

**CITY OF MARQUETTE**  
CHAPTER 1  
GENERAL REQUIREMENTS AND COVENANTS

**1.01 DEFINITION OF TERMS**

**A. Abbreviations**

Wherever the following abbreviations are used in these specifications or the plans, they are to be construed in the same as the respective expressions represented:

- AASHTO      American Association of State Highway and Transportation Officials
- ANSI            American National Standards Institute
- ASTM           American Society for Testing and Materials
- MDOT           Michigan Department of Transportation

**B. Definitions**

*ADDENDUM* (ADDENDA, PLURAL): An Addendum is a document issued by the City prior to the opening of the General Bids which clarifies, amends, or modifies the Bidding Documents or the Contract Documents.

*ADVERTISEMENT*: The public invitation to bid, as required by law, inviting bids for work to be performed and materials to be furnished.

*AUTHORIZATION*: The written approval by authority of the City's Engineer or his authorized representative, for changes in or extras to plans or changes in the quantity of work.

*AWARD*: Formal execution of the contract form by the successful Bidder and the City.

*BASE COURSE*: The layer or layers of specified or selected material of designed thickness placed on a subbase or a subgrade to support a surface course.

*BIDDER*: The individual, partnership or corporation, or a combination thereof, formally submitting a proposal for the work contemplated, acting directly or through an authorized representative.

*CALENDAR DAY*: Every day shown on the calendar beginning and ending at midnight.

*CITY*: The City of Marquette, Michigan a municipal corporation.

*COMMISSION*: The City Commission of the City of Marquette.

*CONTRACT*: The written agreement between the City and the Contractor setting forth the obligations of the parties thereunder. The contract includes the Invitation to Bid,

Information for Bidders, Bidder's Proposal, Contract Form and Contract Bond, Certificates of Insurance, Specifications, Supplemental Specifications, Special Provisions, General and Detailed Plans, Addendum, and Notice to Proceed, also any change orders and agreements which are required to complete the construction of the work in an acceptable manner, all of which constitute one instrument.

*CONTRACT BOND:* The approved form of security, executed by the Contractor and his Surety or Sureties, guaranteeing execution of the contract and the payment of legal debts pertaining to the construction of the project.

1. *Payment Bond:* The security furnished by the Contractor and his Surety to guarantee payment of the debts covered by the bond.
2. *Performance Bond:* The security furnished by the Contractor and his Surety to guarantee performance of the work in accordance with the contract.

*CONTRACT ITEM (PAY ITEM):* A specially described item of work for which a unit price is provided in the contract.

*CONTRACT TIME:* The period of time assigned in the contract, inclusive, from the date of execution of the contract form to the specified completion date or until the specified number of calendar days has elapsed and in each case including authorized extensions of time.

*CONTRACT UNIT PRICE:* The price provided in the contract for a specifically described item of work.

*CONTRACTOR:* The individual, partnership or corporation, or any combination thereof undertaking the execution of the work under the terms of the contract and acting directly or through agents or employees.

*CULVERT:* A structure which provides a total clear span opening of less than 20 feet under a roadbed.

*EARTH GRADE:* The completely graded roadway before placing the pavement structure.

*ENGINEER:* The City Engineer or his authorized representative.

*ESTIMATE:*

1. *Final Estimate:* A compilation of final quantities showing work performed, upon which basis final payment is made.
2. *Progress Estimate:* An estimate made periodically as the work progresses showing estimated work performed and materials furnished and upon which basis periodic payments are made.

*EXTENSION OF TIME:* The additional contract time authorized by the City beyond the original calendar date, or number of calendar days, specified in the contract.

*EXTRA WORK:* Any work which is determined to be essential to the satisfactory completion of the contract and which does not appear in the proposal as a specific item of work and which is not included in the price bid for other items in the contract.

*INSPECTOR:* The authorized representative of the Engineer, assigned to make detailed inspections of the contract performance.

*LIQUIDATED DAMAGES:* Liquidated Damages are a specified sum of money stipulated by the contract as the amount to be recovered for each day of delay towards the completion of a project. By entering into the Contract, the Contractor agrees with the money stipulated by the contract to be recovered for each day of delay. A day as specified will be defined as a “Calendar Day”.

*LOCAL TRAFFIC:* That traffic which has origin or destination within the project limits.

*MAXIMUM UNIT WEIGHT:* Maximum Unit Weight, when used as a measure of compaction or density of soils having a loss by washing greater than 10 percent, shall be understood to mean the maximum unit weight per cubic foot as determined by AASHTO, modified to include all material passing the 1-inch sieve.

*SPECIFICATIONS:* A general term applied to all directions, provisions and requirements pertaining to performance of the work.

1. Standard Specifications: All requirements and provisions contained in this document of Standard Specifications of the City of Marquette.
2. Supplemental Specifications: Detailed specifications supplemental to or superseding the Standard Specifications.
3. Special Provisions: The special requirements, regulations, or directions prepared to cover work on a particular project not provided by the Standard Specifications or Supplemental Specifications. An addendum is a Special provision.

*STANDARD PLANS:* Those plans which contain details, of contract items and materials, which are in general use.

*SUBBASE:* The layer of specified material of designed thickness placed on the subgrade as a part of the pavement structure.

*SUBCONTRACTOR:* The individual, partnership or corporation, or a combination thereof, undertaking the execution of a part of the work under the terms of the contract, by virtue of an agreement with the Contractor approved by the Engineer.

*SUBGRADE:* That portion of the earth upon which the pavement structure is to be placed.

*SURETY:* The legal entity which is bound with, and for the Contractor for the performance of the contract and for the payment of all lawful indebtedness pertaining thereto.

*SURFACE COURSE:* The top layer of a pavement structure.

*TEMPORARY ROAD:* A roadway constructed to facilitate the movement of vehicular and pedestrian traffic around a construction operation including appurtenances.

*TEMPORARY ROUTE:* An existing road over which the traffic is temporarily diverted.

*TRAFFIC CONTROL DEVICES:* Signs, signals, lighting devices, barricades, barrels, delineators, pavement markings, traffic regulators and all other equipment for protecting and regulating traffic in accordance with the 2011 Michigan Manual of Uniform Traffic Control Devices unless otherwise specified.

*TRAFFIC LANE:* The portion of the traveled way for the movement of a single line of vehicles.

*TRAFFIC REGULATOR:* A person assigned to regulate traffic.

*TRAVELED WAY:* The portion of the roadway for the movement of vehicles, exclusive of shoulders.

*WORK:* Work shall mean the furnishing of all labor, materials, equipment, and other incidentals necessary or convenient to the successful completion of the project and the carrying out of all the duties and obligations imposed.

*WORKING DRAWINGS:* Stress sheets, shop drawings, erection plans, falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data which the Contractor is required to submit to the Engineer for approval.

*WORK ORDER:* A written order of contractual status signed by the Engineer and requiring performance by the Contractor.

## **1.02 BIDDING REQUIREMENTS AND CONDITIONS**

### **A. Bid Schedule Quantities**

The quantities appearing in the bid schedule are approximate only and are prepared for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of work performed and accepted or materials furnished in accordance with the contract. The scheduled quantities of work to be done and materials to be furnished may each be increased, decreased, or omitted provided that the total dollar amount of the contract is not changed by more than twenty-five percent. The bid unit prices may be negotiated only if the total contract price is changed by 25% or more.

### **B. Examination of Plans, Specifications and Site of Work**

Bidders shall carefully examine the proposal forms, plans and specifications and inspect the site of the proposed work in order to satisfy themselves, by examination, as to all local conditions affecting the contract and as to the detailed requirements of construction. The submission of a bid shall be considered prima facie evidence that the Bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the plans, specifications, supplemental specifications, special provisions, and contract.

Bidders shall also familiarize themselves with the requirements of all Federal, State and local laws which may directly or indirectly affect the prosecution of the work and the furnishing of the necessary materials.

### **C. Preparation of Proposal**

The proposal shall be electronically signed and all sections completed online through the Bid Express service at [www.bidexpress.com](http://www.bidexpress.com). It shall be submitted in its entirety with no modification or changes except as authorized by the Purchasing Agent of the City of Marquette.

#### **D. Irregular Proposals**

Proposals will be considered irregular and will be rejected for either of the following reasons:

1. If the proposal does not contain a unit price for each pay item listed except lump sum items.
2. If all required fields and documents are not completed according to the instructions on the Bid Express Solicitation. This includes acknowledging all addendums that have been issued.

Proposals will be considered irregular and may be rejected for any of the following reasons:

1. If the form is altered.
2. If there are unauthorized alternate bids or conditional bids.
3. If there are unauthorized additions to the proposal.
4. If there are irregularities of any kind which may tend to make the proposal incomplete, indefinite, or ambiguous as to its meaning.
5. If the Bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.

#### **E. Proposal Guaranty**

No proposal will be considered unless accompanied by a guaranty in the form of a certified check or a bid bond by a surety company registered to do business in the State of Michigan, in an amount not less than five percent of the Bid total.

#### **F. Delivery of Proposal**

Bids are to be submitted online through the Bid Express service at [www.bidexpress.com](http://www.bidexpress.com). No paper, or emailed bids will be accepted. All proposals must be submitted prior to the deadline specified in the advertisement. More than one proposal for the same project from an individual, partnership or corporation will not be considered.

#### **G. Withdrawal or Revision of Proposal**

A Bidder will be permitted to revise, or withdraw their proposal using Bid Express prior to the deadline.

#### **H. Public Opening of the Proposals**

Proposals will be checked publicly and the total amount of each bid will be read aloud at the time and place specified in the advertisement. After checking all bids, the unit prices of the determined low bid will be made public using the Bid Express web portal.

### **1.03 EXECUTION AND AWARD OF CONTRACT**

#### **A. Consideration of Proposals**

The right is reserved to reject any or all proposals, to waive technicalities, to advertise for new proposals, or to proceed to do the work otherwise, if in the judgement of the City Commission the best interests of the City will be promoted thereby.

## **B. Execution and Award of Contract**

The City Commission will, as soon as practicable after opening of proposals, accept the proposal determined to best promote the interests of the City and reject all other proposals. This acceptance does not constitute the award of the contract. The City Engineer will send notice of proposal acceptance together with the required bond forms to the successful Bidder at the address given on his proposal. Upon receipt of these documents the successful Bidder shall return the completed bond forms to the City Engineer and execute the contract forms with the City prior to the scheduled City Commission meeting. The project will be deemed awarded and a binding contract shall arise only when the contract form has been fully executed by the successful Bidder and approved by the City Commission and executed by the authorized officials of the City.

## **C. Return of Proposal Guaranty**

The proposal guarantees of all except the successful Bidder will be returned promptly following the approval of a proposal by the City Commission. The City will hold the proposal guaranty of the successful Bidder until the contract and bond forms have been fully executed. In the event that all proposals are rejected by the City Commission the proposal guarantees of all Bidders will be returned promptly following such rejection.

## **D. Requirements of Contract Bond**

The successful Bidder shall furnish satisfactory performance and payment bonds each in the amount of not less than 100 percent of the total contract price. Such bonds shall be on the forms provided and shall meet the requirements specified by Michigan law.

## **E. Failure to Execute Contract**

Failure on the part of the successful Bidder to execute the contract form and file satisfactory bonds within a 15-day period shall result in the forfeiture of the proposal guaranty to the City.

## **1.04 SCOPE OF THE WORK**

### **A. Intent of the Plans, Specifications, and Contract**

The intent of the plans, specifications, and contract is to provide for completion of the work in substantial compliance with the details as shown thereon and as described herein. The Contractor shall furnish all labor, materials, equipment, tools, transportation and necessary supplies, and shall perform all operations required to complete the work in accordance with the specifications, and the lines, grades and cross sections provided for on the plans or by authorization.

### **B. Special Work**

Proposed construction or requirements not covered by these specifications will be covered by Supplemental Specifications and Special Provisions contained in the proposal or on the plans.

### **C. Changes in Quantities, Plans or Character of the Work**

The Engineer shall have the right under the contract to make increases and decreases in the quantities, delete work items, and make changes in the plans, in the character of the

work, and the termini of the project, as may be necessary or desirable to insure completion of the contemplated work provided that the sum total of such changes does not change the original contract dollar amount by more than twenty-five percent. Unit bid prices in the proposal will not be revised unless the total contract value is increased or decreased by more than twenty-five percent.

#### **D. Traffic Control**

No road or section thereof shall be closed to traffic unless provided on the plans, in the specifications, or permitted by the City Engineer.

Where construction interferes with the normal use of existing roads or sidewalks, the Contractor shall at all times provide facilities for pedestrian ingress and egress for the property adjacent to the work. For local traffic, the Contractor shall limit his occupation of the right-of-way within a reasonable distance of any properties adjacent to the work for which vehicular ingress and egress is denied by the work. The Contractor shall make all necessary arrangements with residents of property affected by the work regarding vehicular and pedestrian access to their respective properties. Contractor shall also make necessary arrangements for emergency vehicular access at all times throughout duration of construction.

#### **E. Final Cleaning Up**

Before final acceptance of the work, the Contractor shall remove all falsework, excavated or useless materials, rubbish and temporary buildings, bridges and approaches, replace or renew any fences damaged, and restore in an acceptable manner all property, both public and private, which may have been used or damaged during the prosecution of the work. All excavated material or falsework placed in stream channels during construction shall be removed. The Contractor shall remove from the right-of-way all machinery, equipment, and surplus material and leave all areas occupied by the Contractor in conjunction with the contract in a neat, presentable, and completely restored condition satisfactory to the Engineer.

#### **F. Requirements of Pavement Warranty Bond**

The successful Bidder shall furnish a satisfactory pavement warranty bond prior to the scheduled City Commission meeting. The Contractor shall furnish a single term bond worth 5% of the total contract or \$1,000,000, whichever is less, secured in the name of the City of Marquette. Such bond shall be on the form provided and shall meet the requirements specified by Michigan law.

#### **G. Requirements of Pass Through Pavement Warranty Contract**

The successful Bidder shall furnish a satisfactory pass through warranty contract prior to the scheduled City commission meeting. Such contract shall be on the form provided and shall meet the requirements specified in the laws of Michigan.

## **1.05 CONTROL OF THE WORK**

### **A. Authority of Engineer**

The Engineer will decide all questions which may arise as to the quality and acceptability of materials furnished and work performed, and as to the manner of performance and rate of progress of the work; all questions which may arise as to the interpretation of the plans and specifications; and all questions as to the satisfactory and acceptable fulfillment of the terms of the contract by the Contractor.

The Engineer shall have authority to suspend the work wholly or in part, for such period or periods as he may deem necessary, due to unsuitable weather or such other conditions as are considered unfavorable for the prosecution of the work or for any other condition or reason deemed to be in the interest of the public. The Contractor shall not suspend the work or remove therefrom equipment, materials, or personnel necessary for the prosecution of the work without permission from the Engineer.

Upon suspension, the work shall be put in proper and satisfactory condition, carefully covered and properly protected. In all cases of Engineer ordered suspension of construction operations, the work shall not be resumed until permitted by written order of the Engineer.

The Contractor shall obtain the written approval of the Engineer for utilization of City owned areas other than street right-of-way for plant operation, materials or stockpiles.

In order to avoid cumbersome and needless repetition of such phrases as "to the Engineer" and "by the Engineer" throughout the Specifications it shall be understood that when an order, instruction, decision, exercise of judgment, or other similar action is indicated, such order, instruction, decision, exercise of judgment, or other similar action will be issued, given, made by, or reserved to the Engineer.

### **B. Plans and Working Drawings**

Plans showing such details as are necessary to give a comprehensive idea of the construction contemplated will be furnished by the Engineer. Dimensions on the contract drawings which are omitted or needed to complete the work will be furnished by the Engineer. The Contractor shall be responsible for all scaled dimensions on the contract drawings.

The Contractor shall submit to the Engineer for review such shop plans or working drawings not furnished by the Engineer as may be required for any part of the finished structure or roadway.

The Contractor may also be required to submit for the Engineer's information working drawings for any falsework, forms, cofferdams or other incidental details required in the construction and not a part of the finished structure. The Contractor shall be fully responsible for the correctness of working drawings.

It shall be the responsibility of the Contractor to have the working drawings or shop plans submitted as early as possible in order to permit the Engineer sufficient time to adequately review them prior to distribution. The Engineer will distribute reproductions of all working drawings or shop plans. The Contractor shall furnish the Engineer with such copies of the working drawings as may be required for review and distribution.



Upon completion of the work, the Contractor shall furnish the City with one complete set of shop plans on reproducible media. Copies of catalogue cuts, parts lists, operating procedures, and instruction, as necessary for the project, shall be furnished by the Contractor when requested.

**C. Deviations from the Plans**

Deviations from the plans for the work or from working drawings will not be permitted without the written order of the Engineer.

**D. Conformity with Plans and Specifications**

All work performed and all materials furnished shall be in reasonable close conformity with the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown on the plans or indicated in the specifications.

In the event the Engineer finds the materials, work performed, or the finished product not within reasonably close conformity with the plans and specifications, he will then determine if the work is to be accepted or rejected. If the work is to be accepted, the Engineer will document the basis of acceptance by contract modifications which will provide for an appropriate adjustment in the contract price, or a guaranty bond, as he deems necessary to conform to his determination based on engineering judgment except where adjustments are shown elsewhere in these specifications.

In the event the Engineer rejects the work, it shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.

**E. Coordination of Specifications and Plans**

In case of discrepancy, figured dimensions shall govern over scaled dimensions, and the parts of the contract will prevail over all other parts in the following order:

1. Special Provisions
2. Supplemental Specifications
3. Project Plans and Drawings
4. Standard Plans
5. Standard Specifications

The Contractor shall not take advantage of any apparent error or omission in the plans or specifications, but the Engineer shall be permitted to make such corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the plans and specifications.

**F. Cooperation by Contractor**

The Contractor shall conduct his operations so as to interfere as little as possible with those of other Contractors, utilities, or any public authority on or near the work as shown on the plans or in the proposal. The City reserves the right to perform other work by contract or otherwise, and to permit public utility companies and others to do work on or near the project during progress of the work. The Contractor shall conduct his work and cooperate with such other parties so as to cause as little interference as possible with their operations and as the Engineer may direct.

No additional compensation will be paid to the Contractor for any reasonable delay or inconvenience due to material shortages or reasonable delays due to the operations of such other parties doing the work indicated or shown on the plans or in the proposal, or for any reasonable delays on construction due to the encountering of existing utilities that are shown on the plans.

The Contractor shall have a competent Superintendent or Foreman on the job site at all times when work is being performed. This person shall be authorized to act for the Contractor as his agent on the work and shall have the authority to sign for and agree on daily quantities and any additional work done under force account time. This person shall thoroughly understand the plans and specifications and shall receive instructions from the Engineer. On package projects the prime Contractor shall designate a Project Supervisor authorized to act as his agent and to be responsible for all Subcontractors. The Project Supervisor shall be designated by name prior to commencement of the work and shall be available as required for proper management of the project during the duration of the contract.

The Contractor shall furnish each Subcontractor, Superintendent and Foreman with a copy of that part of the plans and specifications pertaining to the work he is directing.

#### **G. Lines, Grades, and Elevation**

The location, alignment, elevation, and grade of the work will be determined by the Engineer who will set such controls as are necessary to properly mark these elements. The Contractor shall assume full responsibility for detail dimensions and elevations measured from the lines, grades, and elevations so established.

The Engineer will provide grade and alignment stakes. The Contractor will be responsible for protecting and transferring these grade and alignment stakes to meet his work schedule. The Engineer will require reasonable advance notice which, if deemed necessary, may be requested in writing when the Contractor's needs are indeterminate or erratic or when the magnitude of the work makes scheduling necessary. Should the Engineer show up to install stakes and the Contractor does not have the site ready, the Contractor shall reschedule with the Engineer at the next available time. If the Contractor cannot wait until the Engineer is available again, it will be the Contractor's responsibility to have the stakes installed at his expense. It will be the Contractor's responsibility to be sure he understands all information contained on the stakes set.

Stakes set by the Engineer shall be carefully preserved by the Contractor. In case such stakes are destroyed by the Contractor, they will be replaced at the Engineer's earliest convenience and at the Contractor's expense on a time and material basis.

Stakes set by the Engineer/Surveyor shall be carefully preserved by the Contractor after the structure has been placed to allow adequate time for location inspection.

The Contractor shall provide such scaffolds, batter-boards, straightedges, templates, or other devices as may be necessary to facilitate laying out and inspecting the work. The Contractor shall have the equipment and labor expertise on site to transfer the lines, grades, and elevations established by the Engineer to meet his own construction schedule.

## **H. Authority and Duties of Inspectors**

Inspectors may be appointed and directed to inspect all materials used and all work done. The inspection may extend to all parts of the work and to the preparation or manufacture of the materials for use in the work. The inspectors will not be authorized to revoke, alter, enlarge, or relax any of the provisions of these specifications, nor change the plans in any particular way. The Inspector will call to the attention of the Contractor any failure to follow the plans and specifications that he may observe. In case of any dispute arising between the Contractor and the Inspectors to the materials furnished or the manner of performing the work, the Inspector shall have the authority to reject materials or suspend the work until the question at issue can be referred to and be decided by the Engineer. In no instance shall any action or omission on the part of the Inspector relieve the Contractor of the responsibility of completing the work in accordance with the plans and specifications.

## **I. Schedule Requirements**

The low bidder(s) for the work covered by this proposal will be required to meet with City of Marquette representatives to work out a detailed progress schedule. The schedule for this meeting will be set within one week after the contract is awarded. The City Engineer will arrange the time and place for the meeting.

The Progress Schedule shall include, as a minimum, the controlling work items for the completion of the project and the planned dates (or work day for a work day project) that these work items will be controlling operations. When specified in the bidding proposal, the date the project is to be opened to traffic as well as the final project completion date shall also be included in the project schedule. If the Bidding Proposal specifies other controlling dates, these shall also be included in the Progress Schedule.

The low bidder for the work covered by this proposal will be required to submit a computer generated CPM (Critical Path Method) network (arrow diagrams) at the preconstruction meeting. The arrow diagram shall be the customary activity-on-arrow type or an approved equal that describes the work activities to be accomplished and their dependency on each other. A sufficient number of activities (tasks) will be required with sufficient detail so the controlling operation can be identified.

Notation of each activity arrow shall include a brief work description and activity time duration. The Contractor shall submit an updated computer-generated CPM network every two weeks for those activities that remain to occur. The Engineer may request that an updated CPM network be submitted more frequently if deemed necessary. Project pay estimates may be delayed if the CPM network is not updated to reflect the progress of the project.

Failure on the part of the Contractor to carry out the provisions of the Progress Schedule, as established, may be considered sufficient cause to prevent bidding future projects until a satisfactory rate of progress is again established.

## **1.06 CONTROL OF MATERIALS**

### **A. Quality and Sourced Supply**

Only materials or fabricated items conforming to the requirements of the specifications and approved by the Engineer prior to use shall be used in the work. Prior to commencing the work, the Contractor shall furnish to the Engineer a complete written statement of the origin, composition and manufacture of all materials and fabricated items required in the work together with copies of manufacturer's certified test reports, cut sheets, product data or supplier's reports of Michigan Department of Transportation approval for all such materials and fabricated items. Materials shall be approved by the Engineer before installation. Any material installed prior to approval by the Engineer will be at the Contractors expense for both installation and removal of the material. The Contractor will be permitted to change the source of supply only with the prior written approval of the Engineer.

If it is found that a source of supply does not furnish an acceptable and uniform product, or if for any reason the product from any source at any time proves to be unsatisfactory to the Engineer, the Engineer may require the Contractor, fabricator or supplier to furnish acceptable material from other sources and the Contractor shall have no claim for increased cost on account of such requirement.

All structural steel shall be fabricated in the United States unless otherwise shown on the plans or in the proposal.

### **B. Use of Materials Found on the Work Site**

The Contractor may use on the work such stone, gravel, sand, or other material determined suitable by the Engineer, as may be found in the roadway excavation and will be paid both for the excavation of such materials at the corresponding contract unit price and for the pay item for which the excavated material is used in accordance with the pay items listed in the proposal. He shall replace at his own expense with other acceptable material all of that portion of the excavation material so removed and used which was suitable for use as in place material.

The Contractor shall not excavate or remove any material from within the right-of-way which is not within the grading limits, as indicated by the grade lines, without written authorization from the Engineer.

### **C. Natural Material Sources**

Material secured from outside the right-of-way is considered borrow material and is used for such items as embankment, swamp backfill, granular embankment, structure back full, subbase, and trench back fill.

When sources of natural materials are designated on the plans or described in the special provisions, the Contactor shall determine for himself the amount of equipment and work required to produce acceptable material from such sources. It shall be understood that it is not feasible to ascertain from samples the limits or quality of an entire deposit, and that variations shall be considered normal. The Engineer may order procurement of material from any portion of a deposit and may reject portions of the deposit as unacceptable. If the Contactor desires to use material from sources other than those designated, he shall acquire the necessary rights and shall bear all costs related to acquisitions and use of such sources.

When material deposits are not designated on the plans or in the special provisions, the Contractor shall provide material acceptable to the Engineer.

Sites from which material has been removed shall, upon completion of the work, be left in a neat condition.

Payment for work and materials required to build and maintain borrow haul routes will be considered as having been included in the contract unit prices bid for other contract items.

The Contractor will be held liable for all damages caused by his hauling operations and will be required to pay for such damages as specified under Legal Relations and Responsibility to Public, chapter 1.07 below.

Unless otherwise called for on the plans or in the proposal, the Contractor shall furnish the borrow material.

If not otherwise specified, the Contractor-furnished borrow material shall consist of sound mineral soil having a weight of not less than 95 pounds per cubic foot, determined as specified under Maximum Unit Weight definition in this chapter. It shall not include swamp materials such as peat, muck, or other wet or unstable soils. Stones, broken rock, or masonry included as mixtures with soils shall be limited in size and quantity as per the material sieve size specification to allow for proper compaction of the soil.

#### **D. Sample of Materials**

Samples upon which acceptance or rejection of material is based will be taken by a representative of the City in accordance with the methods designated in the specifications. The Contractor shall afford such facilities as the Engineer may require for collecting and forwarding samples and shall not use the materials represented by the sample until they have been found to satisfy the requirements of the specifications. The Contractor in all cases shall furnish the required samples without charge and, when required, shall prepay the transportation charges for shipment of samples to the testing laboratory.

#### **E. Tests of Materials**

The City reserves the right to conduct random testing of all materials used or proposed to be used in the work. Unless provided elsewhere, all such testing will be at the expense of the City and will be conducted by the City or its designated agent.

The materials used or proposed to be used in the work may be inspected and tested at any time and at any place during their preparation, storage and use, unless otherwise specified. All tests of materials will be made in accordance with methods as described or designated in the specifications.

Unless specifically stated otherwise by date, suffix or both, whenever reference is made to standards of another specifying agency or organization, it shall be understood that the specification, or method, current at the date of advertisement for bids shall apply. Current ASTM specifications, or methods, shall be either Standard or Tentative Standard Specifications, or Methods, but shall not include Tentative Revisions of ASTM Standards.

Additional testing required for areas that have been previously retested due to improper construction methods or materials will require the Contractor to cover the costs of those

tests. These costs will be charged to the Contractor and deducted from any payment due the Contractor.

#### **F. Storage of Materials**

Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Items susceptible to damage shall be protected by suitable shelters. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. Portions of the right-of-way, or other City-owned property approved for the purpose may be used during that phase of the project or the next phase directly abutting that project for storage and for the placing of the Contractor's plant and equipment, but any additional space required therefore must be provided by the Contractor at his expense. Private property shall not be used for storage purposes without written permission of the owner or lessee, and if requested by the Engineer copies of such written permission shall be furnished to him. All storage sites shall be restored to a satisfactory condition by the Contractor at his expense.

Trailers used for equipment storage will be allowed a maximum time of 30 days in the public right of way on any block of construction or block adjoining that construction.

#### **G. Handling Materials**

All materials shall be handled in such a manner as to preserve their quality and fitness for the work. Aggregates shall be transported from the storage site to the work in vehicles so constructed and maintained as to prevent loss or segregation of materials after loading and measuring.

All materials not conforming to the requirements of the specifications shall be considered as unacceptable and all such materials will be rejected and shall be removed immediately from the site of the work unless otherwise instructed by the Engineer. No rejected material, the defects of which have been corrected, shall be used until approval has been given.

#### **H. Unused Material**

All furnished materials which are not incorporated in the work upon completion of the work items, shall remain the property of the Contractor and shall be removed from the project prior to acceptance of the work.

### **1.07 LEGAL RELATIONS RESPONSIBILITY TO PUBLIC**

#### **A. Laws to be Observed**

The Contractor is required to be familiar with all laws, ordinances and regulations which supplement these Standard Specifications or affect the equipment and materials used in the proposed construction, those employed on the work and the conduct of the work, and he shall save harmless and indemnify the City and its representatives against any claim arising from violation thereof.

Pursuant to the requirements of Section 4 of Act No. 251, Public Acts of the State of Michigan of 1955, as amended, Act 45 of the 1963 second extra session, and the State Code of Fair Practices, the Contractor agrees not to discriminate against any employee or applicant for

employment, to be employed in the performance of the contract, with respect to hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment, because of age or sex, except where based on a bona fide occupational qualification, or race, color, religion, national origin, or ancestry. The Contractor further agrees that every subcontract entered into for the performance of the contract will contain a provision requiring nondiscrimination in employment, as herein specified, binding upon each Subcontractor. Breach of this covenant may be regarded as a material breach of the contract.

#### **B. Permits and Licenses**

The Contractor shall procure all permits and licenses and pay all charges and fees necessary and incident to the due and lawful prosecution of the work, unless otherwise provided.

#### **C. Sanitary Provisions**

Prior to the start of construction, the Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees as may be necessary to comply with the requirements and regulations of the Federal, State and local health authorities, and he shall take such precautions as are necessary to avoid creating unsanitary conditions.

All temporary sanitary installations for use during construction shall be removed from the project by the Contractor before acceptance of the work. The construction, maintenance, and removal of all temporary sanitary facilities shall be incidental to the construction of the project and will not be paid for separately.

#### **D. Furnishing Right-of-Way**

The City will be responsible for securing all necessary rights-of-way in advance of construction. Any known exceptions will be indicated in the contract.

#### **E. Protection and Restoration of Property**

The Contractor shall restore, at his own expense, any and all public or private property damaged or injured in consequence of any act or omission on his part or on the part of his employees or agents, to a condition similar and equal to that existing before such damage or injury was done. If the Contractor neglects to repair or make restoration, the Engineer may, after 48 hours written notice to the Contractor, proceed to make such repairs or restoration, and will deduct the cost thereof from any monies that are or may become due the Contractor.

Land monuments and property corners shall not be moved or otherwise disturbed, except as directed by the Engineer.

#### **F. Damage and Liability Insurance**

The Contractor shall name the City as additional Insured on the Contractor's insurance to protect the City against all claims for damages to public or private property and for injuries to persons arising out of and during the progress and to the completion of the work.

1. **Worker's Compensation Insurance:**  
The Contractor, prior to the execution of the contract, shall file a certification that he carries Worker's compensation Insurance.
2. **Bodily Injury and Property Damage:**  
The Contractor, prior to execution of the contract, shall file with the City copies of completed certificates of insurance, and naming the City as an additional insured as evidence that he carries adequate insurance, satisfactory to the City Purchasing Agent to afford protection against all claims for damages to public or private property, and injuries to persons, arising out of and during the progress of the work, and to its completion and, where specified in the proposal, similar insurance to protect the owner of premises on or near where construction operations are to be performed.
3. **Bodily Injury and Property Damage Other than Automobile:**  
Unless otherwise specifically required by special provisions in the proposal, the minimum limits of property damage and bodily injury liability covering each contract shall be:

**Bodily Injury Liability**

Each Person	\$5,000,000
Each Occurrence	\$5,000,000

**Property Damage Liability**

Each Occurrence	\$5,000,000
Aggregate	\$5,000,000

Such insurance shall include, but not be limited to, coverage for:

- a) Underground damage to facilities due to drilling and excavating with mechanical equipment; and
- b) Collapse or structural injury to structures due to blasting or explosion, excavation, tunneling, pile driving, cofferdam work, or building, moving or demolition.
- c) the above limits may be achieved with an Umbrella policy.

4. **Owner's Protective Liability:**  
The bodily injury and property damage protection specified above shall be extended to cover the City for injuries or damages arising from work covered by the contract.
5. **Bodily Injury Liability and Property Damage Liability – Automobiles:**  
Unless otherwise specifically required by special provisions in the proposal, the minimum limits of bodily injury liability and property damage liability shall be:

**Bodily Injury Liability**

Each Person	\$5,000,000
Each Occurrence	\$5,000,000

**Property Damage Liability**

Each Occurrence	\$5,000,000
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**Combined Single Limit**

Each Occurrence	\$5,000,000
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6. **Notice:**  
The Contractor shall not cancel or reduce the coverage of any insurance required by this Section without providing 30-day prior written notice to the Engineer. All such



insurance must include an endorsement whereby the insurer shall agree to notify the Engineer immediately of any reduction by the Contractor. The Contractor shall cease operations on the occurrence of any such cancellation or reduction, and shall not resume operations until new insurance is in force.

**7. Reports:**

At the request of the Engineer, the Contractor or his insurance carrier shall report claims received, inspections made, and disposition of claims.

**G. Contractor's Responsibility for Work**

Until the final acceptance of the work by the Engineer, as evidenced in writing, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damage to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof, except damage to the work due to unforeseeable causes beyond the control of and without fault or negligence of the Contractor, including but not restricted to acts of God or of the public enemy, acts of the Government, slides found by the Engineer to have been unavoidable, and ordinary wear and tear on any section of road opened to traffic by order of the Engineer.

If during the construction operations the Contractor intends to drain the construction project, or parts thereof, through the existing drainage system belonging to the City or other governmental unit, or through portions of the drainage system to be built under the contract, prior arrangements for such use shall be made with, and approved by, the Engineer. The Engineer and the Contractor shall determine the condition of such facilities and make such arrangements as necessary to permit use. Before acceptance of the project, the Contractor shall clean, repair, and otherwise restore all drainage facilities used, or affected by his operations, to as good or better condition than they were prior to his use. Such drainage facilities include catch basins, manholes, sumps, sewers, lift stations, outlets, and open drainage systems. If the Contractor fails to obtain prior approval for use of the drainage facilities, he will be held responsible for all remedial work required to restore them to a satisfactory condition, as determined by the Engineer.

In case of suspension of work from any cause whatever, the Contractor shall be responsible for all materials, and shall properly store them, if necessary, and shall provide suitable drainage of the roadway.

**H. Contractor's Responsibility for Utility Property and Services**

At points where the Contractor's operations are adjacent to properties of railway, telephone, water, sewer, electric, gas, petroleum, or cable television companies, hereinafter referred to as utilities, or are adjacent to other property, damage to which might result in considerable expenses, loss, or inconvenience, work shall not be commenced until all arrangements necessary for the protection thereof have been made.

The Contractor shall cooperate with the owners of any underground or overhead utilities in their removal and rearrangement operations in order that these operations may progress in a reasonable manner, that duplication of rearrangement work may be reduced to a minimum, and that services rendered by those utilities will not be unnecessarily interrupted.

The Contractor shall arrange, through the Engineer, for the discontinuance of all utility services that are to be abandoned as part of the project. The City will hold the Contractor responsible for any claim arising from his failure to do so.

In the event of interruption to utility services as a result of accidental breakage or as a result of being exposed or unsupported, the Contractor shall promptly notify the proper utility and shall cooperate with the said utility in the restoration of service. If utility service is interrupted, repair work shall be continuous until the service is restored.

#### **I. Personal Liability of Public Officials**

In carrying out any of the provisions of these specifications, or in exercising any power or authority granted to them by or within the scope of the contract, there shall be no liability upon any officer of the City, the City Purchasing Agent, the Engineer, or their authorized representatives, either personally or as officials of the City, it being understood that in all such matters they act solely as agents and representatives of the City.

#### **J. No Waiver of Legal Rights**

The City shall not be precluded or estopped by any measurement, estimate or certificate made either before or after the completion and acceptance of the work and payment therefore, from showing the true amount and character of the work performed and materials furnished by the Contractor, nor from showing that any such measurement, estimate or certificate is untrue or incorrectly made, nor that the work or materials do not conform in fact to the contract. The City shall not be precluded or estopped, notwithstanding any such measurement, estimate, or certificate and payment in accordance therewith from recovering from the Contractor and the Surety such damages as it may have sustained by reason of his failure to comply with the terms of the contract. Neither the acceptance by the Engineer or by his representative, nor any payment for, or acceptance of, the whole or any part of the work, nor any extension of time, nor any possession taken by the City shall operate as a waiver of any portion of the contract or of any power herein reserved, or any right to damages herein provided. A waiver of any breach of the contract shall not be held to be a waiver of any other or subsequent breach.

#### **K. Control of Air Pollution**

The Contractor shall comply with all Federal, State, and local laws and regulations governing the control of air pollution.

Dust Control:

During the construction of any project, adequate dust control measures shall be maintained so as not to cause detriment to the safety, health, welfare, or comfort of any person or cause damage to property or business.

#### **L. Use of Explosives**

When the use of explosives is necessary for the prosecution of the work, the Contractor shall comply with all laws, regulations, and ordinances and exercise the utmost care not to endanger life or property, including new work. The Contractor shall obtain a permit from the City Manager and provide the Engineer with due notice of where and when explosives are to be used.

## **M. Concrete Wash Water**

Concrete wash water is generated from washing out ready-mix trucks, drums and pumps; it also includes the water from rinsing off chutes, equipment, and concrete truck exteriors. Improper disposal can clog storm drain pipes. Improper disposal of this material can end up in our lakes and streams. Operators must prevent concrete wash water from entering waterways, and storm drains. Wash out or dumping of excess concrete on private property will require approval from the property owner.

## **1.08 PROSECUTION AND PROGRESS**

### **A. Subletting of Contract Work**

The terms "Subletting" shall be understood to mean the arrangement with any party or parties to execute a part of the contract work. Approval of the subletting of any portion thereof will not be given unless and until the Contractor shall have filed with the Engineer a true copy of the subcontract, bearing the written consent of the Surety thereto.

The Contractor shall not sublet any portion of the contract, or of the work provided therein, except the furnishing of necessary materials, without the approval of the Engineer. Such approval shall not in any way relieve the Contractor of full responsibility for the performance of the contract. The Contractor shall not sell or assign any portion of the contract without the written consent of the Engineer and the Surety.

It is expressly agreed and understood by the Contractor that a Subcontractor of work to be performed under the contract shall perform, with its own organization, not less than 50% of the total value of the contract work sublet to it. It is the intent of the contract that this requirement is also applicable to and binding upon successive subcontracts.

If the Contractor requires the Subcontractor to furnish bonds, such bonds shall not reduce the amount of the bonds required to be furnished by the Contractor.

The Engineer may direct the removal from the job forthwith of any Subcontractor or his equipment operating in violation of these requirements, and any costs or damages thereby incurred are assumed by the Contractor by the acceptance of the contract. It is further understood that the Contractor's responsibilities in the performance of his contract, in case of an approved subcontract, are the same as if he had handled the work with his own organization.

### **B. Limitations of Operations**

The Contractor shall not carry out the construction operations on Sunday, unless otherwise specified in the proposal, without permission from the Engineer except for the purpose of making emergency repairs and for the proper protection of the work such as the curing of concrete.

The Engineer reserves the right to require the Contractor to cease construction operations on legal holidays and the day following, or at such other times as may be determined to be in the interest of the general public.

In case of a dispute arising between two or more Contractors or others as to the respective rights of each under these specifications, the Engineer shall determine the matters at issue

and shall define the respective rights of the various interests involved, in order to secure the completion of all parts of the work in general harmony and with satisfactory results. His decision shall be final and binding on all parties concerned and shall not in any way be cause for a claim for extra compensation by any of the parties.

### **C. Competence of Workmen**

The Contractor shall at all times employ sufficient labor and equipment for prosecuting the several classes of work to full completion in the manner and time required by the specifications.

Workmen shall have sufficient skill and experience to perform properly the work assigned to them. Workmen engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform all work properly and satisfactorily.

### **D. Adequacy of methods and Equipment**

All equipment which is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce satisfactory results.

When the methods and equipment to be used by the Contractor in accomplishing the construction are not prescribed in the contract, the Contractor is free to use any methods or equipment that he demonstrates, to the satisfaction of the Engineer and meeting all applicable safety standards and guidelines, will accomplish the contract work in conformity with the requirements of the contract.

When the contract specifies that the construction be performed by the use of certain methods and equipment, and the Contractor desires to use a method or type of equipment other than those specified in the contract, he may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed to be used and an explanation of the full reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing construction work in conformity with contract requirements. If, after reasonable trial use of the substituted methods or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment. The Contractor shall remove the deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the construction items involved or in contract time as a result of authorizing a change in methods or equipment under these provisions.

### **E. Contract Time**

Contract time shall be as specified and detailed in the special conditions or information for bidders.

## **F. Termination of Contract**

If the Contractor:

1. Fails to prosecute the work with force, equipment, or materials sufficient to complete the work within the contract time; or
2. Performs the work improperly; or
3. Discontinues the performance of the work; or
4. Neglects or refuses to remove such materials or to perform anew such work as shall have been rejected as defective and unsuitable; or
5. For any other reason fails to carry on the work in accordance with the contract; then the Engineer may give the Contractor and Surety written notice specifying the delay, neglect, or default and the action to be taken by them.

If the Contractor or Surety, within a period of ten (10) days after such notice, shall not proceed satisfactorily in accordance therewith, then the City shall have full power and authority to take the work out of the hands of the Contractor and Surety; to appropriate and use any and all materials on the ground which may be suitable; or to enter into contract or use such other methods as in its judgment may be required for the proper completion of the work; provided, if the Contractor commit any act of bankruptcy, or become insolvent or be declared bankrupt; if he shall allow any final judgment against him to remain unsatisfied for a period of five (5) days; or if he shall make an assignment for the benefit of his creditors; or if the Contractor files or if there be filed against the Contractor, proceedings for reorganization, under the Bankruptcy Act; then in any such case the City shall have full power and authority to proceed in any of the ways aforesaid, forthwith upon the delivery to the Contractor and Surety of written notice, stating the reason for said action.

In case the City takes over the uncompleted work under any of the provisions of this section, all additional costs and damages, and the costs and charges of completing the same, shall be deducted from monies due or to become due the Contractor; and if the total of such damages, costs and charges exceeds the balance of the contract price which would have been payable to the Contractor had he completed the work, then the Contractor and Surety shall, on demand, pay to the City the amount of such excess.

## **G. Failure to Complete on Time**

If the Contractor fails to complete the entire project on or before the contract time specified in the proposal or on or before the authorized extension thereof without liquidated damages, the Contractor will be charged, for each calendar day that the work shall remain uncompleted. See Table of liquidated damages in the Information for Bidders section.

Damages for failure to meet the requirements for completion of the project will not be assessed during periods of seasonal suspension.

## **1.09 MEASUREMENT AND PAYMENT**

### **A. Measurement of Quantities**

Quantities of work completed under the contract will be measured by the Engineer according to United States Standard English measures, and the units shown in the bid proposal.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

A station when used as a definition or term of measurement will be one hundred feet.

When the Method of Measurement specifies measurement in stations, miles or acres, the measurements will be horizontal measurements unless specified otherwise.

When the Method of Measurement for a particular item specifies that it will be "measured in place", linear or area measurements will be taken at the surface of the completed item, parallel to the base.

All materials which are specified for measurement by the cubic yard, loose measure, will be measured in the hauling vehicle at the location where used on the project, unless otherwise provided.

When material is measured by weight in tons, the unit shall be the ton of 2000 pounds. Actual scale weights shall be used as pay quantities for all materials which are specified for measurement by the ton.

## **B. Scales**

Platform, belt conveyor, and surge bin scales shall conform to the requirements of the current edition of the National Bureau of Standards Handbook 44.

The tolerance applications of Handbook 44, as applicable to under-registration and over-registration and to tests involving digital indications or representations, shall apply.

A scale shall not be used for weighing a load totaling more than the nominal capacity marked on the scale by the manufacturer. Any portion of the load in excess of the nominal scale capacity will not be considered for payment.

All scales used for weighing of materials to be delivered under this contract shall have been checked for accuracy and approved by a Michigan Department of Transportation scale inspector or other official sealer of weights and measures within the current calendar year.

The total weight of a single highway vehicle shall be weighed as a single draft and shall not be determined by adding together the results obtained by separately weighing each end of such vehicle except that weighing of a coupled combination may be determined without uncoupling under the following conditions:

1. The brakes are released.
2. There is no tension or compression on the drawbar.
3. The approaches are straight and in the same level plane as the scale platform.
4. The approaches are paved at least 50 feet in each direction with a seal coat or higher type surfacing.
5. The approaches are sufficient width and length to ensure level positioning of vehicles during the weighing operation.

When a print-out system is employed on a platform or surge bin scale, it shall be equipped with a printer which shall print the following information on a triplicate ticket for each truckload:

1. Time
2. Date
3. Sequential ticket number (may be preprinted on ticket)
4. Gross weight
5. Tare weight (trucks shall be tared at least twice daily)
6. Net weight
7. Net accumulated job daily total

The system shall be so interlocked as to allow printing only when the scale has come to a complete rest.

### **C. Scope of Payment**

The Contractor shall accept the compensation, as herein provided, as full payment for furnishing all necessary materials, labor, tools, equipment and incidentals and for performing all work under the contract; also for all 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 its final acceptance by the Engineer.

### **D. Payments for Increased or Decreased Quantities**

Whenever the quantity of any item of work as given in the proposal shall be increased or decreased, payment for such item of work shall be made on the basis of the actual quantity completed at the unit price for such item named in the proposal.

### **E. Payment for Extra Work**

Payment for all approved claims of extra work shall be on a force account basis. All time shall be signed for, itemized, and agreed to daily by the construction inspector and the Contractor's representative. The Contractor shall report in writing any claims for extra payment resulting from changes causing him to replace or alter work performed after plans and specifications or initial instructions were followed. The report shall contain the following detailed information:

1. Brief description of work performed.
2. Reason Contractor feels extra payment is due.
3. Name, class, dates, number of hours worked each day, total hours computed to nearest half hour, and rate for each laborer and foreman engaged.
4. Designation, number of hours computed to nearest half hour, worked each day, total hours and rental rate for each unit of equipment engaged.
5. Quantities of materials and prices.
6. Freight on materials.
7. Contractor's overhead and materials handling charges and profit.

The report shall be submitted to the Engineer within fourteen days of the date the change was completed. General contractor markup on subcontracted work shall be a maximum of

five percent. The Engineer shall approve for payment only those claims and amounts which he deems valid and substantiated costs to the Contractor because of work performed by the Contractor in accordance with plans and specifications and later ordered replaced or altered. Failure to submit the reported claim within 14 days will result in the claim being denied.

#### **F. Partial Payment**

Partial payments will be made as specified herein, for work completed. Processing of payments will be completed as soon as practicable, however, no claim will be considered for late payment of estimates.

Partial payments will be made at intervals of not less than two weeks on the basis of the value of work completed during the estimate period, less the percentage retained as specified herein, provided the written orders of the Engineer have been or are being prepared by the Engineer of the value of the work performed and materials complete in place in accordance with the contract. In order to receive partial payment, the Contractor must have submitted correct certified payrolls for the work period the pay request covers. From the total amount earned, the City will deduct and retain amounts in accordance with the following schedule:

The City will retain 10 percent of the amount earned up to one-half the contract price. When the Contractor has earned one-half the contract price, the amount held by the City as retention will be reduced to five percent of the amount earned, and five percent of each additional amount earned will be retained by the City until final inspection and acceptance by the Engineer.

#### **G. Final Inspection, Acceptance, and Final Payment**

The Engineer shall make inspection of all work included in the contract, or such portions thereof eligible for acceptance, as soon as possible after written notification by the Contractor that the work is completed or after the Engineer's records show that the work is completed. If the work is not acceptable to the Engineer at the time of such inspection, he will advise the Contractor in writing as to the particular defects to be remedied before final acceptance by the Engineer.

Upon the satisfactory completion of any portion of a project and upon written approval of same by the Engineer, the Contractor may be relieved of any requirement for further work on such portions and from all responsibility therefore, except that he shall remove any obstructions and repair any damage caused by him subsequent to such approval and prior to final acceptance of the entire project.

When the work has been completed and the Engineer has ascertained that each and every part of the work has been performed in accordance with the plans and specifications, or such modifications thereof as he may have approved, the same will be accepted, and the Engineer will make a final estimate, as soon as practicable, for the completed work, and the total amount due the Contractor, less the total amount of all previous payments, will be paid subject to the following:



Final payment will not be made until the Contractor has filed with the City the consent of the Surety to payment of the final estimate and satisfactory evidence by affidavit or otherwise that all the indebtedness by reason of the contract has been fully paid or satisfactorily secured. In case such evidence is not furnished, the City may retain out of any amount due said Contractor sums sufficient to cover all alienable claims unpaid.

Any claim for additional compensation which has not been approved on or before the date that the Contractor is furnished a copy of the approved final estimate shall be considered as denied by the Engineer as of that date.

#### **H. Guarantee**

The Contractor shall guarantee all material and equipment furnished and work performed for a period of two (2) years from the date of project completion. The Contractor warrants and guarantees for a period of two (2) years from the date of project completion that the completed system is free from all defects due to faulty material or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.