

City of Cleveland

Frank G. Jackson, Mayor

**DEPARTMENT OF PUBLIC SERVICE
Division of Engineering and Construction**

REQUEST FOR PROPOSAL

For

**MATERIAL TESTING, GEOTECHNICAL, ENVIRONMENTAL,
AND GENERAL ENGINEERING SERVICES**

March 2009

City of Cleveland Mission Statement

We are committed to improving the quality of life in the City of Cleveland by strengthening our neighborhoods, delivering superior services, embracing the diversity of our citizens, and making Cleveland a desirable, safe city in which to live, work, raise a family, shop, study, play and grow old.

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DEPARTMENT OF PUBLIC SERVICE
MATERIAL TESTING, GEOTECHNICAL, EVIRONMENTAL,
AND GENERAL ENGINEERING SERVICES

I. INTRODUCTION

The services required are those professional services that are needed to assure quality design and construction for the Department of Public Service improvement projects administrated by the Division of Engineering and Construction in the City of Cleveland for a period of two years or until funds are expended commencing on the execution date of a signed contract. In most instances this will involve bridges, retaining walls, slope stabilization, basic traffic signals, land acquisition, and roadway rehabilitation/reconstruction projects.

II. GENERAL INFORMATION

A. Response Time

The City expects the Consultant to respond to the City's requests in as timely a manner as feasibly possible, which includes starting and completing the field work, material testing, submitting reports, submitting proposals and completing work tasks. This will weigh heavily when being considered for future City of Cleveland professional services contracts.

Some of the pay items include a space to enter response times. The following terms are used:

1. Letter to Start: The time in working days from receipt of authorization letter to start of field work. Usually the letter will be preceded by a telephone call.
2. Completion to Report: The time in working days between the completion of the work and the receipt of the requested data by the City.

B. Authority

The line of authority under the contract is from the Commissioner of the Division of Engineering and Construction, or his/her representative, to the Consultant. The Consultant is responsible for performing all tests, services and evaluations required or negotiated under this contract. The Consultant's field personnel shall be in charge of all field work assigned to them and shall be under the direction of both the City and the Consultant. The Consultant is responsible for applying for a street-opening blanket permit with Bureau of Licenses and Assessments.

C. Required Information

For each copy requested, the Consultant shall submit as part of their proposal all of the following information:

1. The name, ownership and complete address of each testing laboratory or service office to be used under this contract.
2. The name of each subconsultant to be used on this contract and types of work they will be assigned to and how they will interact with the prime.
3. GSA SF 330 – Part II and SF 330 – Part I for himself/herself and for all subconsultants, who perform professional services.
4. A copy of the inspection and review by the Cement and Concrete Reference Laboratory of the National Bureau of Standards for each laboratory to be utilized.
5. A copy of the accreditation by the Department of Commerce's National Voluntary Laboratory Accreditation Program for each laboratory to be utilized.
6. Description of each testing laboratory facility including location, equipment available, list of tests to be performed at each laboratory, experience and qualifications of personnel conducting the tests, list of jobs recently completed, and the resume of its Director.

D. Document Ownership and Examination

Any authorized representative of the Commissioner shall, at all reasonable times, have the right to inspect, examine and copy any and all documents relating to the work. The Consultant shall provide these copies to said representatives at no cost to the City. All original documents, immediately upon completion of the work, shall be delivered to the City of Cleveland, Commissioner of the Division of Engineering and Construction. The Consultant may retain copies of any or all documents if he/she so desires.

E. Insurance

The Consultant shall indemnify and save harmless the City of Cleveland from and against all suits or claims that may be based upon any injury to persons or damage to property arising out of an error, omission or negligent act of the Consultant or their Subconsultants. The Consultant shall, at their own expense, defend the City of Cleveland in all litigation, pay all attorney fees, damages, court costs and other expenses arising out of such litigation or claims incurred in connection therewith.

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Material Testing, Geotechnical, Environmental, and
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The City will require the successful Consultant(s) to maintain comprehensive general and professional liability insurance insuring the Consultant against the indemnification obligation stated above. The comprehensive general liability insurance policy only shall name the City as an additional insured, shall have limits of not less than \$500,000.00 for injuries, including accidental death to one person and not less than \$1,000,000.00 on account of one occurrence involving more than one person, and property insurance in an amount of not less than \$200,000.00, and shall be primary with respect to the Consultant's general liability, notwithstanding any other insurance covering the City. The professional liability insurance shall have limits of not less than \$1,000,000.00 for any one incident.

The Consultant shall maintain full insurance coverage on all original documents and untested material samples against loss by fire, damage, destruction, theft, etc., while said documents or samples are under the care of the Consultant or their Subconsultants, of not less than \$50,000.00.

F. Cleveland Area Business

The Cleveland Area Business Code contained in Chapter 187 of the Codified Ordinances, of Cleveland Ohio 1976 was enacted in an effort to increase the participation of local small business enterprises in City of Cleveland Contracts. The City has, therefore, established as one of its objectives, the meaningful involvement of Cleveland Small Businesses (CSB). The Department of Public Service has an annual participation goal of ten percent (10%) for Cleveland Small Businesses (CSB).

Each Consultant representing itself as a Cleveland Area Small Business (CSB) within the OEO schedules must be certified with the Office of Equal Opportunity as a CSB. Certified CSB firms, to date can be found at [http://www.city.cleveland.oh.us/CityofCleveland/Home/Government/CityAgencies/OfficeofEqualOpportunity/CSB MBE FBE Registry](http://www.city.cleveland.oh.us/CityofCleveland/Home/Government/CityAgencies/OfficeofEqualOpportunity/CSB%20MBE%20FBE%20Registry).

The proposal shall state the percentage of dollar participation of each consultant proposing services. It is strongly encouraged that consultants consider meaningful partnerships that reflect active local and/or minority participation. The proposer should base the participation on an aggregate contract amount of \$350,000.

G. Office of Equal Opportunity (OEO) Reports

Attached to this proposal are four (4) documents identified as "Contract Employment Report", Schedule 1 through 4, from the O.E.O. office. Although some terms, wording, descriptions, etc. in these documents do not necessarily apply to a professional services contract, the applicable forms must be completed and returned with your proposal. Note all subcontractors need to be listed on Schedule 2 and all subconsultants must execute Schedule 3. Please furnish two (2) unbound copies of Schedules 1 through 4, signed and notarized, in the Part "B" envelope of your proposal. Return all schedules whether or not they apply to the project. The object of these forms is to facilitate OEO approvals. OEO will not evaluate MBE and FBE participation for professional service contracts.

H. Non-Competitive Bid Contract Statement

A "NON-COMPETITIVE BID CONTRACT STATEMENT FOR CALENDAR YEAR 2009" is furnished to you for completion. You are required to fill out this form, which is for informational purposes only.

I. Federal Identification Number

The following information should also be included with your proposal:

1. Your mailing address.
2. Your form of business entity (corporation, partnership, limited partnership, joint venture, a sole proprietorship, an individual, etc.).
3. Either your Taxpayer Identification Number or, if appropriate, your Social Security Number. If submitted as a joint venture, a separate number for each member of the venture is required if one number has not been obtained for the venture. A Taxpayer Identification Number is required for entities other than a sole proprietorship or an individual, for which a Social Security Number is appropriate.

J. Submission Procedure

Your proposal shall be submitted in two (2) parts and identified (marked) as follows. The response to the qualification and technical aspects of the RFP, including the required two (2) unbound copies of the "Contract Employment Report" as described in "G" above and the "NON-COMPETITIVE BID CONTRACT STATEMENT FOR CALENDAR YEAR 2009" in "H" above, shall be placed in an

K. Submission Procedure -(continued)

envelope marked part "A". The proposed fees shall be placed in a separate sealed envelope marked part "B".
Interested parties should submit three (3) copies of their proposal no later than the time and date stated in the cover letter to:

Mr. Robert Mavec, Acting Commissioner
Division of Engineering & Construction
Cleveland City Hall, Room 518
Cleveland, OH 44114

The additional copies of the proposal are required for internal processing if the City accepts your proposal.

L. Selection Criteria

Selection shall be based on the following:

1. Laboratory Inspection, Review and Accreditation.
2. Experience of personnel assigned for geotechnical and environmental engineering, noncomplex roadway design, minor bridge inspection, major bridge inspection, basic signal design, right of way acquisition, lift bridge (structural, mechanical and electrical) and survey. Only resumes of key personnel are necessary.
3. Experience of the firm and subconsultants on projects that they worked together on in the past. It is strongly encouraged that proposers consider meaningful partnerships that reflect active local and/or minority participation in their proposal.
4. CSB Participation.
5. Responsiveness to RFP.
6. Quality Assurance
7. Fee

The following procedure will be used in evaluating the proposals:

1. Based upon the technical data furnished the proposals will be ranked in an order of preference.
2. At this point the fee envelope will be opened.
3. The proposed fees of the top ranked firm will be reviewed for compliance to industry standards. The City may enter into negotiations with the prime and subconsultants in order to bring the rates more in line with these standards.

4. Should that endeavor fail, the City would then proceed to the second ranked firm, etc., until the most qualified firm at the best fee has been selected.

M. Questions on RFP

Specific questions regarding the RFP should be written and e-mailed to Marie Bramley, Division of Engineering & Construction, at mbramley@city.cleveland.oh.us. Questions will be accepted until noon on April 15, 2009. An addendum will be posted on the City web site on or about April 17, 2009.

III. TESTING

A. Testing Laboratory

The testing laboratory shall be subject to the review and approval of the Commissioner and shall not be changed without the approval of the Board of Control. All tests performed shall conform in all respects to the qualifications contained in the latest editions of the appropriate publications of the American Society for Testing and Materials (ASTM), The American Association of State Highway and Transportation Officials (AASHTO) and the American Concrete Institute (ACI) Manual of Concrete Practice. The laboratory performing services under this contract shall conform to ASTM E-329.

Inspection and review of the laboratory by the Cement and Concrete Reference Laboratory of the National Bureau of Standards, in affiliation with the American Council of Independent Laboratories is required. Accreditation by the Department of Commerce's National Voluntary Laboratory Accreditation Program or other similar organization is not mandatory, but furnishing proof of such compliance would weigh heavily upon the acceptance of that laboratory to perform services under this contract. However, any laboratory performing services under this contract shall be able to verify its independence from the construction contractor and subcontractor, if any, whose work is being tested.

B. Batch Plant Evaluation

These evaluations shall be performed as described below and only when specifically required and as directed by the Commissioner. Each test shall conform to the specifications indicated.

The unit price bid for each type of batch plant evaluation shall include all costs for the evaluation described and the furnishing of the required reports.

1. Asphalt Batch Plant Evaluation

This item shall conform to ASTM D-290 (Bituminous Mixing Plant

Inspection) and shall be the basis for determining if the batch plant is capable of producing and is producing the required Job Mix Asphalt.

2. Concrete Batch Plant Evaluation

This item shall conform to ASTM C-94 (Ready Mixed Concrete) and shall be the basis for determining if the batch plant is capable of producing and is producing the required Job Mix Concrete.

C. Tests

The tests described below shall be performed only as requested and directed by the Commissioner or his designee. Each test shall conform to the specifications indicated. The unit price bid for each type of field test shall include all costs for the test described; including traffic control, mileage and the furnishing of the required reports. **Two (2) copies of each test report plus original are required.**

All tests requiring coring shall be subject to the following two (2) additional requirements. The first is that the cored hole shall be filled with material approved by the Commissioner. The second is that a representative of the Commissioner may observe the performance of these tests.

Test reports covering different testing sites under various locations will not be accepted. Each test report must include the exact location of the test, name of the individual requesting the test, the date of the request and the date the test was performed. All reports should be sent to:

Mr. Robert Mavec, Acting Commissioner
Division of Engineering & Construction
Cleveland City Hall, Room 518
Cleveland, OH 44114

1. Asphalt Density Test

This test shall conform to ASTM D-2950 (Density of Bituminous Concrete in Place by Nuclear Method). All tests shall be made at the time of placement of the asphalt at locations furnished by the engineer.

2. Asphalt Extraction Test and Extraction, Gradation and Marshall Stability

This test shall conform to ASTM D-2172 (Quantitative Extraction of Bitumen from Bituminous Paving Mixtures) and as herein modified. The first modification is that the sample taken in the field shall be used for a Marshall Stability Test as per ASTM D-1559 (Resistance to Plastic Flow of

C. Tests – continued

Bituminous Mixtures Using Marshall Apparatus). The second and last modification is that after performing the ASTM D-2172 test, all the sample aggregate shall be subjected to a sieve analysis as per ASTM C-136 (Sieve Analysis of Fine Course Aggregates).

The test report shall include all the results, including test method used, for all three (3) ASTM tests. The report shall be included under Item 4. Asphalt Extraction, Gradation and Marshall Stability.

3. Thickness of Compacted Asphalt Test

This test shall conform to ASTM D-3549 (Thickness or Height of Compacted Bituminous Paving Mixture Specimens). Cores shall be drilled in a random pattern along the pavement of each lane as directed.

4. Concrete Compression, Slump, Air Content & Temperature Check Tests (Field)

This item includes making and curing cylinders in the field and testing them in the laboratory. These tests shall conform to ASTM C-31 (Making and Curing Concrete Test Specimens in the Field) and ASTM C-39 (Compressive Strength of Cylindrical Concrete Specimens) and as herein modified. All samples shall be obtained as stated in ASTM C-172 (Sampling Fresh Concrete).

Each Concrete Compression Test shall be composed of a set of four (4) concrete test specimens made in conformity with ASTM C-31 (Making and Curing Concrete Test Specimens in the Field) at locations as specified by the engineer.

At the time of pouring, a slump test conforming to ASTM C-143 (Slump of Portland Cement Concrete) and an air entrainment test conforming to ASTM C-231 (Air Content of Freshly Mixed Concrete by the Pressure Method) shall be performed. The concrete temperature shall also be taken and recorded as per ASTM C-1064 (Test Method for Temperature of Freshly Mixed Concrete).

One (1) cylinder from each set of four (4) shall be compression tested at seven (7) days and a written report, including results of slump and air entrainment tests and the concrete temperature, shall be forwarded to the Commissioner within twenty-four (24) hours of the test completion.

The three (3) remaining cylinders shall be compression tested at twenty-eight (28) days and a written report of each individual cylinder test

C. Tests – continued

and their average shall be forwarded to the Commissioner within twenty-four (24) hours of the test completion. The cost of picking up test cylinders, whether on a holiday, weekend or at night shall be included in the unit price bid for each set tested.

The testing laboratory shall notify the Commissioner of Engineering & Construction, by telephone at (216) 664-2381, immediately on the occurrence of any of the following four (4) conditions:

- a. Any or all of the concrete test specimens of any set are lost or damaged in the field.
- b. Any or all of the concrete test specimens of any set are lost or damaged by the testing laboratory.
- c. The result of the seven (7) day test result is below 3200 psi for Type C concrete or 3400 psi for Type S concrete.
- d. The average of the twenty-eight (28) day test of any set is below 4000 psi for Type C concrete or 4500 psi for Type S concrete.

All telephone calls made, as required above, shall be included in the test report and include the name of the person called, the time and date, and the reason for the call.

The unit price bid for this item shall include making the four (4) cylinders (one set) in the field, curing, testing and the report. **Included in the report should be the exact location of each set of cylinders tested. Reports, which do not include this information, will be rejected. Additionally, no payment will be made for any set which includes less than four (4) cylinders.**

5. Concrete Compression, Slump, Air Content & Temperature Check Tests (Lab)

This item includes making, curing and testing cylinders in the laboratory. These tests shall conform to ASTM C-192 (Making and Curing Test Specimens in the Laboratory), ASTM C-143 (Slump of Portland Cement Concrete), ASTM C-231 Air Content of Freshly Mixed Concrete by the Pressure Method, ASTM C-1064 (Test Method for Temperature of Freshly Mixed Concrete) and ASTM C-39 (Compressive Strength of Cylindrical Concrete Specimens).

The testing laboratory shall submit a certified test report, within twenty-four (24) hours, to those designated by the Commissioner.

C. Tests - continued

6. Concrete Core Samples for the Determination of Concrete Thickness

These samples shall be obtained and measured as per ASTM C-42 (Obtaining and Testing Drilled Cores and Sawed Beams of Concrete) and ASTM C-174 (Measuring Length of Drilled Concrete Cores). The pavement to be cored ranges from four (4) to eighteen (18) inches in thickness.

7. Concrete Core Samples for the Determination of Concrete Compressive Strength

These samples shall be obtained and compression tested as per ASTM C-42 (Obtaining and Testing Drilled Cores and Sawed Beams of Concrete) and ASTM C-39 (Compressive Strength of Cylindrical Concrete Specimen). The concrete to be cored ranges from four (4) to eighteen (18) inches in thickness.

The unit price bid to obtain the cores in the field shall include coring, transportation, storage and traffic maintenance.

The pay item testing concrete cores obtained in the field shall include necessary preparation.

8. Analysis of Aggregates

This item covers sampling and testing aggregates used in subbase courses, bituminous paving mixes and concrete mixes. The sample of the aggregate shall be taken as per ASTM D-75 (Sampling Aggregate) and reduced to the proper test size. The sample shall be tested as per ASTM C-136 (Sieve Analysis of Fine and Course Aggregates), ASTM C-117 (Test Method for Materials Finer Than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing) and/or ASTM C-88 (Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate).

9. Weight and Void Analysis of Aggregate Test

This item covers the determination of unit weight and calculated voids. This test shall conform to ASTM C-29 (Unit Weight and Voids in Aggregate).

10. Specific Gravity and Absorption Analysis of Aggregate Test

This item covers the determination of specific gravity and absorption of course aggregate. This test shall conform to ASTM C-127 (Specific Gravity and Absorption of Course Aggregate).

C. Tests - continued

11. Soil Test

This item covers the determination of the soil density and percent compaction. The density of the soil or soil-aggregate shall be taken as per either ASTM D-2922 (Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)) as required and directed by the Commissioner.

This density shall be compared to the maximum density as determined by the Moisture-Density Test as per ASTM D-698 (Moisture-Density Relations of Soils and Soil-Aggregate Mixtures using 5.5 lbs. (2.49 kg) Rammer and 12 in. (305 mm) Drop)

12. Soil Bearing Test

This item covers evaluation of soil to determine average load-carrying capacity. The test shall conform to ASTM D-4429 (Bearing Ratio of Soils in Place.)

13. Pavement Cores

Item 13 covers obtaining pavement cores as requested and directed by the Commissioner or his representative to determine pavement composition as per ASTM C-42 (Obtaining and Testing Drilled Cores and Sawed Beams of Concrete), ASTM D-3549 (Thickness of Compacted Bituminous Specimens) and ASTM C-174 (Measuring Length of Drilled Concrete Cores). When required, testing of concrete base for compressive strength shall be as per ASTM C-39 (Compressive Strength of Cylindrical Concrete Specimens) and paid for under separate item. Item 15 includes a color photolog with depth shown on the log for specified pavement cores.

Concrete bases will be tested only when authorized by the Commissioner. The cores shall be four (4) to six (6) inches in diameter and in all instances be to subgrade. The number of cores per site will vary. The unit price bid quoted for any pavement cores shall include traffic maintenance.

The price quoted for testing concrete portion of the core shall include necessary preparation.

D. Day/Night Work & Permits

1. Day/Night Work

All work performed between the hours of 6:00 a.m. and 6:00 p.m. shall be designated as day work and work performed between the hours of 6:00 p.m. and 6:00 a.m. shall be designated as night work. Night work will be performed when requested and directed by the Commissioner.

2. Permits

The Consultant shall obtain required City of Cleveland obstruction and street opening permits from the Division of Engineering & Construction. The cost of these permits and others will be waived.

E. CANCELLATION/DOWNTIME/DELAYS

1. Cancellation

The City reserves the right to cancel any test up to two (2) hours prior to the scheduled start of the test. Notification of cancellation will come from the City, not the Contractor on the project.

2. Downtime

The Consultant shall submit a fee for "Unscheduled and/or Unforeseen Cancellations/Delays" in the Fee Section of this RFP. This line item is for reimbursement, up to a maximum of two (2) hours, for tests canceled without the Consultant having been notified by the two (2) hours minimum, as specified above. The fee quoted shall include gas mileage and any other related cost.

3. Delays

If the Consultant, upon arrival to the site, finds the site not ready for testing to be performed, a one-half (1/2) hour maximum wait will be allowed before rescheduling of the test. Reimbursement for this delay will be at the rate quoted for "Unscheduled and/or Unforeseen Cancellations/Delays" in the Fee Section of this RFP and shall include gas mileage and any other related cost.

IV. GEOTECHNICAL SERVICES

A. Introduction

This request is for geotechnical services required for engineering purposes and for obtaining soil samples. Before each request for soil information is issued the City will contact the Consultant and request their input on the number and depths of soil boring and material test to be performed.

B. Scope of Services

A Registered Professional Engineer shall make a soil survey for engineering design with experience in this type of work. Borings shall be made under supervision of the engineer by a qualified contractor and performed in accordance with current applicable standards.

C. Other Terms and Specifications

1. The specific work items shall be completed and all reports delivered to the City within the time period stated in the proposal for routine items, or as negotiated for special projects.
2. Qualified personnel, under the supervision of a Registered Professional Engineer shall perform all work. All tests shall be performed as per The American Society for Testing Materials (ASTM). All reports shall bear the signature and seal of a Registered Professional Engineer.
3. A fancy report is not required. Two (2) copies of the findings will be required.
4. The unit price bid per foot of soil boring shall include visual classification, samples at 2 1/2 foot intervals and samples at all material changes. Normally, a minimum of three (3) soil borings, each ten (10) to twenty (20) feet in depth, will be requested for each location.
6. The "Minimum Daily Rate" is the minimum amount to be paid per day per proposed project.
7. The unit price quoted for each test shall include the sampling, transporting, testing and test report.

The analysis and recommendations for the report shall be negotiated using unit prices submitted with the proposal.

V. ENVIRONMENTAL

Scope of Work

The City will require, on some projects, an Environmental Site Assessment of a site or the investigation of a building or structure for asbestos. This would be in the form of an ESA Phase I, which would outline suspicious environmental conditions, which may have an adverse environmental impact upon the site. If warranted, as indicated by the ESA Phase I investigation, an ESA Phase II would follow with the chemical testing of soil and/or asbestos sampling and analysis.

Scope and fee will be negotiated for each work task order.

VI. General Engineering Services

A. Scope of Work

The services required are those professional and paraprofessional services which

are needed to prepare or assist in the preparation of construction contract plans, inspections, evaluations, reports or other services for the reconstruction or rehabilitation of a roadway, bridge/lift bridge improvements. The work may include field surveys, aerial photography, traffic signal design, water work design, drainage design, right of way services, bridge physical condition survey and report, structural design, lift bridge electrical design, lift bridge mechanical design,. The City will contact the Consultant's point person to discuss the work tasks needed or meet at the project site to review the required repairs with team members, determine scope and negotiate price.

B. Consultant Qualifications

Resumes of key personnel should be attached to the proposal Part "A". ODOT prequalified for Geotechnical Engineering Services, Geotechnical Testing Laboratory, ESA Screening, Phase I ESA, Phase II ESA, traffic signal design, right of way acquisition, road design, bridge inspection major, bridge design level 2, mechanical engineer and hydraulic machinery design for lift bridge, electrical engineer power and controls design for lift bridge.

C. Fee

Section VIII "Compensation" shall govern this work.

VII. COMPENSATION

The unit prices quoted for the various services listed on the "Fee Section" sheets shall include all labor for field work, transportation costs, storage costs, subsistence, secretarial service, office supplies, materials, equipment, reproduction, postage, overhead, profit and other miscellaneous costs pertinent to the services to be provided under this testing, geotechnical, environmental and general engineering services agreement.

The Commissioner of Engineering and Construction reserves the right to eliminate any portion or all of the work or service. In the event of such termination, the Consultant shall be paid for services rendered up to the time of termination.

The Consultant shall submit invoices for payment on a monthly basis. No test shall be invoiced until after the results of the test have been received by the City. The Consultant's invoice shall identify each work order, for which payment is claimed, by work order and description for each construction project. All invoices shall be summarized by work order and/or Item number and shall include any previous amount due, the amount due under this invoice and the new total amount of work invoiced to date.

The Consultant professional services will be negotiated on a site by site basis. The unit costs will be used to evaluate the negotiated fee and for daily assigned work tasks.

IX. FEE SECTION				
The Consultant is requested to furnish unit prices for each of the following Items of Work.				
Rates are place marks for general engineering fees will be negotiated.				
ITEM	APPROX.	UNIT	UNIT	UNOFFICIAL
	QUANTITY		PRICE	TOTAL
<u>ASPHALT</u>				
001. Asphalt Batch Plant Evaluation				
(ASTM D-290)	2	Each		
002. Asphalt Density Test: Technician				
with nuclear densometer - Day Test	8	Hour		
003. Asphalt Density Test : Technician				
with nuclear densometer Night Test	8	Hour		
004. Asphalt Extraction, Gradation and				
Marshall Stability(ASTM D-2172)	2	Each		
005. Thickness of Compacted				
Asphalt Test (ASTM D-3549)	4	Each		
Time from authorization letter				
to start of work ____ Days		Each		
Time from completion of work				
to report submittal ____ Days		Each		
<u>CONCRETE/AGGREGATES</u>				
006. Concrete Batch Plant Evaluation				
(ASTM C-94)	2	Each		
007. Making and Curing Concrete Test				
Cylinders in the Field (ASTM C-31),				
Slump Test (ASTM C-143), Air				
Content Test (ASTM C-231),				
Temperature Test (ASTM C-1064) &				
Compressive Strength Test				
(ASTM C-39)				
4 specimens per set Day Test	50	set		
<i>Immediate response required</i>				
008. Subsequent Slump Test				
(ASTM C- 143) Day Test	15	Each		
009. Subsequent Air Content Test				
(ASTM C-231) and Temperature				
Test (ASTM C-1064) Day Test	15	Each		

ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	UNOFFICIAL TOTAL
010. Making and Curing Concrete Test				
Cylinders in the Field (ASTM C-31),				
Slump Test (ASTM C-143), Air				
Content Test (ASTM C-231),				
Temperature Test (ASTM C-1064) &				
Compressive Strength Test				
(ASTM C-39)				
4 specimens per set Night Test	50	Sets		
Immediate response required				
011. Subsequent Slump Test				
(ASTM C- 143) Night Test	15	Each		
012. Subsequent Air Content Test				
(ASTM C-231) and Temperature				
Test (ASTM C-1064) Night Test	15	Each		
013. Making and Curing Concrete Test				
Cylinders in the Lab (ASTM C-192),				
Slump Test (ASTM C-143), Air				
Air Content Test (ASTM C-231),				
Temperature Test (ASTM C-1064) &				
Compressive Strength Test				
(ASTM C-39)	10	Each		
014. Obtaining pavement core				
(ASTM C- 42) or (ASTM D-3549)				
and determining pavement				
composition & thickness				
(ASTM C-174) or (ASTM D-3549)	75	Each		
015. Photo log with depths shown				
on log for Item 14. Pavement Core	25	Each		
016. Obtaining pavement core				
and determining asphalt thickness				
to top of base or trolley track				
(ASTM D-3549)	100	Each		
017. Exploratory bore (i.e. pot hole) to				
determine depth from surface to top				
of existing utility up to 6-ft	10	each		
Time from authorization letter				
to start of work _____ Days				
Time from completion of work				
to report submittal _____ Days				
018. Determining compressive strength				
of concrete base obtained per				
Item 016 above (ASTM C-39)	15	Each		

ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	UNOFFICIAL TOTAL
019. Flexural Strength of Concrete (Beam)				
Test (ASTM C-78)	4	Each		
020. Soundness of Aggregates Test				
(ASTM C-88)	4	Each		
021. Sieve Analysis of Fine & Coarse				
Aggregates Test (ASTM C-136)	10	Each		
022. Analysis of Material Finer Than				
No. 200 Sieve Test (ASTM C-117)	10	Each		
023. Aggregate Weight & Voids Test				
(ASTM C-29)	4	Each		
024. Aggregate Specific Gravity and				
Absorption Test (ASTM C-127)	4	Each		
<u>SOILS</u>				
025. Laboratory Compaction				
Characteristics of Soil - Proctor Test				
(ASTM C-698)	4	Each		
Time from authorization letter				
to start of work _____ Days		Each		
Time from completion of work				
to report submittal _____ Days		Each		
026. Soil/Aggregate Density Test				
Technician w/Nuclear Density Meter	8	Hour		
<i>Immediate response required</i>				
027. CBR (California Bearing Ratio) of				
Soils in Place (ASTM D-4429)	5	Each		
028. CBR (California Bearing Ratio) of				
Laboratory-Compacted Soils				
(ASTM D-1883)	5	Each		
039. Moisture Content of Soils Test	2	Sites		
(ASTM D-2216)				

	APPROX.	UNIT	UNIT	UNOFFICIAL
ITEM	QUANTITY		PRICE	TOTAL
029. Soil Borings, cased or uncased, standard penetration test, samples at 2 1/2 foot intervals and material changes for depths up to and including ten (10) feet	20	Each		
040. Liquid and Plastic Limits of Soils Test (ASTM D-4318)	2	Sites		
040. Particle-Size Analysis of Soils Test (ASTM D-422)	2	Sites		
041. Unconfined Compressive Strength of Soils Test (ASTM D-2166)	2	Each		
<u>ENVIRONMENTAL</u>				
48. Environmental Project Manager	20	Hours		
49. Environmental Project Engineer	40	Hours		
50. Environmental Technician	100	Hours		
51. Geotechnical Project Engineer	100	Hours		
52. Geotechnical Project Manager	30	Hours		
<u>General Services</u>				
62 Structural Design Engineer (Level I)	100	Hours		
63. Structural Project Engineer Level II)	60	Hours		
64. Structural Project Manager	30	Hours		
65. Bridge Cad Technician	80	Hours		
66. Mechanical Design Engineer	100	Hours		
67. Mechanical Project Engineer	60	Hours		
68. Mechanical Project Manager	30	Hours		
69. Mechanical Cad Technician	80	Hours		
70. Electrical Design Engineer	100	Hours		
71. Electrical Project Engineer	60	Hours		
72. Electrical Project Manager	30	Hours		
73. Electrical Cad Technician	80	Hours		
74. Survey 2 man crew	15	day		
75. Survey Cad Technician	100	Hours		
76. Survey Party Chief	40	Hours		
77. Survey Project Manager	20	Hours		
78. Roadway Project Engineer	160	Hours		
79. Roadway Project Manager	20	Hours		
80. Roadway Cad Technician	200	Hours		
<u>Miscellaneous Services</u>				
78. Asbestos Hazard Evaluation Specialist	50	Hours		
79. Asbestos PLM Analysis	10	Each		
80. Asbestos PLM Point Count Analysis	5	Each		
81. Unscheduled and/or Unforeseen Cancellations/Delays	40	Hrs.		