the Contractor:
 - (a) Shall not be required to extend credit to any buyer; and
 - (b) May require any such property under the conditions prescribed by and at a price or prices approved by the City; and, provided, further that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the City to the Contractor under this Agreement or shall otherwise be credited to the price or cost of the Work covered by this Agreement or paid in such other manner as the City may direct;
8. Complete performance of such part of the Work as shall not have been terminated by the notice of termination; and
9. Take such action as may be necessary, or as the City may direct, for the protection and preservation of the property related to the

Agreement, which is in the possession of the Contractor and in which the City has or may acquire an interest.

- D. The Contractor shall preserve and make available to the City, at all reasonable times at the office of the Contractor, but without direct charge to the City, all its books, records, documents and other evidence bearing on the costs and expenses of the Contractor and any subcontractor under the Agreement and relating to the Work terminated hereunder, all to the extent provided in GC-54 hereof, or, to the extent approved by the Engineer, photographs, microphotographs, or other authentic reproductions thereof.
- E. In arriving at any amount due the Contractor pursuant to Paragraph GC-23.3 or GC-23.4, there shall be deducted:
1. All unliquidated advance or other payments on account theretofore made to the Contractor applicable to the termination portion of this Agreement;
 2. Any claim which the City may have against the Contractor;
 3. Such claim as the Engineer determines to be necessary to protect the City against loss because of outstanding or potential liens or claims; and
 4. The agreed price for, or the proceeds of sale of, any Materials, supplies, or other things acquired by the Contractor or sold, pursuant to the provisions of Clause GC-23.5 C.7 and not otherwise recovered by or credited to the City.
- F. If the termination, pursuant to Paragraph GC-23.4, be partial, the Contractor may file with the City a claim for an equitable adjustment of the price or prices specified in the Agreement relating to the continued portion of the Agreement (the portion not terminated by the notice of termination), and such equitable adjustment as may be agreed upon shall be made in such price or prices. Any claim by the Contractor for an equitable adjustment under this Clause must be asserted within thirty (30) days from the effective date of the notice of termination.
- G. The Contractor shall refund to the City any amounts paid by the City to the Contractor in excess of costs reimbursable under Paragraph GC-23.4.

- H. The City may, at its option and the Contractor's expense, have costs reimbursable under Paragraph GC-23.4 audited and certified by independent certified public accountants selected by the City.
- I. The Contractor shall be entitled to only those damages and that relief from termination by the City as specifically provided in Article GC-23.

GC-24 SUSPENSION OF WORK

- A. The City may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the Work for such period of time as he may determine to be appropriate for the convenience of the City.
- B. If the performance of the Work is, for an unreasonable period of time, suspended, delayed, or interrupted by an act of the City or Engineer in the administration of the Agreement, or by failure of any one of them to act within the time specified in the Agreement (or if no time is specified, within a reasonable time), an equitable adjustment shall be made for any increase in Contractor's costs of performance (excluding profit) and any increase in the time required for performance of the Work necessarily caused by such unreasonable suspension, delay, or interruption and the Agreement modified in writing accordingly. However, no equitable adjustment shall be made under this Paragraph for any suspension, delay, or interruption (pursuant to Paragraph GC-23.2), or for which an equitable adjustment is provided or excluded under any other provision of the Agreement Documents and no adjustment shall be made to the extent that performance would have been so suspended, delayed or interrupted by any other cause, including the fault or negligence of the Contractor. No claim for an equitable adjustment under this Paragraph shall be allowed (1) before the Contractor shall have notified the City in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from an order issued "GC 23 A") and as practicable, the extent of such suspension, delay or interruption; and (2) unless the claims for increased costs or increased time required are asserted in writing to the City within ten (10) days after the termination of such suspension, delay, or interruption.

GC-25 COMMENCEMENT AND PROSECUTION OF THE WORK

Contractor shall, within ten (10) days after receipt from the City of a written Notice to Proceed, commence Work to be done under this Agreement. Contractor shall diligently prosecute Work and all portions thereof to completion within the times specified therefor. The capacity of Contractor's construction and manufacturing equipment and

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plans, sequence and methods of operations, and forces employed, including management and supervisory personnel, shall be such as to insure completion of Work within the specified time.

It is expressly understood and agreed by and between Contractor and City that Agreement Time for the completion of Work described herein is a reasonable time, taking into consideration the average climate and economic conditions and other factors prevailing in the locality of the Work.

GC-26 TIME

GC-26.1 Progress and Completion

- A. All time limits stated in the Agreement Documents are of the essence of the Agreement.
- B. The Contractor shall begin the Work within ten (10) days after the issuance of the Notice to Proceed. The Contractor shall carry the Work forward expeditiously with adequate forces and shall achieve Substantial Completion of the Work and Final Completion within the times stated in the Agreement Documents, including the Project Network Schedule.

GC-26.2 Delays and Extensions of Time

- A. Except as otherwise specifically provided under Paragraph GC-24 (Suspension of Work) or Paragraph GC-42 (Change Orders), the Contractor shall not be entitled to payment or compensation of any kind from the City for direct, indirect, or impact damages, including, but not limited to, costs of acceleration arising because of delay, disruption, interference or hindrance from any cause whatsoever, whether such delay, disruption, interference or hindrance be reasonable or unreasonable, foreseeable or unforeseeable, or avoidable or unavoidable; provided, however, that this provision shall not preclude recovery of damages by the Contractor for hindrances or delays due solely to fraud or bad faith on the part of the City or its agents. The Contractor shall be entitled only to extensions in the time required for performance of the Work as specifically provided in the Agreement.
- B. The Agreement Time shall be adjusted only for Changes in the Work (pursuant to Paragraph GC-42), Suspension of Work (pursuant to Paragraph GC-24) and excusable delays (pursuant to Subparagraph GC-26.2 C). In the event the Contractor requests an extension of the Agreement Time, he shall furnish such justification and supporting evidence as the City may deem necessary for a

determination as to whether the Contractor is entitled to an extension of time under the provisions of the Agreement. The City, after receipt of such justification and supporting evidence, shall make its findings of fact and decision thereon shall advise the Contractor in writing thereof. If the City finds that the Contractor is entitled to any extension of the Agreement Time, the City's determination as to the total number of days' extension shall be based upon the currently approved Project Network Schedule and on all data relevant to the extension as described in the Agreement Documents. Such data will be included in the next periodic updating of the schedule. The Contractor acknowledges and agrees that actual delays (due to changes, suspension of Work or excusable delays) in activities which according to the schedule, do not affect the Agreement Time, do not have any effect upon the Agreement Time and therefore will not be the basis for a change therein.

C. Subject to other provisions of the Agreement Documents, the Contractor may be entitled to an extension of the Agreement Time (but not increase in the Agreement Price) for delays arising from unforeseeable causes beyond the control and without the fault or negligence of the Contractor or its Subcontractors as follows:

1. Labor strikes including strikes affecting transportation, that do, in fact, directly and critically affect the progress of the Work; however, an extension of Agreement Time on account of an individual labor strike shall not exceed the number of calendar days of said strike;
2. Acts of God, tornado, fire, hurricane, blizzard, earthquake, typhoon, or flood that damage completed Work or stored materials;
3. Abnormal weather; however, the Agreement Time will not be extended due to normal inclement weather. Unless the Contractor can substantiate to the satisfaction of the City that there was greater than normal inclement weather considering the full term of the Agreement Time using a ten (10) year average of accumulated record mean values from climatological data compiled by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration for Atlanta, Georgia, and that such alleged greater than normal inclement weather actually delayed the Work or portions thereof which had an effect upon the Agreement Time, the Contractor shall not be entitled to an extension of time;
4. Acts of the public enemy, acts of the state, federal, or local government in its sovereign capacity, and acts of another separate

contractor in the performance of a agreement with the City relating to the Project; and

5. Any act or neglect of the City or the Engineer or any of their employees.
- D. Other than pursuant to Paragraph GC-24 and Paragraph GC-42, no claims for extension of time for delay, disruption, interference or hindrance of the Work hereunder, or any portion thereof, shall be valid unless a notice of a claim is filed with the City within ten (10) days of the first instance of such delay, disruption, interference or hindrance and, in addition, unless a written statement of the claim as hereinafter described is filed with the City within twenty (20) days of such first instance; otherwise, all such claims are waived by the Contractor. In the case of a continuous cause of delay, only one written claim is necessary.
- E. Such notice of claim must clearly identify the instance of delay, disruption, interference or hindrance and an estimate of the probable effect of such delay on the progress of the Work.
- F. Such statement of the claim must provide all information required by the scheduling requirements of the Agreement Documents and further provide the following specific information:
1. Nature of the delay;
 2. Date (or anticipated date) of commencement of delay;
 3. Activities on the construction schedule affected by the delay, and/or new activities created by the delay and their relationship with existing activities;
 4. Identification of person(s) or organization(s) or event(s) responsible for the delay;
 5. Anticipated extent of delay; and;
 6. Recommended action to avoid or minimize the delay.
- G. The City shall receive and process such claims for extensions of time in accordance with the procedures set forth in Paragraphs GC-42 and GC-43, except that any Change Order issued shall only amend the time for completion.

- H. The failure of the Contractor to file any claims for extension of time within the time limits prescribed herein and in the form and manner required hereby shall be deemed a material prejudice to the interests of the City and shall constitute an absolute waiver of the claim and the right to file or thereafter prosecute the same.
- I. If no schedule or agreement is made stating the date upon which written interpretations as set forth in the Agreement Documents shall be furnished, then no claim for delay shall be allowed on account of failure to furnish such interpretations until fifteen (15) days after demand is made for them, and not then unless such claim is reasonable.
- J. To the extent that Contractor is entitled to additional compensation for delay, disruption, interference or hindrance under this Paragraph GC-26.2, an absolute condition precedent to such entitlement shall be strict compliance with all requirements and procedures for entitlement to an extension of time hereunder.

GC-26.3 Limitation of Damages

Under no circumstances shall Contractor be paid for extended home office overhead, lost use of capital, impairment of bonding capacity, loss of potential profit or any other indirect costs.

GC-27 RESPONSIBILITY FOR COMPLETION

GC-27.1 Duty to Accelerate

Subject to the other provisions of the Agreement Documents, the Contractor shall furnish such manpower, Materials, facilities, and Equipment and shall work such hours, including night shifts, overtime operations and Sunday and holidays, as may be necessary to ensure the prosecution and completion of the Work in accordance with the approved and currently-updated Project Network Schedule. If Work actually in place falls behind the currently updated and approved Project Network Schedule, and it becomes apparent from the current schedule that the Work will not be completed within the Agreement Time, the Contractor agrees that it will, as necessary or as directed by the City, take some or all of the following actions at no additional cost to the City to improve their progress:

- A. Increase manpower in such quantities and crafts as will substantially eliminate, in the judgment of the City, the backlog of Work;

- B. Increase the number of working hours per shift, shifts per working day, working days per week, the amount of equipment or any combination of the foregoing, sufficiently to substantially eliminate in the judgment of the City, the backlog of Work;
- C. Reschedule activities to achieve maximum practicable concurrency of accomplishment of activities; and
- D. Any other measure required by the schedule requirements of the Special Conditions.

In addition, the City may require the Contractor to submit a proposed revised Project Network Schedule demonstrating its program and proposed plan to make up lag in scheduled progress and to ensure completion of the Work within the Agreement Time. If the City finds the proposed plan not acceptable, the City may require the Contractor to submit a new plan. If the actions taken by the Contractor or the second plan proposed are not satisfactory, the City may require the Contractor to take any of the actions set forth in this Paragraph GC-27.1 without additional costs to the City to make up the lag in scheduled progress.

GC-27.2 Acceleration by City's Forces

Failure of the Contractor to substantially comply with the requirements of Paragraph GC-27.1 may be considered grounds for a determination by the City and/or the Engineer that the Contractor is failing to prosecute the Work with such diligence as will ensure its completion within the time specified. In such case, upon forty-eight (48) hours prior Written Notice to Contractor, City shall have the right to furnish such additional labor and Materials as may be required to comply with the schedule and the Contractor shall be liable for such costs incurred by City.

GC-27.3 Set-Off of Acceleration Costs

Any monies due to the City under this Section may be set-off by the City against monies due from the City to the Contractor.

GC-27.4 Acceleration Remedies Cumulative

The remedies of the City set out in this Section GC-27 are in addition to, and without prejudice to, all other rights and remedies of the City including those stated elsewhere in the Agreement Documents.

GC-28 WORKING DRAWINGS, SHOP DRAWINGS, DATA ON MATERIAL AND EQUIPMENT, SAMPLES, AND LICENSES

GC-28.1 General

- A. Contractor shall submit to the Engineer for review and exception, if any, such working Drawings, Shop Drawings, test reports and data on Materials, licenses, and Equipment (hereinafter in this article called data), and material samples (hereinafter in this article called samples) as are required for the proper control of Work, including but not limited to, those working Drawings, Shop Drawings, data and samples specifically required elsewhere in the Specifications and Agreement Documents. Submittals are required for any product that becomes a part of or affects the permanent Work.
- B. Data on Materials and Equipment include, without limitation, Materials and Equipment lists, catalog data sheets, cuts, diagrams and similar descriptive material. Materials and Equipment lists shall give, for each item thereon, the name and location of the Supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data.
- C. It is the duty of the Contractor to check all Drawings, data and samples prepared by or for him before submitting them for review. Drawings and schedules shall also be checked and coordinated with the Work of all trades involved. Drawings and other submittals originating from Subcontractors will be reviewed and checked similarly by the Contractor. Pursuant to this required review, Contractor shall indicate his approval, before they are submitted for review by the City, by affixing his stamp of approval, properly initialed and dated. All submittals shall be referenced to the applicable item, section or division of the Specifications.
- D. The Engineer's review of Drawings, data and samples submitted by Contractor will cover only general conformity to the Specifications, external connections, and dimensions which affect the installation. The Engineer's review and exception, if any, will not constitute an approval of dimensions, quantities, and details of the Material, Equipment, device, or item shown.
- E. Contractor shall not begin any of the Work covered by a Drawing, data, or a sample returned for correction until a revision or correction thereof has been reviewed and returned to him.
- F. The Construction schedule shall include respective dates for the submission of shop and work Drawings, the beginning of manufacture, testing and installation of Materials, Supplies and Equipment.

- G. Acceptable submittals will be marked "No Exceptions Taken." Submittals requiring minor corrections before the Material or Equipment is acceptable will be marked "Make Corrections Noted." The Contractor may order, fabricate or ship the items included in the submittal, provided the indicated corrections are made. Drawings must be resubmitted for review prior to installation of Equipment or use of Materials.
- H. Submittals marked "Amend and Resubmit" must be revised to reflect required changes and the initial review procedure repeated.
- I. The "Rejected - See Remarks" notation is used to indicate Materials or Equipment that are not acceptable. Upon return of a submittal so marked, the Contractor shall repeat the initial review procedure utilizing acceptable Materials or Equipment.
- J. Drawings on other submittals not bearing the Engineer's "No Exceptions Taken" notation shall not be issued to Subcontractors or utilized for construction purposes. No Work shall be done or equipment installed without a drawing or submittal bearing the "No Exceptions Taken" notation. The Contractor shall maintain at the job site a complete set of Drawings and other submittals bearing the Engineer's stamp.
- K. In the event the Contractor obtains the City's approval for the use of Equipment other than that which is called for in the Agreement Documents, the Contractor shall, at his own expense and using methods approved by the City, make any changes to structures, piping and electrical work that may be necessary to accommodate this equipment.
- L. Contractor shall submit all Drawings and schedules sufficiently in advance of construction requirements to provide no less than thirty (30) calendar days for checking and appropriate action.
- M. The review of Drawings and schedules will be general, but approval shall not be construed: (a) as permitting any departure from the Agreement requirements; (b) as relieving Contractor of responsibility for any errors, including details, dimensions, and Materials; and (c) as approving departures from details furnished by the City, except as otherwise provided herein.

GC-28.2 Shop Drawings

- A. When used in the Agreement Documents, the term "Shop Drawings" shall be considered to mean fabrication drawings, wiring and control diagrams, cuts, or entire catalogs, pamphlets, descriptive literature, and performance and test data.

The Drawings shall be submitted using standard transmittal forms in accordance with detailed instructions furnished by the City. A separate transmittal sheet shall be used for reference to each item, section or division of the Specifications.

- B. The Contractor shall submit six (6) sets of each Shop Drawing for review. On electrical and instrumentation and control submittals the Contractor shall submit six (6) copies of each for review.
- C. Each Shop Drawing shall include the following:
 - 1. Number and title of the submittal;
 - 2. Date of Drawing or revision;
 - 3. Name of Project;
 - 4. Name of Contractor and or Subcontractor submitting Drawing and with its seal of approval;
 - 5. Specification title and number; and
 - 6. Clear identification of contents and location of the Work.
- D. Drawings for Work on utility facilities, streets and other facilities, which are constructed for owners other than the City, shall be coordinated so that information required by these owners is included on the Shop Drawings for their facilities.
- E. If Drawings show variations from Agreement requirements, Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in Agreement shall be implemented where appropriate. If Contractor fails to describe such variations, he shall not be relieved of the responsibility for executing the Work in accordance with Agreement, even though such Drawings have been reviewed.
- F. If the Drawings or schedules as submitted describe variations per Subparagraph GC-28.2 C.5, and show a departure from the Agreement requirements which the City finds to be in the interest of the City and to be so minor as not to involve a change in Agreement Price or time for performance, the City may return the reviewed Drawings without noting an exception.
- G. If no exceptions are taken by the City, each of the Shop Drawings will be identified by being so stamped and dated. Shop Drawings stamped "Rejected - See Remarks" and with required corrections shown, will be returned to Contractor for correction and re-submittal. On re-submittals, Contractor shall direct specific attention, in writing or on resubmitted Drawings, to revisions other than the corrections requested by the City on previous submissions. Contractor shall make any corrections required by the City. If Contractor considers any

correction indicated on the drawings to constitute a change to the Agreement Drawings or Specifications, Contractor shall give Written Notice thereof to the City. At least two (2) copies of Drawings or data submittals will be returned to Contractor.

- H. When the Drawings or data submittals have been completed to the satisfaction of the City, Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the City.
- I. After final review in which there are no exceptions noted or referenced, and before final payment is made, Contractor shall furnish to the City two (2) sets of record Shop Drawings, all clearly revised and completed and brought up to date, showing the permanent construction as actually made and marked FINAL/AS-BUILTS. One (1) set of such Shop Drawings shall be either drawn in ink on tracing cloth, or reproduced on mylar from which clear prints can be made. The other set could be a complete paper print.
- J. Contractor shall be responsible for and bear all cost of damages which may result from the ordering of any material or from proceeding with any part of Work prior to the review, without exception, by the City of the necessary Shop Drawings.

GC-28.3 Working Drawings

- A. When used in the Agreement Documents, the term "Working Drawings" shall be considered to mean Contractor's plans, including a detailed narrative, for temporary structures such as temporary bulkheads, support of open cut excavation, support of utilities, ground water control systems, forming and false work; for underpinning; and for such other work as may be required for construction but does not become an integral part of the Project.
- B. Copies of Working Drawings shall be submitted to the City where required by the Agreement Documents or requested by the City in accordance with subparagraph GC-28.2 C.2, and shall be submitted at least thirty (30) calendar days in accordance with subparagraph GC-28.1 L. (unless otherwise specified by the Engineer) in advance of their being required for Work.
- C. Working Drawings shall be signed by an engineer licensed to practice in the State of Georgia and shall convey, or be accompanied by, calculation of other sufficient information to completely explain the structure, machine, or system described and its intended manner of use. Prior to commencing such Work, Working Drawings must have been reviewed to the satisfaction of the City, and

each Working Drawing identified by the City with the Engineer's stamp of "No Exception Taken." Review of the Working Drawings by the Engineer will not relieve Contractor in any way from his responsibility with regard to the fulfillment of the terms of Agreement. All risks of error are assumed by Contractor. The City and the Engineer shall have no responsibility therefore.

GC-28.4 Record Agreement Drawings

Contractor shall keep one (1) record copy of all Agreement Documents, reference documents, and all technical submittals at the Site in good order and annotated to show all changes made during the construction process. Record Drawings shall be updated and kept current on a monthly basis by the Contractor. The record Drawings will be reviewed monthly by the City prior to approval of the Contractor's monthly pay request. At the completion of the Project and before final payment is made, Contractor shall furnish the City with one (1) set of electronic reproducible documents, reflecting all changes herein described. Changes to the reproducible Drawings shall be drafted in a neat and workmanlike manner similar to the drawings as originally provided to the Contractor. Upon request, the City will provide one (1) set of sepias of the original Agreement Drawings, at no cost to Contractor.

GC-28.5 Samples

- A. Contractor shall furnish, for the approval of the City, samples required by the Agreement Documents or requested by the City. Samples shall be delivered to the City as specified or directed. Contractor shall prepay all shipping charges on samples. Materials or Equipment for which samples are required shall not be used in Work until approved by the City.
- B. Each sample shall have a label indicating:
 - 1. Name of Project;
 - 2. Name of Contractor and Subcontractor;
 - 3. Material or Equipment Represented;
 - 4. Place of Origin;
 - 5. Name of Producer and Brand (if any); and
 - 6. Location in Project.
- C. Contractor shall prepare a transmittal letter in triplicate for each shipment of samples containing the information required in Subparagraph 2 above. He shall enclose a copy of this letter with the shipment and send a copy of this letter to the City. Approval of a sample shall be only for the characteristics or use named in such approval and shall not be construed to change or modify any Agreement

requirement. Substitutions will not be permitted unless they are considered to be to the City's best interest.

- D. Approved samples not destroyed in testing shall be sent to the City or stored at the Site of the Work. Approved samples of the hardware in good condition will be marked for identification and may be used in the Work. Materials and Equipment incorporated in the Work shall match the approved samples. Samples which failed testing or were not approved will be returned to Contractor at its expense, if so requested at time of submission.
- E. The Contractor will provide architectural samples to the City in a composite color board format for review and color coordination. These samples shall be of the precise Material and color specified and of sufficient size for comparison to other material samples.
- F. Custom colors and coatings may be required to complete the Project within acceptable architectural standards. The Contractor shall comply with the Architect's selection and provide Materials that precisely match the approved samples.

GC-28.6 Operation and Maintenance Manuals

- A. Operation and maintenance manuals are operator and shop maintenance instructions that enable an average journeyman mechanic without prior knowledge of the specific type, make, or model to maintain and repair the Equipment. The manuals shall include repair parts data that provides positive identification for an item of the complete Equipment without reference to the manufacturer or dealer facilities to identify ordering part numbers in support of procured Equipment.
- B. Preparation Instructions: An operation and maintenance manual set is required to cover each specific make, model, year and serial numbered piece of Equipment scheduled for delivery under terms of this Agreement. It is the intent of these requirements to use standard commercial manuals modified to meet the minimum Specification set forth herein. The manuals shall provide instructions, illustrations, and other associated data for operations, preventive and corrective maintenance and repair, including a complete catalog of parts used in the assembly of the end item. The manuals provided shall contain complete instructions and information as set forth below for all equipment components, assemblies, subassemblies, attachments, and accessories manufactured by the prime Supplier or those purchased by the prime Supplier from other sources and assembled in the finished end item.

- C. Contents of Operation and Maintenance Manuals: The contents of complete set of manuals shall include, at a minimum, the following:
- (a) Table of Contents;
 - (b) Operating instructions;
 - (c) Preventive maintenance, service, and corrective maintenance or repair instructions;
 - (d) Parts list with recommended quantity; and
 - (e) Approved Shop Drawing(s).
- D. Binding and Delivery: The manual(s) shall be bound or otherwise securely enclosed in an oil and moisture resistant binder(s). Each binder cover shall indicate in bold type the manufacturer's name, contract number, model number, and serial number of the unit or equipment. Five (5) copies of the manual(s) shall be delivered with the Shop Drawings and must be approved with the Shop Drawings.

GC-29 CONTRACTOR'S TITLE TO MATERIALS

No Materials or supplies for the Work shall be purchased by Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sales contract or other agreement by which all interest is retained by the seller. Contractor warrants that he has good title to all Materials and supplies used by him in the Work, free from all liens, claims or encumbrances.

GC-30 INSPECTION AND TESTING OF MATERIALS

All Materials and Equipment used in the construction of the Project shall be subject to adequate inspection and testing in accordance with accepted standards and the requirements of the Agreement Documents. The laboratory of inspection agency shall be provided by the Contractor and approved by the City for these tests. Additional tests performed after rejection of Materials or Equipment shall be at the Contractor's expense.

Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to establish conformance with Specifications and suitability for uses intended, but failure to inspect Materials will in no way waive the City's right to reject defective Materials or to condemn Work in which they are used. The Contractor will provide for travel expenses, factory performed testing and set up costs for the factory inspection and testing of all major

architectural elements, mechanical, electrical or process equipment. A factory visit for both designers' representative and City's representative may be required. No funds for stored materials or fabrication items will be released until the factory inspection is completed and a certified pay request is submitted.

All tests performed by Contractor shall be witnessed by the City unless the requirement therefor is waived in writing. Contractor shall give the City reasonable advance notice of all such tests. The City may perform additional tests on materials tested by Contractor, and Contractor shall furnish samples for this purpose as requested.

GC-31 MATERIALS AND EQUIPMENT

Contractor shall furnish all Materials and Equipment to be incorporated into the Work. Only Materials and Equipment conforming to the requirements of the Drawings and Specifications shall be incorporated into the Work. Except as otherwise specified or approved in specific instances, all such Materials and Equipment shall be new and unused and of the highest quality available. Materials and Equipment for which no specific requirements are given in the Drawings or specifications shall be those best suited for the specified use, considering function, strength, durability and resistance to corrosion. Manufactured Materials and Equipment shall be obtained from sources which are currently manufacturing such Materials or Equipment, except as otherwise approved in specific instance.

If so ordered by the Engineer, sources of Materials shall be approved by him before delivery from those sources is commenced. Approval of a source of Materials may be withdrawn by the Engineer at any time that the Materials delivered from that source are found to be defective, and Contractor shall thereupon cease all deliveries from that source.

Manufacturer's warranties, certifications, guarantees, manuals, instruction sheets and parts lists provided with materials and equipment shall be furnished to the Engineer before final payment is made.

GC-32 STORAGE OF MATERIALS AND EQUIPMENT

Materials and Equipment to be incorporated in the Work shall be stored in such a manner as to preserve their quality and fitness for incorporation in the final project. They shall be stored in a manner acceptable to the Designer and Owner and in an accessible facility that allows inspection. If at any time the City determines that any Materials or Equipment are not being properly stored, they may issue a directive to correct the storage or reject the Material for incorporation in the Project under GC-23.

No additional payment will be made for storage requirements. No payment will be made on Materials stored improperly or replaced due to improper storage.

No Equipment may be stored outside without the express written permission of the City on that specific piece of equipment stating that unit's unique I.D. numbers.

For any Equipment or units that have rotating parts or bearing assemblies and must be stored for more than sixty (60) days, the Contractor shall set up a schedule to manually rotate the units every fifteen (15) days and maintain a log certification to preserve the service life and warranties.

GC-33 REPORTS, RECORDS, AND DATA

GC-33.1 General

Contractor shall submit to the City schedules of quantities and costs, progress schedules, reports, estimates, records, certificates, and other data as the City may request concerning Work performed or to be performed under this Agreement.

GC-33.2 Payroll Reports

Contractor shall be required to furnish weekly payroll reports to the City. The requirement applies to Contractor and its Subcontractors. These reports shall show completed payroll information.

GC-33.3 Contractor's Daily Reports

As soon as Contractor has started Work on the Project, he shall submit to the City written daily reports of the Work performed the previous day by its employees, including the employees of Subcontractors.

The reports shall be prepared by Contractor's representative and shall bear his signature. Each report shall contain the following information:

- (a) Work items and references to payment items;
- (b) Work forces and construction Equipment employed;
- (c) Materials and Equipment installed; and
- (d) Work performed by Subcontractors.

GC-34 CONTRACTOR'S SUPERVISION OF THE WORK

GC-34.1 General

Contractor shall provide competent, efficient supervision of the Work. All Work shall be performed in a skillful, workmanlike and orderly manner, and Contractor and his supervisory personnel shall enforce this requirement at all times.

GC-34.2 Contractor's Representative

Before beginning Work, Contractor shall notify the City in writing of one (1) person within his organization, satisfactory to the City, who shall have complete authority to supervise Work, to receive orders from the City, and to represent and act for Contractor in all matters arising under Agreement. Contractor shall not remove his representative without first designating, in writing, a new representative, who meets all of the foregoing requirements.

Contractor's representative shall normally be present at or about the Site of Work while the Work is in progress. Before leaving the Site of Work for any extended period, whether or not the Work is in progress, Contractor's representative shall notify the City, in writing, of the designation of an assistant, satisfactory to the City, with full authority to act for the representative in his absence, or shall make substitute arrangements satisfactory to the City. When neither Contractor, his representative, nor the representative's authorized assistant is present on a part of Work, the superintendent, foreman, or other employee or Contractor in charge of that part of the Work shall be an authorized representative of the Contractor for the purposes set forth above.

GC-35 SUBCONTRACTORS AND SUPPLIERS

Contractor may utilize the services of specialty Subcontractors on those parts of Work that, under normal contracting practices, are performed by specialty Subcontractors, except as otherwise required by the Agreement Documents.

In addition to the designation of Subcontractors in the proposal documents, Contractor shall submit to the City a listing of the Subcontractor name, full address and telephone number, contact person, class or trade of work, list of similar past projects worked on, including reference names, telephone numbers, and other information as applicable to that contractor and the provisions of the Agreement Documents. Contractor shall make Subcontractor submittals sufficiently in advance of construction requirements to provide the Engineer and City with no less than sixty (60) days for review and appropriate action.

Neither Contractor nor any Subcontractor shall award Work to any Subcontractor without prior written approval of the City. Contractor shall be as fully responsible to the City for the acts and omissions of all Subcontractors and Suppliers, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him. Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to Work to bind Subcontractors and Suppliers to Contractor by the terms of the General Conditions and other Agreement Documents, insofar as applicable to the work of Subcontractors and Suppliers, and to give Contractor the same power as regards terminating any subcontract that the City may exercise over Contractor under any provisions of the Agreement Documents.

Nothing contained in this Agreement shall create any contractual relation between any Subcontractor, Supplier and the City. The Contractor shall not award more than seventy-five percent (75%) of the Work to Subcontractors.

GC-36 INSPECTION OF WORK

GC-36.1 General

All of Work shall be subject to inspection by the City for conformity with the Drawings and Specifications. Working Drawings, Shop Drawings, data on Materials and Equipment, and material samples will be reviewed under Clause GC-28. Inspection of the balance of Work will be in accordance with this article, unless otherwise expressly indicated. Material tests conducted pursuant to Clause GC-30 and all other specified tests will be considered part of the inspection process and shall be subject to all of the provisions of this clause.

GC-36.2 Engineer's Access to Work

The Engineer shall have access to, and may inspect Work at all times and places. He shall have access to, and may inspect, Materials and Equipment to be incorporated in Work at all times at the place of production or manufacture and at the shipping point, as well as at Site of Work.

The Engineer will designate the Materials and Equipment to be inspected at the place of production or manufacture. Contractor shall give the Engineer fourteen (14) days advance written notice of the start of manufacture or production of Materials and Equipment so designated. The Engineer's failure to so designate Materials and Equipment shall in no way limit his right to inspect them at the place of production of manufacture.

Specifications or required in advance by the Engineer, Contractor shall bear all costs involved in the inspection, notwithstanding conformance of such portion of Work with the Agreement Drawings and Specifications.

GC-36.5 Inspection Not a Waiver or Acceptance

Neither the inspection nor lack of inspection of any portion of the Work, nor the presence or absence of the Engineer during performance of any of the Work, nor acceptance of the whole or any part of the Work by the Engineer, nor any possession taken by the City or its employees shall operate as a waiver of any provision of this Agreement or any power herein reserved to City or any rights to damages herein provided. Should an error in the estimate, or conclusive proofs of defective Work or materials used by or on the part of Contractor be discovered after the final payment has been made, the City reserves the right to claim and recover by process of law such sums as may be sufficient to correct the error or to make good the defects in the Work and Materials.

GC-36.6 Correction of Non-Compliant Work

If the Contractor is found to have Work that fails to meet the intent of the Plans and Specifications, or is in other aspects unsuitable he may be issued a notice of non-compliance on that portion of the Project Work. The Contractor shall remedy the defective or incorrect Work within twenty-four (24) hours unless a different schedule is agreed to in writing. This non-compliance status may be issued on temporary installations that fail to protect the Work or site conditions.

GC-37 CITY'S AUTHORITY

The City shall have authority to decide all questions as to interpretation and fulfillment of Agreement requirements, including, without limitation, all questions as to the prosecution, progress, quality and acceptability of Work. The City may implement and enforce its decisions by orders, instructions; notices, and other appropriate means.

Any oral decision, order, instruction, or notice of the City will be confirmed in writing. Such confirmation shall state the specific subject of the decision, order, instruction, or notice and its date, time, place, author and recipient. All communications between City and Contractor or its representative will be through the City.

Inspectors may be appointed to inspect all Materials used and all Work done. Such inspection may extend to all or any part of the Work and to the preparation or manufacture of the Materials to be used. Inspectors will not be authorized to approve or accept any portion of the completed Work or to issue instructions contrary to the

Plans and Specifications. Inspector will have authority to reject defective Material and to suspend Work that is being improperly done, subject to the final decision of the City. Inspector shall, in no case, act as foreman or perform other duties for Contractor.

GC-38 PROGRESS PAYMENTS

GC-38.1 Progress Estimates

The Contractor shall submit to the Engineer for approval, in the form directed or acceptable to the Engineer, a complete schedule of values of the various portions of the Work, including quantities and unit prices, aggregating the Agreement Price (except in cases and to the extent that accepted unit prices form the basis of payment). The schedule shall subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction and to coordinate with the progress schedule required under the Special Conditions, and shall be supported by such data to substantiate its correctness as the Engineer may require. Each item in the schedule of values shall include its proper share of overhead and profit. An unbalanced breakdown providing for overpayment to the Contractor on items of Work which would be performed first will not be approved. The schedule of values, when approved by the Engineer, shall be used only as a basis for the Contractor's monthly request for payment and shall not be used for additions to or deductions from the Agreement Amount.

Subject to the provisions of this clause, Contractor shall prepare a written report for the Engineer's approval, on City furnished forms, of the total amount of value of Work performed under the proposal items of Agreement to the time of such estimate and in accordance with the progress report based on the approved schedule.

No progress estimate or payment shall be considered an approval or acceptance of any work performed, material, or equipment furnished. All estimates and payment will be subject to correction in subsequent estimates and the final estimate.

Progress payments will be made for all completed activities and for suitably stored materials as herein provided.

GC-38.2 Progress Payments

Upon completion of each monthly estimate of Work performed and Materials furnished, the Engineer, subject to the provisions of the Agreement Documents, shall recommend payment to the Contractor for the estimated value of such Work, Materials and Equipment, less the amount of all prior payments and all liquidated damages and other amounts to be deducted or retained under the Agreement. Contractor will be paid one

hundred (100%) percent, less retainage, of the cost of Materials received and properly stored but not incorporated into the Work. Payments for Materials or Equipment stored on the Site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Engineer to establish the City's title to such Materials or Equipment or otherwise protect the City's interest, including applicable insurance. No progress estimate or payment needs to be made when, in the Engineer's judgment, the increment in the estimated value of Work performed and Materials and Equipment furnished since the preceding estimate is less than Ten Thousand Dollars (\$10,000.00). Contractor will be paid on or before the twenty-fifth day following receipt of the approved estimate.

GC-38.3 Retention from Progress Payments

The amounts retained by the City from each progress payment shall be as follows:

- A. Withholding ten percent (10%) of the estimated value of the Work performed until the progress payments including retainage total fifty percent (50%) of the Agreement Price.
- B. After progress payments, including retainage, total fifty percent (50%) of the Agreement Price, no more retainage shall be withheld, provided that the Engineer determines that the Contractor is making satisfactory progress to ensure completion of the Work within the times specified therefor, and that the Contractor is performing the Work within the requirements of the Agreement Documents.
- C. Upon receipt of written request from the Contractor, the City may reduce retainage to the Contractor for payment of retainage to Subcontractors who have completed their Work. If such retainage is released, the Contractor shall furnish the City with an affidavit certifying that all monies due the Subcontractor have been paid. If the City determines that the released retainage has not been paid to the Subcontractor, the amount released shall be reinstated.
- D. The City may reinstate ten percent (10%) withholding if the Engineer determines that the Contractor is not making satisfactory progress to ensure completion of the work and all portion thereof within the times specified therefor, or if there is other specific cause for such withholding.

GC-38.4 Additional Payment Conditions

- A. The submission and approval of the Project Network Schedule and periodic updates thereof, as required by the Schedule requirements of the Special Conditions, shall be an integral part and basic element of the application upon

which Progress Payments shall be made. The Contractor shall be entitled to Progress Payments only as determined from the currently approved and updated schedule.

- B. The Contractor shall promptly pay each Subcontractor upon receipt of payment from the City, out of the amount paid to the Contractor on account of such Subcontractor's Work, the amount to which said Subcontractor is entitled, reflecting the percentage actually retained, if any, from payments to the Contractor on account of such Subcontractor's Work. The Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payments to their Subcontractors in similar manner.
- C. The City may, on request and at its discretion, furnish to any Subcontractor, if practicable, information regarding the percentages of completion or the amounts applied for by the Contractor and the action taken thereon by the City on account of Work done by such Subcontractor.
- D. Neither the City nor the Engineer shall have any obligation to pay or to see to the payment of any Subcontractor, except as may otherwise be required by law.
- E. No certification of Progress Payment (any progress payment), or any partial or entire use or occupancy of the Project by the City, shall constitute an acceptance of any Work not fully in accordance with the Contract Documents.
- F. Any and all funds paid to Contractor pursuant to the City-Contractor Agreement are hereby declared to constitute trust funds in the hands of Contractor, to be applied first to the payment of claims of Subcontractors, laborers, and Suppliers arising out of the Work, to claims for utilities furnished and taxes imposed, and to the payment of premiums on surety and other bonds and on insurance, before application to any other purpose. Whenever required by the Engineer, it shall be the duty of Contractor to file with the Engineer a verified statement, in form satisfactory to the Engineer, certifying the amounts then due and owing from Contractor for labor and materials, setting forth therein the names of the person whose charges or claims for labor or materials are unpaid, and the undisputed amount due to each respectively.
- G. No payments made hereunder by City to Contractor prior to Final Payment shall be deemed conclusive as to the actual value of the Work performed by Contractor or of Contractor's performance of the Agreement.
- H. City reserves the right to issue any Progress Payment and Final Payment by check jointly to Contractor and any Subcontractor or Supplier at City's option.

- I. Should the City fail to issue any Progress Payment within sixty (60) days of approval of an acceptable monthly estimate of Work performed and Materials furnished, annual interest on the payment amount may accrue at the Prime Rate, plus one percent.
- J. The Prime Rate shall be based on that published in the Wall Street Journal on the first business day of January or June, whichever has most recently passed, of the current year. This clause shall supersede the Georgia Prompt Payment Act and any modifications or successors to it. Nothing stated herein shall invalidate any other conditions of Progress Payment approval.

GC-38.5 Payments Withheld

- A. The City may decline to approve payment and may withhold any payment, in whole or in part, to the extent necessary to reasonably protect the City from loss because of:
 1. Defective Work not remedied;
 2. Third party claims filed or reasonable evidence indicating probable filing of such claims;
 3. Failure of the Contractor to make payments properly to Subcontractors, or for labor, Materials or Equipment;
 4. Reasonable evidence that the Work cannot be completed for the unpaid balance of the Agreement Price;
 5. Damage to the City or another contractor;
 6. Reasonable evidence that the Work will not be completed within the Agreement Time;
 7. Persistent failure to carry out the Work in accordance with the Agreement Documents;
 8. Failure of the Contractor to fully comply with the Schedule requirements of the Special Conditions;
 9. Failure to comply with insurance and safety requirements; or
 10. Failure to keep current "As-Built" Records.
- B. When the grounds in Paragraph GC-38.5 A., above are removed, payment shall be made for amounts withheld because of them.

GC-39 SUBSTANTIAL COMPLETION (“Substantial Completion”)

GC-39.1 Certificate of Substantial Completion

When the Contractor considers that the Work, or a designated portion thereof which is acceptable to the City, is Substantially Complete as defined in Paragraph GC-3, the Contractor shall prepare for the Engineer a list of items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Agreement Documents. When the Engineer, on the basis of an inspection, determines that the Work or designated portion thereof is Substantially Complete, they will then prepare a Certificate of Substantial Completion of the Work which shall establish the Date of Substantial Completion of the Work, shall state the responsibilities of the City and the Contractor for security, maintenance, heat, utilities, damage to the Work and insurance and shall fix the time within which the Contractor shall complete the items listed therein. The Certificate of Substantial Completion of the Work shall be submitted to the City and the Contractor for their written acceptance of the responsibilities assigned to them in such Certificate.

GC-39.2 Retainage Adjustment

Upon Substantial Completion of the Work or designated portion thereof, and upon application by the Contractor and approval by the Engineer, the City shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof as provided in the Agreement Documents and in accordance with the City-Contractor Agreement.

GC-39.3 Warranty Commencement

Warranties required by the Agreement Documents shall commence on the Date of Final Completion of the Project or designated portion thereof unless otherwise provided in the certificate of Substantial Completion of the Work or designated portion thereof.

GC-39.4 Waiver of Claims

The acceptance of Substantial Completion payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the application for payment for the Substantial Completion payment, and except for the retainage sums due at final acceptance.

GC-40 FINAL PAYMENT ("Final Payment")

GC-40.1 Certificate for Final Payment

Following the Engineer's issuance of the certificate of Substantial Completion of the Work or designated portion thereof, and the Contractor's Completion of the Work, the Contractor shall forward to the Engineer a Written Notice that the Work is ready for final inspection and acceptance, and shall also forward to the Engineer a final Application for Payment. Upon receipt, the Engineer will make the necessary evaluations. When the Engineer finds the Work acceptable under the Agreement Documents and the Agreement fully performed, the Engineer will issue a certificate for Payment that will approve the Final Payment due the Contractor.

GC-40.2 Final Payment Conditions

Neither the Final Payment nor the remaining retainage shall become due until the Contractor submits to the Engineer:

1. An affidavit that all payrolls, bills for Materials and Equipment, and other indebtedness connected with the Work have been paid or otherwise satisfied;
2. Consent of surety, if any, to Final Payment;
3. Clear title for all vehicles and/or trailers, if any, to remain as City property;
4. Complete set of as-built record Drawings;
5. Documentation for all state sales taxes paid by Contractor including completed State Department of Revenue Refund forms and all necessary back up documentation required by the Department of Revenue;
6. If required by the Engineer or City, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising out of the Agreement, to the extent and in such form as may be designated by the Engineer or City. If any Subcontractor refuses to furnish a release or waiver required by the Engineer or City, the Contractor may furnish a bond satisfactory to the City to indemnify the City against any such loss. If any lien or indebtedness remains unsatisfied after all payments are made, the Contractor shall refund to the City all monies that the latter may be compelled to pay in discharging such

lien, or other indebtedness including all costs and reasonable attorneys' fees; and

7. As a condition of Final Payment on the Project, the Contractor shall, prior to final payment, complete and submit to the City, all of the invoice documentation and the State of Georgia Revenue Department forms required to obtain the sales tax refund on all applicable equipment expenditures. This submittal shall include the certified forms and auditable back-up necessary to substantiate the expenditures for State refund.

GC-40.3 Waiver of Claims by City

The making of Final Payment shall, after the Date of Substantial Completion of the Project, constitute a waiver of all claims by the City except those arising from:

1. Unsettled liens and third party claims against the City or the Engineer;
2. Faulty or defective Work appearing after Substantial Completion of the Work;
3. Failure of the Work to comply with the requirements of the Agreement Documents;
4. Terms of any special warranties required by the Agreement Documents; or
5. Damages incurred by the City resulting from lawsuits brought against the City, the Engineer, or their agents, employees, or representatives because of actions or omissions on the part of the Contractor, his Subcontractors, Suppliers, or any of their employees, agents, or representatives.

GC-40.4 Waiver of Claims by Contractor

The acceptance of Final Payment shall, after the Date of Substantial Completion of the Project, constitute a waiver of all claims by the Contractor, except those previously made in writing and identified by the Contractor as unsettled at the time of the Final Application for Payment.

GC-41 CHANGES AND EXTRA WORK

GC-41.1 Authority For Changes

The Engineer may make changes in the Drawings or Specifications and in the quantities of Work to be done under the Agreement.

GC-41.2 Change Orders

Without invalidating the Agreement, the Engineer may at any time, or from time to time, by written order, order additions, deletions, or revisions in the Work. These will be authorized by Change Orders. Upon receipt of the Change Order, Contractor shall promptly proceed with the Work involved. If any price or scope of the Work or an extension or shortening of the Agreement Time is involved, an equitable adjustment will be made within the Change Order. In the event the Agreement Price is increased by Change Order, the penal amount of the Payment and Performance Bonds shall be increased as provided for in Appendix B. All changes in the Work authorized by Change Order shall be performed under the applicable Conditions of the Agreement Documents.

GC-41.3 Written Notice

The Engineer may, at the request of Contractor, issue interpretations, clarifications and other instructions as to the intent of the Agreement Documents, in the form of Written Notices. The Engineer may also, at any time, make changes in the details of the Work by issuance of a Written Notice. Upon receipt of such a Written Notice containing interpretations clarifications and other instructions, Contractor shall proceed with the Work and comply with the Written Notice unless Contractor believes that such Written Notice entitles him to a Change in Agreement Price or Time or both.

Should Contractor believe that such Written Notice entitles him to change in Agreement Price or Time, or both, he shall give the Engineer notice in writing thereof within seven (7) days after receipt of the Written Notice. Thereafter within thirty (30) days, Contractor shall document the basis for the change in Agreement Price or Time. The Engineer shall render a timely, written decision on the Contractor's request for a change in Agreement Price or Time. Should the Engineer determine that the Contractor is not entitled to a change in Agreement Time or Price, the Contractor shall proceed as directed upon receipt of the Engineer's decision. Failure to proceed shall constitute a breach of Agreement and shall be a cause for the termination of the Agreement. Request for a Change Order arising out of a Written Notice will not be considered without the attachment thereto of a copy of the referenced Written Notice. No claim by Contractor will be allowed if asserted after Final Payment under this Agreement.

**Part II, General Conditions
FC-4943, Annual Contract to Construct
Sidewalks, Driveways, Curbs and Gutters**

GC-41.4 Extra Work

Extra Work consists of new and unforeseen Work determined by the Engineer not to be covered by any of the various items for which there is a proposal price or by combination of such items.

GC-41.5 Variation In Quantities

Wherever the estimated quantities of work to be done and materials to be furnished under this Agreement are shown in any of the documents including the Bid, they are given for use in comparing proposals and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by City to complete the Work contemplated by this Agreement, and such increase or diminution shall in no way vitiate this Agreement, nor shall any such increase or diminution give cause for claims or liability for damages.

GC-42 CHANGE ORDERS

GC-42.1 General

The Agreement Price may only be changed by a Change Order. Each change will be set forth in a Change Order prepared by the Engineer and approved by City. Change Order will specify (a) all additional work to be done and work to be omitted, if any, in connection with the change; (b) the basis of compensation to the Contractor for additional or omitted work; and (c) any adjustment of the time of completion of the Work. If the Engineer determines that a change requiring additional Work will cause delay in completion of Work, the Engineer will grant an equitable time extension for the changed Work, or a subsequent Change Order may be issued at such time as the extent of such delay can be determined.

Upon receipt of a Change Order, Contractor shall comply therewith and perform each item of Work set forth therein, furnishing all labor, Material, and Equipment necessary therefor, in the same manner as if such Work were originally included in the Agreement. In the absence of a Change Order, Contractor shall not be entitled to payment or an extension of the time of completion on account of any changes made.

GC-42.2 Methods Of Payment

The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Agreement Price shall be determined by the following method which is most advantageous to City, as determined by the Engineer:

- A. Where the Work involved is covered by unit prices contained in Agreement Documents, by application of unit prices to the quantities of the items involved;
- B. By mutual acceptance of a lump sum, based on a detailed breakdown of anticipated costs plus Contractor's fee for overhead, small tools, and profit. The Contractor and all Subcontractors shall be entitled to the same fees as specified in Section GC-42.2 C. and GC-42.3 E; or
- C. On the basis of the actual cost of the Work plus a Contractor's fee for overhead, small tools and profit. This method of payment is herein referred to as Force Account Work, and is further described in GC-42.3. Contractor's fee for Force Account Work performed by his own forces shall be twenty percent (20%) for direct labor and payroll burdens; five percent (5%) for all purchased material; and Contractor's fee for subcontracted work shall be as defined in Section GC-42.3 E.

GC-42.3 Force Account Work

When authorized by a Change Order, Contractor may perform Work on a Force Account basis and will be paid actual costs and a fee for properly allocated charges which may include labor, bond premium, supplies and Materials, Equipment and subcontract billings, incurred in the performance of such Force Account Work as more particularly described below:

- A. Labor: For all labor and for foremen in direct charge of the specific operations, Contractor shall receive the actual rate of wage in effect at the time the Force Account Work is performed for each and every hour that said laborer and foreman are actually engaged in such Work. Said agreed rate shall be no higher than that regularly paid the employee. A foreman shall not be used where there are fewer than two (2) laborers employed, except with the written consent of the Engineer. Contractor shall receive the actual costs paid to or in behalf of workmen, by reason of fringe benefits, including but not limited to, social security contribution, unemployment, excise and payroll taxes, workmens' compensation, health and retirement benefits, sick leave, vacation and holiday pay. Expenses of working after hours, on holidays or on Saturdays and Sundays, shall be included to the extent authorized by the Engineer. Subsistence and travel allowance where required by collective bargaining agreements shall be included.

The charges for labor shall include all classifications through foremen when engaged in the actual and direct performance of the Work. They shall not include charges for such overhead personnel as assistant

Effective as of any termination of the Agreement, Contractor hereby assigns to City all of the Contractor's interest in those subcontracts and purchase orders entered into by Contractor prior to termination which the City specifically requests by Written Notice. All Subcontractors and Purchase Orders shall provide that they are freely assignable by Contractor to the City and its assigns. City shall be at liberty to negotiate with and engage (for itself) any Subcontractors, Suppliers, or others that Contractor dealt with prior to termination.

GC-59.3 Rights and Remedies

- A. The duties and obligations imposed by the Agreement Documents and the rights and remedies available thereunder shall be in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.
- B. No action or failure to act or to require in any one or more instances upon the strict performance of any one or more of the provisions of the Agreement Documents, or to exercise any right herein contained or provided by law by the City or the Engineer, shall constitute a waiver of any right or duty afforded any of them under the Agreement, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach hereunder, nor shall it be construed as a waiver of the right to subsequently demand strict performance or exercise such rights, and the rights shall continue unchanged and remain in full force and effect, except as may be specifically agreed in writing.
- C. The Contractor agrees that it can be adequately compensated by money damages for any breach of this Agreement which may be committed by the City and hereby agrees that no default, act, or omission of the City, or the Engineer, shall constitute a material breach of the Agreement entitling the Contractor to cancel or rescind the provisions of this Agreement or (unless the City shall so consent or direct in writing) to suspend or abandon performance of all or any part of the Work. The Contractor hereby waives any and all rights and remedies to which it may otherwise be or become entitled, save only his right to money damages.

GC-59.4 Unenforceability of any Clause

If any clause of this Agreement is held as a matter of law to be unenforceable or unconscionable, the remainder of the Agreement shall be enforceable without such clause.

GC-59.5 Obligation to Perform

Contractor shall carry on the Work and adhere to the Progress Schedule during and notwithstanding all disputes or disagreements with City. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as Contractor and City may otherwise agree in writing.

GC-59.6 Labor Relations

Work on the Project may be performed by both union and nonunion separate contractors, Subcontractors, Suppliers, and other entities and persons. In the event of any strike, picket, sympathy strike, work stoppage, or other form of labor dispute at the Project whether directed at the Contractor, other separate contractors, Subcontractors, Suppliers or other persons, Contractor shall continue to perform its Work required hereby without interruption or delay. In the event the Contractor fails to continue its Work without interruption or delay, because of any or such events, the City, in addition to all other rights it has in the Agreement Documents and at law, may terminate the Agreement after giving Contractor forty-eight (48) hours written notice of its intent to do so for reason of Contractor's failure to perform. Additionally, if Contractor is party to one or more labor agreement, Contractor shall take all reasonable action to avoid any Work stoppage, and in the event of a work stoppage, Contractor shall within twenty-four (24) hours take all legal action permitted by such labor agreements or by law in order to expedite resumption of Work on this Project.

GC-59.7 Covenant Not to Sue

Should the City elect to terminate the employment of the Contractor for default as provided herein, then the Contractor covenants that it will not file any suit or proceeding of any kind against the City by reason thereof, until the City shall have either abandoned the Project or completed the Contractor's Work as required under the Agreement. If the Contractor should breach this "Covenant Not To Sue," then Contractor shall be liable to the City for all costs resulting to the City therefrom, including, without limitation, all attorneys' fees expended by the City in defending said suit or proceeding, unless a positive determination is made therein that the Contractor's termination by the City was motivated by fraud and bad faith and was without justification of any kind.

GC-60 STATEMENT OF NON-DISCRIMINATION

During the performance of this Agreement, Contractor agrees to comply with all provisions of Part 2, Chapter 2, Article X, Division 11, including Section 2-1414 of the Code of Ordinances, City of Atlanta, and to warrant the following:

Part II, General Conditions
FC-4943, Annual Contract to Construct
Sidewalks, Driveways, Curbs and Gutters

7. Adoption of the EBO Plan submitted in its response to the Invitation for Bids or Requests for Proposals obligations under this Agreement, as approved by the Office of Contract Compliance.
8. Submission of monthly reports on the forms and to the extent required by the Director of the Office of Contract Compliance, to be due on or before the 5th day of each month following the award of the Work set forth in this Agreement.
9. The Contractor further agrees that breach of the EBO provisions contained herein shall subject them to any or all of the following penalties:
 - a). Withholding of ten percent (10%) of all future payments under the involved eligible project until it is determined that the Contractor is in compliance.
 - b). Withholding of all future payments under the involved Project until it is determined that the Contractor is in compliance.
 - c). Refusal of all future bids or offers for any eligible project with the City of Atlanta or any of its department or divisions until such time as the Contractor demonstrates that there has been established and there shall be carried out all of the EBO provisions contained herein.
 - d). Cancellation of the eligible project.

GC-62 WAGE RATES AND REPORTING PROCEDURES

GC-62.1 Certified Payrolls

The Contractor shall maintain accurate payroll records and be prepared to submit certified copies for the prime contractor and all subcontractors. Payrolls reporting an employee for the first time must contain the complete name, address, and social security of the employee.

GC-62.2 Submittals

All required payrolls shall be submitted to the Office of Contract Compliance. Any questions concerning these submittals can be addressed:

**Part II, General Conditions
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Sidewalks, Driveways, Curbs and Gutters**

- A. Cooperate with laboratory personnel, provide access to Work and/or manufacturer's requirements.
- B. Provide to laboratory, preliminary representative samples, in required quantities, of materials to be tested.
- C. Furnish copies of mill test reports.
- D. Furnish required labor and facilities.
 - 1. To provide access to Work to be tested
 - 2. To obtain and handle samples at the site
 - 3. To facilitate inspection and tests
 - 4. Build or furnish a holding box for concrete cylinders or other samples as required by the laboratory.
- E. Notify laboratory sufficiently in advance of operation to allow for the assignment of personnel and schedules of tests.
- F. Copies of all correspondence between the Contractor and testing agencies shall be provided to the City.

GC-64. 4 Quality Assurance

Testing, when required, will be in accordance with all pertinent codes and regulations and with procedures and requirements of the American Society for Testing and Materials (ASTM) or applicable association, society, etc. (SSPC, etc.)

GC-64. 5 Product Handling

Promptly process and distribute all required copies of test reports and related instructions to ensure all necessary retesting or replacement of materials with the least possible delay in progress of the Work.

GC-64.6 Furnishing Materials

The Contractor shall be responsible for furnishing all materials necessary for testing.

GC-64.7 Code Compliance Testing

Inspections and tests required by codes or ordinances or by a plan approval authority, and made by a legally constituted authority, and made by a legally constituted authority, shall be the responsibility of and shall be paid for by the Contractor, unless otherwise provided in the Agreement Documents.

GC-64.8 Convenience Testing

**Part II, General Conditions
 FC-4943, Annual Contract to Construct
 Sidewalks, Driveways, Curbs and Gutters**

PART III

SCOPE OF WORK

PART III

SCOPE OF WORK

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INTRODUCTION

SCOPE

This section describes the scope of work for this *Annual Contract to construct Sidewalks, Driveways, Curbs, Gutters and other miscellaneous concrete work for the Department of Public Works*. The provisions of this section shall not supersede the Bidding Requirements, Contract Forms or General Conditions of the contract.

PROJECT DESCRIPTION

The work to be performed under this contract shall consist of furnishing all labor, materials, tools, equipment and incidentals to perform the work described.

1.03 WORK ORDERS (Sample Work Order Next Page)

- A. The Contractor shall perform the work in accordance with the terms and conditions described herein on a Work Order basis. The Work Order incorporates by the reference all the terms and conditions contained in the Agreement between the City and the Contractor.

 - B. The general description of the Work and services to be performed by the Contractor is set forth in the Agreement and incorporated in the Work Order reference. The detailed description of the Work and services to be performed by the Contractor shall be set forth in the Work Order and incorporated in the Agreement herein by this reference.
- A. The general description of the Period of Performance to be performed by the Contractor shall be set forth in the Agreement and incorporated herein reference the schedule for the work to be performed by the Contractor shall be set forth in the Work Order.

1.04 WORK ORDER PROCESS

- A. The Department Of Public Works Initiates Work Order Process: The City of Atlanta Project Manager will initiate a Work Order. The Contractor shall submit a proposal to perform the work outlined in the Work Order. The Work Order Request shall include a description of the nature and extent of the Work, its scope, Work start and finish dates and a budget center and a list of deliverables.
- B. Contractor Proposal: Contractor shall submit a proposal addressing the Work Order Request, which proposal shall include a Work Order Proposal, level of effort, key personnel, contracted unit prices and draft Near Term Schedule (NTS), see Section 01310 1.05. The proposal shall use cost elements identified on the Bid Form attached hereto and incorporated herein by reference.
- C. Execution of the Work Order: The City of Atlanta Project Manager and Contractor shall formalize the agreement reached in an executed Work Order. An executed Work order is a Work Order that is signed by both parties.
- D. Elements of the Work Order: A Work Order shall include, at a minimum: contract number, detailed scope of work, start date, finish date, NTS schedule for completion of the Work Order, key personnel, and level of effort, labor requirements and unit costs.
- E. Disagreement with Work Order. The Contractor shall notify the City of Atlanta Project Manager within (3) business days if there is a dispute over the finalized Work Order. The Contractor shall not perform any Work until the parties have reached resolution.
- F. No work shall occur until the Work Order is signed by all parties and Department of Public Works approvals are obtained, and the written Work Order Notice-to-Proceed (WONTP) is issued.
- G. It is the responsibility of the Contractor to gather and become familiar with all site information.
- H. Notice to Proceed: The City of Atlanta Project Manager shall issue a notice to proceed for the Work Order the Contractor shall perform the work in accordance with the approved Near Term Schedule.

1.05 MILESTONE DATES - The contractor shall be required to complete the following activities as outlined in the Work Order.

1.06 CONSTRUCTION SCHEDULES -, See Section 1310.

1.07 SEQUENCE OF CONSTRUCTION

- A. General
 - 1. The contractor shall be solely responsible for all construction sequencing.
 - 2. Coordinate timing of all work with the City.

3. The completion of specific preliminary sequencing tasks specified will be required prior to any significant site demolition.
- B. Sequence Submittal: Submit a proposed construction sequence with start and completion of tasks to City of Atlanta Project Manager for review.
- C. Alternate Sequences: Contractor may propose alternate sequences that may reduce the disruption and/or streamline the tasks of this contract.

1.08 MULTIPLE CONTRACTS

A. Due to the magnitude of work and time restraints, the City reserves the right to award more than one contract under this bid. These contracts may not be identical. Should this right be exercised, the City will award work on a project-by-project basis. Selection will be based on each project's estimated quantities, the contractor's bid, the contractor's work performance and the contractor's availability to do the work.

1.09 TERM OF CONTRACT The term of this contract shall be for a period of (1) year, with the provision that the City may exercise its option to renew this contract under the original terms and agreements for another (1) year contract for the next (2) two subsequent years.

PART 1 GENERAL

1.01 SCOPE

- A. The bid form lists each item of the project for which payment will be made. No payment will be made for any items other than those listed in the bid form.
- B. Required items of work and incidentals necessary to complete the work which are not specifically listed in the bid, form shall be considered as incidental to the work. All costs thereof, including contractor's overhead costs and profit, shall be considered as included in the lump sum or unit prices bid for the various bid items.
- C. Work includes furnishing all labor, equipment, tools and materials to, complete the work satisfactorily, in place, as specified and as indicated by the Work Order.

1.02 DESCRIPTIONS

- A. Measurement of an item of work will be by the unit listed on the bid form.
- B. Final payment quantities shall be determined by field measurements accepted and verified by the City of Atlanta. Contractor shall provide as built sketches clearly depicting the work constructed with each pay application for the work performed that period.
- C. Unless otherwise stated in the Work Order, no separate payment will be made for any item of work, materials, parts, equipment, supplies or related items required to perform and complete the work. The costs for all such items required shall be included in the price bid for the work.
- D. Payment will be made by extending unit prices multiplied by quantities provided and then summing the extended prices to reflect actual work. Such price and payment shall constitute full compensation to the contractor for furnishing all plant, labor, equipment, tools and materials
- E. "Products" to complete the work shall mean materials or equipment permanently incorporated into the work.

End of Section

PART 1 GENERAL

1.01 SCOPE

- A. The work under this section includes, but is not necessarily limited to, cutting and patching work as indicated on the drawings or as directed by the engineer, herein specified and as necessary for proper and complete performance of the work.
- B. Requirements for cutting and patching may be described in various sections of these specifications.
- C. Execute cutting, including excavating and filling, or patching of work required to:
 - 1. Make several parts fit properly.
 - 2. Uncover work to provide for installation of ill-timed work.
 - 3. Remove and replace defective work.
 - 4. Remove and replace work not conforming to requirements of the contract documents.
 - 5. Remove samples of the installed work as specified for testing.
 - 6. Install specified work in existing construction.
- D. In addition to contract requirements, upon written instruction of the engineer:
 - 1. Uncover work to provide for the engineer's observation of covered work.
 - 2. Remove samples of the installed materials for testing.
 - 3. Remove work to provide for alteration of existing work.
- E. Protection of Work
 - 1. Do not endanger any work by cutting or altering the work or any part of it.
 - 2. Do not cut or alter the work of another contractor without written consent of the engineer.

1.02 SUBMITTALS

- A. Prior to cutting which affects the structural safety of the project or the work of another contractor, submit a written notice to the engineer requesting consent to proceed with cutting. The notice shall include:
 - 1. Identification of project
 - 2. Description of defective work

Cutting and Patching

3. Necessity for cutting
 4. Effect on other work or on the structural integrity of the project.
 5. Description of the work including:
 - a. Scope of cutting and patching
 - b. Subcontractor and trades to execute work
 - c. Products proposed to be used
 - d. Extent of refinishing
 6. Alternatives to cutting and patching.
 7. Designation of party responsible for the cost of cutting and patching.
- B. Cost Estimate: Prior to cutting and patching performed on instruction of the engineer, submit a cost estimate.
- C. Should conditions of the work or the schedule necessitate alternative materials or methods, submit a written recommendation to the engineer that includes:
1. Compelling conditions for alternative materials or methods
 2. Recommended alternative materials or methods
 3. Submittals as required for substitutions
- D. Uncovered Work: Submit written notice to the engineer designating the time that the work will be uncovered for the engineer's observation.

1.03 PAYMENT FOR COST

- A. Costs caused by ill work or work not conforming to the contract documents, including costs for additional services of the engineer, shall be paid for by the contractor:
- B. Costs for work done on the instructions of the engineer, which is not shown on the drawings or specified, other than for defective or non-conforming work, will be paid for in accordance with the general conditions.

1.04 CASH ALLOWANCES

A. General

1. The Contractor shall include in the bid total, the cash allowance figure inserted in Bid Item #56 of the Bid Form included within the contract documents. This allowance shall cover the cost of any item not included in the bid document. Service(s) covered under this allowance shall include, but not be limited to, those identified in "Part D - Schedule of Cash Allowances," and any other City pre-approved service(s) required to perform the project intent. Under no circumstance will a service be paid for out of this allowance if that item is covered within the specification as being incidental to the item of work being performed.
2. Prior to performing any work under this section, the contractor shall submit a written proposal stating the Contractor's rate (including handling costs, labor, overhead, profit and other expenses) to perform the requested service(s) under this allowance and the Contractor's rate shall be in units as requested by the City. The City reserves the right to reject the contractor's rate should the City determine that it is inconsistent with the general market for similar work. Upon denying the rates submitted, the City may exercise its privilege to secure another contractor or to procure its own work force to perform the specified service(s) under this allowance. The engineer shall be the sole authority in determining whether any item shall qualify for payment from the cash allowance.
3. No payment will be made for nonproductive time on the part of testing personnel due to the contractor's failure to properly coordinate testing activities with the work schedule or the contractor's problems with maintaining equipment in good working condition. The contractor shall make all necessary excavations and shall supply any samples of materials necessary for conducting compaction and density tests.
4. No payment shall be provided for services not pre-approved by the City and which fail to verify required results.
5. No payment shall be made for additional services required as a result of negligence of the contractor or his sub-contractors while performing work under this contract.
6. The contractor's handling costs, labor, overhead, profit and other expenses contemplated for the bid items shall be included in the items to which they pertain and not in allowances.
7. Rework due to poor materials or rejection resulting from non compliance shall be at the expense of the Contractor.

- B. Should the net cost be more or less than the specified amount of the allowance, the contract will be adjusted accordingly by change order. The amount of change order will not recognize any changes in handling costs at the site, labor, overhead, profit and other expenses caused by the adjustment to the allowance.

Cutting and Patching**C. Documentation**

1. The contractor shall submit copies of invoices for subcontractors, testing firms, and materials with each periodic payment request.
2. The contractor shall submit test results as requested by the engineer.

D. Schedule of Cash Allowances

1. Soils and Concrete Testing: Cash allowance may be utilized for the services of a geotechnical engineering firm and testing laboratory to verify soils conditions, including trench excavation and backfill, pile bearing resistance, if applicable, and similar issues and for the testing of concrete cylinders for poured-in-place concrete.
2. Blasting Monitoring: Cash allowance may be utilized for the services of an independent, qualified specialty subcontractor to monitor the blasting, when directed by the engineer.
3. Utility Repair: Cash allowance may be utilized for the services of (a.) having a certified plumber to adjust utilities (water, sewer, gas, etc.) in slopes generated as a result of the construction of sidewalk, (b.) having a certified plumber to modify, as necessary, sprinkler systems constructed in City right-of-way when directed by the engineer.
4. Traffic Control: Cash allowance may be utilized to secure the services of a second certified flagman and/or qualified off-duty officer to serve as the second flagman for traffic control on projects that so warrant, when directed by the engineer. This amount shall not be used for traffic cones, barricades, or warning signs as may be warranted under a City standard lane closure or partial lane closure permit for the general welfare and safety of the public. NOTE: The use of a single flagman and basic traffic control devices is incidental to installing the sidewalk.

1.05 CLEARING AND GRUBBING

- A. No separate payment shall be made for clearing and grubbing.
- B. The cost of moving and reestablishing landscape features, including labor and materials, shall be included in the unit price bid for the item to which it pertains.

1.06 EROSION AND SEDIMENTATION CONTROL**A. General**

1. Payment shall be paid per unit bid price for temporary and/or permanent erosion and sedimentation controls for the item of work to which it pertain.

Cutting and Patching

2. No payment will be made for any portion of the project for which temporary erosion and sedimentation controls are not properly maintained.
3. Erosion control devices will be required near creeks, streams and other water ways to insure siltation does not occur downstream. At the discretion of the engineer, the contractor is required to install and maintain these devices.
- B. Sediment Barriers: Payment will be made for sediment barriers, whether specifically hay bales or silt fence, as required to meet state laws and shall include installation, maintenance, repair, replacement, and removal as per the unit bid price for the item of work to which it pertain.
- C. Grassing
 1. Payment shall be at the contract bid price per square yard.
 2. Payment shall be made only for the final permanent perennial grassing. All costs for grassing, including seeding, fertilizing, mulching as well as temporary measures, shall be included in the price bid for grassing.

1.07 EARTHWORK

- A. Earth Excavation
 1. No separate payment will be made for earth excavation except as it pertains to the bid item for **Bank (Slope) Excavation**. The cost of such work and all costs incidental thereto shall be included in the price bid for the item to which the work pertains.
 2. No separate payment will be made for providing sheeting, bracing and timbering.
- B. Foundation Excavation
 1. Costs for undercutting, foundation preparation, and removal and replacement of unsuitable material, where shown on the drawings or specified, shall be made at the unit price bid for the items as identified in this section.
 2. Payment for removal of unsuitable material and replacement with suitable material (only as directed by the engineer) which is not shown on the drawings or specified shall be made at the unit price bid for:
 - a. **Replacement of Unsuitable Material with Crushed Stone**
 - b. **Replacement of Unsuitable Material with Earth**
 3. Where ordered by the engineer, undercutting of solid rock will be paid utilizing the cash allowance appropriation.
 4. Additional costs of corrective work, made necessary by unauthorized excavation of earth or rock, shall be borne by the contractor.

Cutting and Patching

- C. Dewatering: No separate payment will be made for dewatering required to accomplish the work.
- D. Backfilling: No separate payment will be made for backfilling or excavation, hauling and placement of borrow material. The cost of all such work and all costs incidental thereto shall be included in the unit price bid for the item to which the work pertains.

1.08 TRENCH EXCAVATION AND BACKFILL

- A. No separate or additional payment will be made for any special or unique method, means, techniques or equipment necessary for the contractor's compliance with these specifications, regulatory requirements, permits, laws or regulations which govern this project.
- B. Initial Backfill
 - 1. No separate payment shall be made for initial backfill.
 - 2. No separate payment shall be made for drying out the initial backfill material in order to meet the compaction requirements.
 - 3. No separate payment shall be made for the adding of moisture to the initial backfill materials in order to meet the compaction requirements.
- C. Final Backfilling
 - 1. No additional payment will be made for additional material when excavated materials are used.
 - 2. No separate payment shall be made for drying out the final backfill material in order to meet the compaction requirements.
 - 3. No separate payment shall be made for the adding of moisture to the final backfill materials in order to meet the compaction requirements.
- D. Additional Material: No separate payment will be made for additional earth or fill materials imported to the project site

1.09 REMOVING AND REPLACING PAVEMENT

- A. Payment for removing and replacing pavement will be made as a separate item based on the measured quantity replaced at the unit price in the bid. The unit price bid shall include all costs associated with removing and replacing pavement, including providing select backfill if necessary, traffic control and temporary measures for maintaining traffic.

Cutting and Patching

- B. Payment for soils testing shall be made from the cash allowance. No payment shall be made for tests, which fail to verify required results.
- C. No additional payment will be made for removing and replacing damaged adjacent pavement.
- D. Costs for removal and replacement of sidewalks and curb and gutter shall be included in the unit price bid for the item to which it pertains.
- E. Payment for pavement resurfacing shall be made at the unit price bid. Limits eligible for payment shall be based on widths and lengths as shown on the drawings or as directed by the engineer. Measurement shall be made based on record drawing or field-delineated dimensions.

End of Section

PART 2

2.01 PAYMENT FOR BID ITEMS

The primary specifications governing this work are defined as follows:

Item No. 1: City Standard, 4" Concrete Sidewalk.

Item No. 2: City Standard 4" Concrete Sidewalk With Imprinted Hexagonal Pattern.

Item No. 3: City Standard 4" Concrete Sidewalk With Imprinted Brick Pattern.

Item No. 4: City Standard Monolithic Concrete Sidewalk And Curb.

Measurement and payment shall be at the contract bid price per square yard (Curb & Sidewalk).

Item No. 5: City Standard Monolithic Concrete Sidewalk And Curb With Imprinted Hexagonal Pattern.

Item No. 6: City Standard Monolithic Concrete Sidewalk And Curb With Imprinted Brick Pattern.

Item No. 7: City Standard Concrete Driveway Apron, 6" Thick.

Item No. 8: City Standard Concrete Driveway Apron, 8" Thick.

Item No. 9: City Standard Wheel Chair Ramp, 6" Thick.

Incorporating 2 ft by 4 ft fiberglass truncated domes as manufactured by ADA Solutions, Amor Tile, or City approved equivalent.

Item No. 10: City Standard Combination Concrete Curb and Gutter, 8" X 30".

Item No. 10a City Standard Combination Concrete Curb and Gutter, 8" X 24"

Item No. 11: City Standard Concrete Header Curb.

Item No. 12: City Standard Granite Curb, Grades "A" and "B".

This work shall consist of furnishing and installing granite curbing to the lines and grades as detailed in the plans, the standard details or as directed by the engineer. Work shall include, but is not limited to, demolition and removal of existing rock headers or other curbing, excavation, the installation of 3,000 p.s.i. concrete footings at curb joints, backfill and compaction as may be necessary to achieve the design intent, all of which, unless otherwise provided herein, are considered incidental to the work and no additional compensation shall be paid the contractor therefore.

Grade "A" granite curb shall have a split face and sawed top and otherwise conform to the requirements for Grade "B" granite curb.

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Grade "B" granite curb shall be installed as directed herein and meet the following requirements:

A. Foundation, Excavation and Preparation: The bottom of the trench shall be thoroughly tamped, any soft or yielding material shall be removed to the depth ordered by the engineer, refilled with suitable material, and tamped in layers not more than 4 inches thick. Foundations to receive the granite curb shall be dry and firm before curb is placed.

B. Setting Curb: The curb shall be set true to line and grade. Adjacent sections are to be closely fitted. The curbing shall be thoroughly rammed and mauled into place; each joint shall be placed on concrete bed as shown on the plans, the standard details or as directed by the engineer.

The backfilling shall be of suitable material approved by the engineer, and shall be placed and rammed to firm compaction in layers not over 4 inches thick, just after the curb is set. When the curb is set on a fill or when more than 6 inches of the curb is above the surrounding ground, the contractor shall protect the curb by banking dirt behind it, level with the top of the curb and at least 18 inches wide at the top.

C. All granite for Type B curb shall be of the thickness and height indicated on the plans, the standard details or as directed by the engineer and shall be cut in lengths of 8' or more as may be required for radial curb. The minimum length of curb used for closing sections of the work shall be in 4'-0". The use of cast concrete sections of any length for closure purposes shall not be permitted. Tops of all curbs shall be dressed to an even, smooth surface for the full length, have straight even edges and slope 1/4 of an inch from the back down to the front edge. The curbing shall have the ends squared so as to permit joints being made not more than 1/2 inch wide for the full depth. The back face shall be hand dressed to a depth of at least 4 inches below the exposed part of curb. The front face shall be hand dressed for 8 inches. Dressed surfaces shall not have projections or depressions more than 3/8 inch from the plane surface to the curb.

The granite from which the curbing is made shall have a percentage of wear of not more than 65. Shop drawings shall be provided for each segment of radial curb to be installed and at each driveway and wheel chair ramp. The curb shall be continuous at driveways and wheel chair ramp. No distinction shall be made between radial or straight curb for payment purposes.

Where it is necessary to remove asphalt pavement and roadway base to install the curb, this demolition and removal shall be considered as included in the bid price for installation. Prior to acceptance of the work, the asphalt pavement base and sub-base will be restored in accordance with the standard plans for the street classification applicable or as directed by the engineer. Payment for pavement and base replacement shall be at the contract bid price for these items of work. Limits of such payment shall be a line one foot from and parallel to the face of curb set for asphalt concrete finish course and base and from the same point for crushed aggregate base, but extending to a distance one (1) behind the face of curb.

Measurement of City Standard Grade "B" granite curb shall be in linear feet as field measured of the work acceptably installed.

Payment shall be at the contract bid price in linear feet for the work in place, complete.

Item No. 13: Reset Or Adjust Existing Granite Curb.

This work will consist of resetting or adjusting existing granite curb to lines and grades as shown on the plans, the standard details, or as directed by the engineer. Work shall include, but is not limited

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to, the removal of asphalt concrete or other paving required to accomplish the work, excavation, backfilling and compaction, the installation or 3,000 p.s.i. concrete footings at joints, the replacement of damaged sections of granite curbing with new granite curb sections, the restoration of roadway sub-base, base and asphalt removed to install the work and all other work necessary and incidental to accomplishing the intent. Except as otherwise provided herein, no additional compensation shall be paid the contractor for these tasks.

Work shall conform to these special conditions, item no. 14, City Standard Grade Granite Curb, Grades "A" or "B".

Where applicable, such as on concrete driveway aprons or wheel chair ramps, where granite and combination concrete curb and gutter exist or are proposed, the granite curb section passes through the depressed section of the driveway or wheel chair ramps, requiring the use of special cut sections of granite curb in these instances and, in the case of combination concrete curb and gutter, requiring valley gutter, D.O.T. Standard 9031J.

In instances where concrete driveway apron or wheel chair ramps are installed separately from the curb, the replacement of portions of the granite or combination concrete curb and gutter is a part of that installation. For pay purposes, the replacement of depressed granite curb sections shall be paid as granite curb. The replacement of valley gutter sections shall be paid as combination curb and gutter.

Measurement will be made in linear feet of granite curb reset or adjusted as field measured.

Payment shall be at the contract bid price for resetting or adjusting existing granite curb.

NOTE: Work covered in items 1 through 13 shall conform to Section No. 02513 of this document, these special conditions and to the standard details. Work shall include, but is not limited to: demolition and removal of existing pavement, sidewalks, or curb; removing and reinstalling existing mailboxes disturbed during construction but are in good condition; removing and reinstalling existing traffic signs, street signs, MARTA post, school signs, etc., disturbed during construction but are in good condition; grading, excavating or filling and compacting to achieve required elevations, grades and slopes as specified; the saw cutting of pavement as required to establish clean edge for curb construction; the removal of vegetation, shrubbery, and small trees up to 6" in diameter; the replacement of sub-base, base and asphalt concrete required to be removed to construct the work; the provision of fiber expansion joint material where specified in the standard details or as directed by the engineer; the furnishing, placement and finishing of the concrete; the clean up of the site, restoration of the site and disposal of materials excavated such as debris from demolition or from the work; all of which are included in the bid item applicable and, unless otherwise provided herein, no additional compensation shall be paid therefore.

Where imprinted hexagonal or brick patterns are specified, this is to be accomplished by manual methods by pressing a fabricated steel form into the finished surface of the cast concrete prior to the initial set of the concrete and while the concrete mass is still sufficiently plastic to permit molding by this method. The imprinted pattern thus implanted shall be enhanced using hand methods, which will include steel trowels, edging tools, soft brooms and other appropriate implements. The steel forms to be used for this purpose shall be fabricated by the contractor to the specifications furnished by the engineer. The resulting indentations in the concrete surfaces of the finished work shall not be less than one quarter (1/4) inch in depth below the finished surface of the concrete, result in a clear and neat tile or brick pattern, regularly spaced and have the appearance of the type

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of pavement intended to be represented. On imprinted sidewalk, the six-inch top of curb area is not to be imprinted.

On driveway aprons or wheel chair ramps installed in existing curb or sidewalk or where sidewalk and curb are not part of the work as a whole, the existing sidewalk and curb is to be saw cut in the form of the wheel chair ramp. The existing pavement is to be removed to neat lines and grades, the specified fiber expansion material installed along with subgrade granite curb, effected sections of which shall be removed and replaced with new granite curb, either straight or radial, as appropriate in conformance with the standard details. In the case of existing combination concrete curb and gutter or monolithic concrete sidewalk and curb, the required curb, gutter, pavement and base necessary to install the work in accordance with the standard details shall be removed and replaced. All work necessary to accomplish the plan intent shall conform to these special conditions, the standard plans and the street and sidewalk specifications. Sidewalk or curb and gutter adjacent to but not part of the work and damaged by the contractor's operations shall be removed and replaced at the contractor's expense. Curb, gutter, sidewalk, pavement and base removed and replaced as part of the work and necessary to accomplish the plan intent, as determined by the engineer, shall be paid as specified under the appropriate items of the work defined herein.

Measurement of this work shall be in the bid unit quantities applicable based on field measurement of the completed work acceptably constructed.

Payment shall be made at the contract bid price in the bid unit quantity applicable for the work in place complete.

Item No. 14: Grassing

This work will consist of ground preparation, furnishing and planting, seeding, fertilizing and strawing of all disturbed areas within the limits of the right of way and easement (right of entry) areas adjacent to the right of way as shown on the plans, except those areas designated by the engineer to remain natural. This work shall conform to GDOT Specification Section 700.

Measurement and payment shall be at the contract bid price per square yard.

Item No. 15: Furnish And Install City Of Atlanta Standard Sidewalk Flumes Furnished By Others.

The work will consist of furnishing and installing the City standard sidewalk flume in accordance with the plans, the standard details or as directed by the engineer. Work will include demolition of existing sidewalk, curb and gutter, if any, excavation, backfill and compaction to meet plan line and grades, the setting of the flume, placing and finishing concrete, replacing sidewalk curb and gutter required to be removed to install the work and the clean up and disposal of debris from the construction, which tasks are considered incidental to the bid item of the work, and for which no additional compensation shall be paid.

Measurement of this work shall be by the unit, each, acceptably installed.

Payment shall be at the contract bid price for each sidewalk flume installed, in place, complete.

Cutting and Patching**Item No. 16: Adjust Existing Manhole Rings And Covers Or Catch basin Grates, Frames and Covers To Grade, If Required.**

This work will consist of adjusting manholes and catch basins to grade in accordance with the plans, standard details or as directed by the engineer. In most instances, this will mean raising the structures. Adjustments in grade of these elements requires the removal of one or more existing leveling courses, usually brick, to a sound structural element of the basin or manhole and the raising of the frame and cover or hood and grate by relaying new, sound brick.

In instances where type "A" or "B" catch basins and grates and frames are adjusted to new grade and when the curb and gutter are not combination, it is usually necessary to remove a section of roadway pavement extending from ten (10) feet on the upstream side of the catch basin to ten feet below the downstream side and extending from the face of curb a distance of six (6) feet into the traveled way. The section of pavement is warped to drain to the catch basin.

Where concrete curb and gutter is proposed or exists, it will be necessary to install or remove and replace a section of the combination curb and gutter. The gutter section is wrapped to the catch basin and curbs transition as detailed in the standards. In instances where it is necessary to modify the pavement (most), pavement replacement will conform to the standard details for residential street pavement sections in the case of residential streets. On streets classified as "commercial," the crushed aggregate base section shall be increased to six (6) inches and the black base (or "B" binder) section shall be increased to six and a half (6 1/2) inches, with all other elements being unchanged. Sub-base, base and asphalt pavement replacement shall conform to the street and sidewalk specifications and paid for under the appropriate item of the work.

In the case of manholes, a total of a maximum of three (3) courses of vertical brick shall be permitted to make any grade adjustment, including any existing grade adjustment that may be in place. If more courses of brick either exist or are required to make the adjustment needed, the brick corbel (in the case of a brick manhole) or the pre-cast manhole riser (in the case of a pre-cast manhole) shall require adjustment. In the case of a brick manhole, part or all of the corbel may have to be demolished and reconstructed, reducing the corbel overhang per brick course. In the case of a pre-cast manhole, the pre-cast corbel section may have to be removed and a modified riser section added before the corbel section is replaced. It may be necessary to add manhole steps to the heightened corbel or riser. Pavement replacement around the manhole in streets shall be in accordance with the standard details for the type of street applicable. Limits of pavement for pavement replacement shall be a four-by-four feet concentric square about the manhole. At the option of the engineer, the asphalt concrete base course may be substituted with high early strength six (6) inch concrete, which will be paid for at the bid price applicable for black base or "B" binder asphalt concrete, 6" thick.

Brick and mortar used for these purposes shall meet the requirements of Section 02513. Pre-cast manhole risers required for these purposes shall meet the requirements of the standard plans, the sewer specifications and bear the stamp of the City inspector affixed at the plant of fabrication.

Measurement of this work shall be by the unit, each acceptably installed.

Payment shall be at the contract bid price for each manhole or catch basin adjusted, complete, in place.

Cutting and Patching**Item No. 17: Install GA DOT Std. 1033 or COA Type "C" Catch Basin.**

This work will consist of installing a single wing catch basin structure in accordance with the plans, standard details or as directed by the engineer, in order to accomplish the plan intent. Work under this item shall include, but is not limited to, furnishing all casting necessary to make pipe connections regardless of skew, and for all materials, forms, and the disposal of surplus material. Work may include demolishing an existing structure and installing new structure in the same location. Depth of structure under this item shall not exceed 10 vertical feet.

Brick and mortar used for this purpose shall meet the requirements of Section 02513.
Measurement of this work shall be by the unit for each structure, in place, complete, and accepted.

Item No. 18: Install COA Std. Type "B" Catch Basin.

This work will consist of installing a catch basin structure in accordance with the plans, standard details or as directed by the engineer, in order to accomplish the plan intent. Work under this item shall include, but is not limited to, furnishing all casting necessary to make pipe connections regardless of skew, and for all materials, forms, and the disposal of surplus material. Work may include demolishing an existing structure and installing new structure in the same location. Depth of structure under this item shall not exceed 10 vertical feet.

Brick and mortar used for this purpose shall meet the requirements of Section 02513.
Measurement of this work shall be by the unit for each structure, in place, complete, and accepted.

Item No. 19: Install GA DOT Std. 9031S, 9031U or COA Std. Drop Inlet.

This work will consist of installing a standard drop inlet structure trapped or Type "B," in accordance with the plans, standard details or as directed by the engineer, in order to accomplish the plan intent. Work under this item shall include, but is not limited to, furnishing all casting necessary to make pipe connections regardless of skew, and for all materials, forms, and the disposal of surplus material. Work may include demolishing an existing structure and installing new structure in the same location. Depth of structure under this item shall not exceed 10 vertical feet.

Brick and mortar used for this purpose shall meet the requirements of Section 02513.
Measurement of this work shall be by the unit for each structure, in place, complete, and accepted.

Item No. 20: Install GA DOT Std. 1034 Catch Basin or Double Type "B" Catch Basin.

This work will consist of installing a double wing catch basin or a double type "B" catch basin structure in accordance with the plans, standard details or as directed by the engineer, in order to accomplish the plan intent. Work under this item shall include, but is not limited to, furnishing all casting necessary to make pipe connections regardless of skew, and for all materials, forms, and the disposal of surplus material. Work may include demolishing an existing structure and installing new structure in the same location. Depth of structure under this item shall not exceed 10 vertical feet.

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Brick and mortar used for this purpose shall meet the requirements of section 02513.
Measurement of this work shall be by the unit for each structure, in place, complete, and accepted.

Item No. 22: Adjust Existing Valve Boxes, Meter Boxes, Electrical Pull Boxes And Similar Insets In The Work To Grade.

This work shall consist of adjusting various insets in the pavement to plan line and grades as shown on the plans, standard details or as directed by the engineer. Work shall include demolition of existing pavement, excavation, raising of the valve casing, meter box, pull box or other inset to appropriate grade, the installation of brick footings under metal or plastic casings, the seating of these footings with sand or other appropriate means and the backfill and compaction around the adjusted casing or box, all of which are considered incidental and included in the bid item of the work and no additional payment shall be paid therefore.

Brick and mortar used for this purpose shall meet the requirements of section 02513.

Measurement of this work shall be by the unit for each valve box, meter box, electrical pull box or similar inset acceptably adjusted.

Payment shall be at the contract bid price for each unit acceptably adjusted.

Item No. 22A: Adjustments to water lines under 2-inch.**Item No. 22B: Adjustments to sewer lines 6-inch and under.****Item No. 23: Provide and Install Cleanout Boxes, Valve Boxes and/or Meter Boxes To Grade.**

This work shall consist of providing and installing various insets in the pavement to plan line and grades as shown on the plans, standard details or as directed by the engineer. Work shall include demolition of existing sidewalk (if applicable), excavation, providing and installing of the cleanout boxes, valve casing, meter box, other inset to appropriate grade, the installation of brick footings under metal or plastic casings, the seating of these footings with sand or other appropriate means and the backfill and compaction around the adjusted casing or box, all of which are considered incidental and included in the bid item of the work and no additional payment shall be paid there of.

Brick for these purposes shall conform to section 02513.

Measurement of this work shall be by the unit for each cleanout box, valve box, meter box, or similar inset acceptably provided and installed.

Payment shall be at the contract bid price for each unit acceptably provided and installed.

Cutting and Patching**Item No. 24: City Of Atlanta Standard Masonry Wall, Height Classification Applicable.**

This work will consist of furnishing and installing the gravity masonry retaining walls as detailed in the plans, the standard details (MS-1), or as directed by the engineer. Work will include, but is not limited to, demolition of existing walls, pavement or structures, excavation, fill, backfill and compaction as may be required to meet plan lines and grades, the installation of concrete footings, weep holes and insets in the work, the clean up of and disposal of debris from the work and such other work as may be required to accomplish the intent, all of which are considered incidental to the bid item of the work described hereunder and for which no additional compensation shall be paid the contractor.

This work shall conform to sections 02513.

Wall heights shall be measured from the top of the footing.

Payment shall be at the contract bid price per square foot in place, complete.

Item No.25: Concrete Segmented /Interlocking Retaining Wall System

See Section 02530 for complete specification and summary. Item No. 27: Crushed Aggregate Base, 4" Thick.

Item No. 28: Crushed Aggregate Base, 6" Thick.

Measurement shall be in square yards as may be limited or modified by other sections of these special conditions based on field measurement of the work as acceptably installed.

Payment shall be at the contract bid price in square yards for the work in place, complete.

Item No. 29: Asphalt Concrete Black Base Or "B" Binder, 4 1/2" Thick.**Item No. 30: Asphalt Concrete Black Base Or "B" Binder, 6 1/2" Thick.****Item No. 31: Asphalt Concrete "E" Or "F" Surface Course, 1 1/2" Thick.**

Measurement shall be in square yards as may be limited or modified by other sections of these special conditions based on field measurement of the work as acceptably installed.

Payment shall be at the contract bid price in square yards for the work in place, complete.

Cutting and Patching**Item No. 32: Tree Removal (6" - 18" Diameter).**

This work involves removing 6" to 18" diameter trees as shown in the plans and/or as directed by the engineer to be removed. The diameter of the tree shall be determined by measuring the circumference (converting it to its diameter equivalent) of the trunk at the DBH (Diameter Breast Height – approx. 42" up from the ground or root, as determined by the engineer). **NOTE:** The engineer shall make final determination of a tree size. Work will include, but is not limited to, cutting down the tree, removing the stumps by extraction with hydraulic equipment or chipping to 18" depth, discarding of the chips and backfilling the stump hole with engineer-approved fill. All spoil material generated by this operation shall be removed and disposed of outside of the right-of-way. The method of removal and location of the dump shall be the responsibility of the contractor, subject to the approval of the engineer. Removal of trees 6" diameter or less shall be incidental to the installation of sidewalk and shall receive no additional payment.

Measurement of this work will be for each tree and stump removed as shown on plan and/or as directed by the engineer.

Payment shall be at the contract bid price for each tree and stump removed, complete.

Item No. 33: Tree Removal (Greater than 18" - 36" Diameter).

This work involves removing 18" to 36" diameter trees as shown in the plans and/or as directed by the engineer to be removed. The diameter of the tree shall be determined by measuring the circumference (converting it to its diameter equivalent) of the trunk at the DBH (Diameter Breast Height – approx. 42" up from the ground or root, as determined by the Engineer). **NOTE:** The engineer shall make final determination of a tree size. Work will include, but is not limited to, cutting down the tree, removing the stumps by extraction with hydraulic equipment or chipping to 18" depth, discarding of the chips and backfilling the stump hole with engineer-approved fill. All spoil material generated by this operation shall be removed and disposed of outside of the right-of-way. The method of removal and location of the dump shall be the responsibility of the contractor, subject to the approval of the engineer.

Measurement of this work will be for each tree and stump removed as shown on plan and/or as directed by the engineer.

Payment shall be at the contract bid price for each tree and stump removed, complete.

Item No. 34: Tree Removal (Greater than 36" diameter).

This work involves removing 36" and greater diameter trees as shown in the plans and/or as directed by the engineer to be removed. The diameter of the tree shall be determined by measuring the circumference (converting it to its diameter equivalent) of the trunk at the DBH (Diameter Breast Height – approx. 42" up from the ground or root, as determined by the Engineer). **NOTE:** The engineer shall make final determination of a tree size. Work will include, but is not limited to, cutting down the tree, removing the stumps by extraction with hydraulic equipment or chipping to 18" depth, discarding of the chips and backfilling the stump hole with engineer-approved fill. All spoil material generated by this operation shall be removed and disposed of outside of the right-of-way. The method of removal and location of the dump shall be the responsibility of the contractor, subject to the approval of the engineer.

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Measurement of this work will be for each tree and stump removed as shown on plan and/or as directed by the engineer.

Payment shall be at the contract bid price for each tree and stump removed, complete.

Item No. 34A Tree Replacement for Trees 0"-3"

Item No. 34B Tree Replacement for Trees greater than 3"

Work for item nos. 28 through 31

This work shall conform to Georgia Department of Transportation Standard Specifications, 1993 Edition, Section 643. Work shall include, but is not limited to, removing existing fence, providing incidental clearing and grading as may be required to install new fence to line and grade, replacing of existing gate where shown on plan or as directed, cleaning up of and disposal of debris from the work, and such other work as may be required to accomplish the intent, all of which are considered incidental to the bid item of the work, described hereunder and for which no additional compensation shall be paid the contractor.

Measurement of this work shall be in square feet along the fence from outside of end post for each continuous run of fence, including gates.

Item No. 39: Installation, Removal, Reset, and Disposal of Hand Rail.

- 1) Handrail shall be the product of a company normally engaged in the manufacture of pipe railing. Railing shall be shop assembled in lengths not to exceed 24 feet for field erection.
- 2) Handrails shall be designed to withstand a 200# concentrated load applied in any direction to the top rail.
- 3) The supplier shall submit calculations to the Engineer for approval. Testing of base casting or base extrusions by an independent lab or supplier's lab (if supplier's lab meets the requirements of the Aluminum Association) will be an acceptable substitute for calculations. Calculations will be required for approval of all other design aspects.
- 4) Post spacing shall be a maximum of 6'-0". Posts and railings shall be a minimum of 1 1/2" schedule 40 aluminum pipe, alloy 6105-T5, ASTM B-429 or B-221. The handrail supplier shall show that their posts are of adequate strength to meet the loading requirements. If the supplier's posts are not of adequate strength, the supplier may reduce the post spacing or add reinforcing dowels or do both in order to meet the loading requirements.
- 5) The handrail shall be made of pipes joined together with component fittings. Samples of all components, bases, toeplate and pipe must be submitted for approval. Components that are glued or pop-riveted at the joints will not be acceptable. All components must be mechanically fastened with stainless steel hardware. Handrail and components shall be "TUFRAIL" as manufactured by Thompson Fabricating Company (Birmingham, AL.) or approved equal.

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Measurement of this work shall be by the unit for each mailbox and post removed and a new wood post with mailbox installed.

Payment shall be at the contract bid price for each mailbox and post removed and a new mailbox with wood post installed and accepted, complete, in place.

All mailboxes shall be installed in PVC sleeves except where installed in grass strips.

Item No. 46: Steel Post Mailboxes.

This item shall be identical to wood post mailboxes, except that mailbox post shall be fabricated steel acceptable to the engineer.

All mailboxes shall be installed in PVC sleeves except where installed in grass strips.

Item No. 48: Bank (Slope) Excavation

This work will consist of excavating, sloping and hauling earthwork generated from an area as specified on the plans or as directed by the engineer. This item is not intended to compensate for routine grading. Work under this item shall pertain only to cases where the slope would otherwise require a retaining wall. The engineer shall determine where this item shall apply. Work shall include, but is not limited to, excavating and reworking the existing topography to provide the appropriate slope, removal of trees (6" diameter or less), removal of encumbrances, hauling of the earthwork to an approved dump site, cleanup and disposal of debris from the work, and such other work as may be required to accomplish the intent. No additional compensation beyond the unit price bid shall be paid for work herein described.

Measurement of this work shall be per cubic yard of earthwork.

Payment shall be at the contract bid price per cubic yard.

Item No. 49: Replacement of Unsuitable Material with Crushed Stone

This work will consist of removal and replacement of unsuitable material with crushed stone from an area as specified on the plans or as directed by the engineer. Work shall include, but is not limited to, excavating unsuitable material, hauling and discarding material to an approved dump site, filling excavated area with crushed stone, compacting material to required density, cleanup and disposal of debris from the work and such other work as may be required to accomplish the intent, all of which are considered incidental to the bid item of the work described hereunder and for which no additional compensation shall be paid the contractor.

Measurement of this work shall be per cubic yard of crushed stone material.

Payment shall be at the contract bid price per cubic yard. Such payment will be full compensation for unsuitable soil removed, replaced (with crushed stone) and accepted, complete, in place.

Item No. 50: Installation, Maintenance, Removal, and Disposal of Safety Fence

This work will consist of installation, maintenance, and removal of safety fence. The fence shall be installed as indicated on the plan or as directed by the engineer

Measurement of this work shall be per unit foot.

Payment shall be at the contract bid price per linear foot for completed in place.

Item No. 51: Installation, Maintenance, Removal, and Disposal of Silt Fence

This work will consist of installation, maintenance, removal, and disposal of silt fence. The fence (type A, B, or C) shall be installed as indicated on the approved erosion and sediment control plan.

Measurement of this work shall be per unit foot.

Payment shall be at the contract bid price per linear foot for completed in place.

Item No. 52: Installation, Maintenance, Removal, and Disposal of Hay Bales

This work will consist of installation, maintenance, removal, and disposal of hay bales as it relates to erosion and sediment control. The bales shall be installed as indicated on the approved erosion and sediment control plan.

Measurement of this work shall be per unit foot.

Payment shall be at the contract bid price per linear foot for completed in place.

Item No. 53: 12"-18" Thick Rip Rap Hand Placed

This work shall conform to section 3.10 of the sewer specifications and the standard details. This work shall consist of removal and replacement of unsuitable material with acceptable fill from an area as specified on the plans or as directed by the engineer. Work shall include, but is not limited to, excavating unsuitable material, hauling and discarding material to an approved dump site, filling excavated area with acceptable borrow material, compacting material to required density, cleanup and disposal of debris from the work and such other work as may be required to accomplish the intent, all of which are considered incidental to the bid item of the work described hereunder and for which no additional compensation shall be paid the contractor.

Measurement of this work shall be based on dimensions of work as shown on plans, details, or as directed by the engineer.

Payment shall be at the contract unit price per ton (TON) for the work accepted in place and completed.

Item No. 54: Replacement of Unsuitable Material with Earth

This work will consist of removal and replacement of unsuitable material with acceptable fill from an area as specified on the plans or as directed by the engineer. Work shall include, but is not limited to, excavating unsuitable material, hauling and discarding material to an approved dump site, filling excavated area with acceptable borrow material, compacting material to required density, cleanup and disposal of debris from the work and such other work as may be required to accomplish the intent, all of which are considered incidental to the bid item of the work described hereunder and for which no additional compensation shall be paid the contractor.

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Measurement of this work shall be per cubic yard of earth fill material as installed.

Payment shall be at the contract bid price per cubic yard of earth material. Such payment will be full compensation for unsuitable soil removed, replaced (with fill) and accepted, complete, in place.

Item No. 55: Mobilization

This item provides for mobilization compensation for small projects only. Work will consist of all preparations and operations necessary to perform sidewalk, driveway and/or curb work, including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site. A mobilization charge will be allowed under this item only if that project qualifies by meeting the following criteria:

Project must be a CDBG (Community Development Block Grant) project where the combined length of sidewalk with driveway apron is less than or equal to 200 feet. Combined lengths of sidewalk, driveways and/or curbs are to be determined from field measurements made by the city engineer.

Project must have written approval by the city engineer to receive this mobilization fee.

Only one mobilization payment will be made for each project that qualifies herein as stipulated.

Groups of at least three or more individual projects located within a 1000-foot radius of each other as determined from a map book (the scale must be less than or equal to 1" = 2000') will qualify for only one mobilization payment for that group of projects. However, should the value of the projects within 1,000 foot radius exceed the allowance of 200LF of sidewalk, mobilization shall not be paid.

Measurement of this work shall be for each qualifying and approved mobilization as a lump sum unit.

Payment shall be a lump sum payment at the contract bid price for each qualified and approved mobilization.

Item No. 57: Sidewalk Demolition

Measurement and payment shall be at the contract bid price per square yard.

Item No. 58: Curb Demolition

Measurement and payment shall be at the contract bid price per linear foot.

Item No.61: Reset Signs

Payment shall be for the contracted price for each sign.

Item No.66: Relocation of utilities due to construction of new retaining walls

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PART 2 PRODUCTS

2.02 MATERIALS

All products and materials shall conform to the requirements of the specifications for the type of work being performed, except where no products are specified in these specifications for the item being replaced; then the products and materials shall be of an equivalent type, quality, thickness and width of the item removed.

PART 3 EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions of the work, including elements subject to movement or damage during cutting and patching, or excavating and backfilling.
- B. After uncovering work, inspect conditions affecting the installation of new products.

3.02 PREPARATION

- A. Provide shoring, bracing and support as required to maintain structural integrity of the project.
- B. Provide protection for other portions of the project and provide protection from the elements.

3.03 PERFORMANCE

- A. Execute fitting and adjustments of products to provide finished installation that complies with specified tolerances and finishes.
- B. Execute cutting and demolition by means that will prevent damage to other work and will provide proper surfaces to receive installation of repairs and new work.
- C. Execute excavating and backfilling as specified in the technical specifications.
- D. Restore work which has been cut or removed and install new products to provide completed work in accordance with the requirements of the contract documents.
- E. Refinish entire surfaces as necessary to provide an even finish. Continuous surfaces shall be refinished to the nearest intersection and assemblies shall be entirely refinished.

END OF SECTION

CONSTRUCTION STAKING

PART 1 GENERAL

1.01 SCOPE

- A. Construction staking shall include all of the surveying work required to layout the work and control the location of the finished project. The contractor shall have the full responsibility for constructing the project to the correct horizontal and vertical alignment, as shown on the drawings, as specified, or as ordered by the engineer. The contractor shall assume all costs associated with rectifying work constructed in the wrong location.
- B. From the information shown on the drawings and the information to be provided as indicated under project conditions below, the contractor shall:
 - 1. be responsible for setting reference points and/or offsets, establishment of baselines, and all other layout, staking, and all other surveying required for the construction of the project;
 - 2. safeguard all reference points, stakes, grade marks, horizontal and vertical control points, and shall bear the cost of re-establishing same if disturbed;
 - 3. stake out the permanent and temporary easements or the limits of construction to ensure that the work is not deviating from the indicated limits;
 - 4. be responsible for all damage done to reference points, baselines, center lines and temporary bench marks, and shall be responsible for the cost of re-establishment of reference points, baselines, center lines and temporary bench marks as a result of the operations.
- C. Baselines shall be defined as the line to which the location of the work is referenced, i.e., edge of pavement, road centerline, property line, right-of-way or survey line.
- D. Record drawing surveys shall be performed in accordance with Section 01720 of these specifications.

1.02 PROJECT CONDITIONS

- A. The drawings provide the location and/or coordinates of principal components of the project. The alignment of some components of the project may be indicated in the specifications. The engineer may order changes to the location of some of the components of the project or provide clarification to questions regarding the correct alignment.
- B. The survey points, control points, and baseline to be provided to the contractor shall be limited to only that information which can be found on the project site by the contractor.

1.03 QUALITY ASSURANCE

- A. The contractor shall furnish documentation, prepared by a surveyor currently registered in the State of Georgia, that staking is being done to the horizontal and vertical alignment shown in the contract documents. This requires that the contractor hire, at the contractor's own expense, a currently registered surveyor, acceptable to the City, to provide ongoing construction staking or confirmation of such.
- B. Any deviations from the drawings shall be confirmed by the engineer prior to construction of that portion of the project.

1.04 SIDEWALKS

- A. Staking Precision: The precision of construction staking shall match the precision of a components location indicated on the drawings. Staking of utilities shall be done in accordance with generally accepted practice for the type of utility.
- B. Paved Surfaces: The contractor shall establish a reference point for establishing and verifying the paving subgrade and finished grade elevations. Any variance with plan grades shall be identified by the contractor and confirmed by the engineer prior to constructing the base.

END OF SECTION

REGULATORY REQUIREMENTS**PART 1 GENERAL**

1.01 SCOPE

- A. Permits and Responsibilities: The contractor shall, without additional expense to the City, be responsible for obtaining all necessary licenses and permits, including building permits, and for complying with any applicable federal, state, county and municipal laws, codes and regulations, in connection with the prosecution of the work.
- B. The contractor shall take proper safety and health precautions to protect the work, the workers, the public and the property of others.
- C. The contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the work, except for any completed unit of construction thereof, which may heretofore have been accepted.

END OF SECTION

PROJECT MEETINGS

PART 1 GENERAL

1.01 SCOPE

- A. Work under this section includes all scheduling and administering of pre-construction and progress meetings as herein specified and necessary for the proper and complete performance of this work.
- B. Scheduling and Administration by the City of Atlanta Project Manager.
 - 1. Prepare agenda.
 - 2. Make physical arrangements for the meetings.
 - 3. Preside at meetings.
 - 4. Record minutes and include significant proceedings and decisions.
 - 5. Distribute copies of the minutes to participants.

1.02 PRECONSTRUCTION CONFERENCE

- A. The City of Atlanta Project Manager shall schedule the preconstruction conference prior to the issuance of a Work Order.
- B. Representatives of the following parties are to be in attendance at the meeting:
 - 1. City of Atlanta Project Manager.
 - 2. Engineer.
 - 3. Contractor and superintendent.
 - 4. Major subcontractors.
 - 5. Representatives of governmental or regulatory agencies when appropriate.
- C. The agenda for the preconstruction conference shall consist of the following at a minimum:
 - 1. Distribute and discuss a list of major subcontractors and a tentative construction schedule.
 - 2. Critical work sequencing.
 - 3. Designation of responsible personnel and emergency telephone numbers.

4. Processing of field decisions and change orders.
5. Adequacy of distribution of contract documents.
6. Schedule and submittal of shop drawings, product data and samples.
7. Pay request format, submittal cutoff date, pay date and retainage.
8. Procedures for maintaining record documents.
9. Use of premises, including office and storage areas and City's requirements.
10. Major equipment deliveries and priorities.
11. Safety and first aid procedures.
12. Security procedures.
13. Housekeeping procedures.
14. Work hours.

1.03 PROJECT COORDINATION MEETINGS

- A. Schedule regular bi-weekly meetings as directed by the City of Atlanta Project Manager.
- B. Hold called meetings as the progress of the work dictates.
- C. The meetings shall be held at the location requested by the City of Atlanta Project Manager.
- D. Representatives of the following parties are to be in attendance at the meetings:
 1. City of Atlanta Project Manager
 2. Engineer.
 3. Contractor and superintendent.
 4. Major subcontractors as pertinent to the agenda.
 5. City's representative as appropriate.
 6. Representatives of governmental or other regulatory agencies as appropriate.
- E. The minimum agenda for progress meetings shall consist of the following:
 1. Review and approve minutes of previous meetings.

2. Review work progress since last meeting.
3. Note field observations, problems and decisions.
4. Identify problems, which impede planned progress.
5. Review off-site fabrication problems.
6. Review contractor's corrective measures and procedures to regain plan schedule.
7. Review contractor's revision to the construction schedule as outlined in the Supplementary Conditions.
8. Review submittal schedule; expedite as required to maintain schedule.
9. Maintenance of quality and work standards.
10. Review changes proposed by City for their effect on the construction schedule and completion date.
11. Complete other current business.

END OF SECTION

Bar Chart Construction Schedules

BAR CHART CONSTRUCTION SCHEDULES

PART 1 GENERAL

1.01 SCOPE

- A. The work under this section includes preparing, furnishing, distributing, and periodic updating of the construction schedules as specified herein.
- B. The purpose of the schedule is to demonstrate that the contractor can complete the overall project within the contract time and meet all required interim milestones.

1.02 SUBMITTALS

- A. Overall Project Schedule (OPS)
 - 1. Submit the schedule within 10 days after date of the Notice to Proceed.
 - 2. The engineer will review the schedule and return it within 10 days after receipt.
 - 3. If required, resubmit within 10 days after receipt of a returned copy.
- B. Near Term Schedule (NTS)
 - 1. Submit the first near term schedule within 10 days of the Notice to Proceed.
 - 2. The engineer will review the schedule and return it within 10 days after receipt.
- C. Submit an update of the OPS and NTS with each progress payment request.
- D. Submit the number of copies required by the contractor, plus four copies to be retained by the engineer.

1.03 APPROVAL

Approval of the contractor's detailed construction program and revisions thereto shall in no way relieve the contractor of any of contractor's duties and obligations under the contract. Approval is limited to the format of the schedule and does not in any way indicate approval of, or concurrence with, the contractor's means, methods and ability to carry out the work.

1.04 OVERALL PROJECT SCHEDULE (OPS)

- A. The contractor shall submit to the City for approval a detailed overall project schedule of the contractor's proposed operations for the duration of the project. The OPS shall be in the form of a Gantt/bar chart.

B. Gantt/Bar Chart Schedule

1. Each activity with a duration of five or more days shall be identified by a separate bar. Activities with a duration of more than 20 days shall be sub-divided into separate activities.
2. The schedule shall include activities for shop drawing preparation and review, fabrication, delivery, and installation of major or critical path materials and equipment items.
3. The schedule shall show the proposed start and completion date for each activity. A separate listing of activity start and stop dates and working day requirements shall be provided unless the information is shown in text form on the Gantt/bar chart.
4. The schedule shall identify the notice to proceed date, the contract completion date, major milestone dates, and a critical path.
5. The schedule shall be printed on a maximum 11 x 17-inch size paper. If the OPS needs to be shown on multiple sheets, a simplified, one page, summary bar chart showing the entire project shall be provided.
6. The schedule shall have a horizontal time scale based on calendar days and shall identify the Monday of each week.
7. The schedule shall show the precedence relationship for each activity.

1.05 NEAR TERM SCHEDULE (NTS)

- A. The contractor shall develop and refine a detailed Near Term Schedule showing the day to day activities with committed completion dates, which must be performed during the upcoming 30 day period. The detailed schedule shall represent the contractor's best approach to the work, which must be accomplished to maintain progress consistent with the overall project schedule.
- B. The near term schedule shall be in the form of Gantt/bar chart and shall include a written narrative description of all activities to be performed and describe corrective action to be taken for items that are behind schedule.

1.06 UPDATING

- A. Show all changes occurring since previous submission of the updated schedule.
- B. Indicate progress of each activity and show actual completion dates.
- C. The contractor shall be prepared to provide a narrative report at the project coordination meetings. The report shall include the following:
 1. A description of the overall project status and comparison to the OPS.
 2. Identify activities, which are behind schedule and describe corrective action to be taken.

Bar Chart Construction Schedules

3. A description of changes or revisions to the project and their effect on the OPS.
4. A description of the Near Term Schedule of the activities to be completed during the next 30 days. The report shall include a description of all activities requiring participation by the engineer and/or City.

END OF SECTION

CONSTRUCTION PHOTOGRAPHS**PART 1 GENERAL**

1.01 SCOPE

- A. The contractor shall be prepared, upon request from the City, to furnish all equipment and labor materials required to provide the City with construction photographs of the project.
- B. Negatives or original electronic copy shall become the property of the City and none of the photographs herein shall be published without express permission of the City.

1.02 PRE AND POST CONSTRUCTION PHOTOGRAPHS

- A. Prior to the beginning of any work, the contractor shall take project photographs of the work area to record existing conditions.
- B. Following completion of the work, another recording shall be made showing the same areas and features as in the pre-construction photographs.
- C. All conditions, which might later be subject to disagreement, shall be shown in sufficient detail to provide a basis for decisions.
- D. The pre-construction photographs shall be submitted to the engineer within 25 calendar days after the date of receipt by the contractor of Notice to Proceed. Post-construction photographs shall be provided prior to final acceptance of the project.

1.03 PROGRESS PHOTOGRAPHS

- A. Photographs shall be taken to record the general progress of the project during each pay period. Photographs shall be representative of the primary work being performed at that time.
- B. The photographs shall include the date and time marking of the recording. All photographs shall be labeled on a tab connected to the bottom of the photo to indicate date and description of work shown.
- C. A minimum of 10 photographs shall be submitted with each request for payment. The view selection will be as agreed to with the engineer. Two prints of each photograph shall be submitted.

1.04 SUBMITTALS

- A. Photographs shall be submitted in plastic sleeves pre-punched for a 3-ring binder. Negatives shall be submitted in polyethylene preservers, 8-1/2 x 11-inches in size, equal to Print File Archival Preservers, Style No. 35-7B.

Construction Photographs

- B. Construction photographs shall be submitted with each payment request. Failure to include photographs may be cause for rejection of the payment request.

END OF SECTION

Shop Drawings, Product Data and Samples

SHOP DRAWINGS, PROJECT DATA AND SAMPLES

PART 1 GENERAL

1.01 SCOPE

- A. The work under this section includes submittal to the engineer of shop drawings, product data and samples required by the various sections of these specifications.
- B. Submittal Contents: The submittal contents required are specified in each section.
- C. Definitions: Submittals are categorized as follows:
 - 1. Product Data
 - a. Product data includes standard printed information on materials, products and systems, not specially prepared for this project, other than the designation of selections from among available choices printed therein.
 - b. Collect required data into one submittal for each unit of work or system, and mark each copy to show which choices and options are applicable to the project. Include supplier's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements, which have been checked, and special coordination requirements.
 - 2. Samples
 - a. Samples include both fabricated and un-fabricated physical examples of materials, products and units of work, both as complete units and as smaller portions of units of work, either for limited visual inspection or, where indicated, for more detailed testing and analysis.
 - b. Provide units identical with final condition of proposed materials or products for the work. Include "range" samples, not less than three units, where unavoidable variations must be expected, and describe or identify variations between units of each set. Provide full set of optional samples where the engineer's selection is required. Prepare samples to match the engineer's sample where indicated. Include information with each sample to show generic description, source or product name and supplier, limitations and compliance with standards. Samples are submitted for review and confirmation of color, pattern, texture and "kind" by the engineer. Engineer will note "test" samples, except as otherwise indicated, for other requirements, which are the exclusive responsibility of the contractor.
 - 3. Miscellaneous submittals related directly to the work (non-administrative) include warranties, maintenance agreements, workmanship bonds, project photographs, survey data and reports, physical work records, statements of applicability, quality testing and certifying reports, copies of industry standards, record drawings, field measurement data, operating and maintenance materials, overrun stock, security/protection/safety keys and similar information, devices and materials applicable to the work but not processed as shop drawings, product data or samples.

1.02 SPECIFIC CATEGORY REQUIREMENTS

- A. General: Except as otherwise indicated in the individual work sections, comply with general requirements specified herein for each indicated category of submittal. Submittals shall contain:
1. The date of submittal and the dates of any previous submittals.
 2. The project title.
 3. Numerical submittal numbers, starting with 1.0, 2.0, etc, revisions to be numbered 1.1, 1.2, etc.
 4. The Names of:
 - a. Contractor
 - b. Supplier
 - c. Supplier
 5. Identification of the product, with the specification section number, permanent equipment tag numbers and applicable drawing no.
 6. Field dimensions, clearly identified as such.
 7. Relation to adjacent or critical features of the work or materials.
 8. Applicable standards, such as ASTM or federal specification numbers.
 9. Notification to the engineer in writing, at time of submissions, of any deviations on the submittals from requirements of the contract documents.
 10. Identification of revisions on resubmittals.
 11. An 8 x 3-inch blank space for contractor and engineer stamps.
 12. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria and coordination of the information within the submittal with requirements of the work and of contract documents.
 13. Submittal sheets or drawings showing more than the particular item under consideration shall have all but the pertinent description of the item for which review is requested crossed out.

1.03 ROUTING OF SUBMITTALS

- A. Submittals and routine correspondence shall be routed as follows:
 - 1. Supplier to contractor (through representative if applicable)
 - 2. Contractor to City of Atlanta Project Manager

PART 2 PRODUCTS

2.01 SHOP DRAWINGS

- A. Unless otherwise specifically directed by the City of Atlanta Project Manager, make all shop drawings accurately to a scale sufficiently large to show all pertinent features of the item and its method of connection to the work.
- B. Submit all shop assembly drawings, larger than 11 x 17-inches, in the form of one reproducible transparency with two opaque prints or blueines.
- C. Submit all shop drawings, 11 x 17-inches and smaller, in the form of six opaque prints or blueines.
- D. One reproducible for all submittals larger than 11 x 17-inches and no more than three prints of other submittals will be returned to the contractor.

2.02 SUPPLIER'S LITERATURE

- A. Where content of submitted literature from suppliers includes data not pertinent to this submittal, clearly indicate which portion of the contents is being submitted for the engineer's review.
- B. Submit the number of copies which are required to be returned (not to exceed three) plus three copies, which will be retained by the engineer.

2.03 SAMPLES

- A. Samples shall illustrate materials, equipment or workmanship and established standards by which completed work is judged.
- B. Unless otherwise specifically directed by the engineer, all samples shall be of the precise article proposed to be furnished.
- C. Submit all samples in the quantity, which is required to be returned, plus one sample, which will be retained by the engineer.

2.04 COLORS

- A. Unless the precise color and pattern is specifically described in the contract documents, wherever a choice of color or pattern is available in a specified product, submit accurate color charts and pattern charts to the engineer for review and selection.
- B. Unless all available colors and patterns have identical costs and identical wearing capabilities, and are identically suited to the installation, completely describe the relative costs and capabilities of each.

PART 3 EXECUTION

3.01 CONTRACTOR'S COORDINATION OF SUBMITTALS

- A. Prior to submittal for the engineer's review, the contractor shall use all means necessary to fully coordinate all material, including the following procedures:
 - 1. Determine and verify all field dimensions and conditions, catalog numbers and similar data.
 - 2. Coordinate as required with all trades and all public agencies involved.
 - 3. Submit a written statement of review and compliance with the requirements of all applicable technical specifications as well as the requirements of this section.
 - 4. Clearly indicate in a letter or memorandum on the supplier's or fabricator's letterhead, all deviations from the contract documents.
- B. Each and every copy of the shop drawings and data shall bear the contractor's stamp showing that they have been so checked. Shop drawings submitted to the engineer without the contractor's stamp will be returned to the contractor for conformance with this requirement.
- C. The City may back charge the contractor for costs associated with having to review a particular shop drawing, product data or sample more than two times to receive a "No Exceptions Taken" mark.
- D. Grouping of Submittals
 - 1. Unless otherwise specifically permitted by the engineer, make all submittals in groups containing all associated items.
 - 2. No review will be given to partial submittals of shop drawings for items, which interconnect and/or are interdependent. It is the contractor's responsibility to assemble the shop drawings for all such interconnecting and/or interdependent items, check them and

Shop Drawings, Product Data and Samples

then make one submittal to the engineer along with contractor's comments as to compliance, non-compliance or features requiring special attention.

- E. **Schedule of Submittals:** Within 30 days of contract award and prior to any shop drawing submittal, the contractor shall submit a schedule showing the estimated date of submittal and the desired approval date for each shop drawing anticipated. A reasonable period shall be scheduled for review and comments. Time lost due to unacceptable submittals shall be the contractor's responsibility and some time allowance for resubmittal shall be provided. The schedule shall provide for submittal of items, which relate to one another to be submitted concurrently.

3.02 TIMING OF SUBMITTALS

- A. Make all submittals far enough in advance of scheduled dates for installation to provide all required time for reviews, for securing necessary approvals, for possible revision and resubmittal, and for placing orders and securing delivery.
- B. In scheduling, allow sufficient time for the engineer's review following the receipt of the submittal.

3.03 REVIEWED SHOP DRAWINGS

- A. **Engineer Review**
1. Allow a minimum of 30 days for the engineer's initial processing of each submittal requiring review and response, except allow longer periods where processing must be delayed for coordination with subsequent submittals. The engineer will advise the contractor promptly when it is determined that a submittal being processed must be delayed for coordination. Allow a minimum of two weeks for reprocessing each submittal. Advise the engineer on each submittal as to whether processing time is critical to progress of the work, and therefore the work would be expedited if processing time could be foreshortened.
 2. Acceptable submittals will be marked "No Exceptions Taken." A minimum of three copies will be retained by the engineer for the engineer's and the City's use and the remaining copies will be returned to the contractor.
 3. Submittals requiring minor corrections before the product is acceptable will be marked "Make Corrections Noted." The contractor may order, fabricate and ship the items included in the submittals, provided the indicated corrections are made. Drawings must be resubmitted for review and marked "No Exceptions Taken" prior to installation or use of products.
 4. Submittals marked "Amend and Resubmit" must be revised to reflect required changes and the initial review procedure repeated.

Shop Drawings, Product Data and Samples

5. The "Rejected - See Remarks" notation is used to indicate products, which are not acceptable. Upon return of a submittal so marked, the contractor shall repeat the initial review procedure utilizing acceptable products.
 6. Only two copies of items marked "Amend and Resubmit" and "Rejected - See Remarks" will be reviewed and marked. One copy will be retained by the engineer and the other copy with all remaining unmarked copies will be returned to the contractor for resubmittal.
- B. No work or products shall be installed without a drawing or submittal bearing the "No Exceptions Taken" notation. The contractor shall maintain at the job site a complete set of shop drawings bearing the engineer's stamp.
- C. Substitutions: In the event the contractor obtains the engineer's approval for the use of products other than those which are listed first in the contract documents, the contractor shall, at the contractor's own expense and using methods approved by the engineer, make any changes to structures, piping and electrical work that may be necessary to accommodate these products.
- D. Use of the "No Exceptions Taken" notation on shop drawings or other submittals is general and shall not relieve the contractor of the responsibility of furnishing products of the proper dimension, size, quality, quantity, materials and all performance characteristics, to efficiently perform the requirements and intent of the contract documents. The engineer's review shall not relieve the contractor of responsibility for errors of any kind on the shop drawings. Review is intended only to assure conformance with the design concept of the project and compliance with the information given in the contract documents. The contractor is responsible for dimensions to be confirmed and correlated at the job site. The contractor is also responsible for information that pertains solely to the fabrication processes or to the technique of construction and for the coordination of the work of all trades.

3.04 RESUBMISSION REQUIREMENTS

- A. Shop Drawings
1. Revise initial drawings as required and resubmit as specified for initial submittal, with the resubmittal number shown.
 2. Indicate on drawings all changes, which have been made other than those, requested by the engineer.
- B. Project Data and Samples: Resubmit new data and samples as specified for initial submittal, with the resubmittal number shown.

END OF SECTION

Testing Laboratory Services

TESTING LABORATORY SERVICES

PART 1 GENERAL

1.01 SCOPE

- A. This section includes testing which the City may require, beyond that testing required of the supplier, to determine if materials provided for the project meet the requirements of these specifications.
- B. This work also includes all testing required by the City to verify work performed by the contractor is in accordance with the requirements of these specifications, i.e., concrete strength and slump testing, soil compaction, etc.
- C. This work does not include materials testing required in various sections of these specifications to be performed by the supplier, e.g., testing of pipe.
- D. The testing laboratory or laboratories will be selected by the City. The testing laboratory or laboratories will work for the City.

1.02 PAYMENT FOR TESTING SERVICES

- A. The cost of testing services required by the contract to be provided by the contractor shall be paid for by the City through the cash allowance, i.e., concrete testing, soil compaction, and asphalt testing.
- B. The cost of additional testing services not specifically required in the specifications, but requested by the City or engineer, shall be paid for by the City through the cash allowance.
- C. The cost of material testing described in various sections of these specifications or as required in referenced standards to be provided by a material supplier, shall be included in the price bid for that item and shall not be paid for by the City.
- D. The cost of retesting any item that fails to meet the requirements of these specifications shall be paid for by the contractor. Retesting shall be performed by the testing laboratory working for the City.

1.03 LABORATORY DUTIES

- A. Cooperate with the city, engineer and contractor.
- B. Provide qualified personnel promptly on notice.
- C. Perform specified inspections, sampling and testing of materials.
 - 1. Comply with specified standards, ASTM, other recognized authorities, and as specified.
 - 2. Ascertain compliance with requirements of the contract documents.

- D. Promptly notify the engineer and contractor of irregularity or deficiency of work, which are observed during performance of services.
- E. Promptly submit three copies (two copies to the engineer and one copy to the contractor) of report of inspections and tests in addition to those additional copies required by the contractor with the following information included:
 - 1. Date issued
 - 2. Project title and number
 - 3. Testing laboratory name and address
 - 4. Name and signature of inspector
 - 5. Date of inspection or sampling
 - 6. Record of temperature and weather
 - 7. Date of test
 - 8. Identification of product and specification section
 - 9. Location of project
 - 10. Type of inspection or test
 - 11. Results of test
 - 12. Observations regarding compliance with the contract documents
- F. Perform additional services as required.
- G. The laboratory is not authorized to release, revoke, alter or enlarge on requirements of the contract documents, or approve or accept any portion of the work.

1.04 CONTRACTOR RESPONSIBILITIES

- A. Cooperate with laboratory personnel, provide access to work and/or supplier's requirements.
- B. Provide to the laboratory, representative samples, in required quantities, of materials to be tested.
- C. Furnish copies of mill test reports.
- D. Furnish required labor and facilities to:
 - 1. Provide access to work to be tested;

2. Obtain and handle samples at the site;
 3. Facilitate inspections and tests;
 4. Build or furnish a holding box for concrete cylinders or other samples as required by the laboratory.
- E. Notify the laboratory sufficiently in advance of operation to allow for the assignment of personnel and schedules of tests.
- F. Laboratory Tests: Where such inspection and testing are to be conducted by an independent laboratory agency, the sample(s) shall be selected by such laboratory or agency, or the engineer, and shipped to the laboratory by the contractor at contractor's expense.
- G. Copies of all correspondence between the contractor and testing agencies shall be provided to the engineer.

1.05 QUALITY ASSURANCE

Testing shall be in accordance with all pertinent codes and regulations and with procedures and requirements of the American Society for Testing and Materials (ASTM).

1.06 PRODUCT HANDLING

Promptly process and distribute all required copies of test reports and related instructions to insure all necessary retesting or replacement of materials with the least possible delay in the progress of the work.

1.07 FURNISHING MATERIALS

The contractor shall be responsible for furnishing all materials necessary for testing.

1.08 CODE COMPLIANCE TESTING

Inspections and tests required by codes or ordinances or by a plan approval authority, and made by a legally constituted authority, shall be the responsibility of, and shall be paid for by the contractor, unless otherwise provided in the contract documents.

1.09 CONTRACTOR'S CONVENIENCE TESTING

Inspection or testing performed exclusively for the contractor's convenience shall be the sole responsibility of the contractor.

1.10 SCHEDULES FOR TESTING

A. Establishing Schedule

1. The contractor shall, by advance discussion with the testing laboratory selected by the City, determine the time required for the laboratory to perform its tests and to issue each of its findings, and make all arrangements for the testing laboratory to be on site to provide the required testing.
2. Provide all required time within the construction schedule.

B. When changes of construction schedule are necessary during construction, coordinate all such changes of schedule with the testing laboratory as required.

C. When the testing laboratory is ready to test according to the determined schedule, but is prevented from testing or taking specimens due to incompleteness of the work, all extra costs for testing attributable to the delay will be back-charged to the contractor and shall not be borne by the City.

1.11 TAKING SPECIMENS

Unless otherwise provided in the contract documents, all specimens and samples for tests will be taken by the testing laboratory or the engineer.

1.12 TRANSPORTING SAMPLES

The contractor shall be responsible for transporting all samples, except those taken by testing laboratory personnel, to the testing laboratory.

END OF SECTION

JOB SITE SECURITY**PART 1 GENERAL****1.01 BARRICADES, LIGHTS AND SIGNALS**

- A. The contractor shall furnish and erect such barricades, fences, lights and danger signals and shall provide such other precautionary measures for the protection of persons or property and of the work as necessary. Barricades shall be painted in a color that will be visible at night. From sunset to sunrise, the contractor shall furnish and maintain at least one light at each barricade and sufficient numbers of barricades shall be erected to keep vehicles from being driven on or into any work under construction.
- B. The contractor will be held responsible for all damage to the work due to failure of barricades, signs and lights; and whenever evidence is found of such damage, the contractor shall immediately remove the damaged portion and replace it at contractor's cost and expense. The contractor's responsibility for the maintenance of barricades, signs and lights shall not cease until the project has been accepted by the City.

END OF SECTION

DUST CONTROL

PART 1 GENERAL

1.01 SCOPE

Limit blowing dust caused by construction operations by applying water or employing other appropriate means or methods to maintain dust control, subject to the approval of the City. As a minimum, this may require the use of a water wagon twice a day to suppress dusty conditions.

1.02 PROTECTION OF ADJACENT PROPERTY

- A. The Contractor shall visit the site and note the buildings, landscaping, roads, parking areas and other facilities near the work site that may be damaged by their operations. The contractor shall make adequate provision to fully protect the surrounding area and will be held fully responsible for all damages resulting from contractor's operations.
- B. Protect all existing facilities (indoors or out) from damage by dust, fumes, spray or spills (indoors or out). Protect motors, bearings, electrical gear, instrumentation and building or other surfaces from dirt, dust, welding fumes, paint spray, spills or droppings causing wear, corrosion, malfunction, failure or defacement by enclosure, sprinkling or other dust palliatives, masking and covering, exhausting or containment.

END OF SECTION

SAFETY ON PROJECTS

PART 1 GENERAL

1.01 SCOPE

- A. The contractor shall be responsible for conducting all work in a safe manner and shall take reasonable precautions to ensure the safety and protection of workers, property and the general public. The contractor's responsibility for protection is described in article 15 of the general conditions.
- B. All construction shall be conducted in accordance with the latest applicable requirements for part 1926 of the Occupational Safety and Health Act, Safety and Health Regulations for Construction, section 107 of the Contract Work Hours and Safety Standards Act, as well as any other local, state or federal safety codes and regulations.
- C. The contractor shall designate a trained and qualified employee who is to be responsible for ensuring that the work is performed safely and in conformance with all applicable regulations.
- D. The contractor shall determine the safety hazards involved in prosecuting the work and the precautions necessary to conduct the work safely.
- E. The contractor shall bear all risks associated with performing the work and shall fully indemnify and hold harmless the City and engineer.

END OF SECTION

PROJECT IDENTIFICATION SIGNS**PART 1 GENERAL****1.01 SCOPE**

- A. The work under this section shall include the furnishing of a minimum of one painted sign of not less than 32 square feet in area, with painted graphic content for each project site that includes:
1. Project title
 2. City's name
 3. Names of governmental units participating in the project
 4. Engineer's name
 5. Names and titles of other parties to be directed by the engineer

1.02 DESIGN

The contractor shall provide a scale drawing showing the graphic design, style of lettering and colors corresponding to the sketch included with this section, to the engineer for approval.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. Structure and Framing: May be new or used, wood or metal, in sound condition structurally adequate to work and suitable for specified finish.
- B. Sign Surfaces: Exterior soft wood plywood with medium density overlay, standard large sizes to minimize joints.
- C. Thickness: As required by standards to span framing members, to provide even, smooth surface without waves or buckles.
- D. Rough Hardware: Galvanized.
- E. Paint: Exterior quality, equal to Tnemec.

PART 3 EXECUTION

3.01 ERECTION

Erect the sign on the site in a high visibility location, adjacent to the project as approved by the engineer. The sign shall be erected prior to starting physical work and removed within two (2) weeks following acceptance of the work.

3.02 MAINTENANCE

Contractor shall maintain the project sign in good condition during the project contract period.

END OF SECTION

Transportation and Handling**TRANSPORTATION AND HANDLING****PART 1 GENERAL****1.01 SCOPE**

- A. The contractor shall provide transportation of all equipment, materials and products furnished under these contract documents to the work site. In addition, the contractor shall provide preparation for shipment, loading, unloading, handling and preparation for installation and all other work and incidental items necessary or convenient to the contractor for the satisfactory prosecution and completion of the work.
- B. All equipment, materials and products damaged during transportation or handling shall be repaired or replaced by the contractor at no additional cost to the City prior to being incorporated into the work.

END OF SECTION

STORAGE AND PROTECTION

PART 1 GENERAL

1.01 SCOPE

- A. The work under this section includes, but is not necessarily limited to, the furnishing of all labor, tools and materials necessary to properly store and protect all materials, equipment, products and the like, as necessary for the proper and complete performance of the work.
- B. The contractor shall store materials, supplies and equipment at the site in such orderly fashion and in such locations as approved by the engineer that will not unduly interfere with the progress of the work or the work of any other contractors, or the activities of City personnel.

1.02 STORAGE AND PROTECTION

A. Storage

- 1. Maintain ample way for foot traffic at all times, except as otherwise approved by the engineer.
- 2. All property damaged by reason of storing of material shall be properly replaced at no additional cost to the City.
- 3. Packaged materials shall be delivered in original unopened containers and so stored until ready for use.
- 4. All materials shall meet the requirements of these specifications at the time that they are used in the work.
- 5. Store products in accordance with supplier's instructions.

B. Protection

- 1. Use all means necessary to protect the materials, equipment and products of every section before, during and after installation and to protect the installed work and materials of all other trades.
- 2. All materials shall be delivered, stored and handled to prevent the inclusion of foreign materials and damage by water, breakage, vandalism or other causes.
- 3. Substantially constructed weather tight storage sheds, with raised floors, shall be provided and maintained as may be required to adequately protect those materials and products stored on the site which may require protection from damage by the elements.

Cleaning

- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary for the approval of the engineer and at no additional cost to the City.
- D. Equipment and products stored outdoors shall be supported above the ground on suitable wooden blocks.
- F. Tarps and other coverings shall be supported above the stored equipment or materials on wooden strips to provide ventilation under the cover and minimize condensation. Tarps and covers shall be arranged to prevent ponding of water.

1.03 EXTENDED STORAGE

In the event that certain items of major equipment such as air compressors, pumps and mechanical aerators have to be stored for an extended period of time, the contractor shall provide satisfactory long-term storage facilities, which are acceptable to the engineer. The contractor shall provide all lubricants and exercising necessary or recommended by the supplier to properly maintain and protect the equipment during the period of extended storage.

END OF SECTION

SUBSTITUTIONS AND OPTIONS

PART 1 GENERAL

1.01 SCOPE

This section outlines the restrictions and requirements for substitutions, product and supplier options, and construction method options.

1.02 DEFINITIONS

- A. For the purposes of these contract documents, a "substitute item" shall be defined as one of the following:
 - 1. A product or supplier offered as a replacement to a specified product or supplier.
 - 2. A product or supplier offered in addition to a specified product or supplier.
- B. For the purposes of these contract documents, a "substitute construction method" shall be defined as one of the following:
 - 1. A mean, method, technique, sequence or procedure of construction offered as a replacement for a specified mean, method, technique, sequence or procedure of construction.
 - 2. A mean, method, technique, sequence or procedure of construction offered in addition to a specified mean, method, technique, sequence or procedure of construction.

1.03 GENERAL

- A. An item or construction method, which is offered where no specific product, supplier, mean, method, technique, sequence or procedure of construction is specified or shown on the drawings, shall not be considered a substitute and shall be at the option of the contractor, subject to the provisions in the contract documents for that item or construction method.
- B. For products specified only by a referenced standard, the contractor may select any product by any supplier, which meets the requirements of the specifications, unless indicated otherwise in the contract documents.
- C. If the supplier is named on the drawings or in the specifications as an acceptable supplier, products of that supplier meeting all requirements of the specifications and drawings are acceptable.

Cleaning

- D. Whenever the engineer's design is based on a specific product of a particular supplier, that supplier will be shown on the drawings and/or listed first in the list of approved suppliers in the specifications. Any bidder intending to furnish products of other than the first listed supplier, or furnish substitute items, shall:
1. verify that the item being furnished will fit in the space allowed, perform the same functions and have the same capabilities as the item specified;
 2. include in its bid the cost of all accessory items, which may be required by the other listed substitute product;
 3. include the cost of any architectural, structural, mechanical, piping, electrical or other modifications required; and
 4. include the cost of required additional work by the engineer, if any, to accommodate the item.
- E. Whenever a product specification includes minimum experience requirements which the supplier selected by the contractor cannot meet, the supplier shall furnish the City with a cash deposit, or bond acceptable to the City in an amount equal to the cost of the product, which shall remain in effect until the experience requirement has been met.

1.04 APPROVALS

- A. Approval, of a substitution as an acceptable supplier, of the engineer is dependent on determination that the product offered:
1. is essentially equal in function, performance, quality of manufacture, ease of maintenance, reliability, service life and other criteria to that on which the design is based; and
 2. will require no major modifications to structures, electrical systems, control systems or piping systems.

1.05 SUBSTITUTIONS AND OPTIONS

- A. No substitutions will be considered for the suppliers listed in the bid.
- B. After Notice to Proceed
1. Substitute items will be considered only if the term "equal to" precedes the names of acceptable suppliers in the specification.
 2. Where items are specified by referenced standard or specified as indicated in Article 1.03, paragraph A. above, such items shall be submitted to the engineer for review.

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4. The contractor shall submit shop drawings on the substitute item for the engineer's review in accordance with the section 01340.

END OF SECTION

CLEANING

PART 1 GENERAL

1.01 SCOPE

This section covers the general cleaning, which the contractor shall be required to perform both during construction and before final acceptance of the project, unless otherwise shown on the drawings or specified elsewhere in these specifications.

1.02 QUALITY ASSURANCE

- A. Daily, and more often if necessary, conducts inspections verifying that requirements of cleanliness are being met.
- B. In addition to the standards described in this section, comply with all pertinent requirements of governmental agencies having jurisdiction.

1.03 HAZARDOUS MATERIAL AND WASTE

- A. The contractor shall handle hazardous waste and materials in accordance with applicable local, state, and federal regulations. Waste shall also be disposed of in approved landfills as applicable.
- B. The contractor shall prevent accumulation of wastes, which create hazardous conditions.
- C. Burning or burying rubbish and waste materials on the site shall not be allowed.
- D. Disposal of hazardous wastes or materials into sanitary or storm sewers shall not be allowed.

1.04 DISPOSAL OF SURPLUS MATERIALS

- A. The contractor shall legally dispose all surplus materials and equipment from demolition and shall provide suitable off-site disposal site, or utilize a site designated by the City.
- B. Clean up all refuse, rubbish, scrap materials, and debris caused by the Contractor's operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance. No items shall be left or discarded elsewhere on the site, or any other City sites. Items that are to be discarded shall be removed to approved dump areas.
- C. Remove all surplus material, false work, temporary structures, including foundations thereof, plants of any description and debris of every nature resulting from the Contractor's operations, and put the site in a neat, orderly condition before final payment. Such final cleanup work shall be performed within the time specified for completion of work, with such exceptions as may be approved in writing by the engineer. Unless otherwise provided in the specifications, contractor shall clean any portion of work for which a separate time for completion is specified and the site

Cleaning

thereof to the above standards within the specified time, with such exceptions as may be approved in writing by the engineer.

- D. The disposal of all excavated material or spoil not required for use in the permanent work shall be the responsibility of the contractor. The Contractor's shall remove excess excavated material or spoil from the site of the work and dispose of the same in a legal manner at no additional cost to the City. Burning of debris on site will not be allowed.

PART 2 PRODUCTS**2.01 CLEANING MATERIALS AND EQUIPMENT**

Provide required personnel, equipment and materials needed to maintain the specified standard of cleanliness.

2.02 COMPATIBILITY

Use only the cleaning materials, methods and equipment, which are compatible with the surface being cleaned, as recommended by the supplier of the material or as approved by the engineer.

PART 3 EXECUTION**3.01 PROGRESS CLEANING****A. General**

1. Do not allow the accumulation of scrap, debris, waste material and other items not required for construction of this work.
2. At least each week, and more often if necessary, completely remove all scrap, debris and waste material from the job site.
3. Provide adequate storage for all items awaiting removal from the job site, observing all requirements for fire protection and protection of the environment.

B. Site

1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris and waste material. Remove all such items to the place designated for their storage.
2. Restack materials stored on site weekly.
3. At all times maintain the site in a neat and orderly condition, which meets the approval of the engineer.

3.02 FINAL CLEANING

- A. Definitions: Unless otherwise specifically specified, "clean" for the purpose of this Article shall be interpreted as the level of cleanliness generally provided by commercial building maintenance subcontractors using commercial quality building maintenance equipment and materials.
- B. General: Prior to completion of the work, remove from the job site all tools, surplus materials, equipment, scrap, debris and waste. Conduct final progress cleaning as described in 3.01 above.
- C. Site: Unless otherwise specifically directed by the engineer, hose down all sidewalks within the site and all paved areas directly adjacent to the site; rake clean other surfaces of the grounds. Completely remove all resultant debris.
- D. Post-Construction Cleanup: All evidence of temporary construction facilities, haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, or any other evidence of construction, as directed by the engineer.
- E. Restoration of Landscape Damage: Any landscape feature damaged by the contractor shall be restored as nearly as possible to its original condition at the contractor's expense. The engineer will decide what method of restoration shall be used.
- F. Timing: Schedule final cleaning as approved by the engineer to enable the City to accept the project.

3.03 CLEANING DURING CITY'S OCCUPANCY

Should the City occupy the work or any portion thereof prior to its completion by the contractor and acceptance by the City, responsibilities for interim and final cleaning of the occupied spaces shall be as determined by the engineer in accordance with the conditions of the contract documents.

END OF SECTION

Construction of Sidewalks, Curbs, Ramps and Aprons**CONSTRUCTION OF SIDEWALKS, CURBS, RAMPS AND APRONS****PART 1 GENERAL****1.01 SCOPE**

Concrete curb, curb and gutter, sidewalks, driveway aprons, and wheelchair ramps shall be constructed of Portland cement concrete prepared as described in Part 2 of this specification and placed in one course. Concrete shall be Class "A" unless otherwise specified on the plans.

PART 2 PRODUCTS

The materials and general placement procedures for concrete and masonry construction shall adhere to those stated in this section unless specifically changed by the special provisions, plans, or the engineer.

2.01 CONCRETE

- A. Concrete shall be composed of cement, fine aggregate, coarse aggregate, water, entrained air, and such admixtures as may be specified; proportioned and mixed to produce a plastic workable mix in accordance with the requirements of these specifications and supplemental special provisions and suitable for the specific conditions of placement .
 - 1. Classification and Strength: Concrete shall be in three classifications. Minimum 28-day compressive strength and usage shall be as follows:
 - a. Class "A": Minimum compressive strength 3000 psi at 28-days shall be used for all reinforced concrete work, and for non-reinforced footings and slabs 8 inches or less in thickness, unless a higher strength is required by the plans.
 - b. Class "B": Minimum compressive strength 2200 psi at 28-days may be used for gravity type walls and for non-reinforced footings and slabs greater than 8 inches in thickness, unless a higher strength is required by the plans.
 - c. Class "C": Minimum compressive strength 1500 psi at 28-days shall be used for concrete sub-foundations, pipe envelopes, and for concrete backfill when required. Compressive strength of concrete at the age of 28-days shall be determined by breaking standard 6-inch diameter by 12-inch test cylinders in accordance with ASTM C-31 and C-39.
- B. Concrete - High Early Strength: Concrete made with high early strength Portland cement shall not be used unless specifically authorized by the engineer or otherwise called for in the plans. The compressive strength of such concrete, at the age of 7 days, shall be at least equal to the minimum 28-day compressive strengths for the class specified above. All

other provisions of these specifications, except for cement, shall be applicable to such concrete.

- C. Concrete - Air Entrained: The suffix A/E shall indicate air entrainment required for the concrete mix specified. Compressive strength requirements will not change due to the presence of air entrainment. Compensation for strength loss due to A/E% shall be accomplished by adjustment of the water/cement ratio. Percent of air entrainment shall fall within the range 3% - 7% (with 4.5% being desirable) as determined by the volumetric method in ASTM C-231. Admixtures used to achieve air entrainment shall conform to ASTM C-260, except that admixtures used in reinforced concrete shall not contain chlorides.

2.01 BRICK

All brick used for adjusting manholes, flush tanks, and catch basins shall be hard No. 1 building brick, manufactured of clay or shale. Brick shall be uniform standard commercial size with straight, parallel edges and square corners, burned uniformly hard entirely through, and uniform in color with uniform abrasion resistance. All brick shall conform to ASTM C-32 and meet the minimum requirements of grade SM.

2.03 CEMENT

All cement used in the work shall conform to ASTM C-150, specification for Portland cement.

2.04 SAND

The sand shall be clean and sharp, free from all deleterious substances and shall conform to ASTM C-33.

2.05 COARSE AGGREGATE

Coarse aggregate shall be crushed stone of a quality equal to the best Stone Mountain Granite, of solid composition, free from dirt and adherent coatings, and suited for the class of its intended usage. Unless otherwise stated, gradation shall conform with size number 467, number 57, or number 67 as described in ASTM C-33. The nominal maximum size of coarse aggregate used in concrete shall not be larger than one-fifth of the narrowest dimension between sides of the forms, one-third of the depth of slabs, three-fourths of the minimum clear spacing between reinforcing bars as described in ACI 68-50, Article 3.4.1.

2.06 STEEL REINFORCEMENT

All steel bars used for reinforcement must be intermediate grade, new billet steel and must meet the requirements of ASTM A-615 and be of a pattern per the details in Part V of this document.

2.07 MISCELLANEOUS STEEL

The contractor shall be required to furnish, in addition to the reinforcement shown on the plans, such support bars, tie bars, chairs, etc., as are needed to properly secure the reinforcing bars in place as intended on the plans and all dowels, splices, etc., which shall be of design acceptable to the engineer.

2.08 RUBBLE MASONRY

Rubble stone masonry, when required, shall be built of sound and durable quarried stone, of shape and form to make neat and substantial work of this class. Stone shall be thoroughly cleaned of soil and dust and be bedded in cement mortar, every joint and space filled with mortar. No spalling under stone will be allowed. The headers must be of sufficient size and frequency to insure a strong bond. No stone shall have more "build" than "bed." Mortar shall be as specified in Section 1.10. Size of stone shall be the same as that specified for rip rap in Section 1.09.

2.09 STONE FOR RIPRAP

Stone for riprap shall consist of rough unhewn quarry granite as nearly in rectangular section as is practical. The minimum thickness of stone shall be 9" with more than 70% in any load having, a minimum dimension of twelve (12") inches. All stone shall weigh between 75 and 150 pounds. All rip rap shall be hand placed as a loose stone embankment or grouted in place as indicated on the plans or as directed by the engineer.

2.10 MORTAR

Mortar and grout shall consist of fresh mixtures of one part Portland or Masonry cement to three parts of sand and water. Hydrated lime may be added when Portland cement is used, in amounts not exceeding 10 percent of the weight of cement. Materials shall be mixed dry until a uniform mixture is produced; after which enough water shall be added to produce the desired consistency. Mortar and grout, which has been mixed for more than 45 minutes, shall not be used. Re-tempering of mortar is not permitted.

Fine aggregate for mortar and grout shall consist of natural sand or manufactured sand having clean, hard, strong, durable, uncoated particles. Unless otherwise specified, gradation of fine aggregate for mortar and grout shall be as follows:

TOTAL % BY WEIGHT PASSING EACH SIEVE

U.S. STD.

No. 4	No. 16	No. 50	No. 100
100%	90-100%	15-40%	0-10%

Construction of Sidewalks, Curbs, Ramps and Aprons**PART 3 EXECUTION****3.01 PLACING CONCRETE**

Before concrete is placed, the depth and character of the foundations, the adequacy of forms and false work, the placing of steel and appurtenant work shall be inspected and approved by the engineer; such approval, however, shall not relieve the contractor of the responsibility to produce the finished work in accordance with plans and specifications. Preparation for placing concrete, and the handling and placing of concrete, shall be in accordance with the following:

- A. Preparation: All accumulated water and debris shall be removed from excavations, or from form work into which concrete is to be placed, and any flow of water into such places shall be diverted into side drains or sumps, so as to be removed without disturbing newly placed concrete. Forms, unless lined, shall be thoroughly wetted with water before concrete is placed so as to tighten joints and prevent leakage from the runways for buggies or wheelbarrows, if used, shall not be supported on form work. Concrete shall be conveyed in such a manner so as not to disturb forms or segregate the mix.
- B. Daylight Placing: All concrete shall be placed in daylight, and the placing of concrete in any portion of the work shall not be started if such work cannot be completed during daylight, unless otherwise specifically approved by the engineer. Such approval will not be given unless an adequate lighting system is provided.
- C. Cold Weather Placing: Concrete shall not be placed when the atmospheric temperature is below 35 degrees Fahrenheit. If after placing concrete the temperature drops below 35 degrees Fahrenheit, the contractor shall enclose, heat and protect the work in such a manner so as to keep the air surrounding the fresh concrete at a temperature of not less than 45 degrees Fahrenheit for a period of 5 days after concrete is placed. The contractor shall assume all risk connected with the placement and protection of concrete under the above, and should such concrete be unsatisfactory, it shall be rejected.
- D. Hot Weather Placing: At no time shall the temperature of the concrete at the point of discharge exceed 90° Fahrenheit. The contractor may reduce the concrete temperature by cooling one or more of the ingredients. Water may be refrigerated. Ice may be added to the mixing water on a pound for pound replacement basis, provided that all ice is melted prior to the addition of the water to the mix. Fogging or other suitable means may be used to cool the aggregate, provided that aggregate moisture contents are adjusted with the mixing water to insure no increase in the design water-cement ratio. When the atmospheric temperature is above 90° Fahrenheit ready mix concrete shall be completely discharged within 60 minutes from the time water is added to the mix.

Forms and reinforcement steel shall be pre-wet, and the contractor shall have sufficient skilled personnel and equipment to place and finish the concrete without delay. The contractor may be required to furnish wind screens, to use water fogging, or other means to prevent moisture loss as directed by the engineer.

Curing shall be as specified in Section 3.09, except that if a pigmented curing compound is used, it shall be white.

- E. Handling: Concrete shall be transported from the mixer to the point of deposit by a bottom dump concrete bucket handled by a crane; by concrete buggies, wheelbarrows, pumping, conveyor belts or by such means, approved by the engineer, as the contractor may elect. In the event the quality of the concrete as it reaches the forms, or the method and placing thereof, in the opinion of the engineer, is not satisfactory, the contractor shall change his method of operation so as to place concrete in a satisfactory manner.
- F. Placing: Concrete shall be placed in such a manner so as to avoid the possibility of segregation or separation of aggregates, so as to avoid displacement of reinforcing, and to avoid coating or splattering the reinforcing steel which is in place with concrete, which may set before completion of the pour and tend to re-duce bond. Troughs, pipes, hoppers and chutes and canvas trellis used in placing concrete shall be arranged and used so as to place the concrete in the manner specified. The placing of concrete with in form work caused thereby shall not exceed the design pressure thereof. Concrete shall be placed in continuous horizontal layers, the thickness of which, in general, shall not exceed 12 inches. In placing concrete, each batch and each layer shall be placed following the preceding batch or layer so closely that there will be no lines of separation or "cold joints" in the work. Care shall be used to fill each part of the forms by depositing concrete as near final position as possible. After the concrete has taken its initial set, care shall be taken to avoid jarring the form work or placing strain or vibration on the ends of projecting reinforcing bars.
1. Compaction: Concrete, if placed in layers, shall be compacted by the use of mechanical internal vibrating equipment supplemented by hand spading with a steel splicing rod. Vibrating shall not be used to transport concrete within forms. Internal vibrators shall maintain a speed of at least 5000 impulses per minute when submerged in concrete. At least one spare vibrator shall be maintained on the job site as a relief. The duration of vibration shall be limited to that necessary for satisfactory consolidation, without causing objectionable segregation. The vibrator shall not be inserted into layers, which have begun to set.
 2. Thin Section: All thin section work shall be thoroughly worked with a steel rod; faces shall be shaped and mortar flushed to the surface of the forms thereby. Small diameter holes shall be drilled in form work beneath large wall sleeves and inserts which have been set therein, to prevent the entrapment of air beneath such wall sleeves and inserts, when concrete is placed.
- G. Continuous Placement: The placement of concrete within any unit of the work, between construction joints, once begun shall continue without interruption so that the unit will be monolithic.
- H. Defective Work: Concrete shall be placed and compacted so as to form a dense, compact, impervious, artificial stone, with smooth faces on exposed surfaces. Any section of concrete work found to be porous, plastered, or otherwise defective, in the opinion of the engineer, shall be removed and replaced in whole or in part, as directed by the engineer, at the expense of the contractor.

3.02 JOINTS

The unit of operation between construction joints shall be as shown on the drawings or as directed by the engineer. Concrete shall be placed continuously within the unit, as specified in the paragraph above, so that the unit will be monolithic. At least 72 hours shall elapse between castings of adjoining units, unless otherwise approved by the engineer.

- A. Construction Joints in Footings and Walls: Construction joints in footings and walls, required for proper execution of the work, and not shown on the drawings, shall be located, as directed by the engineer, across regions of low stress so as to least impair the strength and appearance of the work. Special provisions shall be made for joining successive units, as shown on the drawings and as directed by the engineer.
- B. Construction Joints in Slabs: Construction joints in slabs, required for proper execution of the work, and not shown on the drawings shall be located as directed by the engineer. Special provisions, including concrete footing for construction joints in slabs on earth, shall be made for joining successive units, as indicated on the drawings and as may as may be directed by the engineer.
- C. Expansion Joints: Expansion joints, when required, shall be located as indicated on the drawings and constructed in accordance with details thereon.
- D. Keys: Keys shall be constructed in all construction joints, as indicated on the drawings, and as directed by the engineer.
- E. Water Stops: Where indicated on the plans or at construction joints subject to water pressure, water stops shall be installed for the full length of the joint. Water stops shall be either 6" x 1/8" steel plates or 9" x 1/2" rubber or polyvinyl chloride. P. V. C. and rubber water stops shall be spliced in accordance with the supplier's recommendations while steel water stops shall be spliced by welding.

3.03 BONDING CONCRETE WORK

Bonding new concrete work, to be placed on or against new concrete work, shall be in accordance with the following:

- A. Bonding to New Concrete: Before placing new concrete work on or against new concrete work which has recently set, the surfaces of such work shall be thoroughly roughened and cleaned of all foreign matter and laitance, forms placed or tightened and the surfaces slushed with grout. New concrete shall be placed before grout has attained its initial set. All such work shall be done in such a manner to insure complete bonding.
 - 1. Grout: Grout for bonding to new concrete work shall be composed of 1 part Portland cement to 3 parts sand, and from 2 to 4 inches of such grout shall be applied horizontal construction joints.
- B. Bonding to old concrete shall be done in accordance with the plans.

3.04 WATERTIGHTNESS

Concrete required to be watertight shall be air entrained and be proportioned, mixed, and placed in strict accordance with these specifications. All concrete structures for holding or carrying water, or pits below ground level, shall be watertight, and a seepage loss of more than 1/4-inch depth in 24 hours will not be permitted when the water holding structures are filled. All exposed surfaces of water holding structures, and interiors of pits below ground water level, shall be free from visible damp spots or seepages before acceptance.

3.05 SUBGRADE PREPARATION AND PLACEMENT OF BASE MATERIALS

The preparation of natural, filled or excavated roadbed material prior to the placement of sub-base or base material, pavement, curbs and gutters, driveways, sidewalk, driveways, wheelchair ramps or other roadway structures shall conform to the following requirements:

- A. Preparation of Subgrade: Scarifying and cultivating will be required for dry soils which are impervious to the penetration of water, for soils which contain excessive amounts of moisture, for soils which are non-uniform in character, or when pavement is to be placed directly on the roadbed material. Unsuitable material found below the processing depth for subgrade specified herein shall be treated in accordance with Paragraph 3.05, Unsuitable Material.
After rough grading has been completed, when scarifying and cultivating are required, the roadbed shall be loosened to a depth of at least 6 inches. The loosened material shall then be worked to a finely divided condition *and all* rocks larger than 3 inches in diameter shall be removed. The moisture content shall be brought to optimum by the addition of water, by the addition and blending of dry suitable material or by the drying of existing material. The material shall then be compacted by approved equipment to the specified relative compaction.
- B. Relative Compaction: All relative compaction percentages refer to maximum dry density as determined by ASTM D-1557 (Modified Proctor). When pavement is to be placed directly on subgrade material, the top 6 inches of subgrade material shall be compacted to a relative compaction of 95%. When base or sub-base material, curb, gutter, driveways, or sidewalks are to be placed on subgrade material, the top 6 inches of such subgrade material shall be compacted to a relative compaction of 90%.
After compaction and trimming, the subgrade shall be firm, hard, and unyielding.
- C. Subgrade Tolerances: Subgrade for pavement, sidewalk, curb and gutter, driveways, or other roadway structures shall not vary more than 0.02 foot from the specified grade and cross section. Subgrade for sub-base or base material shall not vary more than 0.04 foot from the specified grade and cross section. Variations within the above specified tolerances shall be compensating so that the average grade and cross section are met.
- D. Grading of Areas Not to be Paved: Areas designated as "grade only" on the plans shall be graded to meet the tolerances for base subgrade. The surface shall be constructed to a straight grade from the finish pavement or curb elevations shown on the plans to the elevation of the existing ground at the extremities of the area to be graded.
- E. Adjustment of Manhole Frame and Cover Sets to Grade: Unless otherwise provided in the Measurement and Payment Section, the contractor shall adjust all utility manholes, vaults, frames and covers within the area to be graded or paved. Patching required as a result of

reconstructing or adjusting all manhole and vault frames and covers shall be the responsibility of the contractor.

The contractor shall exercise the necessary caution to prevent debris from falling into manholes. In the event that debris should fall into a manhole, it shall be immediately removed.

- F. Payment: Payment for preparing a sub-grade will be considered as included in the item of work for which the sub-grade is prepared.

Payment for adjusting manhole frames and covers to grade, where the difference between the existing and final elevation of the top of the frame is less than one foot, will be made on the contract unit price for adjusting each manhole frame and cover.

If a provision for manhole adjustment or reconstruction is not made, payment for such work will be deemed to be included in other items of work.

3.06 CONSTRUCTION DETAILS

Concrete curb, curb and gutter, sidewalks, driveway aprons, and wheelchair ramps shall be constructed in strict accordance with the project plans or referenced standard plans on file in the City of Atlanta, Bureau of Highways and Streets.

3.07 FORMS

The forms shall be metal or wood, straight and free from warp, and of sufficient strength and section to resist springing during process of depositing concrete against them. If of wood, they shall be of approved section. The forms shall be of the full depth of the pavement, and shall be securely staked, braced and held firmly to the required line and grade. All forms shall be thoroughly cleaned and oiled before concrete is placed against them.

Form work shall be constructed and braced and shall be removed in accordance with the following:

- A. Chamfer Strips: Chamfer strips shall be placed in forms for all exterior corners.
- B. Constructing and Bracing Forms: Form work shall be built to conform to shape, lines, and dimensions of the concrete work as shown or indicated on the drawings: Forms shall be set to line and grade, and shall be braced, tied and secured so as to withstand placing of the concrete, and to maintain shape and position. Forms shall be tight and substantially assembled to prevent bulging, and to prevent leakage of concrete. Joints in form work shall be arranged vertically or horizontally. Temporary openings shall be arranged, where required, at the bottoms of wall forms and other necessary locations, to facilitate cleaning and inspection. Lumber used once in forms shall have nails removed and surfaces in contact with concrete work thoroughly cleaned before re-use. All wall sleeves, inserts, and openings required in concrete work shall be properly set in form work. At all pipe

connections to concrete structures, provide a formed socket for caulking or a poured-in-place bell at the face of the structure to match pipe.

- C. Shores: Shores shall be used as necessary; if adequate foundations for shores cannot be obtained, trussed supports shall be provided. Structural members and other work subjected to additional loads during construction shall be adequately shored to protect such work from distortion and/or damage.
- D. Removal of Forms: Forms shall not be removed until the member supported thereby has acquired sufficient strength to safely support its own weight and loads imposed on it. Tie rod clamps that are to be entirely removed from walls shall be loosened 24 hours after concrete has been placed. Standard snap ties shall be removed when forms are stripped, with care being taken to avoid damaging concrete surface. Cutting ties back from the face of the wall will not be permitted. Under normal conditions, the minimum time elapsing before the forms may be stripped shall be governed by the following schedule; however, the use of said schedule shall not relieve the contractor of his responsibility for the safety of the structure.

Slabs and Beams not on Grade	14 days
Columns and Pedestals	7 days
Walls and Vertical Faces not supporting other work	2 days

Wood forms shall be completely removed from all portions of the work so that no material will remain for termite infestation.

3.08 FINISHING

The pavement shall be neatly finished, floated and dressed to true and even plane, trowelling of surface being accomplished with wooden floats, and the surface shall be brushed to a true and even, but not a glassy or "slick" surface. All edges (except joints) shall be rounded to a one-half (1/2") inch radius by use of an edger tool. No coarse aggregate shall show on surface.

Transverse contraction joints shall be formed with a tool designed to form a groove one-fourth (1/4") inch deep in the sidewalk. All joint edges shall be rounded with a one-fourth (1/4") inch edger. Expansion joints shall be of material meeting approval of engineer, and shall be placed at locations requested by him. Joints shall be spaced at *all* driveway entrances (both sides) with no section more than one hundred (100') feet in length.

Injure pavement, and if so injured, the entire section or sections shall be removed and properly restored. After removal of metal or wooden joints, the opening shall be poured and struck flush with surface using bitumen of crack filler type. Pre-fabricated expansion joint material of an approved type shall be permitted.

3.09 PROTECTION AND CURING

All new pavement shall be protected by the contractor for seventy-two (72) hours after finishing by covering the entire surface with wet burlap, canvas or sisal-craft paper, or by sprinkling during hot weather not less than three (3) times daily for three (3) consecutive days, beginning as soon as

possible after pavement has been finished. In lieu of above, membrane curing compound may be applied immediately after finishing concrete.

The contractor shall keep pedestrian traffic off new pavement for a period of twenty-four (24) hours, and vehicular traffic off driveways for a period of three (3) days following the finishing of the pavement, and he shall be required, at his own expense, to remove and replace any work damaged by his failure to protect the same. He shall erect suitable barriers and provide adequate lighting until the public is permitted to use same.

Concrete freshly placed shall be protected from wash by rain and flowing water. Concrete shall not be allowed to dry out from the time it is placed until the expiration of the specified curing period. Methods of curing, unless otherwise approved by the engineer, shall be as follows:

- A. Wetting Concrete: Concrete shall be kept wet with clean water for a period of 7 days after placing. Each day forms are left in place will suffice for wetting.
- B. Leaving Forms in Place: Curing may be accomplished by leaving forms in place for a period of 7 days, and keeping such forms sufficiently wet to prevent opening of joints.
- C. Membrane Curing: In lieu of curing methods specified, the contractor, at his option, may use an approved membrane curing compound to seal water in concrete, except for surfaces which are to receive future concrete or mortar. The membrane shall be a pigmented type which will retain 97% of the moisture within concrete at a temperature of 135 °F. and a relative humidity of 3% in the first 24 hours. Curing compound shall be applied in accordance with the supplier's directions.

3.10 IMPERFECT OR DAMAGED WORK

Imperfect or damaged work or any work damaged before final acceptance shall be satisfactorily removed and replaced in accordance with requirements of the drawings and specifications. Removal and replacement of concrete work shall be done in such a manner that the strength of the structure will not be impaired.

3.11 CLEANING

Upon completion of work, all forms, equipment, protective covering and rubbish resulting therefrom shall be removed from the premises. Finished concrete surfaces shall be left in a condition satisfactory to the engineer.

3.12 MEASUREMENT AND PAYMENT

Payment for construction of concrete curb, curb and gutter, sidewalks, driveway aprons, and wheelchair ramps shall be as listed in Section 01025, Measurement and Payment.

END of SECTION

CONCRETE SEGMENTAL/INTERLOCKING RETAINING WALL SYSTEM

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Concrete segmental retaining wall units.
- B. Related Sections
 - 1. Section - Geosynthetic Wall Reinforcement
 - 2. Section - Backfill
 - 3. Section - Drainage Fill
 - 4. Section - Landscaping Turf
 - 5. Section - Drain Tile

1.02 REFERENCES

- A. American Society of Testing and Materials
 - 1. ASTM C1372-99a; Standard Specification for Segmental Retaining Wall Units
 - 2. ASTM C 1262-98; Standard Test Method for Evaluating the Freeze-Thaw Durability of Manufactured Concrete Masonry Units and Related Concrete Units
 - 3. ASTM C698-91; Standard Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 5.5-lb Rammer and 12-in. Drop, (Standard Proctor)
 - 4. ASTM D1557-91; Standard Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb Rammer and 18-in. Drop, (Modified Proctor)
 - 5. ASTM D448-86; Standard Classification for Sizes of Aggregate for Road and Bridge Construction
 - 6. ASTM C 140-99b; Standard Test Methods of Sampling and Testing Concrete Masonry Units
 - 7. ASTM D 2922-96; Standard Test Method for Density of Soil and Soil-Aggregate In Place by Nuclear Methods (Shallow Depth)
 - 8. ASTM D 1556-90; Standard Test Method for Density of Soil In Place by the Sand Cone Method
 - 9. ASTM D 2488-93; Standard Practice for Description and Identification of Soils, Visual-Manual Procedure (USCS; Unified Soil Classification System)

1.03 SUBMITTALS

- A. Submit the following:
 - 1. Supplier's literature: materials description
 - 2. Shop drawings: Retaining wall system design, including wall heights, geosynthetic reinforcement layout and drainage provisions. The shop drawings shall be signed by a registered professional engineer licensed in the State of Georgia.
 - 3. Samples
 - a) Furnish (1) unit in the color and face pattern specified if requested by the architect/engineer. If approved, unit may be used in the finished work.
 - b) 12 inches square or larger piece of the geosynthetic reinforcement specified.

4. Test reports from an independent laboratory stating moisture absorption and compressive strength properties of the concrete wall units meet the project specifications when tested in accordance with ASTM C 140-96, Sections 6, 8 and 9.

1.04 Delivery, Storage And Handling

- A. To prevent damage, store above ground on wood pallets or blocking. Remove damaged or otherwise unsuitable material, when so determined, from the site.
 1. Faces of the concrete wall units shall be substantially free of chips, cracks and stains.
 2. Prevent excessive mud, wet cement, epoxy, and like material, which may affix themselves, from coming in contact with the materials.

1.05 EXTRA MATERIALS

- B. Three (3) replacement units identical to those installed on the project.

1.06 Definitions

- A. Geosynthetic reinforcement is a material specifically fabricated for use as soil reinforcement.
- B. Concrete retaining wall units are as detailed on the drawings and manufacture's literature.
- C. Drainage aggregate is a material used around and directly behind the concrete wall units.
- D. Backfill is the soil, which is used as fill behind the drainage aggregate and within the reinforced soil mass if applicable.
- E. Foundation soil is the soil mass supporting the leveling pad and reinforced zone of the retaining wall system.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Concrete Retaining Wall Unit: "Anchor Diamond, Anchor Landmark Interlocking Retaining Wall Units," as manufactured by Pavestone Corp., or as manufactured by Versalock, or an approved equal.
 1. Concrete wall units shall meet requirements of ASTM C1372-97, except the maximum water absorption shall be limited to 7.0 percent and unit height dimensions shall not vary more than +/- 1/16 inch from that specified.
 2. Color as selected by engineer from supplier's standard selections.
 3. Face pattern: geometry: beveled or straight;
 4. Texture: smooth or split rock face.
 5. The concrete units shall include an integral concrete shear connection, flange/locator.
- B. Geosynthetic reinforcement: Polyester fiber geogrid, polyethylene expanded sheet geogrid, or polypropylene woven geotextile for use as soil reinforcement.
- C. Base: Material shall consist of drainage aggregate, sand and gravel and/or concrete as shown on the construction drawings. A minimum of 6 inches of compacted base is required.
- D. Drainage aggregate: Fill between units shall consist of free-draining, crushed coarse aggregate that meets the gradation requirements of ASTM 448-86; Standard Classification for Sizes of Aggregate for Road and Bridge Construction, designation 57, 67, 6, 7 or 8.
- E. Backfill: Materials are suitable non-organic soils at a moisture content which enables compaction to the specified densities. Unsuitable soils are organic soils and those soils with the USCS classification symbol of CH, OH, MH, OL, or PT. CL soils with a Plasticity Index (PI) greater than 25 are also considered unsuitable soils.
- F. Drain tile: The drainage collection pipe shall be a perforated or slotted PVC or corrugated HDPE pipe. The pipe may be covered with a geotextile filter fabric to function as a filter.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine the areas and conditions under which the retaining wall is to be erected and notify the architect or civil engineer in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected. Promptly notify the wall design engineer of any site conditions, which may affect wall performance or may require a reevaluation of the wall design.
- B. Foundation soil shall be examined by the project geotechnical engineer to ensure that the actual foundation soil strength meets or exceeds that required on the construction drawings.

3.02 EXCAVATION

- A. Excavate to the lines and grades shown on the construction drawings. Over-excavation not approved by the owner or duly appointed owner's representative shall not be paid for, and replacement with compacted fill and/or wall system components will be required at the contractor's expense. Do not disturb base beyond the lines shown. The contractor shall be responsible for the stability of the excavation and its influence on adjacent properties and structures.

3.03 Foundation Preparation

- A. Foundation soil shall be excavated as required for footing or base dimension shown on the construction drawings, or as directed by the engineer.
- B. Soil not meeting the required strength shall be removed, sufficiently oversized from the front of the block and the back of the reinforcement and back-filled with suitable material.
- C. Over-excavated areas shall be filled with suitable compacted backfill.

3.04 BASE COURSE PREPARATION

- A. Base materials shall be placed as shown on the construction drawings with a minimum thickness of 6 inches.
- B. Base materials shall be installed upon undisturbed soils or foundation soils prepared in accordance with Section 3.03.
- C. Material shall be compacted so as to provide a level, hard surface on which to place the first course of units.
- D. Base materials shall be prepared to ensure complete contact of retaining wall unit. Gaps shall not be allowed.
- E. Base materials shall be to the depths and widths shown on the plans. Reduce the depth of sand and gravel and replace with a 1" to 2" concrete topping. Concrete shall be lean, unreinforced and a maximum of two inches thick. Where a reinforced footing is required, place below the frost line.

3.05 ERECTION

- A. First course of concrete wall units shall be placed on the prepared base material. Units shall be checked for level and alignment. The top of all units in base course shall be at the same elevation.
- B. Ensure that concrete wall units are in full contact with base.
- C. Concrete wall units shall be placed side by side for full length of wall alignment. Alignment may be done, by using a string line or offset of wall line.
- D. Fill all voids between and within concrete wall units with drainage aggregate.
- E. A minimum of 12 inches of drainage aggregate shall be placed behind the concrete wall units.
- F. Drain tile shall be installed at the lowest elevation possible to maintain gravity flow of water to outside of the reinforced zone. The drainage collection pipe shall be day-lighted to an appropriate location away from the wall system at each low point or at 50-foot intervals along the wall.

- G. Remove all excess fill from top of units and install next course. Ensure drainage aggregate and backfill are compacted before installation of next course.
- H. Install each succeeding course. Backfill as each course is completed. Pull the units forward until the locating surface of the unit contacts the locating surface of the units in the preceding course. Pull the units forward as far as possible.
- I. Install geosynthetic reinforcement in accordance with geosynthetic supplier's recommendations and the design drawings.

3.06 BACKFILL PLACEMENT

- A. Reinforced backfill shall be placed, spread and compacted in a manner that will minimize slack in the reinforcement.
- B. Fill in the reinforced zone shall be placed and compacted in lifts not to exceed 6 to 8 inches in loose thickness where hand operated compaction equipment is used and not exceeding 12 inches loose thickness where heavy, self-propelled compaction equipment is used.
- C. All fill placed in the reinforced zone must be compacted to a minimum of 95 percent of the soil's standard Proctor density (ASTM D 698-91) or as recommended by the project geotechnical engineer.
- D. Only lightweight hand-operated equipment shall be allowed within 4 feet of the back of the retaining wall units, or one-half of the wall height, whichever is greater.

3.07 CAP UNIT INSTALLATION (If Applicable)

- A. Apply construction adhesive to the top surface of the unit below and place the cap unit into desired position.
- B. Cap units may need to be cut to obtain the proper fit.
- C. Backfill and compact to finish grade.

3.08 ADJUSTING AND CLEANING

- A. Damaged units should be replaced with new units during construction.
- B. Contractor shall remove debris caused by this construction and leave adjacent paved areas broom clean.

3.09 QUALITY CONTROL

- A. The wall installation contractor is responsible for quality control of installation of all materials. The contractor should enlist the assistance of a qualified independent third party to verify the correct installation of all materials according to these specifications and the construction drawings.
- B. The owner, at his own expense, should retain a qualified professional to perform random quality assurance checks of the contractor's work.
- C. Work found to be deficient according to these specifications or the construction drawings must be corrected at the contractor's expense.
- A. The retaining wall will not be considered complete until accepted by the engineer or duly appointed owner's representati

GUIDE SPECIFICATION

SECTION 02750 [02760] [3360]

INTEGRALLY COLORED CONCRETE

[STAMPED/IMPRINTED CONCRETE PAVEMENT]

This guide specification is intended to be used by a qualified construction specifier. It is not intended to be used verbatim as a project specification without appropriate modifications for the specific use intended.

Notes for review by the specifier are set off from specification text by rows of asterisks. Optional text requiring a selection is enclosed within brackets, e.g., "Color shall be [gray] [white]." Items requiring input specifier input are enclosed within brackets, e.g., "Color: [_____]." *****

PART 1 - GENERAL

1.1 SUMMARY

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to Work of this Section.
- B. Section Includes:
 - 1. Imprinted/flushed colored concrete [slabs-on-grade,] [sidewalks,] [driveways,] [patios,] [roads,] [parking lots,] [_____,] [and] [other exterior concrete pavements].
 - 2. Imprinting.
 - 3. Curing of imprinted colored and imprinted concrete.
- C. Related Sections:
 - 1. Division 3 Section "Cast-in-Place Concrete" for general applications of concrete and coordination of sample submittal [and color selection].
 - 2. Division 7 Section "Joint Sealants" for colored sealants for joints.

1.2 REFERENCES

Other useful publications about colored concrete include:

PCA PA124 - Finishing Concrete Slabs with Color and Texture.

PCA SP021 - Color and Texture in Architectural Concrete.

A. American Concrete Institute (ACI):

1. ACI 301 "Specification for Structural Concrete for Buildings."
2. ACI 302 IR "Recommended Practice for Concrete Floor and Slab Construction."
3. ACI 303.1 "Standard Specification for Cast-In-Place Architectural Concrete."
4. ACI 304 "Recommended Practice for Measuring, Mixing, Transporting and Placing of Concrete."
5. ACI 305R "Recommended Practice for Hot Weather Concreting."
6. ACI 306R "Recommended Practice for Cold Weather Concreting."

B. American Society for Testing and Materials (ASTM):

1. ASTM C309 "Liquid Membrane-Forming Compounds for Curing Concrete."
2. ASTM C494 "Standard Specification for Chemical Admixtures for Concrete."
3. ASTM C979 "Standard Specification for Pigments for Integrally Colored Concrete."

C. American Association of State Highway and Transportation Officials (AASHTO):

1. AASHTO M194 "Chemical Admixtures."

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's complete technical data sheets for the following:

1. Colored admixture.
2. Dry Shake Color Hardener
3. Imprinting/Texturing tools
4. Curing and Sealing Compound

B. Design Mixes: For each type of integrally colored concrete.

C. Samples for Initial Selection: Manufacturer's color charts showing full range of colors available.

D. Qualification Data: For firms indicated in "Quality Assurance" Article, including list of completed projects.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer with 10-years experience in production of specified products.
- B. Installer Qualifications: An installer with 5-or more years experience with work of similar scope and quality.
- C. Comply with the requirements of ACI 301.
- D. Obtain each specified material from same source and maintain high degree of consistency in workmanship throughout Project.
- E. Notification of manufacturer's authorized representative shall be given at least 1-week before start of Work.

 Color charts and small sample submittals provide only a general indication of color; color and appearance of completed work may differ. On large or critical projects, specify a mockup or field sample to demonstrate that proposed materials and workmanship produce acceptable concrete appearance.

- F. Imprinted Colored Concrete Flashed with Dry Shake Color Hardener Mockups
 1. Provide under provisions of Division 1 Section ["Quality Control."] [_____].
 2. At location on Project selected by [Architect] [Landscape Architect] [Engineer], place and finish 10 feet by 10 feet area.
 3. For accurate color, the quantity of concrete mixed to produce the sample should not be less than 3 cubic yards (or not less than 1/3 the capacity of the mixing drum on the ready-mix truck) and should always be in full cubic yard increments. Excess material shall be discarded according to local regulations.
 4. Construct mockup using processes and techniques intended for use on permanent work, including curing procedures. Include samples of control, construction, and expansion joints in sample panels. Mockup shall be produced by the individual workers who will perform the work for the Project.
 5. Retain samples of cements, sands, aggregates and color additives used in mockup for comparison with materials used in remaining work.
 6. Accepted mockup provides visual standard for work of Section.
 7. Mockup shall remain through completion of the work for use as a quality standard for finished work.
 8. Remove mockup when directed.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Colored Admixture: Comply with manufacturer's instructions. Deliver colored admixtures in original, unopened packaging. Store in dry conditions.

- B. Dry Shake Color Hardener: Comply with manufacturer's instructions. Deliver dry shake color hardener in original, unopened packaging. Store in dry conditions.

1.6 PROJECT CONDITIONS

- A. Imprinted Concrete Environmental Requirements:
1. Schedule placement to minimize exposure to wind and hot sun before curing materials are applied.
 2. Avoid placing concrete if rain, snow, or frost is forecast within 24-hours. Protect fresh concrete from moisture and freezing.
 3. Comply with professional practices described in ACI 305R and ACI 306R.
- B. Schedule delivery of concrete to provide consistent mix times from batching until discharge. Mix times shall meet manufacturer's written recommendations.

1.7 PRE-JOB CONFERENCE

- A. One week prior to placement of imprinted concrete, a meeting shall be held to discuss the Project and application methods.
- B. It is suggested that the [Architect,] [Landscape Architect,] [Engineer,] General Contractor, [Construction Manager,] Subcontractor, Ready-Mix Concrete Representative, and SCOFIELD Representative, Scott Thome (404) 735-7184 be present.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

- A. L.M. SCOFIELD COMPANY, Douglasville, Georgia; Scott Thome at (404) 735-7184
- B. All materials; integral colored admixture, dry shake color hardener, texturing tools, liquid release and curing/scaling compound must be supplied by the same manufacturer.

2.2 MATERIALS

- A. Colored Admixture for Integrally Colored Concrete: CHROMIX P[®] Admixture and CHROMIX ML[®]; L.M. SCOFIELD COMPANY.

1. Colored admixture shall conform to the requirements of ACI 303.1, ASTM C979, ASTM C494, and AASHTO M194.
- B. Dry Shake Color Hardener: LITHOCHROME COLOR HARDENER, L.M. SCOFIELD COMPANY
- C. Texturing Tools: PAVECRAFTER TOOLS, L.M. SCOFIELD COMPANY
- D. Liquid Release Agent: SCOFIELD Liquid Release, L.M. SCOFIELD COMPANY
- E. Curing and Sealing Compound: Cureseal-S™ Gloss; L.M. SCOFIELD COMPANY. Curing and sealing compound shall comply with ASTM C309 and stated in the technical literature for use with integrally colored concrete.
- F. SUBSTITUTIONS: The use of products other than those specified will be considered providing that the Contractor requests its use in writing within 14-days prior to bid date and all products are supplied by the same manufacturer. This request shall be accompanied by the following:
 1. A certificate of compliance from the material manufacturer stating that proposed products meet or exceed requirements of this Section, including standards ACI 303.1, ASTM C979, ASTM C494 and AASHTO M194.
 2. Documented proof that proposed materials have a 10-year proven record of performance for staining concrete substrates, confirmed by at least 5 local projects that [Architect] [Landscape Architect] [Engineer] can examine.

2.3 COLORS [AND PATTERNS]

- A. Concrete Color[s]:
 1. Cement: Color shall be [gray][white].
 2. Sand: Color shall [be locally available natural sand.] [be manufactured white sand.] [match [Architect's] [Landscape Architect's] [Engineer's] sample.]
 3. Aggregate: [Concrete producer's standard aggregate complying with specifications.] [_____]
 4. Colored Admixture: As selected by [Architect] [Landscape Architect] [Engineer] from Scofield Color Chart A-312.
 5. Dry Shaker Color Hardener: As selected by [Architect] [Landscape Architect] [Engineer] from a current Scofield Color Chart.
 6. [Stamp/Imprinting Pattern:] As selected by [Architect] [Landscape Architect] [Engineer] from Scofield LITHOTEX® Pavecrafters® pattern sheets.

2.4 CONCRETE MIX DESIGN

- A. Minimum Cement Content: [5] [_____] sacks per cubic yard of concrete.

- B. Slump of concrete shall be consistent throughout Project at 4-inches or less. At no time shall slump exceed 5-inches. [If super plasticizers are allowed, slump shall not exceed 8-inches.]
- C. Do not add calcium chloride to mix as it causes mottling and surface discoloration.
- D. Supplemental admixtures shall not be used unless approved by manufacturer.
- E. Do not add water to the mix in the field.
- F. Add colored admixture to the mix according to manufacturer's written instructions in premeasured bags, not by weight of cement content.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install concrete according to requirements of Division 3 Section "Cast-In-Place Concrete."
- B. Do not add water to the mix in the field.
- C. At the appropriate time, broadcast the dry shake color hardener at a rate of 25% of normal application over the entire surface in a uniform pattern. Lightly work it into the surface producing a color variegated, uniform appearance leaving no colored stripes on the surface. This can be done with a windshield wiper motion using a magnesium float.
- D. Apply the liquid release according to the manufacturer's direction on the current Technical Data Bulletin.
- E. Surfaces shall be finished uniformly with the following finish:
 - 1. Imprinted: Apply pattern according to tool manufacturer's instructions. Touch-up pattern and finish edges with hand tools as necessary.

3.2 CURING

- A. Imprinted Colored Concrete: Apply curing and sealing compound according to manufacturer's instructions using manufacturer's recommended application techniques. Apply curing and sealing compound at consistent time for each pour to maintain close color consistency.
- B. Precautions shall be taken in hot weather to prevent plastic cracking resulting from excessively rapid drying at surface as described in CIP 5 *Plastic Shrinkage Cracking* published by the National Ready Mixed Concrete Association.

- C. Do not cover concrete with plastic sheeting.

3.3 TOLERANCES

As with any natural material, some variation in appearance is a normal design feature of concrete, whether colored or not. It is normal for the color of concrete to lighten as it cures; allow up to 28-days for process to occur.

- A. Minor variations in appearance of colored concrete, which are similar to natural variations in color and appearance of uncolored concrete, are acceptable.

3.4 APPLICATORS

- A. For a list of qualified contractors, contact your local Scofield Representative, Scott Thome at (404) 735-7184.

END OF SECTION

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APPENDIX A
OFFICE OF CONTRACT
COMPLIANCE



CITY OF ATLANTA

Shirley Franklin
Mayor

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ATLANTA, GA 30303
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OFFICE OF CONTRACT COMPLIANCE
Hubert Owens
Director
howens@atlantaga.gov

April 7, 2009

RE: Project No.: FC-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

Dear Prospective City of Atlanta Bidder:

The Office of Contract Compliance information is an integral part of every City of Atlanta bid. All Bidders are required to make efforts to ensure that businesses are not discriminated against on the basis of their race, ethnicity or gender, and to demonstrate compliance with these program requirements at or prior to the time of Bid opening, or upon request by OCC. Bidders are required to ensure that prospective subcontractors, vendors, suppliers and other potential participants are not denied opportunities to compete for work on a City contract on the basis of their race, ethnicity, or gender, and must afford all firms, including those owned by racial or ethnic minorities and women, opportunities to participate in the performance of the business of the City to the extent of their availability, capacity and willingness to compete. Please read all of the information very carefully. Pay close attention to the specific availability of minority and female business enterprises for this project and the EBO program reminders listed on page 7.

If you have any questions about the information included in this section of the solicitation, please contact the City of Atlanta Office of Contract Compliance at (404) 330-6010.

The City of Atlanta looks forward to the opportunity to do business with your company.

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CITY OF ATLANTA

EQUAL BUSINESS OPPORTUNITY EQUAL EMPLOYMENT OPPORTUNITY

POLICY STATEMENT

It is the policy of the City of Atlanta to promote full and equal business opportunity for all persons doing business with the City. The City must ensure that firms seeking to participate in contracting and procurement activities with the City are not prevented from doing so on the basis of the race or gender of their owners. The city is committed to ensuring that it is not a passive participant in any private scheme of discrimination. To ensure that businesses are not discriminated against with regard to prime contracting, subcontracting or other partnering opportunities with the City, the City has developed an Equal Business Opportunity (EBO) Program. It is also the policy of the City of Atlanta to actively promote equal employment opportunities for minority and female workers and prohibit discrimination based upon race, religion, color, sex, national origin, marital status, physical handicap or sexual orientation through the City's Equal Employment Opportunity (EEO) Program. The purpose of the Equal Business Opportunity and Equal Employment Opportunity Programs is to mitigate the present and ongoing effects of the past and present discrimination against women and minority owned businesses and women and minority workers so that opportunity, regardless of race or gender, will become institutionalized in the Atlanta marketplace. It is important to note that all bidders, without exception, including minority and female owned business enterprises, must comply with the City of Atlanta's EBO and EEO Program requirements. Availability information on minority and female business enterprises for this project is set forth on page 6.

Implementation of EBO Policy

The Office of Contract Compliance will review information submitted by Bidders pertaining to efforts to promote opportunities for diverse businesses, including M/FBEs, to compete for business as subcontractors and/or Suppliers. A Bidder is eligible for award of a City contract upon a finding by OCC that the Bidder has engaged in, and provided with its bid submission documentation of, efforts to ensure that its process of soliciting, evaluating and awarding subcontracts, placing orders, and partnering with other companies has been non-discriminatory. To assist prime contractors in this effort, the Office of Contract Compliance has set forth in this solicitation document the availability of businesses, including certified M/FBEs within the relevant NAICS Codes, for this Project.

For subcontracting, the Subcontractor Project Plan must include all subcontractors to be utilized on the project, detail the services to be performed, the dollar value of the work to be performed by each subcontractor, and the City of Atlanta M/FBE certification number.

For Suppliers, the Subcontractor Project Plan must include all suppliers to be utilized on the project, the supplies to be provided, including the dollar value of the supplies being provided and the City of Atlanta M/FBE certification number.

Determination of Non-discrimination During Bid Process

No Bidder shall be awarded a contract on an Eligible Project unless the Office of Contract Compliance determines that the Bidder has satisfied the non-discrimination requirement of section 2-1448 on such Eligible Project. Accordingly, each Bidder shall submit with each Bid the following:

1. Covenant of Non Discrimination. Each Bidder shall submit with her/his Bid a Covenant of Non-Discrimination which is set forth herein as Exhibit EBO1.
2. Outreach Efforts Documentation. Each Bidder shall submit with her/his Bid written documentation demonstrating the Bidder's outreach efforts to identify, contact, contract with, or utilize businesses, including certified MFBEs, as subcontractors or Suppliers on the Eligible Project. This information shall be set forth on Exhibit EBO2, which is included herein.
3. Subcontractor Project Plan. Each Bidder shall submit with her/his Bid a completed and signed Subcontractor Project Plan, which is included herein as Exhibit EBO3, which lists the name, address, telephone number and contact person of each subcontractor or other business to be used during the contract, the NAICS Code and the type of work or service each business will perform, the dollar value of the work and the scope of work, the ownership of each business by race and gender, if applicable the AABE, HBE, ABE, NABE, or FBE certification number of each business, and any other information requested by the Office of Contract Compliance. In order for the Office of Contract Compliance to officially consider a firm to be an MFBE, the MFBE firm must be certified by or have a certification application pending with the Office of Contract Compliance prior to the Bidder's submission of the Bid.

OCC Review of Bidder Submissions

The Office of Contract Compliance shall determine whether a Bidder has satisfied the non-discrimination requirement of section 2-1448 based on its review of the Covenant of Non Discrimination, the Outreach Efforts Documentation, the Subcontractor Project Plan, and its review of other relevant facts and circumstances, including complaints received as part of the bid process. In reviewing the documents submitted by a Bidder to determine whether the Bidder has satisfied the non-discriminatory practices requirement of this section, the Office of Contract Compliance will consider, among other things, the total project dollars subcontracted to or expended for services performed by other businesses, including certified MFBES, whether such businesses perform Commercially Useful Functions in the work of the contract based upon standard industry trade practices, whether any amounts paid to Supplier businesses are for goods customarily and ordinarily used based upon standard industry trade practices, and the availability of certified MFBES within the relevant NAICS Codes for such Eligible Project.

(a) Receipt of Complaint of Discrimination in the Bid Process

The Office of Contract Compliance shall accept complaints of alleged discrimination during the Bid process regarding any participant in the Bid process. Where the complaint of discrimination is specific to the procurement which is under consideration by the City, the Office of Contract Compliance may investigate said complaint, determine its validity, and determine whether the actions complained of impact the Bidder's responsiveness on the specific procurement. Allegations of discrimination based on events, incidents or occurrences which are unrelated to the specific procurement will be placed in the Bidder's file maintained in the Vendor Relations database and handled in accordance with the procedure established in the City's Vendor Relations Ordinance, section 2-1465, et seq.

(b) Determination of Violation of EBO Process

Where the Office of Contract Compliance investigates a complaint of discrimination that is related to the specific Bid process, as described in subsection 2-1448(3) (a) above, the details of that investigation, including findings, shall be recorded and maintained in the Vendor Relations Database, pursuant to Section 2-1469.

(c) Office of Contract Compliance Determination of Non-Responsiveness

When, based upon the totality of the circumstances, the Office of Contract Compliance determines that a bidder has been non-responsive to the EBO requirements of a City Bid solicitation, the Director of the Office of Contract Compliance shall present a written determination of non-responsiveness to the Chief Procurement Officer which states the determination and lists the reasons for the determination.

Equal Business Opportunity Program Bid/RFP Submittals

The Covenant of Non Discrimination, the Outreach Efforts Documentation, the Subcontractor Project Plan, and any other information required by OCC in the solicitation document must be completed in their entirety by each Proponent and submitted with the other required Bid/RFP documents in order for the Bid/RFP to be considered responsive. Failure to timely submit these forms, fully completed, will result in the Bid/RFP being considered as non-responsive, and therefore, excluded from consideration.

Monitoring Of EBO Policy

Upon execution of a contract with the City of Atlanta, the successful bidder's Subcontractor Project Plan will become a part of the contract between the bidder and the City of Atlanta. The Subcontractor Project Plan will be monitored by the City of Atlanta's Office of Contract Compliance for adherence with the plan. The successful bidder will be required to provide specific EBO information on a monthly basis that demonstrates the use of subcontractors and suppliers as indicated on the Subcontractor Project Plan. The failure of the successful bidder to provide the specific EBO information by the specified date each month shall be sufficient cause for the City to withhold approval of the successful bidder's invoices for progress payments, increase the amount of the successful bidder's retainage, or evoke any other penalties as set forth in the City of Atlanta Code of Ordinances, Section 2-1452.

Implementation of EEO Policy

The City effectuates its EEO policy by adopting racial and gender work force availability for every contractor performing work for the City of Atlanta. These percentages are derived from the work force demographics set forth in the 2000 Census EEO file prepared by the United States Department of Commerce for the applicable labor pool normally utilized for the contract.

Monitoring of EEO Policy

Upon award of a contract with the City of Atlanta, the successful bidder must submit a Contract Employment Report (CER), describing the racial and gender make-up of the firm's work force. If the CER indicates that the firm's demographic composition does not meet the adopted EEO goals, the firm will be required to submit an affirmative action plan setting forth the steps to be taken to reach the adopted goals. The CER and the affirmative action plan, if necessary, will become a part of the contract between the successful bidder and the City of Atlanta. Compliance with the EEO requirements will be monitored by the Office of Contract Compliance.

First Source Jobs Program Policy Statement

It is the policy of the City of Atlanta to provide job opportunities to the residents of the City of Atlanta, whenever possible. Every contract with the City of Atlanta creates a potential pool of new employment opportunities. The prime contractor is expected to work with the First Source Jobs Program to fill at least 50% of all new entry-level jobs, which arise from this project, with residents of the City of Atlanta. For more specific information about the First Source Jobs Program contact:

Deborah Lum
Manager, One Stop Services
First Source Jobs Program
Atlanta Workforce Development Agency
818 Pollard Boulevard
Atlanta, GA 30315
(404) 658-6312

Equal Business Opportunity M/FBE Availability for this Project

Project No.: FC-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

The availability of certified minority and female firms for the trade categories listed in this project are:

28.00% MBE and 6.00%FBE

Please be reminded that no Bidder shall be awarded a contract on an Eligible Project unless the Office of Contract Compliance determines that the Bidder has satisfied the non-discrimination requirement of section 2-1448 on such Eligible Project. Details of the O.C.C. review process for determination of non-discrimination are detailed on page 2 of this document.

Equal Business Opportunity Program Reminders

1. Certification. It is the prime contractor's responsibility to verify that MBEs and FBEs included on the Subcontractor Project Plan are certified by the City of Atlanta's Office of Contract Compliance, or have a certification application pending with the City of Atlanta's Office of Contract Compliance.
2. Reporting. The successful bidder must submit monthly EBO participation reports to the Office of Contract Compliance.
3. Subcontractor Contact Form. It is required that bidders list and submit information on all subcontractors they solicit for quotes, all subcontractors who contact them with regard to the project, and all subcontractors they have discussions with regarding the project. Failure to provide complete information on this form will result in your bid being declared non-responsive.
4. EBO Ordinance. The EBO Program is governed by the provisions of the EBO Ordinance set forth in the City of Atlanta Code Division 12, section 2 - 1441 through 2 -1464. The ordinance can be obtained from the City of Atlanta Clerk's Office at (404) 330-6032.
5. Supplier Participation. In order to receive full M/FBE credit, suppliers must manufacture or warehouse the materials, supplies, or equipment being supplied for use on the Eligible Project.

COVENANT OF NON-DISCRIMINATION

The undersigned understands that it is the policy of the City of Atlanta to promote full and equal business opportunity for all persons doing business with the City of Atlanta. The undersigned covenants that we have not discriminated, on the basis of race, gender or ethnicity, with regard to prime contracting, subcontracting or partnering opportunities. The undersigned further covenants that we have completed truthfully and fully the required forms EBO-2 and EBO-3. Set forth below is the signature of an officer of the bidding entity with the authority to bind the entity.

Signature of Attesting Party

Title of Attesting Party

On this ____ day of _____, 20____, before me appeared _____, the person who signed the above covenant in my presence.

Notary Public

Seal

**EQUAL BUSINESS OPPORTUNITY CONTRACTOR PROJECT PLAN
SUBCONTRACTOR/SUPPLIER UTILIZATION**

List all Majority, Minority and Female Business Enterprise subcontractors/suppliers, including lower tiers, to be used on this project.

Name of Sub-contractor/ Supplier	Company Name, Address and Phone Number	City Of Atlanta Business License? (yes or no)	NIAC Code	Type of Work to be Performed	Ownership of Business (see code below)	Certification No. and Expiration Date	Dollar (\$) Value of Work and Scope of Work	Percentage of Total Bid Amount

Total MBE% _____
Total FBE% _____

Code: AABE - African American Business Enterprise, HBE - Hispanic Business Enterprise, FBE - Female Business Enterprise.
ABE - Asian Business Enterprise, NABE - Native American Business Enterprise

Proponent's Co. Name: _____ Project Name: _____ FC#: _____

Signature: _____ Date: _____

First Source Job Information

Company Name: _____

FC No.: _____

Project Name: _____

The following entry level positions will become available as a result of the above referenced contract with the City of Atlanta.

- 1.
- 2.
- 3.
- 4.
- 5.

Include a job description and all required qualifications for each position listed above.

Identify a company representative and contact phone number who will be responsible for coordinating with the First Source Jobs Program.

Company Representative: _____

Phone Number: _____

First Source Jobs Agreement

THIS AGREEMENT REGARDING THE USE OF THE FIRST SOURCE JOBS PROGRAM BY CONTRACTORS WITH THE CITY OF ATLANTA TO FILL ENTRY LEVEL JOBS is made and entered into by _____

This _____ day of _____, 200__.

Whereas the City of Atlanta requires the immediate beneficiary or primary contractor for every eligible project to enter into a First Source Jobs employment agreement. The contractor agrees to the following terms and conditions:

- The first source for finding employees to fill all entry level jobs Created by the eligible project will be the First Source Program.
- The contractor will make every effort to fill 50% of the entry level jobs created by this eligible project with applicants from the First Source Program.
- The contractor shall make good faith effort to reach the goal of this employment agreement.
- Details as to the number and description of each entry level job must me provided with the bid.
- The contractor shall comply with the spirit of the First Source Jobs Policy beyond the duration of this agreement and continue to make good faith attempts to hire employees of similar backgrounds to those participating in the First Source Program.
- The contractor as a condition of transfer, assignment or otherwise shall require the transferee to agree in writing to the terms of the employment Agreement.

Upon a determination that a beneficiary or contractor has failed to comply with the terms of this Agreement, the City may inpose the following penalties based on the severity of the non-compliance:

- The City of Atlanta may withhold payment from the contractor.
- The City of Atlanta may withhold 10 percent of all future payments on the contract until the contractor is in compliance
- The City of Atlanta may refuse all future bids on city projects or applications for financials assistance in any form from the City until the contractor demonstrated that the First Source requirements have been met, or cancellation of the eligible project.
- The City of Atlanta may cancel the eligible project.

All terms stated herein can be found in the City of Atlanta Code of Ordinances Sections 5-8002 through 5-8005.

The undersigned hereby agrees to the terms and conditions set forth in this agreement.

Contractor

List all subcontractors or suppliers that were contacted regarding this project.

Name of Sub-contractor/ Supplier	Company Name, Contact Name, Address and Phone Number	City Of Atlanta Business License? (Yes or No)	Type of Work Solicited for	Business Ownership (see code below)	Certification No. and Expiration Date	Results of Contact
Stewart Brothers	2480 Pleasant dale Road Doraville, GA 30340 770-44705810		Asphalt			Quoted
Dalton Electric	1101 Redan Trail Stone Mountain, GA 30088 678-618-3150 Dalton Foster		Electric	AABE		No Quote
RA Smith Asphalt Pav- ing Contract	1498 Nash Road Atlanta, GA 30331 404-799-3332 Erasto Gonzalez Roy Smith		Asphalt			No Quote
A&S Paving, Inc.	P.O. Box 633 Lithonia, GA 30058 770-482-1597 Beverly Allen		Asphalt	FBE		No Quote
ShepCo Pav- ing, Inc.	2261 Plunkett Road Convers, CA 30012 770-483-9397		Asphalt			Quoted

Name of contractor, Supplier	Company Name, Contact Name, Address and Phone Number	City of Atlanta Business License? (Yes or No)	Type of Work Solicited for	Business Ownership (see code below)	Certification No. and Expiration Date	Results of Contact
Desmear System, Inc.	2130 Lavista Executive Park Drive Tucker, GA 30080 770-908-2711 Adesina Tewogbade		concrete	DBE		Not quoting
Lions Group	6075A Lee's Mill Road Forest Park, GA 678-216-0487 Sint		asphalt			Not quoting
Soil Tek Solutions	1701 Oakbrook Drive, Suite C Norcross, GA 30093 770-729-3456 Brian Bennett		Erosion Control			Quoted
GCS & Asso. Inc.	502 Industrial Way North Dallas, GA 30132 770-443-1513 Shawn Whitener		Erosion Control			Quoted

Business Ownership Code: AABE - African American Business Enterprise, HBE - Hispanic Business Enterprise, FBE - Female Business Enterprise, ABE - Asian Business Enterprise, NABE - Native American Business Enterprise

Company Name: SD & C, Inc. Project Name: Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters FC#: 4943

Signature:  Date: 5/28/09

**EQUAL BUSINESS OPPORTUNITY SUBCONTRACTOR PROJECT PLAN
SUBCONTRACTOR'S TIER UTILIZATION**

List all Majority, Minority and Female Business Enterprise subcontractors/suppliers, including lower tiers, to be used on this project.

Name of Sub-contractor/ Supplier	Company Name, Address and Phone Number	City Of Atlanta Business License? (yes or no)	NIAC Code	Type of Work to be Performed	Ownership of Business (see code below)	Certification No. and Expiration Date	Dollar (\$) Value of Work and Scope of Work	Percentage of Total Bid Amount
Kamal Abiodun	Knight & Associates 1515 Northwest Drive Atlanta, GA 30006 770-496-0912	Yes		concrete and walls	AABE & DBE		\$1,596,000	27%
MarJean Selby Contracting, Inc.	MarJean Selby 3956 Gloucester Drive Tucker, GA 30084 770-939-7426	No		concrete and paving	FBE		\$414,000	7%
Dalton Foster	Dalton Electric 1101 Redan Trail Stone Mountain, GA 30088 678-618-3150	No		Electrical	AABE		\$185,250	3.13%

Total MBE% 30.13
Total FBE% 7%

Code: AABE - African American Business Enterprise, HBE - Hispanic Business Enterprise, FBE - Female Business Enterprise.
ABE - Asian Business Enterprise, NABE - Native American Business Enterprise

Proponent's Co. Name: SD & C, Inc. Project Name: Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters FC#: 4943
Signature: [Signature] Date: 5/28/09

First Source Job Information

Company Name: SD & C, Inc.

FC No.: FC-4943

Project Name: Annual Contract To Construct Sidewalks, Driveways,
Curbs And Gutters

The following entry level positions will become available as a result of the above referenced contract with the City of Atlanta.

1. Laborers/Flaggers (If needed)
- 2.
- 3.
- 4.
- 5.

Include a job description and all required qualifications for each position listed above.

Identify a company representative and contact phone number who will be responsible for coordinating with the First Source Jobs Program.

Company Representative: Tony Adibe

Phone Number: 404-508-2481

First Source Jobs Agreement

THIS AGREEMENT REGARDING THE USE OF THE FIRST SOURCE JOBS PROGRAM BY CONTRACTORS WITH THE CITY OF ATLANTA TO FILL ENTRY LEVEL JOBS is made and entered into by SD & C, Inc.

This 28th day of May, 2009.

Whereas the City of Atlanta requires the immediate beneficiary or primary contractor for every eligible project to enter into a First Source Jobs employment agreement. The contractor agrees to the following terms and conditions:

- The first source for finding employees to fill all entry level jobs Created by the eligible project will be the First Source Program.
- The contractor will make every effort to fill 50% of the entry level jobs created by this eligible project with applicants from the First Source Program.
- The contractor shall make good faith effort to reach the goal of this employment agreement.
- Details as to the number and description of each entry level job must me provided with the bid.
- The contractor shall comply with the spirit of the First Source Jobs Policy beyond the duration of this agreement and continue to make good faith attempts to hire employees of similar backgrounds to those participating in the First Source Program.
- The contractor as a condition of transfer, assignment or otherwise shall require the transferee to agree in writing to the terms of the employment Agreement.

Upon a determination that a beneficiary or contractor has failed to comply with the terms of this Agreement, the City may impose the following penalties based on the severity of the non-compliance:

- The City of Atlanta may withhold payment from the contractor.
- The City of Atlanta may withhold 10 percent of all future payments on the contract until the contractor is in compliance
- The City of Atlanta may refuse all future bids on city projects or applications for financials assistance in any form from the City until the contractor demonstrated that the First Source requirements have been met, or cancellation of the eligible project.
- The City of Atlanta may cancel the eligible project.

All terms stated herein can be found in the City of Atlanta Code of Ordinances Sections 5-8002 through 5-8005.

The undersigned hereby agrees to the terms and conditions set forth in this agreement.

SD & C, Inc.

Contractor

APPENDIX B
INSURANCE AND BONDING
REQUIREMENTS

APPENDIX B
INSURANCE & BONDING REQUIREMENTS
FC-4943 Annual Contract for Construction of Sidewalks, Driveways, Curbs, Gutters
& Other Miscellaneous Concrete Work

A. Preamble

The following requirements apply to all work under the agreement. Compliance is required by all Contractor/Consultants. **To the extent permitted by applicable law, the City of Atlanta ("City") reserves the right to adjust or waive any insurance or bonding requirements contained in this Appendix B and applicable to the agreement.**

1. Evidence of Insurance Required Before Work Begins

No work under the agreement may be commenced until all insurance and bonding requirements contained in this Appendix B, or required by applicable law, have been complied with and evidence of such compliance satisfactory to City as to form and content has been filed with City. Contractor/Consultant must provide City with a Certificate of Insurance that clearly and unconditionally indicates that Contractor/Consultant has complied with all insurance and bonding requirements set forth in this Appendix B and applicable to the agreement. In accordance with the solicitation documents applicable to the agreement at the time Contractor/Consultant submits to City its executed agreement, Contractor/Consultant must satisfy all insurance and bonding requirements required by this Appendix B and applicable by law, and provide the required written documentation to City evidencing such compliance. In the event that Contractor/Consultant does not comply with such submittal requirements within the time period established by the solicitation documents applicable to the agreement, City may, in addition to any other rights City may have under the solicitation documents applicable to the agreement or under applicable law, make a claim against any bid security provided by Contractor/Consultant.

2. Minimum Financial Security Requirements

All companies providing insurance required by this Appendix B 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/Consultant to City certifying that all insurance and bonding requirements set forth in this Appendix B and applicable to the agreement have been unconditionally satisfied.

For all agreements, regardless of size, companies providing insurance or bonds under the agreement must meet the following requirements:

- i) Best's Rating not less than A-
- ii) Best's Financial Size Category not less than Class IX, and
- iii) Companies must be authorized to conduct and transact insurance contracts by the Insurance Commissioner, State of Georgia.
- iv) 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 City, City will notify Contractor/Consultant in writing. Contractor/Consultant must promptly obtain a new policy or bond issued by an insurer acceptable to City and submit to City evidence of its compliance with these conditions.

Contractor/Consultant's failure to comply with all insurance and bonding requirements set forth in this Appendix B and applicable to the agreement will not relieve Contractor/Consultant from any liability under the agreement. Contractor/Consultant's obligations to comply with all insurance and bonding requirements set forth in Appendix B and applicable to the agreement will not be construed to conflict with or limit Contractor/Consultant's/Consultant's indemnification obligations under the agreement.

3. Insurance Required for Duration of Contract

All insurance and bonds required by this Appendix B must be maintained during the entire term of the agreement, including any renewal or extension terms, and until all work has been completed to the satisfaction of City.

4. Notices of Cancellation & Renewal

Contractor/Consultant must, within 2 business days of receipt, forward to the City, at the address listed below by mail, hand-delivery or facsimile transmission, all notices received from all insurance carriers providing insurance coverages under this Agreement and Appendix B that concern the proposed cancellation, or termination of coverage of any insurance policies. All notices under this provision shall be sent to:

68 Mitchell St. -Suite 9100
Atlanta, GA 30303
Facsimile No. (404) 658-7450

Confirmation of any mailed notices must be evidenced by return receipts of registered or certified mail.

Contractor/Consultant shall provide the City with evidence of required insurance prior to the commencement of this agreement, and, thereafter, with a certificate evidencing renewals or changes to required policies of insurance at least fifteen (15) days prior to the expiration of previously provided certificates.

5. Certificate Holder

The **City of Atlanta** must be named as certificate holder. All notices must be mailed to the attention of **Risk Management** at **68 Mitchell Street, Suite, 9100, Atlanta, Georgia 30303**.

6. Project Number & Name

The project number and name must be referenced in the description section of the insurance certificate.

7. Additional Insured Endorsements – Form CG 20 10 (11/85) or its equivalent

The City must be covered as Additional Insured under all insurance (except worker's compensation and professional liability) required by this Appendix B and such insurance must be primary with respect to the Additional Insured. Confirmation of this must unconditionally appear on any **Certificate of Insurance** provided by Contractor/Consultant as evidence of its compliance with this Appendix B. **Contractor/Consultant must also submit to City an Additional Insured Endorsement (Form CG 20 10 (11/85) or its equivalent) evidencing City's rights as an Additional Insured for each policy of insurance under which it is required to be an additional insured pursuant to this Appendix B . The City shall not have liability for any premiums charged for such coverage.**

8. Mandatory Sub-Contractor/Consultant Compliance

Contractor/Consultant must require and ensure that all subContractor/Consultants/subconsultants at all tiers to be sufficiently insured/bonded.

B. Workers' Compensation and Employer's Liability Insurance

Contractor/Consultant 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 agreement. :

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 \$500,000 policy limit

C. Commercial General Liability Insurance

Contractor/Consultant must procure and maintain Commercial General Liability Insurance in an amount not less than **\$1,000,000 per occurrence subject to a \$2,000,000 aggregate**. The following indicated extensions of coverage must be provided:

- Contractual Liability
- Broad Form Property Damage
- Personal Injury
- Advertising Injury
- Fire Legal Liability
- Medical Expense
- Premises Operations
- Independent Contractor/Consultants/SubContractor/Consultants
- Products – Completed Operations
- Additional Insured Endorsement* (primary, non-contributing basis)
- Waiver of Subrogation in favor of City

D. Commercial Automobile Liability Insurance

Contractor/Consultant must procure and maintain Automobile Liability Insurance in an amount not less than \$500,000 Bodily Injury and Property Damage combined single limit. The following indicated extensions of coverage must be provided:

- Owned, Non-owned & Hired Vehicles
- Additional Insured Endorsement* (written on a primary, non-contributing basis)
- Waiver of Subrogation in favor of City

If Contractor/Consultant does not own any automobiles in the corporate name, non-owned vehicle coverage will apply and must be endorsed on either Contractor/Consultant's personal automobile policy or the Commercial General Liability coverage required under this Appendix B.

E. Excess or Umbrella Liability Insurance

Contractor/Consultant shall procure and maintain a policy providing Excess or Umbrella Liability Insurance which is at least as broad as the underlying policy. This insurance, which shall be maintained throughout the life of the contract, shall be in an amount of not less than \$4,000,000 per occurrence.

- May be used to achieve minimum general and auto liability limits
- Coverage must be as broad as primary policy

F. Performance and Payment Bond

Contractor/Consultant shall furnish a Payment Bond and a Performance Bond to the City in an amount-equal to **100 percent of the total contract value** and for the duration of the entire term.

The person executing the Bonds on behalf of the surety shall 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 by an official of said surety.

Payment Bond

INSTRUCTIONS

1. This form is required for use in connection with the Agreement identified on its face. There shall be no deviation from this form without approval by the City.
2. The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of the form. The bond shall be signed by an authorized person. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an office of the corporation involved, evidence of this authority must be furnished.
3. Corporation executing the bond as surety must be among those appearing on the U.S. Treasury Department's most current list of approved sureties and must be acting within the amounts and limitations set forth therein.
4. Corporate surety shall be duly authorized by the Commissioner of Insurance of the State of Georgia to transact surety business in the State of Georgia.
5. Do not date this bond. The City will date this bond the same date or later than the date of the Agreement.
6. The Surety shall attach a duly authorized power-of-attorney authorizing signature on its behalf of any attorney-in-fact.
7. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Seal."
8. The name of each person signing this bond shall be typed or printed in the space provided.

Payment Bond

"City" City of Atlanta, Georgia

"Project" Annual Contract to Construct Sidewalks Driveways Curbs and Gutters

"Agreement No." FC-4943

"Principal" (Legal Name and Business Address)

SD & C, Inc.

809 Park North Blvd.

Clarkston, Georgia 30021

Type of Organization ("X" one):

Individual

Partnership

Joint Venture

Corporation

"Surety:" (Name and Business Address)

International Fidelity Insurance Company

One Newark Center, 20th Floor

Newark, New Jersey 07102-5207

duly authorized by the Commissioner of Insurance of
the State of Georgia to transact surety business in the
State of Georgia.

"Agreement:"

Agreement between Principal and City, dated 2nd day of October, 2009,
regarding performance of Work relative to the Project.

"Penal Sum:"

**One Million Five Hundred Nine Thousand Eight Hundred Ten Dollars and Sixty Two
Cents (\$1,509,810.62) **

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety hereto, as named above, are held and firmly bound to the City in the above Penal Sum for the payment of which well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, jointly and severally.

WHEREAS, the Principal and the City entered into the Original Agreement identified above;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall make payment of all Subcontractors and all persons supplying labor, Materials, machinery and Equipment for the performance of said work, this obligation shall be void; otherwise of full force and effect.

And the Surety to this bond, for value received, agrees that no modification, change, extension of time, alteration or addition to the terms of the Emergency Agreement or to the Work to be performed thereunder shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such

modification, change, extension of time, alteration or addition to the terms of the Emergency Agreement or the Work.

It is agreed that this bond is executed pursuant to and in accordance with the provisions of Section 13-10-1 and 36-82-101 *et seq.* and is intended to be and shall be construed to be a bond in compliance with the requirements thereof, though not restricted thereto.

IN WITNESS WHEREOF, the Principal and the Surety have caused these presents to be duly signed and sealed this 2nd day of October, 2009.

PRINCIPAL: SD+C, Inc.

Tony Adibe
President/Vice President (Sign)

TONY ADIBE
President/Vice President (Type or Print)

Attested to by:
Constance Adibe
Secretary/Assistant Secretary (Seal)

SURETY: International Fidelity Insurance Company

By: A.M. DiGeronimo
Attorney-in-Fact (Sign)

A.M. DiGeronimo
Attorney-in-Fact (Type or Print)

APPROVED AS TO FORM
[Signature]
Associate/Assistant City Attorney

APPROVED
[Signature]
City's Chief Financial Officer

Performance Bond

INSTRUCTIONS

1. This form is required for use in connection with the Agreement identified on its face. There shall be no deviation from this form without approval by the City.
2. The full legal name and business address of the Principal shall be inserted in the space designated "Principal" on the face of the form. The bond shall be signed by an authorized person. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an office of the corporation involved, evidence of this authority must be furnished.
3. Corporation executing the bond as surety must be among those appearing on the U.S. Treasury Department's most current list of approved sureties and must be acting within the amounts and limitations set forth therein.
4. Corporate surety shall be duly authorized by the Commissioner of Insurance of the State of Georgia to transact surety business in the State of Georgia.
5. Do not date this bond. The City will date this bond the same date or later than the date of the Agreement.
6. The Surety shall attach a duly authorized power-of-attorney authorizing signature on its behalf of any attorney-in-fact.
7. Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the word "Seal."
8. The name of each person signing this bond shall be typed or printed in the space provided.

Performance Bond

"City" City of Atlanta, Georgia

"Project" Annual Contract to Construct Sidewalks Driveways Curbs and Gutters

"Agreement No." FC-4943

"Principal" (Legal Name and Business Address)

SD & C, Inc.
809 Park North Blvd
Clarkston, Georgia 30021

Type of Organization ("X" one):
 Individual
 Partnership
 Joint Venture
 Corporation

"Surety:" (Name and Business Address)

International Fidelity Insurance Company
One Newark Center, 20th Floor
Newark, New Jersey 07102-5207
duly authorized by the Commissioner of Insurance of
the State of Georgia to transact surety business in the
State of Georgia.

"Agreement:" Agreement between Principal and City, dated 2nd day of October, 2009,
regarding performance of Work relative to the Project.

"Penal Sum:" ** One Million Five Hundred Nine Thousand Eight Hundred Ten Dollars and Sixty Two Cents (\$1,509,810.62) **

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety hereto, as named above, are held and firmly bound to the City in the above Penal Sum for the payment of which well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, jointly and severally.

WHEREAS, the Principal and the City entered into the Original Agreement identified above;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall faithfully and fully comply with, perform and fulfill all of the undertakings, covenants, conditions and all other of the terms and conditions of said Emergency Agreement, including any and all duly authorized modifications of such Emergency Agreement, within the original term of such Emergency Agreement and any extensions thereof, which shall include, but not be limited to any obligations created by way of warranties and/or guarantees for workmanship and materials which warranty and/or guarantee may extend for a period of time beyond completion of said Agreement, this obligation shall be void; otherwise, of full force and effect.

And the Surety to this bond, for value received, agrees that no modification, change, extension of time, alteration or addition to the terms of the Emergency Agreement or to the Work to be performed thereunder shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such modification, change, extension of time, alteration or addition to the terms of the Emergency Agreement or the Work.

It is agreed that this bond is executed pursuant to and in accordance with the provision of O.C.G.A. Sections 13-10-1 and 36-82-101, *et seq.* and is intended to be and shall be construed to be a bond in compliance with the requirements thereof, though not restricted thereto.

IN WITNESS WHEREOF, the Principal and the Surety have caused these presents to be duly signed and sealed this 2nd day of October, 2008

PRINCIPAL: SD+C, Inc.

Tony Adibe

President/Vice President (Sign)

TONY ADIBE

President/Vice President (Type or Print)

Attested to by:
Constance Adibe

Secretary/Assistant Secretary (Seal)

SURETY: International Fidelity Insurance Company

By: A.M. DiGeronimo

Attorney-in-Fact (Sign)

A.M. DiGeronimo

Attorney-in-Fact (Type or Print)

APPROVED AS TO FORM
[Signature]
Associate/Assistant City Attorney

APPROVED
[Signature]
City's Chief Financial Officer

ACCORDTM CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY)
09/23/2009

PRODUCER Mainstreet Insurance Concepts, Inc. 5627 Singleton Road Norcross, Georgia 30093 770 441 2014	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
	COMPANIES AFFORDING COVERAGE	
INSURED S d & C Incorporated 809 Park North BLVD Clarkston, Georgia 30021	COMPANY A	Underwriters At Lloyds of London
	COMPANY B	Progressive Mountain Insurance Company
	COMPANY C	Commerce & Industry Insurance Company
	COMPANY D	Scottsdale Insurance Company

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMPREHENSIVE FORM <input checked="" type="checkbox"/> PREMISES/OPERATIONS UNDERGROUND EXPLOSION & COLLAPSE HAZARD <input checked="" type="checkbox"/> PRODUCTS/COMPLETED OPER <input checked="" type="checkbox"/> CONTRACTUAL <input checked="" type="checkbox"/> INDEPENDENT CONTRACTORS <input checked="" type="checkbox"/> BROAD FORM PROPERTY DAMAGE <input checked="" type="checkbox"/> PERSONAL INJURY	TPATE010549	04/11/2009	04/11/2010	BODILY INJURY OCC	\$1,000,000
					BODILY INJURY AGG	\$2,000,000
					PROPERTY DAMAGE OCC	\$1,000,000
					PROPERTY DAMAGE AGG	\$2,000,000
					BI & PD COMBINED OCC	\$1,000,000
					BI & PD COMBINED AGG	\$2,000,000
					PERSONAL INJURY AGG	\$1,000,000
					Fire Legal Liability	\$50,000
					Medical Payment	\$5,000
					B	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> ALL OWNED AUTOS (Private Pass) <input checked="" type="checkbox"/> ALL OWNED AUTOS (Other than Private Passenger) <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> GARAGE LIABILITY
BODILY INJURY (Per accident)	\$500,000					
PROPERTY DAMAGE	\$500,000					
BODILY INJURY & PROPERTY DAMAGE COMBINED	\$500,000					
EXCESS LIABILITY						
D	EXCESS LIABILITY <input checked="" type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM	TPUM 11452-63	09/23/2009	09/23/2010	EACH OCCURRENCE	\$4,000,000
					AGGREGATE	\$4,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY THE PROPRIETOR/PARTNERS/EXECUTIVE OFFICERS ARE: <input checked="" type="checkbox"/> INCL <input type="checkbox"/> EXCL	WC-003-56-3417	04/02/2009	04/02/2010	<input checked="" type="checkbox"/> WC STATUTORY LIMITS	OTHER
					EL EACH ACCIDENT	\$100,000
					EL DISEASE - POLICY LIMIT	\$500,000
					EL DISEASE - EA EMPLOYEE	\$100,000
	OTHER					

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

City Of Atlanta - FC-4943D, Annual Contract to Construct Sidewalks, Driveways, Curbs, and Gutters
 Waiver Of Subrogation In Favor Of City
 Additional Insured Endorsement (Written On a Primary, non-contributing basis)
 Independent Contractor/ Consultants/ Subcontractor/ Consultant

CERTIFICATE HOLDER

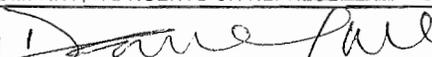
(Additional Insured)
 City Of Atlanta
 55 Trinity Avenue
 Atlanta, Georgia 30303

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

Damian Ike Ekezie, CPCU



APPENDIX C
CONTRACTOR'S DISCLOSURE
AND QUESTIONNAIRE FORM

Form 3; Disclosure Form and Questionnaire

Proponent's disclosures must fully answer all questions posed by the City. Such disclosure must be submitted at the time of the Proposal submission and included as a part of the Proposal.

For the purposes of this disclosure form:

1. "Proponent" means, and disclosure is required for, each Proponent and its constituent members, firms, partners, joint venturers and first-tier subconsultants.
2. "affiliate" means any legal entity that, directly or indirectly through one of more intermediate legal entities, controls, is controlled by or is under common control with the Proponent or a member of Proponent.
3. "control" means that the controlling entity: (i) possesses, directly or indirectly, the power to direct or cause the direction of the management and policies of the controlled entity, whether through the ownership of voting securities or by contract or otherwise; or (ii) has direct or indirect ownership in the aggregate of fifty one (51%) or more of any class of voting or equity interests in the controlled entity.

The following information must be provided:

1. Please provide the names and business addresses of Proponent and each of Proponent's officers, directors, affiliates and other employees, agents or representatives for this project: **FC-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters** for the City. Describe accurately, fully and completely their respective relationships with the Proponent, including their ownership interests and their anticipated role in the management and operations of the Proponent.
2. Please describe the general development of the Proponent's business during the past ten (10) years, or such shorter period of time that the Proponent has been in business.
3. List any lawsuits, administrative actions or litigation to which Proponent is currently a party or has been a party (either as a plaintiff or defendant) during the past ten (10) years based upon fraud, theft, breach of contract, misrepresentation, safety, wrongful death or other similar conduct. For each suit, list all parties and indicate whether any party was a bonding company, insurance company, an owner, or otherwise. State the project giving rise to the lawsuit, administrative action or litigation, explain the basis for all claims, and state whether a settlement was reached or a judgment was entered, identifying each party against whom a judgment was entered.

4. For all facilities contracted or owned by Proponent in the past ten (10) years, specify all violations of local, state/provincial, or national health and safety standards and summarize Proponent's performance with respect to accidents, injuries, lost time-on-job, worker's compensation claims and safety awards (include reported information and benchmarks wherever available).
5. For all facilities contracted or owned by Proponent in the past ten (10) years, specify all instances where it defaulted or materially failed to comply with contractual or regulatory permit-related obligations regarding operating performance, financial obligations or other standards. Please state whether the Proponent ever had a contract terminated due to quality of work.
6. Provide details if Proponent has been charged with a criminal offense within the last ten (10) years.
7. Describe any citation or notices of violation which Proponent received from any government agency in connection with any of Proponent's work during the past ten (10) years. Include OSHA violations, except for de minimus dollar amounts.
8. Provide a detailed listing of any violations of environmental regulations cited or alleged by local, state/provincial or national authorities, against Proponent for the past ten (10) years.
9. Please state whether any of the following events have occurred in the last ten (10) years with respect to the Proponent. If any answer is yes, explain fully the circumstances surrounding the subject matter of the affirmative answer:
 - (a) Whether Proponent, or affiliate currently or previously associated with Proponent, has ever filed a petition in bankruptcy, taken any actions with respect to insolvency, reorganization, receivership, moratorium or assignment for the benefit of creditors, or otherwise sought relief from creditors.
 - (b) Whether Proponent was subject of any order, judgment or decree not subsequently reversed, suspended or vacated by any court permanently enjoining Proponent from engaging in any type of business practice; and
 - (c) Whether Proponent was the subject of any civil or criminal proceeding in which there was a final adjudication adverse to Proponent which directly arose from activities conducted by Proponent which submitted a bid or proposal for the subject project.

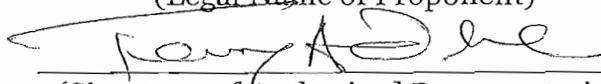
10. State whether any employee, agent or representative of Proponent who is or will be directly involved in the project, in the last ten (10) years: (i) has or had, directly or indirectly, a business relationship with the City; (ii) directly or indirectly has received revenues from the City or (iii) directly or indirectly has received revenues from conducting business on City property or pursuant to any contract with the City.

11. State whether any employee, agent or representative of Proponent who is or will be directly involved in the project has or had within the last ten (10) years a direct or indirect business relationship with any elected or appointed City official or with any City employee.

NOTE: In addition to providing detailed narrative answers to the questions posed in this disclosure form and questionnaire Proponent may attach any other documents that may provide information responsive to the subjects in this disclosure form and questionnaire.

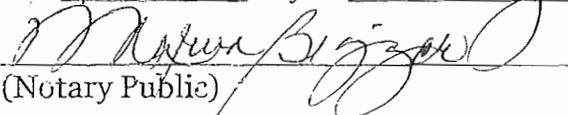
Under penalty of perjury, I declare that I have examined this disclosure form and questionnaire and all attachments to it, if applicable, and, to the best of my knowledge and belief, and all statements contained in it and all attachments, if applicable, are true, correct and complete.

On this 19th day of May, 2009

<u>SD & C, Inc.</u>	<u>5/19/09</u>
(Legal Name of Proponent)	(Date)
<u></u>	<u>5/19/09</u>
(Signature of Authorized Representative)	(Date)
<u>President</u>	(Title)

Sworn to and subscribed before me,

this 19th day of May, 2009


 (Notary Public)

(Seal)

Notary Public, DeKalb County, Georgia
 My Commission Expires Nov. 9, 2012

Commission Expires _____
 (Date)

Form 3: Disclosure Form and Questionnaire

All responses correspond to the question number:

1. SD & C Inc
809 Park north Blvd
Clarkston Ga. 30021

Officers/Directors/Agents: Tony Adibe

Tony Adibe is the President and Chief Operating Officer of the Proponent. He will be responsible for the operation of the project and owns 60% of the Proponent.

2. The Proponent business was incorporated in 1996. It has seen a steady growth to date. It currently has fifteen full time employees. It started with an initial bonding capacity of \$350,000.00 and has now grown to a bonding capacity of \$10,000,000.00
3. No law Suits
4. No known violation of local, state/provisional, or national health and safety standards. There was one workman's compensation claim that was handled by AIG insurance. That claims turned out to be a fraudulent one.
5. No termination contract due to quality of work.
6. No criminal offence
7. None
8. None
9. a. No
b. No
c. No
10. Yes. proponent has performed Contract work for the City in the past and was compensated for it.
11. No.

APPENDIX D

**GEORGIA SECURITY AND
IMMIGRATION COMPLIANCE
ACT OF 2006**

**GEORGIA SECURITY AND IMMIGRATION
COMPLIANCE ACT OF 2006
Required Submittal**

CONTRACT NO. FC-4943

CONTRACTOR: SD & C, Inc.

Effective July 1, 2007, the following language is required to be included in all contracts entered into by the City of Atlanta (hereinafter "City") for the physical performance of services within this State:

A. Pursuant to the Georgia Security and Immigration Compliance Act of 2006, the Contractor understands and agrees that compliance with the requirements of O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02 are conditions of this Agreement. The Contractor further agrees that such compliance shall be attested by the Contractor through execution of the contractor affidavit required by Georgia Department of Labor Rule 300-10-1-.07, or a substantially similar contractor affidavit. The Contractor's fully executed affidavit is attached hereto as Exhibit D and is incorporated into this Agreement by reference herein.

B. By initialing in the appropriate line below, the Contractor certifies that the following employee-number category as identified in O.C.G.A. § 13-10-91 is applicable to the Contractor:

1. _____ 500 or more employees;
2. _____ 100 or more employees;
3. SA Fewer than 100 employees.

C. The Contractor understands and agrees that, in the event the Contractor employs or contracts with any subcontractor or subcontractors in connection with this Agreement, the Contractor shall:

1. Secure from each such subcontractor an indication of the employee-number category as identified in O.C.G.A. § 13-10-91 that is applicable to the subcontractor;
2. Secure from each such subcontractor an attestation of the subcontractor's compliance with O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02 by causing each such subcontractor to execute the subcontractor affidavit required by Georgia Department of Labor Rule 300-10-1-.08, or a substantially similar subcontractor affidavit. The Contractor further understands and agrees that the Contractor shall require the executed subcontractor affidavit to become a part of the agreement between the Contractor

and each such subcontractor and shall provide a copy of said affidavit to the City. The Contractor agrees to maintain records of each subcontractor attestation required hereunder for inspection by the City at any time."

D. Contractor's failure to comply with the requirements of O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02 shall be a material default of performance of this Agreement and may result in termination of this Agreement for such default, pursuant to the termination provisions of this Agreement.

By the signature below, Contractor's duly authorized representative acknowledges the contractual requirements contained in this document and agrees to comply with them as required by law.

This _____ day of _____, 20__.

ATTEST:



Contractor's Representative

TONY ADIBE

Contractor's Representative (Print Name)

a copy of each such verification to the City of Atlanta at the time the subcontractor(s) is retained to perform such service.

170059
EEV / Basic Pilot Program User Identification Number

FURTHER AFFLIANT SAYETH NOT.

Tony Adibe
BY: Authorized Officer or Agent

5/19/09
Date

SD & C, Inc.
Contractor Name

President
Title of Authorized Officer or Agent of Contractor

Tony Adibe
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me
This 19~~th~~ day of May, 2008

Margaret Biggs
Notary Public

Notary Public, DeKalb County, Georgia
My Commission Expires Nov. 9, 2012

My commission expires: _____

* Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603. As of the effective date of O.C.G.A. § 13-10-91, the applicable federal work authorization program is the "EEV / Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

DeKalb COUNTY }
STATE OF GEORGIA }

SUBCONTRACTOR AFFIDAVIT

COMES NOW before me, the undersigned officer duly authorized to administer oaths, the undersigned subcontractor, who, after being duly sworn, states as follows:

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02, 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 the City of Atlanta has registered with and is participating in a federal work authorization program* in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02.

MSEL 0164
EEV / Basic Pilot Program User Identification Number

FURTHER AFFIANT SAYETH NOT.

Marjean Selby
BY: Authorized Officer or Agent

5/28/09
Date

MARJEAN SELBY Contracting Inc
Subcontractor Name

President
Title of Authorized Officer or Agent of Subcontractor

MARJEAN SELBY
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me
This 28th day of May, 2008

Mapua Bizzan
Notary Public Notary Public, DeKalb County, Georgia
My commission expires: My Commission Expires Nov. 9, 2012

* Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603. As of the effective date of O.C.G.A. § 13-10-91, the applicable federal work authorization program is the "EEV / Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

DeKalb COUNTY }
STATE OF GEORGIA }

SUBCONTRACTOR AFFIDAVIT

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By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02, stating affirmatively that the individual, firm, or corporation which is engaged in the physical performance of services under a contract with SD & C, Inc. (name of contractor) on behalf of the City of Atlanta has registered with and is participating in a federal work authorization program* in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02.

249319
EEV / Basic Pilot Program User Identification Number

FURTHER AFFIANT SAYETH NOT.

[Signature]
BY: Authorized Officer or Agent

05-19-09
Date

Knight & Associates
Subcontractor Name

COO
Title of Authorized Officer or Agent of Subcontractor

Kamal Abiodun
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me
This 19th day of May, 2008

[Signature]
Notary Public, DeKalb County, Georgia
My commission expires: Nov. 9, 2012

* Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603. As of the effective date of O.C.G.A. § 13-10-91, the applicable federal work authorization program is the "EEV / Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

DeKalb COUNTY }
STATE OF GEORGIA }

SUBCONTRACTOR AFFIDAVIT

COMES NOW before me, the undersigned officer duly authorized to administer oaths, the undersigned subcontractor, who, after being duly sworn, states as follows:

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259220
EEV / Basic Pilot Program User Identification Number

FURTHER AFFLIANT SAYETH NOT.

DALTON W. FOSTER
BY: Authorized Officer or Agent

Sept. 30. 2009
Date

DALTON ELECTRIC INC
Subcontractor Name

D. Foster
Title of Authorized Officer or Agent of Subcontractor

DALTON W. FOSTER
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me
This 30th day of September 2008

[Signature]
Notary Public

My commission expires: Notary Public, DeKalb County, Georgia
My Commission Expires Nov. 9, 2012

* Any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603. As of the effective date of O.C.G.A. § 13-10-91, the applicable federal work authorization program is the "EEV / Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

EXHIBIT A
BID SCHEDULE AND BID DATA

C.O. NO	ITEM	UNIT	UNIT COST	QUANTITY	TOTAL COST
1	CITY STANDARD 4-INCH CONCRETE SIDEWALK	SY	\$35.00	22,700	\$794,500.00
2	CITY STANDARD 4-INCH CONCRETE SIDEWALK WITH IMPRINTED HEXAGONAL PATTERN	SY	\$32.00	3,100	\$99,200.00
3	COA Standard 4" Concrete Sidewalk WITH IMPRINTED BRICK PATTERN AND COLOR	SY	\$32.00	4500	\$144,000.00
4	CITY MONOLITHIC CONCRETE SIDEWALK WITH CURB	SY	\$45.00	17,400	\$783,000.00
5	City STANDARD MONOLITHIC SIDEWALK WITH HEXAGONAL IMPRINT	SY	\$34.00	5556	\$188,904.00
6	City standard monolithic sidewalk with brick imprint	SY	\$29.00	3500	\$101,500.00
7	CITY STANDARD CONCRETE DRIVEWAY APRON, 6-INCH THICK	SY	\$40.00	9,800	\$392,000.00
8	CITY STANDARD CONCRETE DRIVEWAY APRON, 8-INCH THICK	SY	\$38.00	1,075	\$40,850.00
9	CITY STANDARD WHEELCHAIR RAMP, 6-INCH THICK WITH DETECTABLE TACTILE WARNING SYSTEM	SY	\$100.00	2550	\$255,000.00
10	CITY STANDARD COMBINATION CONCRETE CURB AND GUTTER, 8" X 30"	LF	\$12.00	2560	\$30,720.00
10a	CITY STANDARD COMBINATION CONCRETE CURB AND GUTTER, 8"X24"	LF	\$12.00	2550	\$30,600.00
11	CITY STANDARD CONCRETE HEADER CURB	LF	\$16.00	25,700	\$411,200.00
12	CITY STANDARD GRANITE CURB (GRADE A)	LF	\$26.00	3,000	\$78,000.00
12A	CITY STANDARD GRANITE CURB (GRADE B) ROUGH TOP	LF	\$28.00	3000	\$84,000.00
12B	CITY STANDARD GRANITE CURB (GRADE A RADIUS)	LF	\$36.00	600	\$21,600.00
12C	CITY STANDARD GRANITE CURB (TGRADE B RADIUS)	LF	\$38.00	600	\$22,800.00
13	RESET OR ADJUST EXISTING GRANITE CURB	LF	\$15.00	3500	\$52,500.00
14	GRASSING	SY	\$2.25	10,815	\$24,333.75
15	FURNISH AND INSTALL CITY STANDARD SIDEWALK FLUMES	EA	\$450.00	20	\$9,000.00
16	ADJUST EXISTING MANHOLE RINGS AND COVERS OR CATCH BASIN GRATES, FRAMES AND COVERS TO GRADE	EA	\$50.00	80	\$4,000.00
17	INSTALL GA DOT STD 1033 OR COA TYPE "C" CATCH BASIN	EA	\$800.00	6	\$4,800.00
18	INSTALL COA TYPE "B" CATCH BASIN	EA	\$800.00	15	\$12,000.00
19	INSTALL COA STD DROP INLET OR GA DOT 9031S OR DOT 9031U	EA	\$800.00	7	\$5,600.00
20	INSTALL GA DOT STD 1034 OR COA DOUBLE TYPE "B" CATCH BASIN	EA	\$800.00	3	\$2,400.00
21					
22	ADJUST EXISTING VALVE BOXES, ELECTRICAL PULL BOXES, AND SIMILAR INSERTS IN THE WORK TO GRADE	EA	\$10.00	434	\$4,340.00
22A	ADJUSTMENTS TO WATER LINES UNDER 2-INCHES	EA	\$150.00	110	\$16,500.00
22B	ADJUSTMENTS TO SEWER LINES 6-INCHES AND UNDER (Clean Out Lines)	EA	\$250.00	50	\$12,500.00
23	PROVIDE AND INSTALL CLEANOUT BOXES, VALVE BOXES AND/OR METER BOXES TO GRADE	EA	\$200.00	75	\$15,000.00
24	CITY OF ATLANTA STANDARD MASONRY WALL				
24a	0-4 FT IN HEIGHT	SF	\$25.00	8,500	\$212,500.00
24s	4 FT AND HIGHER	SF	\$20.00	1,700	\$34,000.00
25	COA SEGMENTAL RETAINING WALL	SF	\$5.00	3500	\$17,500.00
27	CRUSHED AGGREGATE BASE, 4 INCH THICK	SY	\$4.00	100	\$400.00
28	CRUSHED AGGREGATE BASE, 6 INCH THICK	SY	\$5.00	100	\$500.00
29	ASPHALT CONCRETE BLACK BASE OR "B" BINDER 4 1/2" THICK	SY	\$30.00	40	\$1,200.00
30	ASPHALT CONCRETE BLACK BASE OR "B" BINDER 6 1/2" THICK	SY	\$30.00	40	\$1,200.00
31	ASPHALT CONCRETE "E" OR "F" SURFACE COURSE, 1 1/2" THICK	SY	\$12.50	40	\$500.00
31B	ASPHALT CONCRETE "E" OR "F" SURFACE COURSE, 1 1/2" THICK WITH GIBSONITE ADDITIVE	SY	\$40.00	40	\$1,600.00
32	TREE REMOVAL 6" TO 18" IN DIAMETER	EA	\$200.00	350	\$70,000.00
33	TREE REMOVAL ABOVE 18" TO 36" IN DIAMETER	EA	\$600.00	45	\$27,000.00
34	TREE REMOVAL WITH GREATER THAN 36" IN DIAMETER	EA	\$800.00	10	\$8,000.00
34A	TREE REPLACEMENT FOR TREES 2.5" to 3.5"	EA	\$150.00	1500	\$225,000.00
34B	TREE REPLACEMENT FOR TREES GREATER THAN 3.5"	EA	\$150.00	50	\$7,500.00
35	REPLACEMENT OF FENCE (FILED FENCE)	LF	\$1.00	200	\$200.00
36	REPLACEMENT OF FENCE (WOVEN WIRE)	LF	\$1.00	150	\$150.00
37	REPLACEMENT OF FENCE (BARBED WIRE)	LF	\$1.00	175	\$175.00

38	REPLACEMENT OF FENCE (CHAIN LINK)	LF	\$16.00	500	\$8,000.00
39	REPLACEMENT OF RAIL (PIPE HANDRAIL)	LF	\$40.00	4,000	\$160,000.00
40	INSTALLATION OF 18" RCP PIPE	LF	\$10.00	800	\$8,000.00
41	INSTALLATION OF 18" DIP PIPE	LF	\$10.00	300	\$3,000.00
42	INSTALLATION OF 24" RCP PIPE	LF	\$10.00	300	\$3,000.00
43	INSTALLATION OF 24" DIP PIPE	LF	\$10.00	300	\$3,000.00
44	REPLACEMENT OF GUARDRAIL ANCHOR (TYPE 1,9,11,12)	EA	\$25.00	150	\$3,750.00
45	INSTALLATION OF WOOD POST MAILBOXES (All mailboxes shall be installed in PVC sleeves except where installed in grass strips.)	EA		200	
			\$90.00		\$18,000.00
46	INSTALLATION OF STEEL POST MAILBOXES (All mailboxes shall be installed in PVC sleeves except where installed in grass strips.)	EA		200	
			\$15.00		\$3,000.00
47	SAW CUT OF PAVEMENT (ASPHALT OR CONCRETE)	LF	\$4.00	3000	\$12,000.00
48	BANK (SLOPE) EXCAVATION	CY	\$6.00	4,230	\$25,380.00
49	REPLACEMENT OF UNSUITABLE MATERIAL WITH CRUSHED STONE	CY		500	
			\$8.00		\$4,000.00
50	INSTALLATION, MAINTENANCE AND REMOVAL OF SAFETY FENCE	LF	\$1.50	500	\$750.00
51	INSTALLATION, MAINTENANCE, AND REMOVAL OF SILT FENCE	LF	\$2.00	16,280	\$32,560.00
52	INSTALLATION, MAINTENANCE, AND REMOVAL OF HAY BALES	LF	\$3.75	300	\$1,125.00
53	INSTALLATION OF RIP RAP	TON	\$5.00	500	\$2,500.00
54	REPLACEMENT OF UNSUITABLE MATERIAL WITH EARTH	CY	\$8.00	100	\$800.00
55	MOBILIZATION	EA	\$220.00	10	\$2,200.00
57	SIDEWALK DEMOLITION	SY	\$6.00	25,000	\$150,000.00
58	CURB DEMOLITION	LF	\$4.00	5,100	\$20,400.00
59	SPEED HUMP	EA	\$2,000.00	25	\$50,000.00
60	THERMOPLASTIC STRIPPING REMOVAL				
60A	THERMOPLASTIC STRIPPING REMOVAL 5" White or Yellow	LF	\$1.50	1500	\$2,250.00
60B	THERMOPLASTIC STRIPPING REMOVAL 5" DOUBLE YELLOW	LF	\$3.00	2000	\$6,000.00
60C	THERMOPLASTIC STRIPPING REMOVAL 12" White	LF	\$3.00	100	\$3,000.00
60D	THERMOPLASTIC STRIPPING REMOVAL 24" White	LF	\$5.00	100	\$500.00
60E	THERMOPLASTIC STRIPPING REMOVAL 8' Ft. CROSSWALK	LF	\$8.50	240	\$2,040.00
61	RESET SIGNS	EA	\$50.00	250	\$12,500.00
62	THERMOPLASTIC STRIPE 6" WHITE	LF	\$1.50	200	\$300.00
63	THERMOPLASTIC STRIPE 8" WHITE	LF	\$3.00	200	\$600.00
64	THERMOPLASTIC STRIPE 12" WHITE	LF	\$3.00	1000	\$3,000.00
65	THERMOPLASTIC STRIPE WHITE 24" (STOP BAR)	LF	\$5.50	100	\$550.00
66	THERMOPLASTIC STRIPE DOUBLE YELLOW	LF	\$3.00	1000	\$3,000.00
67	COA Type "C" Lights (MAIN STREET)	EA	\$3,500.00	25	\$87,500.00
68A	COA - Type "A" Lights- with 25 ft poles	EA	\$1,500.00	13	\$19,500.00
68B	COA - Type "A" Lights- with 29 ft poles	EA	\$1,500.00	13	\$19,500.00
69	COA - Benches	EA	\$1,350.00	100	\$135,000.00
70	COA - Trash Receptacle	EA	\$1,000.00	100	\$100,000.00
71	COA - Reinforced Cantilever Sidewalk Slab 4"	SF	\$5.00	500	\$2,500.00
72	COA - Reinforced Cantilever Sidewalk Slab 5"	SF	\$6.00	500	\$3,000.00
73	Twin 2" PVC (HD) Conduit	LF	\$4.00	5000	\$20,000.00

BID TOTAL, QUALITY OF LIFE SIDEWALK CONTRACT, THE AMOUNT OF

Five Million One Hundred Seventy Six Thousand Nine
Hundred Seventy Seven and DOLLARS (\$ 5,176,977.75)
seventy Five Cents (FIGURE)

The undersigned declares that he understands that the quantities shown are approximate only and are subject to either increase or decrease and that should the quantities of any of the items of work be increased, the undersigned agrees to do the additional work at the unit prices set forth herein, and should the quantities be decreased, he also understands that payment will be made on the actual quantities installed at the unit bid price, and the undersigned will make no claims for anticipated profit for any decrease in the quantities. Actual quantities will be determined upon completion of the job.

The undersigned also agrees that extra work, if any, performed in accordance with articles 33 and 34 of the general conditions will be paid for in accordance with the provisions of those articles.

ALTERNATE BID FORM- (4 PAGES)

FC- 4943, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS, CURBS AND
GUTTERS
ANNUAL CONTRACT
WITH
ASPHALT MILLING, RESURFACING, & TRAFFIC CALMING

ITEM NO.	APPROXIMATE QUANTITY	ITEM WITH UNIT OR LUMP SUM PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES		AMOUNT	
			DOLLARS	CENTS	DOLLARS	CENTS
150-1000	LUMP SUM PER 10 SITES	Traffic Control for each projects _____ LUMP SUM PER SITE	\$4,500	00	\$4,500	00
205-0001	20	UNCLASSIFIED EXCAVATION, AT _____ PER CUBIC YARD	\$ 20	00	\$ 20	00
310-1101	200	TN., GR AGGR BASE CRS, INCL MATL, AT _____ PER TON	\$ 28	00	\$ 5,600	00

ITEM NO.	APPROXIMATE QUANTITY	ITEM WITH UNIT OR LUMP SUM PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES		AMOUNT	
			DOLLARS	CENTS	DOLLARS	CENTS
402-31900	100	Recycled asphalt concrete 25 MM super pave GP1 or 2, including bituminous material & h.lime PER TON	\$ 202	00	\$ 20,200	00
402-3190	200	TN., RECYC ASPH. CONC. 19MM SUPERPAVE, GP 1 OR 2, INCL. BIT. MATL. & H LIME, PER TON	\$ 207	00	\$ 41,400	00
402-3113	500	TN., RECYC ASPH. CONC. 12.5MM SUPERPAVE, GP 1 OR 2, INCL. BIT MATL. & H LIME, PER TON	\$ 148	00	\$ 74,000	00
402-4505	2000	TN., RECYC ASPH. CONC. 9.5MM SUPERPAVE, GP 1 OR 2, INCL. POLYMER MOD BIT MATL. & H LIME, PER TON	\$ 130	00	\$ 260,000	00
413-1000	2000	P.G.6722 Bituminous tack coat PER GALLON	\$ 5	00	\$ 10,000	00

ITEM NO.	APPROXIMATE QUANTITY	ITEM WITH UNIT OR LUMP SUM PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES		AMOUNT	
			DOLLARS	CENTS	DOLLARS	CENTS
432-5010	5000	Milling existing Asphalt concrete pavement <u>0" to 2" Depth</u> Per Square yard	\$ 15	00	\$ 75,000	00
432-5010	100	Milling existing Asphalt concrete pavement <u>2" to 4" Depth</u> Per square yard	\$ 45	00	\$ 4,500	00
432-5010	100	Milling existing Asphalt concrete Pavement <u>4" to 6" Depth</u> Per Square yard	\$ 50	00	\$ 5,000	00
432-5010	200	Milling existing Concrete pavement <u>0" to 2" Depth</u> Per Square yard	\$ 50	00	\$ 10,000	00
432-5010	200	Milling existing concrete Pavement <u>2" to 4" Depth</u> Per square yard	\$ 50	00	\$ 10,000	00

ITEM NO.	APPROXIMATE QUANTITY	ITEM WITH UNIT OR LUMP SUM PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES		AMOUNT	
			DOLLARS	CENTS	DOLLARS	CENTS
432-5010	00	Milling existing concrete pavement 4" to 6" Depth Per square yard	—	—	—	—
432-5010 A	500	Decorative Asphalt Paving Per square yard	\$ 120	00	\$ 60,000	00
432-5010 B	10,000	Hot-In-Place Recycled Asphalt Paving Per square yard	\$ 21	00	\$ 210,000	00

ALTERNATE BID TOTAL, FC-4943, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS, CURBS AND GUTTERS WITH ASPHALT MILLING, RESURFACING AND TRAFFIC CALMING

Eight Hundred Thirty One Thousand One Hundred and Zero Cents DOLLARS (\$ 831,100.00)
(FIGURE)

BASE BID + ALTERNATE BID

TOTAL *Six Million Eight Thousand Eighty Seven* DOLLARS and *Seventy Five Cent*
(WORDS)

(\$ 6,008,087.75)
(FIGURE)

BID ITEMS FOR ANNUAL SIDEWALK CONTRACT 2009

C.O. NO	ITEM	UNIT	UNIT	QUAN-	TOTAL
			COST	TITY	COST
1	CITY STANDARD 4-INCH CONCRETE SIDEWALK	SY	\$ 35.00	22,700	\$ 794,500.00
2	CITY STANDARD 4-INCH CONCRETE SIDEWALK WITH IMPRINTED HEXAGONAL PATTERN	SY	\$ 32.00	3,100	\$ 99,200.00
3	COA Standard 4" SIDEWALK WITH IMPRINTED BRICK PATTERN AND COLOR	SY	\$ 32.00	4500	\$ 144,000.00
4	CITY MONOLITHIC CONCRETE SIDEWALK WITH CURB	SY	\$ 45.00	17,400	\$ 783,000.00
5	CITY STANDARD MONOLITHIC SIDEWALK WITH HEXAGONAL IMPRINT	SY	\$ 34.00	5556	\$ 188,904.00
6	City STANDARD MONOLITHIC SIDEWALK SIDEWALK WITH BRICK IMPRINT	SY	\$ 29.00	3500	\$ 101,500.00
7	CITY STANDARD CONCRETE DRIVEWAY APRON, 6-INCH THICK	SY	\$ 40.00	9,800	\$ 392,000.00
8	CITY STANDARD CONCRETE DRIVEWAY APRON, 8-INCH THICK	SY	\$ 38.00	1,075	\$ 40,850.00
9	CITY STANDARD WHEELCHAIR RAMP, 6-INCH THICK WITH DETECTABLE TACTILE WARNING SYSTEM WARNING SURFACE OF TRUNCATED DOMES	SY	\$ 100.00	2,550	\$ 255,000.00
10	CITY STANDARD COMBINATION CONCRETE CURB AND GUTTER, 8" X 30"	LF	\$ 12.00	2560	\$ 30,720.00
10a	CITY STANDARD COMBINATION CONCRETE CURB AND GUTTER, 6" X 24"	LF	\$ 12.00	2550	\$ 30,600.00
11	CITY STANDARD CONCRETE HEADER CURB	LF	\$ 16.00	25,700	\$ 411,200.00
12	CITY STANDARD GRANITE CURB (GRADE A)	LF	\$ 26.00	3,000	\$ 78,000.00
12A	CITY STANDARD GRANITE CURB (GRADE B) ROUGH TOP	LF	\$ 28.00	3,000	\$ 84,000.00
12B	CITY STANDARD GRANITE CURB (GRADE A RADIUS)	LF	\$ 36.00	600	\$ 21,600.00
12C	CITY STANDARD GRANITE CURB (GRADE B RADIUS)	LF	\$ 38.00	600	\$ 22,800.00
13	RESET OR ADJUST EXISTING GRANITE CURB	LF	\$ 15.00	3,500	\$ 52,500.00
14	GRASSING	SY	\$ 2.25	10815	\$ 24,333.75
15	FURNISH AND INSTALL CITY STANDARD SIDEWALK FLUMES	EA	\$ 450.00	20	\$ 9,000.00
16	ADJUST EXISTING MANHOLE RINGS AND COVERS OR CATCH BASIN GRATES, FRAMES AND COVERS TO GRADE	EA	\$ 50.00	80	\$ 4,000.00
17	INSTALL GA DOT STD 1033 OR COA TYPE "C" CATCH BASIN	EA	\$ 800.00	6	\$ 4,800.00
18	INSTALL COA TYPE "B" CATCH BASIN	EA	\$ 800.00	15	\$ 12,000.00
19	INSTALL COA STD DROP INLET OR GA DOT 9031S OR DOT 9031U	EA	\$ 800.00	7	\$ 5,600.00
20	INSTALL GA DOT STD 1034 OR COA DOUBLE TYPE "B" CATCH BASIN	EA	\$ 800.00	3	\$ 2,400.00
21					
22	ADJUST EXISTING VALVE BOXES, ELECTRICAL PULL BOXES, AND SIMILAR INSERTS IN THE WORK TO GRADE	EA	\$ 10.00	434	\$ 4,340.00
22A	ADJUSTMENTS TO WATER LINES UNDER 2-INCHES	EA	\$ 150.00	110	\$ 16,500.00
22B	ADJUSTMENTS TO SEWER LINES 6-INCHES AND UNDER	EA	\$ 250.00	50	\$ 12,500.00
23	PROVIDE AND INSTALL CLEANOUT BOXES, VALVE BOXES AND/OR METER BOXES TO GRADE	EA	\$ 200.00	75	\$ 15,000.00
24	CITY OF ATLANTA STANDARD MASONRY WALL				
	0-4 FT IN HEIGHT	SF	\$ 25.00	8,500	\$ 212,500.00
	4 FT AND HIGHER	SF	\$ 20.00	1,700	\$ 34,000.00
25	COA SEGMENTAL RETAINING WALL	SF	\$ 5.00	3500	\$ 17,500.00
27	CRUSHED AGGREGATE BASE, 4-1/2 INCH THICK	SY	\$ 4.00	100	\$ 400.00
28	CRUSHED AGGREGATE BASE, 6-1/2 INCH THICK	SY	\$ 5.00	100	\$ 500.00
29	ASPHALT CONCRETE BLACK BASE OR "B" BINDER 4 1/2" THICK	SY	\$ 30.00	40	\$ 1,200.00

30	ASPHALT CONCRETE BLACK BASE OR "B" BINDER 6 1/2" THICK	SY	\$ 30.00	40	\$ 1,200.00
31	ASPHALT CONCRETE "E" OR "F" SURFACE COURSE , 1 1/2" THICK	SY	\$ 12.50	40	\$ 500.00
31B	ASPHALT CONCRETE "E" OR "F" SURFACE COURSE , 1 1/2" THICK WITH GIBSONITE ADDITIVE	SY	\$ 20.00	40	\$ 800.00
32	TREE REMOVAL 6" TO 18" IN DIAMETER	EA	\$ 200.00	350	\$ 70,000.00
33	TREE REMOVAL ABOVE 18" TO 36" IN DIAMETER	EA	\$ 600.00	45	\$ 27,000.00
34	TREE REMOVAL WITH GREATER THAN 36" IN DIAMETER	EA	\$ 800.00	10	\$ 8,000.00
34A	TREE REPLACEMENT FOR TREES 2.5" TO 3.5"	EA	\$ 150.00	1500	\$ 225,000.00
34B	TREE REPLACEMENT FOR TREES GREATER THAN 3.5"	EA	\$ 150.00	50	\$ 7,500.00
35	REPLACEMENT OF FENCE (FIELD FENCE)	LF	\$ 1.00	200	\$ 200.00
36	REPLACEMENT OF FENCE (WOVEN WIRE)	LF	\$ 1.00	150	\$ 150.00
37	REPLACEMENT OF FENCE (BARBED WIRE)	LF	\$ 1.00	175	\$ 175.00
38	REPLACEMENT OF FENCE (CHAIN LINK)	LF	\$ 16.00	500	\$ 8,000.00
39	REPLACEMENT OF RAIL (PIPE HANDRAIL)	LF	\$ 40.00	4,000	\$ 160,000.00
40	INSTALLATION OF 18" RCP PIPE	LF	\$ 10.00	800	\$ 8,000.00
41	INSTALLATION OF 18" DIP PIPE	LF	\$ 10.00	300	\$ 3,000.00
42	INSTALLATION OF 24" RCP PIPE	LF	\$ 10.00	300	\$ 3,000.00
43	INSTALLATION OF 24" DIP PIPE	LF	\$ 10.00	300	\$ 3,000.00
44	REPLACEMENT OF GUARDRAIL ANCHOR (TYPE 1,9,11,12)	LF	\$ 25.00	150	\$ 3,750.00
45	INSTALLATION OF WOOD POST MAILBOXES (All mailboxes shall be installed in PVC sleeves except where installed in grass strip.)	EA	\$ 90.00	200	\$ 18,000.00
46	INSTALLATION OF STEEL POST MAILBOXES (All mailboxes shall be installed in PVC sleeves except where installed in grass strip.)	EA	\$ 15.00	200	\$ 3,000.00
47	SAW CUT OF PAVEMENT (ASPHALT OR CONCRETE)	LF	\$ 4.00	3000	\$ 12,000.00
48	BANK (SLOPE) EXCAVATION	CY	\$ 6.00	4,230	\$ 25,380.00
49	REPLACEMENT OF UNSUITABLE MATERIAL WITH CRUSHED STONE	CY	\$ 8.00	500	\$ 4,000.00
50	INSTALLATION, MAINTENANCE AND REMOVAL OF SAFETY FENCE	LF	\$ 1.50	500	\$ 750.00
51	INSTALLATION, MAINTENANCE, AND REMOVAL OF SILT FENCE	LF	\$ 2.00	16,280	\$ 32,560.00
52	INSTALLATION, MAINTENANCE, AND REMOVAL OF HAY BALES	LF	\$ 3.75	300	\$ 1,125.00
53	INSTALLATION OF RIP RAP	TON	\$ 5.00	500	\$ 2,500.00
54	REPLACEMENT OF UNSUITABLE MATERIAL WITH EARTH	CY	\$ 8.00	100	\$ 800.00
55	MOBILIZATION	EA	\$ 220.00	10	\$ 2,200.00
57	SIDEWALK DEMOLITION	SY	\$ 6.00	25,000	\$ 150,000.00
58	CURB DEMOLITION	LF	\$ 4.00	5,100	\$ 20,400.00
59	SPEED HUMPS	EA	\$ 2,000.00	25	\$ 50,000.00
60	THERMOPLASTIC STRIPING REMOVAL				
60A	THERMOPLASTIC STRIPING REMOVAL 5" WHITE OR YELLOW	LF	\$ 1.50	1500	\$ 2,250.00
60B	THERMOPLASTIC STRIPING REMOVAL 5" DOUBLE YELLOW	LF	\$ 3.00	2000	\$ 6,000.00
60C	THERMOPLASTIC STRIPING REMOVAL 12" WHITE	LF	\$ 3.00	100	\$ 300.00
60D	THERMOPLASTIC STRIPING REMOVAL 24" WHITE	LF	\$ 5.00	100	\$ 500.00
60E	THERMOPLASTIC STRIPING REMOVAL 8 FT CROSSWALK	LF	\$ 8.50	240	\$ 2,040.00
61	RESET SIGNS	EA	\$ 50.00	250	\$ 12,500.00
62	THERMOPLASTIC STRIPE 5" WHITE	LF	\$ 1.50	200	\$ 300.00
63	THERMOPLASTIC STRIPE 8" WHITE	LF	\$ 3.00	200	\$ 600.00
64	THERMOPLASTIC STRIPE 12" WHITE	LF	\$ 3.00	1000	\$ 3,000.00

ANNUAL BID FORM ALTERNATE
CITY OF ATLANTA

ITEM#	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
BASE BID					
ITEM #	ITEM NAME				
150-1000	TRAFFIC CONTROL- STP OOOE- (221)	LS	10	\$ 4,500.00	\$ 45,000.00
205-0001	UNCLASSIFIES EXCAVATION	CY	20	\$ 20.00	\$ 400.00
301-1101	GR AGGR BASE CRS INCL MATL	TON	200	\$ 28.00	\$ 5,600.00
402-3190	RECYCL ASP CONC 25 MM SUPERPAVE GP1 OR 2 INCL BIT MATL & H.LIME	TON	100	\$ 202.00	\$ 20,200.00
402-3190	RECYCL ASP CONC 19 MM SUPERPAVE GP1 OR 2 INCL BIT MATL & H.LIME	TON	200	\$ 207.00	\$ 41,400.00
402-3113	RECYCL ASP CONC 12.5 MM SUPERPAVE GP1 OR 2 INCL BIT MATL & H.LIME	TON	500	\$ 148.00	\$ 74,000.00
402-4505	RECYCL ASP CONC 9.5 MM SUPERPAVE GP1 OR 2 INCL PLOYMER MOD BIT MATL & H.LIME	TON	2000	\$ 130.00	\$ 260,000.00
413-1000	P.G.6722 BITIMINIOUS TACK COAT	GAL	2000	\$ 5.00	\$ 10,000.00
432-5010	MILLING EXISTING ASP CONC PAVEMENT 0" TO 2"	SY	5,000	\$ 15.00	\$ 75,000.00
432-5010	MILLING EXISTING ASP CONC PAVEMENT 2" TO 4"	SY	100	\$ 45.00	\$ 4,500.00
432-5010	MILLING EXISTING ASP CONC PAVEMENT 4" TO 6"	SY	100	\$ 50.00	\$ 5,000.00
432-5010	MILLING EXISTING CONCRETE PAVEMENT 0" TO 2"	SY	200	\$ 50.00	\$ 10,000.00
432-5010	MILLING EXISTING CONCRETE PAVEMENT 2" TO 4"	SY	200	\$ 50.00	\$ 10,000.00
432-5010	MILLING EXISTING CONCRETE PAVEMENT 4" TO 6"	CY	0	\$ -	\$ -
432-5010	DECORATIVE ASPHALT PAVING	SY	500	\$ 120.00	\$ 60,000.00
432-5010	HOT - IN - PLACE ASPHALT PAVING	SY	10,000	\$ 21.00	\$ 210,000.00
	TOTAL COST				\$ 831,100.00

EXHIBIT B

REQUIRED SUBMITTALS

**GEORGIA UTILITY CONTRACTOR'S
LICENSE CERTIFICATION**

**FC-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs
and Gutters**

NOTE: The Utility Contractor's License Number is also required on the Bid Envelope.

Contractor's Name: SD & C, Inc.

Utility Contractor's License Number: UC 301179

Expiration Date of License: 4/30/2011

FC Number and Project Name: FC#:4943 Annual Contract to Construct
Sidewalks, Driveways, Curbs and Gutters

STATE OF GEORGIA

KAREN HANDEL, Secretary of State
State Construction Industry Licensing Board
Utility Contractor

LICENSE NO. UC301179

SD & C Inc
809 Park North Blvd
Clarkston GA 30021

EXPIRATION DATE - 04/30/2011
Active

STATEMENT OF BIDDER'S QUALIFICATIONS

This Statement is to accompany Bids submitted for the following project: FC-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters.

- 1. NAME OF BIDDER: SD & C, Inc.
- 2. BUSINESS ADDRESS: 809 Park North Blvd.
Clarkston, GA 30021
- 3. TELEPHONE NUMBER: 404-508-2481
- 4. FASCIMILE NUMBER: 404-508-2483
- 5. OFFICIAL REPRESENTATIVE AND TITLE: Tony Adibe, President

Sworn to and subscribed
Before me this 19th day
Of May,
2009.

Date: 5/19/09

Firm Name: SD & C, Inc.

By: Tony Adibe

Title: President

Makua Bizzell
Notary Public
Notary Public, DeKalb County, Georgia
My Commission Expires Nov. 9, 2012

STATE OF GEORGIA

KAREN HANDEL, Secretary of State
State Construction Industry Licensing Board
Utility Contractor

LICENSE NO. UC301179

SD & C Inc
809 Park North Blvd
Clarkston GA 30021

EXPIRATION DATE - 04/30/2011
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Firm Name: SD & C, Inc.

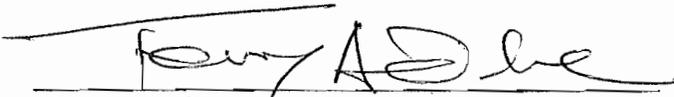
By: Tony Adibe

Title: President

Makua Bizzell
Notary Public
Notary Public, DeKalb County, Georgia
My Commission Expires Nov. 9, 2012

COVENANT OF NON-DISCRIMINATION

The undersigned understands that it is the policy of the City of Atlanta to promote full and equal business opportunity for all persons doing business with the City of Atlanta. The undersigned covenants that we have not discriminated, on the basis of race, gender or ethnicity, with regard to prime contracting, subcontracting or partnering opportunities. The undersigned further covenants that we have completed truthfully and fully the required forms EBO-2 and EBO-3. Set forth below is the signature of an officer of the bidding entity with the authority to bind the entity.



Signature of Attesting Party

President

Title of Attesting Party

On this 19th day of May, 2009, before me appeared Tony Adibe the person who signed the above covenant in my presence.



Notary Public

Notary Public, DeKalb County, Georgia
My Commission Expires Nov. 9, 2012

Seal

BID DATA

The bidder shall designate below the one manufacturer or source for each product listed to be furnished and installed if awarded the work. If the bidder fails to identify products meeting all specification requirements and meeting the approval of the owner, then the owner reserves the right either to determine the bidder non-responsive and reject the bid or to designate the manufacturer of the products to be provided which will meet all specification requirements, which owner-designated manufacturer products must be furnished by the bidder *at no increase in the contract price.*

1. Product: Benches
Manufacturer: Victor Stanley, Inc. or Equal

2. Product: Trash Receptacles
Manufacturer: Victor Stanley, Inc. or Equal

3. Product: Types A & C Lights
Manufacturer: Lumen Source

4. Product: Mailboxes
Manufacturer: Home Depot

5. Product: _____
Manufacturer: _____

END OF SECTION

EXHIBIT C

LEGISLATION

**FC-4943D, Annual Contract to Construct Sidewalks
Driveways, Curbs and Gutters**



**RESOLUTION
BY CITY UTILITIES COMMITTEE**

A RESOLUTION AUTHORIZING THE MAYOR TO EXECUTE A CONTRACT WITH SD&C, INC., FOR FC-4943D, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS, CURBS AND GUTTERS, ON BEHALF OF THE DEPARTMENT OF PUBLIC WORKS, IN AN AMOUNT NOT TO EXCEED ONE MILLION FIVE HUNDRED NINE THOUSAND EIGHT HUNDRED TEN DOLLARS AND SIXTY TWO CENTS (\$1,509,810.62) WITH ALL CONTRACTED WORK BEING CHARGED TO AND PAID FROM VARIOUS FUND, DEPARTMENT ORGANIZATION AND ACCOUNT NUMBERS; AND FOR OTHER PURPOSES.

WHEREAS, the City did solicit Bids for Contract No. FC- 4943, Annual Contract to Construct Sidewalks, Driveways, Curbs, and Gutters ("Contract"); and

WHEREAS, after reviewing and evaluating the Bids, the Commissioner of the Department of Public Works and the Chief Procurement Officer recommend that the Contract be awarded to SD&C, Inc., in an amount not to exceed One Million Five Hundred Nine Thousand Eight Hundred Ten Dollars And Sixty Two Cents (\$1,509,810.62); and

WHEREAS, the base term of the Contract will be for a period of two (2) years, with two (2) one (1) year renewal option(s) to be exercised at the sole discretion of the City; and

WHEREAS, the City has determined that it is desirable and in its best interest to make such recommended award.

THE CITY COUNCIL OF THE CITY OF ATLANTA, GEORGIA, HEREBY RESOLVES that the Mayor is authorized to execute Contract No. FC-4943D, Annual Contract to Construct Sidewalks, Driveways, Curbs, and Gutters with SD&C, Inc., on behalf of the Department of Public Works in an amount not to exceed One Million Five Hundred Nine Thousand Eight Hundred Ten Dollars and Sixty Two Cents (\$1,509,810.62).

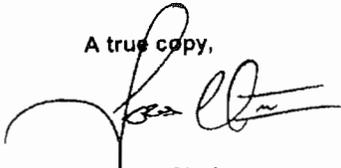
BE IT FURTHER RESOLVED, that the Chief Procurement Officer is directed to assist the City Attorney in the preparation of the multiple Contracts for execution by the Mayor.

BE IT FURTHER RESOLVED, that the Contract will not become binding upon the City, and the City will incur no liability under it until the Contract is approved by the City Attorney as to form, executed by the Mayor, attested to by the Municipal Clerk, and delivered to SD&C Inc.

BE IT FINALLY RESOLVED, that all contracted work will be charged to and paid from Fund, 7701 (Trust Fund), 7101 (Agency Fund), 3502 (General Government Capital Fund), 3127 (2004 Quality of Life Bond), 3138 (2008 Quality of Life Bond), 2502



(Empowerment Zone) Department Organization 130308 (DPW Transportation Design)
 130302 (DPW Traffic Engineering) and Account numbers and PTAE0 Funding Source
 13101619 115 770191494 5414002 COA, 13110262 101 350291795 5414002 COA,
 13102109 102 350291105 5414002 COA, 13101807 102 350291105 5414002 COA,
 13102088 103 312721224 5414002 COA, 13102089 104 313821776 5414002 COA,
 13101955 101 310931141 5414002 COA, 13101955 101 350291114 5414002 COA,
 131***** 101 710191468 5410001 COA, 13102088 104 313821776 5414002 COA,
 13102090 108 313821776 5414002 COA, 13102090 103 312721224 5414002 COA,
 13102090 109 313821776 5414002 COA, 13102090 111 313821776 5414002 COA,
 13110070 101 313821776 5414002 COA, 13110070 102 313821776 5414002 COA,
 25202698 101 250230904 5239004 COA, 25202698 101 250230904 5414002 COA.

A true copy,

 Deputy Clerk

ADOPTED by the Atlanta City Council
 APPROVED by Mayor Shirley Franklin

SEP 21, 2009
 SEP 25, 2009

EXHIBIT D

ADDENDA

**FC-4943D, Annual Contract to Construct Sidewalks
Driveways, Curbs and Gutters**



CITY OF ATLANTA

Shirley Franklin
Mayor

SUITE 1790
55 TRINITY AVENUE, SW
ATLANTA, GA 30303
(404) 330-6204 Fax: (404) 658-7705
Internet Home Page: www.atlantaga.gov

DEPARTMENT OF PROCUREMENT
Adam L. Smith, Esq., CPPB
Chief Procurement Officer
asmith@atlantaga.gov

May 11, 2009

Dear Potential Bidders:

Re: ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

Attached is one (1) copy of **Addendum Number 1**, hereby made a part of the above-referenced project.

For additional information, please contact Sean Holloway, Contracting Officer, at (404) 330-6608, by fax at (404)-658-7705 or by email at sdholloway@atlantaga.gov.

Sincerely,

A handwritten signature in black ink that reads "Adam L. Smith".

Adam L. Smith

ALS/sdh

cc: Mr. Joseph Basista (w/o att)

ADDENDUM NO. 1

This Addendum No. 1 forms a part of the Invitation to Bid and modifies the original solicitation package and any prior Addenda as noted below and is issued to incorporate the following:

Section I Responses to Questions

The final day for questions is extended to May 14, 2009.

The bid due date is extended to May 26, 2009.

Addendum No. 1 for **ITB, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters** is available for pick-up in the Plan Room: City Hall, 55 Trinity Avenue, Suite 1900.

Bids are due on Tuesday, May 26, 2009, and should be time stamped in no later than 1:59 p.m. and delivered to the address listed below:

Adam L. Smith, Esq., CPPB
Chief Procurement Officer
Department of Procurement
55 Trinity Avenue, S. W.
City Hall South, Suite 1790
Atlanta, Georgia 30303

****All other pertinent information is to remain unchanged****

ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

May 11, 2009

Page 3

Acknowledgment of Addendum No. 1

Bidders must sign below and return this form with bid to the Department of Procurement, 55 Trinity Avenue, City Hall South, Suite 1790, Atlanta, Georgia 30303 as acknowledgment of receipt of this Addendum.

This is to acknowledge receipt of ITB-4943, **Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters** on this the 12th day of May, 2009.

SP&C Inc

Legal Company Name of Bidder

Iony Adibe

Signature of Authorized Representative

Iony Adibe

Printed Name

President

Title

5/12/09

Date

SECTION I

RESPONSES TO QUESTIONS

**FC-4943, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS,
CURBS AND GUTTERS
ADDENDUM NO. 1
SECTION I**

1. Line item # 14 on bid schedule has a typo in the quantity.
A. The quantity for line item #14 is 10,000 sq. ft.
2. What are the units for item # 22A & 22B
A. The unit for item #22A & 22B is already provided in the bid form.
3. Line 34A what is a filed fence or is it a typo?
A. Line 34A "filed fence" is a typo. The correct description is "FIELD FENCE".
4. Line # 62, is the thermo striping 6" or 5"
A. The correct phrase for line item #62 is "Thermoplastic stripe white 5".
5. Line # 64, where is 12" thermo striping used.
A. Line #64 is typically used to stripe an island.
6. Line # 66, is the double yellow striping 5" wide.
A. For line #66 the double yellow striping is 2 parallel 5" thermoplastic lines.
7. Lines 67 & 68 calls for COA type "C" and COA type "A"
What about the following items or are they to be priced as the need arises?
 - A. Junction Boxes
 - B. Electrical Power assembly panels
 - C. Cables No. 2, No.4, No.6, No. 10
 - D. Conduits both metal and non metal
 - E. Light pole footing

Answer.

- A. Junction Boxes- As need Arises**
- B. Electrical Power assembly panel-As Need Arises**
- C. Cables No. 2, No. 4, No. 6, No. 10- As Need Arises**
- D. To be answered in Addendum No. 2.**
- E. Light pole footing-The cost of footing should be included in the total cost of installing light poles.**

8. Is the Bid Bond 5% of the total Base Bid Amount?

A. Yes, a bid bond for 5% of the base bid amount is required to bid on this project.

9. Item 14 – Grassing, Please clarify the quantities.

A. To be answered in Addendum No. 2.

10. Item 34 and 34A – Tree Replacement, The schedule of quantities does not have quantities.

A. Items 34 and 34A-Tree Replacement, quantities are as follows:

**A. Item 34A-2.5”-3.5” 1,500
Item 34B- >3.5 50**

11. From Item 67 to 70 – COA Type C Lights, COA Type A Light, COA Benches, COA Trash Receptacles, The bid documents does not include specifications. Please supply specifications, and possible suppliers.

A. To be answered in Addendum No. 2.

12. Item 53 – Installation of Rip Rap, the quantity is 5 ton, this quantity seems to be incorrect; 5 ton is not even a quarter of the load and will not accomplish any resource in erosion control. Please clarify.

A. The correct quantity is 500 tons.

13. Do we have to pre-register with the City of Atlanta to submit a bid?

A. Yes, in order to bid on this particular project, you must be a registered vendor in I-Supplier. To register with the City of Atlanta, please go to the City’s website www.atlantaga.gov.

- **Click on the top tab called “Business”**
- **Click on “Doing Business with Us”**
- **Follow the instructions to register on-line**

14. Was the pre-bid meeting mandatory?

A. No, the pre-bid meeting was not mandatory.

15. Is bonding required for the project(s)?

A. Yes, bonding is required for this project. You must be bonded for 100% of the contract value.

16. I just spoke with you over the phone regarding "City of Atlanta Standards" for particular items or requirements for the cities' projects. My company is trying to bid an Annual Contract for Sidewalks, Curbs & Gutters, etc. When trying to determine the EXACT SPECIFICATIONS for many of the items (i.e. Benches, Trash receptacles, Hand rails, etc) the project manual often refers to "the City of Atlanta Standards". By knowing such "Standards" this will enable us to better estimate per unit costs especially if there are large quantities of such things.

A. To be answered in Addendum No. 2.

+++ End of Answers to Questions Addendum No. 1+++



CITY OF ATLANTA

SUITE 1790
55 TRINITY AVENUE, SW
ATLANTA, GA 30303
(404) 330-6204 Fax: (404) 658-7705
Internet Home Page: www.atlantaga.gov

DEPARTMENT OF PROCUREMENT
Adam L. Smith, Esq., CPPB
Chief Procurement Officer
asmith@atlantaga.gov

Shirley Franklin
Mayor

May 20, 2009

Dear Potential Bidders:

Re: ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

Attached is one (1) copy of **Addendum Number 2**, hereby made a part of the above-referenced project.

For additional information, please contact Sean Holloway, Contracting Officer, at (404) 330-6608, by fax at (404)-658-7705 or by email at sholloway@atlantaga.gov.

Sincerely,

A handwritten signature in black ink that reads "Adam L. Smith".

Adam L. Smith

ALS/sdh

cc: Mr. Joseph Basista (w/o att)

ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

May 20, 2009

Page 2

ADDENDUM NO. 2

This Addendum No. 2 forms a part of the Invitation to Bid and modifies the original solicitation package and any prior Addenda as noted below and is issued to incorporate the following:

Section I Responses to Questions

Section II Clarifications

Last day for questions was May 14, 2009.

Addendum No. 2 for **ITB, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters** is available for pick-up in the Plan Room: City Hall, 55 Trinity Avenue, Suite 1900.

Bids are due on Tuesday, May 28, 2009, and should be time stamped in no later than 1:59 p.m. and delivered to the address listed below:

Adam L. Smith, Esq., CPPB
Chief Procurement Officer
Department of Procurement
55 Trinity Avenue, S. W.
City Hall South, Suite 1790
Atlanta, Georgia 30303

****All other pertinent information is to remain unchanged****

Acknowledgment of Addendum No. 2

Bidders must sign below and return this form with bid to the Department of Procurement, 55 Trinity Avenue, City Hall South, Suite 1790, Atlanta, Georgia 30303 as acknowledgment of receipt of this Addendum.

This is to acknowledge receipt of ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters on this the 20th day of May, 2009.

SD & C, Inc.
Legal Company Name of Bidder

Signature of Authorized Representative
Tony Adibe
Printed Name
President
Title
5/20/09
Date

SECTION I

RESPONSES TO QUESTIONS

**FC-4943, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS,
CURBS AND GUTTERS
ADDENDUM NO. 2
SECTION I**

1. Specification section 01045 Paragraph 1.04 talks about a cash allowance in line item 56. The bid schedule goes from 55 to 57. Is there to be a cash allowance?

A. This is an annual contract, therefore cash allowance is not applicable to this contract.

2. The original unit for line item 14 Grassing was sy. Addendum 1 says the correct quantity is 10,000 Sq. FT. Could you confirm this.

A. The correct unit is square yards.

3. Lines 67 & 68 calls for COA type "C" and COA type "A"
What about the following items or are they to be priced as the need arises?
 - A. Junction Boxes
 - B. Electrical Power assembly panels
 - C. Cables No. 2, No.4, No.6, No. 10
 - D. Conduits both metal and non metal
 - E. Light pole footing

Answer A. Answered in Addendum No. 1

Answer B. Answered in Addendum No. 1

Answer C. Answered in Addendum No. 1

Answer D. Conduits shall be PVC HD (Added to Bid Form and Bid Description Line 73)

Answer E. Answered in Addendum No. 1

4. Item 14 – Grassing, Please clarify the quantities.

A. The quantity is 10,000 sq yds.

5. From Item 67 to 70 – COA Type C Lights, COA Type A Light, COA Benches, COA Trash Receptacles, The bid documents does not include specifications. Please supply specifications, and possible suppliers.

A. Please see Clarification III.

6. I just spoke with you over the phone regarding "City of Atlanta Standards" for particular items or requirements for the cities' projects. My company is trying to bid an Annual Contract for Sidewalks, Curbs & Gutters, etc. When trying to determine the EXACT SPECIFICATIONS for many of the items (i.e. Benches, Trash receptacles, Hand rails, etc) the project manual often refers to "the City of Atlanta Standards". By knowing such "Standards" this will enable us to better estimate per unit costs especially if there are large quantities of such things.

A. You may obtain a copy of "the City of Atlanta Standards" from the Department of Public Works to obtain a copy. Additional costs may be associated.

7. Items 34A and 34 B - Tree replacement for trees 2.5" to 3.5", and Tree replacement for tree greater than 3.5". Which are the tree varieties intend to use in this project?

A. We cannot specify the species of trees at this time because tree replacement species shall be the same as the species removed or as requested during the time of replacement. We suggest that you propose average prices for the caliber ranges.

+++ End of Answers to Questions Addendum No. 2+++

SECTION II
CLARIFICATIONS

ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS,
CURBS AND GUTTERS ADDENDUM NO. 2

SECTION II (CLARIFICATIONS)

- I. Under Scope of Work, Section 1.03-Alternate Scope of Work and Technical Specifications have been added. Please find this section titled Scope of Work, Part I, General. (2 Pages)
- II. Exhibit A- The Bid Schedule has been replaced in its entirety and an alternate bid schedule has been added. (See attached Exhibit A)
- III. Additional specifications added for City of Atlanta Standards for Items 67 to 70-COA Type C Lights, COA Type A Lights, COA Benches, COA Trash Receptacles.
- IV. Required Submittals-Section 00300 Experience added for alternate bid. These forms must be returned with the other required submittals. (See Exhibit B)
- V. Bids are due on Tuesday, May 28, 2009, and should be time stamped in no later than 1:59p.m.
- VI. The term of this Invitation to Bid is for two (2) years with two (2), one (1) year renewal options. (Please reference Scope of Work, Section 1.09, Term of Contract).

SCOPE OF WORK

PART I, GENERAL

UNIQUE REQUIREMENTS

INTRODUCTION

Part I General

1.01 SCOPE

This section describes the scope of work for this *Annual Contract to construct Sidewalks, Driveways, Curbs, Gutters and other miscellaneous concrete work for the Department of Public Works*. The provisions of this section shall not supersede the Bidding Requirements, Contract Forms or General Conditions of the contract.

1.02 PROJECT DESCRIPTION

The work to be performed under this contract shall consist of furnishing all labor, materials, tools, equipment and incidentals to perform the work described.

**1.03 ALTERNATE BID SCOPE OF WORK AND TECHNICAL SPECIFICATIONS
(SEE ADDITIONAL SPECIFICATIONS IN ADDENDUM 2)**

A. SCOPE OF WORK

The scope of work for this project consists of the roadway improvements such as, milling, resurfacing, Striping, ADA ramps, Traffic control loops and sub-grade point repairs on various roads and streets within the City of Atlanta.

B. CONSTRUCTION

Contractor shall perform the work in accordance with the furnished specifications and sample typical section.

The following GDOT specifications and technical documents form a part of the contract for Alternate bid.

Section 150	Traffic Control.....	150-1 to 150-40
Section 205	Unclassified Excavation.....	205-1
Section 310	Graded Aggregate Construction.....	310-1
Section 318	Selected Material Surface Course.....	318-1
Section 402	Hot Mix Recycled Asphaltic Concrete.....	402-1
Section 413	Bituminous Tack Coat.....	413-1
Section 432	Mill Asphaltic Concrete Pavement.....	432-1

Section 446	Placement of Pavement Reinforced Fabric.....	446-1
Section 611	Relaying, Reconstructing or Adjusting to Grade of Miscellaneous Roadway Structures.....	611-1
Section 653	Thermoplastic Traffic Stripe.....	653-1

1.04 **WORK ORDERS** (Sample Work Order Next Page)

- A. The Contractor shall perform the work in accordance with the terms and conditions described herein on a Work Order basis. The Work Order incorporates by the reference all the terms and conditions contained in the Agreement between the City and the Contractor.

- B. The general description of the Work and services to be preformed by the Contractor is set forth in the Agreement and incorporated in the Work Order reference. The detailed description of the Work and services to be preformed by the Contractor shall be set forth in the Work Order and incorporated in the Agreement herein by this reference.

The general description of the Period of Performance to be preformed by the Contractor shall be set forth in the Agreement and incorporated herein reference the schedule for the work to be preformed by the Contractor shall be set forth in the Work Order.

EXHIBIT A

To: The City of Atlanta, Georgia

From: _____

Submitted: _____, 2005

FC-4943, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS,
CURBS AND GUTTERS

The undersigned, as bidder, hereby declares that the only person or persons in this bid, as principal or principals, is or are named herein and *that* no other person *than* herein mentioned has any interest in this bid or in the contract to be entered into; that this bid is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud.

The bidder further declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the contract documents for the work furnished prior to the opening of bids; and that he has satisfied himself relative to the work to be performed.

The bidder proposes and agrees, if this bid is accepted, to contract with the City, in the form of contract specified, to furnish all necessary materials, equipment, means of transportation and labor necessary, and to complete this project in full and complete accordance with the shown, noted, described and reasonably intended requirements of the contract documents to the full and entire satisfaction of the City, and with a definite understanding that no money will be allowed for *extra* work except as set forth in the contract documents.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" from the City and to fully complete the project within the time limits identified in the *city* – contractor agreement. Bidder further agrees to pay liquidated damages, in accordance with the provisions of the general conditions of the contract documents for each consecutive calendar day thereafter.

The undersigned acknowledges receipt of addenda numbered: _____. In accordance with the above understanding, the undersigned proposes to do all of the work furnish all of the materials, and complete the work in accordance with the contract documents ~~at~~ the prices listed in the bid form:

ALL ITEMS LISTED BELOW SHALL INCLUDE FURNISHING ALL PRODUCTS, MATERIALS & EQUIPMENT AND PERFORMING ALL LABOR NECESSARY TO COMPLETE AND PUT INTO OPERATION THE QUALITY OF LIFE SIDEWALK CONTRACT, IN ACCORDANCE WITH CITY OF ATLANTA STANDARDS AT VARIOUS LOCATIONS TO BE DETRMINED.

BID ITEMS FOR ANNUAL SIDEWALK CONTRACT

C.O. NO	ITEM	UNIT	UNIT COST	QUAN-TITY	TOTAL COST
1	CITY STANDARD 4-INCH CONCRETE SIDEWALK	SY		22,700	
2	CITY STANDARD 4-INCH CONCRETE SIDEWALK WITH IMPRINTED HEXAGONAL PATTERN	SY		3,100	
3	COA Standard 4" Concrete Sidewalk WITH IMPRINTED BRICK PATTERN AND COLOR	SY		4500	
4	CITY MONOLITHIC CONCRETE SIDEWALK WITH CURB	SY		17,400	
5	City STANDARD MONOLITHIC SIDEWALK WITH HEXAGONAL IMPRINT	SY		5556	
6	City standard monolithic sidewalk with brick imprint	sy		3500	
7	CITY STANDARD CONCRETE DRIVEWAY APRON, 6-INCH THICK	SY		9,800	
8	CITY STANDARD CONCRETE DRIVEWAY APRON, 8-INCH THICK	SY		1,075	
9	CITY STANDARD WHEELCHAIR RAMP, 6-INCH THICK WITH DETECTABLE TACTILE WARNING SYSTEM	SY		2550	
10	CITY STANDARD COMBINATION CONCRETE CURB AND GUTTER, 8" X 30"	LF		2560	
10a	CITY STANDARD COMBINATION CONCRETE CURB AND GUTTER, 8"X24"	LF		2550	
11	CITY STANDARD CONCRETE HEADER CURB	LF		25,700	
12	CITY STANDARD GRANITE CURB (GRADE A & B)	LF		6,000	
13	RESET OR ADJUST EXISTING GRANITE CURB	LF		3500	
14	GRASSING	SY		10,815	
15	FURNISH AND INSTALL CITY STANDARD SIDEWALK FLUMES	EA		20	
16	ADJUST EXISTING MANHOLE RINGS AND COVERS OR CATCH BASIN GRATES, FRAMES AND COVERS TO GRADE	EA		80	
17	INSTALL GA DOT STD 1033 OR COA TYPE "C" CATCH BASIN	EA		6	
18	INSTALL COA TYPE "B" CATCH BASIN	EA		15	
19	INSTALL COA STD DROP INLET OR GA DOT 9031S OR DOT 9031U	EA		7	
20	INSTALL GA DOT STD 1034 OR COA DOUBLE TYPE "B" CATCH BASIN	EA		3	
21					
22	ADJUST EXISTING VALVE BOXES, ELECTRICAL PULL BOXES, AND SIMILAR INSERTS IN THE WORK TO GRADE	EA		434	
22A	ADJUSTMENTS TO WATER LINES UNDER 2-INCHES	EA		110	
22B	ADJUSTMENTS TO SEWER LINES 6-INCHES AND UNDER(Clean Out Lines)	EA		50	
23	PROVIDE AND INSTALL CLEANOUT BOXES, VALVE BOXES AND/OR METER BOXES TO GRADE	EA		75	
24	CITY OF ATLANTA STANDARD MASONRY WALL				
24a	0-4 FT IN HEIGHT	SF		8,500	
24s	4 FT AND HIGHER	SF		1,700	
25	COA SEGMENTAL RETAINING WALL	SF		3500	
27	CRUSHED AGGREGATE BASE, 4 INCH THICK	SY		100	
28	CRUSHED AGGREGATE BASE, 6 INCH THICK	SY		100	
29	ASPHALT CONCRETE BLACK BASE OR "B" BINDER 4 ½" THICK	SY		40	
30	ASPHALT CONCRETE BLACK BASE OR "B" BINDER 6 ½" THICK	SY		40	
31	ASPHALT CONCRETE "E" OR "F" SURFACE COURSE , 1 ½" THICK	SY		40	
32	TREE REMOVAL 6" TO 18" IN DIAMETER	EA		350	
33	TREE REMOVAL ABOVE 18" TO 36" IN DIAMETER	EA		45	
34	TREE REMOVAL WITH GREATER THAN 36" IN DIAMETER	EA		10	
34A	TREE REPLACEMENTFOR TREES 2.5" to 3.5"	EA		1500	
34B	TREE REPLACEMENT FOR TREES GREATER THAN 3.5."	EA		50	
35	REPLACEMENT OF FENCE (FILED FENCE)	LF		200	
36	REPLACEMENT OF FENCE (WOVEN WIRE)	LF		150	
37	REPLACEMENT OF FENCE (BARBED WIRE)	LF		175	
38	REPLACEMENT OF FENCE (CHAIN LINK)	LF		500	
39	REPLACEMENT OF RAIL (PIPE HANDRAIL)	LF		4,000	

40	INSTALLATION OF 18" RCP PIPE	LF	800
41	INSTALLATION OF 18" DIP PIPE	LF	300
42	INSTALLATION OF 24" RCP PIPE	LF	300
43	INSTALLATION OF 24" DIP PIPE	LF	300
44	REPLACEMENT OF GUARDRAIL ANCHOR (TYPE 1,9,11,12)	LF	150
45	INSTALLATION OF WOOD POST MAILBOXES (All mailboxes shall be installed in PVC sleeves except where installed in grass strips.)	EA	200
46	INSTALLATION OF STEEL POST MAILBOXES (All mailboxes shall be installed in PVC sleeves except where installed in grass strips.)	EA	200
47	SAW CUT OF PAVEMENT (ASPHALT OR CONCRETE)	LF	3000
48	BANK (SLOPE) EXCAVATION	CY	4,230
49	REPLACEMENT OF UNSUITABLE MATERIAL WITH CRUSHED STONE	CY	500
50	INSTALLATION, MAINTENANCE AND REMOVAL OF SAFETY FENCE	LF	500
51	INSTALLATION, MAINTENANCE, AND REMOVAL OF SILT FENCE	LF	16,280
52	INSTALLATION, MAINTENANCE, AND REMOVAL OF HAY BALES	LF	300
53	INSTALLATION OF RIP RAP	TON	500
54	REPLACEMENT OF UNSUITABLE MATERIAL WITH EARTH	CY	100
55	MOBILIZATION	EA	10
57	SIDEWALK DEMOLITION	SY	25,000
58	CURB DEMOLITION	LF	5,100
59	SPEED HUMP	EA	25
61	RESET SIGNS	EA	250
62	THERMOPLASTIC STRIPE 6" WHITE	LF	200
63	THERMOPLSTIC STRIPE 8" WHITE	LF	200
64	THERMOPLSTIC STRPE 12" WHITE	LF	1000
65	THERMOPLASTIC STRIPE WHITE 24" (STOP BAR)	LF	100
66	THERMPLASTIC STRIPE DOUBLE YELLOW	LF	1000
67	COA Type "C" Lights (MAIN STREET)	EA	25
68	COA - Type "A" Lights	EA	25
69	COA - Benches	EA	100
70	COA - Trash Receptacle	EA	100
71	COA - Reinforced CantileverSidewalk Slab 4"	SF	500
72	COA - Reinforced CantileverSidewalk Slab 5"	SF	500
73	Twin 2" PVC (HD) Conduit	LF	5000

BID TOTAL, QUALITY OF LIFE SIDEWALK CONTRACT, THE AMOUNT OF

_____ DOLLARS (\$) _____)
(Figure)

The undersigned declares that he understands that the quantities shown are approximate only and are subject to either increase or decrease and that should the quantities of any of the items of work be increased, the undersigned agrees to do the additional work at the unit prices set forth herein, and should the quantities be decreased, he also understands that payment will be made on the actual quantities installed at the unit bid price, and the undersigned will make no claims for anticipated profit for any decrease in the quantities. Actual quantities will be determined upon completion of the job.

The undersigned also agrees that extra work, if any, performed in accordance with articles 33 and 34 of the general conditions will be paid for in accordance with the provisions of those articles.

Amounts shall be shown in both words and figures, where indicated. In case of discrepancies between the figures shown in the unit prices and the totals, the unit prices shall apply and the totals shall be corrected to agree with the unit prices. In case of discrepancies between written amounts and figures, written amounts shall take precedence over figures and the sum of all bid extensions (of unit prices) plus lump sum items shall take precedence over bid total.

The bid prices shall include all costs of completion of the work, except as otherwise specified in the contract documents.

The names and residence addresses of all persons and parties interested in the foregoing bid as principals are as follows:

(Give first and last names in full. In the case of a corporation, give name of president, treasurer, and manager, and in the case of a partnership, give names and addresses of members.)

The undersigned hereby certifies that he is able to furnish labor that **can** work in harmony with all other elements of labor employed or to be employed on the work.

Notice of acceptance should be mailed, telegraphed, or delivered to the undersigned bidder *at* the following address:

(Name of Bidder) _____

(Signature of Authorized Representative) _____

(Title) _____

(Business Address) _____

(City and State) _____

The following information is required as a part of this bid.

BID DATA

The bidder shall designate below the one manufacturer or source for each product listed to be furnished and installed if awarded the work. If the bidder fails to identify products meeting all specification requirements and meeting the approval of the owner, then the owner reserves the right either to determine the bidder non-responsive and reject the bid or to designate the manufacturer of the products to be provided which will meet all specification requirements, which owner-designated manufacturer products must be furnished by the bidder *at no increase in the contract price.*

1. Product: _____
Manufacturer: _____

2. Product: _____
Manufacturer: _____

3. Product: _____
Manufacturer: _____

4. Product: _____
Manufacturer: _____

5. Product: _____
Manufacturer: _____

END OF SECTION

ALTERNATE BID FORM- (4 PAGES)

FC- 4943, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS, CURBS AND
GUTTERS
ANNUAL CONTRACT
WITH
ASPHALT MILLING, RESURFACING, & TRAFFIC CALMING

ITEM NO.	APPROXIMATE QUANTITY	ITEM WITH UNIT OR LUMP SUM PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES		AMOUNT	
			DOLLARS	CENTS	DOLLARS	CENTS
150-1000	LUMP SUM PER 10 SITES	Traffic Control for each projects _____ _____ LUMP SUM PER SITE				
205-0001	20	UNCLASSIFIED EXCAVATION, AT _____ _____ PER CUBIC YARD				
310-1101	200	TN., GR AGGR BASE CRS, INCL MATL, AT _____ _____ PER TON				
402-31900	100	Recycled asphalt concrete 25 MM super pave GPI or 2, including bituminous material & h.lime _____ _____ PER TON				

ITEM NO.	APPROXIMATE QUANTITY	ITEM WITH UNIT OR LUMP SUM PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES		AMOUNT	
			DOLLARS	CENTS	DOLLARS	CENTS
402-3190	200	TN., RECYC ASPH. CONC. 19MM SUPERPAVE, GP 1 OR 2, INCL. BIT. MATL. & H LIME, _____ _____ PER TON				
402-3113	500	TN., RECYC ASPH. CONC. 12.5MM SUPERPAVE, GP 1 OR 2, INCL. BIT MATL. & H LIME, _____ _____ PER TON				
402-4505	2000	TN., RECYC ASPH. CONC. 9.5MM SUPERPAVE, GP 1 OR 2, INCL. POLYMER MOD BIT MATL. & H LIME, _____ _____ PER TON				
413 -1000	2000	P.G.6722 Bituminous tack coat ----- PER GALLON				
432-5010	5000	Milling existing Asphalt concrete pavement _____ 0" T02" Depth Per Square yard				

ITEM NO.	APPROXIMATE QUANTITY	ITEM WITH UNIT OR LUMP SUM PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES		AMOUNT	
			DOLLARS	CENTS	DOLLARS	CENTS
432-5010	100	Milling existing Asphalt concrete pavement <u>2" to 4" Depth</u> Per square yard				
432-5010	100	Milling existing Asphalt concrete Pavement <u>4" to 6" Depth</u> Per Square yard				
432-5010	200	Milling existing Concrete pavement <u>0" to 2" Depth</u> Per Square yard				
432-5010	200	Milling existing concrete Pavement <u>2" to 4" Depth</u> Per square yard				
432-5010	00	Milling existing concrete pavement <u>4" to 6" Depth</u> Per square yard				

ITEM NO.	APPROXIMATE QUANTITY	ITEM WITH UNIT OR LUMP SUM PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES		AMOUNT	
			DOLLARS	CENTS	DOLLARS	CENTS
432-5010	500	Decorative Asphalt Paving Per square yard				
432-5010	10,000	Hot – In – Place Asphalt Paving Per square yard				

ALTERNATE BID TOTAL, FC-4943, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS, CURBS AND GUTTERS WITH ASPHALT MILLING, RESURFACING AND TRAFFIC CALMING

_____ DOLLARS (\$ _____)
(FIGURE)

BASE BID + ALTERNATE BID
TOTAL _____ DOLLARS
(WORDS)

(\$ _____)
(FIGURE)

FC-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

The following submittals shall be completed and submitted with each Bid. See table below "Required Bid Submittal Check Sheet." Please verify that these submittals are in the envelope before it is sealed.

Submit one (1) Original Bid, signed and dated, and six (6) complete copies of the Original Bid including all required attachments.

Item Number	Required Bid Submittal	Check
	Statement of Bidder's Qualifications (Exhibit B)	
	Acknowledgements of each addendum	
	The Power of Attorney for the attorney-in-fact signing the Bid Guarantee. (Exhibit B)	
	Authorization to Transact Business (Exhibit B)	
	Affidavit of Non-Collusion (Exhibit B)	
	Bid Bond (Exhibit B)	
	Appendix A - Office of Contract Compliance Requirements	
	EBO - Forms 1, 2, and 3	
	EBO - Certificate	
	Appendix B - Insurance and Bonding Requirements (Letter from Surety located in Exhibit B)	
	Appendix C - Contractor's Questionnaire and Disclosure Form	
	Appendix D - Georgia Security and Immigration Compliance Act of 2006 (*Required if Agreement is Awarded)	
	Exhibit A - Bid Schedule	
	Exhibit B-Required Submittals (Bid Documentation, Bid Form, Georgia Utility Contractor's License Certification, Experience Statements, Section 00300 Forms A-H, Section 00300 for alternate bid)	
	Bidder's Name:	
	Contact Person:	
	Telephone Number:	
	Facsimile Number:	

*You do not have to submit with the Bid Documents however; if you are awarded the Agreement, the documents are required to be submitted at the time of award.

CLARIFICATION III
ADDITIONAL SPECIFICATIONS

SECTION 402 - HOT MIX RECYCLED ASPHALTIC CONCRETE

01 DESCRIPTION

- A. Work under this section consists of producing and placing a hot mix recycled asphaltic concrete that incorporates Reclaimed Asphalt Pavement (RAP), virgin aggregate, hydrated lime, and neat asphalt cement.
- B. Hot mix recycled asphaltic concrete production and placement, along with all materials, equipment and accepted plant mixtures, except as specifically noted or modified herein, shall be in accordance with Section 400 of the Georgia Department of Transportation Standard Specifications.

02 MATERIALS

- A. Materials to be used in this work shall be in accordance with Section 402.2 of the Georgia Department of Transportation Standard Specifications, and all pertinent sections referenced therein.

03 CONSTRUCTION REQUIREMENTS

- A. Construction of this item shall be in accordance with the applicable technical requirements, including testing, of section 402.3 of the Georgia Department of Transportation Standard Specifications.
- B. Placement of asphaltic materials shall occur within seven (7) days of completion of the milling operation.

04 EQUIPMENT

- A. Equipment used in this work shall be in accordance with Section 402.3.02 of the Georgia Department of Transportation Standard Specifications.

05 METHOD OF MEASUREMENT

- A. Recycled asphaltic concrete paving items, completed and accepted, will be measured by the ton in accordance with Section 402.4 of the Georgia Department of Transportation Standard Specifications.

06 BASIS OF PAYMENT

- A. Payment will be made at the contract unit price per ton for each asphaltic concrete paving item listed below. This price shall be full compensation for furnishing and placing all materials, for all approved additives, for all cleaning and repairing or preparation of surfaces, for all hauling and crushing, mixing, processing, spreading, rolling and compaction, and all other operations, labor, tools and incidentals necessary to complete the item, including stockpiling.
-

B. Payment will be made under:

Item 402-1802 - Recycled Asph Conc Patching, Incl Bit Matl & H Lime – Per Ton

Item 402-1812 - Recycled Asph Conc Leveling, Incl Bit Matl & H Lime – Per Ton

Item 402-3112 - Recyc Asph Conc 19 MM Superpave, Gp. 1 or 2, Incl Bit Matl & H Lime - Per Ton

Item 402-3121 - Recyc Asph Conc 25 MM Superpave, Gp. 1 or 2, Incl Bit Matl & H Lime – Per Ton

Item 402-3130 - Recyc Asph Conc 12.5 MM Superpave, Gp. 1 or 2, Incl Bit Matl & H Lime – Per Ton

Item 402-4510 - Recyc Asph Conc 12.5 MM Superpave, Gp. 2 only, Incl Polymer-mod Bit Matl & H Lime – Per Ton

Item 402-4505 - Recyc Asph Conc 9.5 MM Superpave, Gp. 2 only, Incl Polymer-mod Bit Matl & H Lime – Per Ton

END OF SECTION

Section 428—Micro Surfacing

428.1 Description

This work covers the materials, equipment, construction, and application procedures for placing micro-surfacing material for filling ruts and surfacing existing paved surfaces. Properly proportion, mix, and spread all ingredients on the paved surface according to this Specification and as directed by the Engineer.

428.1.01 Definitions

General Provisions 101 through 150.

428.1.02 Related References

A. Standard Specifications

Section 413—Bituminous Prime

Section 424—Bituminous Surface Treatment

Section 824—Cationic Asphalt Emulsion

B. Referenced Documents

GDT 125

428.1.03 Submittals

A. Invoices

When the Department requests, furnish formal written invoices from a supplier for all materials used in production of micro surfacing. Show the following on the invoice(s):

- Date shipped
- Quantity in tons (megagrams)

Purchase LRA-modified emulsion from a supplier who will provide copies of invoices upon the Department's request.

B. Mix Design

Submit the proposed mix design for approval at least two weeks before beginning the mixing operations. As a minimum, the design shall include the following:

- Aggregate test properties
- Aggregate target gradation
- Results of Table 1 mixture design properties
- Design percent asphalt residue based on dry weight of the aggregate
- Mineral filler percentages based on dry weight of the aggregate
- Quantitative effects of moisture content on the unit weight of the aggregate (bulking effect)

Submit to the Office of Materials and Research (OMR) representative samples of each ingredient to be used in the micro-surfacing mixture for design verification at least two weeks before beginning mixing operations. Include information about sources, type of materials, and project number.

Do not begin micro-surfacing work until the OMR has approved the micro-surfacing design and accepted the mixture.

The Engineer's acceptance of the design is solely for quality control and does not release the Contractor from performing acceptable work under this Specification.

Ensure the mixture has sufficient working life to allow for proper placement at the existing ambient temperature and humidity. Redesign the mixture if a constituent must be replaced, or gradation changed, in order to produce an acceptable mixture. Proportion the constituents to produce a uniform mixture meeting the requirements of Table 1.

Table 1—Mixture Design Properties

Micro-Surfacing		Type I	Type II
Mixture Control Tolerances	Grading Requirements	Percent Passing	Percent Passing
±0%	3/8-inch (9.5 mm)	100	100
±6%	No. 4 (4.75 mm)	90-100	60-95
±5%	No. 8 (2.36 mm)	65-90	45-75
±4%	No. 50 (300 µm)	20-45	15-35
±3%	No. 200 (75 µm)	5-15	5-15
	Design Requirements	Range	Range
±0.5%	Residual AC, %	6.0-9.0	6.0-9.0
N/A	Mineral Filler, %	0.5-3.0	0.5-3.0
Design Requirements – Micro Surfacing Type I and Type II			
Test No.	Description		Specification
AASHTO T-245 (Modified)	Flow		6-16
AASHTO T-245 (Modified)	Min. Stability, lb (kg), 50 Blow Marshall		1800 (8000)
ISSA TB-100	Wet Track Abrasion Loss (Maximum)	6-day soak	1 lb/yd ² (538 g/m ²)
		1-hour soak	1.5 lb/yd ² (807 g/m ²)
ISSA TB-147A or 147C	Vertical Displacement (Maximum)		10%
ISSA TB-109	Excess Asphalt by LWT (Maximum)		1 lb/yd ² (538 g/m ²)
ISSA TB-113	Mixing Time Test @ 100°F (38 °C) (Minimum)		45 Seconds
ISSA TB-139	Set Time Test (Minimum)	@ 30 minutes	12 kg-cm
		@ 60 minutes	20 kg-cm
ISSA TB-102	Water Resistance Test @ 30 Minutes		No Discoloration
ISSA TB-114	Wet Stripping Test (Minimum Retained)		90%
ISSA TB-115	System Compatibility		Pass

Note 1: Base percent residual asphalt and percent mineral filler on weight of the dry aggregate.

Note 2: Maintain the gradation and percent residual asphalt as shown on the micro-surfacing design or as established by the Engineer within the listed Mixture Control Tolerances. Meet mix control tolerances or make immediate adjustments to bring the gradation and percent residual asphalt back within tolerances, or the work will not be allowed to continue.

Note 3: Modify procedures stated in AASHTO T-245 for determining Flow and Marshall Stability to permit air drying of the mixture at 70 - 77 °F (21 - 25 °C) for 3 days before reheating and fabricating Marshall specimens.

428.2 Materials

The materials to be used and their specifications are listed below:

A. Aggregate

Use aggregate in micro-surfacing that meets the requirements of Subsection 802.2.02.

EXCEPTION: Aggregate shall be manufactured from Group II, Class A or B crushed stone or slag, and the Sand Equivalent Value shall not be less than 65 when tested according to AASHTO T-176.

Ensure that aggregates shipped to the project are uniform and do not require blending or pre-mixing at the storage area before use. Aggregates must meet the appropriate gradation as shown in Table 1.

B. Mineral Filler

Use mineral filler that is Portland cement or hydrated lime which meets the following requirements:

Portland cement	Section 830 and 883
Hydrated Lime	Section 882 and 883

C. Cationic Asphalt Emulsion

Ensure that the emulsified asphalt is a cationic type CSS-lh(LRA) or CSS-1P that meets the requirements for CSS-1h of Section 824, modified to waive the cement-mixing test.

D. Latex Rubber Additive (LRA)

Ensure the LRA is a natural latex or an unvulcanized styrene-butadiene rubber in an emulsified latex form. Provide certification from the LRA manufacturer that the LRA meets the following requirements:

Rubber Solids content, Minimum %, ASTM D 1417	60 (by weight)
Brookfield Viscosity, cps Maximum, ASTM D 1417	5000
Total Ash, Maximum %, ASTM D 297	3.5

Co-mill the LRA and the special emulsifiers with the asphalt cement while manufacturing the emulsified asphalt to produce a homogeneous mixture. Add the LRA in the necessary proportions to result in 3% neat latex by weight of residual asphalt cement in the emulsion. Ensure the LRA modified emulsified asphalt, when left undisturbed for 24 hours, shows no separation of emulsion and LRA and no color striations, but has a uniform color throughout.

Ensure that the residue from the LRA modified emulsified asphalt has a minimum softening point of 135 °F (60 °C) when tested according to AASHTO T-53.

EXCEPTION: The maximum test temperature shall not exceed 350° F (176°C) and the duration shall not exceed 20 minutes.

Formulate the emulsified asphalt to allow the paving mixture to cure at a rate that will permit traffic on the pavement within 1 hour after application without damaging the pavement surface.

E. Bituminous Tack Coat

Use a cationic asphalt emulsion CSS-lh or CQS-lh for the bituminous tack coat that meets Section 824 and is diluted according to Subsection 428.3.05.D.

F. Water

Use water for the micro-surfacing mixture that is potable and free of contaminants detrimental to the mixture.

G. Other Additives

Provide other additives as required to control the set time of the mixture in the field.

428.2.01 Delivery, Storage, and Handling

A. Aggregate Storage

Store or stockpile mineral aggregates in a manner that will prevent segregation, mixing of the various materials or sizes, and contamination with foreign materials. Do not use construction equipment on, or to ramp the stockpiled aggregate. Pass the aggregate over a scalping screen immediately before transferring it to the micro-surfacing mixing machine to remove oversized material.

B. Storage of Bituminous Material

Ensure that the bituminous storage is adequate to meet the requirements of the production rate. Always keep clean all equipment used to store and handle bituminous material and operate it in such a manner to prevent contamination with foreign matter.

428.3 Construction Requirements

428.3.01 Personnel

General Provisions 101 through 150.

428.3.02 Equipment

Obtain the Engineer's approval for all equipment, tools, and machines used to perform this Work. Do not attempt work with malfunctioning equipment. The Engineer may stop the work if equipment and tools are not sufficient to place the materials satisfactorily.

A. Mixing Equipment

Blend the paving mixture using a self-propelled micro-surfacing mixing machine that is:

- A continuous flow mixing unit
- Able to accurately deliver and proportion the aggregate, LRA-modified emulsion, mineral filler, field control additives, and water to a revolving multi-blade, twin shafted mixer
- Able to Discharge the mixed product on a continuous flow-

EXCEPTION: Blending the paving mixture may be accomplished with a truck mounted micro-surfacing mixing machine that meets the above specification, except for continuous flow, when placing the mixture on short streets or projects that are less than one-half mile (800 m) in length.

For streets or projects less than one-half mile (800 m) in length, individual truck-mounted units may be used for placement of micro-surfacing. For streets or projects one-half mile (800 m), or greater, in length, place micro-surfacing mixture with a machine that is equipped as follows:

- Has self-loading devices that load raw materials while continuing to lay micro-surfacing, thereby minimizing construction joints
- Has opposite side driving stations to optimize longitudinal alignment
- Allows the operator to have full hydrostatic control of the forward and reverse speed while applying micro-surfacing material

Thoroughly blend the mixture so that no uncoated aggregate is visible upon discharge from the mixing unit or in samples taken from the roadway.

1. Water Pressure System

Use a mixing machine equipped with a water pressure system and nozzle-type spray bar to provide a water spray ahead of and outside the spreader box when required.

2. Proportioning Devices

Use a machine equipped with individual volume or mass controls or other gauging devices for measuring and proportioning each material added to the mix. Properly calibrate, mark, and positively interlock each material control device.

Ensure that the aggregate feed to the mixer is equipped with a revolution counter or similar device to determine the amount of emulsion used at any time. Before beginning the work, calibrate each mixing unit and provide a copy of the calibration worksheet to the Engineer. Once calibrated, do not change the aggregate and emulsion flows without the Engineer's approval. The water and additive may be adjusted in the field to control the mix properties to produce an acceptable mix.

3. Emulsion Pump

The emulsion pump shall be a heated, positive displacement type pump.

4. Spreading Equipment

Uniformly spread the micro-surfacing mixture using a mechanical-type spreader box attached to the mixer, equipped with paddles or other devices to agitate and spread the materials throughout the box. Use paddles that

are designed to maintain sufficient turbulence in the mixture to prevent the material from setting-up in the box or causing side buildup and lumps. Provide a front seal to prevent loss of the mixture at the road contact surface.

Provide an adjustable rear seal to act as a strike-off. Maintain the spreader to prevent the loss of the paving mixture during surfacing super-elevated curves. Design and operate the spreader box and rear strike-off to achieve a uniform consistency and produce a free flow of material to the rear strike-off without causing skips, lumps, or tears in the finished surface. Use a spreader box capable of lateral movement or with side-shift abilities to ensure proper alignment with the roadway.

B. Auxiliary Equipment

Provide a pressure distributor, power-broom, and power blower which meets requirements of Subsection 424.3.02.

Provide suitable crack and surface cleaning equipment, barricading equipment, hand tools, and other support equipment necessary to perform the work.

428.3.03 Preparation

General Provisions 101 through 150.

428.3.04 Fabrication

General Provisions 101 through 150.

428.3.05 Construction

A. General

Produce, transport, and place the specified materials according to these specifications and as approved by the Engineer. Produce a finished micro-surfacing that has a uniform texture free from excessive scratch marks, tears, or other surface irregularities. Ensure that the cured mixture fully adheres to the underlying surface. Based on a visual examination or test results, the Engineer may reject any work due to poor workmanship, loss of texture, raveling, or apparent instability.

B. Weather Limitations

Spread the micro-surfacing mixture only when:

- The ambient temperature for 48 hours immediately prior to placement has been at least 50 °F (10 °C).
- The current pavement surface and the ambient temperature is at least 50 °F (10 °C) and rising. Supply a surface temperature thermometer and a sling psychrometer and take temperature and humidity measurements as directed by the Engineer.
- The weather is not foggy or rainy.
- There is no forecast of temperatures below 32 °F (0 °C) within 48 hours from the time of placement.

Whenever the relative humidity exceeds 80 percent or the weather is overcast, the placement of micro-surfacing will be at the discretion of the Engineer.

C. Surface Preparation

Before applying the micro-surfacing mixture, thoroughly clean all cracks and the area to be surfaced to the Engineer's satisfaction.

D. Tack Coat

Use a tack coat which consists of cationic asphalt emulsion CSS-1h or CQS-1h. Dilute it at the rate of one part emulsion and three parts water, and apply with an asphalt distributor. The application rate is 0.05 to 0.10 gal/yd² (0.23 to 0.45 L/m²) of diluted emulsion per square yard (meter). Apply the tack coat according to Section 413. If the surface course is placed within 30 days of the leveling course or if the Engineer determines that excessive tracking of material is evident, a tack coat will not be required between the leveling and surface course.

E. Application

Pre-wet the surface by spraying water ahead of and outside of the spreader box at a rate that dampens the surface without allowing water to flow freely ahead of the spreader box.

Spread the paving mixture on the prepared surface to produce a uniform finished surface. Take care when filling ruts to restore the designed profile of the pavement cross section. Excess crowning or overfilling of the rut area is not permitted. Use squeegees and lutes to spread the mixture in areas inaccessible to the spreader box and areas requiring hand spreading. Carry a sufficient amount of material at all times in all parts of the spreader box to ensure complete coverage.

Make adjustments to the additive, if necessary, to provide a slower setting time during hand spreading. If hand spreading is necessary, pour the mixture in a small windrow along one edge of the surface to be covered and uniformly spread with a hand squeegee or lute. Provide a smooth, neat seam where two passes meet. Immediately remove excess material from the ends of each run.

F. Traffic Control

Do not allow traffic on the micro-surfacing mixture until it has cured sufficiently to prevent pick up or marring of the surface. Repair any damage done by traffic to the mixture at no expense to the Department.

G. Rut Filling and Leveling (Scratch) Course

When required on the Plans, provide micro-surfacing materials to fill ruts, utility cuts, depressions in the existing surface, etc. before the final surface course is placed. When ruts are no more than 1/2 inch (13 mm) in depth, construct the leveling/scratch course using a full width spreader box with a steel strike-off. Fill ruts deeper than 1/2 inch (13 mm) independently with a rut-filling spreader box, 6 ft (1.8 m) in width, or as directed by the Engineer.

Place and open to traffic the rut filling and leveling (scratch) course at least 24 hours before surfacing.

H. Workmanship

Excessive buildup, uncovered areas, or unsightly appearance are not permitted on longitudinal or transverse joints. Place longitudinal joints on lane lines. Excessive overlap is not permitted. Ensure straight lines along the roadway centerline, lane lines, shoulder, or edge lines. Keep lines at intersections straight to provide a neat and uniform appearance.

1. **Finished Surface:** Ensure that the finished micro-surfacing has a uniform texture free of excessive scratch marks, tears, or other surface irregularities. Excessive tear marks are considered 4 marks that are 1/2 inch (13 mm) wide or wider and 6 inches (150 mm) or more long per 100 square yards (85 meters), or any marks 1 inch (25 mm) wide or wider or 4 inches (100 mm) long. Ensure that the edges of the micro-surfacing appear neat and that longitudinal alignment is parallel to the roadway centerline.
2. **Joints and Seams:** Produce neat and uniform longitudinal and transverse joints. Construct transverse joints as butt-type joints. Place longitudinal joints on lane lines when possible. Do not allow gaps between applications. Joints are acceptable if there is no more than a 1/2 inch (13 mm) vertical space for longitudinal joints nor more than 1/4 inch (6 mm) for a transverse joint between the pavement surface and a 4 ft (1.2 m) straightedge placed perpendicular on the joint.
3. **Areas the Mixing Machine Cannot Reach:** Surface these areas using hand tools to provide complete and uniform coverage. Clean and lightly dampen the area to be handworked before placing the mix. Ensure areas that require handwork produce a finished surface that is uniform in texture, dense, and has a neat appearance similar to that produced by the spreader box. Micro-surfacing material required to repair deficiencies due to unsatisfactory workmanship and the work required to mix and place the materials according to the Specifications, will be provided at no expense to the Department.

428.3.06 Quality Acceptance

Take two samples of mixture for determining quality acceptance for each day of operation. Test the second sample only if the results of the first sample are outside mixture control tolerances. Test the samples according to GDT 125. The deviation in test results from the Job Mix Formula will be used to determine compliance with the mixture control tolerances. If more than one sample is tested, the average deviation shall be used to determine compliance.

A mixture adjustment period will be provided during the first two days of operation. If the average deviation of sample results for the first day are outside the mixture control tolerances, you may adjust equipment settings to provide a mixture within the tolerances. Samples will be taken the second day (after equipment changes, if any, have been made) and the average deviation in test results will be calculated. If the average deviation of test results for the second day is within mixture control tolerances, mixture quality will be accepted for the first two days of operation. If the average deviation from the second day is not within mixture control tolerances for percent residual asphalt content, a 2% reduction in unit

price will be assessed for each 0.1 percent the residual asphalt content is outside the mixture control tolerances for each of the first two days that tolerances were exceeded.

A. Emulsified Asphalt

Maintain the percent residual asphalt and gradation as shown on the micro-surfacing design, or as established by the Engineer, within the Mixture Control Tolerances listed in Table 1.

After the adjustment period, a 2% reduction in unit price will be applied for each 0.1 percent the residual asphalt content is outside the Mixture Control Tolerance given in Table 1 for the day's production represented by the sample. The average deviation of the samples will be used to determine conformance to the Mixture Control Tolerance. Do not continue to operate and place materials outside the mixture control tolerances. Adjust the placement operation as necessary to maintain production within the tolerances given.

B. Aggregate Application Rate

Control the target spread rate for micro-surfacing to within plus or minus 2 lbs/yd² (1 kg/m²) of the spread rate specified in the Proposal based on the weight of dry aggregate. Mix placed in excess of the upper spread rate tolerance will not be paid for. The unit price will be reduced by 5% for each pound (0.5 kg) of aggregate per square yard (meter) less than the spread rate tolerances established above for each day's placement of material. Accept pay reduction for deficient daily production, or overlay the deficient area at full plan width and depth at the Contractor's expense. Do not continue to operate and place materials outside the spread rate tolerances. Adjust the placement operation as necessary to maintain production within the tolerances given.

428.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150.

428.4 Measurement

A. Micro-Surfacing

Micro-Surfacing, Type I or II surface course, is measured and accepted as completed by the in-place square yard (meter). In computing square yards (meters), the lengths and widths used shall be as specified in Section 109, "Measurement and Payment".

B. Leveling (Scratch Course)

A leveling (scratch course) is measured and paid for by the ton (megagram) of dry aggregate used. Tons (megagrams) of aggregate used shall be determined using the total daily revolutions of the aggregate feed belt and the corresponding gate setting and weight per revolution shown on the mixing unit calibration worksheet.

C. Tack Coat

Diluted emulsified tack coat is measured and paid for according to Section 413.

428.4.01 Limits

General Provisions 101 through 150.

428.5 Payment

Micro-surfacing will be paid for at the contract unit price, which is full compensation for furnishing all materials, including LRA modified bituminous materials, and for furnishing all equipment, work, and labor.

Payment will be made under:

Item No. 428	Micro-Surfacing, type I	Per square yard (meter)
Item No. 428	Micro-Surfacing, type I leveling	Per ton (megagram)
Item No. 428	Micro-Surfacing, type II	Per square yard (meter)
Item No. 428	Micro-Surfacing, type II leveling	Per ton (megagram)

428.5.01 Adjustments

General Provisions 101 through 150.

"THE ATLANTA LIGHT"
ACCEPTABLE MANUFACTURERS

Atlanta Light Type "A" Poles

- A. 25 Foot Mounting Height
 - 1. Holophane Drawing No. US-3276r3
 - 2. Union Metal Drawing No. N2515-190-B22
 - 3. Lumec Drawing No. S C.O.A 34112H

- B. 29 Foot Mounting Height
 - 1. Holophane Drawing No. US-3376-1r1 Composite
 - 2. Union Metal Drawing No. N2515-190-B11
 - 3. Lumec Drawing No. S C.O.A 34112L

Note: On Streets South of North Avenue Use 25 Foot Mounting Height and On Streets North of North Avenue 29 Foot Mounting Height

Atlanta Light Type "A" Luminaires

- A. Holophane Drawing No. US-3305-C
- B. King Luminaire Drawing No. K81-EGD-ST
- C. Lumec Drawing No. RN20 34112B

Atlanta Light Type "C" Poles

- A. Union Metal Drawing No. N1571-70-B79
- B. Main Street AATF1410-9
- C. Holophane Drawing No. US-3411r2

Atlanta Light Type "C" Luminaires

- A. King Luminaire Drawing No. K134-EAR-K12
- B. Main Street L920
- C. American Electric Lighting
Cat. No. AEL24 P 150S MOG ARF R5 TB1 AEL-1015r3 CM

All of the aforementioned drawings are attached and made a part of this specification. Any questions concerning these specifications should be addressed to Wahab Alabi, Bureau of Traffic and Transportation, City of Atlanta, 55 Trinity Avenue SW, Atlanta, Georgia 30335, Telephone number 404-330-6501

Wiring Procedures City of Atlanta

1. ALL lighting designs, lighting additions, or lighting deletions, must flow through The City of Atlanta Bureau of Traffic & Transportation for approval.
2. Traffic signal circuits and lighting circuits are to be totally separate from each other. All lights will be served by Georgia Power and will feed directly from an underground vault or an overhead multiple relay. Source and location to be determined by Georgia Power.
3. The first light on each circuit from the Georgia Power vault will be considered the service point for that circuit and must have a "fuse block" installed inside the base of the pole. The service point on an overhead service shall have a disconnect on the pole below the relay before the first light. The fuses, or breakers, will be protection for fault current on the circuit and should be sized according to the load of the circuit.
4. Each light must be individually fused using quick-disconnect fuseholders installed inside the base of each pole.
5. Each wiring connection must be made using compression connections (Burndy "C" connector, or equivalent) followed by a heat shrink protective material to protect the connection from weathering elements.
6. All poles will have a 15-inch bolt circle pattern with (4) bolts with accommodations to fit up to a 1-1/4 inch bolt for Type "A", Type "C", and Cobrahead type poles.
7. All lights will be High Pressure Sodium. Wattage to be determined by The City Bureau of Traffic & Transportation during pre-construction meetings.

12/03/01
LAH

8. Use 2-2" pipe conduits
Use 2" steel pipes under driveways

City of Atlanta

Cast Aluminum & Steel Post

Ø22" Clamshell Base

Specifications

DESCRIPTION

The lighting post shall consist of a decorative, tapered and fluted clamshell base, a 12-flat flute tapered shaft, a smooth, curved and tapered arm with a fitting for luminaire mounting, and 2 bolt-on banner arms with breakaway couplings. Base shall have custom 'Atlanta' medallions at 90° and 270° from access door.

MATERIALS

The base shall be cast aluminum (356.1 Ingot alloy). The shaft shall be 11-gauge fluted steel with a steel anchor plate. The luminaire arm shall be 6063-T6 with cast aluminum (356.1 Ingot alloy) fittings. Banner arms and brackets shall be aluminum pipe and plate. Banner arms shall have breakaway couplings with safety cables. All hardware shall be tamper-resistant, stainless steel. Anchor bolts shall be hot-dip galvanized steel.

DIMENSIONS

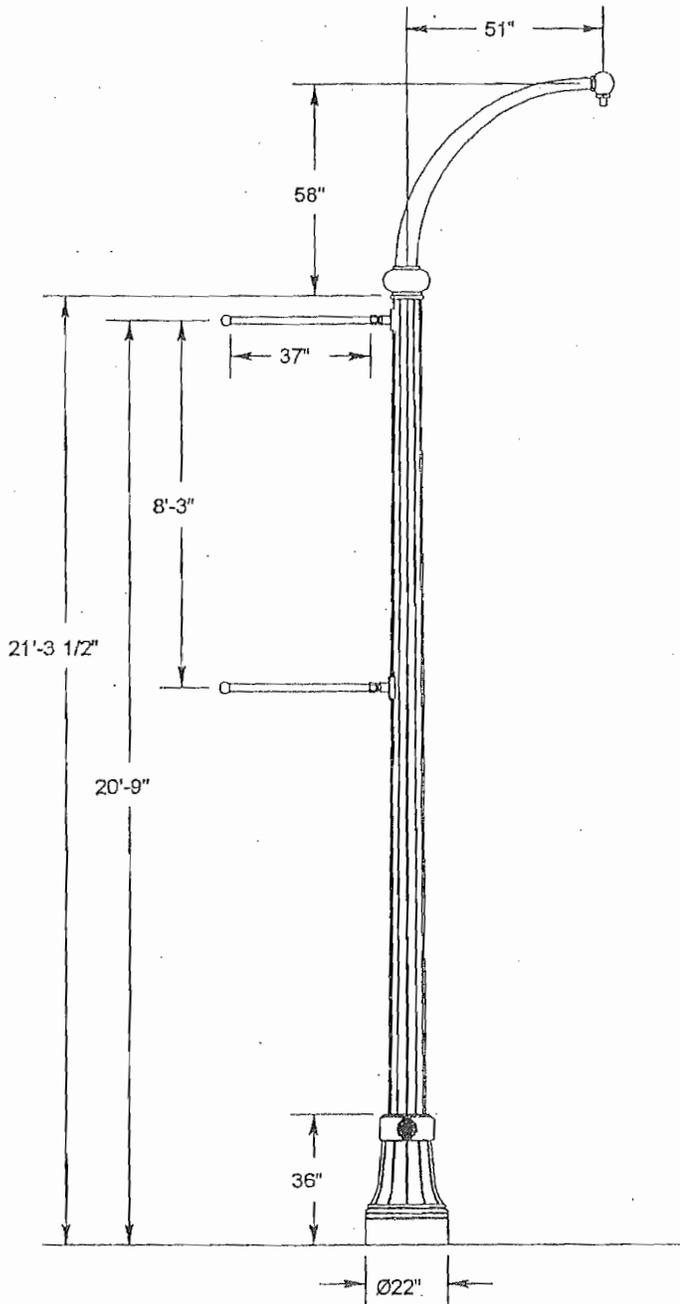
The base shall be Ø22" and 36" tall. The shaft shall be 21'-3 1/2" in height, beginning with Ø10.4" at the anchor plate, and tapering at .14 inch per foot. The anchor plate shall be 16" square and 1" thick. Shaft shall have a Ø4 1/2" x 10" tall tenon. Luminaire arm shall rise 58" and measure 51" from post center to luminaire center, with a 1 1/2" NPT male fitting for luminaire mounting. Banner arm shall be 1 1/2" pipe (1 7/8" diameter) and measure 37" in length, with a Ø3" ball finial.

INSTALLATION

Post shall be provided with (4) Ø1" x 42" x 6" hot-dip galvanized anchor bolts to be installed on a Ø15" bolt circle. A nominal 4" x 6 1/2" handhole shall be located in the shaft for wiring access.

FINISH

The post assembly shall be shipped with a 'custom match' powder coat finish. Color to match CODA Olympic Green (Y207D). Atlanta medallions on base shall be furnished with a 'gold' color finish.



Catalog # AT(21.29)FF12/22CSB-CAS/CM-(4x6HH)-T(4.5X10.0)-CLD-2BBA37B3/1.5/BO-CA/CM-ATC51-CA/CM

TYPE: A

DRAWING NO: US-32763

THIS DRAWING, WHEN APPROVED, SHALL BECOME THE COMPLETE SPECIFICATION FOR THE MATERIAL TO BE FURNISHED BY HOLOPHANE ON THE ORDER NOTED ABOVE. A UNIT OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER IN WRITING. ON POLE ORDERS AN ANCHOR BOLT TEMPLATE PRINT WILL BE SUPPLIED WITH EACH ANCHOR BOLT ORDER TO MATCH THE POLE PROVIDED.

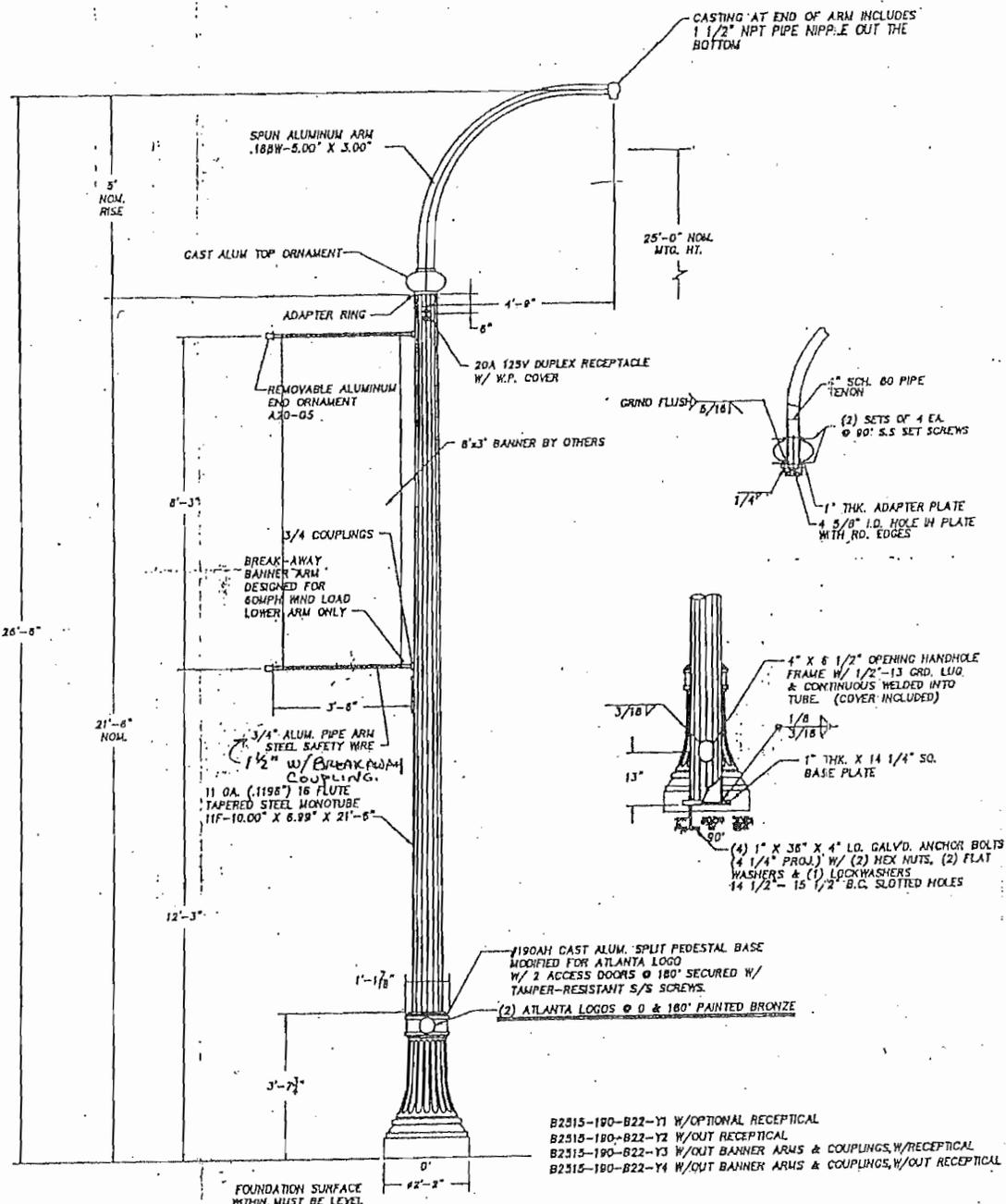
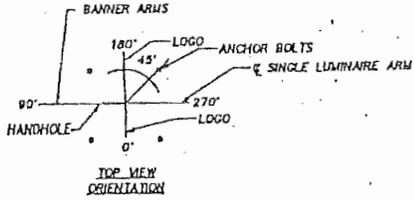
THIS PRINT IS THE PROPERTY OF HOLOPHANE AND IS LOANED SUBJECT TO RETURN UPON DEMAND AND UPON EXPRESS CONDITION THAT IT WILL NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO OUR INTERESTS, AND ONLY IN CONNECTION WITH MATERIAL FURNISHED BY HOLOPHANE.

HOLOPHANE
LEADER IN LIGHTING SOLUTIONS
An Acuity Brands Company
214 OAKWOOD AVENUE - NEWARK, OHIO 43055

SCALE: NONE
DRAWN: SM
APP'D:
DATE: 02-25-03

MATERIAL SPECIFICATIONS

TUBES: CHEM. & PHYSICAL PROP. OF ASTM A513 GR. A
 PLATE: CHEM. & PHYSICAL PROP. OF ASTM A513 GR. A
 ANCHOR BOLTS: ASTM A307, GR. A GALV. TO A183
 ANCHOR BOLT NUTS: ASTM A307, GR. A GALV. TO A183
 WASHERS: ASTM A307, GR. A GALV. TO A183
 ADAPTER RING: CAST ALUMINUM-AL319F
 ANCHOR LOCK NUTS: ASTM A307, GR. A GALV. TO A183
 FLAT WASHERS: ASTM A307, GR. A GALV. TO A183
 PIPE: CHEM. & PHYSICAL PROP. OF ASTM A513 GR. A
 PEDESTAL BASE: CAST ALUMINUM SPLIT BASE-J19F
 STUDS: ASTM-A38 HD. GALV. TO A183
 FINISH: POWDER COATED "COCA GREEN"



ORIGINAL		ORNAIMENTAL LIGHTING STANDARD FOR THE CITY OF ATLANTA 26'-6" A POLE	
		LOF YES	ENG. REF. #
REQ. #	0858-16-01	S.O. #	CAD #
DRAWN WJC		Union Metal CORPORATION RO	
DATE 12-26-01		DRAWING NO. N2515-190-B22	

CITY OF ATLANTA

Specifications

DESCRIPTION

For a complete description of the Atlanta Luminaire, see US-1413.

DESCRIPTION

The post shall consist of a decorative, tapered and fluted clamshell base, a 16-flute, tapered shaft, a curved and tapered post-top luminaire arm, and 2 bolt-on banner arms with breakaway couplings. Base shall have custom 'Atlanta' medallions at 90° and 270°.

MATERIALS

The clamshell base shall be heavy-wall cast aluminum (A356.1 alloy), formed true to pattern with complete detail. The shaft shall be steel (A585) with a steel anchor plate. Post-top arm shall be 6063-T6 aluminum with cast aluminum (356.1 alloy) post fitter. Bolt-on banner arms shall be 6061-T6 pipe and plate. All hardware shall be tamper resistant, stainless steel. Anchor bolts shall be hot-dip galvanized steel.

DIMENSIONS

The post shall be 25'-0" in height with a 22"Ø x 36" tall base. The 11-gauge shaft (.1196" wall) shall be taper from 10"Ø at the anchor plate (14" square x 1" thick), with a 4 1/2"Ø x 10" tall tenon for luminaire arm mounting. Post-top arm shall have a 58" rise and measure 51" from post center to luminaire center. Arm shall terminate 1 1/2" NPT fitting for luminaire mounting. Banner arms shall be 1 1/2" pipe (1 7/8"Ø) and measure 37" in length, with a 3"Ø ball finial.

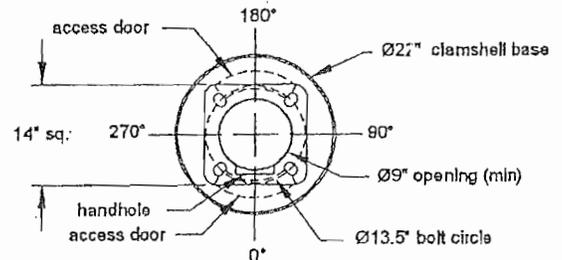
INSTALLATION

Post provided with (4) 1"Ø x 40" hot-dip galvanized, L-type anchor bolts to be installed on an 13.5"Ø bolt circle. Two doors shall be located in the base, one coinciding with the shaft handhole for wiring access.

FINISH

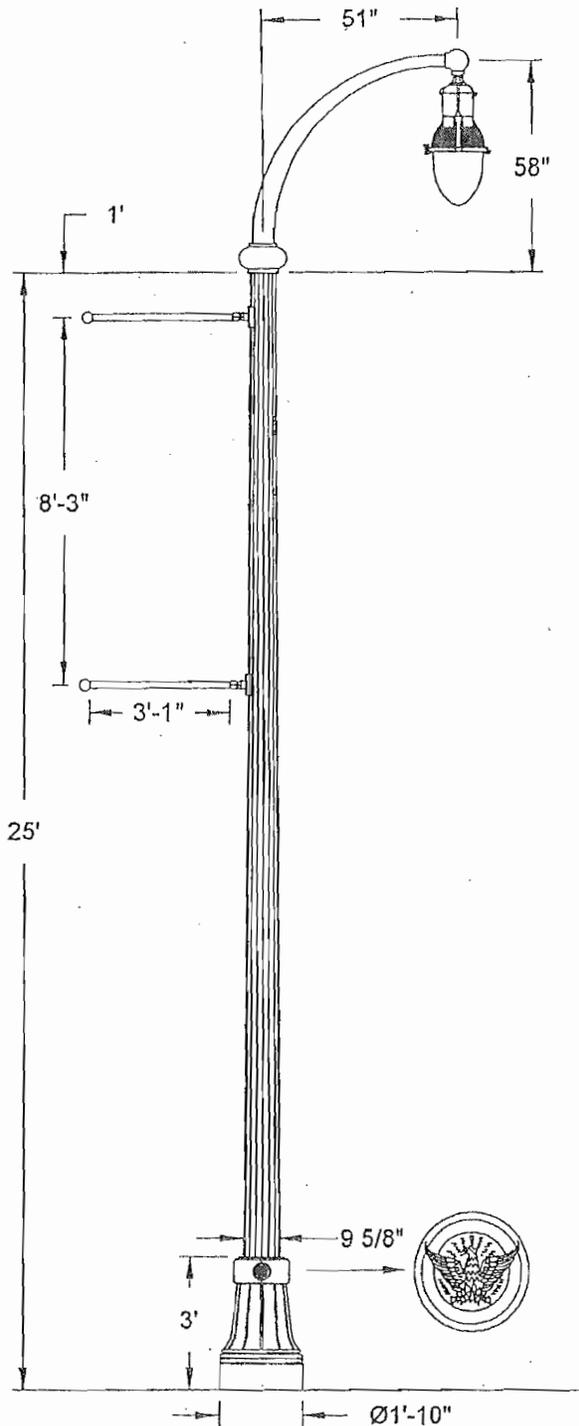
The post assembly shall be furnished with a 'custom match' powder coat finish. Customer to provide manufacturer's color number or color sample for matching.

Anchorage Detail



Catalog #:

FL210-T00A250-P9-FP(SPCL)-HH-AB(1.0"x40")-T(4.5X10.0)
AT22CSB-CA/CM-CLD-ATC51/1-CA/CM-
2BBA37B3/1.5/BO-CA/CM-AL250HPXXA4-Y027D



ARCHITECTURAL OUTDOOR ORDER #:

TYPE: A

DRAWING NO: US-3376-1r1
COMPOSITE

THIS DRAWING, WHEN APPROVED, SHALL BECOME THE COMPLETE SPECIFICATION FOR THE MATERIAL TO BE FURNISHED BY HOLOPHANE ON THE ORDER NOTED ABOVE. A UNIT OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER IN WRITING. ON POLE ORDERS AN ANCHOR BOLT TEMPLATE PRINT WILL BE SUPPLIED WITH EACH ANCHOR BOLT ORDER TO MATCH THE POLE PROVIDED.

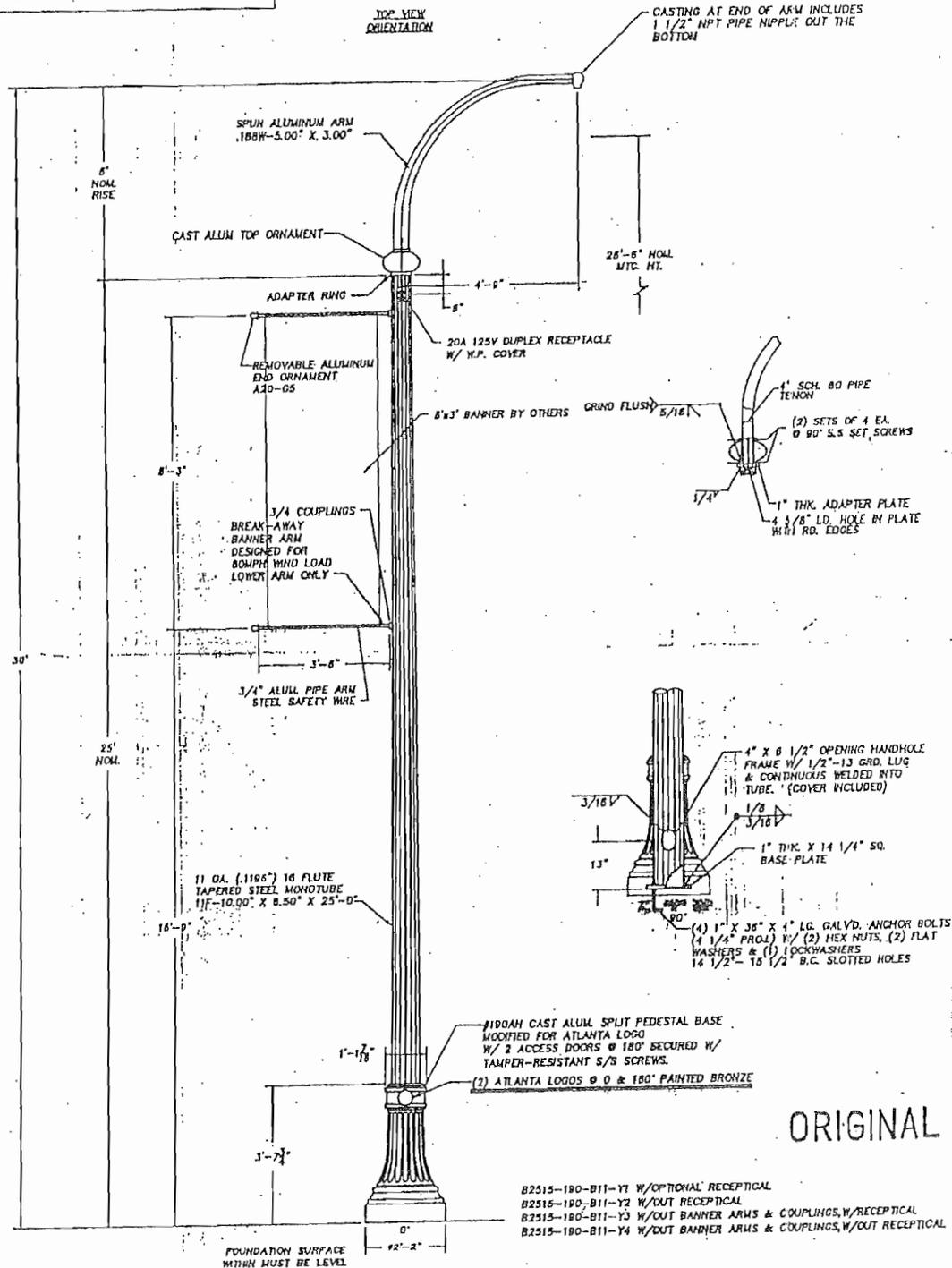
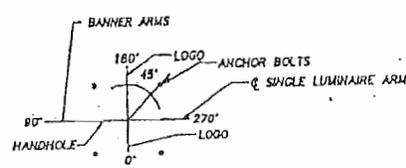
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HOLOPHANE
LEADER IN LIGHTING SOLUTIONS
An Acuity Brands Company
214 OAKWOOD AVENUE - NEWARK, OHIO 43055

SCALE: N/A
DRAWN: BHH
APP'D:
DATE: 02-25-03

MATERIAL SPECIFICATIONS

TUBES: CHEM. & PHYSICAL PROP. OF ASTM A513, GR. A.
 PLATE: A513
 ANCHOR BOLTS: A307 OR S3 TOP END GALV. TO A163
 ANCHOR BOLT NUTS: ASTM A563 OR A GALV. TO A163
 MISC. HDWE: (STL STL) A307 SERIES (18-8)
 ADAPTER RING: CAST ALUMINUM-8319
 AND LOCK NUTS: ASTM A563 OR A GALV. TO ASTM A163
 FLAT WASHERS: ASTM F436 GALV. TO A163
 MISC. STEEL HDWE: ASTM A307 GALV. TO ASTM A163
 PEDestal BASE: CAST ALUMINUM SPLIT BASE-3102
 STUDBS: ASTM-A36 HD GALV. TO A163
 FINISH: POWDER COATED "CDDA GREEN"



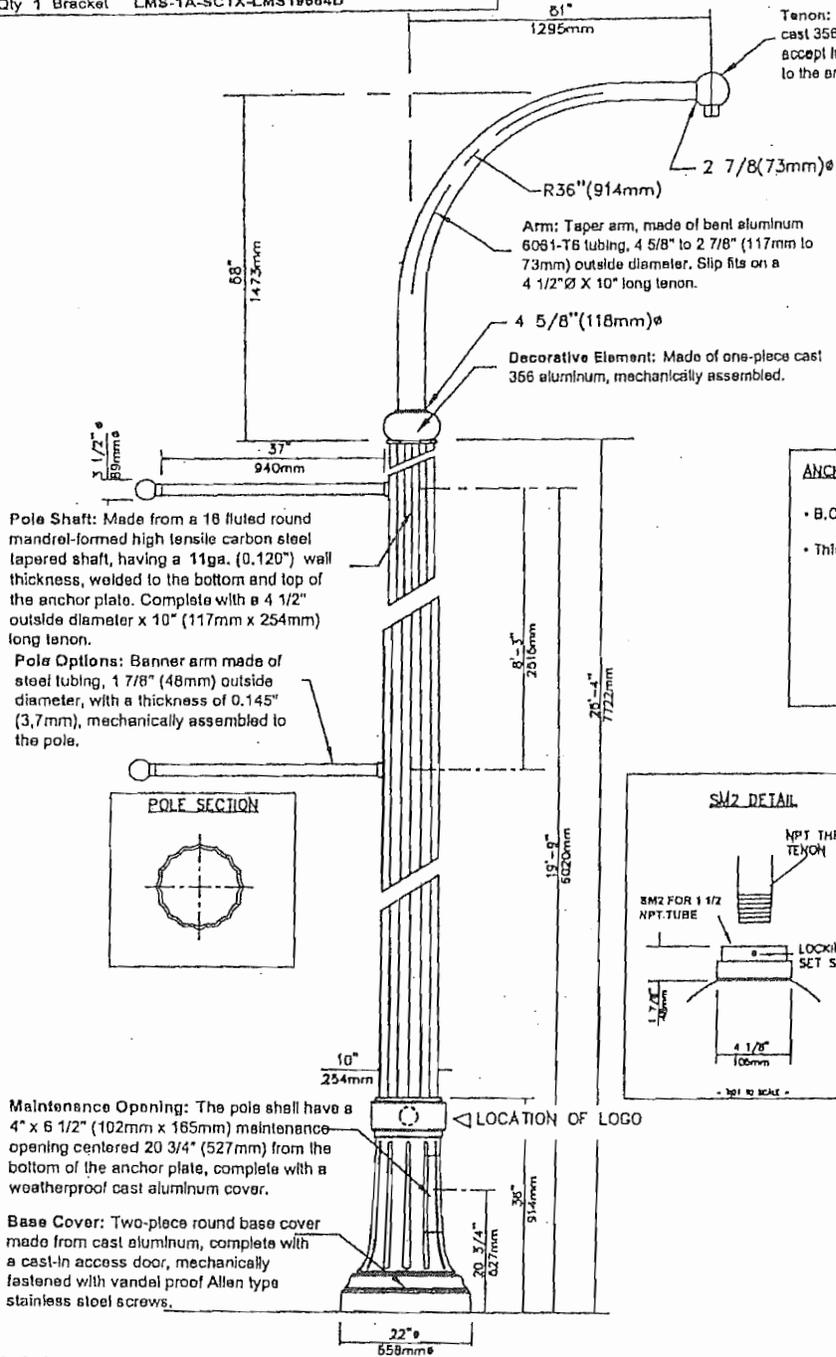
ORIGINAL

- B2515-190-B11-Y1 W/OPTIONAL RECEPTICAL
- B2515-190-B11-Y2 W/OUT RECEPTICAL
- B2515-190-B11-Y3 W/OUT BANNER ARMS & COUPLINGS, W/RECEPTICAL
- B2515-190-B11-Y4 W/OUT BANNER ARMS & COUPLINGS, W/OUT RECEPTICAL

R5	REMOVED LUM FIXTURE NOM MTD HGT WAS 26'-6" REVISED TITLE BLOCK	12-28-01 W.K. 10/11	ORNAMENTAL LIGHTING STANDARD FOR THE CITY OF ATLANTA 30' A POLE
R4	REVISED DAVIT ARM CONNECTION WAS THRU-BOLT CONNECTION.	8/13/01 RLR 2008	
R3	REV. JENON CHG. B.C. TO 14 1/2"-15 1/2" SLOTTED ADDED Y3 & Y4 DESIGN Y'S	7/3/00 LFT 10/01	
DRAWN: RLW DATE: 12/17/98 RECEIVED: 1/20/99			ENG. REF. # REQ. # 1001-39-98 S.O. # NGA-9502 CAD # 1001A98 Union Metal CORPORATION R5 DRAWING NO. N2515-190-B11

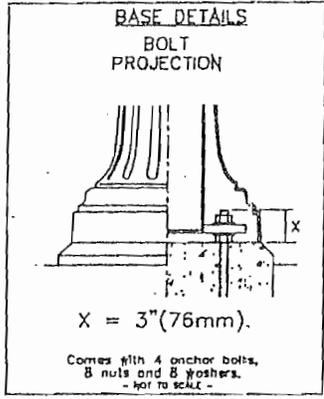
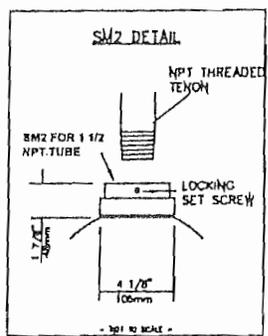
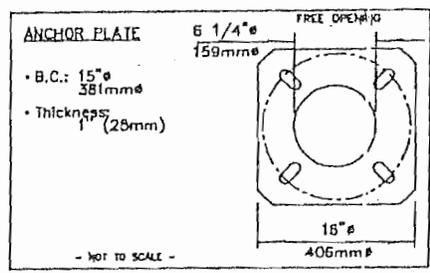
Qty 1 Pole VSPS-25'-4"-BAS37(2)-VPA-SCTX-LMS19664D

Qty 1 Bracket LMS-1A-SCTX-LMS19664D



Miscellaneous Hardware: All exposed screws will be in stainless steel. Neoprene and/or silicon gasketing is applied.

Finish: Special color to be Coda Green (textured) (SCTX). Application of a polyester powder coat paint. (4 mils/100 microns). The chemical composition provide a highly durable UV and salt spray resistant finish in accordance to the ASTM-B117-73 standard and humidity proof in accordance to the ASTM-D2247-88 standard.



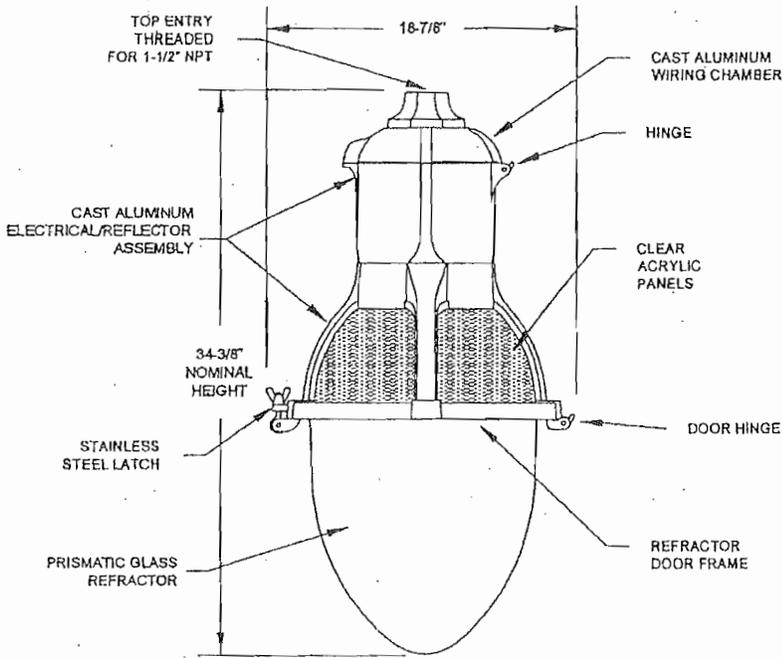
• ANCHORING BOLTS
 STEEL, 1" x 48"
 (supplied by LUMEC inc).

TITRE:	ENREGISTRÉ	City of Atlanta							34112
TITLE:	REGISTERED	R90 LMS19664D							
ECHELLE/SCALE:	ISO 9002	N°	REVISION	PAR./BY	DATE:	VER.:	PAR./BY	N° DE DESSIN / DRAWING N°	PAGE
1/2" = 1'-0"					06-26-02		LL	S C.O.A 34112L	1/1

City of Atlanta

Teardrop Style
 Maximum weight - 60 lbs
 Maximum effective projected area - 2.0 sq. ft.

Specifications



DESCRIPTION

The luminaire is styled to replicate the "teardrop" luminaires that lighted boulevards in the first half of this century. Designed for light control and ease of installation and maintenance, the Atlanta has a precision optical system for true street lighting performance.

WIRING CHAMBER

The wiring chamber has a 1-1/2 inch NPT threaded entry for pendant mounting. A stainless steel net screw locks the unit in position. A three station terminal block will accept #14 through #2 wires and is wired to one half of the plug assembly that connects to the removable electrical module.

ELECTRICAL / REFLECTOR ASSEMBLY

The electrical / reflector assembly hinges down from the wiring chamber for ease in wiring and to facilitate the removal of the electrical module. The assembly is latched in place by a captive stainless steel hex head screw. The utilized electrical module consists of the ballast and socket mounted to a cast aluminum plate that is easily removed by loosening two screws in keyhole slots. The disconnect plug connects the ballast to the terminal block in the wiring chamber. The socket is street lighting grade with nickel plated lamp grip shell, center contact backed by a coiled spring and glazed porcelain body. The prismatic glass reflector is designed to work in conjunction with the refractor to provide the desired distribution of light. The glass reflector allows an upright component to illuminate clear acrylic panels in the housing, creating a soft upward glow that define the luminaire's classic shape.

REFRACTOR / DOOR ASSEMBLY

The cast aluminum door cradles a teardrop shaped, thermal resistant borosilicate glass refractor that controls the light to provide an I.E.S. type IV cut off distribution. The combination of reflector, refractor and vertical burning lamp maximize efficiency and uniformity of illumination while controlling luminaire brightness. The refractor assembly hinges from the electrical / reflector assembly and is latched by a stainless steel, captive, wing nut assembly.

BALLAST

(Refer to Ballast Data Sheet for specific operating characteristics)
 150 watt and below 120 volt High Pressure Sodium (HPS) ballasts are High Power Factor Reactor type. All other 150 watt and below are High Power Factor Autotransformer type. 250 watt HPS ballasts are Lead type. All Metal Halide (MH) ballasts are Peak Lead Autotransformer type.

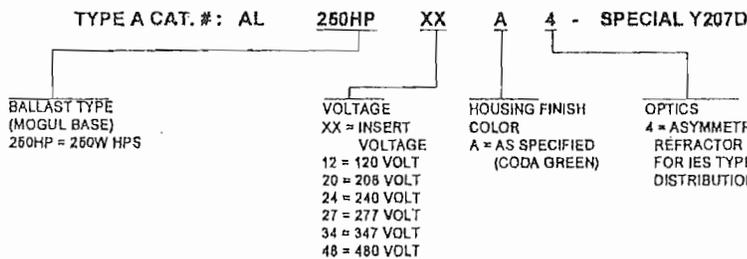
FINISH / MATERIAL

The luminaire is finished with polyester powder paint applied after a seven stage pretreatment process to insure maximum durability. Color to match C.O.D.A. Olympic green (Y207D). All castings utilize alloy #358 aluminum for maximum corrosion resistance and all exposed hardware is stainless steel.

U.L. LISTING

U.L. listing suitable for wet locations at 25 degrees C.

ORDERING INFORMATION



TYPE: A

DRAWING NO: US-3305-C

THIS DRAWING, WHEN APPROVED, SHALL BECOME THE COMPLETE SPECIFICATION FOR THE MATERIAL TO BE FURNISHED BY HOLOPHANE ON THE ORDER NOTED ABOVE. A UNIT OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER IN WRITING. ON POLE ORDERS AN ANCHOR BOLT TEMPLATE PRINT WILL BE SUPPLIED WITH EACH ANCHOR BOLT ORDER TO MATCH THE POLE PROVIDED.

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HOLOPHANE
 LEADER IN LIGHTING SOLUTIONS
 An Acuity Brands Company
 214 OAKWOOD AVENUE - NEWARK, OHIO 43055

SCALE: N/A
 DRAWN: BHH
 APP'D:
 DATE: 02-25-03

REV.	ALTERATION	E.C.H.	DATE
A	REMOVED VOLTAGE INFOR.		04/18/01 TB
A	NEW BALLAST HOUSING ADDED		02/16/01 A.A.

KING U.S. ORDER NO.: CUSTOMER ORDER NO.:

SPECIFICATIONS
 CATALOGUE NO.: K81-EGD-ST-III-250(MOG)
 -HPS-120(MT)

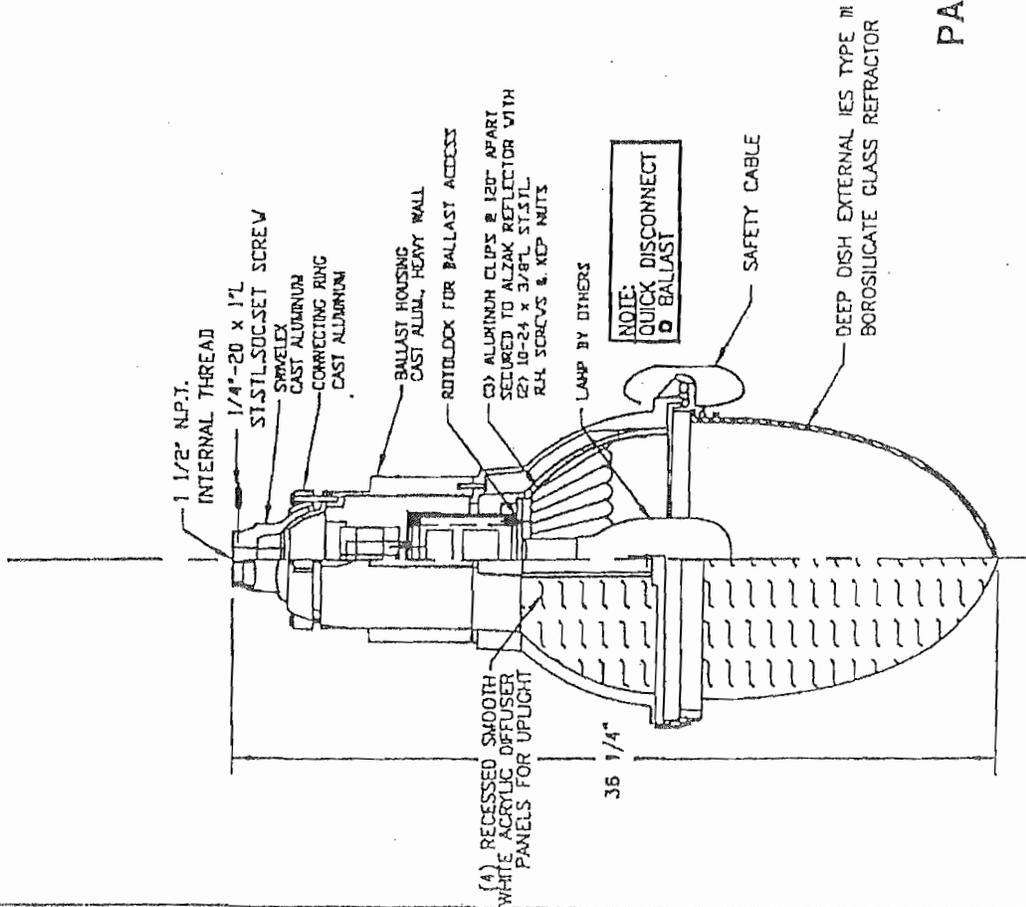
QUANTITY: GLASS
 GLOBE MAT'L: TYPE III
 IES CLASSIFIC.: 250W
 WATTAGE: HIGH PRESSURE SODIUM
 LIGHT SOURCE: 120V (MULTI-TAP)
 LINE VOLTAGE: CODA GREEN MATCH
 PAINT: LAMP BY OTHERS

BALLAST INFORMATION:
 BALLAST TYPE: CWA
 BALLAST MANUFACTURER: ADVANCE
 CATALOG NUMBER: 71A8291

OPTIONS:
 QUICK DISCONNECT
 TERMINAL BLOCK
 OTHER: 14" 0" OF LEAD UPLIGHT

SEE DRAWING #202C0054 FOR UPLIGHT / REFLECTOR CUT-OUTS

PART No. K81-EDG-ST-III-250(MOG)HPS-120(MT)



(A) RECESSED SMOOTH WHITE ACRYLIC DIFFUSER PANELS FOR UPLIGHT

36 1/4"

NOTE: QUICK DISCONNECT BALLAST

NOTE: CSA APPROVAL - THE LIGHT FIXTURE MEETS ANSI & NEMA STANDARDS, COMPLY WITH NEC REQUIREMENTS & CARRY CSA/NRTL CERTIFIED (OSHA APPROVAL) -UL EQUIVALENT LABEL

PART	PLANT REFERENCE DVG. #'S	REVISION
GLOBE		
CAPITAL		
OPTICS		
BALLAST		
FINIAL		
OTHERS		



KING LUMINAIRE
 COMPANY INC.
 340 WALKER'S LANE, P.O. BOX 7,
 BURLINGTON, ONTARIO, CANADA L7R 3J9
 U.S.A. 22222

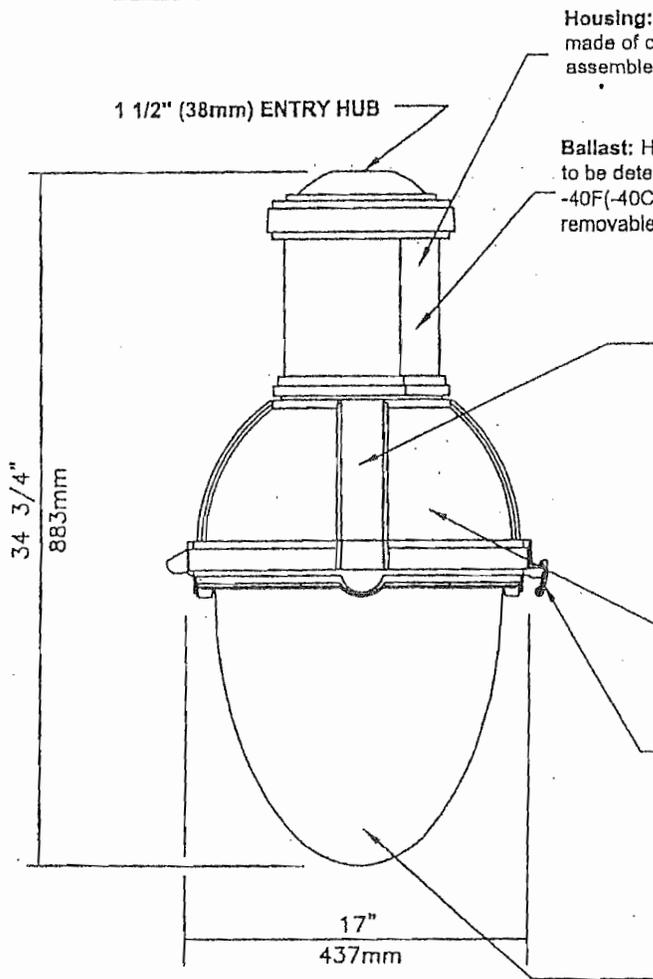
DWG NAME SPEC. DWG.	DWG NUMBER K81-EGD-ST	DATE 11/15/00	DWG DT. A.A.	REV. B
PROJECT/CUSTOMER: CITY OF ATLANTA, GEORGIA (TYPE A) (GEORGIA POWER)				

CERT. I.D. CS ET

\\SPEC\GEORGIA_POWER\K81-EGD-ST

Qty 31 Luminaire

250HPS-RN20-THA3-GL-VOLT-GT-SCTX-LMS19664A



Housing: In a round shape, this housing is made of cast aluminum 356, mechanically assembled to the bracket.

Ballast: High power factor of 90%. Primary voltage to be determined _____. Lamp starting capacity -40F(-40C) degrees. Assembled on a unitized removable tray with quick disconnect plug.

Hood: Cast 356 aluminum dome, mechanically assembled on the luminaire.

Lamp: 250 watts high pressure sodium(not included), ED 18 bulb, mogul base.

Optical System: (THA3-GL), I.E.S. type III hyper-extensive (asymetrical). Sealsafe system, composed of brightened anodized aluminum hydroformed reflector, permanently assembled on a refractor globe. Watertightness IP66 rating. This assembly is toolfree removable from the technical ring.

Luminaire Options: Glow Top made of white acrylic, mechanically assembled on the housing.

Access-Mechanism: A cast 356 aluminum frame with latch and hinge. The mechanism shall offer toolfree access to the inside of the luminaire. An embedded memory-retentive gasket shall ensure weatherproofing.

Globe: Made of one-piece seamless injected-molded borosilicate glass having an inner prismatic surface c/w semi prismatic house side shield and a textured exterior surface. The globe is mechanically assembled on the access-mechanism.

Miscellaneous

Wiring: Type TEW 14 ga. 6" (152mm) minimum exceeding from luminaire.

Hardware: All exposed screws will be in stainless steel. Neoprene and/or silicone gasketing is applied.

Finish: Special color to be Coda Green (textured) (SCTX). Application of a polyester powder coat paint. (4 mils/100 microns).

The chemical composition provide a highly durable UV and salt spray resistant finish in accordance to the ASTM-B117-73 standard and humidity proof in accordance to the ASTM-D2247-68 standard.

Note: IMPORTANT: All missing details must be clearly specified on the return of these approval drawings. Thank you for your cooperation. Voltage of Ballast to be determined _____.

TITRE:
 TITLE:

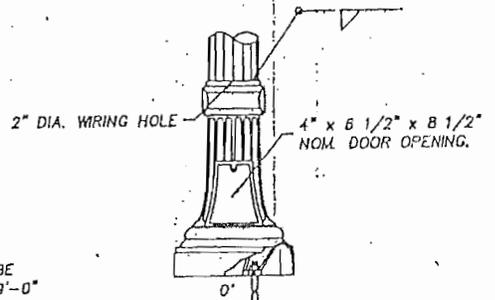
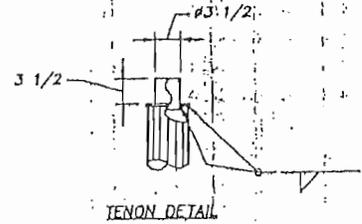
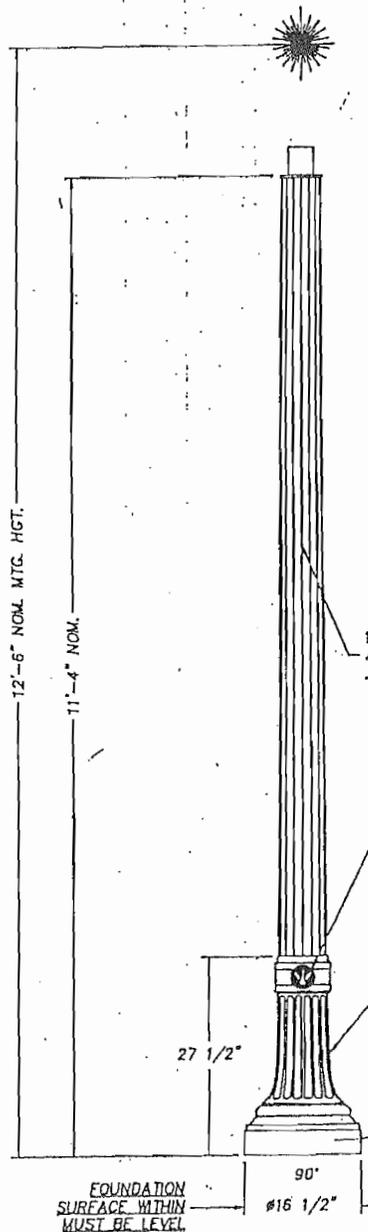
ENREGISTRÉ

City of Atlanta

RN20 LMS19664A

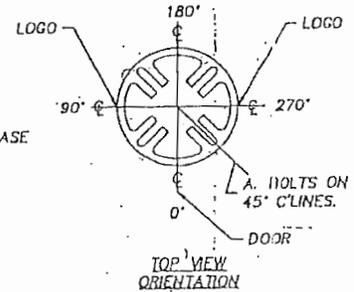
34112

ECHILLE/SCALE 1/8"=1"	ISO 9002 REGISTERED	N°	REVISION	PAR./BY:	DATE:	VER.:	PAR./BY:	N° DE DESSIN / DRAWING N°	PAGE
		4	REVISION	LL	10-04-02		EM	RN20 34112B	1/1



- (4) 3/4" x 4" x 26" GALV. ANCHOR BOLTS
- (2 1/2" PROJ.) W/ (1) GALV. HEX NUT
- & (1) 3/4" x 2" O.D. GALV. FLAT WASHER
- ON A 8" TO 12" B.C.
- (2) 16 GA. SHIMS PER POLE PROVIDED.

- (2) ATLANTA RESURGENS LOGOS
- Ø 180° PAINTED BRONZE



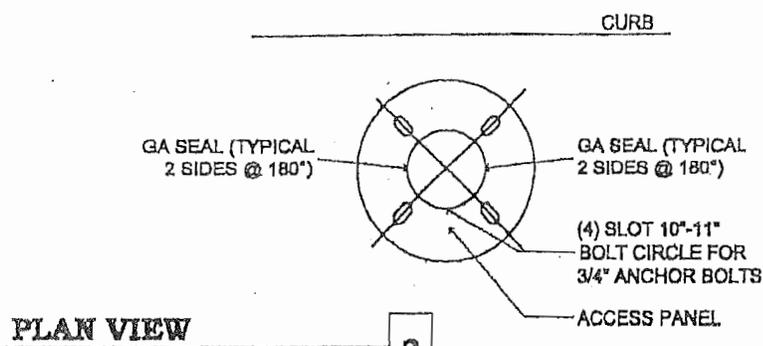
ORIGINAL

MATERIAL SPECIFICATIONS

- TUBES: AA6083-T4
- ANCHOR BOLTS: AASHTO M314 GR. 55 GALV. TO ASTM A153
- ANCHOR BOLT NUTS: ASTM A563 GR. A GALV. TO ASTM A153
- MISC. HARDWARE: (STN. STL.) AISI 300 SERIES (18-8)
- MISC. STL. HARDWARE: ASTM A307 GALV. TO ASTM A153
- PEDESTAL BASE: CAST ALUMINUM AJ19.0
- FINISH: PER SALES ORDER

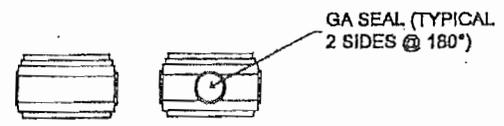
DESIGN NUMBER: P1571-70-B79-Y1

		ORNAMENTAL LIGHTING STANDARD "C" POLE (ONE PIECE ALUMINUM) ATLANTA, GEORGIA	
LOF	PS	ENG. REF.	# N1571-70-B21
REQ.	# 0841-39-01	S.O.#	CAD#
R1	REMOVED DWS TITLE 0841 REMOVED LUMINAIRE 3901 RESURGENS WAS SPELLED RESURGENCE	12-4-01	WJC
		DRAWN	WJC
		DATE	12-6-01
		Union Metal CORPORATION	R1
		DRAWING NO.	N1571-70-B79



PLAN VIEW

2



DETAIL

3

GENERAL DESCRIPTION

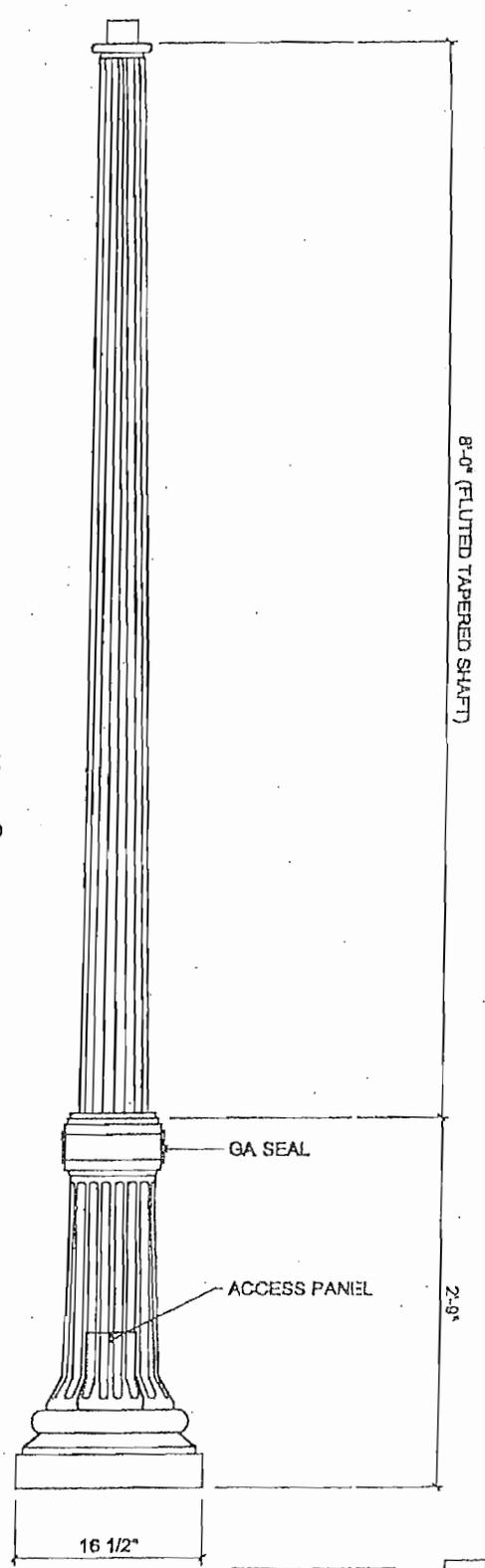
CAST ALUMINUM DECORATIVE BASE OF SERIES 319 ALUMINUM ALLOY INCLUDING CAST ALUMINUM MOUNTING PLATE WELDED IN AND IS COMPLETE WITH A HAND HOLE WITH MATCHING DOOR.

THE BASE IS JOINED TO THE SERIES 6052 ALUMINUM ALLOW 11 GAUGE THICK ROLLED AND FORMED TAPERED, FLUTED, ROUND SHAFT UTILIZING 100% PENETRATION TIG WELDING PROCESS. THE SHAFT TAPER IS .14"/FT AND HAS 16 FORMED FLUTES.

TO COMPLETE THIS ASSEMBLY, A CAST SERIES 319 ALUMINUM ALLOY TENON IS TIG WELDED AT THE TOP. THE TENON HAS A 3" DIA. NECK TO HOLD THE LUMINAIRE.

FINISH

THE SURFACE OF THE POLE IS SAND BLASTED TO ASSURE A GOOD PAINT ANCHOR IS ACHIEVED. THE SURFACE IS SOLVENT CLEANED AND A SHERWIN WILLIAMS VINYL WASH PRIMER IS APPLIED. THE FINISH COATING SHALL BE A MIN. DRY FILM THICKNESS OF 1-1/2 MIL. OF SHERWIN WILLIAMS POLANE POLYURETHANE ENAMEL (SPECIAL COLORS MATCHED) TO THOROUGHLY SEAL THE POLE AND GIVE IT THE PROPER UV PROTECTION.



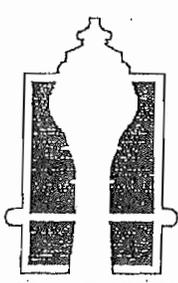
SIDE VIEW

8'-0" (FLUTED TAPERED SHAFT)

2'-9"

1

ALUMINUM ASSEMBLY



MAIN STREET LIGHTING

(330) 723-4431 FAX: (330) 723-2570
 1080 INDUSTRIAL PARK MEDINA OH 44256

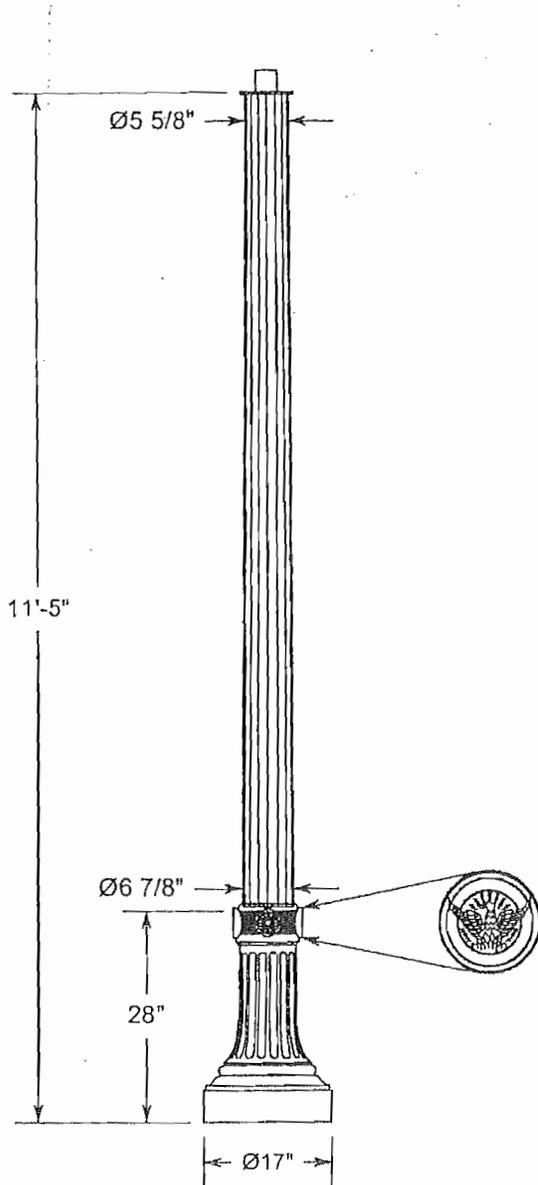
THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO MAIN STREET. THIS DRAWING AND INFORMATION IS NOT TO BE REPRODUCED, FORWARDED, DISCLOSED, OR USED OTHERWISE IN WHOLE OR IN PART, WITHOUT THE WRITTEN AUTHORIZATION OF MAIN STREET.

AATF1410-9 (ATL)

SCALE: 3/4" = 1'-0"

DATE: 8/13/01

City of Atlanta
North Yorkshire Series
 Cast Aluminum Post
 17"Ø Base



Specifications

DESCRIPTION

The lighting post shall be all aluminum construction, with a classic tapered and fluted base, and a 16-flute tapered shaft with a tenon for luminaire mounting. Base shall have custom 'Atlanta Resurgens' logos.

MATERIALS

The base shall be heavy-wall cast aluminum (356.1 ingot alloy) formed true to pattern with complete detail. The shaft shall be tapered and fluted aluminum. All hardware shall be tamper resistant, stainless steel. Anchor bolts shall be hot-dip galvanized steel.

DIMENSIONS

The post height shall be 11'-5" tall, with a 17"Ø x 28" tall base. The fluted shaft shall taper from 6 7/8"Ø at the base to 5 5/8"Ø at the top, with a 3"Ø x 3" tall tenon for luminaire mounting.

INSTALLATION

Post provided with (4) 3/4"Ø x 24" x 3" hot-dip galvanized, L-type, anchor bolts to be installed on a 12"Ø bolt circle. A door shall be located in the base for anchorage and wiring access. A grounding screw shall be provided inside the base, opposite the door, for easy access.

FINISH

The post assembly shall be shipped with a 'custom match' powder coat finish. Color to match 'CODA Green'.

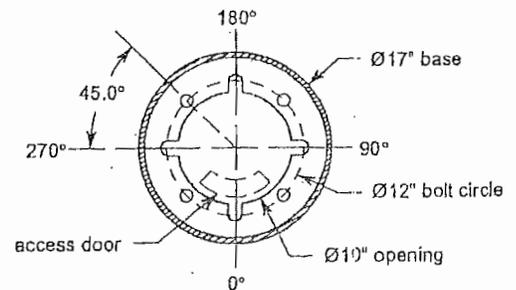
CUSTOM LOGO

The base shall have 'Atlanta Resurgens' medallions, in lieu of rosettes, located at 90 and 270 degrees. Medallions shall be furnished with a 'gold' color finish.

ALTERNATE BOLT PATTERN

The base shall have an alternate anchor bolt pattern, 45 degrees from access door.

Anchorage Detail



Catalog # NY(11.42)/17CIT-CA/CM-BC(.75X12.0ALT45)-T(3.0X3.0)-CLD/CS

OUTDOOR ARCHITECTURAL ORDER NO:

TYPE: C

DRAWING NO: US-3411r3

THIS DRAWING WHEN APPROVED SHALL BECOME THE COMPLETE SPECIFICATION FOR THE MATERIAL TO BE FURNISHED BY HOLOPHANE ON THE ORDER NOTED ABOVE. A UNIT OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER IN WRITING. ON POLE ORDERS AN ANCHOR BOLT TEMPLATE PRINT WILL BE SUPPLIED WITH EACH ANCHOR BOLT ORDER TO MATCH THE POLE PROVIDED.

THIS PRINT IS THE PROPERTY OF HOLOPHANE AND IS LOANED SUBJECT TO RETURN UPON DEMAND AND UPON EXPRESS CONDITION THAT IT WILL NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO OUR INTERESTS, AND ONLY IN CONNECTION WITH MATERIAL FURNISHED BY HOLOPHANE.



HoloPhane
 214 OAKWOOD AVENUE - NEWARK, OHIO 43055

SCALE: NONE
 DRAWN: SA
 APP'D:
 DATE: 2/26/03

REV.	ALTERATION	E.C.N.	DATE	dY
A	REVISED VOLTAGE INFOR.		041801	TB

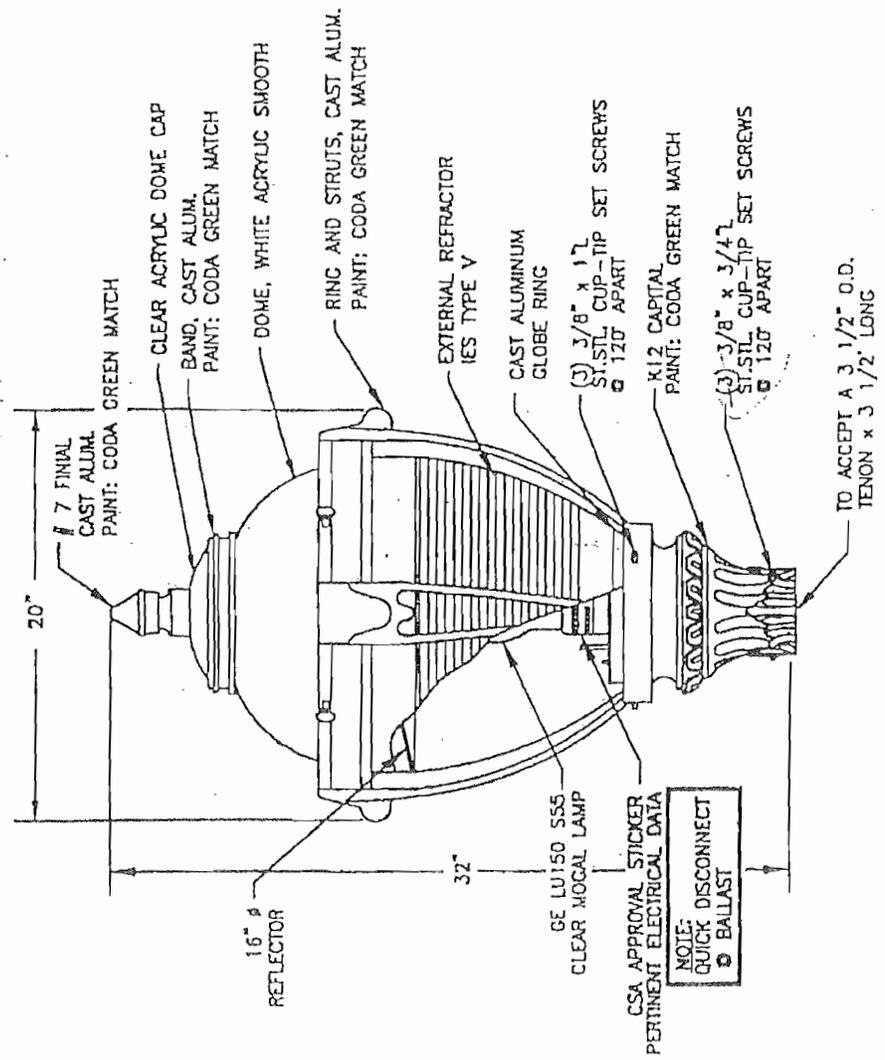
KING U.S. ORDER NO.: CUSTOMER ORDER NO.:

SPECIFICATIONS
 CATALOGUE NO.: K134-EAR-V-150(MOG)
 -HPS-120(MT)-K12

QUANTITY: ACRYLIC
 GLOBE MAT'L: TYPE V
 IES CLASSIFIC.: 150W
 WATTAGE: HIGH PRESSURE SODIUM
 LIGHT SOURCE: 120V (MULTI-TAP)
 LINE VOLTAGE: K12
 POLE ADAPTOR: LAMP BY OTHERS

BALLAST INFORMATION:
 BALLAST TYPE: HX-HPF
 BALLAST MANUFACTURER: ADVANCE
 CATALOG NUMBER: 71A8192

OPTIONS:
 QUICK DISCONNECT
 TERMINAL BLOCK
 OTHER: 14' 0" OF LEAD



PART No. K134-EAR-V-150(MOG)-HPS-120(MT)-K12

PART	PLANT REFERENCE DWG. #'S	REVISION
GLOBE		
CAPITAL		
OPTICS		
BALLAST		
FINIAL		
OTHERS		
CERT. I.D. CS <input type="checkbox"/> ET <input type="checkbox"/>		

KING LUMINAIRE
 840 WALKER'S LANE, P.O. BOX 7, CLEVELAND, OHIO 44115
 BURLINGTON, ONTARIO, CANADA L7R 3G9
 TEL: 416-754-1101

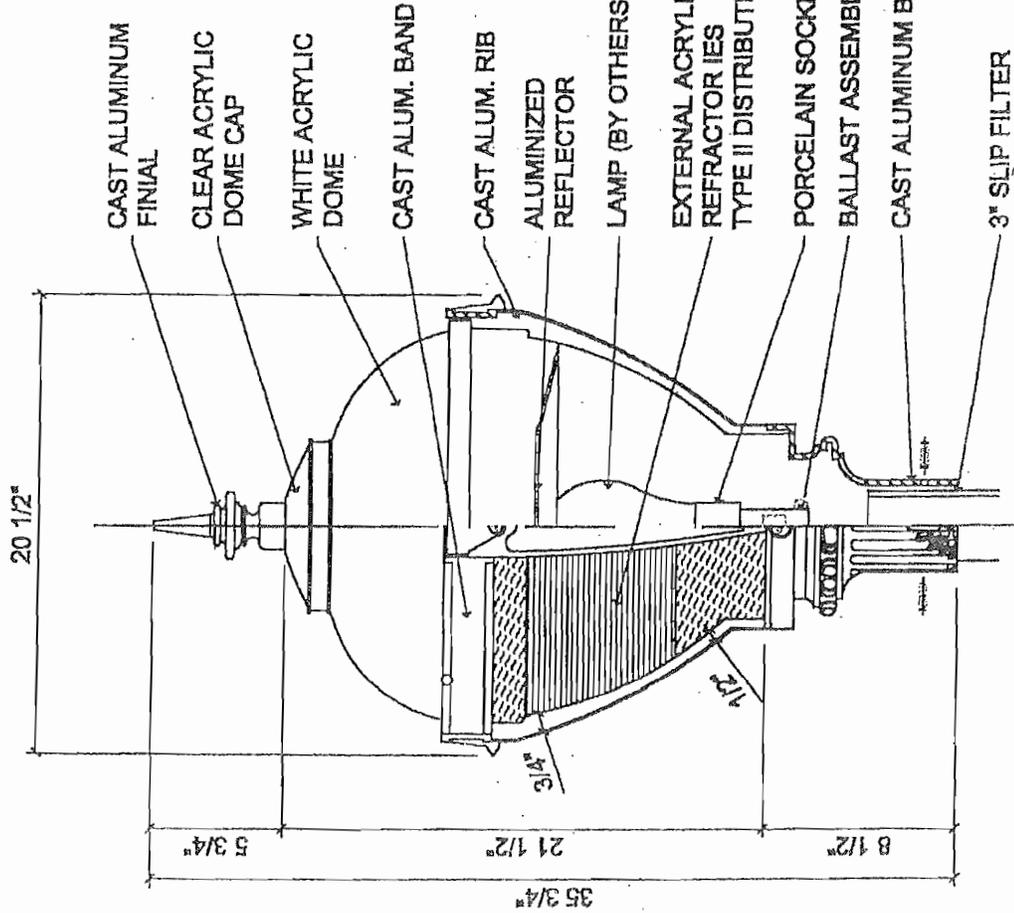
DWG. NAME: SPEC. DWG. K134-EAR-K12 DATE: 11/15/00 REV. BY: A.A. REV. A

PROJECT/CUSTOMER: CITY OF ATLANTA, GEORGIA (TYPE C)
 (GEORGIA POWER)
 \SPEC\GEORGIA_POWER\K134-EAR-K12

NOTE:
 CSA APPROVAL - THE LIGHT FIXTURE MEETS ANSI & NEMA STANDARDS, COMPLY WITH NEC REQUIREMENTS & CARRY CSA/NRTL CERTIFIED (OSHA APPROVAL)
 -UL EQUIVALENT LABEL

SPECIFICATIONS

CATALOG # L920 150W. HPS, 120V (MT)
 GLOBE MATERIAL: POLYCARBONATE
 WITH BUILT IN EXTERNAL ACRYLIC
 REFRACTOR IES TYPE V, INCLUDING
 WHITE ACRYLIC DOME CAP
 WATTAGE: 150W
 LIGHT SOURCE: HIGH PRESSURE SODIUM
 LINE VOLTAGE: 120V (MULTI-TAP)
 BALLAST: ADVANCE #71A8192
 SUPPLIED WITH QUICK DISCOUT
 AND 14" OF LEAD
 COLOR: ALL ALUM. EXTERNAL PARTS
 ARE WASHED PRIMERED & SHERWIN
 WILLIAMS POLYURETHANE, APPLIED
 TO MATCH "CODA GREEN"



FRONT VIEW 1

FRONT SECTION 1

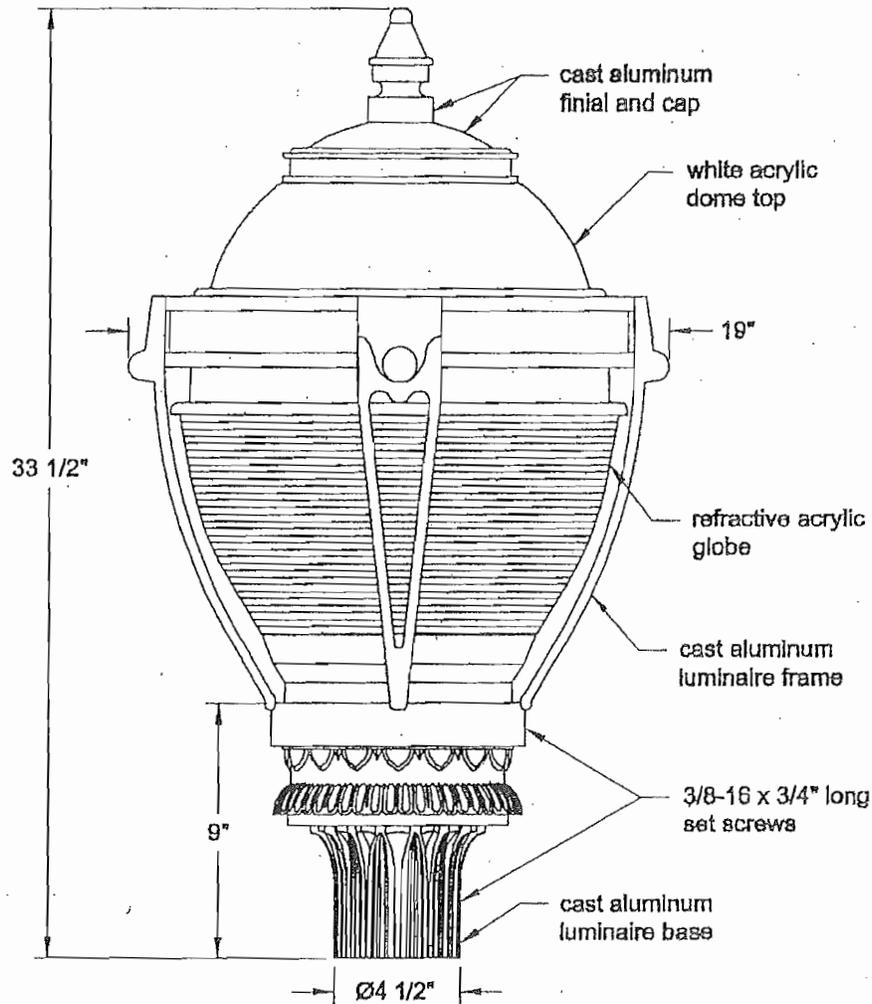
THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO MAIN STREET LIGHTING. THIS DRAWING AND INFORMATION IS NOT TO BE REPRODUCED, TRANSMITTED, OR USED IN ANY MANNER WITHOUT THE WRITTEN AUTHORIZATION OF MAIN STREET.

MAIN STREET LIGHTING
 1081 INDUSTRIAL PARK, WYOMING, WY 83014
 FAX: (307) 723-2370
 (307) 723-4431

L920

SCALE: 1 1/2" = 1'-0"
 DATE: 07/24/00

Atlanta Type 'C' Luminaire



Catalog Number: AEL24 P 150S MOG ARF R5 TB1 AEL-1015r3 CM

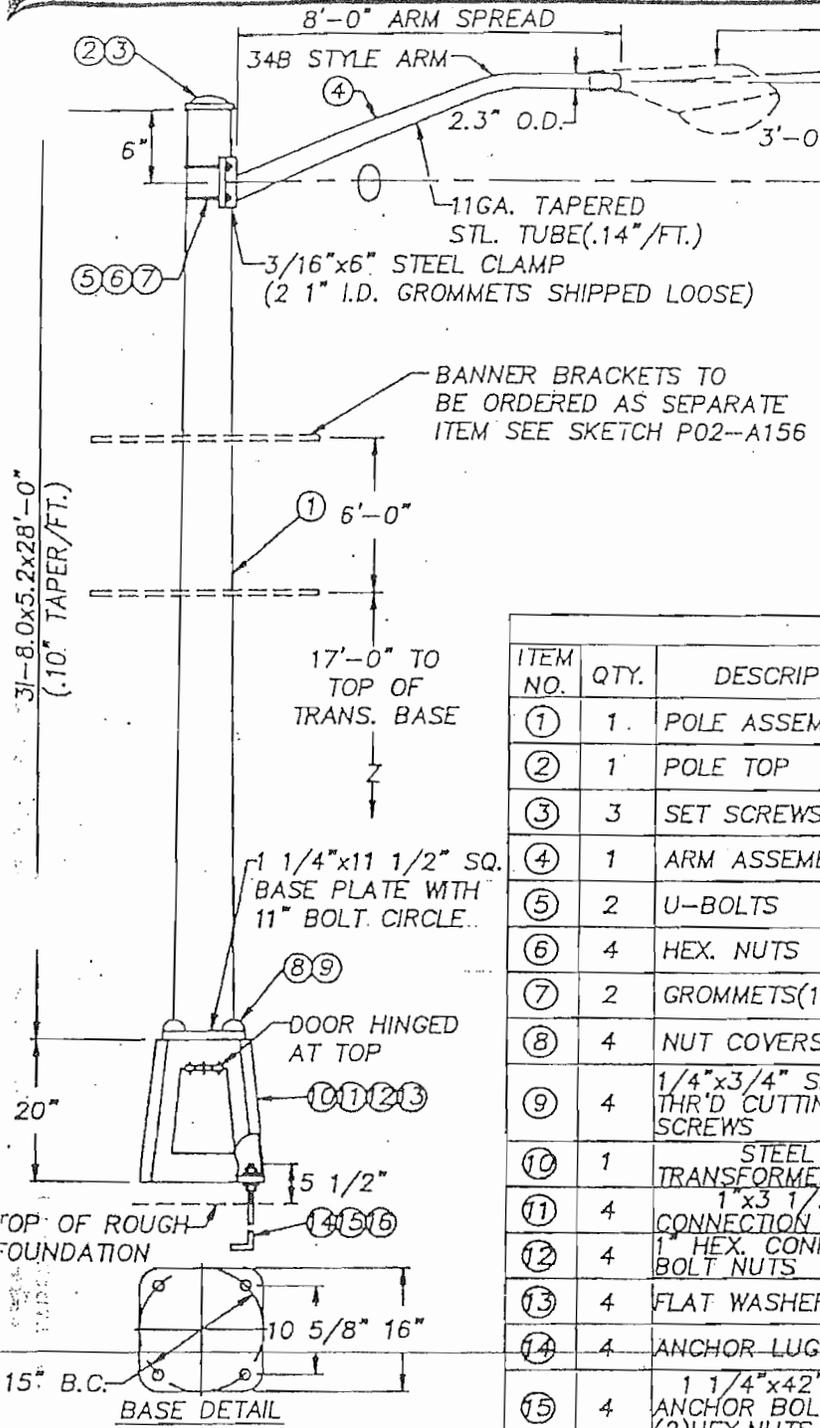
Luminaire: Luminaire shall be 19" wide x 33-1/2" tall with a cast aluminum base, frame, finial and cap. Globe shall have a clear refractive (IES Type 5 distribution) acrylic lower section and a smooth white acrylic dome top.

Luminaire shall be furnished with a high intensity discharge ballast and a socket assembly for a 150-watt, high-pressure sodium lamp with mogul base. Ballast shall be high power factor, multi-tap, wired for 120-volt operation. 14'-0" leads included. UL listed.

Installation: Luminaire shall slip-fit a nominal 3"Ø x 3" tall tenon, and be secured by 6 socket head set screws.

Finish: The luminaire shall have a custom City of Atlanta CODA green powder coat finish.

DES-905



2" SLIP-FIT LUMINAIRE
(BY OTHERS) MAX. PROJ.
AREA 3.3 S.F. MAX. WGT.
75 LBS.

32'-0" NOM. MTG.
HGT. TO BOTTOM
OF TRANS. BASE

**City of Atlanta
Traffic & Transportation**

Lighting Plans Approved

W. H. ...

Date: 4/18/05

PACKING LIST

ITEM NO.	QTY.	DESCRIPTION	CONTROL NUMBER	DRAWING NUMBER	MATERIAL SPECIFICATION
①	1	POLE ASSEMBLY			ASTM-A595 GR.B 60 K.S.I.
②	1	POLE TOP			ASTM-B26(43,319 OR 356F ALLOY)
③	3	SET SCREWS			AISI-300 SERIES (STN.STL.)
④	1	ARM ASSEMBLY			40 K.S.I.
⑤	2	U-BOLTS			ASTM-A36
⑥	4	HEX. NUTS			ASTM-A563 GR.A
⑦	2	GROMMETS(1" I.D.)			RUBBER
⑧	4	NUT COVERS			ASTM-B26
⑨	4	1/4"x3/4" S.S. THR'D CUTTING SCREWS			AISI-300 SERIES (STN.STL.)
⑩	1	STEEL TRANSFORMER BASE			ASTM-A36
⑪	4	1"x3 1/2" CONNECTION BOLTS			ASTM-A325
⑫	4	1" HEX. CONN. BOLT NUTS			ASTM-A194 GR.2H
⑬	4	FLAT WASHERS(1")			F436
⑭	4	ANCHOR LUG			ASTM-A36
⑮	4	1 1/4"x42"x6" ANCHOR BOLTS W/ (2)HEX.NUTS EACH			AASHTO M314 GR.55
⑯	8	1 1/4" FLAT WASHERS			F436

FINISH:
H.D. GALV. TO ASTM-A123 E92-072

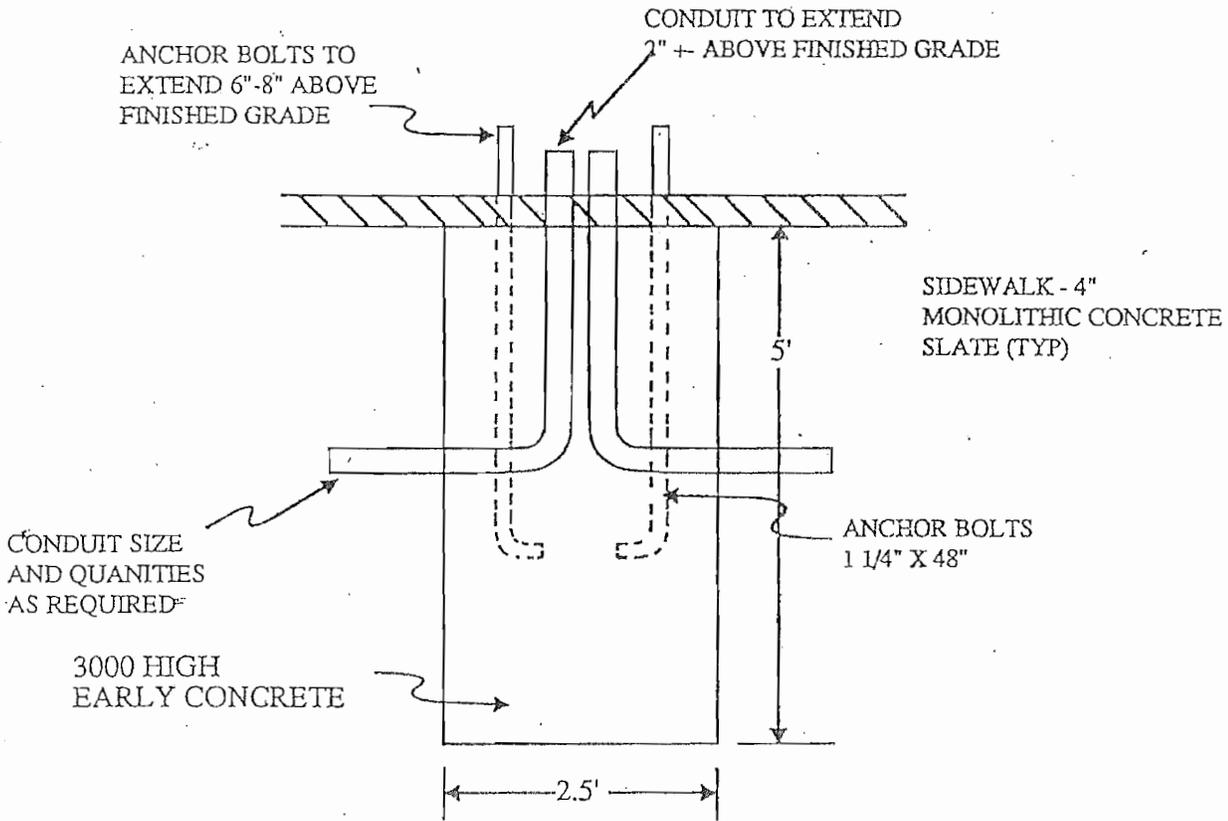
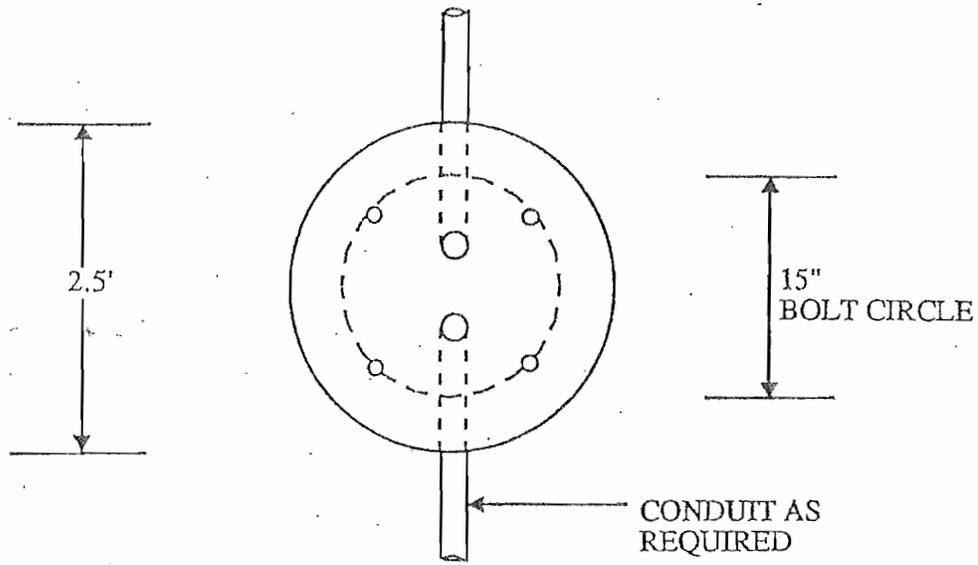
CITY OF ATLANTA, GEORGIA
STEEL LIGHTING POLE



DRAWN J.L. BOWE
DATE 3-10-92
CHECKED GMP

DRAWING NO.
P06-A255

REVISIONS



TYPICAL FOUNDATION - STREET LIGHT/ BANNER POLE

24. The City of Atlanta reserves the right to test for sewage contamination on any cleaned and disinfectant surface. The laboratory will be a State of Georgia certified microbiology laboratory.

25. Disposal of Waste Materials.

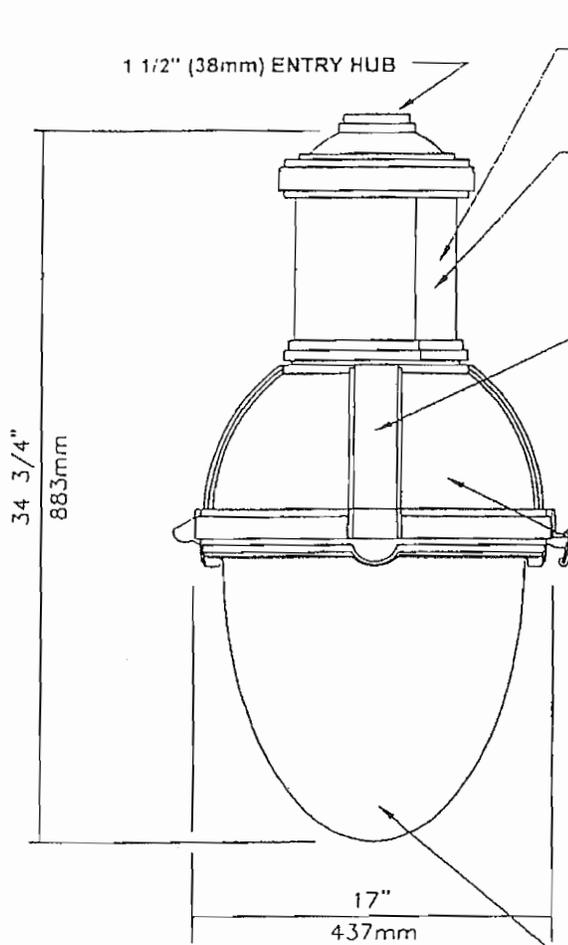
The City shall be permitted to inspect all work, materials records, invoices and other relevant data, and have free access to all parts of the work and to all materials intended for use in the work. The work will be inspected as it progresses, but failure to reject or condemn defective work and the materials used in such work at the time of completion will in no way prevent its rejection if defects are discovered before the work is finally accepted and approved.

- (a) All materials and equipment used in the construction of the project shall be subject to inspection and testing in accordance with accepted standards. Any laboratory or inspection agency shall be selected by the City.
- (b) Failure to inspect materials will in no way waive the City's right to reject defective materials or condemn the work in which they are used.
- (c) The removal and disposal of material containing contaminants of pollutants must be removed in accordance with state, federal, and local EPA requirements.

Compliance

Exception

Qty Luminaire 250HPS-RN20-THA3-GL-SM2-VOLT-GT-SCTX-LMS19664D



Housing: In a round shape, this housing is made of cast aluminum 356, mechanically assembled to the bracket.

Ballast: High power factor of 90%. Primary voltage to be determined. Lamp starting capacity -40F(-40C) degrees. Assembled on a unitized removable tray with quick disconnect plug.

Hood: Cast 356 aluminum dome, mechanically assembled on the luminaire.

Lamp: 250 watts high pressure sodium(not included), ED 18 bulb, mogul base.

Optical System: (THA3-GL), I.E.S. type III hyper-extensive (asymmetrical). Sealsafe system, composed of brightened anodized aluminum hydroformed reflector, permanently assembled on a refractor globe. Watertightness IP66 rating. This assembly is toolfree removable from the technical ring.

Luminaire Options: Glow Top made of white acrylic, mechanically assembled on the housing.

Access-Mechanism: A cast 356 aluminum frame with latch and hinge. The mechanism shall offer toolfree access to the inside of the luminaire. An embedded memory-retentive gasket shall ensure weatherproofing.

Globe: Made of one-piece seamless injected-molded borosilicate glass having an inner prismatic surface c/w semi prismatic house side shield and a textured exterior surface. The globe is mechanically assembled on the access-mechanism.

Miscellaneous

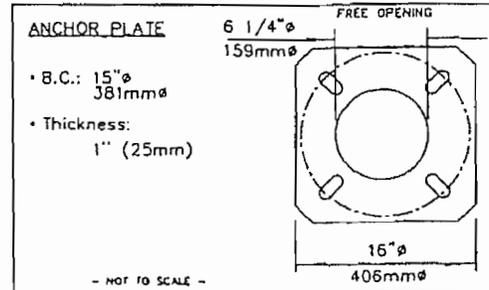
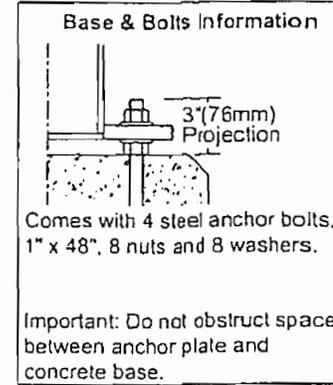
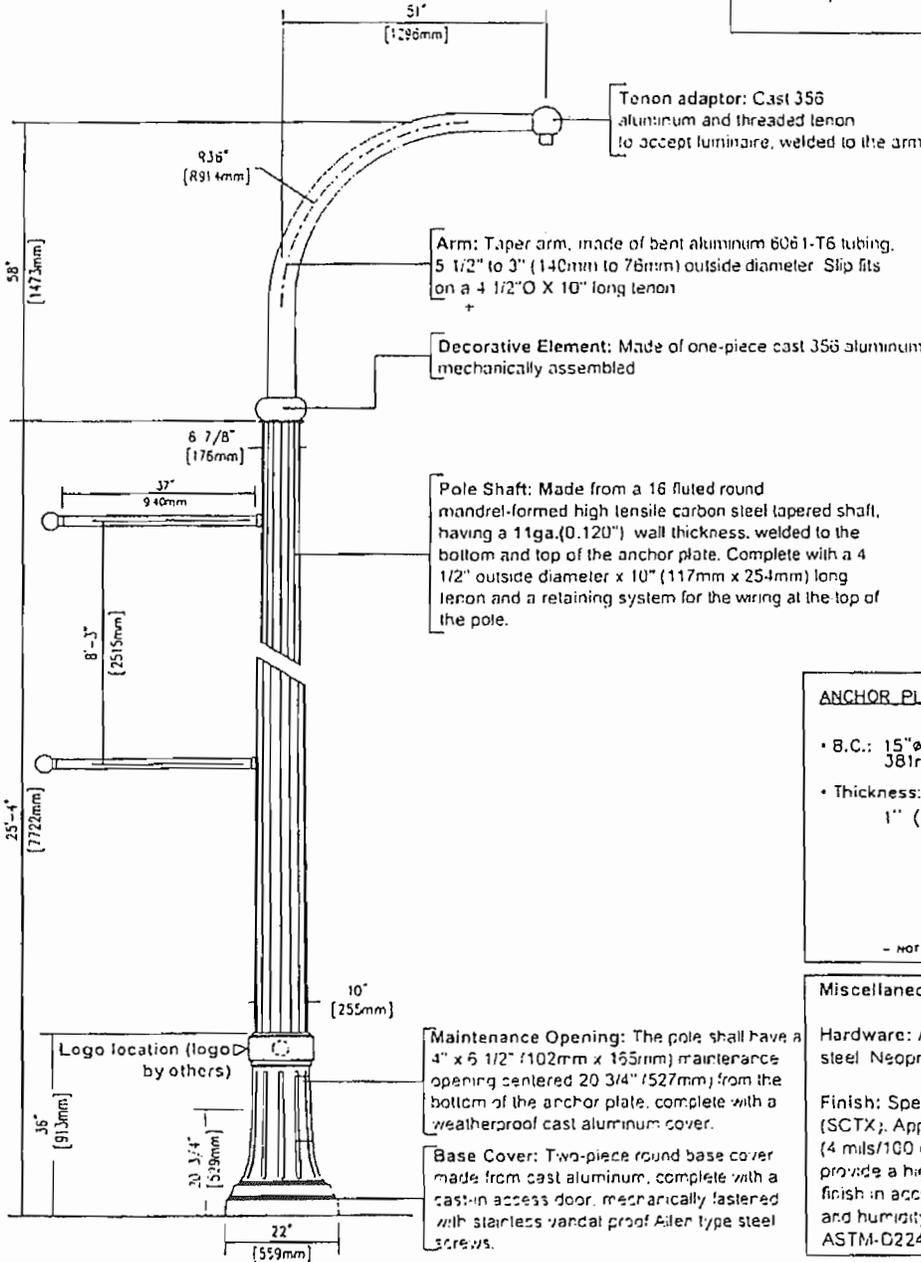
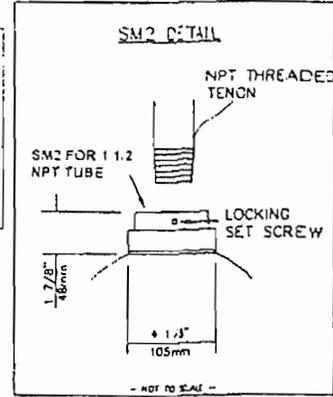
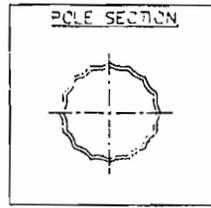
Wiring: Type TEW 14 ga. 6" (152mm) minimum exceeding from luminaire.

Hardware: All exposed screws will be in stainless steel. Neoprene and/or silicone gasketing is applied.

Finish: Special color to be Coda Green (textured) (SCTX). Application of a polyester powder coat paint. (4 mils/100 microns). The chemical composition provide a highly durable UV and salt spray resistant finish in accordance to the ASTM-B117-73 standard and humidity proof in accordance to the ASTM-D2247-68 standard.

TITRE: TITLE:		Georgia Power City of Atlanta				34112		
ENREGISTRÉ REGISTERED		RN20 LMS19664D						
ECHELLE/SCALE	N°	REVISION	PAR./BY	DATE	VER.	PAR./B°	N° DE DESSIN / DRAWING N°	PAGE
1/8" = 1"				02-10-03		LL	C.A LMS1966D-02	1/1

Qty Bracket LMS-1A-SCTX-LMS19664D
 Qty Pole VSPS-25'-4"-BAS37(2)-VPA-SCTX-LMS19664D



Miscellaneous

Hardware: All exposed screws will be in stainless steel. Neoprene and/or silicone gasketing is applied.

Finish: Special color to be Coda Green (textured) (SCTX). Application of a polyester powder coat paint (4 mils/100 microns). The chemical composition provide a highly durable UV and salt spray resistant finish in accordance to the ASTM-B117-73 standard and humidity proof in accordance to the ASTM-D2247-68 standard.

TITRE: **Georgia Power City of Atlanta**
 TITLE: **Pole and bracket LMS19664D**

34:12

ECHÉLLE/SCALE: 3/8" = 1'-0"	REGISTRATION	PAP./B.	DATE: 02-10-03	VER.: LL	N° DE Dessin / DRAWING N°: C.A LMS19664D-01	PAGE: 1/1

NOTE: CONTRACTOR MUST INITIAL IN THE "COMPLY" SPACE PROVIDED. FAILURE TO COMPLETE AS INSTRUCTED MAY CAUSE YOUR BID TO BE REJECTED.

Atlanta City Ordinance.

Sec. 74-441. Notification of accidental discharges and spills.

(a) Notwithstanding other requirements of law, as soon as any person responsible for a facility, activity or operation, or responsible for emergency response for a facility, activity or operation has information of any known or suspected release of pollutants or non-stormwater discharges from that facility or operation which are resulting or may result in illicit discharges or pollutants discharging into stormwater, the storm sewer system of the City of Atlanta, or State Waters, said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release so as to minimize the effects of the discharge.

(b) Said person shall notify the Department Of Watershed Management in person or by phone, facsimile or in person no later than 24 hours of the nature, quantity and time of occurrence of the discharge.

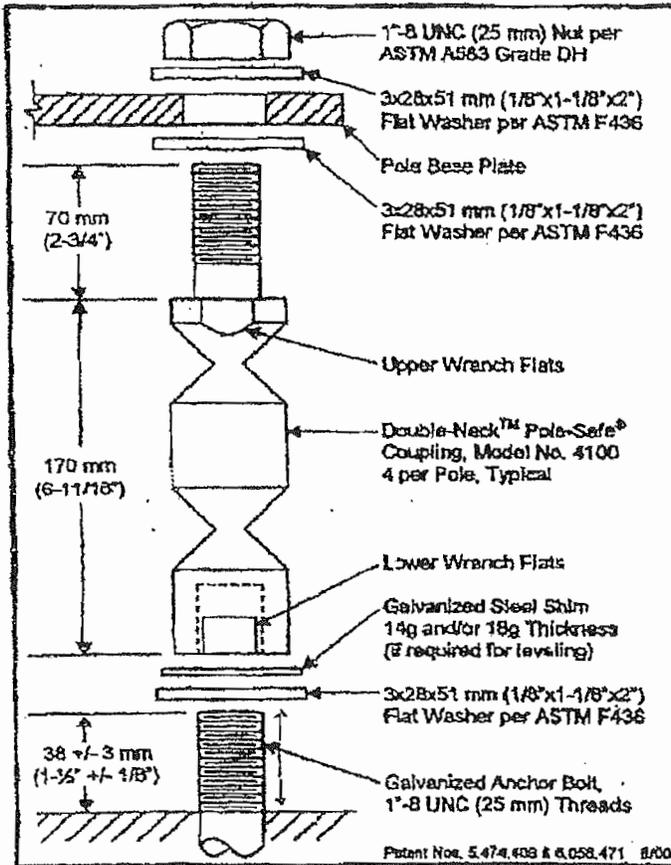
(1) If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

(2) Said person shall also take immediate steps to ensure no recurrence of the discharge or spill.

(c) Any notification made to the City of Atlanta is not exclusive of any state or federal notification requirements.

(b) Failure to provide notification of a release as provided above is a violation of this article.

(Ord. No. 2003-75, § 3, 6-24-03) Secs. 74-442--74-445. Reserved.



SPECIFICATIONS

Performance Criteria:

1. Double-Neck™ Pole-Safe® conforms to AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signs."
2. Double-Neck™ Pole-Safe® has been crash-tested and FHWA approved in accordance with the requirements of NCHRP Report 350, "Recommended Procedures for the Safety Performance Evaluation of Highway Features."
3. Maximum Allowable Pole Mass = 450 kg (992 lb.) (total, including fixtures).

Physical Properties per Coupling:

1. Ultimate Tensile Strength = 221.5 kN (49.8 kips), minimum.
2. Tensile Yield Strength = 192.0 kN (43.2 kips), minimum.
3. Ultimate Restrained Shear Strength = 24.5 kN (5.5 kips), minimum.

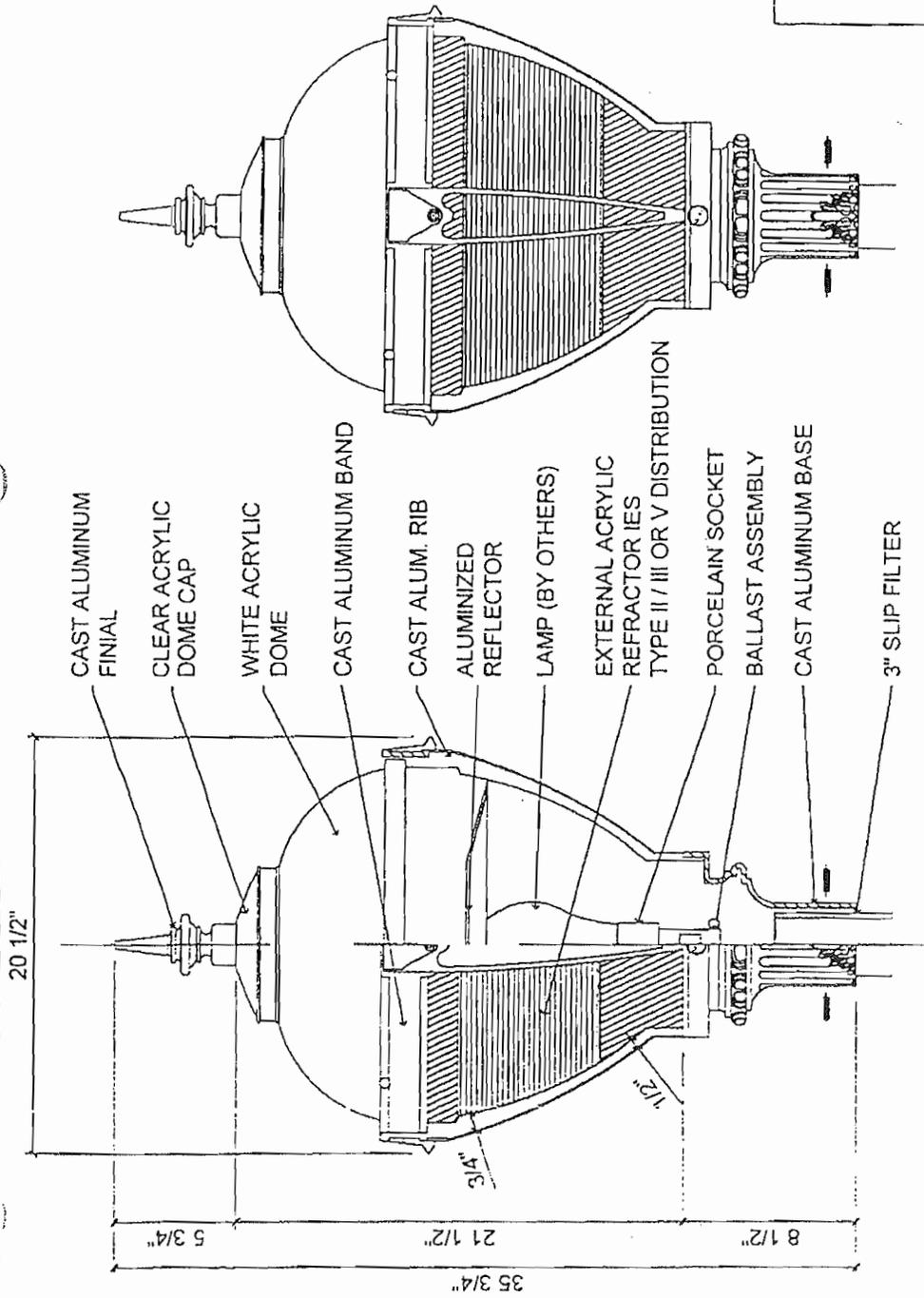
Corrosion Protection:

1. All Double-Neck™ Pole-Safe® couplings, nuts, bolts, washers, and shims are galvanized after fabrication in accordance with ASTM A153.

Pole-Safe® Model No. 4100
Breakaway Support System for Light Poles



20 Jonas Street
New Rochelle, NY 10801
914-638-1000



FRONT VIEW

FRONT SECTION

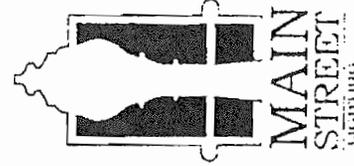
SPECIFICATIONS

CATALOG # L920 150W. HPS, 120V (MT)
 GLOBE MATERIAL: POLYCARBONATE
 WITH BUILT IN EXTERNAL ACRYLIC
 REFRACTOR IES TYPE V, INCLUDING
 WHITE ACRYLIC DOME CAP
 WATTAGE: 150W MOGUL BASE
 LIGHT SOURCE: HIGH PRESSURE SODIUM
 LINE VOLTAGE: 120V (MULTI-TAP)

LINE VOLTAGE: 120V (MULTI-TAP)
 BALLAST: ADVANCE #71A8192
 SUPPLIED WITH QUICK DISCOUNT
 AND 14" OF LEAD

COLOR: ALL ALUMINUM EXTERNAL PARTS
 ARE WASHED PRIMERED AND SHERWIN
 WILLIAMS POLYURETHANE, APPLIED T1
 MATCH "CODA GREEN"

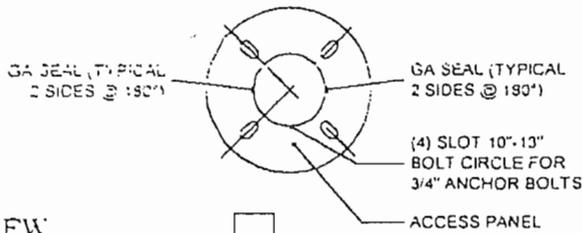
TYPE 'C'
 CITY OF ATLANTA



1800 INDUSTRIAL PARK, KEDWA OH 44268
 FAX: (330) 723-2570
 (330) 723-4481

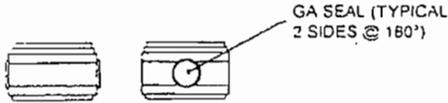
L920
 SCALE: 1 1/2" = 1'-0"
 DATE: 6/9/03

CURB



PLAN VIEW

1



DETAIL

2

GENERAL DESCRIPTION

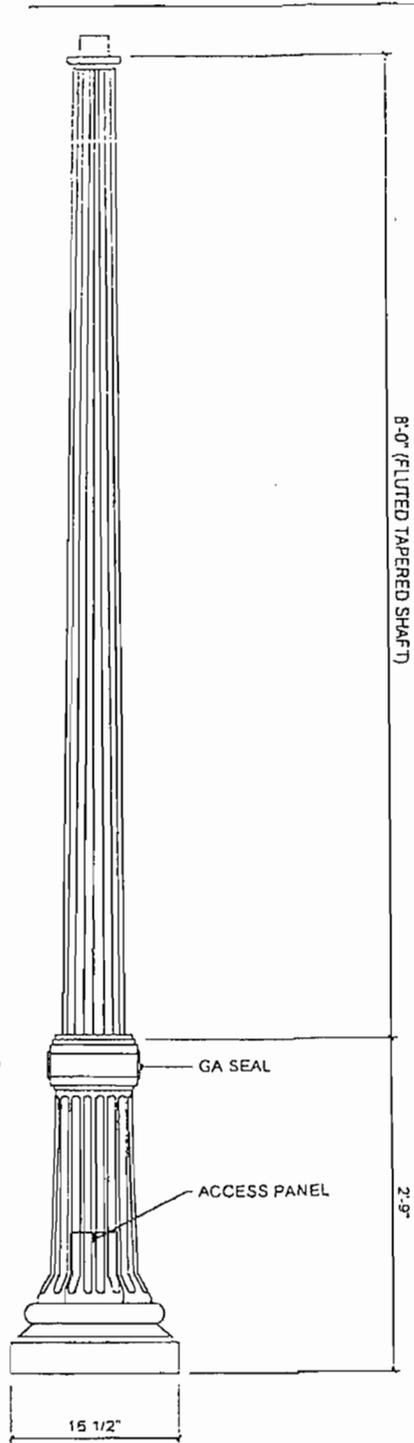
CAST ALUMINUM DECORATIVE BASE OF SERIES 319 ALUMINUM ALLOY INCLUDING CAST ALUMINUM MOUNTING PLATE WELDED IN AND IS COMPLETE WITH A HAND HOLE WITH MATCHING DOOR

THE BASE IS JOINED TO THE SERIES 5052 ALUMINUM ALLOW 11 GAUGE THICK ROLLED AND FORMED TAPERED, FLUTED, ROUND SHAFT UTILIZING 100% PENETRATION TIG WELDING PROCESS. THE SHAFT TAPER IS .14\"/>

TO COMPLETE THIS ASSEMBLY, A CAST SERIES 319 ALUMINUM ALLOY TENON IS TIG WELDED AT THE TOP. THE TENON HAS A 3\"/>

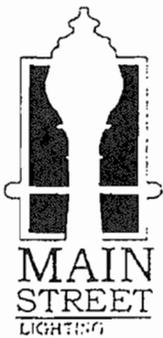
FINISH

THE SURFACE OF THE POLE IS SAND BLASTED TO ASSURE A GOOD PAINT ANCHOR IS ACHIEVED. THE SURFACE IS SOLVENT CLEANED AND A SHERWIN WILLIAMS VINYL WASH PRIMER IS APPLIED. THE FINISH COATING SHALL BE A MIN. DRY FILM THICKNESS OF 1-1/2 MIL. OF SHERWIN WILLIAMS POLANE POLYURETHANE TO THOROUGHLY SEAL THE POLE AND GIVE IT THE PROPER UV PROTECTION. COLOR TO MATCH CODA GREEN



8'-0\"/>

2'-9\"/>



(330) 723-4431 FAX: (330) 723-2570
1080 INDUSTRIAL PKWY. MEDINA, OH 44258

THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO MAIN STREET LIGHTING. THIS DRAWING AND ITS INFORMATION IS NOT TO BE REPRODUCED, TRANSMITTED, DISCLOSED OR USED IN ANY MANNER WITHOUT THE WRITTEN AUTHORIZATION OF MAIN STREET LIGHTING.

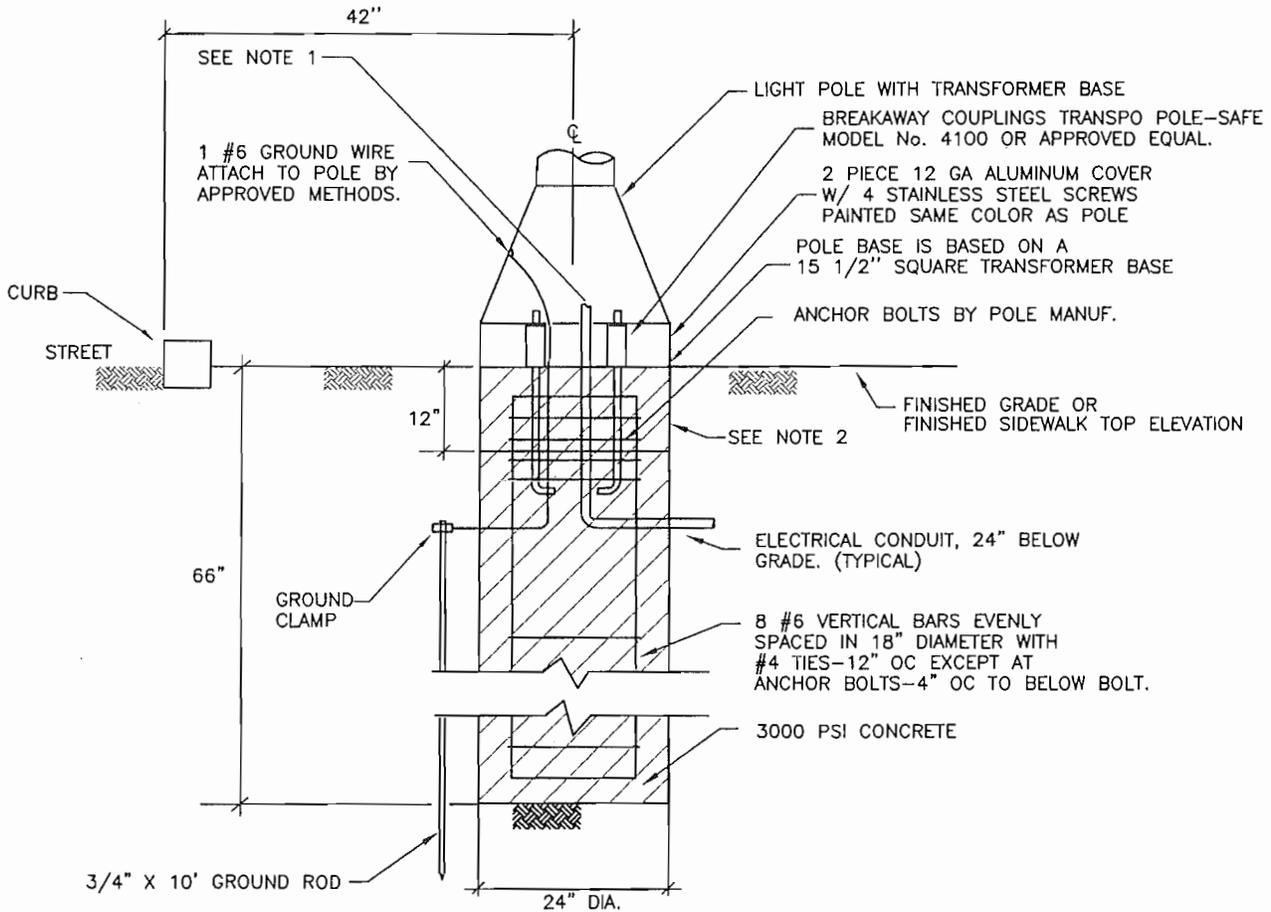
AATE1410-9 (ATL)

SCALE: 3/4" = 1'-0"
DATE: 6/3/03

CITY OF ATLANTA TYPE 'C'
ALUMINUM ASSEMBLY

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MOUNTING	No/LAMPS	WATTAGE
CH	LUMINAIRE GE#M-250A2-25-S-0-A-1-G-MC2-1- PAINTED CODA GREEN VOLTAGE - 208	29' POLE	1-250W HPS	320W
	29' POLE HADCO RTA30C8BFM18 PAINTED CODA GREEN VALMONT DS50-750A270-8S W/TRANSFORMER BASE PAINTED CODA GREEN			



NOTE

1. PROVIDE AND INSTALL INLINE FUSE FOR EACH PHASE CONDUCTOR FOR THE FIXTURE. FUSE @3 AMPS. LOCATE IN POLE BASE.
2. TRANSITION FROM 16" SQUARE TO 24" DIA. (ROUND) FOUNDATION AT 12" BELOW GRADE AS SHOWN. PROVIDE AND INSTALL EXPANSION JOINT MATERIAL BETWEEN THE POLE BASE AND THE SIDEWALK AS NEEDED.
3. CONTRACTOR TO ADJUST THE DIMENSIONS OF THE SETBACK AND POLE FOUNDATION TOP SQUARE DIMENSION IF THE ACTUAL POLE DIMENSIONS ARE DIFFERENT FROM ABOVE. NOTE THE SETBACK IS TO BE 42" FROM FACE OF CURB TO THE CENTER OF THE "A" POLE AND ALL POLES, BOTH "A" AND "C" CENTERLINES SHALL BE THE SAME DIMENSION OFF THE FACE OF THE CURB.

TYPICAL POLE "CH" DETAIL

NTS

MIDTOWN
DEVELOPMENT DESIGN GUIDELINES

Public Spaces

POLICY STATEMENTS

PUBLIC STREETS

Capacity

- Increase the pedestrian capacity of Midtown streets by including marked crosswalks and wide sidewalks.

Character

- New streetscapes should encourage and reinforce existing character of commercial and residential streets.

Public Safety

- Create an attractive, safe environment for pedestrians with adequate street and pedestrian scaled lighting.
- Every commercially reasonable effort shall be made to place utilities underground.

Consistency

- Use consistent materials, standards and street furniture to create a continuous visual character for district

Transportation Options

- Provide for all modes of transportation including walking, bicycles, alternative fueled vehicles, automobiles and other transit options.

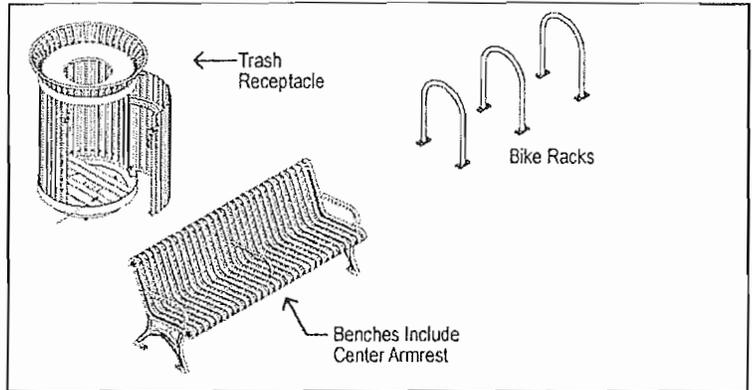
PUBLIC SPACES

- Create a variety of public spaces that are oriented to the public street.
- Improve the attractiveness, functionality and security of existing public spaces.
- Encourage public art, fountains with vertical spray and other enhancements.
- Make public spaces fully accessible to the public.

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STREET FURNITURE ZONE



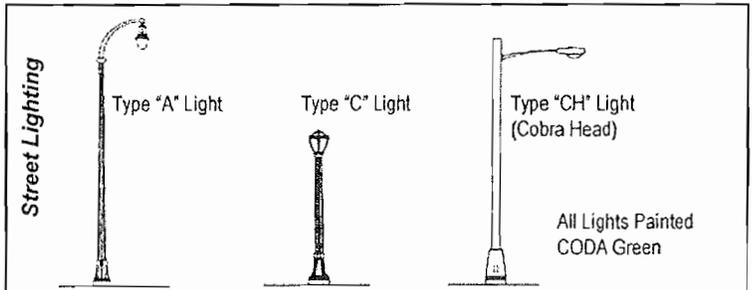
R All elements required upon 5-foot Street Furniture/Paver Zone

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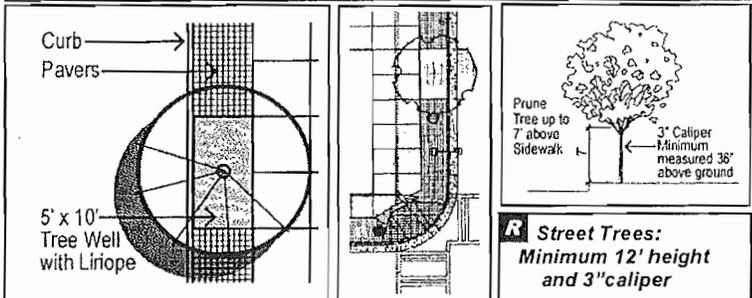
R Benches: Victor Stanley #CR-96

R Bike Racks: Graber Products #2112
(Below Grade Mount)

R Paver bed installation details available from Midtown Alliance
All elements shall be painted "CODA" green or black



R Within the sidewalk, a clear, passable zone is required that is a minimum of 10' wide and 8' in height and free of ANY obstruction.



R Pavers: 6"x6" "Autumn," or "Charcoal" with Tudor or Shotblast finish

Pavers: Where required - wrap corners with consistent 5-ft band per schematic design for corridor.

R Open space requirements may be transferred within Midtown with a Special Administrative Permit (SAP)

R Total width of sidewalks shall be at least 15' wide.
Note: Sidewalks less than 15' require SAP/zoning variation.

R Street trees shall be planted a maximum of 40' on-center within the street furniture zone and spaced equally between street lights (note unique standards for 10th St and 14th St, p 11). Tree wells planted with groundcover (liriope spicata) is required.

Where total sidewalk is 8' wide or less, 4 x 8 tree grates are needed within 4ft wide furniture zones. Such widths require code variation.

MIDTOWN CITYSCAPES STANDARDS

Streetscapes	Design ¹	Sidewalk Zone ²					Supplem. Zone ³	Street Lighting		Street Trees ⁷ Tree Species ⁵
		Curb	Clear	Street Furniture Zone	Intersection	Width ⁴		Type ⁴	Spacing	
Primary Corridors A										
1. Peachtree Street - SS										
3rd to 10th	*	gran	conc	Red 6"x6" conc paver	Red 6"x6" conc paver	20	5 min.	A/C/A/C	40	Highpoint Nuttall Oak
10th to 11th	*	gran	conc	Red 6"x6" conc paver	Red 6"x6" conc paver	20	5 min.	A/C/A/C	40	Allee Elm
11th to Brookwood	-	gran	conc	Red 6"x6" conc paver	Red 6"x6" conc paver	20	30 max	A/C/A/C	40	Highpoint Nuttall Oak
2. Piedmont Avenue										
North to 10th	-	gran	conc	GS	scored conc.	15	varies	CH	exist	Bosque Elm
10th to 14th, West	-	gran	conc	GS	scored conc.	15	15 min.	CH	exist	Bosque Elm
10th to 14th, East	*	gran	conc	GS	scored conc.	15	15 min.	CH/C/CH/C	40	Bosque Elm
14th to Westminster, E.	*	conc	conc	GS	scored conc.	15	15 min.	CH/C/CH/C	40	Bosque Elm
3. Juniper Street										
North to 14th	*	gran	conc	Grey 6"x6" conc paver	Grey 6"x6" con. paver	15	5 min.	CH/C/C/CH	60	Lib Am Elm/ 30' on-center
4. West Peachtree Street										
North to Pershing Point	*	gran	conc	Grey 6"x6" conc paver	Red 6"x6" conc paver	15	5 min.	CH/C/C/CH	40	Athena Elm
5. Spring Street										
North Ave to Pershing Pt.	*	conc	conc	Grey 6"x6" conc paver	Red 6"x6" conc paver	15	5 min.	CH/C/C/CH	40	Panache Shumard Oak
6. 14th Street-SS										
175/85 to Piedmont Ave.	*	gran	conc	Red 6"x6" conc paver	scored conc.	15	5 min.	A/C/A/C	60	Allee Elm/ 30' on-center
7. 10th Street - SS										
1-75/85 to Juniper St.	*(C)	gran	conc	Red 6"x6" conc paver	scored conc.	15	5 min.	A	80	Lib Am Elm/40' on-center
Juniper St. to Myrtle St.	*	gran	conc	Red 6"x6" conc paver	scored conc.	15	5 min.	A	80	OG Maple/40' on-center
8. 5th Street - SS										
1-75/85 to P'tree	*	gran	conc	Red 6"x6" conc paver	Red 6"x6" conc paver	15	5 min.	A/C/A/C	40	Allee Elm
Juniper to Piedmont	*	gran	conc	Red 6"x6" conc paver	Red 6"x6" conc paver	15	0	A/C/A/C	40	Allee Elm
9. Ponce de Leon Avenue - SS										
Spring to Peachtree	-	gran	conc	Red 6"x6" conc paver	scored conc.	15	0	A/C/A/C	40	Allee Elm
P'tree to Piedmont Ave.	*	gran	conc	Red 6"x6" conc paver	scored conc.	15	5 min.	A/C/A/C	40	Allee Elm
10. North Avenue - SS										
East of Peachtree	*(C)	gran	conc	Red 6"x6" conc paver	scored conc.	15	5 min.	A	60	Highpoint Nuttall Oak 30' on-center
11. 17th Street - SS										
		gran	conc	Red 6"x6" conc paver	scored conc.	15	5 min	CH/C/CH	match exist.	Allee Elm
12. Crescent Avenue - SS										
		gran	conc	Red 6"x6" conc paver	scored conc.	15	5 min.	A/C/A/C	40	Bosque Elm
13. Cypress Street - SS										
		gran	conc	scored conc.	scored conc.	15	5 min.	A/C/A/C	40	Bosque Elm
i. Arts Center Way										
		gran	conc	Grey 6"x6" conc paver	Grey 6"x6" conc paver	15	5 min.			Match Woodruff Arts Ctr
15. a. Linden Avenue b. Peachtree Place										
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Secondary Corridors A										
3rd St-SS . W. of Juniper	-	exist	conc	Red 6"x6" conc paver	scored conc.	15	Per SPI-16 Supp. Zone Regs.	CH	40	Hightower Willow Oak
3rd St-SS . E. of Juniper	-	exist	conc	GS	scored conc.	15		CH	40	Hightower Willow Oak
4th Street	-	exist	conc	conc	scored conc.	15		CH	40	Highpoint Nuttall Oak
6th St . E. of W. P'tree	-	exist	conc	conc	scored conc.	15		CH/C/C/CH	40	OG Red Maple
11th St	-	exist	conc	conc	scored conc.	15		CH	40	Allee Elm
12th St. W of Juniper	-	exist	conc	Red 6"x6" conc paver	scored conc.	15		CH/C/C/CH	40	OG Red Maple
12th St. E of Juniper	-	exist	conc	GS	scored conc.	15		CH/C/C/CH	40	OG Red Maple
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15th Street	-	exist	conc	GS	scored conc.	15		CH	40	Hightower Willow Oak
Abercrombie Place	-	exist	conc	conc	scored conc.	15		CH	40	Forum Tupelo
Armistead	-	exist	conc	conc	scored conc.	15		CH	40	Hightower Willow Oak
6th Street . W of W. P'tree	-	exist	conc	conc	scored conc.	15		CH	40	Allee Elm
Williams Street	-	exist	conc	conc	scored conc.	15		CH/C/C/CH	40	Ginkgo Biloba Autumn Gold <Male> or E. Hornbeam
Secondary Corridors B										
1. Residential	-	exist	conc	NA / GS	scored conc.	15	35	CH	40	varies

¹ * Corridors for which schematic designs are commissioned and have special conditions that will cause standards to vary - consult individual schematic design plans for details
 *(C) - Streets standards set by CODA in a previous project

² Sidewalk Zones are measured from back of curb and may extend into private property - consult specific Midtown SPI-16 regulations
 Sidewalk Zone Codes: SS - Designated per SPI-16 "Storefront Street"
 gran - "Rough Face, Rough Top" granite curb
 conc - concrete curb or sidewalk
 conc paver - 6X6 concrete paver with "tutor" or "shotblast" finish / color dependent on selection per schematic design by corridor
 PA - 5'x10' planting area with ground cover: liniope spicata
 GS - Minimum 3' continuous grass strip

³ Supplemental Zones extend into private property from back of sidewalk zone - consult specific Midtown SPI-16 regulations per sub-area

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MIDTOWN
DEVELOPMENT DESIGN GUIDELINES

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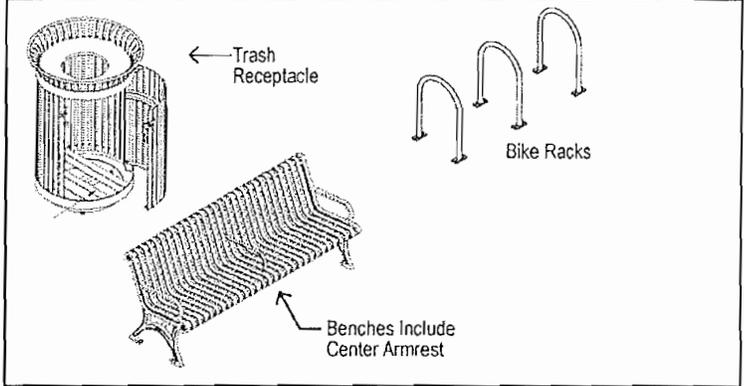
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STREET FURNITURE ZONE



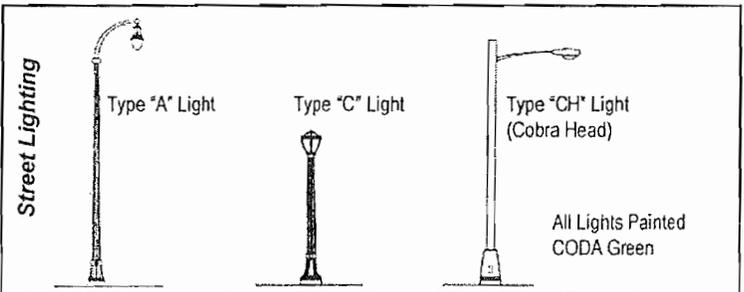
R All elements required upon 5-foot Street Furniture/Paver Zone

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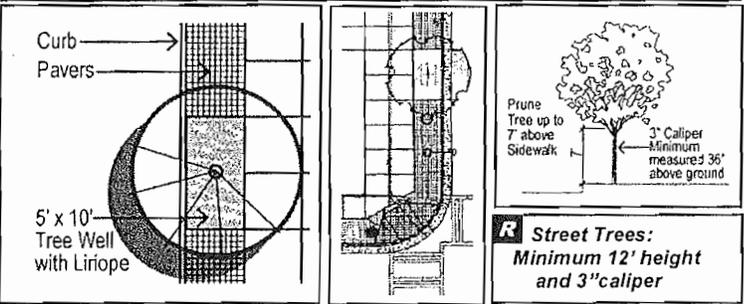
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11th to Brookwood	-	gran	conc	Red 6"x6" conc paver	Red 6"x6" conc paver	20	30 max	A/C/A/C	40	Highpoint Nuttall Oak
2. Piedmont Avenue										
North to 10th	-	gran	conc	GS	scored conc.	15	varies	CH	exist	Bosque Elm
10th to 14th, West	-	gran	conc	GS	scored conc.	15	15 min.	CH	exist	Bosque Elm
10th to 14th, East	*	gran	conc	GS	scored conc.	15	15 min.	CH/C/CH/C	40	Bosque Elm
14th to Westminster, E.	*	conc	conc	GS	scored conc.	15	15 min.	CH/C/CH/C	40	Bosque Elm
3. Juniper Street										
North to 14th	*	gran	conc	Grey 6"x6" conc paver	Grey 6"x6" conc paver	15	5 min.	CH/C/C/CH	60	Lib Am Elm/ 30' on-center
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1-75/85 to Piedmont Ave.	*	gran	conc	Red 6"x6" conc paver	scored conc.	15	5 min.	A/C/A/C	60	Allee Elm/ 30' on-center
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8. 5th Street - SS										
1-75/85 to P'tree	*	gran	conc	Red 6"x6" conc paver	Red 6"x6" conc paver	15	5 min.	A/C/A/C	40	Allee Elm
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Secondary Corridors A

3rd St-SS . W. of Juniper	-	exist	conc	Red 6"x6" conc paver	scored conc.	15	Per SPI-16 Supp. Zone Regs.	CH	40	Hightower Willow Oak
3rd St-SS . E. of Juniper	-	exist	conc	GS	scored conc.	15		CH	40	Hightower Willow Oak
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6th St . E. of W. P'tree	-	exist	conc	conc	scored conc.	15		CH/C/C/CH	40	OG Red Maple
11th St	-	exist	conc	conc	scored conc.	15		CH	40	Allee Elm
12th St. W of Juniper	-	exist	conc	Red 6"x6" conc paver	scored conc.	15		CH/C/C/CH	40	OG Red Maple
12th St. E of Juniper	-	exist	conc	GS	scored conc.	15		CH/C/C/CH	40	OG Red Maple
13th St. W of Juniper	-	exist	conc	Red 6"x6" conc paver	scored conc.	15		CH/C/C/CH	40	
13th St. E of Juniper	-	exist	conc	GS	scored conc.	15		CH/C/C/CH	40	
15th Street	-	exist	conc	GS	scored conc.	15		CH	40	Hightower Willow Oak
Abercrombie Place	-	exist	conc	conc	scored conc.	15		CH	40	Forum Tupelo
Armistead	-	exist	conc	conc	scored conc.	15		CH	40	Hightower Willow Oak
6th Street . W of W. P'tree	-	exist	conc	conc	scored conc.	15		CH	40	Allee Elm
Williams Street	-	exist	conc	conc	scored conc.	15		CH/C/C/CH	40	Ginkgo Biloba Autumn Gold <Male> or E. Hornbeam

Secondary Corridors B

1. Residential	-	exist	conc	NA / GS	scored conc.	15	35	CH	40	varies
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CLARIFICATION IV
EXHIBIT B
REQUIRED SUBMITTALS
SECTION 00300

SECTION 00300

FORM C. PRELIMINARY CONTRACT SCHEDULE

Bidder shall submit a preliminary schedule indicating detailed activities for the first sixty (60) days of the project and include general activities. The schedule shall be submitted with the bid package.

The bar chart schedule shall show continuity and flow of the work and be clear and legible. The minimum requirements of the bar chart shall be derived from the Special Condition sections below listed:

7.2.1

7.2.2

7.2.3

7.2.6

Based on the successful Bidder's Preliminary Contract Schedule and CITY'S requirements, an agreed schedule shall be developed after award, in accordance with the Special Condition titled "CONTRACT SCHEDULE".

FORM F. RESUMES OF KEY PERSONNEL

Bidder to provide a resume for each key person to be assigned to the Contract, containing at least the following information on each person (attach and properly designate additional pages, if necessary):

POSITION

TITLE

a. Name:

b. Education/Qualifications:

c. Present Position in Bidder's Company:

d. Relevant Experience:

e. Safety performance metrics from the last three (3) projects (First Aid cases, Recordable Incident Rate and Lost Workday Case Rate)

f. Employment History:

Resumes are required for the following positions: Project Manager, Site/Construction Manager, Lead Site Engineers, Scheduling Engineers, Safety personnel (See Form G) and Lead Site Supervisors, all of whom would be assigned full time to the contract.]

Key personnel will be listed in the Special Condition titled "KEY PERSONNEL", restricting their replacement without CITY consent.



CITY OF ATLANTA

SUITE 1790

55 TRINITY AVENUE, SW

ATLANTA, GA 30303

(404) 330-6204 Fax: (404) 658-7705

Internet Home Page: www.atlantaga.gov

DEPARTMENT OF PROCUREMENT

Adam L. Smith, Esq., CPPB

Chief Procurement Officer

asmith@atlantaga.gov

Shirley Franklin
Mayor

May 21, 2009

Dear Potential Bidders:

Re: ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

Attached is one (1) copy of **Addendum Number 3**, hereby made a part of the above-referenced project.

For additional information, please contact Sean Holloway, Contracting Officer, at (404) 330-6608, by fax at (404)-658-7705 or by email at sdholloway@atlantaga.gov.

Sincerely,

Adam L. Smith

ALS/sdh

cc: Mr. Joseph Basista (w/o att)

ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

May 21, 2009

Page 2

ADDENDUM NO. 3

This Addendum No. 3 forms a part of the Invitation to Bid and modifies the original solicitation package and any prior Addenda as noted below and is issued to incorporate the following:

The correct due date for FC-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters is Thursday, May 28, 2009.

Last day for questions was May 14, 2009.

Addendum No. 3 for **ITB, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters** is available for pick-up in the Plan Room: City Hall, 55 Trinity Avenue, Suite 1900.

Bids are due on Thursday, May 28, 2009, and should be time stamped in no later than 1:59 p.m. and delivered to the address listed below:

Adam L. Smith, Esq., CPPB
Chief Procurement Officer
Department of Procurement
55 Trinity Avenue, S. W.
City Hall South, Suite 1790
Atlanta, Georgia 30303

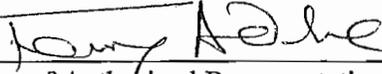
****All other pertinent information is to remain unchanged****

Acknowledgment of Addendum No. 3

Bidders must sign below and return this form with bid to the Department of Procurement, 55 Trinity Avenue, City Hall South, Suite 1790, Atlanta, Georgia 30303 as acknowledgment of receipt of this Addendum.

This is to acknowledge receipt of ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters on this the 21st day of May, 2009.

SD & C, Inc.
Legal Company Name of Bidder


Signature of Authorized Representative

Tony Adibe
Printed Name

President
Title

5/21/09
Date



CITY OF ATLANTA

SUITE 1790
55 TRINITY AVENUE, SW
ATLANTA, GA 30303
(404) 330-6204 Fax: (404) 658-7705
Internet Home Page: www.atlantaga.gov

DEPARTMENT OF PROCUREMENT
Adam L. Smith, Esq., CPPB
Chief Procurement Officer
asmith@atlantaga.gov

Shirley Franklin
Mayor

May 28, 2009

Dear Potential Bidders:

Re: ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

Attached is one (1) copy of **Addendum Number 4**, hereby made a part of the above-referenced project.

For additional information, please contact Sean Holloway, Contracting Officer, at (404) 330-6608, by fax at (404)-658-7705 or by email at sdholloway@atlantaga.gov.

Sincerely,

A handwritten signature in black ink that reads "Adam L. Smith" with a stylized flourish at the end.

Adam L. Smith

ALS/sdh

cc: Mr. Joseph Basista

ADDENDUM NO. 4

This Addendum No. 4 forms a part of the Invitation to Bid and modifies the original solicitation package and any prior Addenda as noted below and is issued to incorporate the following:

The due date for FC-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters is extended to Thursday, June 4, 2009.

Last day for questions was May 14, 2009.

Addendum No. 4 for ITB, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters is available for pick-up in the Plan Room: City Hall, 55 Trinity Avenue, Suite 1900.

Bids are due on Thursday, June 4, 2009, and should be time stamped in no later than 1:59 p.m. and delivered to the address listed below:

Adam L. Smith, Esq., CPPB
Chief Procurement Officer
Department of Procurement
55 Trinity Avenue, S. W.
City Hall South, Suite 1790
Atlanta, Georgia 30303

****All other pertinent information is to remain unchanged****

ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

May 28, 2009

Page 3

Acknowledgment of Addendum No. 4

Bidders must sign below and return this form with bid to the Department of Procurement, 55 Trinity Avenue, City Hall South, Suite 1790, Atlanta, Georgia 30303 as acknowledgment of receipt of this Addendum.

This is to acknowledge receipt of **ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters** on this the 28th day of May, 2009.

SD & C, Inc.
Legal Company Name of Bidder

Tony Adibe
Signature of Authorized Representative

Tony Adibe
Printed Name

President
Title

5/28/09
Date



CITY OF ATLANTA

SUITE 1790
55 TRINITY AVENUE, SW
ATLANTA, GA 30303
(404) 330-6204 Fax: (404) 658-7705
Internet Home Page: www.atlantaga.gov

DEPARTMENT OF PROCUREMENT
Adam L. Smith, Esq., CPPB
Chief Procurement Officer
asmith@atlantaga.gov

Shirley Franklin
Mayor

June 2, 2009

Dear Potential Bidders:

Re: ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

Attached is one (1) copy of **Addendum Number 5**, hereby made a part of the above-referenced project.

For additional information, please contact Sean Holloway, Contracting Officer, at (404) 330-6608, by fax at (404)-658-7705 or by email at sdholloway@atlantaga.gov.

Sincerely,

A handwritten signature in black ink that reads "Adam L. Smith".

Adam L. Smith

ALS/sdh

cc: Mr. Joseph Basista

ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters

June 2, 2009

Page 2

ADDENDUM NO. 5

This Addendum No. 5 forms a part of the Invitation to Bid and modifies the original solicitation package and any prior Addenda as noted below and is issued to incorporate the following:

Section I Responses to Questions

Section II Clarifications: Revised Bid Form Additional Items Added

Section III Additional Specifications for Bid Items 432-5010 A & B

Last day for questions was May 14, 2009.

Addendum No. 5 for **ITB, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters** is available for pick-up in the Plan Room: City Hall, 55 Trinity Avenue, Suite 1900.

Bids are due on Thursday, June 4, 2009, and should be time stamped in no later than 1:59 p.m. and delivered to the address listed below:

Adam L. Smith, Esq., CPPB
Chief Procurement Officer
Department of Procurement
55 Trinity Avenue, S. W.
City Hall South, Suite 1790
Atlanta, Georgia 30303

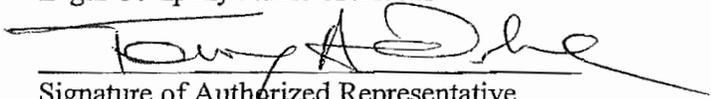
****All other pertinent information is to remain unchanged****

Acknowledgment of Addendum No. 5

Bidders must sign below and return this form with bid to the Department of Procurement, 55 Trinity Avenue, City Hall South, Suite 1790, Atlanta, Georgia 30303 as acknowledgment of receipt of this Addendum.

This is to acknowledge receipt of **ITB-4943, Annual Contract to Construct Sidewalks, Driveways, Curbs and Gutters** on this the 2nd day of June, 2009.

SD & C, Inc.
Legal Company Name of Bidder


Signature of Authorized Representative

Tony Adibe
Printed Name

President
Title

6/2/09
Date

SECTION I
RESPONSES TO QUESTIONS

**FC-4943, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS,
CURBS AND GUTTERS
ADDENDUM NO. 5
SECTION I**

1. In the Item 432-5010 Hot-in-place Asphalt Paving the unit is square yard. Please clarify what is the thickness of the asphalt pavement?

A. The thickness of the asphalt paving is 1 to 2 inches.

2. Per your request to follow up with an e-mail, could you please clarify the scope of work for Bid Item 432-5010 "Hot-In-Place Asphalt Paving - Per Square Yard"

It is unclear as to the type or thickness of mix required.

A. Please refer to Question No. 1.

3. On the alternate Bid Form issued with addendum # 2, I have the following question:

The last two Items have GDOT Item No. 432-5010 which is a specification for Milling, however the description for these two items are described as "Decorative Asphalt Paving (Per SY)" and "Hot-In-Place Asphalt Paving (Per SY)" respectively. Do these items represent milling or paving? If paving what are the thickness for both these items? Please also corresponding specifications.

A. Please note that item 432-5010 as shown in this bid form is not part of milling activities. Items have been renamed to reflect 432-5010 A & B. Item A, refers to Hot-In-Place Recycled Asphalt Paving while Item B, refers to Decorative Asphalt Paving. This process involves stamping and layment of thermoplastic materials on asphalt surfaces in crosswalks and intersections. Items shall be measured in Square Feet (SF). Hot-In-Place Recycled Asphalt Paving shall be measured in Square Yard. This process recycles existing milled asphalt pavement and recycles into a Hot-In-Place asphalt pavement. The thickness of the new hot surface varies from 1 to 2 inches.

B. Decorative Asphalt Paving - As manufactured by Integrated Paving Concepts or an approved equal. (See attached Specifications, Section III, Additional Specifications.)

C. Hot-In-Place Asphalt (See attached Specifications, Section III, Additional Specifications.)

4. In the Item 432-5010 Hot-in-place Asphalt Paving the unit is square yard. Please clarify what is the thickness of the asphalt pavement?
 - A. **The thickness of the new hot surface varies from 1 to 2 inches.**

5. Is the bidder responsible for providing the 3000 psi concrete for the sidewalks, gutters, and aprons.
 - A. **Yes, the bidder is responsible for providing the 3000 psi concrete for sidewalks, gutters and aprons.**

6. Item 44 - Replacement of Guardrail Anchors. You have 150 lf, we believe these should be each.
 - a. We need a thickness for the Item 432-5010 - Hot – in – Place Asphalt Paving.
 - b. The Information issued on the Light Poles says 29 ft poles north of North Ave and 25 ft south of North Ave. Can we determine how many of each?
 - A. **The quantity should be each.**
 - a. **Please refer to the answer to question No. 4.**
 - b. **Please see revised Bid Form, Section II Clarifications.**

+++ End of Answers to Questions Addendum No. 5+++

SECTION II
CLARIFICATIONS

EXHIBIT A

BID FORM

From: _____

Submitted: _____, 2009

FC-4943, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS,
CURBS AND GUTTERS

The undersigned, as bidder, hereby declares that the only person or persons in this bid, as principal or principals, is or are named herein and *that* no other person *than* herein mentioned has any interest in this bid or in the contract to be entered into; that this bid is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud.

The bidder further declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the contract documents for the work furnished prior to the opening of bids; and that he has satisfied himself relative to the work to be performed.

The bidder proposes and agrees, if this bid is accepted, to contract with the City, in the form of contract specified, to furnish all necessary materials, equipment, means of transportation and labor necessary, and to complete this project in full and complete accordance with the shown, noted, described and reasonably intended requirements of the contract documents to the full and entire satisfaction of the City, and with a definite understanding that no money will be allowed for *extra* work except as set forth in the contract documents.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" from the City and to fully complete the project within the time limits identified in the *city* – contractor agreement. Bidder further agrees to pay liquidated damages, in accordance with the provisions of the general conditions of the contract documents for each consecutive calendar day thereafter.

The undersigned acknowledges receipt of addenda numbered: _____ In accordance with the above understanding, the undersigned proposes to do all of the work furnish all of the materials, and complete the work in accordance with the contract documents *at* the prices listed in the bid form:

ALL ITEMS LISTED BELOW SHALL INCLUDE FURNISHING ALL PRODUCTS. MATERIALS & EQUIPMENT AND PERFORMING ALL LABOR NECESSARY TO COMPLETE *AND* PUT INTO OPERATION THE QUALITY OF LIFE SIDEWALK CONTRACT, IN ACCORDANCE WITH CITY OF ATLANTA STANDARDS AT VARIOUS LOCATIONS TO BE DETERMINED.

BID ITEMS FOR ANNUAL SIDEWALK CONTRACT

C.O. NO	ITEM	UNIT	UNIT COST	QUAN-TITY	TOTAL COST
1	CITY STANDARD 4-INCH CONCRETE SIDEWALK	SY		22,700	
2	CITY STANDARD 4-INCH CONCRETE SIDEWALK WITH IMPRINTED HEXAGONAL PATTERN	SY		3,100	
3	COA Standard 4" Concrete Sidewalk WITH IMPRINTED BRICK PATTERN AND COLOR	SY		4500	
4	CITY MONOLITHIC CONCRETE SIDEWALK WITH CURB	SY		17,400	
5	City STANDARD MONOLITHIC SIDEWALK WITH HEXAGONAL IMPRINT	SY		5556	
6	City standard monolithic sidewalk with brick imprint	SY		3500	
7	CITY STANDARD CONCRETE DRIVEWAY APRON, 6-INCH THICK	SY		9,800	
8	CITY STANDARD CONCRETE DRIVEWAY APRON, 8-INCH THICK	SY		1,075	
9	CITY STANDARD WHEELCHAIR RAMP, 6-INCH THICK WITH DETECTABLE TACTILE WARNING SYSTEM	SY		2550	
10	CITY STANDARD COMBINATION CONCRETE CURB AND GUTTER, 8" X 30"	LF		2560	
10a	CITY STANDARD COMBINATION CONCRETE CURB AND GUTTER, 8"X24"	LF		2550	
11	CITY STANDARD CONCRETE HEADER CURB	LF		25,700	
12	CITY STANDARD GRANITE CURB (GRADE A)	LF		3,000	
12A	CITY STANDARD GRANITE CURB (GRADE B) ROUGH TOP	LF		3000	
12B	CITY STANDARD GRANITE CURB (GRADE A RADIUS)	LF		600	
12C	CITY STANDARD GRANITE CURB (TGRADE B RADIUS)	LF		600	
13	RESET OR ADJUST EXISTING GRANITE CURB	LF		3500	
14	GRASSING	SY		10,815	
15	FURNISH AND INSTALL CITY STANDARD SIDEWALK FLUMES	EA		20	
16	ADJUST EXISTING MANHOLE RINGS AND COVERS OR CATCH BASIN GRATES, FRAMES AND COVERS TO GRADE	EA		80	
17	INSTALL GA DOT STD 1033 OR COA TYPE "C" CATCH BASIN	EA		6	
18	INSTALL COA TYPE "B" CATCH BASIN	EA		15	
19	INSTALL COA STD DROP INLET OR GA DOT 9031S OR DOT 9031U	EA		7	
20	INSTALL GA DOT STD 1034 OR COA DOUBLE TYPE "B" CATCH BASIN	EA		3	
21					
22	ADJUST EXISTING VALVE BOXES, ELECTRICAL PULL BOXES, AND SIMILAR INSERTS IN THE WORK TO GRADE	EA		434	
22A	ADJUSTMENTS TO WATER LINES UNDER 2-INCHES	EA		110	
22B	ADJUSTMENTS TO SEWER LINES 6-INCHES AND UNDER(Clean Out Lines)	EA		50	
23	PROVIDE AND INSTALL CLEANOUT BOXES, VALVE BOXES AND/OR METER BOXES TO GRADE	EA		75	
24	CITY OF ATLANTA STANDARD MASONRY WALL				
24a	0-4 FT IN HEIGHT	SF		8,500	
24s	4 FT AND HIGHER	SF		1,700	
25	COA SEGMENTAL RETAINING WALL	SF		3500	
27	CRUSHED AGGREGATE BASE, 4 INCH THICK	SY		100	
28	CRUSHED AGGREGATE BASE, 6 INCH THICK	SY		100	
29	ASPHALT CONCRETE BLACK BASE OR "B" BINDER 4 1/2" THICK	SY		40	
30	ASPHALT CONCRETE BLACK BASE OR "B" BINDER 6 1/2" THICK	SY		40	
31	ASPHALT CONCRETE "E" OR "F" SURFACE COURSE , 1 1/2" THICK	SY		40	
31B	ASPHALT CONCRETE "E" OR "F" SURFACE COURSE , 1 1/2" THICK WITH GIBSONITE ADDITIVE	SY		40	
32	TREE REMOVAL 6" TO 18" IN DIAMETER	EA		350	
33	TREE REMOVAL ABOVE 18" TO 36" IN DIAMETER	EA		45	
34	TREE REMOVAL WITH GREATER THAN 36" IN DIAMETER	EA		10	
34A	TREE REPLACEMENT FOR TREES 2.5" to 3.5"	EA		1500	
34B	TREE REPLACEMENT FOR TREES GREATER THAN 3.5."	EA		50	
35	REPLACEMENT OF FENCE (FILED FENCE)	LF		200	
36	REPLACEMENT OF FENCE (WOVEN WIRE)	LF		150	
37	REPLACEMENT OF FENCE (BARBED WIRE)	LF		175	

38	REPLACEMENT OF FENCE (CHAIN LINK)	LF	500
39	REPLACEMENT OF RAIL (PIPE HANDRAIL)	LF	4,000
40	INSTALLATION OF 18" RCP PIPE	LF	800
41	INSTALLATION OF 18" DIP PIPE	LF	300
42	INSTALLATION OF 24" RCP PIPE	LF	300
43	INSTALLATION OF 24" DIP PIPE	LF	300
44	REPLACEMENT OF GUARDRAIL ANCHOR (TYPE 1,9,11,12)	EA	150
45	INSTALLATION OF WOOD POST MAILBOXES (All mailboxes shall be installed in PVC sleeves except where installed in grass strips.)	EA	200
46	INSTALLATION OF STEEL POST MAILBOXES (All mailboxes shall be installed in PVC sleeves except where installed in grass strips.)	EA	200
47	SAW CUT OF PAVEMENT (ASPHALT OR CONCRETE)	LF	3000
48	BANK (SLOPE) EXCAVATION	CY	4,230
49	REPLACEMENT OF UNSUITABLE MATERIAL WITH CRUSHED STONE	CY	500
50	INSTALLATION, MAINTENANCE AND REMOVAL OF SAFETY FENCE	LF	500
51	INSTALLATION, MAINTENANCE, AND REMOVAL OF SILT FENCE	LF	16,280
52	INSTALLATION, MAINTENANCE, AND REMOVAL OF HAY BALES	LF	300
53	INSTALLATION OF RIP RAP	TON	500
54	REPLACEMENT OF UNSUITABLE MATERIAL WITH EARTH	CY	100
55	MOBILIZATION	EA	10
57	SIDEWALK DEMOLITION	SY	25,000
58	CURB DEMOLITION	LF	5,100
59	SPEED HUMP	EA	25
60	THERMOPLASTIC STRIPPING REMOVAL		
60A	THERMOPLASTIC STRIPPING REMOVAL 5" White or Yellow	LF	1500
60B	THERMOPLASTIC STRIPPING REMOVAL 5" DOUBLE YELLOW	LF	2000
60C	THERMOPLASTIC STRIPPING REMOVAL 12" White	LF	100
60D	THERMOPLASTIC STRIPPING REMOVAL 24" White	LF	100
60E	THERMOPLASTIC STRIPPING REMOVAL 8' Ft. CROSSWALK	LF	240
61	RESET SIGNS	EA	250
62	THERMOPLASTIC STRIPE 6" WHITE	LF	200
63	THERMOPLSTIC STRIPE 8" WHITE	LF	200
64	THERMOPLSTIC STRPE 12" WHITE	LF	1000
65	THERMOPLASTIC STRIPE WHITE 24" (STOP BAR)	LF	100
66	THERMPLASTIC STRIPE DOUBLE YELLOW	LF	1000
67	COA Type "C" Lights (MAIN STREET)	EA	25
68A	COA - Type "A" Lights- with 25 ft poles	EA	13
68B	COA - Type "A" Lights- with 29 ft poles	EA	13
69	COA - Benches	EA	100
70	COA - Trash Receptacle	EA	100
71	COA - Reinforced CantileverSidewalk Slab 4"	SF	500
72	COA - Reinforced CantileverSidewalk Slab 5"	SF	500
73	Twin 2" PVC (HD) Conduit	LF	5000

BID TOTAL, QUALITY OF LIFE SIDEWALK CONTRACT, THE AMOUNT OF

_____ DOLLARS (\$) _____)
(Figure)

The undersigned declares that he understands that the quantities shown are approximate only and are subject to either increase or decrease and that should the quantities of any of the items of work be increased, the undersigned agrees to do the additional work at the unit prices set forth herein, and should the quantities be decreased, he also understands that payment will be made on the actual quantities installed at the unit bid price, and the undersigned will make no claims for anticipated profit for any decrease in the quantities. Actual quantities will be determined upon completion of the job.

The undersigned also agrees that extra work, if any, performed in accordance with articles 33 and 34 of the general conditions will be paid for in accordance with the provisions of those articles.

Amounts shall be shown in both words and figures, where indicated. In case of discrepancies between the figures shown in the unit prices and the totals, the unit prices shall apply and the totals shall be corrected to agree with the unit prices. In case of discrepancies between written amounts and figures, written amounts shall take precedence over figures and the sum of all bid extensions (of unit prices) plus lump sum items shall take precedence over bid total.

The bid prices shall include all costs of completion of the work, except as otherwise specified in the contract documents.

The names and residence addresses of all persons and parties interested in the foregoing bid as principals are as follows:

(Give first and last names in full. In the case of a corporation, give name of president, treasurer, and manager, and in the case of a partnership, give names and addresses of members.)

The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work.

Notice of acceptance should be mailed, telegraphed, or delivered to the undersigned bidder at the following address:

(Name of Bidder) _____

(Signature of Authorized Representative) _____

(Title) _____

(Business Address) _____

(City and State) _____

The following information is required as a part of this bid.

BID DATA

The bidder shall designate below the one manufacturer or source for each product listed to be furnished and installed if awarded the work. If the bidder fails to identify products meeting all specification requirements and meeting the approval of the owner, then the owner reserves the right either to determine the bidder non-responsive and reject the bid or to designate the manufacturer of the products to be provided which will meet all specification requirements, which owner-designated manufacturer products must be furnished by the bidder *at no increase in the contract price.*

1. Product: _____

Manufacturer: _____

2. Product: _____

Manufacturer: _____

3. Product: _____

Manufacturer: _____

4. Product: _____

Manufacturer: _____

5. Product: _____

Manufacturer: _____

END OF SECTION

ALTERNATE BID FORM- (4 PAGES)

FC- 4943, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS, CURBS AND
GUTTERS
ANNUAL CONTRACT
WITH
ASPHALT MILLING, RESURFACING, & TRAFFIC CALMING

ITEM NO.	APPROXIMATE QUANTITY	ITEM WITH UNIT OR LUMP SUM PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES		AMOUNT	
			DOLLARS	CENTS	DOLLARS	CENTS
1000	LUMP SUM PER 10 SITES	Traffic Control for each projects _____ _____ LUMP SUM PER SITE				
205-0001	20	UNCLASSIFIED EXCAVATION, AT _____ _____ PER CUBIC YARD				
310-1101	200	TN., GR AGGR BASE CRS, INCL MATL, AT _____ _____ PER TON				

.EM NO.	APPROXIMATE QUANTITY	ITEM WITH UNIT OR LUMP SUM PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES		AMOUNT	
			DOLLARS	CENTS	DOLLARS	CENTS
402-31900	100	Recycled asphalt concrete 25 MM super pave GP1 or 2, including bituminous material & h.lime _____ _____ PER TON				
402-3190	200	TN., RECYC ASPH. CONC. 19MM SUPERPAVE, GP 1 OR 2, INCL. BIT. MATL. & H LIME, _____ _____ PER TON				
402-3113	500	TN., RECYC ASPH. CONC. 12.5MM SUPERPAVE, GP 1 OR 2, INCL. BIT MATL. & H LIME, _____ _____ PER TON				
402-4505	2000	TN., RECYC ASPH. CONC. 9.5MM SUPERPAVE, GP 1 OR 2, INCL. POLYMER MOD BIT MATL. & H LIME, _____ _____ PER TON				
413 -1000	2000	P.G.6722 Bitiminous tack coat ----- PER GALLON				

ITEM NO.	APPROXIMATE QUANTITY	ITEM WITH UNIT OR LUMP SUM PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES		AMOUNT	
			DOLLARS	CENTS	DOLLARS	CENTS
432-5010	5000	Milling existing Asphalt concrete pavement <u>0" to 2" Depth</u> Per Square yard				
432-5010	100	Milling existing Asphalt concrete pavement <u>2" to 4" Depth</u> Per square yard				
432-5010	100	Milling existing Asphalt concrete Pavement <u>4" to 6" Depth</u> Per Square yard				
432-5010	200	Milling existing Concrete pavement <u>0" to 2" Depth</u> Per Square yard				
432-5010	200	Milling existing concrete Pavement <u>2" to 4" Depth</u> Per square yard				

ITEM NO.	APPROXIMATE QUANTITY	ITEM WITH UNIT OR LUMP SUM PRICE WRITTEN IN WORDS	UNIT PRICE IN FIGURES		AMOUNT	
			DOLLARS	CENTS	DOLLARS	CENTS
432-5010	00	Milling existing concrete pavement <u>4" to 6" Depth</u> Per square yard				
432-5010 A	500	Decorative Asphalt Paving Per square yard				
-5010 B	10,000	Hot -In-Place Recycled Asphalt Paving Per square yard				

ALTERNATE BID TOTAL, FC-4943, ANNUAL CONTRACT TO CONSTRUCT SIDEWALKS, DRIVEWAYS, CURBS AND GUTTERS WITH ASPHALT MILLING, RESURFACING AND TRAFFIC CALMING

_____ DOLLARS (\$ _____)
(FIGURE)

BASE BID + ALTERNATE BID
TOTAL _____ DOLLARS
(WORDS)

(\$ _____)
(FIGURE)

SECTION III
ADDITIONAL SPECIFICATIONS



SAMPLE SPECIFICATION

HOT-IN-PLACE RECYCLING BY THE HEATER SCARIFICATION METHOD

Description: This work shall consist of rehabilitating an asphalt pavement by heating, rejuvenating, scarifying and compacting the existing pavement.

Procedure: The entire surface to be rehabilitated shall be cleaned of water, earth and foreign material. All base failures shall be repaired in accordance with local specifications and paid for separately. Rehabilitation work shall be performed only when the air temperature in the shade is at least 45°F. and the forecast is for rising temperatures.

Utilizing a one-pass, continuous process, the surface of the existing pavement shall be heated, rejuvenated and scarified to a one inch nominal depth (Note 1) with the surface temperature of the old pavement not to exceed 375°F. Heat shall be applied under an enclosed or shielded hood and shall extend at least four inches beyond the width of scarification on both sides. Scarifying shall be accomplished with pressure scarifiers. The scarifying unit shall be equipped to scarify and move material away from the gutter flags for a depth of 1/2 inch by 4 inches wide. The heating-scarifying operation shall not exceed 30 feet per minute. When a repaving pass is being made adjacent to a previously placed mat, the longitudinal repaving seam shall extend at least two inches into the previously placed mat.

NOTE 1: The depth of scarification will be determined by scraping out and weighing the heated and scarified material from a one square foot area. This weight shall be 75% of the theoretical weight of one square foot by 1" of compacted bituminous surface course. Total equipment length of the pre-heater and heater-scarifier shall not exceed 115 feet.

Immediately before the scarifying operation, an approved asphalt modifier shall be applied at the approximate rate of 0.10 gallon per square yard. The engineer may waive or adjust the requirement for the asphalt modifier if the existing pavement condition warrants this action. The surface shall then be leveled by distributing the heated, scarified and treated (HST) material over the width being processed, so as to produce a uniform cross section. The minimum temperature of the HST material after leveling shall be 175°F. The HST material shall be compacted before the temperature of the mix drops below 150°F.

Compaction shall be accomplished with an 8 to 10-ton steel wheel roller in static mode. The roller shall be equipped with an adequate scraping or cleaning device on each wheel to prevent the accumulation of material on the wheels. When used for the compaction of bituminous mixtures, the roller shall be equipped with a water system, which will keep all wheels uniformly wet to prevent material pickup when required.

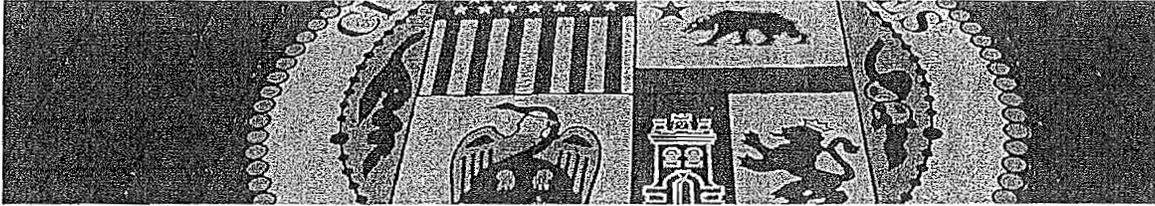
Method of Measurement: The heat-scarifying process will be measured in place and the area computed in square yards. The asphalt modifier will be measured in gallons. If provided as a payment item, the preparation of the base will be measured in square yards.

Basis of Payment: This work will be paid for at the contract unit price per square yard for HEATER-SCARIFYING, and per gallon for ASPHALT MODIFIER. If provided as a pay item, the preparation of the base (exclusive of additional material required) will be paid for at the contract unit price per square yard for PREPARATION OF BASE.



Information Series

February 2001



STREETPRINT LOGOTHERM SAMPLE SPECIFICATION

SECTION 02700 PAVING & PAVEMENTS

1.0 GENERAL

1.1 Description

Logotherm shall be described as "StreetPrint Logotherm Thermoplastic Pavement Marking" on the drawings and documents related to the project. The contractor doing this work shall be an Authorized StreetPrint Applicator as licensed by Integrated Paving Concepts Inc., and shall have at least one crew member on site who has successfully completed a StreetPrint Level 1 accreditation training program.

1.2 Related Sections

Section 02230 Site Clearing
Section 02330 Subgrade and Roadbed Preparation
Section 02720 Unbound Base Courses
Section 02740 Flexible Pavement

NOTE TO SPECIFIER: Above are examples of typical sections related to Hot Mix Asphalt pavement construction. Edit for applicable related sections.

1.3 Definitions

"StreetPrint Logotherm Thermoplastic Pavement Marking" is defined as a finishing system, for application on asphalt surfaces, consisting of thermoplastic road marking material capable of being affixed to bituminous pavements by heating and hardening by cooling. Logotherm is manufactured to replicate almost any flat 2 dimensional pattern or design.

"Accredited StreetPrint Applicator" is someone who has successfully completed the StreetPrint Level 1 accreditation training program.

"Heating system" used to affix the thermoplastic panels to the asphalt surface is defined as a reciprocating infrared heater such as the StreetHeat SR-60, or the hand held hot air jet heater such as the StreetHeat Jet Heater. To avoid over heating or burning of the thermoplastic panels continuous monitoring of the surface temperature, during the heating process, using an infra red thermometer is recommended. Equipment that is specifically excluded from this section and shall not be used for reheating of the asphalt is any form of direct flame heaters or non reciprocating heaters.

1.4 Scope of Work

1.4.1 Application of StreetPrint Logotherm Thermoplastic Pavement Marking Panels

The surface shall be clean and free of all dust, silt, debris and, most importantly, chemical residue from de-icing materials. If de-icing material has been used on the road in the past, cleaning shall be carried out using pressure washing.

The panels shall be placed in position on completely dry asphalt. Heat shall be gently applied to the surface using reciprocating infra red heaters, slowly raising the surface temperature until the thermoplastic material in the panels start to liquefy and flow, but no higher than 325° F. Once the thermoplastic material has liquefied, the heat source shall be removed and the surface allowed to cool to ambient temperature. Only once the asphalt surface and the thermoplastic has reached ambient temperature may the road be opened to traffic.

2.0 MATERIALS

2.1 "StreetPrint Logotherm Thermoplastic Pavement Marking Panels"

The Owner or Owner's representative shall specify the colors and patterns of the "StreetPrint Logotherm Thermoplastic Pavement Marking Panels" that will be installed.

The pre-formed pre-cut markings shall be supplied by Integrated Paving Concepts, Inc. The thermoplastic material shall have a thickness of 90 mils, and consist of color pigmented plastic film with imbedded reflective glass spheres, uniformly distributed throughout their entire cross-sectional area.

3.0 INSTALLATION

3.1 Installation and Bonding of Pre-formed Thermoplastic Panels

The thermoplastic shall be applied only in dry conditions. The thermoplastic shall be placed on the clean, dry, asphalt, prior to application of heat. Once the thermoplastic is in place, heat shall be applied using a reciprocal infrared heater. The asphalt surface temperature shall not exceed 325 °F (163°C). If smoke is visible, that is an indication that the asphalt and/or the thermoplastic material is burning. Apply sufficient heat to liquefy the thermoplastic. This is achieved when the joints in the thermoplastic panels flow together. Bonding of the thermoplastic material to the asphalt surface can be monitored by carefully lifting a corner of the thermoplastic material before it completely cools. If asphalt is attached to the base of the thermoplastic material sufficient heat was applied. If not re-apply heat.

HIGH PERFORMANCE PAVEMENT TEXTURING SPECIFICATION

PART 1 – GENERAL

1.1 DESCRIPTION

- A. **StreetPrint**® is a proprietary asphalt pavement texturing system that is highly suitable for a wide variety of decorative pavement applications. Paved entranceways, parking lots, residential driveways, sidewalks, plazas, medians, and cross-walks are some examples of successful applications of **StreetPrint**®.
- B. The **StreetPrint**® system is executed by elevating the surface temperature of the asphalt pavement and then pressing a metal template into the asphalt pavement to replicate, in relief, the grout depressions common to hand-laid brick or cobblestone, or any other design as shown on the drawings or described in the specifications. The imprinted asphalt pavement surface is then coated using one or more of the **StreetBond** coatings.
- C. The proprietary nature of the **StreetBond** coatings and equipment combined with the dedicated focus on quality by the **Accredited StreetPrint Applicator** ensures the **StreetPrint**® Work is genuine; there is no other equal asphalt pavement texturing system on the market anywhere.
- D. **StreetBond** coatings are specifically formulated for application to asphalt pavement and have been confirmed by a certified testing facility to possess a balance of performance properties for a durable and color-fast finish.
- E. A variety of template designs and **StreetBond** coating colors are available. Please refer to www.integratedpaving/streetprint.com to view these. Custom template designs and colors are available upon request.
- F. Certain colors of the **StreetBond** coatings have been independently verified to have an SRI greater than 29 and therefore can help projects qualify for points in the LEED program under Heat Island Effect: Non-Roof. Please refer to www.integratedpaving/streetprint.com for further information.
- G. Qualifications. Only **Accredited StreetPrint**® applicators may bid for and perform this work. Please refer to **Section 1.4 DEFINITIONS**.
- H. **StreetPrint**® is a registered Trademark product. U.S. patent number 5,215,402.

1.2 REFERENCES

- A. ASTM D-4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Tester.
- B. ASTM D-4060 Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser.
- C. ASTM D-2697 Standard Test Method for Volume of Nonvolatile Matter in Clear or Pigmented Coatings.
- D. ASTM D522-93A Standard Test Method for Mandrel Bend Test of Attached Organic Coatings.



HIGH PERFORMANCE PAVEMENT TEXTURING SPECIFICATION

- E. ASTM D1653 Standard test method for water vapor transmission or organic film coatings.
- F. ASTM G-154 QUV Accelerated Weathering Environment. Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials.
- G. ASTM D 2369 Weight Solids Standard test method for Volatile Content of Coatings.
- H. ASTM D 1475 Standard Test method for Density of Paint, Varnish, Lacquer, Other related products.
- I. ASTM D-2240 (2000) Standard Test Method for Rubber property – Durometer hardness.
- J. ASTM D-5895 Standard Test Method of drying or curing during film formation of organic coatings using mechanical recorders.
- K. ASTM D-570 Standard Test Method for water absorption of plastics.

1.3 DEFINITIONS

- A. **“Accredited StreetPrint® Applicator”** is a licensed **StreetPrint®** applicator who has a certificate of accreditation as offered by Integrated Paving Concepts, Inc. (Tel. 800-688-5652). **StreetPrint®** applicators are reviewed on an annual basis and certificates are valid only for the calendar year. All **Accredited StreetPrint® Applicators** have been qualified by Integrated Paving Concepts, Inc to perform the Work.
- B. **“Owner”** means the Owner and refers to the representative person who has decision making authority for the Work.
- C. **“Textured asphalt pavement”** is asphalt pavement that has been subjected to imprinting or stamping in a specific pattern.
- D. **“Non-textured asphalt pavement”** is asphalt pavement that is unstamped and is sometimes referred to as “flatwork”.
- E. The **“Work”** is the asphalt pavement texturing work contemplated in this bid submission and specification.
- F. **“Scuffing”** is a “tear” of the asphalt pavement caused by an external force. Stationary vehicle tires turning on the pavement surface is a typical cause.

1.4 SUBMITTALS

A copy of the current year Accreditation certificate as provided by Integrated Paving Concepts, Inc. to the **Accredited StreetPrint® Applicator** is a required submittal.

PART 2 – PRODUCTS

2.1 MATERIALS – STREETBOND COATINGS

Cem-Base 150 and SP-150E are **StreetBond** coatings which have been scientifically formulated to provide the optimal balance of performance properties

HIGH PERFORMANCE PAVEMENT TEXTURING SPECIFICATION

for a durable, long lasting color and texture finish to asphalt pavement surfaces. Some of these key properties include wear and crack resistance, color retention, adhesion, minimal water absorption and increased friction properties.

StreetBond coatings are environmentally safe and meet EPA requirements for Volatile Organic Compounds (VOC).

- A. **StreetBond CemBase 150** is a high-performance cementitious, epoxy modified, acrylic based, waterborne surfacing product designed for application on textured asphalt pavements only. **CemBase 150** fortifies asphalt pavement and as shown in Section 3.6 Table 3 of this specification, is used as a base coat for **StreetBond SP150E**. **CemBase 150** is not to be used on non-textured asphalt pavement.
- B. **StreetBond SP150E** is an epoxy modified, acrylic, waterborne coating specifically designed for application on asphalt pavements. It has a balance of properties to ensure good adhesion and movement on flexible pavement, while providing good durability. **StreetBond SP150E** is durable in both dry and wet environments and can be directly applied to asphalt pavement or used as a top coat over **CemBase 150**.
- C. **StreetBond Colorant** is a highly concentrated, high quality, UV stable pigment blend designed to add color to **StreetBond SP150E** and **CemBase 150** coatings. The same **StreetBond Colorant** shall be used in each coating layer applied to the pavement surface. One pint of colorant shall be used with one pail of **StreetBond** coating material.
- D. **StreetBond Primer** is formulated to enhance the adhesion of **StreetBond** coatings to existing asphalt pavement surfaces (especially those with exposed polished stone aggregates) and/or previously coated asphalt pavements. The **Accredited StreetPrint® Applicator** can determine if **StreetBond Primer** is necessary or not for the application. **StreetBond Primer** is not required for new asphalt pavement.

2.1.1 Properties of StreetBond coatings

The following tables outline the physical and performance properties of the **StreetBond** coatings as determined by an independent testing laboratory.

TABLE 1: Physical Properties of “StreetBond Water-borne coatings”

Characteristic	Test Specification	Typical Requirement for Coating	
		CEMBase 150	SP150E
Solids by Volume	ASTM D-2697	60.27%	55%
Solids by Weight	ASTM D-2369	73.94%	68.9%
Density	ASTM D-1475	14.19 lbs/gal (1.70 kg/l)	13.34 lbs/gal (1.599 kg/l)

HIGH PERFORMANCE PAVEMENT TEXTURING SPECIFICATION

TABLE 2: Performance Properties of “StreetBond Water-borne Coatings”

Characteristic	Test Specification	Typical Requirement for Coating	
		CEMBASE 150	SP150E
Dry time (To re-coat)	ASTM D-5895 23°C; 37% RH	45 min	35 min
Taber Wear Abrasion Wet H-10/ 1000g	ASTM D-4060 g/1000 cycles 7 days cure	6.92	3.4
QUV E Accel. Weathering environment.	ASTM G-154 Delta E 1,500 hours	9.16	0.53
Hydrophobicity Water absorption	ASTM D-570	10.2% (7 days immersion)	8.3% (9 days immersion)
Shore hardness	ASTM D-2240	33 Type D	63 Type D
Mandrel Bend	ASTM D522- 93A	3/8" @ 21°C	1/4" @ 21°C
Permeance	ASTM D1653	13.43g/m ² /24hr/mm Hg (55mils)	3.45 g/m ² /hr (52 mils)
Adhesion to Asphalt	ASTM D-4541	Substrate Failure	Substrate Failure
Friction Wet	ASTM E-303 British Pendulum Tester		WP* coated 64
			WP* uncoated 57
			AC** coated 73
			AC** uncoated 60

*WP – test conducted on asphalt in wheel path

**AC – test conducted on asphalt adjacent to curb.

Certificates of Analysis are available upon request for each of these properties.

2.2 EQUIPMENT

The following equipment is proprietary and is an integral part of the proper execution of the **StreetPrint®** process. This equipment is available only from Integrated Paving Concepts Inc. and can only be used by **Accredited StreetPrint® applicators** that have been properly trained to use this equipment. Substituting with other pavement re-heat and/or coating application equipment is expressly forbidden.

HIGH PERFORMANCE PAVEMENT TEXTURING SPECIFICATION

- A. **StreetPrint® Templates** are used to imprint the desired pattern into the asphalt pavement. Templates are manufactured by cutting and welding highly specialized flexible wire rope into the patterns as detailed on the drawings. Templates are proprietary and only available from Integrated Paving Concepts Inc.
- B. Integrated Paving Concepts Inc. offers three mobile, proprietary pieces of equipment designed specifically to elevate the temperature of the asphalt pavement without adversely affecting it. Two of these, the **SR-120 and SR-60 Reciprocating Infra-Red Heaters (SR-120, SR-60)** each employ a bank of propane-fired heaters mounted on a track device such that these can reciprocate back and forth over a designated area thereby allowing the operator to monitor the temperature of the asphalt pavement at all times during the heating process. The nominal heat area of the **SR-120** is 130SF and the nominal heat area for the **SR-60** is 60SF.
- C. The third mobile re-heat device is the **SR-20 Infrared Heater (SR-20)**. The **SR-20** is designed specifically to heat areas such as borders and narrow areas that are inaccessible to the **SR-120 and SR-60** heaters. Similar to the **SR-120 and SR-60**, the **SR-20** allows the operator to monitor the temperature of the asphalt pavement at all times during the heating process.
- D. The **Rapid Sprayer II** is a proprietary coating sprayer supplied by Integrated Paving Concepts Inc. and is capable of applying the **StreetBond** coatings to the asphalt pavement surface in a thin, controlled film which will optimize the drying and curing time of the coating.
- E. The **StreetHeat Portable Jet Heater** is a hand-held portable heating device to be used to heat isolated areas of the asphalt pavement.
- F. The **StreetBond Coatings mixer** is a motorized mixing device designed exclusively for use with **StreetBond coatings**.
- G. Two **finishing tools** are offered to enable the applicator to finish imprinting in areas that cannot be completed when using the templates (e.g. when imprinting next to a curb or wall). The **finishing bit** is a specialized metal bit designed to be attached to a power hammer device. Alternatively, the **hand-held finishing tool** may be used for this purpose as well.
- H. Vibratory Plate Compactors shall be used for pressing the wire templates into the heated asphalt to create the specified pattern. Please note that Integrated Paving Concepts Inc. does not supply Vibratory Plate Compactors.

PART 3 - EXECUTION

3.1 GENERAL

The **StreetPrint®** system shall only be installed by an **Accredited StreetPrint® Applicator** in accordance with the plans and specifications, or as directed by the Owner. In any circumstance, do not begin installation without confirmation of Applicator certification.

HIGH PERFORMANCE PAVEMENT TEXTURING SPECIFICATION

3.2 PRE-CONDITIONS

A highly stable asphalt pavement free of defects is a pre-requisite for the installation of the **StreetPrint**® system. **Do not install StreetPrint**® over poor quality asphalt pavement.

3.2.1 Pre-requisites for new asphalt pavement

A durable and stable asphalt pavement mix design installed according to best practices over a properly prepared and stable substrate is a pre-requisite for all long-lasting asphalt pavement surfaces. The application of **StreetPrint**® does not change this requirement.

Generally, the asphalt pavement mix design for roadways as prescribed by the local jurisdiction will be sufficient for the application of StreetPrint.

3.2.2 Pre-requisites for existing asphalt pavement

Depending upon the condition and age, existing asphalt pavement may or may not be suitable for the successful application of **StreetPrint**®. Minimally, the asphalt pavement must be not have any defects including cracks, ruts or potholes nor demonstrate any flushing, raveling or like deficiencies. The **Accredited StreetPrint**® **Applicator** can advise on the suitability of the asphalt pavement.

3.2.3 Pavement Marking Removal: recommended guidelines

Pavement markings may be removed by sandblasting, water-blasting, grinding, or other approved mechanical methods. The removal methods should, to the fullest extent possible, cause no significant damage to the pavement surface. The Owner shall determine if the removal of the markings is satisfactory for the application of **StreetBond** coatings. Work shall not proceed until this approval is granted.

3.2.4 Surface Preparation

The asphalt pavement surface shall be dry and free from all foreign matter, including but not limited to dirt, dust, de-icing materials, and chemical residue.

3.3 LAYOUT

Layout of the pattern for imprinting into the surface of the asphalt pavement shall be as per the drawings and specifications and in accordance to the methods prescribed by the **Accredited StreetPrint**® **applicator** in conjunction with the **Owner**.

3.4 HEATING THE ASPHALT PAVEMENT

The Applicator shall follow the latest Application Procedures as issued by Integrated Paving Concepts Inc. Primary heating of the asphalt pavement

HIGH PERFORMANCE PAVEMENT TEXTURING SPECIFICATION

surface is accomplished by the **Accredited StreetPrint® applicator** using the **SR-120** or **SR-60** reciprocating heaters.

- A. **Pavement temperature.** The optimal pavement temperature for imprinting the template is dependent upon mix design, modifiers used in the mix, and the age of the pavement. Typically, the surface temperature of the pavement should not exceed 325°F as determined by an infra-red thermometer reading taken after the **SR-120** or **SR-60** heaters pass over the pavement surface.
- B. In order to achieve the proper depth of imprint it is important to elevate the asphalt pavement temperature to a minimum depth of 1/2 inch (12.5mm) without burning the pavement surface.

3.5 SURFACE IMPRINTING

Once the asphalt pavement has reached imprinting temperature, the templates shall be placed in position and pressed into the surface using vibratory plate compactors. The top of the template is to be flush with the surrounding asphalt pavement and can then be removed. Areas that have an imprint depth less than 3/8 inch shall be re-heated and re-stamped prior to applying the coatings.

In areas difficult to get at with the template, or areas that have light print, the **finishing bit** or hand held finishing tool may be used to complete the imprint process.

3.6 APPLICATION OF STREETBOND COATINGS

3.6.1 StreetBond Coating System Options

The selection of the appropriate **StreetBond** coating or system of coatings and the required number of layers of each is dependent upon the application as outlined here in **TABLE 3**.

TABLE 3: COATING SYSTEM OPTIONS

APPLICATION	RECOMMENDED COATING SYSTEM FOR TEXTURED ASPHALT PAVEMENT
No vehicle traffic; Residential Driveway	1 layer of SP-150E over 2 layers Cem-Base 150 OR 3 layers of SP-150E
Vehicle traffic	<u>2</u> layers of SP-150E over 2 layers Cem-Base 150 OR 4 layers of SP-150E

Notes:

1. The **Accredited StreetPrint® Applicator** can make the final determination of the coating system option to be used for the project.
2. For high wear areas that will be prone to scuffing, use **Cem-base 150** overlain with **SP-150E**.

HIGH PERFORMANCE PAVEMENT TEXTURING SPECIFICATION

3. Additional layers of **Cem-Base 150** or **SP-150E** may be used to provide additional build thickness in high wear areas such as wheel paths and vehicle turning areas.
4. A maintenance program may be required for applications exposed to:
 - scuffing
 - abrasive materials (such as salt and sand)
 - abrasive equipment (such as snow removal equipment)
5. Do not apply **Cem-Base 150** to non-textured asphalt pavement. Substitute with **SP-150E** to achieve recommended number of coating layers.

3.6.2 Coating Application Guidelines

- A. The **Accredited StreetPrint® Applicator** shall use the **Rapid Sprayer II** to apply the **StreetBond** coatings.
- B. The asphalt pavement surface shall be completely dry and thoroughly cleaned prior to application of the coatings.
- C. Subject to its age and condition, existing asphalt pavement may require **StreetBond primer**. The **Accredited StreetPrint® applicator** can assess if primer is required or not. Primer is not required for new asphalt pavement.
- D. The coating application shall proceed as soon as practical upon completion of the imprinting of the asphalt pavement.
- E. The first layer of coating shall be spray applied then broomed to work the coating material into the pavement surface. Subsequent applications shall be sprayed then broomed or rolled. Each application of coating material shall be allowed to dry to the touch before applying the next layer.
- F. The **Accredited StreetPrint® Applicator** shall apply the **StreetBond** coatings only when the air temperature is at least 50°F (10°C) and rising, and will not drop below 50°F (10°C) within 8 hours of a pplication of the coating material. There should be no precipitation expected within 2 hours after the final layer of **StreetBond SP150E** is dry to touch.

3.7 NON-TEXTURED HMA PAVEMENT

Only use **SP150E** and/or **StreetBond Primer** when applying **StreetBond** coatings to non-textured asphalt pavement. **CemBase 150** is designed only to be used for textured asphalt pavement.

3.8 COATING COVERAGE & THICKNESS

Recommended coating coverage and thickness is as outlined in **TABLE 4** below. Actual coverage may be affected by the texture of the asphalt pavement substrate and the imprint pattern selected. There will be less coverage with the first layer and higher coverage with subsequent layers.

HIGH PERFORMANCE PAVEMENT TEXTURING SPECIFICATION

TABLE 4: COATING COVERAGE AND THICKNESS

# OF LAYERS	COVERAGE (approx.)		THICKNESS (approx.)			
	TEXTURED (Offset brick) SF/pail	NON- TEXTURED SF/pail	WET		DRY	
			mm	mil	mm	mil
3	200	225	0.65	25.7	0.36	14.1
4	150	175	0.87	34.3	0.48	18.9

3.9 OPENING TO TRAFFIC

Minimally, the surface coating must be 100% dry before traffic is permitted. The following table is a guide:

TABLE 5: COATING DRY TIMES (TYPICAL)

Air Temperature	Relative Humidity	Time to dry (approx.)
60°F (15°C)	80%	8 hours
81°F (27°C)	57%	4 hours
120°F (49°C)	5%	2 hours

Substrate temperature, wind and humidity can also affect dry times. Generally, warm and dry conditions decrease the time required for the coatings to dry.

PART 4 – MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

The measured area is the actual area of asphalt pavement that has received the **StreetPrint®**, measured in place. No deduction will be made for the area(s) occupied by manholes, inlets, drainage structures, bollards or by any public utility appurtenances within the area.

4.2 PAYMENT

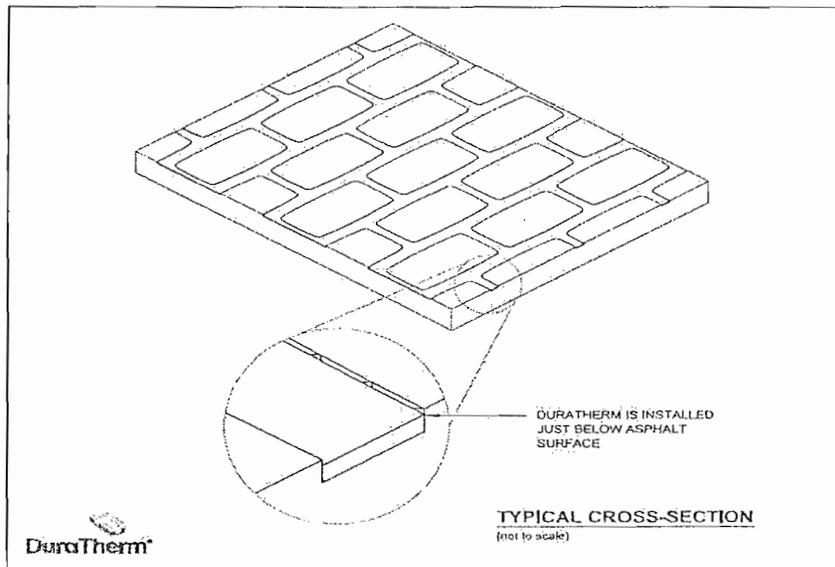
Payment will be full compensation for all work completed as per conditions set out in the contract. For unit price contracts, the payment shall be calculated using the measured area as determined above.

SPECIFICATION

PART 1: GENERAL

1.1 DESCRIPTION

- A. DuraTherm® is a proprietary decorative HMA pavement marking system that uses specialized pre-formed thermoplastic inlaid into HMA pavement to create virtually any desired pavement marking.
- B. DuraTherm® is a highly suitable HMA pavement marking system for high traffic areas such as pedestrian cross-walks, bus stops, fire-lanes, store entrance-ways, intersections, malls and airports.
- C. DuraTherm® thermoplastic is embedded into HMA pavement by using proprietary infrared heating equipment designed specifically to elevate the temperature of the pavement without adversely affecting it and then imprinting into the heated HMA pavement a specialized plastic template to create depressions to match the desired pattern. The DuraTherm® thermoplastic, pre-cut to match the pattern, is then installed within the depressions and melted in place.
- D. As shown in the typical Cross-section shown below, the top of the DuraTherm® thermoplastic is installed slightly below the surface level of the surrounding HMA pavement thereby allowing the pavement to absorb the effects of the traffic:



SPECIFICATION

E. DuraTherm® is a pavement marking system designed so that the HMA pavement surrounding the DuraTherm® thermoplastic absorbs the physical effects of the traffic. When installed in accordance with recommended installation guidelines by an **Accredited DuraTherm® Applicator**, the installed DuraTherm® thermoplastic will wear at a similar rate as the surrounding HMA pavement. Therefore the life of the DuraTherm® pavement marking system is dependent upon using a long lasting, durable and stable HMA pavement that will not wear prematurely.

F. DuraTherm® thermoplastic is available in a variety of standard patterns and colors which can be viewed at www.integratedpaving.com. Custom patterns and decorative designs are also available. Please contact Integrated Paving Concepts (Tel. 800-688-5652) for further information.

G. DuraTherm® thermoplastic is available either with impregnated glass beads (to provide retro-reflectivity) or without glass beads.

H. DuraTherm® is a registered Trade-mark product.

1.2 REFERENCES

- A. ASTM D570 Standard Test Method for water absorption of plastics.
- B. ASTM D36 ASTM D36-06 Standard Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus).
- C. AASHTO T250 Binder Content
- D. ASTM D792 Standard Test method for density and specific gravity (relative density) and density of solid plastics.
- E. AASHTO T250 Low Temperature Stress resistance
- F. ASTM D 2240 Standard Test Method for Rubber property – Durometer hardness.
- G. ASTM D256, Method A Standard Test Method for determining the IZOD pendulum impact resistance of plastics.
- H. ASTM D92 Test Method for Flash points.
- I. California Skid test method 342 completed by Skidtest Enterprises, Inc. report date September 19, 2005.

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1.3 DEFINITIONS

- A. “HMA Pavement” is Hot Mix Asphalt pavement.
- B. “Accredited DuraTherm® Applicator” is an applicator that is accredited and licensed for the current calendar year by Integrated Paving Concepts Inc. (Tel. 800-688-5652) to install DuraTherm®.
- C. “Imprinting HMA pavement” is defined as pressing a flexible plastic template into re-heated, fully compacted HMA pavement to produce a depression for the installation of the DuraTherm® thermoplastic.

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SPECIFICATION

- D. “Owner” means the Owner and refers to the representative person who has decision making authority for the implementation of the DuraTherm® system.
- E. “The Work” is as outlined in the Scope of Work and includes the execution of the DuraTherm® process.
- F. “ASTM” American Society for Testing and Materials.
- G. “AASHTO” American Association of State Highway and Transportation Officials.

1.4 REQUIRED BID SUBMITTAL DOCUMENTS

The documents required as part of bid submission are as follows:

- A. Product Data Sheet for DuraTherm® thermoplastic.
- B. DuraTherm® thermoplastic samples.
- C. A copy of the current year certificate of accreditation as provided by Integrated Paving Concepts, Inc. to the **Accredited DuraTherm® applicator** or written verification from Integrated Paving Concepts that the bid applicator is qualified to perform this Work.

PART 2: PRODUCTS

2.1 MATERIALS

DuraTherm® thermoplastic shall be provided as pre-cut panels in sizes to conform to the specified pattern, widths and shapes. DuraTherm® thermoplastic shall be packaged in accordance with accepted commercial standards and if stored, placed indoors in a cool dry area.

2.1.1 Characteristics of DuraTherm® thermoplastic.

- A. DuraTherm® thermoplastic consists of homogeneously mixed non-hazardous polymer resins, pigments, fillers consisting of TiO₂ and CaCO₃, fibers, and, for applications requiring retro-reflectivity, glass beads. No solvents or volatiles are used in the formulation.
- B. DuraTherm® thermoplastic shall be supplied preformed or precut at a standard thickness of 90 mils (2.30 mm).
- C. DuraTherm® thermoplastic can be provided either as non-reflective or as a retro-reflective pavement marking material through the use of glass beads homogeneously mixed in the thermoplastic.
- D. Upon heating to application temperature, the DuraTherm® thermoplastic will flow and preserve the integrity of its properties including its color.
- E. Environmental and Chemical Resistance: DuraTherm® thermoplastic is resistant to deterioration when exposed to sunlight, gasoline, oil, salt, water or adverse weather conditions.
- F. Professional independent testing using California Skid Test Method 342 concluded that there is no reduction in the skid factor where the DuraTherm®

SPECIFICATION

thermoplastic is inlaid into the HMA pavement. Refer to References Section. This report is available from Integrated Paving Concepts Inc. upon request.

- G. Storage Life: **DuraTherm®** thermoplastic can be stored for a period of two years if stored indoors at room temperature (21°C +/-3°C) (70°F +/-5°F).
- H. **DuraTherm®** thermoplastic is suitable for application on high quality, stable HMA pavement both new and old. Under normal conditions, bond strength on HMA pavement surfaces shall be sufficient for the material to remain in place for a number of years.

2.1.2 Product Data Sheet (tests under Florida DOT Specification 971-5-2006 and 523 for Thermoplastic Materials for Traffic Striping.)

Characteristic	Test Method	Typical Results of DuraTherm® thermoplastic
Water Absorption	ASTM D570	0.27%
Binder Content	AASHTO T250	20.01% with d.o. beads
Softening point	ASTM D36	240°F
Low Temp. Resistance @ 15°F	AASHTO T250	No visual cracks
Specific Gravity	ASTM D792	2.00
Indentation resistance @ 110°F for 15 sec.	ASTM D 2240 (after flaming)	43 (Shore A)
Impact Resistance	ASTM D256, Mtd A	4.9+ N-m
Flash Point	ASTM D92	500°F

A copy of the product data sheet is available from Integrated Paving Concepts Inc. upon request.

2.2 EQUIPMENT

The following equipment is proprietary and is an integral part of the proper execution of the **DuraTherm®** process. This equipment is available only from Integrated Paving Concepts Inc. and can only be used by **Accredited DuraTherm® applicators** or an applicator authorized by Integrated Paving Concepts Inc.

- A. **Plastic Templates** are used for imprinting the specified pattern into the HMA pavement. Templates are thicker than the **DuraTherm®** thermoplastic to enable the applicator to ensure the top of the inlaid thermoplastic is slightly lower than the surrounding HMA pavement surface. Templates shall be supplied by Integrated Paving Concepts Inc.

SPECIFICATION

- B. **Re-Heat Equipment.** Integrated Paving Concepts offers three mobile, proprietary pieces of equipment designed specifically to elevate the temperature of the HMA pavement without adversely affecting it. Two of these, the **SR-120 and SR-60 Reciprocating Infra-Red Heaters (SR-120, SR-60)** each employ a bank of propane-fired heaters mounted on a track device such that these can reciprocate back and forth over a designated area thereby allowing the operator to monitor the temperature of the HMA pavement and the thermoplastic at all times during the pavement re-heating process.
- C. The third mobile re-heat device is the **SR-20 Infrared Heater (SR-20)**. The **SR-20** is designed specifically to heat areas such as borders and narrow areas that are inaccessible to the **SR-120 and SR-60** heaters. Similar to the **SR-120 and SR-60**, the **SR-20** allows the operator to monitor the temperature of the HMA pavement and the thermoplastic at all times during the heating process.
- D. The **StreetHeat Portable Jet Heater** is a hand-held portable heating device to be used to heat isolated areas of the HMA pavement or **DuraTherm®** thermoplastic.
- E. The **DuraTherm® Hand Held finishing tool (DT-HHFT)** enables the applicator to complete the imprinting of the HMA pavement in areas around permanent structures such as curbs and manholes covers which may be inaccessible to the template.
- F. Vibratory Plate Compactors shall be used for pressing the plastic templates into the heated asphalt to create the specified pattern. Please note that Integrated Paving Concepts does not supply Vibratory Plate Compactors.

PART 3: EXECUTION

3.1 GENERAL

DuraTherm® shall be supplied and installed only by an **Accredited DuraTherm® Applicator** or an applicator authorized by Integrated Paving Concepts Inc. in accordance with the plans and specifications or as directed by the Owner. In any circumstance, do not begin installation without confirmation of Applicator accreditation or authorization.

3.2 PRE-CONDITIONS – HMA PAVEMENT

DuraTherm® is a pavement marking system designed so that the HMA pavement surrounding the **DuraTherm®** thermoplastic absorbs the physical effects of the traffic. When installed in accordance with recommended installation guidelines by an **Accredited DuraTherm® Applicator**, the installed **DuraTherm®** thermoplastic will wear at a similar rate as the surrounding HMA pavement. Therefore the life of the **DuraTherm®** pavement marking system is

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dependent upon using a long lasting, durable and stable HMA pavement that will not wear prematurely.

This Section 3.2 is to be used as a guide towards achieving a high quality HMA pavement. It does not supersede other specifications pertaining to this Work, nor does it replace recommendations made by the engineer of record for this Work.

3.2.1 Pre-requisites for new HMA pavement:

- stable sub-grade or base over which the HMA pavement is laid.
- proper mix design for the traffic loads.
- proper placement and compaction practices.

3.2.1.1 Sub-grade: The sub-grade must be stable and should be inspected to identify any areas of soft or yielding soil that are too weak to properly support the paving equipment. These soft spots must be over-excavated and re-compacted to meet the engineer's requirements. Prior to paving, the sub-grade and base courses must be thoroughly and uniformly compacted, properly graded and constructed in accordance with the engineer's specifications. Please refer to the related sections for more exact requirements of this work.

3.2.1.2 Guidelines for HMA pavement mix design.

A durable, stable mix design is a pre-requisite for all long-lasting HMA pavement surfaces, especially those that will experience vehicle traffic. The application of DuraTherm® does not change this requirement. **Generally, the HMA pavement mix design for roadways as prescribed by the local jurisdiction will be sufficient for the application of DuraTherm®.** Failure to use a stable mix design may lead to premature failure of the HMA pavement such as raveling, rutting or segregation. The appropriate pavement structure is not within the scope of this specification; however, this specification can offer some general guidelines as follows:

- Stability** is a good general guide: generally, if the surface course design has a minimum Marshall Stability of 10 KN (about 2250 lbs) and design densities are achieved during compaction, the pavement should perform adequately.
- The nominal aggregate size for the HMA pavement should not be less than 3/8" or greater than 5/8".
- If a more stable mix design than is offered by the locally prescribed surface course is required, contact the HMA producer, the engineer of record or Integrated Paving Concepts Inc. for suggestions as to how to increase stability.

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3.2.1.3 Placement of New HMA Pavement

- A. Successful placement of HMA pavement includes compaction of the mix when it is hot and compaction of the mix to the minimum densities required for the specified air voids. Generally, the first pass of the rollers is to be done when the asphalt mixture is at minimum 230°F (110°C); the compaction process must be **completed** before the **in-place** temperature of the mixture cools to 185°F (85°C) or higher depending on the type of asphalt and/or modifiers used. For applications that will experience vehicle traffic and wherever it is possible, compaction is to be completed using a paving machine and a self-propelled roller.
- B. **Handwork**, which includes placing and spreading by hand and the use of hand operated compaction equipment, should be restricted to areas that cannot be accessed by the paving machine or the self-propelled rollers. Compaction must be completed when the pavement is hot as described above. Handwork is to be done carefully and the material distributed uniformly so there will be no segregation.
- C. The pavement must be smooth, without seams and graded to achieve proper drainage.

3.2.2 Pre-requisites for existing pavement

Depending upon the condition and age, existing HMA pavement may or may not be suitable for the successful application of **DuraTherm®**. The **Accredited DuraTherm® Applicator** can advise whether the HMA pavement is suitable or not.

3.2.3 Recommended guidelines for Mill & Fill applications.

A tack coat must be applied to ensure proper adhesion of the new HMA material to the old pavement substrate. A durable, stable mix design is a pre-requisite for all Mill & Fill applications - especially those that will experience vehicle traffic. The application of the **DuraTherm®** process does not change this requirement. A minimum lift thickness of two inches is recommended. Due to the thin lift thickness, it is especially critical to ensure that the HMA concrete is compacted when it is hot. It is generally recommended to not proceed with a Mill & Fill pavement application when the outside air temperature is less than 50°F (10°C).

3.2.4 Pavement Marking Removal.

Because the aesthetics of the final product depends largely upon the condition of the HMA pavement, use of pavement marking removal methods is likely to produce a pavement surface that is unsatisfactory for the installation of **DuraTherm®**. A test area may be used to check if adequate or not. The Owner shall determine if the removal of the markings is satisfactory for the application of **DuraTherm®**. Work shall not proceed until this approval is granted.

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3.2.5 Surface Preparation.

The HMA pavement surface shall be dry and free from all foreign matter, including but not limited to dirt, dust, de-icing materials, and chemical residue.

3.3 LAYOUT

Layout of the pattern for imprinting into the surface of the HMA pavement shall be as per the drawings and specifications and in accordance to the methods prescribed by the **DuraTherm**® applicator in conjunction with the **Owner**.

3.4 HEATING THE HMA PAVEMENT

The Applicator shall follow the latest Recommended Application Procedure Guidelines as provided by Integrated Paving Concepts Inc. Primary heating of the pavement surface is accomplished with the **SR-120** or **SR-60** reciprocating infrared heaters.

- A. **Pavement temperature.** The optimal pavement temperature for imprinting the template is dependent upon mix design, modifiers used in the mix, and the age of the pavement. Typically, the surface temperature of the pavement should not exceed 325°F as determined by an infra-red thermometer.
- B. In order to achieve the proper depth of imprint it is important to elevate the HMA pavement temperature to a minimum depth of 1/2 inch (12.5mm) without burning the pavement surface.

3.5 SURFACE IMPRINTING

Once the HMA pavement has reached imprinting temperature, the templates shall be placed and held in position then pressed into the surface using vibratory plate compactors. Once the top of the template is level with the surrounding HMA pavement, the template can be removed. Areas that have an imprint depth less than the depth of the template shall be re-heated and re-stamped prior to installing the **DuraTherm**® thermoplastic.

In areas difficult to get at with the template, or areas that have light print, the hand held finishing tool may be used to complete the imprint process.

3.6 INSTALLING DURATHERM THERMOPLASTIC

- A. The HMA pavement surface shall be dry and free from all foreign matter, including but not limited to dirt, dust, de-icing materials, and chemical residue.
- B. The pre-cut **DuraTherm**® thermoplastic panels shall be installed within the imprinted depressions, ensuring the appropriate overlap at the thermoplastic joints.
- C. Heat shall be re-applied to the HMA pavement surface using the **SR-60** or **SR-120**, slowly raising the surface temperature until the thermoplastic panels

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start to liquefy and flow. The **SR-20** and/or the **Portable jet heater** may also be used to raise the surface temperature, typically in areas that are difficult to heat using the **SR-60** or **SR-120**. The temperature shall be monitored to ensure the thermoplastic is not over-heated. The thermoplastic panel must be heated to its full depth in order for the thermoplastic material to melt and create a bond with the underlying HMA pavement.

- D. The joints between the thermoplastic pieces are to be melted together creating a seamless installation.
- E. Once the thermoplastic panel has been liquefied to its full depth, the heat source shall be removed and the surface allowed to cool.
- F. For applications when the outside air temperature is low, care must be taken to ensure the thermoplastic is thoroughly heated to assure a bond between it and the underlying HMA pavement. It is generally recommended to not proceed with the **DuraTherm®** process when the outside air temperature is below 40°F (5° C).
- G. Do not install during periods of precipitation.
- H. Do not install when there is frost in the designated area.

3.7 PROTECTION AND OPENING TO TRAFFIC

- A. The melted **DuraTherm®** thermoplastic is to be protected until it cools and hardens. Do not permit any debris such as dust, water, pollen etc to come in contact with the melted thermoplastic.
- B. The road may be opened to traffic once the thermoplastic has cooled to 140°F (60° C).

PART 4 – MEASUREMENT AND PAYMENT

4.1 Measurement

The measured area is the actual area of HMA pavement that has received the **DuraTherm®** thermoplastic measured in place. No deduction will be made for the area(s) occupied by manholes, inlets, drainage structures, bollards or by any public utility appurtenances within the area.

4.2 Payment

Payment will be full compensation for all work completed as per conditions set out in the contract. For unit price contracts, the payment shall be calculated using the measured area as determined above.