



City of Columbia, Missouri
Public Works Department
701 East Broadway
Columbia MO 65201
573-874-7250

**STREET, STORM SEWER, AND
SANITARY SEWER
SPECIFICATIONS AND STANDARDS**

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Approved:

John D. Glascock, P.E.
Director

Date

STREET AND STORM SEWER SPECIFICATIONS AND STANDARDS

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DIVISION I

**GENERAL REQUIREMENTS AND
COVENANTS**

SECTION 1

DEFINITIONS

Wherever the following terms are used in the plans, specifications, or other Contract documents, the intent and meaning shall be interpreted as follows:

<i>AASHTO:</i>	The American Association of State Highway and Transportation Officials, Reference-Standard Specifications for Highway Materials and Methods of Sampling and Testing.
<i>AGC:</i>	Associated General Contractors of America.
<i>ASTM:</i>	The American Society for Testing Materials.
<i>Bid Price and Contract Price:</i>	The sum of the products of the quantity of work, estimated by the Engineer to be embraced in the project as set forth in the proposal, and the respective unit prices bid in the proposal.
<i>Bidder:</i>	An individual, partnership, joint venture or corporation submitting a proposal for the work contemplated.
<i>Change Order:</i>	Written authority issued to the Contractor by the Engineer, directing changes in the work within the provisions of the Contract.
<i>City Council:</i>	City Council of the City of Columbia, Missouri
<i>City:</i>	City of Columbia, Missouri
<i>Contract:</i>	The agreement covering the performance of the work for the proposed construction. The Contract shall include: Notice to Contractors, Plans, Proposal, Contract Bond, Contract Agreement, Special Provisions, Standard Specifications, Notice to Proceed and all Change Orders.
<i>Contract Bond:</i>	The approved type of security, furnished by the Contractor and its Surety, guaranteeing the faithful performance of the Contract and conditions, as may be required by the laws of the State of Missouri, or by the Charter and Ordinances of the City of Columbia.
<i>Contractor:</i>	That Bidder furnishing satisfactory bond and having entered into the Contract with the City of Columbia.
<i>Division of Purchasing</i>	The Purchasing Division of the City of Columbia,

Missouri

- Engineer:*** The Director of Public Works, or his duly authorized representative.
- Notice to Contractors:*** An official Notice to Contractors stating the time and place for the submission of sealed proposals upon designated sections or projects of proposed work, as published according to Charter or Ordinance.
- Notice to Proceed:*** A written notice from the Engineer notifying the Contractor to proceed with the work for which he has contracted.
- Owner:*** City of Columbia, Missouri
- Plans:*** All drawings or reproductions thereof pertaining to the work, and which have been approved by the authorized representative of the City.
- Proposal:*** The written offer submitted by the Bidder to perform the work specified in the Contract.
- Proposal Guaranty:*** The security designated in the proposal to be furnished by the Bidder as a guaranty of good faith to enter into this Contract with the City of Columbia, Missouri.
- Specifications:*** The directions, provisions, and requirements contained herein together with such may be added or adopted as supplemental specifications or special provisions, for the performance of the work and for the quantity, quality, and proportion of materials.
- Subcontractor:*** An individual, partnership, joint venture, or corporation that has contracted with the Contractor for the performance of all or any part of the work or services which such Contractor has itself contracted to perform.
- Subgrade:*** That portion of the roadbed upon which the surfacing material or pavement is to be placed. Also the bottom of a trench where pipe bedding material is to be placed.
- Surety:*** A Surety Company authorized to do business in the State of Missouri, bound with and for the Contractor for the acceptable performance of the Contract and also for the payment of all claims recoverable under the Contract Bond.

SECTION 2

PROPOSAL REQUIREMENTS AND CONDITIONS

2.1. Contents of Proposal Forms. The Bidder will be furnished proposal forms by the City. The proposals will include Notice to Contractors, the location and description of the work; the estimate of the various quantities of work to be performed and materials to be furnished; the place, date and time of opening proposals; the specified time for completion of the work if determined by the City; and any special provisions or requirements which vary from or are not contained in the specifications. All papers bound with or attached to the proposal forms are a necessary part thereof and must not be detached or altered.

2.2. Interpretation of Proposal Quantities. Although the quantities listed in the proposal forms and on the plans are the results of calculations made from original surveys, such quantities, including the classification thereof, may or may not be representative of the actual conditions encountered during construction. Final payment to the Contractor will be made on only the actual amount of work of each class performed, which amount shall be finally determined from actual measurements made during the progress or after the completion of the work, except as otherwise specified herein.

The Contractor agrees that he is fully informed regarding all of the conditions affecting the work to be done, and labor and materials to be furnished for the completion of this Contract, and that his information was procured by personal investigation and research and not from any estimates of the City of Columbia; and that it will make no claim against the City by reason of estimates, test, or representation of any officer, agent or employee of the City.

2.3. Familiarity with Proposed Work and Laws Affecting its Prosecution. Bidders are required to examine carefully the site of the proposed work, the proposal, plans, general requirements and covenants, specifications, and the Contract and bond forms, for the work contemplated. Bidders are assumed to have made themselves familiar with all federal and state laws, local laws, ordinances, and regulations, which in any manner affect the work or its prosecution, persons engaged in or employed on the work, and the materials or equipment used in the work. They shall make such investigations as are necessary to acquaint themselves fully with the actual conditions to be encountered in the work. The conditions indicated on the plans and in the proposal represent information available from surveys, and studies, but the City assumes no responsibility with respect to the sufficiency and accuracy of such data.

2.4. Preparation of Proposals. All proposals must be properly signed and sealed and submitted as set forth in the Notice to Contractors. Each Bidder shall specify in his proposal both in words and figures, without interlineations, alterations, or erasures, a unit price for each of the separate items called for in the proposal, and shall show the products of the respective unit prices and estimated quantities in the columns provided for the purpose, as well as the gross sum for which he will perform all of the estimated work as required by the general requirements and covenants, specifications, and plans. In case of a discrepancy between the gross sum shown in the proposal and that obtained by

adding the products of the unit prices and various estimated quantities, the latter shall prevail. In case of a discrepancy between the prices shown in figures and in writing, the latter shall prevail, and where there is conflict between the unit price bid and the extension thereof made by the Bidder, the unit price shall govern and the City shall be authorized to make a corrected extension of such unit bid price and to use such corrected extension in comparing bids.

A proposal executed by an individual shall have the title "Contractor" after the signature and shall give his address.

A proposal executed by a partnership shall have the signature of at least one of the partners, with title "Partner" after the signature, and shall give the business address of the firm, together with the names and addresses of all the partners.

A proposal executed by a corporation shall show the name of the corporation, shall bear the signature of its authorized representative, and shall give the business address of the corporation.

A Bidder doing business under a fictitious name shall have on file with the City, before the award, a certified copy of his Registration of Fictitious Name issued by the Secretary of State, State of Missouri.

All Bidders, who are corporations organized in states other than Missouri, shall before the award have on file with the City a certified copy of a valid certificate of authority and license to do business in Missouri issued by the Secretary of State, State of Missouri.

2.5. Irregular Proposals. Proposals will be rejected if they show any material omission, alteration, addition or irregularities which might prejudice the rights of other Bidders.

2.6. Proposal Guaranty. Each Bidder shall submit a bid bond, in an amount of not less than 5% of the total bid amount (including all possible alternates), to the Division of Purchasing, prior to the bid closing date and time. Acceptable forms of Bid Bonds:

- 1. Traditional Hard Paper Copy of the bond or a certified check, payable to the City of Columbia**
- 2. An Electronic Bid Bond, provided by Surety2000.com, (verified by an eleven-digit code which is generated by the Surety2000 system) and provided by the Contractor in his bid submission.**

Bid bonds, regardless of the format, must be issued by a surety company authorized to conduct business in the State of Missouri, and carrying a rating of A-6 or better as listed in the A.M. Best or equivalent rating guide. The bid bond shall guarantee good faith on the part of the Bidder, to enter into Contract within fifteen (15) days at the price bid, if accepted by the City.

2.7. Delivery of Proposals. Sealed Bids must be received in the Division of Purchasing, 701 E. Broadway, Columbia, MO either electronically through the City's electronic bid system at www.gocolumbiamo.com or by hard paper copy, by bid closing

date and time stated in the bid document. Paper bids must be in a sealed envelope and should have the bid name and bid number, along with the bidders name and address, clearly stated on the outside of the envelope. The bid bond must be physically delivered in paper original form or submitted electronically, through Surety2000 by bid closing date and time.

2.8. Withdrawal of Proposals. Bids may be withdrawn without prejudice any time before the deadline for receipt of bids. If a mistake or error is discovered by the bidder or by the Purchasing Agent after the bid opening, the Purchasing Agent has the right to call this error to the bidder's attention and request verification of the bid. If the bidder acknowledges the mistake and requests reconsideration, the Purchasing Agent will proceed in the following manner:

a. Clerical Mistakes: Any mistake which is obviously a clerical one, such as an error in price extension, or in placement of decimal points, reversal of prices, etc., may be corrected by the Purchasing Agent after verification is made by the bidder. However, the unit price shown shall always prevail.

b. Withdrawal: Permission to allow a bidder to withdraw his bid without prejudice may be given when clear and convincing evidence supports the existence of an error. If there is a significant and obvious disparity between the prices of the lowest bidder and of the other bidders, a bidder may be permitted to withdraw without prejudice, upon submission of evidence that an unintentional error occurred.

Actual changes in bid pricing, terms or conditions will not be permitted after the deadline for receipt of bids.

2.9. Opening of Proposals. Proposals will be opened publicly and read at the time and the place set in the Notice to Contractors. Bidders or their authorized agents are invited to be present.

2.10. Disqualification of Bidders. More than one proposal from an individual, partnership, joint venture, or corporation under the name or different names will not be considered. Reasonable ground for believing any Bidder is interested in more than one proposal for the work contemplated will cause the rejection of all proposals in which such Bidder is interested. Any or all proposals will be rejected if there is reason for believing that collusion exists among the Bidders and no participant in such collusion will be considered in future proposals for the same work. Proposals in which the prices are obviously unbalanced will be rejected. No Contract will be awarded except to responsible Bidders capable of performing the class of work contemplated. The Bidder shall furnish, if required, a complete statement of his experience and of the amount of equipment available for the proposed work. The Bidder shall also furnish, if required, a financial statement prepared by a Certified Public Accountant.

2.11. Combination Bids. Combination bids for two or more section of work may be made only if called for in the Notice to Contractors and as listed in the proposal and shall be submitted on the proper proposal form. A separate and complete bid for each section of work shall be included in the combination bid, and only sections on which individual bids are submitted will be considered as in the combination. The Bidder will be allowed to combine the sections in the combination listed in the proposal as follows:

- a. by stating "All or None" which is preferable, or
- b. by listing any two (2) or more sections that he wishes to bid in combination.

SECTION 3

AWARD AND EXECUTION OF CONTRACT

3.1. Right to Reject Proposals. The City reserves the right to reject any or all bids, to advertise for new bids, or to proceed to do work otherwise if in the judgement of the City Council the best interests of the City will be thereby promoted.

3.2. Award of Contract. The Contract will be awarded by the Purchasing Agent and confirmed by Ordinance of the City Council to the lowest responsible Bidder within a reasonable length of time after the opening of the bids. The responsibility of the Bidder will be determined by the Purchasing Agent who will base his decision, among other things, upon the Bidder's qualifications, previous work, financial standing, and ability to perform the work. The successful Bidder will be notified in writing, mailed to the address shown on the proposal, that the bid has been accepted and that he has been awarded the Contract.

3.2.1. Alternate Bids. In making the award, if alternate bids have been requested, that alternate bid will be used which will be to the best interest of the City.

3.2.2. Federal or State Concurrence. In case the federal or state government or any agency thereof is paying all or a portion of the cost of construction of the project, the award made by the City shall be deemed only tentative until proper federal or state concurrence therein has been received.

3.3. Return of Bidder's Check or Bond. The check or bond of the low Bidder will be retained until the Contract has been executed, all insurance requirements met, and satisfactory Contract Bond furnished. The check or bond of the second low Bidder will be returned to him as soon as the City has determined that the award will not be made to said second low Bidder. As soon as the two lowest Bidders have been determined, the checks or bonds of the other Bidders will be returned to them.

3.4. Contract Bond Required. Upon award of the Contract, the successful Contractor shall furnish a Performance Bond and a Labor and Material Payment Bond, each for 100% of the Contract price, guaranteeing faithful compliance with all requirements of the Contract Documents and complete fulfillment of the Contract, including payment of all labor, material, and other bills made in carrying out this Contract. **The Surety Company issuing the bonds must be authorized to conduct business in the State of Missouri, and carry a rating of A-6 or better as listed in the A.M. Best or equivalent rating guide.**

3.5. Execution of Contract. The individual, partnership, joint venture, or corporation to whom, or to which, the Contract has been awarded shall return the prescribed copies of the Contract and Contract Bond, properly executed, to the Division of Purchasing of the City within ten (10) days after its receipt of Notice of Acceptance. No proposal shall be considered binding upon the City until the Contract has been executed and filed and a satisfactory Performance and Labor and Material Payment Bond has been returned to Purchasing, and until the Contract has been signed by the Purchasing

Agent, attested by the City Counselor and funds verified by the Finance Director.

3.6. Failure to Execute Contract. Failure to furnish satisfactory Contract Bond or to execute the Contract within ten (10) days from date of Notice of Award, as specified, shall be cause for annulment of the award. In the event of the annulment of the award of the Contract, the certified check deposited with the proposal shall become the property of the City as provided by law. If, in lieu of a certified check, a Bidder's Bond has been furnished, the obligation of such bond will remain in full force and effect until payment equal to the bond sum has been forfeited and paid to the City, not as a penalty but as liquidated damages.

SECTION 4

SCOPE OF WORK

4.1. General. The intent of the Contract is to prescribe a complete work or improvement which the Contractor undertakes to do, in full compliance with the plans, specifications, special provisions, proposal, and Contract. In the event of conflicting language between the project documents, the hierarchy shall be:

1. Technical specifications
2. Supplemental conditions
3. Large scale details
4. Small scale details
5. Plans
6. Street and Storm Sewer Specification and Standards

The Contractor shall furnish, unless otherwise provided in the Contract, all implements, machinery, equipment, tools, materials and labor necessary to the prosecution and completion of the work under Contract.

4.2. Special Work. Construction or conditions which have not been anticipated in the specifications will be covered by special provisions incorporated, in, or attached to, the proposal form, which will be considered a part of the Contract. Should any special provision conflict with the plans or specifications, the special provisions shall govern.

4.3. Alteration of Plans.

4.3.1. The Engineer may, without notice to the Surety, make alterations in or additions to the plans, provided such alterations or additions are incidental or subsidiary to a full and proper execution of the work described in the Contract.

4.3.2. Alterations may include the entire elimination or addition of any one or more items or units. The fact that nature, the weather, physical conditions, or other conditions not directly caused by the City or any of its agents, may prove to be different from that which the parties anticipated or contemplated when the Contract was originally executed shall not be considered an alteration.

4.3.3. Alterations shall affect compensation only as to quantities, and not as to unit prices. Where work is added or deducted for which there is no unit price, the Engineer and Contractor shall agree in writing before the work is commenced upon a fair unit price or sum to be added or deducted. Overhead and profit for alterations shall be per paragraph 4.4.2. When a unit price or sum cannot be agreed upon by the Engineer and Contractor, then any increased or decreased compensation shall be determined by the method set out in Section 4.4. any consequential loss of profit, actual or anticipated, because of any alteration shall not be considered in arriving at the amount due the Contractor.

4.3.4. All alterations affecting compensation shall be made by written change orders authorized by ordinance of the City Council and delivered by the Engineer to the Contractor or the Contractor's authorized representative. All such change orders shall be binding upon the parties as if the provisions thereof had been incorporated in the original Contract.

4.4. Extra Work and Force Account.

4.4.1. The Contractor shall, when directed by the Engineer, perform extra work for which there is no quantity and price included in the Contract, or as provided in Section 4.3., or where necessary to complete the work contemplated. Extra work shall be done in accordance with the specifications. Payment for extra work will be based upon unit prices or sums previously agreed upon in writing by the parties to the Contract or where such prices or sums cannot be agreed upon, the work shall be done upon a force account basis if so ordered by the Engineer.

4.4.2. Extra Work Overhead and Profit. The combined overhead and profit included in the total cost to the Owner of a change in the Work shall be based on the following schedule:

1. For the Contractor, for Work performed by the Contractor's own forces, ten percent (10%) of the cost.
2. For the Contractor, for Work performed by the Contractor's Subcontractors, five percent (5%) of the amount due the Subcontractors.
3. For each Subcontractor involved, for Work performed by that Subcontractor's own forces, ten percent (10%) of the cost.
4. For each Subcontractor involved, for Work performed by the Subcontractor's Sub-subcontractors, five percent (5%) of the amount due the Sub-subcontractor.
5. Cost to which overhead and profit is to be applied shall be determined in accordance with subparagraph 4.4.1.
6. In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials, and Subcontractors. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are Subcontracts, they shall be itemized also. In no case will a change involving over \$1,000 be approved without such itemization.

4.4.3. All extra work done on a force account basis will be paid for in the following manner:

4.4.3.1. Labor. For all lead workers and laborers, the Contractor will receive the rate of wage paid for each hour that said lead workers and laborers are engaged in the force account work.

4.4.3.1.1. The Contractor will receive the actual costs paid to, or on behalf of, employees for subsistence and travel allowances, health and welfare benefits, pension

fund benefits or other benefits, if such amounts are required by the collective bargaining agreement or employment contract applicable to the classes of labor employed on the work.

4.4.3.1.2. An amount equal to 10 percent (5 percent profit and 5 percent overhead) of the sum of the above items will also be paid the Contractor.

4.4.3.2. Insurance and Taxes. For property damage, liability and worker's compensation insurance premiums, unemployment insurance contributions and social security taxes on the force account work, the Contractor will receive the actual cost paid, to which no percentage will be added.

4.4.3.3. Material. For material accepted by the Engineer and used, the Contractor will receive the actual cost of such material delivered on the work, including transportation charges paid (exclusive of equipment rentals as hereinafter set forth), to which cost 10 percent (5 percent profit and 5 percent overhead) will be added. For all material used in connection with, but not entering permanently into the work, reasonable depreciation will be allowed.

4.4.3.4. Equipment. For only that Contractor-owned equipment necessary to accomplish the force account work, including all fuel and lubricants, tires and repairs, the Contractor will be allowed an hourly rate equal to the monthly rental rate divided by 176 hours as set out in the Rental Rate Blue Book for Construction Equipment on file in the Office of the Secretary of the Commission at the time the work is begun. The allowed rates will be the rate adjustment factor multiplied by the bare hourly rates multiplied by the regional adjustment factor, plus the estimated operating cost per hour. The allowed time will be the actual operating time on the work. For the time required to move the equipment to and from the site of the work and any authorized standby time, the rate will be 50 percent of the hourly rate after the actual operating costs have been deducted. All allowed time shall fall within the authorized working hours for such extra work. No payment will be allowed for time elapsed while equipment is broken down or being replaced. The hourly rental rates will apply only to equipment that is already on the job. If the actual unit of equipment to be used is not listed in the schedule, the rate listed for similar equipment with the approximate same initial cost shall be used. Equipment to be used and all prices shall be agreed upon in writing before such equipment is used. An amount equal to 10 percent (5 percent profit and 5 percent overhead) of the sum of these items will also be paid the Contractor. Whenever it is necessary for the Contractor to rent equipment, the rental and transportation costs of the equipment plus five percent for overhead will be paid. In no case shall the rental rates exceed those of established distributors or equipment rental agencies. All prices shall be agreed upon in writing before such equipment is used.

4.4.3.5. Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools or other costs for which no specific allowance is herein provided. Jobsite and home office overhead expenses shall be considered fully compensated by the payments provided in section 4.4.3.

4.4.3.6. Subcontracted Work. For administration and all overhead costs in

connection with approved subcontract work, the Contractor will receive an amount equal to five percent of the actual cost of the subcontracted work. The Engineer has the authority to require alterations in the equipment and labor force assigned to force account work, to limit authorization of overtime work to that normally used on a project for work of similar nature or to require overtime work when an emergency exists, and to require the cessation of force account work when adverse conditions seriously limit productivity.

4.4.3.7. Statements. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such force account work detailed as follows:

- (a) Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.
- (b) Designation, dates, daily hours, total hours, rental rate and extension for each unit of machinery and equipment.
- (c) Quantities of material, prices and extensions.
- (d) Transportation of material.
- (e) Cost of property damage, liability and worker's compensation insurance premiums, unemployment insurance contributions and social security.

4.4.3.7.1 Statements shall be accompanied and supported by receipted invoices for all rental equipment, material used and transportation charges.

4.4.3.7.2 If material used on the force account work is not specifically purchased for such work but is taken from the Contractor's stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such material was taken from Contractor's stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

4.4.3.8 Compensation. Each day the Contractor's representative and the Engineer shall compare records of the cost of work done as ordered on a force account basis. Two copies of these records will be made by the Engineer on forms provided by the City, and the copies shall be signed at the end of each day by both the Engineer and the Contractor, one copy to be retained by the Engineer, and one copy to be retained by the Contractor. The total payment made, as provided in section 4.4.3, shall constitute full compensation for such work.

4.5. Ownership of Salvage Materials. All old paving brick, curbing, crosswalks, gutter, culverts, and drainage and sewer pipe, iron pipe and castings, and similar materials removed within the right of way during the time of construction shall remain the property of the City, except that drainage pipes in approaches to private driveways shall be set aside to be reclaimed by the property Owners.

4.6. Cleanliness of Streets and Construction Site. The Contractor shall clean and keep clean the streets, the work, and public or private property occupied by him, from waste materials or refuse resulting from his operations. Trucks hauling excavated material, cement, sand, stone, or other loose material from or to the site shall be tight so that no spillage will occur on adjacent streets. Should the Contractor be negligent of his

duties in maintaining the proper street cleanliness, the city shall take necessary steps to perform such cleaning and shall charge the Contractor for all the costs thereof.

4.7. Contractor's Insurance Requirements. The Contractor shall not commence work under this Contract until they have obtained all insurance required under this paragraph and such insurance has been approved by the City, nor shall the Contractor allow any Subcontractor to commence work on their Subcontract until all similar insurance required of Subcontractor has been so obtained and approved. All policies shall be in amounts, form and companies satisfactory to the City **which must carry an A-6 or better rating as listed in the A.M. Best or Equivalent Rating Guide.**

4.7.1. Workers Compensation Insurance. The Contractor shall take out and maintain during the life of this Contract **Employers' Liability and Worker's Compensation Insurance** for all of their employees employed at the site of the work, and in case any work is sublet, the Contractor shall require the subcontractor similarly to provide Worker's Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor. Worker's

Compensation coverages shall meet Missouri statutory limits. Employers' Liability limits shall be \$500,000.00 each employee, \$500,000.00 each accident, and \$500,000.00 policy limit. In case any class of employees engaged in hazardous work under this Contract at the site of the work is not protected under the Worker's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide Employers' Liability Insurance for the protection of their employees not otherwise protected.

4.7.2. Commercial General Liability Insurance. Contractor shall carry Commercial General Liability Insurance written on ISO occurrence form CG 00 01 07 98 or later edition (or a substitute form providing equivalent coverage) and shall cover all operations by or on behalf of the Contractor, providing insurance for bodily injury liability and property damage liability for the limits indicated below and for the following coverage:

- Premises and Operations
- Products and Completed Operations
- Contractual Liability insuring the obligations assumed by the Contractor under this Contract.
- Personal Injury Liability and Advertising Injury Liability

Except with respect to bodily injury and property damage included within the products and completed operations hazards, the general aggregate limit shall apply separately to the Contractor's project under this Contract. Completed Operations coverage must be maintained for the correction period provided by the agreement.

Limit of Liability. The Commercial General Liability policy limits shall not be less than:

\$1,000,000 Each Occurrence (Combined Single Limit for Bodily Injury and Property Damage)
\$1,000,000 Aggregate for Products/Completed Operations
\$1,000,000 Personal Injury/Advertising Injury
\$1,000,000 General Aggregate (provide endorsement to apply the General Aggregate per project, if available. If not, see Umbrella Liability section.)

Additional Insured The Owner, all of its officers, directors and employees, shall be named as Additional Insureds under the Commercial General Liability Insurance using ISO Additional Insured Endorsements CG 20 10 or substitute providing equivalent coverage. If additional insured status is required for a correction period then CG 20 37 or equivalent should also be used. These endorsements must be stated on the insurance certificate provided to the Owner and a copy of the endorsements confirming coverage should accompany the insurance certificate.

Primary Coverage The Contractor's Commercial General Liability Policy shall apply as primary insurance and any other insurance carried by the Engineer or the Owner shall be excess only and will not contribute with Contractor's insurance. This must be stated on the insurance certificate and a copy of the endorsement confirming coverage should accompany the insurance certificate.

4.7.3. Business Automobile Liability Insurance. The policy should be written on ISO form CA 0001, CA 0005, CA 0002, CA0020 or a substitute form providing equivalent coverage and shall provide coverage for all owned, hired and non-owned vehicles. The limit of liability should be at least \$1,000,000 Combined Single Limit for Bodily Injury and Property Damage each accident and should also cover Automobile Contractual Liability. The policy should name the Owner and all of its officers, directors and employees as Additional Insureds. The policy shall be endorsed to be primary coverage and any other insurance carried by the Owner shall be excess only and will not contribute with Contractor's insurance. To confirm coverage, a copy of the Additional Insured Endorsement should accompany the insurance certificate.

4.7.4 Umbrella Excess Liability. The Contractor should provide an umbrella excess liability policy that will provide a minimum of \$1,000,000 per occurrence/\$1,000,000 aggregate over the above listed coverages. This policy should "follow-form" of the underlying policies and comply with all insurance requirements of those policies. If the General Aggregate of the Commercial General Liability policy does not apply per project, the umbrella excess limits should be \$2,000,000 per occurrence/\$2,000,000 aggregate.

4.7.5 Waiver of Subrogation. The Commercial General Liability and Automobile Liability policies shall each contain a waiver of subrogation in favor of the Owner and its officers, directors and employees.

4.7.6 Certificates of Insurance. As evidence of the insurance, limits and endorsements required, a standard ACORD or equivalent Certificate of Insurance executed by a duly authorized representative of each insurer shall be furnished by the Contractor to the Owner and Architect before any Work under the Contract is

commenced by the Contractor. Owner shall have the right, but not the obligation, to prohibit Contractor or any Subcontractor from entering the Project site until such certificates are received and approved by the Owner. With respect to insurance to be maintained after final payment, an additional certificate(s) evidencing such coverage shall be promptly provided to Owner as a precondition to final payment. The Certificate of Insurance shall provide that there will be no cancellation or reduction of coverage without 30 days prior written notice to the Owner. The certificate must also contain a description of the project or work to be performed. Failure to maintain the insurance required herein may result in termination of the Contract at Owner's option. In the event the Contractor does not comply with the requirements of this section, the Owner shall have the right, but not the obligation, to provide insurance coverage to protect the Owner and charge the Contractor for the cost of that insurance. The required insurance shall be subject to the approval of the Engineer, but any acceptance of insurance certificates by the Owner shall in no way limit or relieve the Contractor of their duties and responsibilities in this Agreement.

A. Subcontractors. Contractor shall cause each Subcontractor to purchase and maintain insurance of the types and amounts specified herein. Limits of such coverage may be reduced only upon written agreement of Owner. Contractor shall provide to Owner copies of certificates evidencing coverage for each Subcontractor. Subcontractors' commercial general liability and business automobile liability insurance shall name Owner as Additional Insured and have the Waiver of Subrogation endorsements added.

4.8. Hold Harmless Agreement. To the fullest extent not prohibited by law, Contractor shall indemnify and hold harmless the City of Columbia, its directors, officers, agents and employees from and against all claims, damages, losses, and expenses (including but not limited to attorney's fees) arising by reason of any act or failure to act, negligent or otherwise, of Contractor, of any Subcontractor (meaning anyone, including but not limited to consultants having a contract with Contractor or a Subcontractor for part of the services), of anyone directly or indirectly employed by Contractor or by any Subcontractor, or of anyone for whose acts the Contractor or its Subcontractor may be liable, in connection with providing these services. This provision does not, however, require Contractor to indemnify, hold harmless, or defend the City of Columbia from its own negligence.

SECTION 5

CONTROL OF WORK

5.1. Authority of the Engineer. The Engineer shall in all cases decide any and all questions which may arise concerning the quality, quantity, and acceptability of all materials furnished and work performed; the manner of performance and the rate of progress of all work; all question of classification; the correct interpretation of all plans, specifications, and Contract provisions; the acceptable fulfillment of the Contract in all respects; the proper compensation for the performance or breach of the Contract; all claims of any character whatsoever in connection with or growing out of the construction whether claimed under the Contract, under force account, under quantum merit, or otherwise; and his estimates and decisions shall be final, binding, and conclusive upon all parties to the Contract.

5.2. Plans. The City will supply the Contractor with sufficient plans for the work, normally three (3) sets. In case of discrepancy on plans between scaled dimensions and those shown in figures, the figures shall govern. The Contractor shall take no advantage of any error or omission of dimensions in the plans. The Engineer will make such corrections and supply such omitted dimensions as may be necessary, and his interpretation shall be final.

5.3. Cooperation of Contractor. The City will supply the Contractor with two (2) copies of the complete Contract, one (1) copy being for the use of the Surety. The Contractor shall have available on the work, at all times, one (1) copy each of the plans, if any, and one (1) copy of the Contract. The Contractor shall give the work its constant attention to facilitate the progress thereof, and shall cooperate with the Engineer in every way possible.

5.4. Construction Stakes. The Contractor shall be responsible for all construction staking unless noted otherwise. The Contractor shall establish such survey lines and grades as may be necessary for the proper control of the work; the Contractor shall be responsible for making careful and accurate measurements and for constructing the work accurately to the line and grade. The Contractor shall exercise proper care in the preservation of all measurement marks and stakes.

5.5. Inspection of Work. The Contractor shall furnish the Engineer with every reasonable facility for ascertaining whether or not the work performed and materials used are in accordance with the requirements of the Contract specifications. If the Engineer requests, the Contractor shall, at any time before final acceptance of the work, remove or uncover such portion of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, removing, and replacing or restoring of the parts removed shall be considered and paid for as extra work. Should the work thus exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or restoring of the parts removed shall be at the Contractor's expense. No work shall be done and no materials shall be used without supervision or inspection by the Engineer or his

representative. Any work done or materials used without said supervision or inspection by the Engineer or his representative may at the option of the Engineer be ordered removed and replaced at the Contractor's expense.

In case the federal or state government or any agency thereof is paying all or a portion of the cost of the construction of the project, inspections may be made by the Federal Highway Administration and the Missouri Department of Transportation and the Contractor shall grant them access to all parts of the work.

5.6. Unauthorized Work.

5.6.1. Work done without lines and grades being given or work done beyond the lines and grades shown on the plans or as given, except as otherwise provided in the Contract, will be considered unauthorized and done at the expense of the Contractor.

5.6.2. All changes in the work or departures not provided for in the Contract, will be considered unauthorized and done at the expense of the Contractor, unless, before proceeding with the work, he has a copy of an order signed by the Engineer, or a change order signed by all parties whose signatures are provided for. These forms shall contain complete detailed instructions regarding the proposed changes. Any departure from the instructions contained in such written order shall be considered unauthorized.

5.6.3. The Engineer may order unauthorized work removed and replaced at the Contractor's expense.

5.7. Defective Work. All construction and materials which have been rejected or declared unsatisfactory shall be remedied or removed and replaced in an acceptable manner by the Contractor at his expense. Upon failure of the Contractor to remedy or remove and properly dispose of rejected materials or work, or to replace them immediately after receiving written notice from the Engineer, the Engineer may employ labor to rectify the work, and the cost of rectification shall be deducted from any payment due or which may become due the Contractor.

5.8. Damage to Existing Improvements. The Contractor will be held liable for damages done to pavements, sidewalks, and other improvements caused by his construction operations. The City may either make repairs at the Contractor's expense or require the Contractor to make repairs.

5.9 Correction Period. If after final payment and prior to the expiration of two years after the date of substantial completion (unless a longer period is set forth in Supplementary Conditions) or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract documents, any work is found to be defective as a result of workmanship or material defect, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, either correct such defective work or, if it has been rejected by Owner, remove it from the site and replace it with non-defective Work. If Contractor does not promptly comply with the terms of such instructions, Owner may have the defective work corrected or the rejected work removed and replaced, and all direct and indirect costs of

such removal and replacement, including compensation for additional professional services, shall be paid by Contractor.

SECTION 6

CONTROL OF MATERIALS

6.1. Sources of Supply. Materials shall be obtained from sources of supply which meet the approval of the Engineer. Inspection of materials made at principal sources of supply is solely a matter of convenience to the Contractor and producer. All materials shall meet the requirements of the specifications before being incorporated into the work. Any defective materials discovered in the process of handling or at any time during the progress of the work, even though previously accepted, will be rejected. If it is found that a source of supply does not furnish a uniform product or if for any reason the product from any source at any time proves to be unsatisfactory, the Contractor will be required to furnish approved material from other sources. The Contractor shall have no claim for any increased cost on account of such requirement.

6.2. Specifications, Samples, and Tests. When a specification of a national standard (ASTM, AASHTO, etc.) is designated, the material may meet either the designated specifications or the latest revision thereof in effect at the time of the award of the Contract. Tests of samples of materials will be made by the Engineer in accordance with the latest methods prescribed by the ASTM or the AASHTO. All tests not covered by the above shall be performed as specified by the Engineer.

6.2.1. When tests are made at the source of production, the producer shall furnish every reasonable facility for the performance of the tests and for the protection of testing equipment and supplies, and shall permit the Engineer to have free access to all parts of the plant to enable adequate inspection and selection of samples. Sources of supply of bituminous material where the Engineer is required to conduct tests shall have adequate testing facilities and satisfactory laboratory equipment, which equipment shall meet the requirements of the standard methods mentioned.

6.2.2. When called for in the special provisions of the Contract, the producer shall furnish a laboratory room or building having not less than one hundred and thirty (130) square feet of floor space, three (3) windows and one (1) door, and any other requirements as specified in the Special Provisions.

6.3. Storage of Materials. Materials shall be so stored as to ensure preservation of their quality and fitness for the work. The Engineer may direct that they be placed on wooden platforms or other hard, clean surfaces, and not on the ground and he may direct that they be placed under cover when weather conditions endanger the quality of the materials. Materials in storage shall be so arranged as to facilitate inspection. Lawns, grass plots, or private property shall not be used for storage purposes without written permission of the Owner or lessee.

All aggregates and surfacing materials having a maximum size greater than one-half (1/2) inch shall be dumped in horizontal layers when placed in storage. Each layer shall not be more than three (3) feet in depth and the aggregates and surfacing materials shall be deposited in such a manner as to prevent segregation of the sizes.

6.4. Defective Materials. All materials not conforming to the requirements of the specifications shall be considered as defective, and all such materials, whether in place or not, shall be rejected and shall be removed immediately from the construction site unless otherwise permitted by the Engineer. No material which has been rejected, and the defects of which have been subsequently corrected or removed, shall be used until written approval has been given by the Engineer.

6.5. Materials to be Furnished by the Contractor. Unless otherwise stated in the Special Provisions, all materials needed in the work will be furnished by the Contractor. The Contractor will assume full responsibility in ordering materials of the quality specified and required in the specifications. The Contractor shall be responsible for the delivered costs of all materials ordered by him.

SECTION 7

LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

7.1. Laws to be Observed. The Contractor shall at all time observe and comply with all federal and state laws, local laws, ordinances, orders, decrees, and regulations existing at the time of or enacted subsequent to the execution of the Contract which in any manner affect the prosecution of the work. The Contractor and his Surety shall indemnify and save harmless the City and all City officers, Engineers, representatives, agents and employees against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by himself, his employees, or his Subcontractors.

7.2. Permits and Licenses. The Contractor shall procure all permits and licenses, shall pay all charges and fees, and shall give all notices necessary and incidental to the due and lawful prosecution of the work. The cost of complying with this requirement will be included in the Contract unit price for other items.

7.3. Patented Devices, Materials and Processes. If the Contractor is required or desires to use any design, device material, or process covered by letter patent or copyright, he shall arrange and provide for such use by suitable agreement with the patentee or Owner, and a copy of the agreement may be required by the City. The Contractor shall indemnify and save harmless the City from any suit, claims, or damages arising from the infringement upon or use of any patented or copyrighted design, device material, or process.

7.4. Sanitary and Safety Provision.

7.4.1. The Contractor shall at all times take necessary precautions to protect the life and health of all persons employed on the project. He should familiarize himself with the latest accepted accident prevention methods and shall provide necessary safety devices and safeguards in accordance therewith.

7.4.2. 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 minimum standards of the State Division of Health and of the City of Columbia. He shall commit no public or private nuisance.

7.5. Public Convenience and Safety.

7.5.1. Public Convenience. Unless otherwise provided in the Special Provisions, all public traffic shall be permitted to pass through the work, and the Contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience to the public. He shall have under construction no greater length or amount of work than can be prosecuted properly with due regard to the rights of the public, and the Engineer shall be the sole judge of the length or amount of work which will afford proper convenience to the public. In addition to the requirements for furnishing facilities for public safety as specified in paragraph 7.5.2 the Contractor shall erect such warning and directional signs

as may be necessary in the opinion of the Engineer, for expediting the passage of public traffic through or around the work. All such signs and traffic maintenance shall be subject to the approval of the City Traffic Engineer, and he shall be notified twenty-four (24) hours in advance of any disturbance of existing traffic patterns.

Where pipelines to be installed under the Contract across certain designated streets or highways, the Contractor shall be required to open the trench for only one-half (1/2) the width of the pavement at any one time so that one-way traffic may be maintained, unless specified otherwise in the Special Provisions.

Construction operations shall be conducted in such a manner as to cause as little inconvenience as possible to abutting property Owners. Water or dust palliative shall be applied if ordered by the Engineer for the alleviation or prevention of dust nuisance caused by the Contractor's operations. Convenient access to driveways, houses and buildings along the line of the work shall be maintained at least each morning and evening and temporary approaches to crossings or intersecting roads or streets shall be provided and kept in good condition.

7.5.2. Public Safety. The Contractor shall furnish, erect, and maintain such warning lights, barricades, bridges, and other devices as are necessary to prevent accidents and avoid damage or injury to the public and as directed by the Engineer. The adequacy of warning and protective measures for public safety is the responsibility of the Contractor. No action or inaction by the Engineer shall relieve or abrogate the Contractor's obligation to furnish and pay for these devices.

Forty-eight (48) hours in advance of beginning any work, the Contractor shall notify the Engineer in writing of the name, location and twenty-four (24) hour per day telephone number of the person designated to be responsible for the barricade and warning devices for the project. Said persons must be approved by the Engineer and must be available on a twenty-four (24) hour basis for maintaining, placing, and replacing barricades and warning devices.

The Contractor shall furnish all construction signs to be used on the job site and on the approaches to the job site unless otherwise provided in the Special Provisions. All signs and traffic control devices used for the detouring or routing of traffic in, around and through the construction area shall conform to the standards of the City of Columbia as set forth in the attached standard detail sheets or according to the latest edition of the "Manual of Uniform Traffic Control Devices." The approximate quantity of Traffic Control Devices is listed in the Traffic Control detail. The actual quantities of Traffic Control Devices will vary depending on the Construction Sequence. No itemized list of actual quantities or additional payment will be made for devices needed in excess of the approximate quantity shown.

Barricades and warning lights shall be furnished by the Contractor. Barricades shall be effectively reflectorized by having one-half (1/2) of the top board of the barricade covered with reflectorized sheeting or other reflective material. Delineators shall have a reflective sheeting surface, or equal, of not less than twenty-four (24) square inches or one (1) three (3) inch diameter unit reflector. All warning flashers shall meet

the following light requirements:

- (1) Percentage dwell = 20 to 28 percent
- (2) Flash rate = 55 FPM \pm 5.

Whenever the Contractor's operations require one-way traffic or create a condition hazardous to the public traffic, he shall provide and station a competent flagman whose sole duties shall consist of directing the movement of public traffic through or around the work. No additional compensation shall be due the Contractor for the furnishing of barricades or flagman for traffic control work as required in the plans or by the Engineer.

The Contractor will be advised by the Engineer as to which road signs are to remain in use during construction and shall make necessary relocations to avoid interference with construction operations. Signs that are to be removed from the site, during construction, will be picked up, stored and re-installed by the City. The Contractor will be required to pay the cost of replacing or repairing any signs damaged by reason of his operations or lost while in his custody, and upon his failing to pay such costs, they will be deducted and retained from any sums due under the Contract.

No material or equipment shall be stored where it will interfere with the safe passage of public traffic, and at the end of each day's work and at other times when construction operations are suspended for any reason, the Contractor shall remove all equipment and other obstructions from that portion of the roadway open for use by public traffic. Spillage resulting from hauling operation along or across any public traveled way shall be removed promptly.

The Contractor shall notify the City Joint Communication Office of all road closures in advance, and keep them notified of all changes so that emergency vehicles will know, at all times, of appropriate response routes. Contact Joint Communications at 874-6325.

The Contractor shall elect to use an appropriate construction sequence with consideration given to maintaining access to all properties in the construction zone to the maximum extent practicable.

7.6. Progress Schedule and Procedure. Immediately after execution of the Contract Agreement, the Contractor shall submit for approval a carefully prepared Progress Schedule and Procedure, showing the proposed dates of starting and completing each of the various sections of the work, methods of handling traffic and other potential problems of the particular project involved.

7.7. Special Approval for Work on Sundays, Holidays, and After Hours. No work shall be done between the hours of 7:00 PM and 7:00 AM on weekdays. No work shall be done before 9:00 AM nor after 5:00 PM on Saturdays. No work shall be done on Sundays or legal holidays, without the written approval of the Director of Public Works; as provided by ordinance of the City; approval shall be given for a specified number of days on a specified job and shall not be extended without further approval. However, work as may be necessary in case of emergencies may be done without the Director's

approval.

7.8. Use of Explosives. When explosives are used in the prosecution of the work, the Contractor shall use the utmost care to prevent danger to life or property. All explosives shall be stored in a secure and safe manner and in compliance with all existing statutes and ordinances and all places used for such storage shall be clearly marked "DANGEROUS POWDER MAGAZINE." The Contractor shall notify, in writing, the Engineer and all parties affected by the use of explosives in the work to be performed and it further agrees to save the City, its agents, officers and employees harmless from any claim growing out of the use of such explosives.

7.9. Preservation of Utilities, Monuments and Artifacts. The Contractor shall be responsible for the preservation of all public and private utility wires, lines, pipes, poles, cables and conduits within the right of way and shall use every precaution necessary to prevent damage or injury thereto. He shall not disturb or damage any land monument or property landmark until an authorized agent has witnessed or otherwise referenced their locations and shall not remove them until directed by the Engineer. He shall be responsible for the preservation of all artifacts, fossils, and other items of archaeological character encountered within the right of way and shall deliver them promptly into the custody of the Engineer.

7.10. Responsibility for Claims for Damage. The Contractor shall indemnify and save harmless the City, its officers, agents and employees from all claims or suits made or brought for injury to persons or property caused by the Contractor's negligence or his failure to perform the work in accordance with the plans and specifications. The City may retain from any payment due or to become due the Contractor such sums as are deemed necessary to protect its interests until all such claims or suits have been settled or disposed of and suitable evidence to that effect furnished to the City.

7.11. Until work is accepted by the Engineer, it shall be in the custody and under the charge and care of the Contractor. The Contractor shall rebuild, repair, restore, or make good, at his own expense, all damages to any portion of the work before its completion and acceptance, caused by the action of the elements or from any other reason. The City shall have the right of full possession and use of any or all completed portions of the work, regardless of the completion time for the Contract, and such possession and/or use shall not release the Contractor from the proper and adequate maintenance of any street or alley or property over which this work may go, nor shall such possession and/or use be deemed as final acceptance by the City. Application by the Contractor for the extension of the completion date of this Contract, based on such possession and/or use, may be considered a valid reason for such extension if approved by the Engineer.

SECTION 8

PROSECUTION AND PROGRESS

8.1. Subletting or Assigning of Contract.

8.1.1 The Contract or any portion thereof shall not be assigned or sublet except with the written consent of the Engineer. No subcontract shall, under any circumstances, relieve the Contractor of his liabilities and obligations under his Contract, and all transactions with the Engineer must be through the Contractor. Subcontractors will be recognized only in the capacity of workmen and shall be subject to same requirements as to character and competence. Not less than fifty percent (50%) of the Contract work shall be performed by the Contractor's own forces and equipment.

8.1.2. The Contractor shall furnish four (4) signed copies of all Subcontracts to the City.

8.2. Notice to Proceed. The Engineer will issue Notice to Proceed within ten (10) days after the award of the Contract, provided the Contractor has executed and filed the prescribed number of copies of the Contract, Contract Bond, and satisfactory evidence of having complied with insurance requirements.

8.3. Prosecution of Work.

8.3.1. The Contractor is required to commence work within ten (10) days of the date specified in the Notice to Proceed and any work performed by the Contractor prior to the date specified shall be at his own risk.

8.3.2. The Contractor must continuously and diligently prosecute the work in such order and manner as will ensure its completion within the specified time. He shall be fully responsible for the prosecution and coordination of all work being performed under the Contract by Subcontractors.

8.3.3. The work in progress shall receive the personal attention either of the Contractor or of a competent and reliable superintendent who shall have full and final authority to act for him. In case the Contractor delegates authority to a superintendent, he shall notify the Engineer in writing, stating the name of the person authorized to act as superintendent, and stating the name or names of the persons authorized to sign the various documents such as Weekly Report of Working Days; Change Order; Force Account Statement; Labor Payroll; and any other documents that may be required during the progress of the work. If at any time progress in keeping with the intent of the Contract shall not have been made, the Contractor shall take such steps as may be necessary to complete the work in the time and manner specified.

8.3.4. In Contracts involving joint adventure, the joint adventurers shall, prior to beginning any work on the Contract, appoint a single representative delegated with full and final authority to act for the organization. The authority and obligations of this representative shall be those of the Contractor. The Engineer shall be notified in writing

of the name of this representative and of any subsequent replacements.

8.4. Cooperation with Other Contractors.

8.4.1. The Contractor is required to arrange his work so as not to interfere with the operations of other Contractors engaged within the limits of his Contract or upon adjacent work. He is also required to join his work to that of others in a proper manner, in accordance with the spirit and intent of the plans and specifications, and to perform his work in the proper sequence in relation to that of other Contractors.

8.4.2. Whenever work being done by other Contractors is contiguous or related to the work included in the Contract, the respective right of the various interests involved will be established by the Engineer in order to secure the completion of the various portions of the work in general harmony.

8.5. Cooperation with Public Utilities.

8.5.1. The general location of railroad facilities, of principal water mains, sewer pipes, telephone conduits, gas mains, pipe lines, pole lines, and other public and private utility facilities which will affect construction operations are indicated on the plans insofar as their locations are known. Some of these utilities are to remain in place; others may be removed entirely or in part by the Owners for relocation elsewhere. Bidders shall examine the site and shall consult with the various utility Owners regarding the relocations and adjustments required, also the location of any proposed facilities, and determine for themselves the locations of such utilities on the right of way which may affect their operations, whether or not shown on the plans. Submittal of a proposal will be presumed evidence that the Bidder has familiarized himself with all of the conditions and factors involved and is fully aware of any delay and inconvenience which may be occasioned thereby.

8.5.2. All utility companies having facilities within or adjacent to the limits of construction will be notified as early as possible by the Engineer and furnished with plans, so that all possible adjusting or relocating of facilities to conform with new construction may be completed prior to commencement of work by the Contractor. When adjustments or relocations have not been completed prior to constructing, the Contractor shall notify the Engineer, requesting that this work be done. The Contractor shall then coordinate his operations with the work of Owners making necessary adjustment, removals, or construction of new fixtures, and shall permit free access to the site for such work.

8.5.3. Should there be located within the right of way any public or private utility facilities which are to remain in place and which will interfere with the Contractor's proposed methods of operation, the Contractor shall make all necessary arrangements with the Owners for any temporary or permanent removal or relocation of such facilities desired for his convenience. Any cost involved shall be borne by the Contractor.

8.5.4. The Contractor will be responsible for any damage done to any telephone,

telegraph, cable, fiber optic or power poles or lines, water or fire hydrants, gas mains and pipe lines, water mains and pipe lines, sewers, conduits and other accessories and appurtenances of a similar nature which are fixed or controlled by a municipality, public utility company, or corporation. The Contractor shall perform and carry on its work in such manner as not to interfere with or damage fixtures mentioned herein, or as shown on the plans, or discovered during construction which are to be left within the limits of the project. The City will not be responsible for any delay or damage incurred by the Contractor due to working around or joining its work to fixtures left in place.

8.5.5. The Contractor shall be responsible for all damage to any utility facility due directly to his operations regardless of location and he shall repair and replace as necessary any such damaged facility or make payment to the Owner for repair or replacement.

8.6. Character of Workmen and Equipment.

8.6.1. All Subcontractors, superintendents, foremen, and workmen employed by the Contractor shall be competent and reliable. The Engineer may demand the dismissal of any person employed by the Contractor, in, about, or upon the work who misconducts himself or is incompetent or negligent in the due and proper performance of his duty, or who neglects or refuses to comply with any proper directions given; and such person shall not again be employed thereon without the written consent of the Engineer. Should the Contractor continue to employ or re-employ any such person, the Engineer may suspend the work until the Contractor complies with such orders.

8.6.2. The Contractor shall furnish suitable equipment for the satisfactory prosecution of the work. No equipment will be permitted that would damage any streets or adjacent property.

8.7. Temporary Suspension of Work.

8.7.1. The Engineer shall have the authority to suspend work wholly or in part for such period or periods as he may deem necessary, when weather or other conditions are such that in the opinion of the Engineer the work may be done at a later time with advantage to the City, or for failure on the part of the Contractor to comply with any of the provisions of the Contract. Should it become necessary to stop work for an indefinite period, the Contractor shall store all materials in a manner that will protect them from damage and will not unnecessarily obstruct traffic; shall take every precaution to prevent damage to or deterioration of the work performed; and shall provide suitable drainage of the roadway by opening ditches, shoulder drains, etc.; and by erecting temporary structures where necessary. The Contractor may suspend work for reasonable cause upon the written approval of the Engineer. Liquidated damages shall not accrue during the period in which work is suspended by approval of the Engineer unless such suspension is due to the failure of the Contractor to comply with the provisions of the Contract. If work has been discontinued, the Contractor shall notify the Engineer in writing at least forty-eight (48) hours before resuming operations.

8.8. Contract Time for Completion of the Work.

8.8.1. The Contractor shall perform fully, entirely, and in an acceptable manner, the work contracted for, within the time stated in the Contract, or within the time provided in the last extension thereof; and all extensions of time must be approved by the Engineer, and confirmed by the City Council, prior to the time stated in Contract specified or the date of the last preceding extension thereof.

8.8.2. The time for the completion of the work is based upon working days, which time will be specified in the proposal form. A working day is defined as any day when, in the opinion of the Engineer, soil and weather conditions are such as would permit work on any contemporaneous major operation of the project for six (6) hours or more unless other unavoidable conditions prevent the Contractor's operations. If conditions are such as to stop work in less than six (6) hours, the day shall not be counted as a working day.

8.8.3. Saturdays, Sundays, national holidays, and holidays legal in the State of Missouri shall be excluded from the count of working days unless the Contractor utilizes such a day as a working day as indicated above.

8.8.4. The count of working days shall begin on the date specified in the Notice to Proceed. The Engineer shall be sole judge of the number of working days to be charged under the Contract. In computing the time required by the Contractor in the execution of the work, allowances will be made for days not construed as working days, and for days during which work is suspended with the written approval of the Engineer. No allowance shall be made for delay or suspension of the prosecution of the work due to fault of the Contractor. Each week the Engineer, on a form designated *Weekly Report of Working Days*, shall give written notice to the Contractor, or to his representative in charge of the work, of the number of working days the Engineer has determined there were in the weekly period covered by such notice. Any objection by the Contractor to such weekly decision shall be deemed waived, and shall not thereafter be made the basis of any claim, unless the Contractor shall, within three (3) days after receipt of such notice, file with the Engineer his written protest setting forth his objections and specifying his reasons therefor. If the Contractor's objections to the working day count are made on the ground that he is unable to work due to causes beyond his control he shall state his reasons in writing, furnish proof to establish his claim, and state the approximate number of days he estimates he will be delayed.

8.9. Liquidated Damages for Failure or Delay in Completing Work on Time.

8.9.1. Time is of the essence of this Contract. Inasmuch as delay in the prosecution of the work will inconvenience the public, obstruct traffic, interfere with business, and increase the cost to the City, it is important that the work be prosecuted vigorously to completion. Should the Contractor, or, in case of default, the Surety, fail to complete the work within the time stipulated in the Contract, or within such extension of time as may be allowed in the manner set out in the preceding sections, a deduction of an amount as set out in the proposal form will be made for each and every calendar day that such Contract remains uncompleted after the time allowed for the completion. The said amount set out in the proposal is hereby agreed upon as liquidated damages for loss to the

City and the public due to the obstruction of traffic, interference with business, and increased cost of Engineer, administration, supervision, maintenance of detours around or over the work, inspection, etc., after the expiration of the time stipulated in the Contract, and will be deducted from any money due the Contractor under this Contract, and the Contractor and its Surety shall be liable for any liquidated damages in excess of amount due the Contractor. Permitting the Contractor to continue and finish the work or any part of it after the expiration of the stipulated time, or after any extension of the time, shall in no way operate as a waiver on the part of the City of any of its rights under this Contract.

8.9.2. In case of a default of the Contract and the completion of the work by the City under the provisions of Section 8.10 the Contractor and its Surety shall be liable for liquidated damages chargeable under the Contract, but no liquidated damages shall be chargeable by the City for any delay in the final completion of the work by the Contractor due to any unreasonable action, negligence, omission, or delay of the City.

8.9.3. In any suit involving the collection of liquidated damages, the reasonableness of the amount per day stipulated in the proposal shall be presumed.

8.9.4. If the City, or any of its agents should cause a delay in any part of the work, or in the final completion of the job, this fact shall not void the provisions of the Contract as to liquidated damages, but the Contractor shall be given such additional working days for the final completion of the job as the City may deem proper to compensate for such delay caused by the City or its agents.

8.10. Default of Contract.

8.10.1. If the Contractor fails to begin the work within the time specified, or fails to perform the work with sufficient workmen or materials to ensure its prompt completion or performs the work unsuitably, or neglects or refuses to remove materials or perform anew such work as shall be rejected as defective and unsuitable, or discontinues the prosecution of the work, or from any other cause whatsoever does not carry on the work in an acceptable manner, or becomes insolvent or is adjudicated a bankrupt, or commits any act of bankruptcy or insolvency, or allows any final judgment to stand against him unsatisfied for a period of ten (10) days, the Engineer may give notice in writing by registered mail to the Contractor and the Surety of such delay, neglect, or default. If within ten (10) days after such notice the Contractor does not proceed to remedy to the satisfaction the Engineer the fault specified in said notice, or the Surety does not proceed to take over the work for completion under the direction of the Engineer, the City shall have full power and authority, without impairing the obligation of the Contract or the bond, to take over the completion of the work; to appropriate or use any or all material and equipment on the ground that is suitable and acceptable; to enter into agreements with others; or to use other such methods as in its opinion may be required for the completion of the Contract in an acceptable manner. The Contractor and his Surety shall be liable for all costs and expenses incurred by the City in completing the work, and also for all liquidated damages in conformity with the terms of the Contract. In case the sum of such liquidated damages and the expense so incurred by the City is less than the sum which would have been payable under the Contract if it had been completed by the Contractor, the Contractor, or his Surety, shall be entitled to receive the

difference; and in case the sum of such expense and such liquidated damages exceeds the sum which would have been payable under the Contract, the Contractor and his Surety shall be liable and shall pay to the City the amount of such excess.

8.11. Cancellation of Contract.

8.11.1. When funds available are insufficient for the completion of the work, the City shall have the right to annul the Contract upon giving thirty (30) days notice in writing to the Contractor, in which event the Contractor shall be entitled to the full amount of the estimate for the work done by him under the terms and conditions of the Contract up to the time of such annulment, including the retained percentage. The Contractor shall be reimbursed by the City for such expenditures as, in the judgment of the Engineer, are not otherwise compensated for.

8.11.1.1. Notice to the Contractor shall be deemed to be served when delivered to the person in charge of any office used by the Contractor, his representative at or near the work, or by registered mail addressed to the Contractor at his last known place of business.

8.11.2. In the event that the Engineer finds that a national emergency exists which creates a shortage of materials, labor, or equipment, and that such emergency will probably continue to exist for an unreasonable length of time, by reason of which the Contractor will be unable to proceed with the construction Contract, the City may cancel such construction Contract or any part thereof, under the terms hereinafter provided.

8.11.2.1. If the Contract, or any portion thereof, is canceled and the Contractor released before all items of work included in the Contract have been completed, payment will be made at Contract unit prices for the actual work performed. The Contractor shall be reimbursed by the City for such expenditures as in the judgment of the Engineer are not otherwise compensated for. No claims for loss of anticipated profits shall be considered.

8.11.2.2. Materials obtained by the Contractor for authorized work, which have been inspected, tested, and accepted by the Engineer, but not incorporated in the work, and which have been properly stored and maintained, shall be purchased from the Contractor at actual cost as shown by receipted bills or other proper evidence of actual cost at such points of delivery as may be designated by the Engineer.

SECTION 9

MEASUREMENT AND PAYMENT

9.1. Measurement of Quantities. All work completed under the Contract will be measured by the Engineer using United States Standard Measures in accordance with well recognized engineering practice or will be paid for on plan quantity basis as set out elsewhere in these specifications. If the quantity of any item that is to be paid for on a plan quantity basis is found to include errors, the quantity will be corrected before making final payment.

9.2. Scope of Payment. The Contractor shall receive and accept the compensation provided for in the Contract as full payment for furnishing all materials and for performing all work under the Contract in a complete and acceptable manner; for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the prosecution thereof.

9.3. Method of Payment.

9.3.1. The successful Contractor will be allowed payment in accordance with the following schedule:

a. Not later than thirty (30) days after receipt of invoice, the City will make partial payment to the Contractor on the basis of a duly certified approved estimate of the cost of materials delivered to the site and work performed at the site during the preceding calendar month by the Contractor, but the City will retain ten percent (10%) of the amount of each such estimate. Not later than thirty days after final tests and acceptance, the City will make final payment of the retained ten percent. If, for any reason, the City should delay testing and acceptance, then final payment shall be due and payable sixty (60) days after completion of all items of the Contract unless such tests and acceptance is delayed or withheld due to defective equipment or improper operation of the equipment supplied by the Contractor.

b. The Contractor shall, by affidavit, certify to the Engineer that all bills and claims properly due and chargeable against the work have been satisfied and that Contractor has complied with the laws relating to the payment of prevailing wage rates and that Contractor shall release the City of Columbia from all further claims, which certificate must bear the written endorsement of the Surety on the bond. The acceptance by the Contractor of the final payment shall constitute a release and waiver of any and all rights and privileges under the terms of the Contract; further, the acceptance by the Contractor of final payment shall relieve the City from any and all claims or liabilities on the part of the City relating to or connected with the Contract.

c. The cost of all legal publications, engineering costs, and other costs incidental to the proper consummation of this Contract will be paid by the Contractor, and the total amount of such costs will be included in the total cost of

the work.

d. The Contractor shall pay:

For all transportation and utility service not later than the 20th day of the calendar month following that in which the services are rendered.

For all materials, tools, and other expendable equipment to the extent of 90% of the cost thereof, not later than the 20th day of the calendar month following that in which such materials, tools, and equipment are delivered at the site of the project, and the balance of the cost thereof not later than the 30th day following the completion of that part of the work in or on which such materials, tools, and equipment are incorporated or used.

To each of his subcontractors, not later than the 5th day following each payment to the Contractor, the respective amounts allowed the Contractor on account of the work performed by his subcontractor, to the extent of each subcontractor's interest therein.

9.4 Assignment of Contract. No assignment by the Contractor of any principal construction Contract or any part thereof or of the funds to be received thereunder by the Contractor, will be recognized unless such assignment has had the approval of the City and the Surety has been given due notice of such assignment in writing. In addition to the usual recitals in assignment Contracts, the following language must be set forth:

“It is agreed that the funds to be paid to the assignee under this assignment are subject to a prior lien for services rendered or materials supplied for the performance of the work called for in said Contract in favor of all persons, firms, or corporations rendering such services or supplying such materials.”

SECTION 10

STATE WAGE RATE REQUIREMENTS

10.1. This Contract shall be based upon payment by the Contractor and his subcontractors of wage rates not less than the prevailing hourly wage rate for each craft or classification of workers engaged on the work as determined by the Missouri Division of Labor Standards.

10.2 The Contractor shall comply with all requirements of the prevailing wage law of Missouri, Revised Statutes of Missouri, Sections 290.210 to 290.340, including the latest amendments thereto.

10.3 The prevailing wage law does not prohibit payment of more than the prevailing rate of wages nor does it limit the hours of work which may be performed by any worker in any particular period of time.

10.4 Records. The Contractor and each subcontractor shall keep an accurate record showing the names, occupations, and crafts of all workers employed, together with the number of hours worked by each worker and the actual wages paid to each worker. At all reasonable hours, such records shall be open to inspection by the Missouri Division of Labor Standards and the Owner. The payroll records shall not be destroyed or removed from the State for at least one year after completion of the work.

10.5 Notices. A clearly legible statement of all prevailing hourly wage rates to be paid to all workmen employed in order to execute the Contract and employed on the construction of the public works shall be kept posted in a prominent and easily accessible place at the site thereof by each Contractor and subcontractor engaged in the public works projects under the provisions of this law and such notice shall remain posted during the full time that any such workman shall be employed on the public works (RSMo 290.265).

10.6 Penalty. Pursuant to Section 290.250 RSMo, The Contractor shall forfeit as a penalty to the city on whose behalf the Contract is made or awarded one hundred dollars for each workman employed, for each calendar day, or portion thereof, such workman is paid less than the said stipulated rates for any work done under said Contract, by him or by any subcontractor under him, and the said public body awarding the Contract shall cause to be inserted in the contract a stipulation to this effect. It shall be the duty of such public body awarding the Contract, and its agents and officers, to take cognizance of all complaints of all violations of the provisions of sections 290.210 to 290.340 committed in the course of the execution of the Contract, and, when making payments to the Contractor becoming due under said Contract, to withhold and retain therefrom all sums and amounts due and owing as a result of any violation of sections 290.210 to 290.340. It shall be lawful for any Contractor to withhold from any subcontractor under him sufficient sums to cover any penalties withheld from him by the awarding body on account of said subcontractor's failure to comply with the terms of sections 290.210 to 290.340, and if payment has already been made to him, the Contractor may recover from him the amount of the penalty in a suit at law.

The employer shall have the right to dispute such notice of penalty in writing to

the department within forty-five days of the date of the notice. Upon receipt of this written notice of dispute, the department shall notify the employer of the right to resolve such dispute through arbitration. The state and the employer shall submit to an arbitration process to be established by the department by rule, and in conformance with the guidelines and rules of the American Arbitration Association or other arbitration process mutually agreed upon by the employer and the state. If at any time prior to the department pursuing an enforcement action to enforce the monetary penalty provisions of subsection 1 of this section against the employer, the employer pays the back wages as determined by either the department or the arbitrator, the department shall be precluded from initiating any enforcement action to impose the monetary penalty provisions of subsection 1 of this section.

10.7 Affidavit of Compliance. After completion of the work and before final payment can be made under this Contract, the Contractor and each subcontractor must file with the Owner an affidavit stating that they have fully complied with the provisions and requirements of the prevailing wage law of Missouri, Sections RSMo. 290.210 to 290.340. Exhibit D is to be used for this purpose.

10.8 Wage Determination. During the life of this Contract, the prevailing hourly rate of wages is subject to change by the Missouri Division of Labor Standards or by court decision as provided by law. Any such change shall not be the basis of any claim by the Contractor against the Owner, nor will deductions be made by the Owner against sums due the Contractor by reason of any such change.

10.9 The prevailing wage rate determination made by the Missouri Division of Labor Standards applicable to this Contract is reproduced verbatim and included in this bid.