CITY COUNCIL AGENDA ITEM COVER MEMO

Agenda Item Number_____

Meeting Type: Regular

Meeting Date: 2/14/2013

Action Requested By:
Water Pollution Control

Agenda Item Type

Resolution

Subject Matter:

Agreement with Croy Engineering, L.L.C.

Exact Wording for the Agenda:

Resolution authorizing the Mayor to enter into an agreement with Croy Engineering, L.L.C. for Engineering Design Services for Cast in Place Pipe (CIPP) Rehabilitation, Project No. 65-13-SP13

Note: If amendment, please state title and number of the original

Item to be considered for: Action

Unanimous Consent Required: No

Briefly state why the action is required; why it is recommended; what Council action will provide, allow
and accomplish and; any other information that might be helpful.

Engineering services contract to provide Water Pollution Control with design services for the WPC 2013 CIPP Rehabilitation project. This project will prepare bid documents for the trenchless technology of cast in place pipe for sanitary sewer rehabilitation on the gravity sanitary sewer. Design services in a lump sum total contract amount of $19,450.00. Account No. 02-8000-0815-1338

Associated Cost:

Budgeted Item: Select...

MAYOR RECOMMENDS OR CONCURS: Select...

Department Head: Shane Cook

Date: 1-24-13

revised 3/12/2012

ROUTING SLIP
CONTRACTS AND AGREEMENTS

Originating Department: **Water Pollution Control** Council Meeting Date: **2/14/2013**

Department Contact: **Shane Cook** Phone # **256-883-3719**

Contract or Agreement: **Cast in Place (CIPP) Rehabilitation**

Document Name: **Croy Engineering-Sewer line Rehab- Project No.** 65-13-SP13

City Obligation Amount: **$19,450.00**

Total Project Budget: **$19,450.00**

Uncommitted Account Balance: **0**

Account Number: **02-8000-0815-1338**

Procurement Agreements

Not Applicable	**Not Applicable**

Grant-Funded Agreements

Not Applicable	**Grant Name:**

Department	Signature	Date
1) Originating	Shane Cook	1-24-13
2) Legal	Mary Cates	1-30-13
3) Finance	[illegible]	1/30/13
4) Originating		
5) Copy Distribution		
a. Mayor's office (1 copies)		
b. Clerk-Treasurer (Original & 2 copies)		

RESOLUTION NO. 13-_____

BE IT RESOLVED by the City Council of the City of Huntsville, Alabama, that the Mayor be, and is hereby authorized, to enter into an agreement with Croy Engineering, L.L.C. in the amount of NINETEEN THOUSAND FOUR HUNDRED FIFTY AND NO/100 DOLLARS ($19,450.00) for Engineering Design Services for Cast in Place Pipe (CIPP) Rehabilitation, Project No. 65-13-SP13, in Huntsville, Alabama, on behalf of the City of Huntsville, a municipal corporation in the State of Alabama, which said agreement is substantially in words and figures similar to that document attached hereto and identified as "Agreement between City of Huntsville and Croy Engineering, L.L.C. for Engineering Design Services for Cast in Place Pipe (CIPP) Rehabilitation, Project No. 65-13-SP13" consisting of a total of eighteen (18) pages plus twenty-seven (27) additional pages consisting of Attachments 1-15, and the date of February 14, 2013, appearing on the margin of the first page, together with the signature of the President or President Pro Tem of the City Council, and an executed copy of said document being permanently kept on file in the Office of the City Clerk of the City of Huntsville, Alabama.

ADOPTED this the 14th day of February, 2013.

_____
President of the City Council of the City of Huntsville, Alabama

APPROVED this the 14th day of February, 2013.

_____
Mayor of the City of Huntsville, Alabama

AGREEMENT BETWEEN

CITY OF HUNTSVILLE, ALABAMA

AND

CROY ENGINEERING, L.L.C.

FOR

ENGINEERING DESIGN SERVICES

FOR

CAST IN PLACE PIPE (CIPP) REHABILITATION

Project I.D Number 65-13-SP13
February 14, 2013

President of the City Council of the City of Huntsville, AL
Date: February 14, 2013

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AGREEMENT BETWEEN

CITY OF HUNTSVILLE, ALABAMA
AND
CROY ENGINEERING, L.L.C.
FOR
ENGINEERING DESIGN SERVICES
FOR
CAST IN PLACE PIPE (CIPP) REHABILITATION

Project I.D Number 65-13-SP13

THIS AGREEMENT made as of the 14th day of February in the year 2013, by and between the CITY OF HUNTSVILLE, ALABAMA (hereinafter called OWNER), and CROY ENGINEERING, L.L.C. (hereinafter called ENGINEER).

WITNESSETH, for the considerations hereinafter set forth, the parties hereto agree as follows:

ARTICLE 1 - ENGAGEMENT OF THE ENGINEER

The OWNER hereby engages the ENGINEER, and the ENGINEER hereby accepts the engagement to provide general engineering and consultation as a representative of the OWNER to include the following:

1.1 Professional engineering services for design of Cast in Place Pipe (CIPP) Rehabilitation as further described in ARTICLE 2, and hereinafter called PROJECT.

1.2 By executing this Agreement, the ENGINEER represents to the OWNER that the ENGINEER is a professional qualified to act as the ENGINEER for the PROJECT and is licensed and certified to practice engineering by all public entities having jurisdiction over the ENGINEER and the PROJECT. The ENGINEER further represents to the OWNER that the ENGINEER will maintain all necessary licenses, certifications, permits or other authorizations necessary to act as ENGINEER for the PROJECT until the ENGINEER's remaining duties hereunder have been satisfied. The ENGINEER shall assign only qualified personnel to perform any service concerning the PROJECT. All services rendered by the ENGINEER for the PROJECT shall be performed by or under the immediate supervision of experienced and qualified professionals licensed, certified, and registered as appropriate in the State of Alabama possessing the expertise in the discipline of the service being rendered. The ENGINEER assumes full responsibility to the OWNER for the negligent acts, errors and omissions of its consultants or others employed or retained by the ENGINEER in connection with the PROJECT.

1.3 Execution of this Agreement by the ENGINEER constitutes a representation that the ENGINEER has become familiar with the PROJECT site and the local conditions under which the PROJECT is to be implemented. The ENGINEER agrees to provide all necessary

engineering services required to professionally accomplish the ENGINEER's defined scope of services.

ARTICLE 2 – DESIGN SERVICES OF THE ENGINEER

2.1 ENGINEER shall provide for OWNER professional engineering services for design of Cast in Place Pipe (CIPP) Rehabilitation.

2.2 These services shall include consultation and advice; customary civil, structural, mechanical and electrical engineering design services; and Architectural services incidental thereto, as outlined herein and further described in the SCOPE OF SERVICES, ATTACHMENT 1.

2.3 Upon the OWNERS authorization, the ENGINEER shall prepare construction documents consisting of drawings and specifications setting forth in detail the requirements for construction of the PROJECT. The ENGINEER warrants that such construction documents are accurate, coordinated and adequate for the construction and in conformity and comply with applicable laws, codes and regulations. Products specified for use shall be readily available unless written authorization to the contrary is given by the OWNER. Products or materials specified by the ENGINEER that are available from only one source shall be justified in writing by the ENGINEER in order to meet applicable federal, state, or local procurement or bid requirements.

2.4 The ENGINEER shall prepare appropriate bid alternates as necessary in order to assure that the PROJECT can be awarded within the PROJECT budget limitations.

2.5 The ENGINEER shall serve as the OWNER's professional representative in those portions of the PROJECT to which this Agreement applies and shall consult with and advise the OWNER during the performance of these services.

2.6 The ENGINEER shall incorporate into its design, and into its final work products, the requirements contained within the OWNER's engineering standards, standard specifications, and design manuals referenced in ATTACHMENT 3. The requirements of the State of Alabama Department of Transportation design standards shall be reviewed for applicability and incorporated into portions of the work where joint participation between the OWNER and the State is applicable. When conflicts are noted between the OWNERS requirements and standards of others, the OWNERS standards shall take precedent. Discrepancies shall be brought to the attention of the OWNER. Deviations from OWNER's requirements shall be identified to the OWNER by the ENGINEER in writing prior to incorporating the changes.

2.7 The ENGINEER shall obtain all Planning Commission approvals with regard to location, character and extent, as required.

2.8 The ENGINEER shall obtain a Utility Project Notification Form (Attachment 10) from all affected utilities on the project by the 60% design review stage. Acceptance shall be provided as a signed original by all affected parties at the 90% design review stage.

2.9 The ENGINEER shall promptly correct, or have corrected, any errors, omissions, deficiencies or conflicts in the ENGINEER's work product or that of his sub-contractors/sub-consultants, without additional compensation for time, reproduction or distribution.

2.10 During the process of design and preparation of the construction documents, the ENGINEER shall review with the OWNER the construction documents, the estimate of probable construction cost, schedule, and other design services issues. Such review shall be, at a minimum, as outlined in ATTACHMENT 4 as 0%, 30%, 60%, and 90% completion stage.

Following such reviews, the ENGINEER shall make any appropriate revisions thereto to assure compliance with the OWNER's requirements.

2.11 Field surveying work is required and shall be performed in accordance with "Standards of Practice for Surveying in the State of Alabama" as required by the Alabama Board of Registration for Engineering and Land Surveyors. Surveying shall include P.K. Nails or other permanent stationing markings as well as staking of right-of-way, easements and parcels of land acquired by the City of Huntsville. Property corners shall be set at the new right-of-way. Easements shall be staked as requested by the City of Huntsville. The above field work shall be performed as a minimum as needed at the time of right-of-way acquisition and one additional time near the 100% submittal stage as determined by the OWNER. The cost for these services is included in the fees for Basic Services.

Survey data shall be based on a US Public Land Survey System corner or quarter corner. Said corner or quarter corner shall be field verified by the surveyor and a state plane coordinate provided in deliverables submitted to the City of Huntsville. All survey work shall be based on the following datum's:

Coordinate System:	US State Plane
Zone:	Alabama East 0101
Vertical Datum:	The North American Vertical Datum of 1988 (NAVD 88)
Horizontal Datum:	The North American Datum of 1983 (NAD 83)
Geoid Model:	Geoid03
Units:	US Survey Feet

2.12 The ENGINEER shall comply with the City of Huntsville Tree Ordinance and carry the requirements referenced therein with deliverables (drawings, specifications, etc.) in accordance with Section 27-57 of the City of Huntsville Code of Ordinances (Ord. No. 04-45, §13, 2-12-2004).

2.13 The ENGINEER shall prepare the prebid agenda after obtaining comments from stakeholders such as affected utilities, City of Huntsville Construction Project Engineer and Inspector(s), and other City of Huntsville departments as applicable. The ENGINEER shall moderate the prebid meeting, prepare meeting minutes, make clarifications, prepare addendums, and distribute to bidders.

2.14 A valid City of Huntsville license shall be maintained throughout the term of this contract. Additionally, the engineering firm shall be required to obtain and pay for all other federal, state or local permits, licenses, and fees which may be necessary or required in order to perform the work detailed herein.

ARTICLE 3 - CONSTRUCTION ADMINISTRATION SERVICES OMITTED

ARTICLE 4 - ADDITIONAL SERVICES

The following services of the ENGINEER are not included in Article 2. Nevertheless, the ENGINEER shall provide such services if authorized in writing by the OWNER, and they shall be paid for by the OWNER as provided in Article 7, unless otherwise noted.

4.1 Making revision in drawings, specifications or other documents when such revisions are inconsistent with written direction by the OWNER previously given, are required by the enactment of revision of codes, laws or regulations subsequent to the preparation of such

documents and not reasonably anticipated, or are due to other causes not within the control or responsibility of the ENGINEER, either in whole or in part.

4.2 Preparing drawings, specifications and supporting data in connection with change orders, provided that such change orders are issued by the OWNER due to causes not within the control or responsibility of the ENGINEER, either in whole or in part.

4.3 Providing additional services for repair or replacement of work damaged by acts of God or other cause during construction provided that such services are required by causes not the responsibility of the ENGINEER, either in whole or in part.

4.4 Providing services not otherwise required herein which are made necessary solely by the default of the ENGINEER or major defects or deficiencies in the work of the ENGINEER. These services shall be provided with no increase in the contract amount and will not be compensable on an hourly basis.

4.5 Providing expert witness services and other services arising out of claims.

4.6 Provide services to stake site during construction.

ARTICLE 5 - RESPONSIBILITIES OF OWNER

The OWNER, without cost to the ENGINEER, will perform the following in a timely manner so as not to delay the services of the ENGINEER:

5.1 Assist ENGINEER by placing at ENGINEER's disposal all available information pertinent to the PROJECT including previous reports and any other data relative to design or construction of the PROJECT.

5.2 Provide all criteria and full information as to OWNER's requirements for the PROJECT, including design objectives and constraints, space, capacity and performance requirements, flexibility and expendability, and any budgetary limitations. The OWNER shall also furnish copies of all design and construction standards, which OWNER will require to be included in the drawings and specifications.

5.3 Assist the ENGINEER as necessary in acquiring access to and making all provisions for the ENGINEER to enter upon public and private lands as required for the ENGINEER to perform the work under this agreement.

5.4 Designate in writing a person to act as the OWNER's representative with respect to the work to be performed under this Agreement, such person to have complete authority to transmit instructions, receive information, interpret and define the OWNER's policies and decision with respect to materials, equipment elements and systems pertinent to the work covered by this Agreement. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by ENGINEER, obtain advice of an attorney, insurance counselor and other consultants as OWNER determines appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of ENGINEER.

5.5 When requested by the ENGINEER, the OWNER will intercede on the ENGINEER's behalf when data from, or reviewed by third parties is not on schedule through no fault of the ENGINEER

5.6 The OWNER's review of any documents prepared by the ENGINEER or its consultants shall be solely for the purpose of determining whether such documents are generally consistent

with the OWNER's intent. No review of such documents shall relieve the ENGINEER of its responsibility for the accuracy, adequacy, fitness, suitability and coordination of its work product.

ARTICLE 6 - PERIOD OF SERVICES

6.1 The ENGINEER shall commence services pursuant to this agreement as of February 15, 2013. The final completion date for the completion of design services as outlined in Article 2 shall be August 30, 2013.

The ENGINEER shall perform these services with reasonable diligence and expediency consistent with sound professional practices. The ENGINEER shall include in his schedule an allowance for time required for OWNER's review of submissions and for approvals of authorities having jurisdiction over the PROJECT. When approved by the OWNER, the schedule shall not be exceeded by the ENGINEER, except for cause.

If the ENGINEER becomes aware of delays due to time allowances for review and approval being exceeded, delay by the OWNER, the OWNER's consultants, or any other reason beyond the ENGINEER's control, which may result in the schedule of performance of the ENGINEER's services not being met, the ENGINEER shall promptly notify the OWNER. If the OWNER becomes aware of any delays or other causes that will affect the ENGINEER's schedule, the OWNER shall promptly notify the ENGINEER. In either event, the ENGINEER's schedule for performance of its services shall be equitably adjusted.

ARTICLE 7 - PAYMENT TO THE ENGINEER

7.1 BASIC SERVICES

The OWNER shall compensate the ENGINEER for services rendered pursuant to this Agreement, excepting those services described as Additional Services in Article 4 of this Agreement, by payment of the LUMP SUM AMOUNT OF NINETEEN THOUSAND FOUR HUNDRED FIFTY AND NO/100 DOLLARS ($19,450.00) for design services as described in Article 2. Additional services of the ENGINEER as described in Article 4, if any, shall be compensated on an hourly basis in accordance with Attachment 5.

7.2 REIMBURSABLE EXPENSES

The scope of work for sub-contracted services is defined in the ENGINEER's scope of services, Attachment 1. The scope includes provisions for administration expenses for subcontracted services and reimbursable direct expenses including but not limited to laboratory tests and analyses; computer services; word processing services; permit fees, bonds, telephone, printing, binding and reproduction charges; and other similar costs. Indirect costs will have administrative fee reimbursements limited to no more than 5%. Direct costs are also limited to no more than 5% reimbursement.

Reimbursable expenses shall be limited during the term of this agreement as stated in Art. 7.1 Basic Services.

7.3 EFFECTIVE DATE

This contract shall have no force or effect unless and until it is executed by the OWNER and the ENGINEER and a properly executed copy is mailed to the ENGINEER with a notice to proceed (NTP). If a NTP is not issued within sixty (60) days commencing from the last date of execution of this CONTRACT by the OWNER and the ENGINEER, then this CONTRACT shall be NULL AND VOID, the OWNER will not be obligated to any

payment to the ENGINEER and the ENGINEER will not be obligated to perform any work under said CONTRACT.

PAYMENT SUMMARY

Engineering Design Services – LUMP SUM AMOUNT OF	$19,450.00
TOTAL CONTRACT AMOUNT:	**$19,450.00**

ARTICLE 8 - GENERAL PAYMENT PROCEDURE

8.1 INVOICES

8.1.1 The ENGINEER shall submit monthly invoices to the Administrative Officer in the Engineering Department, for the basic services described under Articles 2 and 4 for the design of the PROJECT. Invoices must include the City of Huntsville project name and number, dates of services, contract amount, previous billings and current billing. Along with each invoice, the ENGINEER must submit a consultant progress report in the format shown in Attachment 6 hereto. No payment will be made without the consultant progress report completed and attached. Monthly progress reports shall be submitted monthly even if no request for payment is made. If services under Article 4 are included in the invoice for additional services not included under the lump sum provisions, or services billed as time and material, the classification and hours of such persons rendering the services shall be attached to the invoice.

8.1.2 The signature of the ENGINEER on the invoice shall constitute the ENGINEER's representation to the OWNER that the services indicated in the invoice have progressed to the level indicated, have been properly and timely performed as required herein, that the reimbursable expenses included in the invoice have been reasonably incurred, that all obligations of the ENGINEER covered by prior invoices have been paid in full, and that, to the best of the ENGINEER's knowledge, information and informed belief, the amount requested is currently due and owing, there being no reason known to the ENGINEER the payment of any portion thereof should be withheld. Submission of the ENGINEER's invoice for final payment and reimbursement shall further constitute the ENGINEER's representation to the OWNER that, upon receipt from the OWNER of the amount invoiced, all obligations of the ENGINEER to others, including its consultants, incurred in connection with the PROJECT, have been paid in full. ENGINEER must designate on Attachment 6 – Progress Report in the appropriate space provided that such action has been completed.

8.2 TIME FOR PAYMENT

The OWNER shall make payment for services in Articles 2 and 4 within 60 days of receipt of valid invoice.

8.3 OWNER'S RIGHT TO WITHHOLD PAYMENT

In the event the OWNER becomes credibly informed that any representations of the ENGINEER, provided pursuant to Article 8.1.2, are wholly or partially inaccurate, the OWNER may withhold payment of sums then or in the future otherwise due to the ENGINEER until the inaccuracy, and the cause thereof, is corrected to the OWNER's reasonable satisfaction. Additionally, failure by the ENGINEER to supply substantiating records shall be reason to

exclude related costs from the amounts which might otherwise be payable by the OWNER to the ENGINEER.

8.4 REIMBURSABLE EXPENSES

8.4.1 In addition to the requirements set forth in 8.1 above, invoices for reimbursable expenses shall include such documentation as the OWNER may require. Reasonable expenses are limited to the following expenses:

(a) Transportation outside the immediate Huntsville area (50 mile radius) approved in advance by the OWNER in writing and incurred in connection with the PROJECT; (Per Department of Treasury, Internal Revenue Service Publication 1542, Per Diem Rates, for travel within the continental United States). Refer to website: www.irs.gov/pub/irs-pdf/p1542.pdf for more information.
(b) Charges for long-distance communications;
(c) Fees paid for securing approval of authorities having jurisdiction over the PROJECT,
(d) Actual costs of reproduction for items in excess of those included in the required services;
(e) Postage and handling charges incurred for drawings, specifications and other documents.

8.4.2 The ENGINEER shall set forth with particularity on its invoice the nature and cost of the expense item being billed, and attach to its invoice the written authorization, if any, required for such item; and shall bill expenses at actual cost or prevailing rate and without the addition of administrative charge, any multiple or surcharge.

8.5 W-9 TAXPAYER FORM

All ENGINEERING FIRMS are required to submit a Federal Tax Form W-9 to City of Huntsville at the time a contract is awarded. No payments of invoices can be made until this W-9 Tax Form has been properly submitted. A copy of the W-9 Tax Form can be requested from the OWNER or at the following website: www.irs.ustreas.gov/pub/irs-pdf/fw9.pdf.

ARTICLE 9 - GENERAL CONSIDERATIONS

9.1 GENERAL

OWNER and ENGINEER agree that the following sections and provisions shall apply to the work to be performed under this Agreement and that such provisions shall supersede any conflicting provisions of this Agreement.

9.2 SUB-CONTRACTED SPECIALIZED SERVICES

The ENGINEER may sub-contract specialized services required of the PROJECT to competent and experienced sub-consultants approved by the OWNER in writing. As a prime professional, the ENGINEER shall act as OWNER's representative for contracting, directing, and managing the services of sub-consultants. The OWNER shall have the right to reject any consultant provided that the OWNER raises a timely objection. At the time of the execution of this Agreement, the parties anticipate that the consultants listed in Attachment "7" hereto will be retained by the ENGINEER to provide services with respect to the PROJECT. Expenses payable to the ENGINEER for subcontracted services are limited to no more than 5% of the cost of the subcontracted services

9.3 PEER REVIEW

The OWNER reserves the right to conduct, at the OWNER"s expense, peer review of designs and drawings prepared by the ENGINEER and/or sub-consultant(s) for the PROJECT. The ENGINEER and sub-consultant(s) agree that knowledge and consent to review of their work by other engineers of the OWNER's choosing is hereby given in accordance with the ADMINISTRATIVE CODE (RULES AND REGULATIONS) of the Alabama State Board of Licensure for Professional Engineers and Land Surveyors, Chapter 330-X-14-.06(a) (13) effective January 2008 and as may be amended now or in the future pertaining to the Code of Ethics for review of the work of another engineer.

9.4 CLARIFICATION OF WORK

If reviewing agencies raise questions regarding the work of ENGINEER, OWNER will participate in such meetings as deemed necessary to explain and clarify this work.

9.5 CANCELLATION OF WORK

This Agreement may be canceled by either party in the event of default or violation of any of the provisions of this Agreement by the other party, by written notice delivered to the address of record by registered mail giving ten (10) days advance notice of the intention to cancel. In the event of cancellation of this Agreement, ENGINEER shall be paid for all work performed to date of cancellation, less any loss, damage, or liability incurred by reason of default of ENGINEER and all records, data, parameters, design calculations and other information collected or obtained in the performance of this Agreement shall be delivered to OWNER.

9.6 CHANGES

9.6.1 The OWNER may, at any time by written order, make changes within the general scope of the Agreement in the services to be provided. If such changes cause an increase or decrease in ENGINEER's cost of, or time required for performance of any services, whether or not changed by any order, an equitable adjustment shall be made and the Agreement shall be modified in writing accordingly. Upon notification of change, ENGINEER must assert any claim of ENGINEER for adjustment in writing within 30 days from the date of receipt unless OWNER grants a further period of time.

9.6.2 If findings in any phase of this PROJECT significantly alter the scope of work for subsequent phases, or if regulations are changed resulting in a scope of work change for any phase, engineering fees set forth in Article 7 may be renegotiated by the OWNER and ENGINEER.

9.7 ENGINEER'S RECORDS

Documentation accurately reflecting services performed and the time expended by the ENGINEER and his personnel and records of reimbursable expenses shall be prepared concurrently with the performance of the services and shall be maintained by the ENGINEER. The ENGINEER shall maintain record copies of all written communications, and any memoranda of verbal communications related to the PROJECT. All such records and documentation shall be maintained for a minimum of five (5) years after the PROJECT date of final completion or for any longer period of time as may be required by law or good practice. If the ENGINEER receives notification of a dispute or of pending or commencement of litigation during this five-year period, the ENGINEER shall continue to maintain all PROJECT records until final resolution of the dispute or litigation. The ENGINEER shall make such records and documentation available to the OWNER upon notice and shall allow

the authorized representative(s) of the OWNER to inspect, examine, review and copy the ENGINEER's records at the OWNER's reasonable expense.

9.8 USE AND OWNERSHIP OF DOCUMENTS

All rights of ownership, copyrights, construction documents, including all drawings, specifications and other documents, electronic media, computer source code, or things prepared by or on behalf of the ENGINEER for the PROJECT are hereby transferred to the OWNER and shall be the sole property of the OWNER and are free of any retention rights of the ENGINEER. The ENGINEER hereby grants to the OWNER an unconditional right to use or to refer to, for any purpose whatsoever, the construction documents and any other documents or electronic media, computer source code prepared by or on behalf of the ENGINEER for the PROJECT, free of any copyright claims, trade secrets or other proprietary rights with respect to such documents. The ENGINEER shall be permitted to retain copies thereof for its records. The ENGINEER's documents and other work products are not intended or represented to be suitable for re-use by OWNER or others on extensions of the PROJECT or on any other PROJECT. Any re-use without specific written verification or adaptation by ENGINEER will be at OWNER's sole risk and without liability or legal exposure to ENGINEER, and OWNER shall indemnify and hold harmless ENGINEER from all claims, damages, losses and expenses including attorneys' fees arising out of, or resulting from, such reuse by the OWNER; provided however, that this agreement to indemnify and save harmless shall not apply to any reuse of documents retained by, or through, the ENGINEER.

9.9 ESTIMATE OF CONSTRUCTION COST

Since ENGINEER has no control over the construction cost of labor, materials, or equipment, or over the construction contractor(s) methods of determining prices, or over competitive bidding or market conditions, his opinion of probable PROJECT cost or construction cost provided for herein are to be made on the basis of his experience and qualifications and represent his best judgment as a design professional familiar with the construction industry; but, ENGINEER cannot and does not guarantee that proposals, bids or construction costs will not vary from opinions of probable cost prepared by him. If OWNER wishes greater assurance as to the construction cost, he will employ an independent cost estimator.

9.10 TERMINATION FOR CAUSE

This Agreement may be terminated by either party upon seven (7) days written notice to the other should such other party fail substantially to perform in accordance with its material terms through no fault of the party initiating the termination.

9.11 TERMINATION BY THE OWNER WITHOUT CAUSE

The OWNER may terminate this Agreement without cause upon seven (7) days' written notice to the ENGINEER. In the event of such a termination without cause, the ENGINEER shall be compensated for all services performed prior to termination, together with Reimbursable Expenses incurred. In such event, the ENGINEER shall promptly submit to the OWNER its invoice for final payment and reimbursement which invoice shall comply with the provisions of Paragraph 8.1.

ARTICLE 10 - INDEMNITY AND INSURANCE

10.1 INSURANCE

The ENGINEER shall carry insurance of the following kinds and amounts in addition to any other forms of insurance or bonds required under the terms of the contract specifications.

The ENGINEER shall procure and maintain for the duration of the job until final acceptance by the OWNER, or as later indicated, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the ENGINEER, his agents, representatives, employees or subcontractor.

10.2 MINIMUM SCOPE OF INSURANCE:

A. General Liability:

Insurance shall be written on an occurrence basis. Claims-made coverage will be accepted only on an exception basis after the OWNER's approval. The same insurance company should write General Liability Coverage and OWNERs ENGINEERs Protective Insurance.

B. Commercial General Liability

Products and Completed Operations
Contractual
Personal Injury
Explosion, Collapse and Underground
Broad Form Property Damage

C. Professional Liability:

Insurance may be written on a "claims-made" basis, providing coverage for negligent acts, errors or omissions in the performance of professional services. Coverage shall be maintained for a discovery and reporting period of no less than five (5) years after completion of the professional services and Certificates of Insurance shall be submitted to the OWNER on a yearly basis during this time frame. Coverage shall be no less comprehensive than that which is carried by at least 25% of the registered engineers or engineering firms contracting in the State of Alabama. Such coverage shall be carried on a continuous basis including prior acts coverage to cover the subject PROJECT. The professional liability insurance shall contain contractual liability coverage.

D. Automobile Liability:

Business Automobile Liability providing coverage for all owned, hired and non-owned autos. Coverage for loading and unloading shall be provided under either automobile liability or general liability policy forms.

E. Workers' Compensation Insurance:

Statutory protection against bodily injury, sickness or disease or death sustained by employee in the scope of employment. Protection shall be provided by a commercial insurance company or a recognized self-insurance fund authorized before the State of Alabama Industrial Board of Relations. "Waivers of Subrogation" in favor of the OWNER shall be endorsed to Workers' Compensation Insurance.

F. Employers Liability Insurance:

Covering common law claims of injured employees made in lieu of or in addition to a worker's compensation claim.

10.3 MINIMUM LIMITS OF INSURANCE:

A. General Liability:

Commercial General Liability on an "occurrence form" for bodily injury and property damage:

$ 2,000,000 General Aggregate Limit
$ 2,000,000 Products - Completed Operations Aggregate
$ 1,000,000 Personal & Advertising Injury
$ 1,000,000 Each Occurrence

B. Professional Liability:

Insurance may be made on a "claims-made" basis:

$ 500,000 Per Claim - Land Surveyors
$ 1,000,000 Per Claim - Other Professionals

C. Automobile Liability:

$ 1,000,000 Combined Single Limit per accident for bodily injury and property damage.

D. Workers' Compensation:

As required by the State of Alabama Statute

E. Employers Liability:

$ 1,000,000 Bodily Injury by Accident or Disease
$ 1,000,000 Policy Limit by Disease

10.4 OTHER INSURANCE PROVISIONS:

The OWNER is hereby authorized to adjust the requirements set forth in this document in the event it is determined that such adjustment is in the OWNER's best interest. If the insurance requirements are not adjusted by the OWNER prior to the OWNER's release of specifications with regard to the PROJECT in question, then the minimum limits shall apply. The City of Huntsville/OWNER shall be named on the policies of general liability and automobile insurance and on the certificate of insurance as an Additional Insured. Additional Insured status on the Commercial General Liability policy shall be through ISO Additional Endorsement CG 20 10 11 85 or equivalent and coverage shall be afforded on a primary basis.

The policies are to contain, or be endorsed to contain, the following provisions:

A. All Coverage:

The ENGINEER is responsible to pay all deductibles. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled, non-renewal or materially changed by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the OWNER. Cancellation of coverage for non-payment of premium will require ten (10) days written notice to the OWNER.

10.5 ACCEPTABILITY OF INSURERS:

Insurance is to be placed with insurers authorized by the State of Alabama with an A. M. Best rating of A-V or better.

10.6 VERIFICATION OF COVERAGE:

The OWNER shall be indicated as a Certificate Holder and the ENGINEER shall furnish the OWNER with Certificates of Insurance reflecting the coverage required by this document. The A. M. Best rating and deductibles, if applicable, shall be indicated on the Certificate of Insurance for each insurance policy. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf and must be an original signature. Certificates signed using digital signatures will not be accepted. All certificates are to be received and approved by the OWNER before work commences. The OWNER reserves the right to require complete, certified copies of all required insurance policies at any time.

10.7 CONSULTANTS AND/OR SUBCONTRACTORS WORKING FOR THE ENGINEER:

The ENGINEER shall furnish separate certificates and/or endorsements for each subcontractor and/or consultant showing insurance of the same type or types and to the extent of the coverage set forth in this Article 10.

10.8 HOLD HARMLESS AGREEMENT:

A. Other Than Professional Liability Exposures:

The ENGINEER, to the fullest extent permitted by law, shall indemnify and hold harmless the OWNER, its elected and appointed officials, employees, agents, and representatives against all claims, damages, losses and expenses, including, but not limited to, attorney's fees, arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to personal injury, including bodily injury sickness, disease or death, or to injury to or destruction of tangible property, including loss of use resulting there from, and (2) is caused by any negligent act or omission of the ENGINEER or any of their consultants, or anyone directly or indirectly employed by them or anyone for whose acts they are legally liable. Such obligation should 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 this paragraph.

B. Professional Liability:

The ENGINEER agrees, to the fullest extent permitted by law, to defend, protect, indemnify and hold harmless the OWNER, its elected and appointed officials, officers, directors, employees, agents, and representatives from and against any and all liability, claims, demands, damages, loss, costs, fees, and expenses (including actual fees and expenses of attorneys, expert witnesses, and other consultants) actually or allegedly arising out of, or resulting from, the professional services of the ENGINEER or the ENGINEER's consultants, subcontractors, or suppliers, including, without limitation, any breach of contract or any negligent acts, errors, or omissions in the performance of the professional services provided pursuant to or as a result of this Agreement. Neither, the OWNER nor the ENGINEER shall be obligated to indemnify the other party in any manner whatsoever for the other parties own negligence.

To the fullest extent permitted by law, the ENGINEER shall defend, protect, indemnify, and hold harmless the OWNER, its elected and appointed officials, officers, directors, employees, agents, and representatives from and against any and all liability, claims, demands, damages, loss, costs, fees and expenses (including actual fees and expenses of attorneys, expert witnesses, and other consultants) for infringement of patent rights, copyrights, or other intellectual property rights, except with respect to designs, processes or products of a particular manufacturer expressly required by the OWNER in writing. If the ENGINEER has reason to believe the use of a required design, process or product is an infringement of a patent, the ENGINEER shall be responsible for such loss unless such information is promptly given to the OWNER.

ARTICLE 11- MISCELLANEOUS PROVISIONS

11.1 GOVERNING LAW

This Agreement shall be governed by the law of the State of Alabama.

11.2 INTENT AND INTERPRETATION

11.2.1 The intent of this contract is to require complete, correct and timely execution of the work. Any work that may be required, implied or inferred by the contract documents, or any one or more of them, as necessary to produce the intended result shall be provided by the ENGINEER.

11.2.2 This contract is intended to be an integral whole and shall be interpreted as internally consistent. What is required by any one contract document shall be considered as required by the contract.

11.2.3 When a word, term or phrase is used in this contract, it shall be interpreted or construed, first, as defined herein; second, if not defined, according to its generally accepted meaning in the engineering industry; and third, if there is no generally accepted meaning in the engineering industry, according to its common and customary usage.

11.2.4 The words "include", "includes", or "including", as used in this contract, shall be deemed to be followed by the phrase, "without limitation".

11.2.5 The specification herein of any act, failure, refusal, omission, event, occurrence or condition as constituting a material breach of this contract shall not imply that any other, non-specified act, failure, refusal, omission, event, occurrence or condition shall be deemed not to constitute a material breach of this contract.

11.2.6 Words or terms used as nouns in this contract shall be inclusive of their singular and plural forms, unless the context of their usage clearly requires a contrary meaning.

11.3 TIME IS OF THE ESSENCE

Time limitations contained herein, or provided for hereby, are of the essence of this Agreement. The ENGINEER understands and acknowledges that time is of the essence in completion of the PROJECT and that the OWNER will incur damages if the PROJECT is not completed on time.

11.4 SUCCESSORS AND ASSIGNS

The ENGINEER shall not assign its rights hereunder, excepting its right to payment, nor shall it delegate any of its duties hereunder without the written consent of the OWNER. Subject to the provisions of the immediately preceding sentence, the OWNER and the ENGINEER, respectively, bind themselves, their successors, assigns and legal representatives to the other party to this Agreement and to the successors, assigns and legal representatives of such other party with respect to all covenants of this Agreement. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of any public body that may be party hereof, nor shall it be construed as giving any rights or benefits hereunder to anyone other than OWNER and ENGINEER.

11.5 NO THIRD-PARTY BENEFICIARIES

This Agreement shall inure solely to the benefit of the parties hereto and their successors and assigns. Nothing contained herein is intended to or shall create a contractual relationship with, or any rights in favor of, or any cause of action in favor or, any third party, against the OWNER or the ENGINEER.

11.6 INTELLECTUAL PROPERTY/ CONFIDENTIALITY

All information, documents, and electronic media, computer source code furnished by the OWNER to the ENGINEER belong to the OWNER, are considered proprietary and confidential, unless otherwise indicated by the OWNER, and are furnished solely for use on the OWNER's PROJECT. Such information, documents, and electronic media, computer source code shall be kept confidential by the ENGINEER, shall only be released as necessary to meet official regulatory requirements in connection with the PROJECT, and shall not be used by the ENGINEER on any other PROJECT or in connection with any other person or entity, unless disclosure or use thereof in connection with any matter other than services rendered to the OWNER hereunder is specifically authorized in writing by the OWNER in advance. This Section 11.6 shall survive the expiration of this Agreement.

11.7 SUBCONTRACT REQUIREMENTS

The ENGINEER shall include the terms and conditions of this Agreement in every subcontract or agreement with a consultant for this PROJECT so that these terms and conditions shall be binding upon each subcontractor or consultant. The subcontractor(s)/consultant(s) will maintain all licenses and certifications to practice its profession or trade by all public entities having jurisdiction over the PROJECT. The subcontractor (s)/consultant(s) further represent to the OWNER that the subcontractor(s)/consultant(s) will maintain all necessary licenses, certifications, permits or other authorizations necessary for the PROJECT until the remaining duties hereunder have been satisfied.

11.8 NOTICES

Unless otherwise provided, all notices shall be in writing and considered duly given if the original is hand delivered; if delivered by facsimile to 256-427-5325, or is sent by U.S. Mail, postage prepaid to City of Huntsville Engineering, P. O. Box 308 (35804), 320 Fountain Circle (35801), Huntsville, AL. All notices shall be given to the addresses set forth above. Notices, hand delivered or delivered by facsimile, shall be deemed given the next business day following the date of delivery. Notices given by U.S. Mail shall be deemed given as of the second business day following the date of posting.

11.9 STRICT COMPLIANCE

No failure of the OWNER to insist upon strict compliance by the ENGINEER with any provision of this Contract for Professional Services shall operate to release, waive, discharge, modify, change or affect any of the ENGINEER's obligations.

11.10 WAIVER

No provision of this Agreement may be waived except by written agreement of the parties. A waiver of any provision on one occasion shall not be deemed a waiver of that provision on any subsequent occasion, unless specifically stated in writing. A waiver of any provision shall not affect or alter the remaining provisions of this Agreement.

11.11 SEVERABILITY

If any provision of this Agreement, or the application thereof, is determined to be invalid or unenforceable, the remainder of that provision and all other provisions of this Agreement shall remain valid and enforceable.

11.12 ETHICS

The ENGINEER shall not offer or accept any bribes or kickbacks from or to any manufacturer, consultant, trade contractor, subcontractor, supplier or any other individual or entity in connection with the PROJECT. The ENGINEER shall not confer on any governmental, public or quasi-public official having any authority or influence over the PROJECT any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised. The ENGINEER shall not, without the express written permission of the OWNER, engage or recommend to the OWNER engagement of any consultant, trade contractor, subcontractor, or supplier to provide services on behalf of the ENGINEER, OWNER or PROJECT in which the ENGINEER has a direct or indirect proprietary or other pecuniary interest; or call for the use of or by exclusion require or recommend the use of products, materials, equipment, systems, processes or procedures in which the ENGINEER or in which any consultant, trade contractor, subcontractor, or supplier of the ENGINEER has a direct or indirect proprietary or other pecuniary interest. Without prior notification and written approval of the OWNER, the ENGINEER and the ENGINEER'S subconsultants shall not offer services to the OWNER'S contractor.

11.13 E-VERIFY – NOTICE

The ENGINEER shall enroll, and shall remain enrolled for the duration of this contract, in a designated employment eligibility verification system (E-Verify) in accordance with the City of Huntsville Ordinance 09-735. If the ENGINEER uses subcontractors in connection with the performance of work herein and the value of the subcontract exceeds $3,000, the subcontractor shall also comply with this ordinance. The ENGINEER shall include specific written notice in all requests for bids or proposals prepared by the ENGINEER that contractors and any subcontractors are required to enroll in the E-verify program as required by the ordinance. Failure to comply with the requirements of the ordinance shall be a material breach of the contract.

As a condition of this agreement, pursuant to 8 U.S.C.§1324a, Croy Engineering, L.L.C., hereby certifies that it has not knowingly employed, recruited, referred for a fee, or contracted with an unauthorized alien, with respect to employment in the United States.

Further, Croy Engineering hereby certifies that it has enrolled in the City of Huntsville designated employment eligibility verification system in accordance with Ordinance 09-735 and will maintain enrollment throughout the term of this contract.

Croy Engineering, L.L.C.
(Company)

BY: _____
(Authorized Representative)

11.14 ENTIRE AGREEMENT

This Agreement represents the entire agreement between the OWNER and the ENGINEER and supersedes all prior communications, negotiations, representations or agreements, either written or oral. This agreement may be amended only by written instrument signed by both OWNER and ENGINEER.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

OWNER:
CITY OF HUNTSVILLE

BY: _____
Tommy Battle

TITLE: Mayor

ATTEST: _____

Given under my hand this_____day

Of _____, 2013.

_____
Notary Public

My commission expires_____

ENGINEER:
CROY ENGINEERING, L.L.C.

BY: _____
Richard A. Somers

TITLE: Regional Project Manager

ATTEST: Ronneka Carter

Given under my hand this 28th day

Of January, 2013.

Mary A. Hollingsworth
Notary Public

My commission expires 3/28/15

ATTACHMENT 1-SCOPE OF SERVICES

(Refer to letter dated January 3, 2013, from Andy Somers to Shane Cook and attachments).

CROY ENGINEERING
Engineers
Planners
Surveyors

Croy Engineering, LLC
200 Clinton Avenue West
Regions Center, Suite 508
Huntsville, AL 35801

Phone: 256.517.8555
Fax: 256.517.8554

www.croyengineering.com

January 3, 2013

City of Huntsville, AL
Attn: Mr. Shane Cook
Water Pollution Control
1800 Vermont Road
Huntsville, AL 35802

Subject: Proposal and Agreement
Cast In Place Pipe (CIPP) Rehabilitation

Dear Mr. Cook,

Croy Engineering, LLC is pleased to submit the enclosed proposal for engineering services and contract assistance to the City of Huntsville for a sewer line rehabilitation using CIPP techniques. We are prepared to diligently pursue our efforts as soon as a notice to proceed is given.

Please feel free to contact me if you have any questions or need any additional information.

Sincerely,
Croy Engineering, LLC

P.E

Andy Somers, P.E.
Regional Project Manager

Enclosure (1)

Cc: File

Proposal for: City of Huntsville, AL

Project: Cast in Place Pipe (CIPP) Sewer Rehabilitation

Location: City-wide – Huntsville, AL

Proposed Project Description:

Croy understands that the City of Huntsville (COH) wishes to rehabilitate a number of deficient sewer lines using CIPP techniques. The sewer failures will cover several lines scattered across multiple sites through the City

Scope of Services:

1. Plan Set Preparation
   - Develop a plan set for te project that will consist of the following:
     - Cover Sheet
     - Mapping and highlighting of specific lines to be rehabilitated
     - Details, General notes, and specification references as applicable
   - Work with City personnel to determine lines to be rehabilitated, determine sewer pipe size and pipe materials from all available City information.

2. Develop Specifications and Bid Documents
   - Review previous specifications for similar projects, specification used in other jurisdictions, and other available material to develop specifications that reflect best practices and current state-of-the-art.
   - Incorporate all specifications, notices, forms, and required forms into a complete bid document package suitable for distribution to prospective contractors.
   - Review with City personnel and review/revise as necessary based on received comments.

3. Pre-bid and Contract Award activities
   - Prepare quantity and cost estimates for the project.
   - Prepare and attend one (1) pre-bid informational meeting for interested bidders. This shall include scheduling of the meeting, development of the meeting agenda, attendance at the meeting, and issuance of any bid document addenda as a result of the meeting.
   - Assist City at Bid Opening, to include bid tabulations and assistance with contact award.

Fees and Additional Services:

The fee for conducting the above services shall be on a lump sum basis for a total of **$19,450.00.** Fees above this amount shall not be charged unless the scope is changed by mutual agreement of Croy Engineering and the City of Huntsville. Additional services will be charged per the attached rate sheet and will include any associated direct costs incurred.

Invoicing:

Invoicing will be monthly based on the estimated percentage of work competed for that month. Our normal billing cycle ends on the 25th of each month and invoice will be issued by 28th of each month. All invoices are due 30-days from the date of the invoice.

Execution:
We are prepared to diligently pursue work efforts as soon asnotice to proceed is given. We will strive to have documents developed to allow for a construction target date of spring or early summer of 2013.

APPROVED:
City of Huntsville

Signed: Shane Cook Title: Director WPC

Printed Name: Shane Cook Date: 1-11-13

CIPP Proposal and Contract Support

	Sr. Eng. (AS)	Sr. Tech (PL)	Sr. Eng. (BW)	Sr. Prof (DEH)	Total Labor	Directs	Cost
Task 1: Plan Set Preparation							
Coordinate with WPC	4	8		2			
Obtain and coordinate with GIS	4						
Prepare Plan Set and Cover	8	40	2	2			
SUB-TOTAL FOR TASK	16	48	2	4	0		
COST FOR TASK	$ 1,840	$ 4,320	$ 230	$ 580	$ 6,970	$ -	**$ 6,970**
Task 2: Compile Specs and Contract							
Research other specs	2		2	2			
Compile Specs and Assemble Docs	4	24		2			
Tailor Specs to indvidual Project	8	4	2	2			
Estimates	2	4					
Document Assembly/Printing						$ 400	
SUB-TOTAL FOR TASK	16	32	4	6	0		
COST FOR TASK	$ 1,840	$ 2,880	$ 460	$ 870	$ 6,050	$ 400	**$ 6,450**
Task 3: Pre-Bid and Support							
Prepare Agenda, and support docs		4					
Pre-bid meeting	4	4		2			
Prepare and issue Addenda	4	8					
SUB-TOTAL FOR TASK	8	16	0	2	0		
COST FOR TASK	$ 920	$ 1,440	$ -	$ 290	$ 2,650	$ -	**$ 2,650**
Task 4: Opening							
Bid Tabulation	2	3					
Bid/Award Support	8						
Overall QCQA	8		4	4			
SUB-TOTAL FOR TASK	18	3	4	4	29		
COST FOR TASK	$ 2,070	$ 270	$ 460	$ 580	$ 3,380	$ -	**$ 3,380**
TOTAL HOURS	58	99	10	16	29		
TOTAL COST	$ 6,670	$ 8,910	$ 1,150	$ 2,320	$ 19,050	$ 400	**$ 19,450**

ATTACHMENT 2 - ALABAMA IMMIGRATION ACT - REPORT OF OWNERSHIP FORM

A. **General Information.** Please provide the following information:

- Legal name(s) (include "doing business as", if applicable): Cray Engineering, LLC
- City of Huntsville current taxpayer identification number (if available): 37527
  (Please note that if this number has been assigned by the City and if you are renewing your business license, the number should be listed on the renewal form.)

B. **Type of Ownership.** Please complete the un-shaded portions of the following chart by checking the appropriate box below and entering the appropriate Entity I.D. Number, if applicable (for an explanation of what an entity number is, please see paragraph C below):

☐ Individual or Sole Proprietorship	
☐ General Partnership	
☐ Limited Partnership (LP)	Number & State:
☐ Limited Liability Partnership (LLP)	Number & State:
☑ Limited Liability Company (LLC) (Single Member)	Number & State: 0527087, Georgia
☐ LLC (Multi-Member)	Number & State:
☐ Corporation	Number & State:
☐ Other, please explain:	Number & State (if a filing entity under state law):

C. **Entity I.D. Numbers.** If an Entity I.D. Number is required and if the business entity is registered in this state, the number is available through the website of Alabama's Secretary of State at: www.sos.state.al.us/, under "Government Records". If a foreign entity is not registered in this state please provide the Entity I.D. number (or other similar number by whatever named called) assigned by the state of formation along with the name of the state.

D. **Formation Documents.** Please note that, with regard to entities, the entity's formation documents, including articles or certificates of incorporation, organization, or other applicable formation documents, as recorded in the probate records of the applicable county and state of formation, are not required unless: (1) specifically requested by the City, or (2) an Entity I.D. Number is required and one has not been assigned or provided.

Please date and sign this form in the space provided below and either write legibly or type your name under your signature. If you are signing on behalf of an entity please insert your title as well.

Signature: [signature] Title (if applicable): managing partner

Type or legibly write name: James M. Cray Sr. Date: 1.12.12

ATTACHMENT 3
CITY OF HUNTSVILLE STANDARDS AND DESIGN GUIDES

1. City of Huntsville Standard Specifications for Construction of Public Improvements. Contract Projects, 1991.

2. City of Huntsville Engineering Standards, 1991.

3. City of Huntsville Design and Acceptance Manual for Force Mains and Pump Stations, 2011.

4. City of Huntsville Design and Acceptance Manual for Sanitary Sewers, 2011.

5. Alabama Department of Transportation Standard Specifications for Highway Construction, Current Edition.

6. City of Huntsville Subdivision Regulations, 1991.

ATTACHMENT 4
DESIGN REVIEWS

0% COMPLETE – PRE-DESIGN CONFERENCE

The ENGINEER shall meet with the OWNER at a 0% complete - Pre-Design Conference. The OWNER's representative (Project Engineer) will be introduced.

CONFERENCE FORMAT

The pre-design meeting will we initiated by the OWNER. The purpose of the conference will be to give the ENGINEER an opportunity to discuss the design of the PROJECT, to visit the PROJECT site, to receive copies of OWNER -furnished documents, if applicable, and to meet the OWNER'S Project Engineer and other personnel working on the PROJECT.

ATTENDEES: (Required)

- ENGINEER
- ALDOT (as appropriate for the type of project)
- Real Estate
- Landscape Management
- Utilities
- Traffic Engineering
- Planning

DISCUSSION TOPICS :

- Authority of OWNERS representative (Written submittal made to the ENGINEER)
- Scope of Work
- Time Requirements
- Budget Restraints
- Testing Requirements
- Permit Responsibilities
- Design criteria
- LC&E requirements
- Plan Requirements
- Special Conditions
- Utility Project Notification and a list of all utilities that need to be contacted.
- Tree Ordinance

REQUIRED SUBMITTALS TO THE PROJECT ENGINEER

1. A Certificate of Insurance for the ENGINEER and the ENGINEER's subconsultants shall be submitted to the OWNER's PROJECT ENGINEER per Section 10.6.

2. Prior to the Pre-Design Conference, a completed **draft** design criteria document shall be prepared to the best of the ENGINEER'S ability and in conformance with his fee proposal and will serve as the basis of a discussion topic during the Pre-Design Conference. A **final** version of the design criteria based upon discussion during the meeting shall be prepared by the ENGINEER and distributed with the meeting minutes. A copy of a design criteria format may be found on the City of Huntsville web site at http://www.huntsvilleal.gov/engineering/index.php.

3. Within seven (7) calendar days of the 0% Complete - Pre-Design Conference, the ENGINEER shall submit to the OWNER's Project Engineer two color copies and an electronic copy of a schedule in Microsoft Projects format showing the critical path and indicating the time frame for the required milestone events and submittals outlined in this document. The schedule shall support a PROJECT completion date in accordance with the Period Of Services in Article 6. When approved, a baseline of the schedule shall be saved from which variances in the schedule can be measured and evaluated.

ATTACHMENT 4
DESIGN REVIEWS

30% COMPLETE – CONCEPTUAL DESIGN

This design review is to show the OWNER how the functional and technical requirements will be met, to indicate the ENGINEER's approach to the solution of technical problems, to show compliance with design criteria or to justify noncompliance and to provide an estimate of probable cost. A field review shall be conducted at this juncture with the OWNER's staff and the ENGINEER to review the proposed field alignment of the PROJECT.

CONFERENCE FORMAT

ATTENDEES: (Required)

- Real Estate
- Landscape Management
- Utilities
- Traffic Engineering
- Planning
- City of Huntsville Construction Project Manager
- City of Huntsville Inspector
- City of Huntsville Environmental Representative

DISCUSSION TOPICS:

- ENGINEER presents recommended design/solutions along with other options and alternatives considered.
- ENGINEER presents updates on progress of permitting requirements
- ENGINEER presents progress on coordination with other project participants such as the State of Alabama, sub consultants, etc.
- ENGINEER presents budgetary constraints

REQUIRED SUBMITTALS TO THE PROJECT ENGINEER

1. A preliminary list of all permits to be obtained with associated fees.
2. An updated schedule in Microsoft Projects format showing the critical path shall be submitted.
3. Two color copies and an electronic copy of an updated schedule in Microsoft Projects format showing the critical path shall be submitted.

ATTACHMENT 4
DESIGN REVIEWS

60% COMPLETE – PRELIMINARY DESIGN CRITERIA

The review of the PROJECT at this point is primarily to insure that funding limitations are not being exceeded and to insure that the contract documents, design analysis and cost estimates are proceeding in a timely manner, and that the design criteria and previous review comments are being correctly interpreted. An additional review may be required by the OWNER to review changes proposed from previous submittals.

CONFERENCE FORMAT

ATTENDEES: (Required)

- Real Estate
- Landscape Management
- Utilities
- Traffic Engineering
- Planning
- City of Huntsville Construction Project Manager
- City of Huntsville Inspector
- City of Huntsville Environmental Representative

DISCUSSION TOPICS:

- Additional land acquisition needs, as required.
- Utility Project Notification and a list of all utilities that need to be contacted.
- Technical specifications for special construction items not covered under standard specifications or deviations from standard specifications.
- Update on progress of permitting requirements.
- Erosion control plan requirements, if required by the OWNER.
- Budget constraints.
- Progress on coordination with other project participants such as the City of Huntsville Real Estate Officers (Engineering Department), State of Alabama, sub consultants, etc.

REQUIRED SUBMITTALS TO THE PROJECT ENGINEER

1. One full size print copy and one ½ size print copy of all drawings that have incorporated previous comments shall be submitted. Plan/Profile drawings shall be 75% complete. Right-of way drawings shall be 100% complete at this submittal (reference Real Estate Division Plan Requirements Section entitled DRAWINGS, included at the end of this proposal)

2. An update to the schedule in Microsoft Projects format showing the critical path shall be submitted.

3. Unless determined to be inapplicable by the OWNER, Hydraulic reports 75% complete, shall be submitted.

4. Three (3) copies of preliminary plans for utilities shall be submitted.

5. Legal descriptions for takings shall be submitted. The information shall be 100% complete. (reference Real Estate Division Plan Requirements Section entitled DESCRIPTIONS, included at the end of this proposal)

6. Traffic Control Plan, if required. Plan shall be 60% complete at this submittal.

7. Detailed preliminary construction cost estimate shall be submitted.

8. Results of geotechnical investigations shall be submitted.

9. A list of comments made at the 30% review and a summary of each resolution.

10. Two color copies and an electronic copy of an update to the schedule in Microsoft Projects format showing the critical path shall be submitted.

ATTACHMENT 4
DESIGN REVIEWS

90% COMPLETE – FINAL REVIEW

The review of this submittal is to ensure that the design is in accordance with directions provided the ENGINEER during the design process.

CONFERENCE FORMAT

DISCUSSION TOPICS

Discussion topics will be handled open forum.

REQUIRED SUBMITTALS TO THE PROJECT ENGINEER

1. One full size print copy and one ½ size print copy of all drawings that have incorporated previous comments shall be submitted. Submittals include Plan/Profile drawings, Construction Details, Detailed cross-sections with cut and fill quantities and storm and sanitary sewer crossings, Erosion control plan, if required, Technical specifications, Right-of way drawings, Traffic Control Plan, Plans for Utilities, Signed Acceptance of Utility Project Notification Form by all affected parties, Design Calculations, and a final cost estimate. All submittals shall be 100% complete.

2. Any changes to Land Acquisition needs shall be identified and Legal descriptions for the changes shall be submitted.

3. A list of comments made at the 60% review and a summary of each resolution.

4. Calculations showing how quantities were determined for each bid item and how the item is to be measured in the field and paid. Three bound copies of corrected quantity calculations to match bid quantities. The following shall be required for each item:

   - Item Number
   - Item Description with standard specification used
   - Detailed calculation to include all measurements, conversion factors, and "standard" weights used
   - Final "calculated" amount and any "increased" amounts
   - Notes to include any deviation from referenced standard specifications

ATTACHMENT 4
DESIGN REVIEWS

100% COMPLETE – READY TO ADVERTISE

After the 90% review, the ENGINEER shall revise the construction documents by incorporating any comments generated during the previous design reviews. The ENGINEER shall prepare final hard copy contract specifications, prepare a bid form, and update the cost estimate as necessary.

CONFERENCE FORMAT

This is a submittal only. **Return this sheet with submittal**

YES	NO		REQUIRED SUBMITTALS TO THE PROJECT ENGINEER
☐	☐	1.	Two (2) sets of complete construction drawing prints sized 24" x 36" sealed and marked "ISSUED FOR CONSTRUCTION". Drawings information shall be referenced to Alabama State Plane Coordinate system, NAD1983 Alabama East Zone as described in the Code of Alabama (1975), Section 35-2-1. Surveys shall be tied to a minimum of two accepted GPS monuments or one GPS tie point plus an astronomic observation to determine grid north or GPS Survey.
☐	☐	2.	One (1) Micro station digital and One (1) digital file in either .tiff or .pdf format of construction drawings (must be signed and sealed) – sized 11" x 17".
☐	☐	3.	Two (2) sets of right-of-way drawing prints sized 24" x 36" sealed and marked "ISSUED FOR CONSTRUCTION". Drawings information shall be referenced to Alabama State Plane Coordinate system. NAD1983 Alabama East Zone
☐	☐	4.	One (1) Micro station digital file of right-of-way drawings.
☐	☐	5.	Two (2) print sets of 8-1/2" x 11" legal descriptions for right-of-way (REVISED SETS ONLY)
☐	☐	6.	One (1) digital text file of legal descriptions for right-of-way (REVISED FILE ONLY)
☐	☐	7.	One (1) print copy of Final Construction Cost Estimate.
☐	☐	8.	One (1) digital spread sheet file of Final Construction Cost Estimate.
☐	☐	9.	Three (3) printed and bound copies of corrected quantity calculations to match Final Bid Quantities.
☐	☐	10.	One (1) digital spread sheet file (Excel 2003 format) of Final Bid Quantities.
☐	☐	11.	Two (2) print sets of contract specifications.
☐	☐	12.	One (1) digital text file of contract specifications.
☐	☐	13.	One (1) complete set of signed and sealed calculations.
☐	☐	14.	One (1) complete set of all approved permits including Location, Character, and Extent, COE, ADEM, etc.
☐	☐	15.	One (1) complete set of all field notes.
☐	☐	16.	One (1) copy of digital aerial photography obtained for this PROJECT in (.tif) format, as necessary.
☐	☐	17.	Utility Project Notification forms and a list of all utilities that need to be contacted.

_____ Engineer

Croy Engineering LLC
2013 BILLING RATES

Senior Professional	**$145.00**
Survey/ Mapping Manager (RLS)	**$115.00**
Senior Engineer	**$115.00**
Engineer/Senior Designer	**$100.00**
Senior Planner/Technician	**$ 90.00**
Survey Field Manager	**$ 80.00**
Planner/Technician I	**$ 80.00**
Planner/Technician II	**$ 75.00**
Resident Inspector	**$ 70.00**
Technician	**$ 65.00**
CADD/Jr. Technician	**$ 60.00**
Administration	**$ 50.00**
1 Man Survey Crew (GPS)	**$ 80.00**
2 Man Survey Crew	**$105.00**
3 Man Survey Crew	**$145.00**

Reimbursables will be billed at cost.

ATTACHMENT 6 - PROGRESS REPORT
(Article 8)

PROGRESS REPORT NO. _____ FOR MONTH AND YEAR _____

PROJECT _____ PROJECT NO. _____

DATE _____ CITY'S PROJECT ENGINEER _____

CONSULTANT _____CONSULTANT'S PROJ. MAN. _____

CURRENT MONTH % COMPLETE: _____ PREV. MONTH % COMPLETE: _____

ATTACH A "SHOULD HAVE STARTED TASKS REPORT" AND A "SLIPPING TASKS REPORT" FROM MICROSOFT PROJECTS THAT LISTS ALL ACTIVITY THAT IS BEHIND SCHEDULE.

ATTACH A "TASKS STARTING SOON" REPORT FROM MICROSOFT PROJECTS WITH A DATE RANGE OF THIRTY (30) DAYS AFTER THE DATE OF THIS PROGRESS REPORT.

STATE WHAT ACTION IS BEING TAKEN TO BRING PROJECT BACK TO SCHEDULE:

_____

_____

_____

MILESTONE SUBMITTALS	SCHEDULED DATE	ACTUAL DATE
30%	_____	_____
60%	_____	_____
90%	_____	_____
100%	_____	_____
"FINAL" INVOICE SUBMITTED		_____
SUBCONSULTANTS PAID IN FULL		_____
CONTRACTED COMPLETION DATE:	August 30, 2013	_____

(These scheduled dates shall be agreed upon at the beginning of the project (Attachment 4) with the Project Engineer and noted monthly on each progress report. The scheduled contract completion date shall not be changed except by contract change order. Changes to the scheduled milestone submittal dates shall be accompanied by a new project schedule approved by the OWNER'S Project Engineer.)

UPDATED SCHEDULE ATTACHED? _____YES _____ NO
*If yes, send an electronic copy to the Project engineer

COMMENTS:

_____

_____

_____

This progress report (4 copies) shall be submitted monthly. Scheduled completion dates will not be extended without a contract modification.

CERTIFICATION: I certify that the stated information is true and accurate to the best of my knowledge.

_____ _____

CONSULTANT DATE CITY PROJECT ENGINEER DATE

ATTACHMENT 7 - SUB CONSULTANTS ENGAGED BY THE ENGINEER
(Article 9.2)

CONSULTANT NAME AND ADDRESS	DESCRIPTION OF SERVICES	FEE
	N/A	
	SUB-TOTAL	
	5% Administrative Fee	
	TOTAL	

ATTACHMENT 8 - CONTRACT DOCUMENT REQUIREMENTS LIST

REQUIREMENT	SUBMIT TO	SUBMITTAL REQUIREMENT DATE	NUMBER OF COPIES	REFERENCE SECTION OF CONTRACT AND COMMENTS
Deviations from OWNER's standards.	OWNER	Prior to incorporating deviations.	2	Article 2.5
Products or materials specified by the ENGINEER that are available from only one source.	OWNER	Prior to 100% submittal.	2	Article 2.2
Approval of ENGINEER's Request for Payment.	OWNER	Within ten (10) days of receipt of the request from the ENGINEER.	N/A	Article 3.4
Approval of ENGINEER submittals	OWNER	So as to cause no delay to the ENGINEER or the PROJECT.	N/A	Article 3.8
Change order changes that reduce construction requirements.	OWNER	Prior to authorizing a change.	N/A	Article 3.11
Any information pertaining to any claim.	OWNER	Immediately	2	Article 3.12
Information pertinent to the PROJECT, all criteria and full information as to OWNER's requirements, copies of all design and construction standards.	ENGINEER	So as to not delay the services of the ENGINEER.	2	Article 5.1, 5.2
Notification of delays.	ENGINEER; OWNER	Promptly	4	Article 6.1
ENGINEER's monthly invoices.	OWNER	Monthly	4	Article 8.1.1
Consultant progress report.	OWNER	Monthly	4	Article 8.1.1
Records, data, parameters, design calculations and other information.	OWNER	Cancellation of contract.	2	Article 9.7
Documentation, records of reimbursable expenses, record copies of all written communications, and any memoranda of verbal communications related to the PROJECT.	OWNER	Upon notice from the OWNER.	2	Article 9.4
Termination notification.	OWNER or ENGINEER	7 days prior to termination.	2	Article 9.10 & 9.11
Certificate of Insurance for ENGINEER.	OWNER	At 0% design conference	1	Article 10.2(B), 10.6, and Attachment 4.
Insurance cancellation, suspension, or reduction in coverage or limits.	OWNER	30 days prior to effective date except for cancellation which is 10 days notification.	1	Article 10.4(A)

Certificate of insurance for sub consultants/subcontractors.	OWNER	At 0% design conference.	1	Article 10.7
A schedule in Microsoft Projects format showing the critical path.	Project Engineer	Within 7 calendar days of Pre-design conference, 30% complete design review. 60% design review. Attachment 6	1 hard; 1 digital	Attachment 4
Drawings.	Project Engineer	30% complete design review, 60% design review, 90% review, and 100% complete.	3	Attachment 4
Cost estimate.	Project Engineer	30% complete design review, 60% review, 90% review, and 100% complete.	3	Attachment 4
Hydraulic reports.	Project Engineer	60% design review.	2	Attachment 4
Preliminary plans for utilities.	Project Engineer	60% design review.	3	Attachment 4
Real Estate Deliverables	Project Engineer	60% design review, 90% review, 100% complete.	Reference Real Estate Division Plan Requirements	Attachment 4, 14 Real Estate Plan Requirements at end of this proposal document
Traffic Control plan.	Project Engineer	60% design review.	N/A	Attachment 4
Results of geotechnical investigations.	Project Engineer	30% design review.	2	Attachment 4
Technical specifications.	Project Engineer	90% review, 100% complete.	N/A	Attachment 4
Relocation of Utilities	Project Engineer	0% review – list of all utilities that need to be contacted 60% review – from all affected parties 90% review – Signed Acceptance Utility Project Notification Form	2	Attachment 4, 10
Design Calculations	Project Engineer	90% review, 100% complete	1	Attachment 4
Digital copy of drawings.	Project Engineer	100% complete – 1 in .dgn format; 1 in .tiff or .pdf format	2	Attachment 4
Digital text files.	Project Engineer	100% complete.	1	Attachment 4
Bid Quantities.	Project Engineer	100% complete. Digital in Excel 2003 format and hard copy	3	Attachment 4
Permits and Permit Applications	Project Engineer	100% complete.	1	Attachment 4
Field notes.	Project Engineer	100% complete.	1	Attachment 4
Digital aerial photography.	Project Engineer	100% complete.	1	Attachment 4
Progress Report (Art. 8)	Project Engineer	30% complete design review, 60% design review, 90% design review, 100% completion stage.	4 hard; 1 digital monthly	Attachment 4

ATTACHMENT 9 - REQUIREMENTS FOR DOCUMENT SUBMITTALS

All drawings shall be sized 24" x 36", unless otherwise approved by the OWNERS Project Engineer.

Title blocks shall as a minimum, contain the name of the project, date, city project number, and ENGINEER's name. The title block of drawings shall contain a space for the names of the preparer and the reviewer and/or checker. These blocks shall be signed on each submittal (See Attachment "11" for sample standard drawing format). Drawings shall contain alphanumeric revision designations. Drawings issued for review shall be issued with alpha revision designation and the revision letter shall be changed for each submittal containing drawing changes. Drawings issued for construction shall be issued with numeric designation at revision level "0" and described as "Issued for Construction" in the revision description block. Subsequent drawing changes require the revision level to be raised using successively higher numbers and the changes to be marked by circling and briefly described in a revision block.

Unless otherwise specified by the Owners Project Engineer, all drawings for review submittals shall be full or half-size copies. All documents shall be clearly marked in a revision block indicating the applicable submittal milestone, i.e. 30%, 60%, 90%, etc.

Submittals required by the State of Alabama for their review, bidding, etc., shall be of the size, form and numbers of copies as the state may require even though such submittals may differ from the submittals set forth as being required elsewhere in this Agreement.

All drawings shall be prepared in Micro station .DGN format, unless otherwise approved by the OWNERS Project Engineer. Transmittal letters shall consist of a list of files being submitted, a description of the data in each file, and a level/layer schematic of each design file. DGN design files shall have working units as follows: master units in feet, no sub-units, and 1,000 positional units. All data submitted shall use NAD 1983 Alabama East Zone horizontal datum and NAVD 88 vertical datum coordinates.

Digital files shall be submitted by 4-3/4" CD ROM, DVD, 3 and 1/2 inch floppy disk, or to the City of Huntsville F.T.P. site.

All print copies shall be first generation copies.

All text documents shall be prepared in Microsoft Word 2007 format.

All spreadsheets shall be in Microsoft Excel 2007 format.

A schedule showing the critical paths shall be in Microsoft Projects format, unless otherwise approved by the OWNERS Project Engineer.

Aerial photography files shall be in Intergraph (.COT) or (.tiff) format.

All mapping shall meet National Map Accuracy Standards unless otherwise noted. If National Map Accuracy Standards are not met, the accuracy of the map shall be identified to the Owners Project Engineer and on the maps derived from the aerial survey. National Map Accuracy Standards are shown below. This and other map standards are shown in Department of the Army, US Army Corps of Engineers standard, "EM 1110-1-1000, Engineering and Design - Photogrammetric Mapping". http://140.194.76.129/publications/eng-manuals/em1110-1-1000/toc.htm

ATTACHMENT 10 – UTILITY PROJECT NOTIFICATION FORM

NAME:_____
(Utility Name)

PROJECT NAME: _____ PROJECT NUMBER:_____

CONSULTING ENGINEER: _____
(Name)

ENGINEERING REPRESENTATIVE_____PHONE:_____

I have reviewed design drawings or other information as available, and:

DO _____ DO NOT _____

have facilities that will require relocation. If relocation is required, a construction duration of _____ calendar days from the Notice to Proceed, is anticipated to be required for relocation.

LIST NAME(S) OF OTHER UTILITY(S) that share poles or facilities that have to be relocated prior to YOU starting your work:

NAME OF UTILITY:_____

NAME OF UTILITY:_____

NAME OF UTILITY: _____

OTHER: _____

COMMENTS: _____

BY: _____
AUTHORIZED REPRESENTATIVE

FIELD CONTACT PERSON: _____ PHONE: _____
OFFICE CONTACT PERSON: _____ PHONE:_____

DATE:_____

CONSTRUCTION PLANS FOR

PROJECT NAME

PROJECT INFORMATION

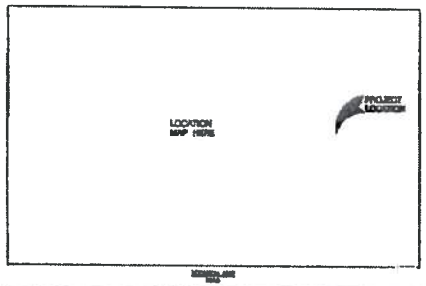
FOR THE

CITY OF HUNTSVILLE

HUNTSVILLE, ALABAMA

(PROJECT NO. XXXXXXXXX)

SAMPLE STANDARD DRAWING FORMAT



HUNTSVILLE
The Star of Alabama

INDEX OF DRAWINGS

SHEET NO.	TITLE

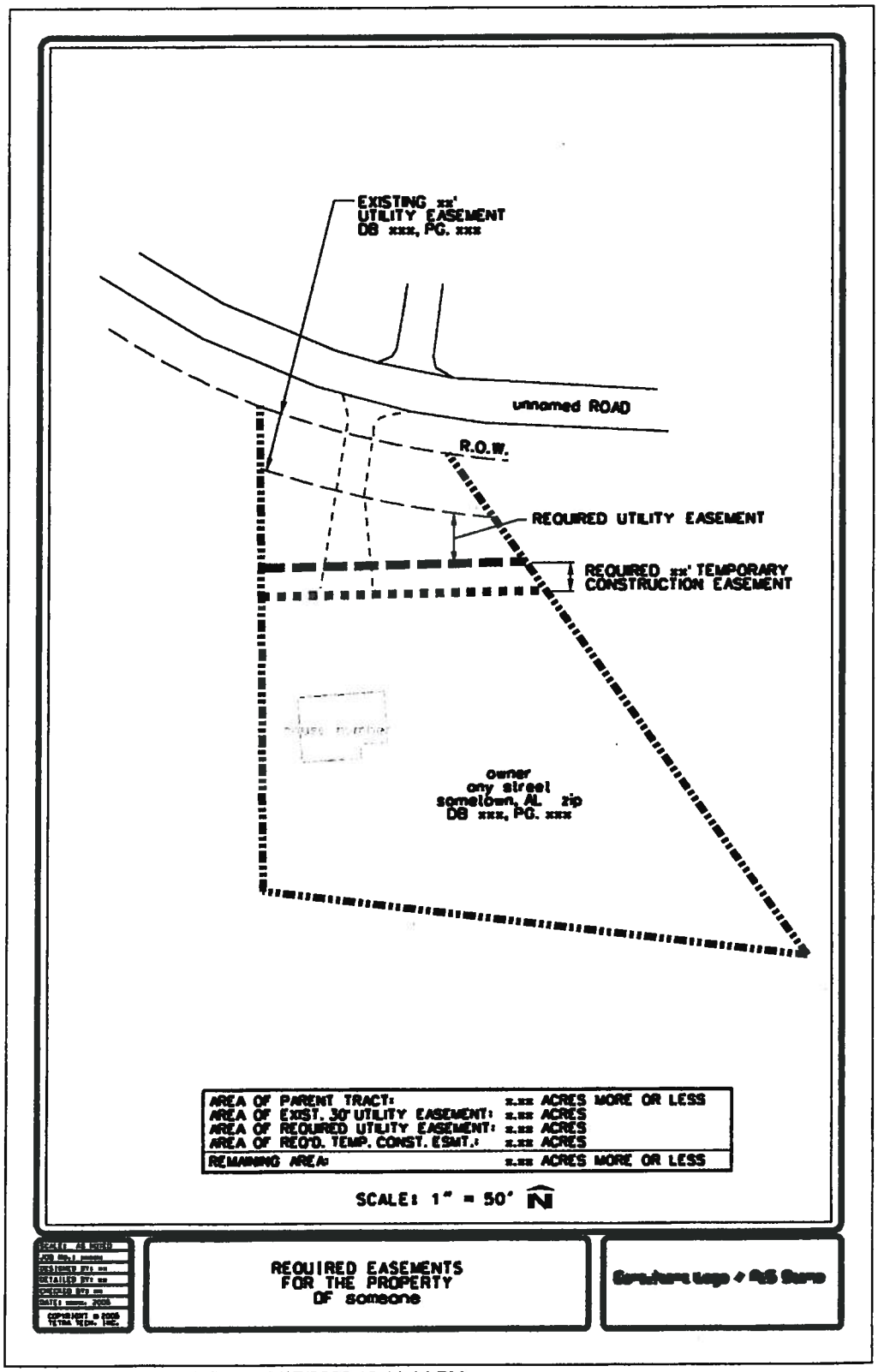
INDEX TO DRAWINGS SHALL BE PLACED ON COVER SHEET IF POSSIBLE, OTHERWISE IT SHALL BE THE SECOND SHEET IN THE SET.

TITLE SHEET

PROJECT NAME AND INFORMATION
CITY OF HUNTSVILLE
HUNTSVILLE, ALABAMA

ATTACHMENT 11

ATTACHMENT 12
SAMPLE



...\easementtemplate_V7.dgn 3/17/2006 12:11:14 PM

ATTACHMENT 13

United States National Map Accuracy Standards

With a view to the utmost economy and expedition in producing maps which fulfill not only the broad needs for standard or principal maps, but also the reasonable particular needs of individual agencies, standards of accuracy for published maps are defined as follows:

1. ***Horizontal accuracy.*** *For maps on publication scales larger than 1:20,000, not more than 10 percent of the points tested shall be in error by more than 1/30 inch, measured on the publication scale; for maps on publication scales of 1:20,000 or smaller, 1/50 inch. These limits of accuracy shall apply in all cases to positions of well-defined points only. Well-defined points are those that are easily visible or recoverable on the ground, such as the following: monuments or markers, such as bench marks, property boundary monuments; intersections of roads, railroads, etc.; corners of large buildings or structures (or center points of small buildings); etc. In general what is well defined will be determined by what is plottable on the scale of the map within 1/100 inch. Thus while the intersection of two road or property lines meeting at right angles would come within a sensible interpretation, identification of the intersection of such lines meeting at an acute angle would obviously not be practicable within 1/100 inch. Similarly, features not identifiable upon the ground within close limits are not to be considered as test points within the limits quoted, even though their positions may be scaled closely upon the map. In this class would come timber lines, soil boundaries, etc.*

2. ***Vertical accuracy,*** *as applied to contour maps on all publication scales, shall be such that not more than 10 percent of the elevations tested shall be in error more than one-half the contour interval. In checking elevations taken from the map, the apparent vertical error may be decreased by assuming a horizontal displacement within the permissible horizontal error for a map of that scale.*

3. ***The accuracy of any map may be tested*** *by comparing the positions of points whose locations or elevations are shown upon it with corresponding positions as determined by surveys of a higher accuracy. Tests shall be made by the producing agency, which shall also determine which of its maps are to be tested, and the extent of the testing.*

4. ***Published maps meeting these accuracy requirements*** *shall note this fact on their legends, as follows: "This map complies with National Map accuracy Standards."*

5. ***Published maps whose errors exceed those aforestated*** *shall omit from their legends all mention of standard accuracy.*

6. ***When a published map is a considerable enlargement*** *of a map drawing (manuscript) or of a published map, that fact shall be stated in the legend. For example, "This map is an enlargement of a 1:20,000-scale map drawing," or "This map is an enlargement of a 1:24,000-scale published map."*

7. ***To facilitate ready interchange and use of basic information for map construction*** *among all Federal mapmaking agencies, manuscript maps and published maps, wherever economically feasible and consistent with the uses to which the map is to be put, shall conform to latitude and longitude boundaries, being 15 minutes of latitude and longitude, or 7.5 minutes, or 3-3/4 minutes in size.*

U.S. BUREAU OF THE BUDGET

ATTACHMENT 14

ENGINEERING DEPARTMENT - REAL ESTATE DIVISION
PLAN REQUIREMENTS

DRAWINGS:
Individual Parcels

- Each individual parcel 8 ½" x 14" (dgn or dxf format)
- Show Calculations
  - Before
  - After
  - Taking
- ***All Parcels shall be closed shapes (polygons).***
- Show Existing and Proposed Right-of-Way on each individual parcel map.
- Property Ownership

Overall Project Land Acquisition Maps

- Total project drawing in dgn or dxf format
- Indicate the following:
  - Stationing on Centerline
  - Existing Right-of-Way
  - Proposed Right-of-Way
  - Existing Easements
  - Proposed Easements
  - Existing Pavement
  - Proposed Pavement/Sidewalks/Structures
  - Existing Structures
  - Property Ownership

Color Standards *(SAMPLE)*

Description	Color	Line Style	Type
Existing ROW	Red	Medium Dashed	
Proposed ROW	Red	Solid	Closed Polygon
Existing Easements	Orange	Medium Dashed	
Proposed Easements	Orange	Solid	Closed Polygon
TCE	Pink	Solid	Closed Polygon

DESCRIPTIONS:

- Microsoft Word on 3.5" Diskette or CD
- Each Description shall be complete and independent (separate file).
- Hard Copies signed and stamped by PLS.

GENERAL:

- P.K. Nails or other permanent stationing markings shall be required.
- Re-staking of right-of-way or easements may be required (See Article 4).
- All survey plats to be on Alabama State Plane Datum. Strip Maps shall indicate at least 2 monuments in place with Alabama State Plane Coordinate values shown on each.
- Parcel plats and legal descriptions shall indicate the Alabama State Plane Coordinate NAD83 Alabama East Zone Value of the point of beginning.

ATTACHMENT 15 - GIS BASE MAP

DESIGN LEVEL	CONTENTS	LINE CODE	COLOR	WEIGHT	TEXT SIZE	FONT	CELL NAME
1	State Plane Coordinate Grid	0	0	0	20	0	
2	Benchmarks	0	0	0			
3	Private Street Text	0	105	0	20	0	
3	Street Text	0	3	0	20 (or 18)	0	
4	Street R/W	7	0	0			
5	Street Centerline	7	0	0			
6	Street Pavement	0	3	0			
6	Proposed Street Pavement	3	16	0			
6	Private Streets	0	105	0			
6	Proposed Private Road	3	105	0			
7	Parking Lots	1	3	1			
7	Private Lots used as Roads	1	105	1			
8	Secondary Roads--Private	2	105	0			
8	Secondary Roads	2	3	0			
8	Trails	3	3	0			
9	Secondary Roads/Trails Text	0	3	0	20	0	
10	Sidewalks	5	3	0			
11	Bridges/Culverts/Paved Ditches	0	0	0			
12	Hydrology - Major	6	1	0			
12	Hydrology – Minor, Ditches	7	1	0			
13	Hydrology - Text	0	1	0	25	23	
14	Tailings & Quarries, Athletic Fields/Text, misc. areas	0	1	0			
15	Greenways	3	48	0			
16	Speed Tables	0	3	0			TCALM
17	Railroad Tracks (Patterned)	0	2	0			RR
18	Railroad Text	0	2	0	25	0	
19	Railroad R/W	2	2	0			
20	Utility Poles (Cell)	0	5	0			P POLE
21	Utility Easements	3	5	0			
22	Utility Text	0	5	1			
23	Geographic Names	0	3	1			
24	Building Structures	0	0	0			
24	Pools and Text	0	1	0	10	1	
24	Future Site of Structures	2	0	0			STRUCT
24	Existing Structures (exact location and shape unknown)	2	0	0			STRCEX
25	Property Lines/ refuge bdy.	6	6	1	30	1	
26	Cadastral Polygons	6	6	0			
27	Ownership Text	0	6	1			
28	Cemeteries/Text	4	6	0	10	1	
29	Lot Numbers				25	0	
30	Block Numbers				30	0	
31	Addition Names	0	0	0	35	0	
32	Open						
33	Lot Ticks						
34	Lot Lines/Property Lines	6	6	0			
35	Trees/Hedge Rows	0	6	0	AS=1		TREES
36	GPS Monuments	0	5	0	18	23	CONTRL

37	2' Topo Contour						
38	5' Topo Contour	0	7	0			
39	25' Major Topo Contour	0	7	0			
40	X Spot Elevation	0	7	0			
41	FEMA Monuments/Labels	0	3/0	0	18	1	FEMA
42	Quarter Sections						
43	Section Lines	0	5	0			
44	Features	0	2	0			
44	Cell Towers	0	12	0	AS=1		CELTWR
45	Fences (Pattern)	0	8	0	AS=1		FENCE
46	Format/Legend	0	0	0			Limleg Madleg
47	Mass Points	0	7	2			
48	Break Lines	0	7	2			
49	Open						
50	Billboards	0	37	1			BBOARD
51	Sanitary Sewer	0		3			
52	Sanitary Sewer Text						
53	Storm Water Features	0		3			
54	Storm Water Text						
55	Open						
56	Property Address	0	1	0			
57	Text Tag for Buildings	0	1	0	10-20	1	
58	One Way Arrows	1	3	1			
59	Open						
60	Open						
61	Open						
62	Monuments for Setup (point cell)						
63	Open						