

## Section 9 - Measurement and Payment

### 9.1 Measurement of Quantities.

Measurements of the completed work shall be in accordance with, and by instruments and devices calibrated to. United States Standard Measures or Metric System of Measurement, and the units of measurement for payment, and the limits thereof, shall be as shown on the plans or the special provisions or in the absence thereof, as set forth in these specifications.

In determining quantities, all measurements shall be made in horizontal or vertical planes unless otherwise specified.

9.1.1 Methods of Measurement – Materials and items of work which are to be paid for on the basis of measurement shall be measured in accordance with the methods stipulated in the particular sections involved.

9.1.2 Certified Weights – When payment is to be made on the basis of weight, the weighing shall be done on certified platform scales or, when approved by the Engineer, on a completely automated weighing and recording system. The Contractor shall furnish the Engineer with duplicate licensed weighmaster's certificates showing the actual net weights. The City may accept the certificates as evidence of the weights delivered.

9.1.3 Units of Measurement – Measurements, conversions, multiples and fractions thereof shall be in accordance with U.S. Standard Measures. A pound is an avoirdupois pound. A ton is 2,000 pounds. The unit of liquid measure is the U.S. gallon. The units of area are square feet and square yards and the unit of volume is cubic yards. Unit of length is linear feet

Material not used from a transporting vehicle shall be determined by the Engineer and deducted from the certified tag.

When materials are to be measured and paid for on a volume basis, and it would be impractical to determine the volume, or when requested by the Contractor in writing and approved by the Engineer in writing, the material will be weighed and converted to volume measurement for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer before such method of measurement of pay quantities will be adopted. Unless otherwise specified, units of measurement are as determined in place based on neat lines as indicated on Contract Plans or Drawings without regard to expansion or compaction.

Where contract plans, drawings, reference drawings or other contract specifications indicate a minimum dimension (e.g., 2 inch minimum depth of asphalt concrete overlays), no payment for exceeding the minimum dimension shall be allowed, except when payment is based on weight or volume the Engineer may approve up to a five (5) percent increase based

either on the contract bid amount, or theoretical weight or volume based on the contract drawings and specifications, which ever is less.

Full compensation for all expense involved in conforming to the requirements for measuring and weighing materials shall be considered as included in the unit prices bid for the materials being measured or weighed and no additional allowance will be made therefore.

Quantities of material wasted or disposed of in a manner not called for under the Contract; or rejected loads of material, including material rejected after it has been placed by reason of the failure of the Contractor to conform to the provisions of the contract; or material not unloaded from the transporting vehicle; or material placed outside the lines indicated on the plans or given by the Engineer; or material remaining on hand after completion of the contract, will not be paid for and such quantities will not be included in the final total quantities. No compensation will be allowed for hauling and disposing of rejected materials.

#### 9.2 Scope of Payment.

The Contractor shall accept the compensation, as herein provided, as full payment for furnishing all labor, materials, tools, equipment and incidentals necessary to the completed work and for performing all work contemplated and embraced under the Contract; also for loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the work, also for all expenses incurred in consequence of the suspension or discontinuance of the work as herein specified; and for estimate or of any retained percentage shall relieve the Contractor of any obligation to make good any defective work or material.

This Section shall apply to all bid items as if repeated and contained separately therein.

Compensation for all work performed under the Contract shall be included in the bid prices listed in the Bid Proposal and include the full compensation for all of the costs, overhead, profit and expenses in connection therewith, including furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in completing each item as shown and specified. Principal features of the work to be included under the various payment items are noted. Work not specifically listed in the "Bid Proposal" shall be included in the prices bid under the items to which such work is applicable. Quantities of work to be paid shall be based on the number or amount of the item acceptably installed complete in place, as measured by the Engineer. In the case of item limits of payment designated on the plans, such limits shall control and no separate measurement or payment will be made beyond such limits for the items.

The work of this project is designated in the Bid Proposal by size, type, quantity or whatever information is necessary for identification. The Contractor shall accept the compensation provided in the contract as full payment for furnishing all bonds, licenses, permits, fees and insurances, supervision, labor materials, tools, equipment; testing, corrections, repair, field construction survey, and incidentals necessary to the completed

work and for performing all work contemplated and embraced under the Contract. Also for loss or damage arising from the nature of the work or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the work until the acceptance by the City and for all risks of every description connected with the prosecution of the work, also for all expenses incurred in consequence of the suspension or discontinuance of the work as provided in the Contract; and for completing the work in accordance with the Contract Documents. Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective or damaged work or material.

No compensation will be made in case of loss of anticipated profits. Increased or decreased work involving Contract Change Orders or supplemental agreements will be paid for as provided in such Contract Change Orders or agreements.

Payments for materials and supplies stored or not installed in their final positions will not be allowed.

Unless specifically provided differently, references to contractor's cost, borne by Contractor, paid by Contractor and phrases of like import shall be deemed to be accompanied with the phrase "at no additional cost to the City."

It is mutually agreed between the parties hereto that no certificate given or payments made under this Contract, except the final certificate of payment, shall be conclusive evidence of the performance of this Contract, either wholly or in part, against any claim of the City, and no payments shall be construed as an acceptance of any defective work or improper materials. The Contractor hereby further agrees that the payment of the final amount due under the Contract, and the adjustment and payment for any work done in accordance with any alterations of the same, shall release the City, Engineer, and their authorized representatives from any and all claims or liability on account of work performed under this contract or any alterations thereof.

The Contractor shall submit an estimated, progress payment-request to the City for the work constructed during the preceding calendar month. The City will review the progress payment request to determine that it represents the total amount of work done, and if required, will adjust the request to represent the total amount of the work done. The City will deliver copies of such adjustments to the Contractor. Such progress payment requests shall be on a form provided or approved by the City.

No payment or partial payment will be made for any work or portions thereof which work or portions are not incorporated and installed as a completed part of the work. The unit and lump sum prices bid shall cover all work required by the Contract Documents. All costs in connection with the proper and successful completion of the work, including furnishing all materials, supplies, and appurtenances; providing all construction plant, equipment, and tools; performing all necessary labor and supervision to fully complete the work; and restoration of existing improvements and utilities, shall be included in the prices bid. All concomitant work not specifically set forth as a pay item in the Bid Form shall be considered a subsidiary obligation of Contractor and all costs in connection therewith shall be included in the prices bid.

All estimated quantities stipulated in the Bidders Proposal or other Contract Documents are approximate and are to be used only as a basis for estimating the probable cost of the work and for the purpose of comparing the bids submitted for the work. The actual amounts of work done and materials furnished under unit price items may differ from the estimated quantities. Contractor agrees that he will make no claim for damages, anticipated profits, or otherwise on account of any difference, between the amounts of work actually performed and materials actually furnished and the estimated amounts therefore.

### 9.3 Extra Work

9.3.1 General – New or unforeseen work will be classed as "extra work" when the Engineer determines that it is not covered by contract unit prices or stipulated unit prices.

9.3.2 Payment – When the price for the extra work cannot be agreed upon, the city will pay for the extra work based on the accumulation of costs as provided herein.

9.3.3 Daily Reports by Contractor – At the beginning of the following day, the Contractor shall submit a daily report to the Engineer, on forms approved by the City, together with applicable delivery tickets, listing all labor, materials and equipment involved for that day, and for other authorized services and expenditures. An attempt shall be made to reconcile the daily report, and it shall be signed by the Engineer and the Contractor. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by subcontractors or others shall be submitted through the prime contractor. The Daily Reports shall show the following:

- a. Labor — The report shall show names of workers, classification and hours worked.
- b. Material — The report shall describe and list quantities of materials used.
- c. Equipment — The report shall show type of equipment, size, identification number and hours of operation, including loading and transportation, if applicable.
- d. Other Services and Expenditures — Other services and expenditures shall be described in such detail as the City may require.

### 9.3.4 Basis for Establishing Costs

9.3.4.1 Labor – The costs of labor will be the actual cost for wages, not to exceed that prevailing locally for each craft or type of workman at the time the extra work is done, plus costs. The use of labor classification which would increase the extra work cost will not be permitted unless the Contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

9.3.4.2 Labor Surcharge – The labor surcharge compensates the Contractor for statutory payroll items stipulated by various governmental agencies. The four items

included are Workers\* Compensation, Social Security, State Unemployment and Federal Unemployment taxes. The general rate is an average of the job classifications common to public projects. Exceptions to this average are listed below. The exceptions were determined from ratings of very high Workers' Compensation costs. The exceptions should be utilized only for the employee group actually performing the "excepted" task. Questions or disputes should be directed to the City.

The Labor Surcharge percentage will make all necessary compensation for the fact that 1) the unemployment portion of the percentage should be applied only to the first \$7,000.00 earned and 2) the entire percentage should be applied only to base wage and vacation pay. The surcharge percentage to be applied to the actual wages paid will be 19 percent for all work, except that for the following types of work said surcharge will be as shown below:

Type of Work Performed	Labor Surcharge Percent
Concrete Construction - Bridge .....	20
Drilling .....	23
Erection of structural metal for metal bridges, excluding sign bridge .....	24
Puedriving, not including drilled, cast-in-place concrete piles .....	23
Wrecking & Demolition .....	21

9.3.4.3 Materials – The cost of materials reported shall be at invoice or lowest current price at which such materials are locally available and delivered to the job site in the quantities involved, plus sales tax, freight and delivery. The City reserves the right to approve materials and sources of supply, or to supply materials to the Contractor if necessary for the progress of the work. No charge of markup shall be applied to any material provided by the City.

9.3.4.4 Tool and Equipment Rental – No payment will be made for the use of tools which are not listed on the current State equipment Rental Rate List.

The rates to be used in determining equipment rental costs shall not exceed those determined using the latest State Department of Transportation Manual of Equipment Rental Rates.

The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance and all incidentals. Necessary loading and transportation costs for equipment used on the extra work shall be included.

If equipment is used intermittently and, when not in use, could be returned to its rental source and less expense to the City than holding it at the work site, it shall be returned, unless the Contractor elects to keep it at the work site at no expense to the City.

All equipment shall be acceptable to the Engineer, in; good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and manufacturer's approved modifications shall be used to classify equipment and it shall be powered by a unit of at last: the minimum rating recommended by the manufacturer.

The reported rental time for equipment already at the job site shall be the duration of its use on the extra work, commencing at .the time it is first put into actual operation on the extra work, plus the time required to move it from is previous site and back or to a closer site.

9.3.4.5 Other Items – The City may authorize other items which may be required on the extra work. Such items include labor, services, material and equipment which are different in their nature from those required for the work specified in the contract and which are of a type not ordinarily available from the Contractor or any of his subcontractors. Invoices covering all such items in detail shall be submitted with the request for payment.

9.3.4.6 Invoices – Vendor's invoices for material, equipment rental, and other expenditures shall be submitted with the request for payment. If the request for payment is not substantiated by, invoices or other documentation, the City may establish the cost of the item involved at the lowest price which was current at the time of the work involved.

9.3.4.7 Markup – The following percentage shall be added to the Contractor's costs and shall constitute the markup for all overhead and profits.

On Labor	25%
On Materials	15%
On Equipment Rental	15%
On Other Items and Expenditures	15%

No additional markup shall be made by reason of the performance of extra work by a subcontractor or other forces.

#### 9.4 Progress Payments.

The Contractor shall, once each-month, prepare an estimate of the total amount of work done. The Engineer will review and correct the monthly estimate as appropriate. Upon the Engineers approval of the monthly estimate, the City shall retain 10% of such estimated value of the done and shall pay to the Contractor, the estimated amount of work after deducting therefrom all previous payments and all sums to be kept or retained under the provisions of the Contract No such estimate or payment shall be required to be made, when, the judgment of the Engineer, the work is not proceeding in accordance with the provisions of the Contract, or when in his judgment the total value of the work don® since the last estimate amounts to less than One Thousand Dollars (\$10DO).

Progress payments will be made no sooner than 15 calendar days following the Engineer's approval of the monthly pay request and no later than 25 calendar days following the Engineer's approval.

In lieu of the above described retention, at the request and expense of the Contractor, the City will make payment of funds withheld" from progress or partial payments pursuant to the requirements of Government Code Section 14402 if the Contractor deposits in escrow with a bank acceptable to the City, securities eligible for the investment of State funds under Government Code Section 16430 or bank certificates of deposit, upon the following conditions.

a. The Contractor shall bear the expense of the City and the escrow agent, either the City Treasurer or the bank, in connection with the escrow deposit made.

b. Securities or certificates of deposit to be placed in escrow shall be subject to approval of the Department and unless otherwise permitted by the escrow agreement, shall be of a value of at least 100 percent of the amounts of retention to be paid to the Contractor pursuant to this section.

c. The Contractor shall enter into an escrow agreement satisfactory to the City, which agreement shall include provisions governing (inter alia):

1. the amount of securities to be deposited,
2. the providing of powers of attorney or documents necessary for the transfer of the securities to be deposited,
3. conversion to cash to provide grounds to meet defaults by the Contractor including, but not limited to termination of the Contractor's control over the work, stop notices filed pursuant to law, assessment of liquidated damages or other amounts to be kept or retained under the provisions or the contract,
4. decrease in value of securities on deposit
5. the termination of the escrow upon completion of the contract.
6. The Contractor shall provide written notice to the surety to such agreement.

#### 9.5 Delivered Material.

When provided for in the Special Provisions, subject to limitations and conditions therein, the cost of materials and equipment delivered but not incorporated in the work may be included in the progress estimate, upon approval by the Engineer.

#### 9.6 Payments Withheld.

The City may withhold, or on account of later discovered evidence, nullify all or part of any certification made to the Contractor by the City as to the amount determined to be

due the Contractor, to such extent and period of time only as may be necessary to protect the City from loss on account of:

- (a) Defective work not remedied;
- (b) Claims filed or written evidence indicating probable filing;
- (c) Failure to properly pay Subcontractors or for material or labor;
- (d) Damage to City property.

9.7 Acceptance, Final Estimate and Payment.

Whenever the Contractor shall, in the opinion of the Engineer, have completed his Contract, the Engineer shall so certify in writing to the City Council, and shall make a final estimate of the amount of the work done by the Contractor and also the value of his work according to the terms of the Contract.

Upon acceptance of the work by the City Council, the final payment of the work will be made to the Contractor. The payment due the Contractor for work performed and materials furnished shall be determined from the final measurements made by the Engineer and the unit prices bid by the Contractor, including such extra work as may have been properly authorized. All prior partial quantities and payments shall be subject to correction in the final payment and no payment shall be construed to be an acceptance of any effective work or improper materials.

From the total amount of the work, a deduction of ten (10) percent will be made and from the remainder will be deducted all amounts due to the City from Contractor in accordance with the terms of the contract. This amount will be paid no sooner than 35 calendar days, nor later than 45 calendar days, following council acceptance.