

## AMENDATORY AGREEMENT

**THIS AMENDATORY AGREEMENT** (“**Agreement**”) is made and entered by and between the **CITY AND COUNTY OF DENVER** (the "**City**"), a municipal corporation of the State of Colorado, and **OLSSON, INC.**, (the "**Consultant**"), a Nebraska corporation registered to do business in Colorado, whose address is 601 P St. Ste 200, Lincoln, NE 68508, US.

### RECITALS:

**WHEREAS**, the Parties entered into an Agreement dated July 14, 2023 (the “**Agreement**”) to provide engineering services; and

**WHEREAS**, the Parties now wish to amend the Agreement to extend the Term, increase the Maximum Contract Amount and to make such other amendments as are herein set forth.

**NOW THEREFORE**, in consideration of the premises and the Parties’ mutual covenants and obligations, the Parties agree as follows:

1. **Exhibit B** is hereby deleted in its entirety and replaced with **Exhibit B-1, Rates**, attached and incorporated by reference herein. All references in the Original Agreement to **Exhibit B** are changed to **Exhibit B-1**.

2. Section 2.07 (j) of the Agreement, entitled “Schematic Design or Planning Phase”, Subsection (1), is amended to read as follows:

“(j) Schematic Design or Planning Phase:

(1) The Consultant shall begin work on the Schematic Design or Planning Phase of each project unless written notice to discontinue work on such phase is received from the Project Manager.”

3. Section 2.07 (k) of the Agreement, entitled “Design Development Phase”, Subsection (1), is amended to read as follows:

“(k) Design Development Phase:

(1) The Consultant shall begin with work on the Design Development Phase of each project unless written notice to discontinue work on such phase is received from the Project Manager.”

4. Section 2.07 (l) of the Agreement, entitled “Construction Documents Phase”, Subsection (1), is amended to read as follows:

“(I) Construction Documents Phase:

(1) The Consultant shall begin with work on the Construction Documents Phase of each project unless written notice to discontinue work on such phase is received from the Project Manager. The City’s review of the Design Development Documents, or the City’s failure to object to any element thereof, shall not relieve the Consultant of any liability for any defaults, deficiencies, errors or omissions therein.”

5. Section 3 of the Agreement, entitled “**COMPENSATION, PAYMENT, AND FUNDING**”, Subsection 3.05 (a) entitled “**Maximum Contract Amount; Funding**”, is amended to read as follows:

“**3.05 Maximum Contract Amount; Funding.**

(a) It is understood and agreed by the parties hereto that payment or reimbursement of all kinds to the Consultant, for all Work performed, which includes all categories selected under this Agreement, shall not exceed **TWO MILLION DOLLARS AND NO CENTS (\$2,000,000.00)**. In no event shall the maximum payment to the Consultant, for all work and services performed throughout the entire term of this Agreement exceed the contract maximum amount set forth above.”

6. Section 4 of the Agreement, entitled “**TERM AND TERMINATION**”, Subsection 4.01 entitled “**Term**”, is amended to read as follows:

“**4.01 Term.** The term of this Agreement shall commence on July 14, 2023 and expire, unless sooner terminated on July 13, 2028 (“**Term**”). The Consultant shall complete any task orders in progress as of the expiration date of this agreement and the term will extend until the work is completed or earlier terminated by the Director.”

7. A new Subsection 6.29 entitled “**Value Engineering**”, is hereby being added to the Agreement to read as follows:

“**6.29 Value Engineering.** Prior to the completion of the Bidding Phase, the Consultant will lead the exercise to reduce costs by preparing a list of substitutions that can be accepted by the City to bring the project back into budget if there is a budget shortfall.”

8. A new Subsection 6.30 entitled “**Compliance with Denver Wage Laws**”, is hereby being added to the Agreement to read as follows:

“**6.30 Compliance with Denver Wage Laws.** To the extent applicable to the Consultant’s provision of Services hereunder, the Consultant shall comply with, and agrees to be bound by, all rules, regulations, requirements, conditions, and City determinations regarding the City’s Minimum Wage and Civil Wage Theft Ordinances, Sections 58-1 through 58-26 D.R.M.C., including, but not limited to, the requirement that every covered worker shall be paid all earned wages under applicable state, federal, and city law in accordance with the foregoing D.R.M.C. Sections. By executing this Agreement, the Consultant expressly acknowledges that the Consultant is aware of the requirements of the City’s Minimum Wage and Civil Wage Theft Ordinances and that any failure by the Consultant, or any other individual or entity acting subject to this Agreement, to strictly comply with the foregoing D.R.M.C. Sections shall result in the penalties and other remedies authorized therein.”

9. As herein amended, the Agreement is affirmed and ratified in each and every particular.

10. This Amendatory Agreement will not be effective or binding on the City until it has been fully executed by all required signatories of the City and County of Denver, and if required by Charter, approved by the City Council.

**[THE BALANCE OF THIS PAGE IS INTENTIONALLY LEFT BLANK;  
SIGNATURE PAGES FOLLOW.]**

**Contract Control Number:** DOTI-202582732-01 [202368026-01]  
**Contractor Name:** OLSSON, INC.

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at Denver, Colorado as of:

**SEAL**

**CITY AND COUNTY OF DENVER:**

**ATTEST:**

By:

\_\_\_\_\_

\_\_\_\_\_

**APPROVED AS TO FORM:**

**REGISTERED AND COUNTERSIGNED:**

Attorney for the City and County of Denver

By:

By:

\_\_\_\_\_

\_\_\_\_\_

By:

\_\_\_\_\_

**Contract Control Number:**  
**Contractor Name:**

DOTI-202582732-01 [202368026-01]  
OLSSON, INC.

By: <sup>Signed by:</sup> Jessica Burch  
D610513449494F6...

Name: Jessica Burch  
(please print)

Title: Senior Vice President  
(please print)

ATTEST: [if required]

By: \_\_\_\_\_

Name: \_\_\_\_\_  
(please print)

Title: \_\_\_\_\_  
(please print)

## **Exhibit B-1**

### **Rates**

**PRIME TEAM MEMBERS**Prime: Olsson, Inc. (Page 1 of 5)

List **ALL** potential personnel titles/classifications that may be utilized under the contract and their respective hourly rate. Do not list names of personnel, only titles (i.e. Project Manager). Provide additional sheets as necessary.

| Title/Classification        | Responsibilities   | Rate/Hr. |
|-----------------------------|--------------------|----------|
| Technical Expert            | Leadership         | \$331    |
| Senior Project Manager      | Leadership         | \$305    |
| Client Relationship Manager | Leadership         | \$316    |
| Senior Team Leader          | Leadership         | \$311    |
| Project Manager             | Leadership         | \$274    |
| Client Manager              | Leadership         | \$264    |
| Group Leader                | Leadership         | \$295    |
| Associate Project Manager   | Technical Services | \$257    |
| Lead Engineer               | Technical Services | \$305    |
| Senior Engineer             | Technical Services | \$269    |
| Project Engineer            | Technical Services | \$217    |
| Engineer                    | Technical Services | \$181    |
| Associate Engineer          | Technical Services | \$166    |
| Assistant Engineer          | Technical Services | \$150    |
| Lead Scientist              | Technical Services | \$248    |
| Senior Scientist            | Technical Services | \$212    |
| Project Scientist           | Technical Services | \$176    |
| Scientist                   | Technical Services | \$152    |
| Associate Scientist         | Technical Services | \$138    |
| Assistant Scientist         | Technical Services | \$114    |
| Lead Planner                | Technical Services | \$243    |

The City will not compensate for expenses such as postage, mileage, parking, or telephone costs. Reproductions, if requested by the City, shall be reimbursed at actual cost if approved in advance by the Project Manager. Reproductions requested by the City such as end-of-phase reports, drawings, bid documents, record drawing reproductions, etc. are not included in the hourly rates will be itemized as a not-to-exceed expense, and will be reimbursed at actual cost.

**PRIME TEAM MEMBERS**

Prime: Olsson, Inc. (Page 2 of 5)

---

List **ALL** potential personnel titles/classifications that may be utilized under the contract and their respective hourly rate. Do not list names of personnel, only titles (i.e. Project Manager). Provide additional sheets as necessary.

| Title/Classification             | Responsibilities   | Rate/Hr. |
|----------------------------------|--------------------|----------|
| Senior Planner                   | Technical Services | \$207    |
| Project Planner                  | Technical Services | \$166    |
| Planner                          | Technical Services | \$155    |
| Associate Planner                | Technical Services | \$140    |
| Assistant Planner                | Technical Services | \$119    |
| Lead Landscape Architect         | Technical Services | \$243    |
| Senior Landscape Architect       | Technical Services | \$212    |
| Project Landscape Architect      | Technical Services | \$176    |
| Landscape Architect              | Technical Services | \$155    |
| Associate Landscape Designer     | Technical Services | \$135    |
| Assistant Landscape Designer     | Technical Services | \$114    |
| Design Manager                   | Technical Services | \$209    |
| Design Technical Manager         | Technical Services | \$197    |
| Design Associate                 | Technical Services | \$160    |
| Senior Technician                | Technical Services | \$131    |
| Associate Technician             | Technical Services | \$117    |
| Assistant Technician             | Technical Services | \$93     |
| Administrative Senior Specialist | Admin Services     | \$148    |
| Administrative Coordinator       | Admin Services     | \$91     |
| Administrative Assistant         | Admin Services     | \$79     |
| Student Intern 1                 | Technical Services | \$78     |

The City will not compensate for expenses such as postage, mileage, parking, or telephone costs. Reproductions, if requested by the City, shall be reimbursed at actual cost if approved in advance by the Project Manager. Reproductions requested by the City such as end-of-phase reports, drawings, bid documents, record drawing reproductions, etc. are not included in the hourly rates will be itemized as a not-to-exceed expense, and will be reimbursed at actual cost.

**PRIME TEAM MEMBERS**

Prime: Olsson, Inc. (Page 3 of 5)

List **ALL** potential personnel titles/classifications that may be utilized under the contract and their respective hourly rate. Do not list names of personnel, only titles (i.e. Project Manager). Provide additional sheets as necessary.

| Title/Classification               | Responsibilities   | Rate/Hr. |
|------------------------------------|--------------------|----------|
| Student Intern 2                   | Technical Services | \$94     |
| Lead Construction Manager          | Technical Services | \$248    |
| Senior Construction Manager        | Technical Services | \$228    |
| Project Construction Manager       | Technical Services | \$191    |
| Construction Manager               | Technical Services | \$166    |
| Associate Construction Manager     | Technical Services | \$145    |
| Assistant Construction Manager     | Technical Services | \$124    |
| Commissioning Manager              | Technical Services | \$259    |
| Commissioning Technical Manager    | Technical Services | \$259    |
| Commissioning Agent                | Technical Services | \$228    |
| Commissioning Senior Technician    | Technical Services | \$197    |
| Commissioning Associate Technician | Technical Services | \$171    |
| Commissioning Assistant Technician | Technical Services | \$150    |
| Building Inspector                 | Technical Services | \$129    |
| CMT Manager                        | Technical Services | \$172    |
| Drilling Manager                   | Technical Services | \$170    |
| CMT Technical Manager              | Technical Services | \$160    |
| Drilling Project Manager           | Technical Services | \$160    |
| CMT Lab Manager                    | Technical Services | \$131    |
| CMT Field Manager                  | Technical Services | \$132    |
| Drilling Field Manager             | Technical Services | \$137    |

The City will not compensate for expenses such as postage, mileage, parking, or telephone costs. Reproductions, if requested by the City, shall be reimbursed at actual cost if approved in advance by the Project Manager. Reproductions requested by the City such as end-of-phase reports, drawings, bid documents, record drawing reproductions, etc. are not included in the hourly rates will be itemized as a not-to-exceed expense, and will be reimbursed at actual cost.

**PRIME TEAM MEMBERS**Prime: Olsson, Inc. (Page 4 of 5)

List **ALL** potential personnel titles/classifications that may be utilized under the contract and their respective hourly rate. Do not list names of personnel, only titles (i.e. Project Manager). Provide additional sheets as necessary.

| Title/Classification             | Responsibilities   | Rate/Hr. |
|----------------------------------|--------------------|----------|
| CMT Senior Technician            | Technical Services | \$122    |
| Senior Driller                   | Technical Services | \$117    |
| CMT Associate Technician         | Technical Services | \$96     |
| Associate Driller                | Technical Services | \$93     |
| CMT Assistant Technician         | Technical Services | \$86     |
| Assistant Driller                | Technical Services | \$83     |
| CMT Standby Time                 | Technical Services | \$95     |
| CMT Earthwork Observation        | Technical Services | \$95     |
| CMT Asphalt Observation          | Technical Services | \$95     |
| CMT Deep Foundation Observation  | Technical Services | \$121    |
| CMT Concrete Observation         | Technical Services | \$96     |
| CMT Masonry Observation          | Technical Services | \$121    |
| CMT Structural Steel Observation | Technical Services | \$129    |
| CMT Post-Tension Observation     | Technical Services | \$121    |
| CMT Scheduler                    | Technical Services | \$91     |
| Senior Surveyor                  | Technical Services | \$180    |
| Surveyor                         | Technical Services | \$145    |
| Associate Surveyor               | Technical Services | \$135    |
| Assistant Surveyor               | Technical Services | \$102    |
| UAS Pilot                        | Technical Services | \$176    |
| Lidar Crew                       | Technical Services | \$212    |

The City will not compensate for expenses such as postage, mileage, parking, or telephone costs. Reproductions, if requested by the City, shall be reimbursed at actual cost if approved in advance by the Project Manager. Reproductions requested by the City such as end-of-phase reports, drawings, bid documents, record drawing reproductions, etc. are not included in the hourly rates will be itemized as a not-to-exceed expense, and will be reimbursed at actual cost.



## REIMBURSABLE EXPENSES

Prime: Olsson, Inc. (Page 1 of 2)

---

The additional expenses reimbursable by the City shall include the actual cost to reproduce drawings and specifications requested by the City. Travel/transportation costs shall not be reimbursed by the City for Primes.

### Actual Costs

| <u>Item</u>          | <u>Charge Rate</u>       |
|----------------------|--------------------------|
| Copies (8 1/2 x 11") | \$ <u>At Cost</u> / each |
| Copies (8 1/2 x 14") | \$ <u>At Cost</u> / each |
| Red-line copies      | \$ <u>At Cost</u> / S.F. |
| Reproducibles        | \$ <u>At Cost</u> / page |

**REIMBURSABLE EXPENSES**Prime: Olsson, Inc. (Page 2 of 2)

| <b>Equipment &amp; Testing Services</b> |          |       |          |                                    |                    |
|---|----------|-------|----------|------------------------------------|--------------------|
| 2" Weighted Disposable Bailer           | \$       | 15    | /day     | Specific Gravity                   | \$ 137 /test       |
| Anemometer                              | \$       | 60    | /day     | Direct Shear                       | \$ 525 /point      |
| Four Gas Monitor                        | \$       | 35    | /day     | Hydrometer Analysis                | \$ 158 /test       |
| Five Gas Monitor                        | \$       | 110   | /day     | Swell, One-Dimensional             | \$ 158 /test       |
| FLIR Camera                             | \$       | 100   | /hour    | Re-Molded Swell                    | \$ 184 /test       |
| Geiger Mueller                          | \$       | 25    | /day     | Consolidation, Time Rate           | \$ 210 /unit       |
| Hand Auger Kit                          | \$       | 35    | /day     | Soil Corrosion Suite               | \$ 263 /test       |
| Handheld GPS                            | \$       | 25    | /day     | Trip Charge                        | Per Project        |
| Level, Tripod, and Grade Rod            | \$       | 50    | /day     | Electrical Resistivity             | \$ 158 /test       |
| Magnetic Locator                        | \$       | 35    | /day     | Concrete Temperature Probe         | \$ 131 /each       |
| Oil/Water Interface Probe               | \$       | 50    | /day     | Unconfined Compression             | \$ 89 /test        |
| Peristaltic Sampling Pump               | \$       | 60    | /day     | Falling Head Permeability          | \$ 578 /test       |
| Submersible Pump                        | \$       | 60    | /day     | Triaxial (CU), In-Situ             | \$ 562 /point      |
| Photoionization Detector                | \$       | 100   | /day     | Re-Molded Triaxial (CU)            | \$ 2,048 /point    |
| Sampling Kit                            | \$       | 30    | /day     | Triaxial (UU)                      | \$ 111 /point      |
| Trimble GPS Handheld Meter              | \$       | 150   | /day     | Thermal Resistivity                | \$ 1,260 /point    |
| Water Level Indicator                   | \$       | 35    | /day     | Compr. Strength of Concrete        | \$ 19 /test        |
| Water Quality Meter                     | \$       | 75    | /day     | Compr. Strength of Cores           | \$ 89 /test        |
| 4 Wheel Drive ATV                       | \$       | 100   | /day     | Core Lengths                       | \$ 26 /test        |
| Trimble GPS                             | \$       | 300   | /day     | Floor Flatness Equipment           | \$ 158 /day        |
| Trimble Robot                           | \$       | 300   | /day     | Coring Equipment                   | \$ 158 /day        |
| LiDAR Scanner                           | \$       | 900   | /day     | Compr. Strength of Grout           | \$ 42 /test        |
| Drone                                   | \$       | 500   | /day     | Compr. Strength of Mortar          | \$ 42 /test        |
| Pointerra (1-month)                     | \$       | 100   | /each    | Compr. Strength of Block           | \$ 142 /test       |
| Pointerra (6-months)                    | \$       | 500   | /each    | Compr Strength of Block Prism      | \$ 173 /test       |
| Mileage                                 | IRS RATE |       | /mile    | LA Abrasion                        | \$ 263 /test       |
| Line Drawing Bond                       | \$       | 0.25  | /sq. ft. | Core Thickness                     | \$ 26 /test        |
| Map Rendering Bond                      | \$       | 1.25  | /sq. ft. | Max. Theoretical Specific Gravity  | \$ 89 /test        |
| Full Color Bond                         | \$       | 2.50  | /sq. ft. | Bulk Specific Gravity              | \$ 68 /test        |
| Line Drawing Photo                      | \$       | 0.65  | /sq. ft. | Asphalt Content & Gradation        | \$ 147 /test       |
| Map Rendering Photo                     | \$       | 1.65  | /sq. ft. | Drilling – Straight Auger          | \$ 27 /foot        |
| Full Color Photo                        | \$       | 2.90  | /sq. ft. | Drilling – Hollow Stem             | \$ 40 /foot        |
| Lrg. Format Print - Presentation        | \$       | 5.00  | /sq. ft. | Drill Rig Mobilization (<25 miles) | \$ 709 /each       |
| #200 Wash Analysis                      | \$       | 58    | /test    | Drill Rig Mobilization (>25 miles) | \$ 709 + \$7 /mile |
| Atterberg Limits Tests                  | \$       | 100   | /test    | Moisture Vapor Emission Test       | \$ 68 /each        |
| Standard Proctor                        | \$       | 168   | /test    | Electrical Resistivity Gauge       | \$ 158 /day        |
| Modified Proctor                        | \$       | 210   | /test    | Field CBR Device                   | \$ 420 /day        |
| Proctor Checkpoint                      | \$       | 74    | /test    | Dynamic Cone Penetrometer          | \$ 79 /day         |
| Sieve Analysis                          | \$       | 105   | /test    | Seismic (24-Channel Unit)          | \$ 1,575 /day      |
| Moisture Only                           | \$       | 16    | /test    | Sonic Echo Testing                 | \$ 263 /day        |
| Density & Moisture                      | \$       | 26    | /test    | Ultrasonic Testing Machine         | \$ 158 /day        |
| R-Value                                 | \$       | 446   | /test    | Magnetic Particle Machine          | \$ 158 /day        |
| Relative Density                        | \$       | 315   | /test    | Intumescent Thickness Gauge        | \$ 105 /day        |
| California Bearing Ratio                | \$       | 263   | /point   | Specialized Geotechnical Software  | \$ 788 /each       |
| Sulfate Soundness                       | \$       | 263   | /test    | Testing Equipment                  | \$ 30 /day         |
| pH Level                                | \$       | 32    | /test    | Fireproofing – Cohesion            | \$ 26 /test        |
| Organic Content                         | \$       | 79    | /test    | Fireproofing - Adhesion/Cohesion   | \$ 53 /test        |
|   |          |       |          | Lidar UAS Sensor                   | \$ 1,575 /day      |
| Unmanned Aircraft System (UAS)          | \$       | 2,500 | /day     | Mobile Lidar                       | \$ 10,000 /day     |



**REIMBURSABLE EXPENSES**

Sub-Consultant: Martinez Associates, Inc.

---

The additional expenses of the consultant reimbursable by the City shall include:

1. Actual cost of reproduction of drawings and specifications requested by the City.
2. Travel cost may apply for sub consultants not local to the project. Travel shall be pre-approved by the DOTI PM.

The Consultant will be required to submit a complete list of pricing reimbursable items.

**Actual Costs**

| <u>Item</u>          | <u>Charge Rate</u>   |
|----------------------|----------------------|
| Copies (8 1/2 x 11") | \$ <u>N/A</u> / each |
| Copies (8 1/2 x 14") | \$ <u>N/A</u> / each |
| Red-line copies      | \$ <u>N/A</u> / S.F. |
| Reproducibles        | \$ <u>N/A</u> / page |



**SOIL AND AGGREGATE TESTS**

|  |          |
|--|----------|
| Standard Proctor, ASTM D698 .....                                      | \$137.00 |
| Modified Proctor, ASTM D1557 .....                                     | \$152.00 |
| Particle Size Analysis, ASTM D42252.00                                 |          |
| • Fine Sieve (from +#200 to #4).....                                   | \$98.00  |
| • Coarse Sieve (from +#200 to 3")...                                   | \$121.00 |
| • Coarse Sieve (retained on #4).....                                   | \$104.00 |
| • Hydrometer.....  | \$116.00 |
| Percent Passing #200 Sieve, ASTM D1140...                              | \$76.00  |
| Atterberg Limits, ASTM D4318   |          |
| • Three points .....   | \$99.00  |
| • One point .....  | \$79.00  |
| Moisture Content   |          |
| • Moisture Content & Dry (Bulk) Density,<br>ASTM D2216 and D2937 ..... | \$23.00  |
| • Moisture Content, ASTM D2216.....                                    | \$19.00  |
| Water Soluble Sulfate... ..  | \$63.00  |
| Organic Content, ASTM D2974 .....                                      | \$100.00 |
| Unconfined Compression, ASTM 2166 .....                                | \$100.00 |
| Unconfined Compression (remolded).....                                 | \$126.00 |
| Swell/Settlement .....   | \$100.00 |
| Swell/Settlement, Remolded .....                                       | \$126.00 |
| Specific Gravity and Absorption  |          |
| • Coarse Aggregate, ASTM C127 .....                                    | \$69.00  |
| • Fine Aggregate, ASTM C128.....                                       | \$67.00  |
| Unit Weight of Aggregate, ASTM C29.....                                | \$67.00  |

**CONCRETE TESTS**

|   |          |
|---|----------|
| Compression Test, ASTM C39                  |          |
| • Compression .....                         | \$23.00  |
| • Flexure Test Beams .....                  | \$74.00  |
| Light Weight Concrete, ASTM C39             |          |
| • Compression .....                         | \$23.00  |
| Specimen Preparation, Trimming or Coring .. | \$67.00  |
| Core Compression Test, ASTM C12.....        | \$69.00  |
| Generator and Coring Machine, per day ..... | \$315.00 |

**MASONRY TESTS**

|                                    |          |
|------------------------------------|----------|
| Moisture Content, as received..... | \$40.50  |
| Absorption .....                   | \$81.00  |
| Compression .....                  | \$23.00  |
| Net Area and Volume.....           | \$40.50  |
| Trimming.....                      | \$86.50  |
| Compression Test                   |          |
| • Ungrouted prisms .....           | \$131.00 |
| • Grouted prisms .....             | \$142.00 |
| • 2" x 4" Mortar Cylinder.....     | \$23.00  |
| • 3" x 6" Grout Prisms.....        | \$71.00  |
| • 2" Cubes, ASTM C109 .....        | \$23.00  |

**MOISTURE EMISSION TEST**

|                               |          |
|-------------------------------|----------|
| Vapor Emission Test Kit ..... | \$49.00  |
| RH Test Probe .....           | \$185.00 |

**ASPHALTIC CONCRETE**

|   |          |
|---|----------|
| Asphalt Content with Gradation.....         | \$284.00 |
| AC Ignition Oven Mix Calibration .....      | \$520.00 |
| Max. Specific Gravity of Mix, (Rice Method) | \$173.00 |
| Unit Weight of Core or Compacted Sample ..  | \$63.00  |
| Generator and Coring Machine .....          | \$315.00 |

**FIELD EXPLORATION AND TESTING**

|                                  |             |
|----------------------------------|-------------|
| Field Percolation Test .....     | By Proposal |
| Geotechnical Investigation ..... | By Proposal |

**VIBRATION MONITORING**

|                                      |             |
|--------------------------------------|-------------|
| Vibration Monitoring Equipment ..... | By Proposal |
| Calibration/Project.....             | \$650.00    |

**Outside Services**, at cost plus 15 percent

**SOIL AND AGGREGATE TESTS**

|  |  |
|--|--|
| Relative Density                                   |  |
| R-value, ASTM D2844                                |  |
| Soil Resistivity (Miller Box)                      |  |
| Corrosivity (pH, resistivity, sulfates, chlorides) |  |
| Permeability                                       |  |
| • Undisturbed Sample, up to #4 Sieve               |  |
| • Disturbed (remolded) Sample, up to #4 Sieve      |  |
| Permeability of Gravel and Sands                   |  |
| Direct Shear Undrained, per point                  |  |
| Los Angeles Abrasion                               |  |
| • 500 Revolutions, ASTM C131                       |  |
| • 1,000 Revolutions, ASTM C535                     |  |
| Soundness-Sulfate (5-cycles), ASTM C88             |  |
| Micro Deval  |  |

**CONCRETE TESTS**

|  |  |
|--|--|
| Splitting Tensile, 6" x 12" Cylinders  |  |
| Laboratory Trial Batch, ASTM C192      |  |
| Laboratory Mix Design, Historical Data |  |

**MASONRY TESTS**

|                             |  |
|-----------------------------|--|
| Shrinkage (ASTM C426)       |  |
| Mortar or Grout Mix Designs |  |

**ASPHALTIC CONCRETE**

|                                      |  |
|--------------------------------------|--|
| Complete Asphalt Concrete Mix Design |  |
|--------------------------------------|--|