



**Project Manual**

for

**Mission Crossing Park Construction**

Bid Date: February 23, 2016

CITY OF MISSION  
SPECIFICATIONS  
CONTRACT DOCUMENTS

**MISSION CROSSING PARK CONSTRUCTION**

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CITY OF MISSION, KANSAS

NOTICE TO BIDDERS

Sealed bids for **MISSION CROSSING PARK CONSTRUCTION** will be received by the City of Mission, Kansas, at the office of the City Clerk, City Hall, 6090 Woodson Street, Mission, Kansas 66202 until 2:00 p.m. local time on **TUESDAY, FEBRUARY 23, 2016**. At that time all sealed bids will be transferred to the **City Council Chamber**, City Hall, where they will be publicly opened and read aloud. Any bid received after the designated closing time will be returned unopened.

All bids shall be submitted in sealed envelopes addressed to the City Clerk of Mission, Kansas, and marked "**BID FOR MISSION CROSSING PARK CONSTRUCTION**." Contractors desiring the Contract Documents for use in preparing bids may obtain a set of such documents from the **City of Mission, Kansas, Parks and Recreation Department, email [chumerickhouse@missionks.org](mailto:chumerickhouse@missionks.org) with subject line reading "BID FOR MISSION CROSSING PARK CONSTRUCTION"**. Proposers should specifically note the City of Mission prefers questions be submitted by email.

Neither the City nor consultant shall be responsible for the accuracy, completeness, or sufficiency of any bid documents obtained from any source other than the source indicated above. Obtaining copies of plans, specifications, bid documents and other contract documents from any other source(s) may result in obtaining incomplete and inaccurate information. Obtaining these documents from any source other than directly from the source listed herein may also result in failure to receive any addenda, corrections, or other revisions to these documents that may be issued.

Contractors should read and be fully familiar with all contract documents before submitting a bid. In submitting a bid, the bidder warrants that it has read the contract documents and is fully familiar therewith and that it has visited the site of the work to fully inform itself as to all existing conditions and limitations and shall include in its bid a sum to cover the cost of all items of the work.

Should a bidder find "defects" as defined in paragraph GC-3 of the General Conditions, it shall follow the procedures outlined in paragraph GC-3 to bring same to the attention of City. Changes necessitated thereby shall be in the form of addenda issued by the consultant.

All bidders shall verify that they have considered all written addenda. Neither the City nor the consultant shall be responsible for oral instructions.

Any written addenda issued during the time of bidding shall be covered and included in the bid. There will be no clarifications or exceptions allowed on the bid. Bids are for a total bid package, total contract price.

Bids shall be made upon the form provided in ink or typewritten. Numbers shall be stated both in writing and in figures; the signature shall be long hand; and the complete form shall be without alteration or erasure. On alternate items for which a bid is not submitted, a written indication of "no bid" on the bid form is required.

No oral, telegraphic, facsimile or telephonic bids or alterations will be considered.

The following items must be included in the sealed envelope with the bid:

- a. Bid
- b. 5% Bid Security--Bid Bond, Cashier's Check or Certified Check (See below.)

Each bidder shall file with its bid a bid bond, a cashier's check or a certified check drawn on any acceptable bank, made payable to the City of Mission, Kansas, in an amount of not less than five percent (5%) of the total bid, which shall be retained by the City of Mission until a contract for the project has been executed. Bid bonds will be returned to the unsuccessful bidders, with the exception of the second qualifying bidder, at such time as their bids are rejected. The bid deposit of the successful bidder and the second qualifying bidder will be returned when satisfactory bonds in an amount equal to 100% of the contract amount, required insurance certificates and other required documents shall have been furnished and the contract documents have been executed.

In the event the successful bidder is unable to execute the contract, for whatever reason, City may exercise its legal prerogatives, including, but not limited to, enforcement of its rights as to the bid security.

The City reserves the right to accept or reject any and all bids and to waive any technicalities or irregularities therein. Bids may be modified or withdrawn by written request of the bidder received in the office of the City Clerk, prior to the time and date for bid opening; provided, however, that no bidder may withdraw its bid for a period of thirty (30) days from the date set for the opening thereof. ALL BIDDERS AGREE THAT REJECTION SHALL CREATE NO LIABILITY ON THE PART OF THE CITY BECAUSE OF SUCH REJECTION. IT IS UNDERSTOOD BY ALL BIDDERS THAT AN UNSUCCESSFUL BIDDER HAS NO CAUSE OF ACTION AGAINST THE CITY FOR BID PREPARATION COSTS. THE FILING OF ANY BID IN RESPONSE TO THIS INVITATION SHALL CONSTITUTE AN AGREEMENT OF THE BIDDER TO THESE CONDITIONS.

A Pre-Bid Conference will be held at: FUTURE MISSION CROSSING PARK SITE  
6000 BROADMOOR STREET  
(SW CORNER OF BROADMOOR AND MARTWAY)  
MISSION, KS 66202  
Date & Time: MONDAY, FEBRUARY 15th, 10 a.m.

Publish: *Legal Record*

Tuesday, January 26, 2016

## INSTRUCTIONS TO BIDDERS

- IB-1. **BIDS:** All bids shall be made on the forms provided in this bound volume of contract documents and shall be in compliance with the Notice to Bidders. All appropriate blanks shall be filled in and shall be signed by the appropriate individual on behalf of him/herself or the entity submitting the bid. Each bid must be enclosed in a sealed envelope plainly marked "**BID FOR MISSION CROSSING PARK CONSTRUCTION**". As per the Notice to Bidders, bid shall be addressed to:

CITY OF MISSION, KANSAS  
Attention: City Clerk  
6090 Woodson Street,  
Mission, KS 66202

IB-2. **DEFINITIONS:**

- a. All definitions set forth in the General Conditions or in other contract documents are applicable to the Bidding Documents.
- b. "Alternative Bid" (or "Alternate") means an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the work, as described in the Bidding Documents, is accepted.
- c. "Base Bid" means the sum stated in the Bid for which the Bidder offers to perform the work described in the Bidding Documents as the base, to which work may be added or from which work may be deleted for sums stated in Alternate Bids.
- d. "Bid" shall mean the offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the work to be performed (and the City reserves the right to reject any and all bids).
- e. "Bidder" shall mean any individual, partnership, corporation, association or other entity submitting a Bid for the work.
- f. "Bidding Documents" shall mean all documents related to a Bidder's submitting a Bid, including, but not limited to, the advertisement for Bids, if applicable, Instructions to Bidders, the Bid form, other sample bidding and contract forms and the proposed contract documents, including any addenda issued prior to receipt of Bids. At the City's option, Bidders may be required to complete and submit a prequalification statement.
- g. "City" means the City of Mission, Kansas.
- h. "Contractor" shall mean the entity entering into the contract for the performance of the work covered by the contract, together with its duly authorized agents or legal representatives.
- i. "Successful Bidder" means the person or entity who is determined and declared by the City to have submitted the lowest and best responsible Bid in conformity with the terms of the Bidding Documents.

- j. "Unit Price" means an amount stated in the Bid as a price per unit of measurement for materials or services as described in the Bidding Documents or in the proposed contract documents.

IB-3. BIDDER'S REPRESENTATIONS: Each Bidder by making its Bid represents that:

- a. It has read and understands the Bidding Documents, and its Bid is made in accordance therewith.
- b. It has visited the site, has familiarized itself with the local conditions under which the work is to be performed, has reviewed all published reports, inspections and other documents relating to the project and has correlated its observations with the requirements of the proposed contract documents.
- c. Its Bid is based upon the materials, systems and equipment required by the Bidding Documents without exception.
- d. It has familiarized itself with state, federal law and local ordinances, regulations, and permitting requirements which may affect cost and/or progress or performance of the work.

IB-4. BIDDING DOCUMENTS: Bidders may obtain complete sets of the Bidding Documents from the City or the consultant for the sum stated in the Notice to Bidders. Neither the City nor the consultant shall be responsible for the accuracy, completeness, or sufficiency of any Bidding Documents obtained from any source other than the source indicated in the Notice to Bidders. Obtaining copies of Bidding Documents from any other source(s) may result in obtaining incomplete and inaccurate information or result in failure to receive any addenda, corrections, or other revisions to these documents that may be issued.

Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the City nor the consultant assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

The City in making copies of the Bidding Documents available on the above terms does so only for the purpose of obtaining Bids on the work and does not confer a license or grant for any other use.

IB-5. DEFECTS IN BIDDING DOCUMENTS: Bidders shall promptly notify the City of any errors, omissions, discrepancies or inconsistencies (hereinafter "defects") which they may discover upon examination of the Bidding Documents or of the site and local conditions. Bidders will not be permitted to take advantage of any such defect.

Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the consultant at least seven days prior to the date for receipt of Bids.

Any interpretation, correction or change of the Bidding Documents will be made by Addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.

- IB-6. SUBSTITUTIONS: The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.

No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the consultant at least seven (7) days prior to the date for receipt of Bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, cuts, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or other work that incorporation of the substitute would require shall be included. The burden of proof of the merit of the proposed substitute is upon the Bidder. The consultant's decision of approval or disapproval of a proposed substitution shall be final.

If the consultant approves any proposed substitution prior to receipt of Bids, such approval will be set forth in a written addendum. Bidders shall not rely upon approvals made in any other manner.

No substitutions will be considered after the contract award unless specifically provided in the contract documents (see GC-61).

- IB-7. ADDENDA: Written addenda will be mailed or delivered to all who are known by the consultant to have received a complete set of Bidding Documents.

Copies of written addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

No written addenda will be issued later than four (4) days prior to the date for receipt of Bids except an addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

Each Bidder shall ascertain prior to submitting its Bid that it has received all written addenda issued, and it shall acknowledge its receipt in its Bid.

- IB-8. INSURANCE:

- a. General: The Contractor shall secure and maintain, throughout the duration of the agreement, insurance (on an occurrence basis unless otherwise agreed to) of such types and in at least such amounts as required herein. Contractor shall provide certificates of insurance and renewals thereof on forms provided by the City or on forms acceptable to the City. The City shall be notified by receipt of written notice from the insurer or the Contractor at least thirty (30) days prior to material modification or cancellation of any policy listed on the Certificate.

Bidders are referred to Article GC-38 of the General Conditions for additional insurance information.

- b. Notice of Claim Reduction of Policy Limits: The Contractor, upon receipt of notice of any claim in connection with the agreement, shall promptly notify the City, providing full details thereof, including an estimate of the amount of loss or liability.

The Contractor shall monitor and promptly notify the City of any reduction in limits of protection afforded under any policy listed in the Certificate (or otherwise required by the contract documents) if the Contractor's limits of protection shall have been impaired or reduced to such extent that the limits fall below the minimum amounts required herein. The Contractor shall promptly reinstate the original limits of liability required hereunder and shall furnish evidence thereof to the City.

c. Commercial General Liability:

Limits –

General Aggregate:	\$2,000,000
Products / Completed Operations Aggregate:	\$2,000,000
Personal & Advertising Injury:	\$1,000,000
Each Occurrence:	\$1,000,000

Policy MUST include the following conditions:

1. Pollution Liability (Applicable only to contracts involving pollutants such as asbestos & lead abatement, sludge or other waste abatement, etc.)
2. **NAME CITY OF MISSION AS “ADDITIONAL INSURED”**

d. Automobile Liability: Policy shall protect the Contractor against claims for bodily injury and/or property damage arising from the ownership or use of any owned, hired and/or non-owned vehicle.

Limits (Same as Commercial General Liability) -

Combined Single Limits, Bodily Injury and Property Damage - Each Accident:

Policy MUST include the following condition:  
**NAME CITY OF MISSION AS “ADDITIONAL INSURED”**

e. Umbrella Liability: The Umbrella / Excess Liability must be at least as broad as the underlying general liability and automobile liability policies.

Limits –

Each Occurrence	\$1,000,000
General Aggregate	\$1,000,000

f. Workers' Compensation: This insurance shall protect the Contractor against all claims under applicable state workers' compensation laws. The Contractor shall also be protected against claims for injury, disease or death of employees which, for any reason, may not fall within the provisions of workers' compensation law. The policy limits shall not be less than the following:

Workers' Compensation:	Statutory
Employer's Liability:	
Bodily Injury by Accident	\$100,000 each accident
Bodily Injury by Disease	\$500,000 policy limit
Bodily Injury by Disease	\$100,000 each employee



companies authorized to do business in the State of Kansas upon the entire project to the full insurable value of the project, including professional fees, overtime premiums and all other expenses incurred to replace or repair the insured property. The property insurance obtained by Contractor shall include as additional insured's the interests of City, Contractor, design consultants, subcontractor and sub-subcontractors, and shall insure against the risk of direct physical loss including but not limited to fire and extended coverage, theft, vandalism, malicious mischief, collapse, flood, earthquake, debris removal and other perils or causes of loss as called for in the contract documents. The property insurance shall include physical loss or damage to the work, including materials and equipment in transit, at the site or at another location as may be indicated in Contractor's application for payment and approved by City. All deductibles are the responsibility of the Contractor.

1. Unless the contract documents provide otherwise, Contractor shall procure and maintain boiler and machinery insurance that will include the interests of City, Contractor, design consultants, subcontractors and sub-subcontractors.
2. Prior to commencing any work, Contractor shall provide City with certificates evidencing that (1) all Contractor's insurance obligations required by the contract documents are in full force and in effect and will remain in effect until Contractor has completed all of the work and has received final payment from City and (2) no insurance coverage will be canceled, renewal refused, or materially changed unless at least thirty (30) days prior written notice is given to City. Contractor's property insurance shall not lapse or be canceled if City occupies a portion of the work. Contractor shall provide City with the necessary endorsements from the insurance company prior to occupying a portion of the work.
3. Any loss covered under Contractor's property insurance shall be adjusted with City and Contractor and made payable to both of them as trustees for the insured's as their interests may appear, subject to any applicable mortgage clause. All insurance proceeds received as a result of any loss will be placed in a separate account and distributed in accordance with such agreement as the interested parties may reach. Any disagreement concerning the distribution of any proceeds will be resolved in accordance with Article II of the Agreement.
4. City and Contractor waive against each other and City's separate contractors, design consultants, subcontractors, agents and employees of each and all of them, all damages covered by property insurance provided herein, except such rights as they may have to the proceeds of such insurance. Contractor and City shall, where appropriate, require similar waivers of subrogation from City's separate contractors, design consultants and subcontractors and shall require each of them to include similar waivers in their contracts.

IB-9. **BID SECURITY**: Each Bid shall be accompanied by a bid bond or a certified cashier's check on an acceptable bank, made payable, without condition, to the City of Mission, Kansas, (hereinafter "City") in an amount of not less than five percent (5%) of the total Bid. In addition to other legal remedies, the amount of said bid security may be retained by and forfeited to the City as liquidated damages if such Bid is accepted and the Successful Bidder fails to enter into an agreement in the form prescribed, within the time specified in the notice of award by the City; provided, however, that the City shall not

necessarily be limited in protecting its legal rights to enforcement of its rights under the bid security. Deposits will be returned to unsuccessful Bidders, with the exception of the second qualifying Bidder, at such time as their Bids are rejected. The Bid deposit of the Successful Bidder and the second qualifying Bidder will be returned when satisfactory insurance certificates, performance bond and statutory or labor and material payment bond in an amount equal to 100% of the agreement and other documents required by the General Conditions have been furnished and the contract documents have been executed.

IB-10. TAXES: It is the intent of the City to supply the Contractor with a Project Exemption Certificate for use in purchasing materials and supplies used on the project. The Contractor shall, in preparing its Bid, omit from its computed costs all sales and compensation taxes. Upon issuance of a Kansas tax exemption number, two (2) copies of the Project Exemption Certificate (Form PR-74a) will be forwarded to the Contractor. Upon completion of the project, the City will provide the State of Kansas with the project completion date and the State will issue a Project Completion Certification. This will be forwarded to the Contractor who must sign and return it to the City. All invoices must be retained by the Contractor for a period of five (5) years and are subject to audit by the Kansas Department of Revenue. Final payment will not be made to the Contractor until the City has received the Project Completion Certification from the Contractor along with a Consent of Surety Company to Final Payment.

IB-11. LIQUIDATED DAMAGES: In case of failure on the part of the Contractor to effect completion within the time specified, the City shall have the right to deduct from the total compensation otherwise due the Contractor as liquidated damages based on the full Bid price of the agreement, fixed and agreed to in advance, according to the following schedule:

<u>Contract Amount</u>		<u>Liquidated Damages</u>
\$0	to \$50,000	\$250.00
\$50,000	to \$100,000	\$400.00
\$100,000	to \$500,000	\$800.00
\$500,000	to \$1,000,000	\$1,000.00
\$1,000,000	to \$2,000,000	\$1,750.00
\$2,000,000	to \$5,000,000	\$2,500.00
\$5,000,000	to \$10,000,000	\$3,500.00
\$10,000,000	to \$20,000,000	\$5,500.00
\$20,000,000	and up	\$6,000.00

for each twenty-four (24) hour calendar day, including Sundays and holidays, the work remains incomplete over the specified completion time. **(THE CITY RESERVES THE RIGHT TO ADJUST THE SCHEDULE OF LIQUIDATED DAMAGES, PRIOR TO ADVERTISING FOR BIDS, BASED ON THE SCOPE AND URGENCY OF THE PROJECT.)**

In the event moneys being retained by the City shall not be sufficient to cover the amount of any liquidated damages, City may sue for and recover compensation for damages for nonperformance of the contract at the time stipulated herein and provided for.

IB-12. MODIFICATION OR WITHDRAWAL OF BIDS: Bids may be modified or withdrawn by written request of the Bidder received in the office of the City Clerk, prior to the time and

date for Bid opening. No Bidder may withdraw its Bid for a period of thirty (30) days from the date set for the opening thereof.

- IB-13. ACCEPTANCE AND REJECTION OF BIDS AND AWARD OF CONTRACT: The contract will be awarded to the lowest and best, responsible Bidder as determined by the City.

The City reserves the right to reject any and all Bids; to waive any and all irregularities and informalities; to negotiate contract terms with the Successful Bidder; and the right to disregard all nonconforming, non-responsive or conditional Bids.

In evaluating Bids, the City may consider the qualification of Bidders, whether or not the Bids comply with the prescribed requirements, and alternates and Unit Prices if requested in the Bid forms. The City reserves the right to reject the Bid of any Bidder who does not pass the evaluation to the City's satisfaction.

- IB-14. BONDS: The Contractor to whom the work is awarded will be required to furnish a Performance Bond, Maintenance Bond, and a Statutory or Labor and Material Payment Bond in the forms hereinafter provided in an amount equal to 100 percent (100%) of the amount of the contract to be awarded in each case in addition to any other bonds as may be required by the contract documents. With each bond there shall be filed with the City one copy of "Power of Attorney" certified to include the date of the bonds.

- IB-15. INDEMNIFICATION: The Contractor shall be required to indemnify and hold the City harmless as set forth in Article GC-33 of the General Conditions.

- IB-16. BID PREFERENCE: Existing State law (K.S.A. 75-3740a) requires that, to the extent permitted by federal law and regulations, the City, when letting contracts for bids, must require any Successful Bidder-Contractor domiciled outside the state of Kansas to submit a Bid the same percent less than the lowest bid submitted by a responsible Kansas contractor as would be required of such Kansas domiciled contractor to succeed over the bidding Contractor domiciled outside Kansas on a like contract let in the foreign Bidder's domiciliary state. All Bids are received on this condition, and if it is determined by the City that the apparent lowest and best Bidder is a foreign domiciled contractor, such contractor shall be awarded the Contract only if such Contractor's Bid complies with this state law requirement.

All Bidders domiciled outside of the State of Kansas may be requested to furnish the City with a copy of their state's preferential bidding statutes, if any.

- IB-17. NON-DISCRIMINATION, AFFIRMATIVE ACTION AND SEXUAL HARASSMENT: The Contractor shall comply with Article GC-68 of the General Conditions.

- IB-18. APPOINTMENT OF SERVICE AGENT: Kansas Statutes Annotated 16-113 requires that non-resident Contractors appoint an agent for the service of process in Kansas. The executed appointment must then be filed with the Secretary of State, Topeka, Kansas. Any Successful Bidder-Contractor domiciled outside the State of Kansas must comply with these statutory requirements.

- IB-19. SUBCONTRACTING: As provided in Article GC-36, the Contractor may utilize the services of subcontractors on those parts of the work which, under normal contracting practices, are performed by subcontractors.

IB-20. CONFLICT OF INTEREST: 31 USCS Section 1352 requires all subgrantees, Contractors, subcontractors and consultants who receive federal funds via the City to certify that they will not use federal funds to pay any person for influencing or attempting to influence a federal agency or Congress in connection with the award of any federal contract, grant, loan or cooperative agreements.

In addition, contract applicants, recipients and subrecipients must file a form disclosing any expenditures they make for lobbying out of non-federal funds during the agreement period. Necessary forms are available from the City Engineer and should be returned to the City with other contract documents. It is the responsibility of the general Contractor to obtain executed forms from any subcontractors who fall within the provisions of the Code and to provide the City with the same.

BID

**MISSION CROSSING PARK CONSTRUCTION**

TO: CITY OF MISSION,  
JOHNSON COUNTY, KANSAS

Neither the City nor Consultant shall be responsible for the accuracy, completeness, or sufficiency of any bid documents obtained from any source other than the source indicated in the Notice to Bidders. Obtaining copies of plans, specifications, bid documents and other contract documents from any other source(s) may result in obtaining incomplete and inaccurate information. Obtaining these documents from any source other than directly from the source listed in the Notice to Bidders may also result in failure to receive any addenda, corrections, or other revisions to these documents that may be issued.

The undersigned bidder hereby proposes to mobilize and furnish all materials, supplies, transportation, tools, equipment and plant, perform all necessary labor and construct, install and complete all work stipulated in, required by, and in conformity with the proposed contract documents (including all documents referred to therein) and any and all addenda thereto, for and in consideration of prices as follows:

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST \$	COST \$
1	Mobilization	Lump Sum	1		
2	Construction Staking	Lump Sum	1		
3	Earthwork	Lump Sum	1		
4	Typical Concrete Pavement	Sq. Ft.	2935		
5	CIP Stairs With Curb	Nose Ft.	130		
6	Accessible Ramp	Sq. Ft.	210		
7	Handrails	Lin. Ft.	86		
8	Park Benches	Each	4		
9	Park Concrete Tables	Each	4		
10	Trash Receptacles	Each	4		
11	Recycling Receptacles	Each	1		
12	Pet Waste Systems	Each	2		
13	Shade Structure	Lump Sum	1		
14	Trees (5.5" Caliper)	Each	11		
15	Seeding	Acres	0.4		

TOTAL BASE BID \$ \_\_\_\_\_

**ALTERNATE 1: COLORED REINFORCED CIP WALLS**

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST \$	COST \$
A1-1	Colored Reinforced CIP Walls	Cu. Yds.	13.1		

TOTAL ALTERNATE 1 BID \$ \_\_\_\_\_

1. The undersigned further agrees to begin upon the date stated in the Notice to Proceed and to complete the work, if this bid is accepted, within 120 calendar days as set forth in paragraph SC-19, CONSTRUCTION TIMELINE AND LIMITATIONS, of the Project Special Conditions.

The undersigned also declares that it understands that if not preset by the City the time to begin construction and to complete the work will be one factor considered in determining the lowest and best responsible bidder.

The undersigned also declares that he/she understands that liquidated damages based on the full bid price of the contract shall be assessed against Contractor, as stipulated liquidated damages and not as a penalty, in an amount as set forth in paragraph GC-46 of the General Conditions for each and every calendar day the work remains incomplete over the specified completion time(s).

2. In submitting this bid, the undersigned declares that it is of lawful age and executed the accompanying bid on behalf of the bidder therein named, and that it had lawful authority so to do. The undersigned further declares that it has not directly or indirectly entered into any agreement, expressed or implied, with any bidder or bidders, having for its object the controlling of the price or amount of such bid or any bids, the limiting of the bid or bidders, the parceling or farming out to any bidder or bidders, or other persons, of any part of the contract or any part of the subject matter of the bid or bids or of the profits thereof, and that it has not and will not divulge the sealed bid to any person whomsoever, except those having a partnership or other financial interest with bidder in said bid or bids, until after sealed bid or bids are opened.
3. The undersigned further declares that it has carefully examined the Notice to Bidders, Instructions to Bidders and other contract documents, and that it has inspected the actual location of the work, together with the local sources of supply, and has satisfied itself as to all conditions and quantities, and understands that in signing this Bid it waives all right to plead any misunderstanding regarding the same.
4. The undersigned hereby agrees to furnish the required bonds and insurance certificates and execute an agreement within ten (10) calendar days from and after notice of the award of the contract, and failure of the bidder to do so shall constitute a default, and the City may thereafter take such steps to protect its legal rights as it deems in its best interest, including, but not limited to, enforcement of its rights as to bid security.
5. It is understood that the City will pay in a prompt and timely manner pay estimates when submitted and approved by the Architect/Engineer and further approved by the City staff coordinator for the project, all as provided in the contract documents.

6. Undersigned acknowledges receipt of the Plans and Specifications for the project including the following addenda (complete) \_\_\_\_\_

Enclosed is a certified check, cashier's check or bid bond in the amount of

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_) which the undersigned agrees is subject to being forfeited to and becoming the property of the City as liquidated damages and not as a penalty, together with other legal remedies the City may choose to invoke, all as set forth in the Instructions to Bidders Section IB-9, should this Bid be accepted and the contract be awarded to this bidder and it should fail to enter into an agreement in the form prescribed and to furnish the required insurance, bonds and other required documents within ten (10) calendar days as above stipulated, otherwise the bid security shall be returned to the undersigned upon signing of the agreement and delivery of the approved bonds and other required documents to the City of Mission, Kansas.

DATED in \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 2016.

(SEAL)

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Street Address or P.O. Box

\_\_\_\_\_  
City, State, Zip

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Fax Number

CITY OF MISSION, KANSAS

AGREEMENT BETWEEN  
CITY OF MISSION, KANSAS  
AND CONTRACTOR

**MISSION CROSSING PARK CONSTRUCTION**

THIS AGREEMENT is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,  
by and between the City of Mission, Kansas, hereinafter the "City", and \_\_\_\_\_,  
hereinafter the "Contractor".

WITNESSETH:

WHEREAS, the City has caused to be prepared, in accordance with the law, Notice to Bidders, Instructions to Bidders, Bid, this Agreement, General Conditions, Project Special Provisions, Plans, Specifications and other Contract Documents, as defined in the General Conditions, for the work herein described, and has approved and adopted these said Contract Documents and has caused to be published, in the manner and for the time required by law, an advertisement inviting sealed Bids for furnishing construction materials, labor, tools, equipment and transportation necessary for, and in connection with, the construction of public improvements in accordance with the terms of this Agreement; and

WHEREAS, the Contractor, in response to the advertisement, has submitted to the City, in the manner and at the time specified, a sealed Bid in accordance with the terms of this Agreement; and

WHEREAS, the City, in the manner prescribed by law, has publicly opened, examined and canvassed the Bids submitted, and as a result of this canvass has, in accordance with the law, determined and declared the Contractor to be the lowest and best responsible bidder for the construction of the public improvements, and has duly awarded to the Contractor a contract therefor upon the terms and conditions set forth in this Agreement and for the sum or sums named in the Bid attached to and made a part of this Agreement.

NOW, THEREFORE, in consideration of the compensation to be paid the Contractor, and of the mutual agreements herein contained, the parties hereto have agreed, and hereby agree, the City for itself and its successors, and the Contractor for itself, himself/herself or themselves, its, his/her or their successors and assigns, or its, his/her or their executors and administrators, as follows:

ARTICLE I. The Contractor will furnish at its own cost and expense all labor, tools, equipment, materials and transportation required to construct and complete the work as designated, described and required by the Contract Documents, to wit: **MISSION CROSSING PARK CONSTRUCTION** all in accordance with the Notice to Bidders, Instructions to Bidders, Bid, this Agreement, General Conditions, Project Special Provisions, Plans, Specifications and other Contract Documents as defined in paragraph GC-1 of the General Conditions of the Contract for Construction, on file with the City Clerk of Mission, Kansas, all of which Contract Documents form the Contract, and are as fully a part hereof as if repeated verbatim herein; all work to be done in a good, substantial and workmanlike manner to the entire satisfaction of the City, and in accordance with the laws of the City, the State of Kansas and the United States of America. All

terms used herein shall have the meanings ascribed to them in the General Conditions unless otherwise specified.

ARTICLE II. The City shall pay to the Contractor for the performance of the work embraced in this Contract, and the Contractor will accept in full compensation therefor, the sum of \_\_\_\_\_

DOLLARS (\$ \_\_\_\_\_) (subject to adjustment as provided by the Contract Documents) for all work covered by and included in the Contract award and designated in the foregoing Article I, payment thereof to be made in cash or its equivalent and in the manner provided in the Contract Documents.

ARTICLE III. The Contractor shall commence work upon the date stated in the Notice to Proceed, and will complete all work covered by this Contract within within 120 calendar days as set forth in in paragraph SC-19, CONSTRUCTION TIMELINE AND LIMITATIONS, of the Project Special Conditions. Liquidated damages based on the full bid price of the Contract shall be assessed against Contractor, as stipulated liquidated damages and not as a penalty, in an amount as set forth in paragraph GC-46 of the General Conditions for each and every calendar day the work remains incomplete over the specified completion time(s) stated above.

ARTICLE IV. The Contractor shall not subcontract, sell, transfer, assign or otherwise dispose of the Contract or any portion thereof without previous written consent of the City. In case such consent is given, the Contractor shall be permitted to subcontract a portion thereof, but shall self-perform not less than forty percent (40%) of the total Contract Price based upon the unit prices within the Bid submitted to the City by the Contractor. No subcontracts, or other transfer of Contract, shall release the Contractor of its liability under the Contract and Bonds applicable thereto.

ARTICLE V. Contractor specifically acknowledges and confirms that: (1) it has visited the site, made all inspections it deems appropriate and has read and fully understands the Contract Documents, including all obligations and responsibilities undertaken by it as specified herein and in the other Contract Documents and knowingly accepts same; (2) it has furnished copies of all Contract Documents to its insurance carrier(s) and its surety(ies); and (3) its insurance carrier(s) and surety(ies) agree to be bound as specified herein, in the Contract Documents and in the insurance policy(ies) and bonds as to liability and surety coverage.

ARTICLE VI. It is specifically agreed between the parties executing this Agreement that the Contract Documents are not intended to create any third party beneficiary relationship nor to authorize anyone not a party to this Agreement to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of this Agreement. The duties, obligations and responsibilities of the parties to this Agreement with respect to third parties shall remain as imposed by law.

ARTICLE VII. This Agreement, together with the other Contract Documents, constitutes the entire agreement between the parties and supersedes all prior agreements, whether oral or written, covering the same subject matter. This Agreement may not be modified or amended except as provided herein or in the other Contract Documents.

ARTICLE VIII. This Agreement is entered into, under and pursuant to, and is to be construed and enforceable in accordance with, the laws of the State of Kansas.

ARTICLE IX. Should any provision of this Agreement or the other Contract Documents be determined to be void, invalid, unenforceable or illegal for whatever reason, such provision(s) shall be null and void; provided, however, that the remaining provisions of this Agreement

and/or the other Contract Documents shall be unaffected thereby and shall continue to be valid and enforceable.

IN WITNESS WHEREOF, the City of Mission, Kansas, has caused this Agreement to be executed on its behalf, thereunto duly authorized, and the said Contractor has executed three (3) counterparts of this Contract in the prescribed form and manner, the day and year first above written.

CITY OF MISSION, KANSAS

ATTEST:

By \_\_\_\_\_  
Steve Schowengerdt  
Mayor

\_\_\_\_\_  
Martha Sumrall  
City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
David Martin  
City Attorney

\_\_\_\_\_  
Contractor

(SEAL)

By \_\_\_\_\_  
Title \_\_\_\_\_ President \_\_\_\_\_

***(If the Contract is not executed by the president of the corporation or general partner of the partnership, please provide documentation which authorizes the signatory to bind the corporation or partnership. If a corporation, Contractor shall furnish City a current certificate of good standing, dated within ten (10) days of the date of this Contract.)***

CITY OF MISSION, KANSAS

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned \_\_\_\_\_, of \_\_\_\_\_ as principal, hereinafter referred to as the "Contractor," and \_\_\_\_\_, a corporation organized under the laws of the State of \_\_\_\_\_ and authorized to transact business in the State of Kansas, as surety, are held and firmly bound unto the City of Mission, Kansas, hereinafter referred to as "City," in the penal sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), lawful money of the United States of America, for the payment of which sum well and truly to be made we bind ourselves, and our heirs, executors, administrators, successors and assigns, jointly and severally by these presents:

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH THAT:

WHEREAS, the above bonded Contractor, has on the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, executed a written Agreement with the aforesaid City for furnishing in a good, substantial and workmanlike manner all construction, labor, materials, equipment, tools, transportation, superintendence and other facilities and accessories for **MISSION CROSSING PARK CONSTRUCTION** designated, defined and described in the Agreement and in accordance with the Contract Documents to include the General Conditions, Project Special Provisions, Specifications, Plans and other Contract Documents therefor; a copy of the Agreement being attached hereto and made a part hereof.

NOW, THEREFORE, if said Contractor shall in all particulars promptly and faithfully perform each and every covenant, condition, and part of the Agreement, and the General Conditions, Project Special Provisions, Specifications, Plans and other Contract Documents thereto attached or by reference made a part thereof, according to the true intent and meaning in each case, upon written acceptance by the City of the improvement herein described in substantial compliance with the Contract Documents and upon the effective date of the Maintenance Bond for the improvement then this obligation shall be and become null and void.

PROVIDED, that said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or the Work to be performed thereunder or the General Conditions, Project Special Provisions, Specifications, Plans and other Contract Documents accompanying same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement or to the Work or to the Specifications, Plans and other Contract Documents.

PROVIDED, FURTHER, that it is expressly agreed that the bond shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Agreement not increasing the contract price more than 50 percent, so as to bind the Contractor and the Surety to the full and faithful performance of the Agreement so amended. The term "amendment," wherever used in this bond, and whether referring to this bond or the Agreement, shall include any alteration, addition, extension, or modification of any character whatsoever.

Whenever Contractor is declared by City to be in default under the Contract Documents, the Surety may promptly remedy the default or shall within fourteen (14) days from the date of notice from the City:

1. Commence completing the Work of the Agreement in accordance with its terms and conditions. However, Surety may not use the defaulting Contractor, or any legal reformation of the defaulting Contractor, to complete the Work and the Surety may not use any of the subcontractors of the defaulting Contractor to complete the Work without the written consent of the City; or
  
2. Commence the process of obtaining a bid or bids for completing the Work of the Agreement in accordance with its terms and conditions, and upon determination by the City and the surety jointly of the lowest and best responsive, responsible bidder, arrange for an Agreement between such bidder and the City, and make available as work progresses sufficient funds to pay the cost of completion less the balance of the Contract Price, including other costs and damages for which the surety may be liable hereunder, which sum shall not exceed the amount set forth in the first paragraph hereof. The term "balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by City to Contractor under the Agreement and any amendments thereto, less the amount properly paid by City to Contractor. No right of action shall accrue on this bond to or for the use of any person or corporation other than the City or successors of the City.

IN TESTIMONY WHEREOF, said Contractor has hereunto set his/her hand, and said surety has caused these presents to be executed in its name; and its corporate seal to be hereunto affixed by its attorney-in-fact duly authorized thereunto so to do at \_\_\_\_\_, \_\_\_\_\_ on this, the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Contractor/Principal

ATTEST: By \_\_\_\_\_(SEAL)

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Title

\_\_\_\_\_  
Surety Company

By \_\_\_\_\_(SEAL)  
Attorney-in-Fact

NOTE:

1. Date of bond must not be prior to date of contract.
2. If Contractor is partnership, all partners should execute bond.
3. Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state of Kansas.
4. Accompany this bond with Attorney-in-Fact's Authority from the surety company certified to include the date of the bond.

CITY OF MISSION, KANSAS

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned \_\_\_\_\_ of \_\_\_\_\_ as principal, hereinafter referred to as the "Contractor," and \_\_\_\_\_, hereinafter referred to as the "Surety", a corporation organized under the laws of the State of \_\_\_\_\_ and authorized to transact business in the State of Kansas, as surety, are held and firmly bound unto the City of Mission, Kansas, hereinafter referred to as "City," in the penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), lawful money of the United States of America, for the payment of which sum well and truly to be made we bind ourselves, and our heirs, executors, administrators, successors and assigns, jointly and severally by these presents:

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH THAT:

WHEREAS, the above bonded Contractor, has on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, executed a written Agreement with the aforesaid City for furnishing in a good, substantial and workmanlike manner all construction, labor, materials, equipment, tools, transportation, superintendence and other facilities and accessories for **MISSION CROSSING PARK CONSTRUCTION**, hereinafter referred to as the "Improvement", designated, defined and described in the Agreement and the Contract Documents, and in accordance with the Specifications and Plans and other Contract Documents therefor; a copy of the Agreement being attached hereto and made a part hereof.

NOW, THEREFORE, upon acceptance of the Improvement by the City in substantial compliance with the Contract Documents, if said Improvement endures without defect or need of repair or maintenance for a period of two (2) years from the date of final acceptance, then this obligation shall be and become null and void.

If the Improvement requires repairs or maintenance within such two (2) year period then this obligation shall remain in full force and effect and Contractor and the Surety shall be responsible for the prompt payment of the penal sum to the City for such repairs and/or maintenance including any incidental costs associated therewith, including but not limited to the costs of consultants and/or engineering investigations, testing, analysis and any other costs incurred to determine the cause of the defect and/or the necessary repair or maintenance and attorney fees incurred in collection of this Maintenance Bond.

PROVIDED, that said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or the Work to be performed thereunder or the Specifications, Plans and other Contract Documents accompanying same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement or to the Work or to the Specifications, Plans and other Contract Documents.

PROVIDED, FURTHER, that it is expressly agreed that the bond shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Agreement not increasing the contract price more than 50 percent, so as to bind the Contractor and the Surety to the full and faithful performance of the Agreement so amended. The term "amendment," wherever used in this bond, and whether referring to this bond or the Agreement, shall include any alteration, addition, extension, or modification of any character whatsoever.

IN TESTIMONY WHEREOF, said Contractor has hereunto set his/her hand, and said surety has caused these presents to be executed in its name; and its corporate seal to be hereunto affixed by its attorney-in-fact duly authorized thereunto so to do at \_\_\_\_\_  
\_\_\_\_\_ on this, the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Contractor/Principal

ATTEST:  
(SEAL)

By \_\_\_\_\_  
Print Name: \_\_\_\_\_

\_\_\_\_\_  
Title

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Surety Company

(SEAL)

By \_\_\_\_\_  
Attorney-in-Fact

NOTE:

1. Date of bond must not be prior to date of contract.
2. If Contractor is partnership, all partners should execute bond.
3. Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state of Kansas.
4. Accompany this bond with Attorney-in-Fact's Authority from the surety company certified to include the date of the bond.

CITY OF MISSION, KANSAS

STATUTORY BOND

**MISSION CROSSING PARK CONSTRUCTION**

KNOW ALL MEN BY THESE PRESENTS, that we \_\_\_\_\_  
\_\_\_\_\_ as Contractor and principal, and \_\_\_\_\_  
\_\_\_\_\_ a corporation organized under the laws of the State of \_\_\_\_\_  
\_\_\_\_\_ and authorized to transact business in the State of Kansas, as surety, are held and firmly bound  
unto the State of Kansas, in the penal sum of \_\_\_\_\_  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_) lawful money of the United States of  
America, for the payment of which sum well and truly to be made, we bind ourselves, and our heirs,  
executors, administrators, successors, and assigns, jointly and severally, firmly by these presents:

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH THAT:

WHEREAS, the said Contractor has on the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, entered into an  
Agreement with the City of Mission, Kansas, a copy of which is attached hereto and incorporated herein  
for furnishing all tools, equipment, materials, transportation and supplies, performing all labor, and  
constructing public improvements described in the Agreement and the Contract Documents, all in  
accordance with Provisions, Specifications, Plans and other Contract Documents on file in the office of  
the City Clerk of the City of Mission, Kansas.

NOW, THEREFORE, if the Contractor or the subcontractors of the Contractor shall pay all indebtedness  
incurred for supplies, materials, transportation or labor furnished, or equipment used or consumed in  
connection with or in or about the construction or making of the improvements described in the  
above-mentioned Contract Documents, then this obligation shall be void; otherwise, it shall remain in full  
force and effect.

The said Surety, for value received, hereby stipulates and agrees that no change, extension of time,  
alteration or addition to the terms of the Agreement and the Contract Documents to the work to be  
performed thereunder, or the Provisions, Plans and Specifications accompanying the same, shall in any  
way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of  
time alteration or addition to the terms of the Agreement, Contract Documents or to the Plans and  
Specifications.

PROVIDED, that it is expressly agreed that this bond shall be deemed amended automatically and  
immediately, without formal and separate amendments hereto, upon amendment to the Agreement not  
increasing the contract price more than 50 percent, so as to bind the Contractor and the Surety to the full  
and faithful performance of the Agreement as so amended. The term "amendment," wherever used in  
this bond and whether referring to this bond or the Agreement shall include any alteration, addition,  
extension or modification of any character whatsoever.

The said Surety further agrees that any person to whom there is due any sum for labor furnished,  
transportation, materials, equipment or supplies used or consumed in connection with or in or about the  
construction of said public improvement, as hereinbefore stated or said person's assigns, may bring  
action on this bond for the recovery of said indebtedness within six (6) months from the completion of said  
public improvement.

IN TESTIMONY WHEREOF, the said Contractor has hereunto set his/her hand, and the said surety has caused these presents to be executed in its name, and its corporate seal to be hereunto affixed, by its attorney-in-fact duly authorized thereunto so to do, at \_\_\_\_\_ on this, the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Contractor/Principal

ATTEST:

\_\_\_\_\_  
Secretary

By \_\_\_\_\_ (SEAL)

\_\_\_\_\_  
Title

\_\_\_\_\_  
Surety Company

By \_\_\_\_\_ (SEAL)  
Attorney-in-Fact

NOTE:

1. A Statutory Bond is required only in connection with a Contract exceeding one hundred thousand dollars (\$100,000.00) in accordance with K.S.A. 60-1111 as amended.
2. Contractor shall be responsible for seeing to it that this Statutory Bond is filed with the Clerk of the District Court for Johnson County, Kansas.
3. Date on bond must not be prior to date of contract.
4. If Contractor is partnership, all partners should execute bond.
5. Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state of Kansas.
6. Accompany this bond with Attorney-in-Fact's Authority from the surety company certified to include the date of the bond.

CITY OF MISSION, KANSAS

LABOR AND MATERIAL PAYMENT BOND

**MISSION CROSSING PARK CONSTRUCTION**

KNOW ALL MEN BY THESE PRESENTS, that we \_\_\_\_\_ as Contractor and principal, and \_\_\_\_\_, a corporation organized under the laws of the State of \_\_\_\_\_ and authorized to transact business in the State of Kansas, as surety, are held and firmly bound unto the City of Mission, Kansas in the penal sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_) lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, and our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents:

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH THAT:

WHEREAS, the said Contractor has on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, entered into an Agreement with the City of Mission, Kansas, a copy of which is attached hereto and incorporated herein for furnishing all tools, equipment, materials, transportation and supplies, performing all labor, and constructing public improvements described in the Agreement and the Contract Documents, all in accordance with Provisions, Specifications, Plans and other Contract Documents on file in the office of the City Clerk of the City of Mission, Kansas.

NOW, THEREFORE, if the Contractor or the subcontractors of the Contractor shall pay all indebtedness incurred for supplies, materials, transportation or labor furnished, or equipment used or consumed in connection with or in or about the construction or making of the improvements described in the above-mentioned Contract Documents, then this obligation shall be void; otherwise, it shall remain in full force and effect.

The said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement and the Contract Documents to the work to be performed thereunder, or the Plans and Specifications accompanying the same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement, Contract Documents or to the Plans and Specifications.

PROVIDED, that it is expressly agreed that this bond shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Agreement not increasing the contract price more than 50 percent, so as to bind the Contractor and the Surety to the full and faithful performance of the Agreement as so amended. The term "amendment," wherever used in this bond and whether referring to this bond or the Agreement shall include any alteration, addition, extension or modification of any character whatsoever.

IN TESTIMONY WHEREOF, the said Contractor has hereunto set his/her hand, and the said surety has caused these presents to be executed in its name, and its corporate seal to be hereunto affixed, by its attorney-in-fact duly authorized thereunto so to do, at \_\_\_\_\_ on this, the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

ATTEST:

\_\_\_\_\_

Secretary

\_\_\_\_\_  
Contractor/Principal

By \_\_\_\_\_  
(SEAL)

\_\_\_\_\_  
Surety Company

By \_\_\_\_\_ (SEAL)  
Attorney-in-Fact

- NOTE:
1. A Labor and Material Payment Bond is required only in connection with a Contract which does not exceed one hundred thousand dollars (\$100,000.00).
  2. Date on bond must not be prior to date of contract.
  3. If Contractor is partnership, all partners should execute bond.
  4. Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state of Kansas.
  5. Accompany this bond with Attorney-in-Fact's Authority from the surety company certified to include the date of the bond.

**ASA**  
51-15

KANSAS SECRETARY OF STATE  
**Appointment of Service Agent**  
Instructions

The following form **must be complete** and accompanied by **the correct filing fee** or the document will **not** be accepted for filing.

**Kansas Office of the Secretary of State:**

Memorial Hall, 1st Floor (785) 296-4564  
120 S.W. 10th Avenue kssos@sos.ks.gov  
Topeka, KS 66612-1594 www.sos.ks.gov

<input type="checkbox"/> <b>Filing fee</b>	Please submit this form, properly notarized, with the <b>\$35</b> filing fee.
<input type="checkbox"/> <b>Payment</b>	Please enclose a check or money order payable to the Secretary of State. Forms received without the appropriate fee will not be accepted for filing. Please do not send cash. <b>NOTICE:</b> There is a \$25 service fee for all checks returned by your financial institution. Also, to expedite processing, please do not use staples on your documents or to attach checks.
<input type="checkbox"/> <b>Expiration</b>	This appointment expires three years from date of filing.
<input type="checkbox"/> <b>Foreign entities</b>	Nonresident contractors under K.S.A. 16-113 who are foreign corporations, foreign limited partnerships, or foreign limited liability companies qualified to do business and in good standing in Kansas are not required to file this form.

This form **must be complete** and accompanied by **the correct filing fee** or the document will **not** be accepted for filing.

THIS SPACE FOR OFFICE USE ONLY.

**1. Individual/entity name**

--

**2. Appointing authority's mailing address**

Must be a street, rural route, or highway. A P.O. box is unacceptable.

Address			
City	State	Zip	Country

**3. State of formation**

Complete if appointing authority is an entity.

--

**4. Name of service agent**

Must be a Kansas resident.

--

**5. Service agent address**

Must be a street, rural route, or highway in Kansas. A P.O. box is unacceptable.

Address			
City	State KS	Zip	Country

**6. The following section must be completed in the presence of a notary public.**

Signature of Individual Authorized by Appointing Agent in Question 1

Month    Day    Year

X

Name of Signer (printed or typed)

Phone Number

Acknowledged before me by

Day    Month    Year  
on this    of

Signature of Notary

Month    Day    Year

X

My appointment or commission expires

State
-------

County
--------

AFFIX NOTARY'S SEAL HERE.

# MISSION CROSSING PARK CONSTRUCTION

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## GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

### GC-1 CONTRACT DOCUMENTS/CONTRACT FOR CONSTRUCTION

The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. The intention of the Contract Documents is to include all construction, labor, materials, tools, equipment and transportation necessary for the workmanlike construction of the Project in accordance with the Contract Documents.

The Contract Documents shall consist of (but not necessarily be limited to) the Agreement between the City and Contractor (sometimes referred to herein as the "Agreement"), these General Conditions, the Project Special Provisions, the Plans, the Specifications, all addenda issued prior to and all modifications issued after execution of the Contract (modifications consisting of written amendments to the Contract signed by both parties, Change Orders, written interpretations issued by the Consultant, written orders for minor changes in the Work issued by the Consultant and changes in the Work identified in Article GC-25), drawings and data which may be furnished by the Contractor and approved by the City, additional drawings which may be furnished by the Architect/Engineer which the Consultant deems necessary to make clear the intent of the Contract Documents (and, in particular, the Specifications), and the Bidding Documents. It is understood that the Work shall be carried out and the Project shall be constructed fully in accordance with the Contract Documents.

It is expressly understood and agreed that the bound volume of Contract Documents, any plans, schedules and other drawings herein referred to, and data which may be furnished by the Engineer as are necessary to make clear the intent of the Specifications and Plans, are each and all included in this Contract and the Work shall be done fully in accordance therewith.

If there is any conflict or discrepancy between the Agreement between the City and Contractor and these General Conditions or between the Agreement between City and Contractor and any other of the Contract Documents, the Agreement between City and Contractor shall prevail. If there is any discrepancy between the General Conditions and any other Contract Documents other than the Agreement between City and Contractor, the General Conditions shall prevail, unless such discrepancy is between the General Conditions and the Project Special Provisions, if any, in which case the Project Special Provisions shall prevail. The Contract Documents supersede all previous agreements and understandings between the parties, which previous agreements and understandings are of no further force and effect.

The Contract Documents as enumerated herein form the Contract for construction. The Contract may not be amended or modified except by a modification as hereinabove defined. These Contract Documents do not, nor shall they be construed to, create any contractual relationship of any kind between the City and any Subcontractor or remote tier Subcontractor.

All time limits stated in the Contract Documents are of the essence of the Contract.

### GC-2 DEFINITIONS

Whenever any word or expression defined herein, or pronoun used in its stead, occurs in these Contract Documents, it shall have and is mutually understood to have the meaning herein given. Work described in words which so applied have a well-known technical or trade meaning shall be held to refer to such recognized standards.

1. "Bid" shall mean the offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed (and the City reserves the right to reject any and all bids).

2. "Bidder" shall mean any individual, partnership, corporation, association or other entity submitting a Bid for the Work.

3. "Bidding Documents" shall mean all documents related to a Bidder's submitting a Bid, including, but not limited to, the advertisement for Bids, if applicable, Instructions to Bidders, the Bid form, other sample bidding and contract forms and the proposed Contract Documents, including any addenda issued prior to receipt of Bids. At the City's option, Bidders may be required to complete and submit a prequalification statement.

4. "Bonds" shall mean the Bid, Performance, Maintenance, and Statutory or Labor and Material Payment Bond, together with such other instruments of security as may be required by the Contract Documents.

5. "Change Order" is a written order issued after the Agreement is executed by which the City, the Consultant and the Contractor agree to construct additional items of work, to modify the Contract Time, or, in lump sum contracts, to change the character and scope of Work shown on the Contract Plans, or as otherwise provided in Article GC-25. Change Orders must be signed by the City and the Contractor to be binding.

6. "City" shall mean the City of Mission, Kansas.

7. "Consultant" shall mean the individual, firm or entity designated in the Contract Documents which has been employed by the City for the performance of professional engineering, architectural, or other design services in connection with the Project; or shall mean the City if the City acts as its own Engineer or Architect.

8. "Contract" and "Contract Documents" shall have the meaning ascribed to them in Article GC-1, such terms sometimes being used interchangeably.

9. "Contract Price" shall be the amount identified in the Agreement between City and Contractor as the total amount due Contractor for total completion of the Work as per the Contract Documents. Where the Contract provides that all or a part of the Work is to be Unit Price Work the Contract Price shall initially be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work multiplied by the estimated quantity of each item required for the Work. It is understood and agreed that estimated quantities of items for Unit Price Work are not guaranteed and are solely for the purpose of comparison of bids and determining an initial Contract Price. Determinations of actual quantities and classifications of Unit Price Work shall be made by the Consultant. Each unit price shall be deemed to include Contractor's overhead and profit for each separately identified item.

10. "Contract Time" shall be the number of calendar days stated in the Contract Documents for the completion of the Work or shall be a date certain if so designated in the Contract Documents.

11. "Contractor" shall mean the entity entering into the Contract for the performance of the Work covered by this Contract, together with its duly authorized agents or legal representatives. (For purposes of indemnification, see GC-33 for definition of "Contractor".)

12. "Defective Work" shall mean Work which is unsatisfactory, faulty or deficient, or not in conformity with the Contract Documents. It shall also include Work damaged prior to approval of final payment unless responsibility for such damage shall have been expressly assumed by the City at substantial completion.

13. "Effective Date of the Agreement" shall mean the date indicated in the Agreement on which it becomes effective, but, if no such date is indicated, it shall mean the date on which the Agreement is signed and delivered by the City to the Contractor. For this purpose, delivery shall be accomplished by either hand-delivery to the Contractor or placing a copy in the mail, first class, postage prepaid.

14. "Field Order" shall mean a written order issued by the Consultant which orders minor changes in the Work in accordance with Article GC-25 but which does not involve a change in the Contract Price or Contract Time.

15. "Final Acceptance" shall mean the date when the Consultant accepts in writing that the construction of the Project is complete in accordance with the Contract Documents such that the entire project can be utilized for the purposes for which it is intended and Contractor is entitled to final payment.

16. "General Requirements" shall mean those provisions of the Specifications which apply to the entire Work.

17. "Inspector" shall mean the engineering or technical inspector or inspectors duly authorized by the Consultant or the City.

18. "Notice of Award" shall mean the written notice by the City to the apparent successful Bidder stating that upon compliance with the conditions precedent enumerated therein, within the time specified, the City will sign and deliver the Agreement.

19. "Notice to Proceed" shall mean the written notice by the City to the Contractor fixing the date on which the Contract Time is to commence and on which the Contractor shall start to perform its obligations under the Contract Documents. Without the prior express written consent of the City, Contractor shall do no Work until the date set forth in the Notice to Proceed.

20. "Partial Utilization" shall mean placing a portion of the Work to be provided under the Contract Documents to the use intended by the City.

21. "Pay Estimate No. \_\_\_\_\_" or "Final Pay Estimate" shall mean the form to be used by the Contractor in requesting progress and final payments, including supporting documentation required by the Contract Documents.

22. "Plans" or "the Plans" shall mean and include all drawings which may have been prepared by the City and/or the Consultant on the City's behalf as a basis for Bids, all drawings (other than Shop Drawings, as defined in Definition No. 23, below.) submitted by the successful Bidder with its Bid or by the Contractor to the City, if and when approved by the Consultant, and all drawings submitted by the City to the Contractor during the progress of the Work, all of which show the character and scope of the Work to be performed.

23. "Shop Drawings" shall mean all drawings, diagrams, illustrations, schedules and other data which are specifically prepared by the Contractor, a Subcontractor, manufacturer, fabricator, supplier or distributor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other

information prepared by a manufacturer, fabricator, supplier or distributor and submitted by the Contractor to illustrate material or equipment for some portion of the Work.

24. "Specifications" shall mean those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction methods, standards and workmanship as applied to the Work and certain administrative details applicable thereto. They may include, but not necessarily be limited to:

- (1) design specifications, e.g. measurements, tolerances, materials, inspection requirements and other information relative to the Work;
- (2) performance specifications, e.g., performance characteristics required, if any;
- (3) purchase description specifications, e.g. products or equipment required by manufacturer, trade name and/or type; provided, however, equivalent alternatives (including aesthetics, warranty and manufacturer reputation) may be substituted upon written request and written approval therefore by the City in accordance with Article GC-61;
- (4) such other information deemed appropriate by the City for inclusion in the Specifications for the proper construction of the Project.

25. "Subcontractor" shall mean an individual, firm or corporation having a direct contract with the Contractor or with another Subcontractor for the performance of a part of the Work.

26. "The Work" or "The Project" (used interchangeably) shall mean the work to be done necessary to complete the construction required of the Contractor by the Contract Documents, and includes all construction, labor, materials, tools, equipment and transportation necessary to produce such construction in accordance with the Contract Documents.

27. "Underground Facilities" shall mean all pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish services or materials including, but not limited to, electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

28. "Unit Price Work" shall mean Work to be paid for on the basis of unit prices (quantity variations).

29. Whenever in these Contract Documents the words "as ordered," "as directed," "as required," "as permitted," "as allowed," or words or phrases of like import are used, it is understood that the order, direction, requirement, permission or allowance of the City and/or the Consultant is intended.

30. Whenever any statement is made in the Contract Documents containing the expression "it is understood and agreed," or an expression of like import, such expression means the mutual understanding and agreement of the parties hereto.

31. The words "approved," "reasonable," "suitable," "acceptable," "properly," "satisfactory," or words of like effect in import, unless otherwise particularly specified herein,

shall mean approved, reasonable, suitable, acceptable, proper or satisfactory in the judgment of the City and/or the Consultant.

### GC-3 DEFECTS IN CONTRACT DOCUMENTS

If Contractor has reasonable cause such that it should, in the exercise of ordinary care of someone in its position, know that any errors, omissions, discrepancies or inconsistencies (hereinafter "defects") appear in the Contract Documents, including, but not limited to, the Plans, Specifications and other documents or the Work, Contractor shall, notify the Consultant in writing of such defects. Contractor shall remedy any such defects whether or not disclosed to the Consultant without any increase in the cost of the Work. The Contract Documents shall be appended to all contracts between the Contractor and any Subcontractor or any more remote tier Subcontractor, and such Subcontractors and remote tier Subcontractors shall, likewise, notify the Contractor in writing of any defects therein, and it shall be the obligation of the Contractor to remedy same as if Contractor had discovered such defects itself. The Contractor will not be permitted to take advantage of any such defect.

### GC-4 BID

The Contractor acknowledges and agrees that the unit prices and/or lump sum prices shown in the Bid contemplate the construction of all facilities, complete, and in conformance with the Plans and Specifications. Any item or items required in construction for which a specific unit price and/or lump sum price is not provided shall be included in the price for the closest applicable items.

### GC-5 COPIES OF THE CONTRACT

Unless otherwise provided in the Contract Documents, City will furnish to Contractor a maximum of five (5) copies of the Contract Documents, free of charge, necessary for the execution of the Work.

Sufficient copies of the Bidding Documents, Bonds and Agreement between City and Contractor shall be prepared, each containing an exact copy of the Contractor's Bid as submitted, the Bonds properly executed and the Contract signed by both parties hereto. These executed counterparts shall be filed with the City, Contractor and the surety company executing the Bonds. The original Bid submitted by the Contractor will be retained by the City.

Contractor shall keep, and make available to City at the Project site, one copy of all Contract Documents for the Work at the Project site, in good order and legibly marked to reflect actual construction. Contractor shall also maintain at the site all approved samples and a print of all approved Shop Drawings. Such Documents, samples and Shop Drawings shall be turned over to the City at the completion of the Work if requested by the City.

Contract Documents are the property of the City, and none of the Contract Documents are to be used on other work by Contractor. At City's request, all Contract Documents shall be returned to the City with the exception of one record set for Contractor. All models and calculations are the property of City.

### GC-6 SCOPE, NATURE AND INTENT OF PLANS AND SPECIFICATIONS

The Plans and Specifications are intended to complement, but not necessarily duplicate each other. Together they shall constitute one complete set of the Plans and Specifications, and any Work exhibited in one but not in the other shall be executed just as if it had been set

forth in both in order that the Work shall be completed according to the complete design or designs as decided and determined by the Consultant.

Should anything be omitted from the Plans and Specifications which is necessary to a clear understanding of the Work, or should it appear that various instructions are in conflict, or in the event the Plans and Specifications are silent as to any detail, then it shall be the duty of the Contractor to secure written instructions from the Consultant before proceeding with the construction affected by such omissions, discrepancies or silence. In accordance with Article GC-3, Contractor's failure to bring any such matter to the attention of the Consultant shall be at the Contractor's peril, and there shall be no compensation for extra work necessitated thereby.

Dimensions and elevations shown on the Plans shall be accurately followed, even though they may differ from scaled measurements. No Work shown on the Plans, the dimensions of which are not indicated, shall be executed until the required dimensions have been obtained from the Consultant. Contractor shall be responsible for verification of all locations, dimensions and elevations in the field (including, but not limited to verification of location of Underground Facilities and utilities) and shall verify all field dimensions shown on the Contract Documents.

All Work performed under this Contract shall be done to the lines, grades, and elevations shown on the Plans. The Contractor shall keep the Consultant informed, a reasonable time in advance of the times and places at which it wishes to do Work, in order that lines and grades may be furnished and necessary measurements for record and payment may be made with the minimum of inconvenience and delay to the Consultant and the Contractor.

Any Work done without being properly located and established by base lines, offset stakes, bench marks, or other basic reference points may be ordered removed and replaced at the Contractor's cost and expense.

Contractor, together with its Subcontractors, shall carefully examine the Plans and Specifications for any interferences with the Work and clearances that may be required. Contractor shall be responsible for the proper fitting of materials and equipment without substantial alterations. Contractor shall be responsible for eliminating interferences without additional cost to City. If departures from the Plans and Specifications, or other Contract Documents, are deemed necessary by Contractor, details of such departures and reasons therefore shall be submitted to Consultant, with drawings (if Consultant determines that drawings are necessary), for approval as soon as practical. No such departure shall be made except at the peril of the Contractor without the prior written approval of the Consultant.

#### GC-7 BEGINNING, PROGRESS AND TIME OF COMPLETION OF WORK

After being awarded the Contract, the Contractor shall immediately prepare and submit for approval by the City a construction schedule giving the dates on which it expects to start and to complete separate portions of the Work, which schedule shall be strictly adhered to unless agreed to in writing by all parties or modified by any extension or extensions of time as hereinafter provided. The schedule shall be submitted before the Notice to Proceed is issued. No Work on this Contract shall begin until said schedule is approved. The City reserves the right to adjust the Contractor's schedule to coordinate with any other projects in the same area.

The Contractor shall, within ten (10) days after being instructed to do so in the written "Notice to Proceed" from the City, commence the Work to be done under this Contract; and the rate of progress shall be such that the Work shall have been completed in accordance with the

terms of the Contract on or before the termination of the construction period contractually specified, subject to any extension or extensions of such time made as hereinafter provided.

The Contractor shall submit monthly progress reports and schedules. The progress report shall summarize Work completed, identify any weather and/or utility delays encountered, and indicate Work anticipated for the upcoming month. The schedule will be detailed indicating how the remaining Work will be completed within the stated deadlines (the remaining Work shall include identifying/incorporating utility relocation work with the project-related construction work). The progress report and schedule will be required before payment of monthly pay estimates.

If requested, a weekly construction schedule shall be submitted to the City and approved by the City's designated representative. Modifications and/or revisions to the schedule shall have twenty-four (24) hour notice with approval by the City's designated representative.

#### GC-8 SHOP DRAWINGS

Contractor shall review, approve, and submit, with such promptness as to cause no delay in its own Work or in that of any Subcontractor or other Contractor, three (3) copies of all shop, fabrication, assembly, foundation and other drawings and schedules required by the Specifications, including, but not limited to: (1) drawings of equipment and devices offered by the Contractor for approval of the Consultant in sufficient detail to adequately show the construction and operation thereof; (2) drawings showing essential details of any change in design of construction proposed, for consideration by the Consultant, by the Contractor in lieu of the design or arrangement required by the Contract Documents, or any item of extra work there under; (3) all required wiring and piping layouts; and (4) structural and reinforcing fabrication drawings. All submittals, regardless of origin, shall be stamped with the approval of the Contractor and identified with the name and number of this Contract, Contractor's name and references to applicable specification paragraphs and Contract drawings. Each submittal shall indicate the intended use of the item in the Work. Contractor's stamp of approval is representation to the Consultant, that the Contractor accepts full responsibility for determining and verifying all quantities, dimensions, field construction criteria, materials, and similar data, and that he has reviewed or coordinated each submittal with the requirements of the Work and the Contract Documents. All deviations from the Contract Documents shall be identified on each submittal and shall be tabulated in the Contractor's letter of transmittal. Such submittals shall, as pertinent to the deviation, indicate essential details of all changes proposed by Contractor (including modifications to other facilities that may be a result of each deviation).

The Consultant shall review the Shop Drawings for conformance with the design concept of the Work and information as given in the Contract Documents. The Contractor is not relieved of responsibility for any deviation from the requirements of the Contract Documents by the Consultant's approval of the Shop Drawings, product data, or samples. The Contractor is not relieved from responsibility for errors or omissions in Shop Drawings by the Engineer's approval thereof. The Consultant shall respond to, accept or reject such submissions within a reasonable time after receipt thereof. Contractor shall make such revisions as deemed necessary. On Final Acceptance, the Consultant shall be furnished with a total of five (5) copies of each drawing as finally approved, such number to include any copies of preliminary or revised drawings which are approved as submitted. No Work shall be performed in connection with the fabrication or manufacture of material or equipment shown by any drawing thereof, nor shall any accessory, appurtenance or device not fabricated or manufactured by the Contractor or its Subcontractors be purchased, until the drawing or drawings therefore have been approved as stipulated, except at the Contractor's own risk and responsibility.

#### GC-9 CONTRACTOR'S RESPONSIBILITIES AS TO AMBIGUITIES

If there is any ambiguity in Consultant's drawings or instructions, Contractor shall ask the Consultant for clarification. Upon written request of Contractor, the Consultant shall furnish, with reasonable promptness, additional instructions by means of drawings, Specifications or other information necessary for the proper execution of the Work. The Work shall be executed in conformity therewith, and, in accordance with Article GC-3, Contractor shall do no Work without proper instructions except at its peril. Nothing herein to the contrary shall affect Contractor's responsibilities with regard to defects as set forth in Article GC-3.

#### GC-10 CONCEALED CONDITIONS

The Contractor understands that the City does not warrant that the various and sundry materials and information, including, for example, soil tests, bore reports, utility locations and other such data and as-builts in the case of renovation of or addition to existing facilities, reflect actual conditions. The Contractor warrants that it has examined the site and conducted such tests and examinations as it deems necessary. That being the case, should concealed conditions encountered in the performance of the Work below the ground or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the Contract Documents, or should unknown physical conditions below the surface of the ground or should concealed or unknown conditions in an existing structure of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract, be encountered, there shall be no adjustment in the Contract Price for any extra work necessitated thereby, although, if necessary, the Contract Time may be adjusted.

#### GC-11 CONTRACTOR TO FURNISH STAKES AND HELP

The Contractor, unless otherwise instructed, shall stake the Work and shall furnish, without charge, competent people from its force and such tools, stakes, and other materials as required in properly staking out the Work, in making measurements and surveys and in establishing temporary or permanent reference marks in connection with said Work. The stakes furnished for the staking of the Work shall be of such type, size and quality as to be acceptable to the Consultant.

#### GC-12 PRESERVATION OF MONUMENTS AND STAKES

The Contractor shall carefully preserve all monuments, property corners, bench marks, reference points and stakes, and in case of destruction of the same, will be responsible for proper replacement and for any mistakes or loss of time that may be caused by their unnecessary loss or disturbance. In the event that the loss of stakes, etc., causes a delay in the Work, the Contractor shall have no claim for damages or extensions of time. In the case of any permanent monuments, property corners or bench marks which must of necessity be removed or disturbed in the construction of the Work, the Contractor shall carefully protect and preserve the same until they can be properly referenced for relocation. The Contractor shall furnish at its own expense such materials, surveyors and assistance as are necessary for the proper replacement of monuments, property corners or bench marks that have been moved or destroyed.

#### GC-13 PERMITS AND NOTICES

(a) All permits and licenses shall be secured and paid for by Contractor, unless otherwise specified.

(b) Contractor shall give all notices required by and all Work shall be done in accordance with all applicable federal and state laws, City and County laws and ordinances, building codes and rules and regulations bearing on the conduct of the Work.

(c) Contractor shall notify all affected utilities of the Work and coordinate with the utilities to avoid interruption of utility service and damage to utility lines and property. This notice requirement shall also apply as to the owner/operator of any affected Underground Facility. Any project delay, damages or increase in construction costs due to utility relocation delays shall be at the Contractor's risk.

#### GC-14 GENERAL ADMINISTRATION OF THE CONTRACT

(a) Unless otherwise stipulated, Contractor shall provide and initially pay for all Work (including labor, transportation, tools, equipment, machinery, plant and appliances) necessary in producing the results called for by the Contract Documents.

(b) Unless otherwise specified, all supplies, materials, equipment and other facilities are guaranteed to be new and all Work shall be of good quality and workmanship and free from defects or fault. Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of the Work.

(c) The Contractor shall be solely responsible for and have complete control and charge of construction means, methods, techniques, sequences and procedures, and for safety precautions and programs in connection with the Work. The City shall not be responsible for nor have control or charge over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.

(d) The Contractor shall, in addition to the schedule required by Article GC-7, give to the Consultant full information in advance as to its plans for carrying on any part of the Work. If at any time before the beginning or during the progress of the Work, any part of the Contractor's plant or equipment or any of its methods of executing the Work, appear to the Consultant to be unsafe, inefficient or inadequate to ensure the required quality or rate of progress of the Work, the Consultant may order the Contractor to increase or improve its facilities or methods, and the Contractor shall promptly comply with such orders; but neither compliance with such orders nor failure of the Consultant to issue such orders shall relieve the Contractor from its obligation to secure the degree of safety, the quality of Work and the rate of progress required by the Contract.

(e) The approval by the Consultant of any plan, schedule or method of work proposed by the Contractor shall not relieve the Contractor of any responsibility therefore, and such approval shall not be considered as an assumption by the City, or any officer, agent or employee thereof, of any risk or liability, and the Contractor shall have no claim under this Contract on account of the failure or inefficiency of any plan or method so approved. Such approval shall be considered and shall mean that the Consultant has no objection to the Contractor's use or adoption, at the Contractor's own risk and responsibility, of the plan or method so proposed by the Contractor.

(f) Any plan or method of Work suggested by the Consultant or the City, to the Contractor, but not specified or required, if adopted or followed by the Contractor in whole or in part, shall be used at the risk and responsibility of the Contractor, and the Consultant and the City will assume no responsibility therefor.

## GC-15 CONTRACTOR'S EMPLOYEES

(a) Contractor shall at all times enforce strict discipline and good order among its employees and shall not employ on the Work any unfit person or anyone not skilled in the Work assigned to him.

(b) Contractor shall be responsible for compliance with all state and federal laws, if applicable, pertaining to wages, hours and benefits for workers employed to carry out the Work.

## GC-16 SAMPLES

Contractor shall furnish for approval samples if directed by the Consultant or the Contract Documents. The Work shall be in accordance with approved samples.

## GC-17 PROTECTION AND MAINTENANCE OF PUBLIC AND PRIVATE PROPERTY; LIABILITY

(a) Contractor shall be solely liable for all damages to the City or the property of the City, to other contractors or other employees of the City, to neighboring premises, or to any private or personal property, due to improper, illegal or negligent conduct of the Contractor, its Subcontractors, employees or agents in and about said Work, or in the execution of the Work. The Contractor shall be liable to the City for any damages, whether property damage or personal injury, occasioned by Contractor's use of any scaffolding, shoring, apparatus, ways, works, machinery, plant or any other process or thing that is required for the Work.

(b) Without in any manner limiting Contractor's responsibilities as provided elsewhere in the Contract Documents, the Contractor shall maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards, and assume full responsibility, for the protection of all public and private property, life, the Work, supplies, materials and equipment on the Project site not yet incorporated in the Work, structures, sewers and utilities both above the ground and Underground Facilities, along, beneath, above, across or near the site or sites of the Work being performed under this Contract, or which are in any manner affected by the prosecution of the Work or the transportation of people or materials in connection therewith.

(c) Protection may include, shoring, bracing, supporting and maintaining all underground pipes, conduits, drains and other underground construction uncovered or otherwise affected by the construction Work performed by Contractor. Barriers shall be kept placed at all times to protect bracing and shoring of the trenches shall be in full accordance with Occupational Safety and Health Standards – Excavations; Final Rule 29 CFR Part 1926. All open trenches and other excavations shall be provided with suitable barriers, signs and lights, at Contractor's expense, such that adequate protection is provided to the public against accident by reason of such open construction. Obstructions such as material piles and equipment shall be provided with similar warning lights and signs. All pavement, surfaces, driveways, curbs, walks, buildings, utility poles, guy wires, and other surface structures affected by construction operations in connection with the performance of the Contract, shall be maintained, and if removed or otherwise damaged, shall be restored to the original condition thereof, as determined and approved by the Engineer. All replacement of such underground construction and surface structures or parts thereof shall be made with new materials conforming to the requirements of these Specifications, or if not specified, as approved by the Engineer, at the Contractor's own expense, unless otherwise provided by the Contract.

(d) Barriers shall be kept placed at all times to protect other than those engaged on or about the Work from accident and the Contractor shall be held responsible for all accidents to persons or property resulting from the acts of Contractor or its employees. Contractor shall give reasonable notice to any affected owner or owners when any property is liable to injury or damage through the performance of the Work and shall make all necessary arrangements with such owner or owners relative to the removal and replacement or protection of such property and/or utilities.

(e) Contractor shall comply with any and all instructions from the Consultant regarding prevention of accidents, fires or for the elimination of any unsafe practice and shall observe all the applicable recommendations of the National Fire Protection Association Standard No. 241 (or other, later revision) "Standards For Safeguarding Building Construction and Demolition Operations".

(f) Contractor shall post danger signs warning against the hazards created by such features of construction as protruding nails, hood hoists, well holes, elevator hatchways, scaffolding, window openings, stairways, falling materials, open trenches, other excavations, obstructions and similar conditions. It shall designate a responsible member of its organization on the Project whose duty shall be the prevention of accidents. The name and position of the person so designated shall be reported to the Consultant by Contractor.

(g) In an emergency affecting the safety of life, the Work, City's property or of adjoining property, Contractor, without special instruction or authorization from the Consultant, is hereby permitted to act, at its discretion, to prevent such threatened injury or loss. Any compensation claimed by Contractor on account of emergency work shall be determined by mutual agreement of City and Contractor.

(h) Contractor shall develop and maintain an up-to-date emergency action plan, taking into account fires, hazardous materials, explosions, adverse weather, floods, etc., which shall be in compliance with all federal, state and local laws and ordinances. The procedures should outline specific action to be taken to protect life and to secure and protect the building materials, constructed work, buildings, equipment and the position of cranes. Contractor shall be fully responsible for the contents of and procedures outlined in said plan, including deficiencies therein, whether or not City shall have reviewed said plan.

(i) Contractor shall be responsible for any damage caused by settlement of backfill placed beneath pavement, street, road, and driveway surfacing, and drainage and other structures beneath yards, parking and parks, which may occur at any time prior to and during a period of two (2) years from and after the date of Final Acceptance of Work covered by the Contract; during such period, the Contractor shall at his own expense, refill all excavations where backfill settlement has occurred, and shall repair or cause to be repaired all damage to structures, pavements, surfacing and sod caused by such settlement, to the satisfaction of the City. Should the Contractor fail to repair settlements, which may occur as described above within thirty (30) days after being given notice thereof, the City shall have the right to repair such settlement and charge the cost of such repairs to the Contractor.

(j) Contractor shall be held responsible for all damage to roads, highways, shoulders, ditches, embankments, bridges, culverts, and other property, caused by the Contractor or any of the Contractor's Subcontractors in hauling or otherwise transporting materials to or from the several sites of Work, regardless of the location of such damage. Contractor shall make arrangements relative to the payment for, or repair or replacement of, such damage or damaged surfaces of structures; said arrangements shall be satisfactory and acceptable to the owner or owners of such damaged surfaces or structures, or to their legally

responsible officers, agents or other representatives, and said payment shall be at the Contractor's own cost and expense, unless otherwise provided by the Contract.

(k) All streets, roads, highways and other public thoroughfares which are closed to traffic, under the authority of a proper permit, shall be protected, at Contractor's expense, by means of effective barricades on which shall be placed proper warning signs; such barricades being located at the nearest intersecting public highway or street on each side of the blocked section of such public thoroughfare.

(l) All barricades and obstructions shall be illuminated by means of amber lights at night and all lights used for this purpose shall be at Contractor's expense and shall be kept burning from sunset to sunrise. Materials stored upon or alongside public streets and highways shall be so placed, and the Work at all times shall be so conducted, as to cause the minimum obstruction and inconvenience to the traveling public.

(m) All barricades, signs, lights and other protective devices in public rights-of-way shall be installed and maintained in conformity with applicable statutory requirements and as required by the Manual on Uniform Control Devices, as amended, or any other applicable statutes or ordinances.

#### GC-18 WORK IN OR ACROSS STREET OR HIGHWAY RIGHT-OF-WAY

All Work performed and all preparations of the Contractor or its employees, and Subcontractors, if any, within the limits of street or highway rights-of-way shall be in conformity with the requirements, and be under the control, through the City, of the street or highway authority owning or having jurisdiction and control over such rights-of-way in each case. Any costs incurred to comply with such requirements are the responsibility of Contractor.

#### GC-19 MAINTENANCE OF TRAFFIC

Local traffic on all streets shall be carried through construction whenever possible. Detours of traffic will be permitted when necessary and with the prior permission of the City. Streets may be closed for short periods of time under authority of proper permit issued by the City or authority having jurisdiction. However, the Contractor shall conduct its Work so as to interfere as little as possible with public travel, whether vehicular or pedestrian, on such streets. Proper notification to County and City police units and to Fire Districts shall be given by the Contractor before closing any public thoroughfare.

Where construction operations require the closing of private driveways, the Contractor shall give adequate notice to the owner or owners thereof and where necessary shall provide temporary access to private property.

#### GC-20 NOISE CONTROL

Contractor shall take reasonable measures to avoid unnecessary noise. Such measures shall be appropriate for the normal ambient sound levels in the area during working hours. All construction machinery and vehicles shall be equipped with practical sound muffling devices, and operated in a manner to cause the least noise consistent with efficient performance of the Work.

#### GC-21 DUST CONTROL

Adequate precaution shall be taken to insure that excessive dust does not become airborne during construction. The Contractor shall comply with any local, state, or federal regulations which apply to this matter in the geographical area of the Work. No separate payment will be made for performing dust control or for applying water for this purpose.

#### GC-22 INSPECTION OF WORK

(a) Consultant shall at all times have access to the Work for the observation and inspection thereof wherever it is in preparation or progress, and Contractor shall provide proper facilities for such inspection. The Contractor shall furnish all reasonable aid and assistance required for any such inspection.

(b) All Work must be inspected, tested or approved and the Contractor shall give the Consultant timely notice of its readiness for such inspection, testing or approval and the date fixed for such inspection, testing or approval, if the inspection, testing or approval is by an authority other than Consultant. If any Work should be covered up which is required by the above to be inspected, tested or approved and which, by virtue of being so covered up, is not susceptible to being properly inspected, tested or approved, Contractor shall, if requested by Consultant, uncover such Work and at Contractor's expense bear the cost of uncovering such Work and redoing same after inspection, testing or approval and redoing such other Work damaged as a result of having to uncover and redo same.

(c) Consultant reserves the right to inspect any and all Work before it is covered up; and, accordingly, Contractor must notify Consultant before covering any Work. Consultant shall be given a reasonable time to make its inspection. Contractor shall not cover any Work prior to Consultant having a reasonable time to inspect. If Work to be covered does not conform to the Contract Documents, Consultant can withhold its consent to covering up Work until such Work is made to conform at Contractor's expense.

(d) If any labor, supplies, materials or equipment are found not to be in accordance with the Contract Documents, Contractor shall at its own expense bear the cost of uncovering such labor, supplies, materials or equipment, the cost of removing same, as well as the cost of undoing and redoing the Work and other Work damaged by such nonconforming labor, supplies, materials or equipment.

(e) The Contractor shall comply with the directions and instructions of the Consultant.

(f) The City, the Consultant and all designated Inspectors shall be free at all times to perform their duties, including the observation and inspection of the Work, and intimidation or attempted intimidation of any one of them by the Contractor or by any of its employees shall be sufficient reason, if the City so desires, to terminate the Contract.

(g) Any inspection, by whosoever conducted, shall not relieve the Contractor from any obligation to perform the Work strictly in accordance with the Plans and Specifications, and any of the Work not so constructed shall be removed and made good by the Contractor at its own expense.

#### GC-23 SUPERINTENDENCE AND SUPERVISION

The Contractor shall be responsible for coordination between all phases of the Work and provide all necessary supervision to the Work using its best skill, care, judgment and attention and shall keep on the Work, during its progress, a competent superintendent and any necessary

assistants, all satisfactory to Consultant. The Contractor shall coordinate the activities and scheduling of all operations in accordance with the approved schedule. All unsupervised Work shall be unacceptable and subject to removal and replacement at the Contractors expense. The superintendent shall not be changed except with the consent of the Consultant unless the superintendent proves to be unsatisfactory to the Contractor and/or ceases to be in its employ; provided however, that the Consultant retains the right to require that the Contractor replace the superintendent at any time, such right not to be arbitrarily exercised.

The superintendent shall be fully authorized to act for the Contractor and receive whatever orders as may be given for the proper prosecution of the Work or notices in connection therewith. Use of Subcontractors on portions of the Work shall not relieve the Contractor of its obligation to have a competent superintendent directly employed by the Contractor on the Work at all times.

#### GC-24 CONTRACTOR'S OFFICE AT SITE OF WORK

During the performance of this Contract, the Contractor shall maintain a suitable office at or near the site of the Work which shall be the headquarters of the superintendent authorized to receive drawings, instructions, or other communications or articles from the Consultant, and any such communication given to the said superintendent or delivered at the Contractor's office at the site of the Work in his/her absence shall be deemed to have been given to the Contractor.

#### GC-25 CHANGES IN THE WORK

(a) Change Orders. City, without invalidating the Contract, may by Change Order direct changes in the Work which may result in an addition to or deduction from the Contract Price and/or changes in the Contract Time. All Change Orders shall be executed under the provisions of the original Contract Documents. If the Change Order consists of a modification to the Contract Price, the value of such change shall be determined as per paragraph (e) below.

Except for Work done as a result of an emergency endangering life or property, no Work resulting in an additional pay item shall be performed unless pursuant to the provisions of a Change Order.

(b) Quantity Variations. Where changes in the Work involve a change in the quantity of any Bid item, the Contract Price shall be revised by extension of the quantities and unit price of all Bid items so changed subject to written approval of the Consultant.

(c) Field Orders. Consultant may order minor changes in the Work through Field Orders, which in no specific, concrete or substantial way increase or decrease the Work; and such minor changes in the Work shall not involve an addition or deduction from the Contract Price.

(d) From time to time the Consultant may also issue written orders to Contractor for needed clarifications, modifications or corrections. Should a difference of opinion arise as to whether the order constitutes extra work for which additional compensation is due, and the City insists on its performance, the Contractor shall proceed with the Work after making a written request for a Change Order, and it shall keep an accurate account of the actual field cost thereof as provided for in (e)(3) below. The Contractor will thereby preserve the right to submit a claim therefor.

(e) The value of any change in the Work which results in an addition/deletion to the Contract Price shall be determined in one or more of the following ways, at the option of City:

- (1) By agreed lump sum.
- (2) By unit prices named in the Contract or subsequently agreed upon.
- (3) By actual field cost (time and material) plus fifteen percent (15%) and shall include a "Not to Exceed" figure.

In order to arrive at the value for any change, Contractor shall credit City with its projected cost(s), including overhead and fee for any Work which was previously included but which has been excluded by any such change.

(f) No change in the Work shall entail additional time unless the Consultant determines that additional time is required and specifically so provides in the Change Order. No change in the Work shall entitle the Contractor to delay damages.

(g) Where extra work is performed under (e)(3) above, the term "actual field cost" of such extra work is hereby defined to be and shall include:

- (1) The cost of all workers, such as foremen, timekeepers, mechanics, and laborers, for the time actually employed in the performance of the said extra work;
- (2) All materials and supplies;
- (3) Trucks and rentals on machinery and equipment for the time actually employed or used in the performance of said extra work;
- (4) Any transportation charges necessarily incurred in connection with said equipment authorized by the Consultant for use on said Work and similar operating expenses;
- (5) All incidental expenses incurred as a direct result of such extra work, including payroll taxes and a ratable proportion of premiums on construction Bonds and, where the premiums therefore are based on payroll costs, public liability and property damage, worker's compensation, and other insurance required by the Contract; provided, however, Contractor must enumerate and justify to City's satisfaction any such claimed incidental expenses; and provided, further, that without in any way limiting City's right to challenge any individual costs claimed by Contractor, incidental costs shall not include:
  - (A) Payroll costs and other compensation of Contractor's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by Contractor whether at the site or in Contractor's principal or a branch office for general administration of the Work unless specifically agreed to by City - all of which are to be considered administrative costs covered by the Contractor's overhead and profit.

- (B) Expenses of Contractor's principal and branch offices other than Contractor's office at the site.
- (C) Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- (D) Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of Defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.
- (E) Other overhead of general expense costs of any kind and the costs of any item not specifically and expressly agreed to by City.

The Consultant may direct the form in which accounts of the actual field cost shall be kept and may also specify in writing, before the Work commences, the method of doing the Work and the type and kind of machinery and equipment, if required, which shall be used in the performance of extra work under (e)(3) above. In the event that machinery and heavy construction equipment shall be required for such extra work, the authorization and basis of payment for the use thereof shall be stipulated in the written extra work order.

The fifteen percent (15%) of the actual field cost to be paid to the Contractor shall cover, and be full compensation for, the Contractor's profit, overhead, general superintendence, field office expense and all other elements of cost not embraced within the "actual field cost" as herein defined.

(h) In the event that unit prices are provided for in the Contract Documents as to all or a part of the Work, if the quantities originally contemplated are so changed in a proposed Change Order that application of the agreed unit prices to the quantities of Work proposed is substantially inequitable to either the City or the Contractor, the unit prices shall be reevaluated and adjusted in accordance with the following:

- (1) If the total cost of a particular item of Unit Price Work amounts to twenty percent (20%) or more of the Contract price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than thirty-three percent (33%) from the estimated quantity of such item indicated in the Contract; and
- (2) If there is no corresponding adjustment with respect to any other item of Work; and
- (3) If Contractor has incurred additional expense as a result thereof; or
- (4) If City believes that the quantity variation entitles it to an adjustment in the unit price and, the parties are unable to agree as to effect of any such variations in the quantity of Unit Price Work performed; then either City or Contractor may request the Consultant to make an adjustment in the Contract price.

(i) No claim for extra work of any kind will be allowed except as provided herein. If extra work orders are given in accordance with the provisions of this Contract, such Work shall be considered a part hereof and subject to each and all of the terms and requirements of this Contract.

(j) Contractor shall be responsible for notifying its surety(ies) of any modifications to the Contract price or time, and said surety(ies) shall not seek discharge as a result of any failure on Contractor's part to notify surety(ies).

#### GC-26 DEDUCTIONS FOR UNCORRECTED WORK

If City deems it inexpedient to have corrected any Work which is not in accordance with the Contract Documents, an equitable deduction from the Contract Price shall be made therefor.

#### GC-27 DELAYS AND EXTENSION OF TIME

(a) If Contractor shall be delayed at any time in the progress of the Work by an act or omission of City or by any separate contractor employed by City and over which Contractor has no control and which is not a result of the Contractor's acts or the acts of any of its employees, Subcontractor or suppliers, negligent or otherwise, then the time of completion shall be extended for such reasonable time as the Consultant shall decide, and no adjustment shall be made in the Contract Price.

(b) No such extension shall be made for delay unless Contractor provides written notice to Consultant of such delay, the reasons therefore and the expected length of delay within seven (7) days of the commencement of such delay. In the case of a continuing cause of delay, only one claim is necessary.

(c) In executing the Contract, the Contractor expressly covenants and agrees that, in undertaking to complete the Work within the time therein fixed, it has taken into consideration and made allowances for all hindrances and delays incident to such Work, whether growing out of delays in securing materials, workers, weather conditions or otherwise. No charge shall be made by the Contractor for hindrances or delays from any cause during the progress of the Work, or any portion thereof, included in this Contract, except as provided in subparagraph (a), (b), or (d) of this Article.

(d) The Contractor shall delay or suspend the progress of the Work or any part thereof, whenever it shall be so required by written order of the Consultant, and for such periods of time as the Consultant shall require; provided, that in the event of such delay or delays or of such suspension or suspensions of the progress of the Work, or any part thereof, the time for completion of Work so suspended or of Work so delayed by such suspension or suspensions shall be extended for a period equivalent to the time lost by reason of such suspension or suspensions; but such order of the Consultant shall not otherwise modify or invalidate in any way, any of the provisions of this Contract. In the event that the Work shall be stopped by order of the Consultant, through no fault of the Contractor, its employees, Subcontractors or suppliers, any incidental expenses (see Article GC-25 (g)(5)) which, in the opinion and judgment of the Consultant, are caused thereby shall be paid by the City to the Contractor; provided, however, that such suspension or suspensions shall not be the basis for any claim by Contractor for additional compensation or damages for delay.

(e) The City reserves the right and may delay Work on certain portions of Work until such time as weather and/or utility relocations will allow proper progress on major items of Work. The City may direct the Contractor to clear the right-of-way before utility relocations, if, in

the opinion of the Engineer, such clearing would expedite utility relocation. Also, the City may direct the Contractor to work on certain items of Work after partial utility relocations have been made. There shall be no charge made by the City or the Contractor for delays arising from the issuance of such delayed Work direction other than provided for in paragraphs (a) through (d) in this Article.

#### GC-28 WORK STOPPAGES

Contractor warrants to the City that there shall be no work stoppages or interruptions arising out of labor disputes, including, but not limited to, those due to the presence of both union and non-union workforces at the job site. Contractor further agrees that in the event of any strike, picket, sympathy strike, work stoppage or other form of labor dispute or picket in connection with the Work of the Contractor, other contractors, Subcontractors, the City, or any other person, the Contractor will, contingent upon the City providing a picket-free entrance, continue to perform the Work required herein without interruption or delay. Anything in this Contract to the contrary notwithstanding, in the event the Contractor fails to continue performance of the Work included herein without interruption or delay, because of such picket or other form of labor dispute, the City may terminate the services of said Contractor after giving forty-eight (48) hours written notice to Contractor and its sureties of its intent to do so, or the City may invoke any of the rights set forth elsewhere in the Contract Documents.

#### GC-29 PATENT LIABILITY CLAUSE

Contractor agrees to defend any claim, action or suit that may be brought against City, its Governing Body, officers, agents or employees for infringement of any patents arising out of the performance of this Contract or out of the use or disposal by or for the account of City of supplies furnished or construction Work performed hereunder, and also to indemnify and hold harmless City, its Governing Body, officers, agents, and employees against all judgments, decrees, damages, costs and expenses recovered against it or them or sustained by it or them on account of any such actual or alleged infringement.

It is understood that all royalties and fees for and in connection with patents, or patent infringement, claims for materials, articles, apparatus, devices or equipment used in or furnished for the Work shall be included in the Contract Price. Final payment to the Contractor by the City shall not be made while any suit or claim involving infringement or alleged infringement of any patent remains unsettled.

#### GC-30 INDEPENDENT CONTRACTOR

The right of general supervision of the City and/or the Consultant shall not make the Contractor an agent of the City, and the liability of the Contractor for all damages to persons, firms and corporations arising from the Contractor's execution of the Work shall not be lessened because of such general supervision, but as to all such persons, firms and corporations, and the damages, if any, to them or their property, the Contractor herein is an independent contractor in respect to the Work.

#### GC-31 SEPARATE CONTRACTS

(a) City reserves the right to perform by itself or let other contracts in connection with Work. Contractor shall afford reasonable opportunity for the introduction and storage of materials and the execution of Work by City or others and shall properly connect and coordinate its Work with the Work of City or others.

(b) If any part of Contractor's Work depends upon the Work of the City or others, Contractor shall inspect and promptly report to City any defects in any such Work that render it unsuitable for proper execution or results. Its failure to so inspect and report shall constitute an acceptance by it of such other Work as fit and proper for the reception of its Work.

#### GC-32 RELATIONS WITH OTHER CONTRACTORS

The Contractor shall cooperate with all other contractors or workers who may be performing Work on behalf of the City or any other entity on any Work in the vicinity of the Work to be done under this Contract, and it shall so conduct its operations as to interfere to the least possible extent with the Work of such Contractors or workers. Contractor shall be responsible for any injury or damages that may be sustained by other contractors, workers or their Work because of any fault or negligence on Contractor's part, and shall at its own expense repair or pay for such injury or damage. Any difference or conflict which may arise between the Contractor and other contractors, or between the Contractor and the workers of the City or any other entity, in regard to their Work, shall be adjusted and determined by the Consultant. If the Work of the Contractor is delayed or damaged because of any acts or omissions of any other contractor or contractors, the Contractor shall have no claim against the City on that account; provided, however, the City may, in its discretion, grant an extension of time.

When two or more contracts are being executed at one time in such manner that Work on one Contract may interfere with that on another, the Consultant shall decide which contractor shall cease Work and which shall continue, whether the Work on both contracts shall progress at the same time, and in what manner the Work is to proceed.

When the territory of one contract is the necessary or convenient means of access for the transportation or movement of men/women, materials or appliances required for the execution of another contract, such privileges of access or any other responsible privilege may be granted by Consultant to the Contractor so desiring to the extent which may be reasonably necessary.

In the event that Contractor is performing Work at a site or on a project involving City and one or more other private or governmental entities, which have their own contractors on site as well, Contractor shall advise Consultant when it anticipates that there may be interference with the Contractor's Work or with the Work of any other contractor. Consultant shall, to the best of its ability, with input from Contractor as to coordination of the Work, seek to schedule Work of the various contractors so as to avoid as much inconvenience and delay as possible; provided, however, that in the event Contractor experiences a delay or damage to the Contractor's Work as a result of the presence of other such contractors, Contractor shall not be entitled to additional compensation or damages for delay or damage to the Contractor's Work; rather, Contractor's only recourse shall be an extension of time to be determined by the Consultant.

#### GC-33 INDEMNITY

##### (a) Definitions

For purposes of indemnification requirements as set forth throughout the Contract, the following terms shall have the meanings set forth below:

- (1) "The Contractor" means and includes Contractor, all of its affiliates and subsidiaries, its Subcontractors and materialmen and their respective servants, agents and employees; and

- (2) "Loss" means any and all loss, damage, liability or expense, of any nature whatsoever, whether incurred as a judgment, settlement, penalty, fine or otherwise (including attorney's fees and the cost of defense), in connection with any action, proceeding, demand or claim, whether real or spurious, for injury, including death, to any person or persons or damages to or loss of, or loss of the use of, property of any person, firm or corporation, including the parties hereto, which arise out of or are connected with, or are claimed to arise out of or be connected with, the performance of this Contract whether arising before or after the completion of the Work required hereunder.

(b) The Indemnity

For purposes of this Contract, and without in any way limiting indemnification obligations that may be set forth elsewhere in the Contract, Contractor hereby agrees to indemnify, defend and hold harmless the City from any and all Loss where Loss is caused or incurred or alleged to be caused or incurred in whole or in part as a result of the negligence or other actionable fault of the Contractor, its employees, agents, Subcontractors and suppliers.

It is agreed as a specific element of consideration of this Contract that this indemnity shall apply notwithstanding the joint, concurring or contributory or comparative fault or negligence of the City or any third party and, further, notwithstanding any theory of law including, but not limited to, a characterization of the City's or any third party's joint, concurring or contributory or comparative fault or negligence as either passive or active in nature.

(c) General Limitation

Nothing in this Article shall be deemed to impose liability on the Contractor to indemnify the City for Loss when the City's negligence or other actionable fault is the sole cause of Loss.

(d) Waiver of Statutory Defenses

With respect to the City's rights as set forth herein, the Contractor expressly waives all statutory defenses, including, but not limited to, those under workers compensation, contribution, comparative fault or similar statutes to the extent said defenses are inconsistent with or would defeat the purposes of this Article.

#### GC-34 PROTECTION OF PROPERTY/LIABILITY

Without in any manner limiting Contractor's responsibilities as provided elsewhere in the Contract Documents, the Contractor shall assume full responsibility for the protection of all public and private property, structures, sewers and utilities, both above the ground and Underground Facilities, along, beneath, above, across or near the site or sites of the Work being performed under this Contract, or which are in any manner affected by the prosecution of the Work or the transportation of men/women or materials in connection therewith. Barriers shall be kept placed at all times to protect persons other than those engaged on or about the Work from accident, and the Contractor will be held responsible for all accidents to persons or property resulting from the acts of Contractor or its employees.

The Contractor shall give reasonable notice to the affected owner or owners when any such property is liable to injury or damage through the performance of the Work and shall make

all necessary arrangements with such owner or owners relative to the removal and replacement or protection of such property and/or utilities.

The Contractor shall satisfactorily shore, support and protect any and all structures and all pipes, sewers, drains, conduits and other facilities and shall be responsible for any damage resulting thereto. The Contractor shall not be entitled to any additional time on account of any postponement, interference or delay caused by any such structures and facilities being on the line of the Work, whether they are shown on the Plans or not.

#### GC-35 PROVISION FOR EMERGENCIES

Whenever, in the opinion of the Consultant, the Contractor has not taken sufficient precaution for the safety of the public or the protection of the Work to be constructed under this Contract, or of adjacent structures or property which may be injured by process of construction, and whenever, in the opinion of the Consultant, an emergency shall arise and immediate action shall be considered necessary in order to protect property interests and to avoid personal injury and/or death, then the Consultant, with or without notice to the Contractor, shall, upon notification to the City, provide suitable protection to the said interests by causing such Work to be done and materials to be furnished at places as the Consultant may consider necessary and adequate. The cost and expense of such Work and material so furnished shall be borne by the Contractor and, if the same shall not be paid on presentation of the bills therefore, such costs shall be deducted from any amounts due or to become due the Contractor. The performance of such emergency work shall in no way relieve the Contractor of responsibility for damages which may occur during or after such precaution has been duly taken.

#### GC-36 ASSIGNMENT AND SUBLETTING OF CONTRACT

In case the Contractor assigns all, or any part, of the monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due the Contractor shall be subject to all prior claims of all persons, firms and corporations for services rendered or materials supplied for the performance of the Work called for in this Contract and that no money shall be paid assignee on behalf of the Contractor by the City until such time as the Contractor has discharged its obligations to the City under the Contract. It is expressly understood and agreed that no assignment shall be effective as against the City unless it complies with the foregoing.

The Contractor shall not award subcontracts which total more than sixty percent (60%) of the total Contract Price based upon the unit prices within the Bid submitted to the City by the Contractor and shall self-perform not less than forty percent (40%) of the total Contract Price based upon the unit prices within the Bid submitted to the City by the Contractor. Should any Subcontractor fail to perform in a satisfactory manner, the Work undertaken by such Subcontractor shall be immediately terminated by the Contractor. The Contractor shall be as fully responsible to the City for the acts and omissions of its Subcontractors, and of persons either directly or indirectly employed by them, as Contractor is for the acts and omissions of persons directly employed by it. Approval by the City of any Subcontractor shall not constitute a waiver of any right of the City to reject Defective Work, material or equipment not in compliance with the requirements of the Contract Documents. The Contractor shall not make any substitution for any Subcontractor accepted by the City unless the City so agrees in writing.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind Subcontractors to the Contractor by the terms of the Contract Documents insofar as applicable to the Work of the Subcontractor and to give the Contractor

the same power to terminate any subcontract as the City has to terminate the Contractor under any provisions of the Contract Documents.

Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor and the City, nor shall anything contained in the Contract Documents create any obligation on the part of the City to pay to or to see to the payment of any sums due any Subcontractor.

Prior to the City's approval of the Contract Bid, the successful Bidder shall submit to the the City's designated representative for City acceptance a list of the names of all Subcontractors proposed for portions of the Work and shall designate which Work each is to perform.

The City's designated representative shall, prior to City's approval of the Contract Bid, notify the successful Bidder, in writing, if the City, after due investigation, has reasonable objection to any Subcontractor on such list, and the Contractor shall substitute a Subcontractor acceptable to the City at no additional cost to the City or shall be allowed to withdraw its Bid, and the City shall either rebid the Project or accept the next best lowest and responsible Bidder. The failure of the City to make objection to a Subcontractor shall constitute an acceptance of such Subcontractor but shall not constitute a waiver of any right of the City to reject Defective Work, material or equipment not in conformance with the requirements of the Contract Documents.

The Contractor shall not make any substitution for any Subcontractor who has been accepted by the City unless the City's designated representative determines that there is a good cause for doing so. The City's disapproval of any Subcontractor shall not, under any circumstance, be the basis for an increase in the Contract Price or a claim for delay damages.

#### GC-37 DISPUTE RESOLUTION

City and Contractor agree that disputes relative to the Work shall first be addressed by negotiations between the parties. If direct negotiations fail to resolve the dispute, the party initiating the claim that is the basis for the dispute shall be free to take such steps as it deems necessary to protect its interests; provided, however, that notwithstanding any such dispute Contractor shall proceed with the Work as per the Contract Documents as if no dispute existed; and provided further that no dispute will be submitted to arbitration without the City's express written consent.

In order to preserve its rights to dispute a matter hereunder, the complaining party must submit a written notice to the other party setting forth the basis for its complaint within twenty (20) calendar days following receipt of the decision of the Consultant as to such matter as per Article GC-39. No dispute resolution shall be a condition precedent to any legal action.

#### GC-38 INSURANCE

The Contractor shall secure and maintain through the duration of this Contract insurance (on an occurrence basis unless otherwise agreed to) of such types and in such amounts (but not less than the amounts set forth in Section IB-8 of the Instructions to Bidders) as may be necessary to protect the Contractor and the City and agents of the City against all hazards or risks of Loss as hereinafter specified. The form and limits of such insurance, together with the underwriter thereof in each case, shall be approved by the City, but regardless of such approval it shall be the responsibility of the Contractor to maintain adequate insurance coverage at all times. Failure of the Contractor to maintain adequate coverage shall not relieve it of any

contractual responsibility or obligation, including, but not limited to, the indemnification obligation.

Satisfactory certificates of insurance shall be filed with the City prior to Contractor's starting any construction work on this Contract. The certificates shall state that thirty (30) days written notice will be given to the City before any policy covered thereby is changed or cancelled. Failure by the Contractor to furnish the required insurance within the time specified in the Notice of Award of the Contract by the City may, at the City's option, be the basis for the City's exercising its right to terminate the Contract pursuant to Article GC-42.

(a) Commercial General Liability - This insurance shall protect the Contractor against all claims arising from the injuries to members of the public or damage to property of others arising out of any act or omission of the Contractor or its agents, employees or Subcontractors. In addition, this policy shall specifically insure the contractual liability assumed by the Contractor under Article GC-33.

The liability limits shall be as stated in the Instructions to Bidders or in the Project Special Provisions.

(b) Automobile Liability - This insurance shall protect the Contractor against all claims for injuries to members of the public and damage to property of others arising from the use of motor vehicles, and shall cover operation on and off the site of all motor vehicles licensed for highway use, whether they are owned, non-owned or hired.

The liability limits shall be as stated in the Instructions to Bidders or in the Project Special Provisions.

(c) Worker's Compensation and Employer's Liability - This insurance shall protect the Contractor against all claims under applicable state worker's compensation laws. The Contractor shall also be protected against claims for injury, disease or death of employees which, for any reason, may not fall within the provisions of a worker's compensation law. This policy shall include an "all states" endorsement.

The liability limits shall be as stated in the Instructions to Bidders or in the Project Special Provisions.

(d) Additional Insurance -

(1) The Contractor shall be required to purchase an Owner's Protective Liability Insurance Policy, issued on an occurrence basis and covering bodily injury (and death) and property damage, naming the City as named insured. The liability limits shall be as stated in the Instructions to Bidders or in the Project Special Provisions. The original policy shall be placed on file with the City and maintained during the life of the Contract. Such policy shall contain no exclusion relative to any function performed by the City or its employees and agents in connection with the Work.

(2) Additional insurance covering special hazards may be required on certain projects. Such additional insurance requirements shall be as specified in Instructions to Bidders or Project Special Provisions.

(e) Subcontractors' Insurance - If a part of the Contract is to be sublet, the Contractor shall either:

- (1) Cover all Subcontractors in its insurance policies; or
- (2) Require each Subcontractor not so covered to secure insurance which will protect Subcontractor and the City against all applicable hazards or risks of loss as and in the minimum amounts designated for the Contractor.

#### GC-39 AUTHORITY AND DUTY OF THE CONSULTANT

Unless the City acts as its own Consultant, the Consultant is an independent contractor. It is mutually agreed by and between the parties to this Contract that the Consultant shall observe and inspect all Work included herein (provided, however, that any such observations and inspections shall not alter the rights, responsibilities and obligations of the parties as set forth in Article GC-22). Anything in the Contract Documents to the contrary notwithstanding, in order to prevent delays and disputes, it is further agreed by and between the parties to this Contract that the Consultant shall in all cases determine the amount and quantities of the several kinds of Work which are to be paid for under this Contract; that Consultant shall determine all questions relating to the Plans and Specifications for the Project; that Consultant shall issue promptly any written clarifications or interpretations of the requirements of the Contract Documents (in the form of drawings or otherwise) which Consultant may determine are necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents; that Consultant's decisions and findings shall be a condition precedent to the right of the parties to submit any proper matter and to any rights of the Contractor to receive any money under this Contract; provided, however, that should the Consultant render any decision or give any direction which, in the opinion of either party hereto, is not in accordance with the meaning and intent of this Contract, either party may file with the other, within twenty (20) days a written objection to the decision or direction so rendered and, by such action, may reserve the right to submit the question so raised as herein provided, except as otherwise provided in Article GC-37. It is the intent of the Contract that there shall be no delay in the execution of the Work, and the decisions or directions of the Consultant as rendered shall be promptly carried out.

#### GC-40 CORRECTION OF LABOR, ETC. - BEFORE FINAL PAYMENT

At Consultant's request, Contractor shall, at Contractor's expense, promptly remove from the job site all labor, supplies, materials, equipment and/or other facilities condemned by Consultant as not in accordance with the Contract Documents, whether incorporated or not; and the Contractor shall, at Contractor's expense, promptly replace and re-execute all labor, supplies, materials, equipment and/or other facilities in accordance therewith and, at Contractor's expense, restore all Work of other Contractors and Subcontractors destroyed or damaged as a result of such removal, replacement and re-execution.

#### GC-41 CORRECTION OF LABOR, ETC. - AFTER FINAL PAYMENT

(a) Contractor guarantees to City that all Work performed under this Contract shall be free from defects in material or workmanship for a period of not less than two (2) full years from the date of final payment by City; provided, however, that whenever any provision of the Contract Documents requires a guarantee for a period in excess of two (2) years to be furnished by Contractor, Contractor shall promptly execute same in writing and shall promptly deliver same to City.

(b) Contractor shall promptly procure from each Subcontractor a written guarantee that all Work performed by such Subcontractor shall be free from defects in material or workmanship for a period of not less than two full (2) years from the date of final payment by City to Contractor and shall promptly deliver same to City; provided, however, that wherever any provision of the Contract Documents requires a guarantee for a period in excess of two (2) years to be furnished by a Subcontractor, Contractor shall promptly procure same in writing from the appropriate Subcontractor and shall promptly deliver same to City.

(c) Whenever any provision of the Contract Documents requires a guarantee for a period in excess of two (2) years, but does not specify who is to give such a guarantee, it shall be given by the Contractor regardless of who is performing the Work for which the guarantee is required. All such guarantees shall be in writing and shall be promptly delivered to City.

(d) The furnishing of guarantees by Subcontractors and materialmen shall not relieve Contractor of its obligations under guarantees required of Contractor under the Contract Documents. In addition to the above guarantees, Contractor will (1) obtain and assign to City all available manufacturers and suppliers warranties; and (2) at City's sole option, assign to City any rights Contractor may have against any Subcontractor and/or supplier for Defective Work, materials or equipment.

(e) Any provision of the Contract Documents to the contrary notwithstanding, all guarantees provided for in the Contract Documents shall begin to run from the date of final payment by City to Contractor.

(f) Neither the issuance of the final certificate, payment nor any provision in the Contract Documents shall relieve the Contractor of responsibility for Work determined by City not to be in accordance with the Contract Documents. If, within two (2) years of the date of final payment to Contractor or within any longer period of time as may be prescribed by applicable law or by the terms of any applicable special warranty required by the Contract Documents, any of the Work is found by City to be defective or not in conformance with the Contract Documents then, at City's request, Contractor shall, at Contractor's expense, promptly remove from the premises all Work determined by the City to be defective or not in accordance with the Contract Documents; and Contractor shall, at Contractor's expense, promptly replace and re-execute all Work in accordance therewith and, at Contractor's expense, restore all Subcontractors' Work and Work of other Contractors and Subcontractors damaged as a result of such removal, replacement and re-execution. City shall with reasonable promptness give notice of any Work condemned by City as not in accordance with the Contract Documents. If, within ten (10) days after the mailing of such notice, the Contractor shall fail or neglect to make, or undertake to make, with due diligence any required repairs or corrections, the City shall make such repairs at Contractor's expense; provided, however, that, in case of an emergency which, in the judgment of City, would cause serious loss, hazard or damage if not corrected immediately, such repairs may be made without prior notice being sent to the Contractor, and Contractor shall nevertheless be liable to the City for the cost thereof.

#### GC-42 RIGHT OF CITY TO TERMINATE CONTRACT

Without in any manner limiting the right of the City to terminate the Contract or declare the Contractor in default thereof for any reason set forth in the Contract Documents, if the Work to be done under this Contract shall be abandoned by the Contractor; or if this Contract shall be assigned by Contractor otherwise than as herein provided; or if the Contractor should be judged as bankrupt; or if a general assignment of its assets should be made for the benefit of its creditors; or if a receiver should be appointed for the Contractor or any of its property; or if at any time the Consultant shall certify in writing to the City that the performance of the Work under

this Contract is being unnecessarily delayed, that the Contractor is violating any of the conditions or covenants of this Contract or the Specifications therefore, that it is executing the same in bad faith or otherwise not in accordance with the terms of said Contract; or if all Bid items of the Project are not completed within the time named for their completion or within the time to which such completion date may be extended; then, in addition to other rights the City may choose to exercise, the City may, at its option, serve written notice upon the Contractor and its surety of City's intention to terminate this Contract, and, unless within five (5) days after the serving of such notice upon the Contractor, a satisfactory arrangement be made for the continuance thereof, this Contract shall cease and terminate. In the event of such termination, the City shall immediately serve notice thereof upon the surety and the Contractor, and the surety shall have the right to take over and complete the Work; provided, however, that if the surety does not commence performance thereof within thirty (30) days from the date of said notice of termination, the City may take over the Work and prosecute same to completion, by contract or otherwise, for the amount and at the expense of the Contractor, and the Contractor and its surety shall be liable to the City for any and all excess cost sustained by the City by reason of such prosecution and completion; and in such event the City may take possession of, and utilize in completing the Work, all such materials, equipment, tools and plant as may be on the site of the Work and necessary therefore. When Contractor's services have been so terminated, such termination shall not affect any rights or remedies of City against Contractor then existing or which may later accrue. Similarly, any retention or payment of monies due Contractor shall not release Contractor from liability.

City reserves the right, in its sole discretion and for its convenience and without cause or default on the part of Contractor, to terminate the Contract by providing written notice of such termination to Contractor. Upon receipt of such notice from City, Contractor shall: (1) immediately cease all Work; or (2) meet with City and, subject to City's approval, determine what Work shall be required of Contractor in order to bring the Project to a reasonable termination in accordance with the request of City. If City shall terminate for its convenience as herein provided, City shall: (1) compensate Contractor for all purchased materials and actual cost of Work completed to date of termination; and (2) release and indemnify Contractor against any liability Contractor may have to any third parties as the result of any contracts, commitments, purchase orders or any other such liabilities Contractor may have incurred as a result of its obligations under the provisions of the Contract. Contractor agrees that it shall minimize such potential liabilities by, where practical, informing third parties of City's right to terminate and attempting to obtain from such third parties a waiver of any liability in the event of such termination.

Any termination of the Contract for alleged default by Contractor that is ultimately determined to be unjustified shall automatically be deemed a termination for convenience of the City.

#### GC-43 CITY'S RIGHT TO DO WORK

Without otherwise limiting City's rights under the Contract Documents, if Contractor should neglect to prosecute the Work properly or fail to perform any provision of the Contract Documents, City, after three (3) days' written notice to Contractor may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due Contractor.

#### GC-44 PAYMENTS

(a) Before the first application for payment, the Contractor shall submit to the Consultant a schedule of values allocated to the various portions of the Work, prepared in such

form and supported by such data to substantiate its accuracy as the Consultant may require. This schedule, unless objected to by the Consultant, shall be used only as a basis for the Contractor's applications for payment and does not constitute approval by the Consultant of the method or performance by the Contractor.

(b) Payment will be made to Contractor monthly from funds available within thirty (30) days of the City's receipt of a proper undisputed pay request from the Contractor on the basis of a duly certified estimate of the value of all labor and materials delivered on the site and accepted by the Consultant during the preceding month, calculated in proportion to the Contract Price, but to ensure the proper performance of the Contract, ten percent (10%) of the amount of each estimate will be retained until final completion and acceptance of all Work covered by the Contract.

(c) Each payment made to the Contractor shall be on account of the total amount payable to the Contractor by or for the City, and all materials and Work covered by the partial payments made shall therefore become the sole property of the City. This provision shall not be construed as relieving the Contractor from the responsibility imposed by the Contract Documents for the care and protection of materials and Work upon which payments have been made, for the restoration of any damaged Work, or as a waiver of the right of the City to require the fulfillment of all the terms of the Contract. Progress payments in respect to materials will be made only for materials delivered on the site and accepted by the Consultant, all calculated in proportion to the Contract Price.

(d) In general, no allowance will be made in estimates for materials delivered on the site and not incorporated in the Work except in case of those items considered by the Consultant to be major items of considerable magnitude, which will be allowed in estimates on the basis of ninety percent (90%) of invoices, the value calculated in proportion to the Contract Price.

(e) The retained percentages herein provided for are to be retained and held for the sole protection and benefit of the City, and no other person, firm or corporation shall have or assert any lien, claim, right or priority therein, thereon or thereto, or be entitled to receive any part thereof, except as herein expressly provided.

(f) The City shall require at intervals as it shall determine and at any time before final payment is made for the Work specified herein that the Contractor furnish the City with written acknowledgments (to the extent of payment made) by all Subcontractors and vendors who have done work or labor on, or who have furnished materials for, this Project that they have been fully paid in whole or in part by the Contractor for such work or labor done or materials furnished by them. Contractor's failure to furnish said list or to include all such Subcontractors and vendors shall not relieve Contractor or its surety of any obligation assumed under this Contract, nor shall the City's request for such list create any obligation on City's part to verify accuracy. City may require, at its option, lien waivers on forms supplied by City.

(g) The Contractor has, per the Instructions to Bidders, Bid this job net of all sales and compensation taxes. No application for payment shall include any amount for reimbursement of such taxes paid by Contractor resulting from Contractor's failure to use the Project Exemption Certificate for any purchase in connection with the Work. Final payment will not be made to Contractor until the City has received the Project Completion Certification from the Contractor along with a Consent of Surety to Final Payment.

(h) The Contractor shall be responsible for the return and/or exchange of surplus materials, and all credits for returned or exchanged materials shall be first submitted to the

Consultant for approval. Applications for payment shall reflect any such credits, and the Contract Price shall be adjusted as necessary to reflect such credits. Non-returnable excess materials shall be turned over to the City, or, at its option, be removed from the Project site at Contractor's expense.

(i) The acceptance by the Contractor of final payment shall be and shall operate as a release to the City of all claims and all liability to the Contractor other than written claims in stated amounts as may be specifically excepted by the Contractor for all things done or furnished in connection with this Contract and for every act and neglect of the City and others relating to or arising out of this Contract. Any payment, however, final or otherwise, shall not release the Contractor or its sureties from any obligations under the Contract Documents, the Bonds, or insurance coverage's.

#### GC-45 PAYMENTS WITHHELD

City may withhold or, on account of subsequently discovered evidence, nullify the whole or a part of any application for payment to the extent necessary to protect City from loss on account of:

- (a) Incomplete Work or Defective Work not remedied;
- (b) A reasonable doubt that the Work can be completed for the balance of the Contract Price then unpaid;
- (c) Damage to City; or
- (d) A breach of this Contract.

#### GC-46 LIQUIDATED DAMAGES

It is mutually understood and agreed by and between the parties to this Contract that time is of the essence of this Contract, and that in the event that the Contractor shall fail in the performance of the Work specified and required to be performed within the period of time stipulated therefore in the Contract, after due allowance for any extension or extensions of time which may be granted under the Contract, the said Contractor shall pay to City, as stipulated liquidated damages and not as a penalty, the sum stipulated herein for each and every day that the Contractor shall be in default.

In the case of joint responsibility for any delay in the final completion of the Work covered by this Contract, where two or more separate contracts are in force at the same time and cover work on the same project and at the same site, the total amount of liquidated damages assessed against all contractors under such contracts, for any one day of delay in the final completion of the Work will not be greater than the approximate total of the damages sustained by the City by reason of such delay in completion of the Work as set forth in the table below, and the amount assessed against any one contractor for such one day of delay will be based upon the individual responsibility of such contractor for the aforesaid delay as determined by, and in the judgment of, the City.

In case of failure on the part of the Contractor to effect completion within the time specified, the City shall have the right to deduct from the total compensation otherwise due the Contractor as liquidated damages based on the full Bid price of the Contract, fixed and agreed to in advance, an amount according to the following schedule:

<u>Contract Amount</u>		<u>Liquidated Damages</u>
\$0	to \$50,000	\$250.00
\$50,000	to \$100,000	\$400.00
\$100,000	to \$500,000	\$800.00
\$500,000	to \$1,000,000	\$1,000.00
\$1,000,000	to \$2,000,000	\$1,750.00
\$2,000,000	to \$5,000,000	\$2,500.00
\$5,000,000	to \$10,000,000	\$3,500.00
\$10,000,000	to \$20,000,000	\$5,500.00
\$20,000,000	and up	\$6,000.00

for each twenty-four (24) hour calendar day, including weekends and holidays, the Work remains incomplete over the specified completion time. **(THE CITY RESERVES THE RIGHT TO ADJUST THE SCHEDULE OF LIQUIDATED DAMAGES, PRIOR TO ADVERTISING FOR BIDS, BASED ON THE SCOPE AND URGENCY OF THE PROJECT.)**

The City shall have the right to deduct said liquidated damages from any moneys in its hands, otherwise due or to come due, to the Contractor, or to sue for and recover compensation for damages for nonperformance of this Contract.

#### GC-47 BONDS

Contractor shall after Notice of Award furnish City the Performance, Maintenance, and Statutory or Labor and Material Payment Bond as required by the Instructions to Bidders. Failure to furnish such Bonds within the time specified in the Notice of Award may, at the City's option, be the basis for declaring Contractor in default and pursuing such legal rights as the City deems in its best interest, including, but not limited to, enforcement of the City's rights as to Bid security.

#### GC-48 EASEMENTS AND RIGHTS-OF-WAY

Permanent and temporary (construction) easements and rights-of-way will be provided by the City as shown on the Plans. The Contractor shall confine its operations to the easements provided and shall carefully note where buildings, structures or other obstructions will limit its working space. In the event that easements and rights-of-way are not available or if they have not been secured, or if entry to property is denied by court order, injunction, litigation or any other reason, the Contractor shall cease operations in such area and confine its Work to other areas approved by the City. In the event of any delay arising from delays in securing easements and rights-of-way, the Contractor shall have no claim against the City for damages arising from such delay but may request an extension of time under Article GC-27.

#### GC-49 UNDERGROUND FACILITIES AND UTILITIES

Underground Facilities and utilities, including sewer, water, gas, sprinkler systems, etc. damaged by the Contractor within or outside the right-of-way shall be restored at the Contractor's expense and at no cost to the City. The Contractor shall make every effort to locate these lines and protect them.

#### GC-50 USE OF PREMISES

(a) Contractor shall confine its operations to limits indicated by law, ordinances, rules, regulations, permits of City or directions of Consultant and shall not unreasonably encumber the premises and/or site.

(b) Contractor shall not load or permit any part of any structure, streets or highways to be loaded with a weight that exceeds load limits which will endanger their safety.

(c) Contractor shall comply with federal, state and local laws and ordinances, as well as any specific instructions regarding signs, advertisements, fires and smoking from Consultant.

(d) A laydown area or staging area will be provided at the site and shall be chosen by Consultant. Contractor will furnish its own weather protection if required.

(e) No City equipment will be taken out of service or put into service without approval of City.

#### GC-51 ALLOWANCES

Contractor agrees that the Contract Price includes all allowances required by the Contract Documents. Contractor declares that the Contract Price includes all other sums for expenses and overhead and fee on account of allowances as it deems proper. No demand for expenses or overhead and fee other than those included in the Contract Price shall be allowed.

#### GC-52 CUTTING, PATCHING AND DIGGING

(a) Contractor shall do all cutting, fitting or patching of its Work that may be required to make its several parts come together properly and fit it to receive or be received by Work of others shown upon or reasonably implied by the Contract Documents.

(b) Contractor shall not endanger any property of City or any other individual or entity, or the Work by cutting, digging or otherwise and shall not cut or alter the work of others except with the written consent of City.

(c) Contractor shall assume responsibility for the patching or repairs, by the proper trade, of damages caused by Work under this Contract.

(d) Contractor shall comply with all local ordinances dealing with cutting, patching and digging and shall obtain all necessary permits.

#### GC-53 CLEANING UP

Contractor shall at all times keep the premises/site free from accumulations of waste material or rubbish caused by its employees or Work; and at the completion of the daily Work it shall remove all its rubbish from and about the premises/site and all its tools, scaffolding and surplus materials, and shall leave its Work "broom clean" or its equivalent unless more exactly specified. In case of dispute, City may remove the rubbish and charge the cost to Contractor.

#### GC-54 TEMPORARY FACILITIES

(a) Except where special permission has been granted by City to use existing toilet facilities belonging to City, Contractor shall provide and maintain sanitary temporary toilet facilities located where directed by Consultant for accommodation of all persons engaged on the Work. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the

construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet will be furnished for each twenty workers. Contractor shall enforce the use of such sanitary facilities by all personnel at the site.

Temporary toilets shall be enclosed and weatherproof and kept in sanitary and approved condition at all times. After use for same has ceased, Contractor shall remove the temporary toilet facilities from City's premises and disinfect and fill any vaults.

(b) Contractor shall provide and maintain any necessary temporary offices, storerooms, roadways, etc., as may be required for its Work. Same shall be located and constructed in an approved manner acceptable to Consultant. Upon completion of Work or when requested by Consultant, Contractor shall remove same from City's premises and leave the area in a clean and orderly condition.

(c) Contractor shall provide and maintain temporary heat as required to protect all Work and material against injury from dampness and/or cold to the satisfaction of Consultant.

(d) Unless otherwise specified in the Contract Documents, Contractor shall provide, at its cost and expense, temporary power, wiring and lights from City's provided source as may be required for its operations.

#### GC-55 SANITARY REGULATIONS AND WATER

The operations of the Contractor shall be in full conformity with all of the rules and regulations of boards and bodies having jurisdiction with respect to sanitation. The Contractor shall supply safe and sufficient drinking water to all of its employees. The Contractor shall obey and enforce all sanitary regulations and orders, and shall take precautions against infectious diseases and the spread of same.

All water used in the course of the Work shall be hauled in or purchased from the local water company's distribution system at the Contractor's own cost and expense.

#### GC-56 COMPLIANCE WITH LAWS

The Contractor shall be fully familiar with all City, county, state and federal laws, ordinances or regulations which would in any way control the actions or operations of those engaged in the Work under this Contract or which would affect the materials supplied to or by them. It shall at all times observe and comply with all ordinances, laws and regulations and shall protect and indemnify and defend the City and the City's officers and agents against any claims or liability arising from or based on any violation of same.

#### GC-57 UNFAVORABLE CONSTRUCTION CONDITIONS

During unfavorable weather, or other unfavorable conditions for construction operations, the Contractor shall pursue only such portions of the Work as will not be damaged thereby. No portions of the Work, the satisfactory quality or efficiency of which will be affected by any unfavorable conditions, shall be constructed while these conditions exist, unless, by special means or precautions approved by the Consultant, the Contractor shall be able to perform the Work in a proper and satisfactory manner.

#### GC-58 CONTRACTOR'S RISK

The Contractor shall assume full responsibility for the Work and shall bear any loss and repair any damage at his/her own cost occasioned by neglect, accident, vandalism or natural cause, whether foreseen or unforeseen, during the progress of the Work and until the Work is completed and accepted by the City.

#### GC-59 SAFETY RULES

(a) Contractor shall be responsible for enforcing safety rules to ensure protection of the employees and property of City, to assure uninterrupted production and to assure safe working conditions for Contractor and Subcontractors and their employees and to assure the safety of the general public. In addition to any other rights the City might exercise, Contractor and/or any Subcontractor failing to follow safety rules shall be subject to eviction from the job site and may be refused reentry.

(b) Contractor is expected to establish and enforce a comprehensive safety program on this Project for the protection of its personnel, its Subcontractors' personnel, City's employees and all other persons exposed to hazards resulting from Contractor's operations. As a minimum requirement, Contractor shall review and discuss the details of its program with Consultant at the first project meeting. The items to be covered shall include, but not necessarily be limited to,

- (1) Personal protective equipment;
- (2) First aid - personnel and facilities;
- (3) Arrangements for medical attention;
- (4) Sanitary facilities;
- (5) Fire protection;
- (6) Signs, signals and barricades;
- (7) Security regulations;
- (8) Safety inspections;
- (9) Designation of persons responsible for the program;
- (10) Reporting forms and procedures;
- (11) Material handling and storage;
- (12) Lines of communication;
- (13) Determination of potential hazards;
- (14) Personnel safety meetings and education;
- (15) Access to work areas;
- (16) Subcontractors involvement in the program;
- (17) Inspections and corrective action.

Contractor is fully responsible for the safety program and any and all methods and procedures provided for therein whether or not City or Consultant shall have reviewed and/or accepted such program.

#### GC-60 WEEKENDS, HOLIDAY AND NIGHT WORK

No Work shall be done between the hours of 6:00 p.m. and 7:00 a.m., nor on weekends or City holidays, without the written approval or permission of the City forty-eight (48) hours in advance in each case, except such Work as may be necessary for the proper care, maintenance and protection of Work already done or of equipment, or in the case of an emergency.

Night Work may be established by the Contractor, as a regular procedure, with the written permission of the City; such permission, however, may be revoked at any time by the City.

#### GC-61 APPROVAL OF EQUALS

"Approved Equals," where permitted by the Contract Documents or otherwise made feasible by market conditions, shall be considered for approval as follows:

(a) Contractor shall notify City in writing if it wishes to use an approved equal specifically named in the Contract Documents.

(b) If Contractor desires to use an "equal" not specifically named in the Contract Documents, it must first inform City and receive written approval for such substitutions. City has no obligation to approve such request and is not responsible for any delay or cost incurred caused by Contractor's making such request.

The Contractor shall be solely responsible for design risks, delays and other claims arising out of any approved alternates.

#### GC-62 TEST OF MATERIALS OFFERED BY CONTRACTOR

All specified and required tests for approval of material shall be made at the expense of the Contractor by a properly equipped laboratory of established reputation, whose work and testing facilities shall be approved by the Consultant. Approval of materials based on acceptable tests will apply only while such materials as furnished equal or exceed the tested samples or test specimens in quality and minimum requirements. Any change in origin, method of preparation or manufacture of such materials will require new tests and approval thereof. Reports of all tests shall be furnished to the Consultant in as many certified counterparts as may be required by the Consultant.

#### GC-63 TESTING OF COMPLETED WORK

Before Final Acceptance, all installed and constructed equipment, devices and other work which is to be tested under the Contract Documents shall be tested and each part shall be in good condition and working order or shall be placed in such condition and order at the expense of the Contractor. All tests of such completed Work required under this Contract shall be made under the direction of the Consultant.

#### GC-64 BORROW AND WASTE AREAS

All borrow materials shall be obtained by the Contractor at its own cost and expense. The borrow area and materials shall be approved by the Consultant and shall be friable material suitable for compaction.

All waste areas shall be located off the site and arrangements and payment for use of such areas shall be the sole responsibility of the Contractor. All waste disposal shall be in compliance with federal, state and local laws, ordinances and regulations.

#### GC-65 PARKING AREAS, DRIVES AND WALKS

All existing parking areas, drives and walks within the Project limits shall be adjusted to conform to the lines and grades shown on the Plans. Any of the above structures that are

removed or damaged during construction shall be reconstructed at Contractor's expense of materials that will create a quality equal to or better than the condition of the existing facility prior to construction operation.

#### GC-66 STREET SIGNS AND TRAFFIC AIDS

The Contractor shall be responsible for all preexisting traffic control devices at the Project site, including installation, maintenance, removal and storage of such devices. All temporary and permanent traffic control devices supplied by the Contractor shall comply with and be installed in accordance with the Manual on Uniform Traffic Control Devices, current edition as revised, and the Traffic Control Devices Handbook.

#### GC-67 PLACING WORK IN SERVICE/PARTIAL UTILIZATION

If desired by the City, portions of the Work may be placed in service when completed for Partial Utilization by the City, and the Contractor shall give proper access to the Work for this purpose; but such use and operation shall not constitute an acceptance of the Work, and the Contractor shall be liable for defects due to faulty construction until the entire Work under this Contract is finally accepted and for such periods of time as designated in the Contract Documents or otherwise permitted by law.

#### GC-68 NON-DISCRIMINATION/OTHER LAWS

- (a) The Contractor agrees that:
- (1) The Contractor shall observe the provisions of the Kansas Act Against Discrimination and shall not discriminate against any person in the performance of work under the present contract because of race, religion, color, sex, disability, national origin, ancestry or age;
  - (2) In all solicitations or advertisements for employees, the Contractor shall include the phrase, "equal opportunity employer," or a similar phrase to be approved by the Kansas Human Rights Commission ("Commission");
  - (3) If the Contractor fails to comply with the manner in which the Contractor reports to the Commission in accordance with the provisions of K.S.A. 44-1031 and amendments thereto, the Contractor shall be deemed to have breached the present Contract and it may be cancelled, terminated or suspended, in whole or in part, by the City;
  - (4) If the Contractor is found guilty of a violation of the Kansas Act Against Discrimination under a decision or order of the Commission which has become final, the Contractor shall be deemed to have breached the present contract and it may be cancelled, terminated or suspended, in whole or in part, by the City; and
  - (5) The Contractor shall include the provisions of Subsections (1) through (4) in every subcontract or purchase order so that such provisions will be binding upon such Subcontractor or vendor.

The provisions of this Article shall not apply to a contract entered into by a Contractor:

- (A) Who employs fewer than four employees during the term of such contract; or
  - (B) Whose contracts with the City cumulatively total \$5,000 or less during the fiscal year of the City.
- (b) The Contractor further agrees that the Contractor shall abide by the Kansas Age Discrimination In Employment Act (K.S.A. 44-1111 et seq.) and the applicable provision of the Americans With Disabilities Act (42 U.S.C. 12101 et seq.) as well as all other federal, state and local laws, ordinances and regulations applicable to this Project and to furnish any certification required by any federal, state or local governmental agency in connection therewith.

#### GC-69 FEDERAL LOBBYING ACTIVITIES

31 USCS Section 1352 requires all subgrantees, contractors, subcontractors and consultants who receive federal funds via the City to certify that they will not use federal funds to pay any person for influencing or attempting to influence a federal agency or Congress in connection with the award of any federal contract, grant, loan or cooperative agreements.

In addition, contract applicants, recipients and subrecipients must file a form disclosing any expenditures they make for lobbying out of non-federal funds during the Contract period.

Necessary forms are available from the City's designated representative and must be returned to the City with other Contract Documents. It is the responsibility of the general Contractor to obtain executed forms from any Subcontractors who fall within the provisions of the Code and to provide the City with the same.

#### GC-70 RECORDS

Contractor shall maintain copies of records pertaining to the construction of this Project for a period of five (5) years from the date of final payment. Such records shall be made available to the City for audit and review purposes upon written request therefor from City or its authorized agent(s) during the construction period and the five (5) year period following final payment.

#### GC-71 TITLES, SUBHEADS AND CAPITALIZATION

Titles and subheadings as used herein and other Contract Documents are provided only as a matter of convenience and shall have no legal bearing on the interpretation of any provision of the Contract Documents. Some terms are capitalized throughout the Contract Documents, but the use of or failure to use capitals shall have no legal bearing on the interpretation of such terms.

#### GC-72 NO WAIVER OF RIGHTS

No waiver of any breach of this Contract shall be construed to be a waiver of any other or subsequent breach.

#### GC-73 SEVERABILITY

The parties agree that should any provision of the Contract Documents be determined to be void, invalid, unenforceable or illegal for whatever reason such provision(s) shall be null and

void but that the remaining provisions of the Contract Documents shall be unaffected thereby and shall continue to be valid and enforceable.

GC-74 GOVERNING LAW

This Agreement shall be governed by, and construed in accordance with, the laws of the State of Kansas.

GC-75 VENUE

Venue of any litigation arising in connection with this Agreement shall be the State courts of Johnson County, Kansas.

**CITY OF MISSION**  
**MISSION CROSSING PARK CONSTRUCTION**  
**PROJECT SPECIAL CONDITIONS**

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**CITY OF MISSION**  
**MISSION CROSSING PARK CONSTRUCTION**  
**PROJECT SPECIAL CONDITIONS**

**SC-1. SCOPE OF WORK**

The work provided for in these Specifications shall consist of furnishing all labor, materials, appliances, and equipment, and performing all work and operations in connection with the construction of items and all other incidental and related work as set forth in these Specifications and as directed by the Consultant to make a complete and finished job.

**SC-2. CONTRACT SPECIFICATIONS**

The Specifications that shall govern the materials furnished and work performed in the construction of the work covered by the Contract or Contracts based thereon, are divided, classified, designated, and arranged as shown in the PROJECT SPECIAL PROVISIONS, TABLE OF CONTENTS attached hereto. No attempt has been made in the foregoing designated Specifications to segregate work to be performed by any trade, subcontract, or proposal item, under any one specification. Any segregation between trade or craft jurisdiction limits, and the establishment of subcontract limits, will be solely a matter of agreement between the Contractor and his employees and his subcontractors. The Specifications will govern the construction of the entire work, and the provisions thereof will govern each item and unit of work to which such provisions apply.

When reference is made to Consultant, it shall have the same meaning as Consultant as set forth in Paragraph GC-2 of the General Conditions.

**SC-3. STANDARD SPECIFICATIONS**

The work shall conform to these Specifications and to the "Standard Specifications" where reference is made herein. Where reference is made in the Specifications and Contract Documents to "Standard Specifications," it shall mean that the reference is made to the current edition of the Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, current edition of City of Overland Park Traffic Signal Specifications, current edition of the Manual On Uniform Traffic Control Devices, and The City of Overland Park Traffic Control Handbook for Street Maintenance and Construction Operations with such revisions, amendments, and supplements as are contained herein.

**SC-4. CONTRACT DRAWINGS**

The Contract Drawings or "Plans" on which the proposals and contracts are to be based, and which are to be supplemented by additional shop and dimension drawings of material and equipment and other drawings, where specified, are shown in the "Index of Sheets" on the cover sheet of the Plans.

**SC-5. MEASUREMENT AND PAYMENT**

**a. Method of Measurement**

The completed work shall be measured by the units described in the Proposal under each bid item that is satisfactorily completed by the Contractor. At monthly intervals, beginning one month after the Notice to Proceed, the Contractor shall submit to the City's designated representative an accurate record of the work completed.

**b. Basis of Payment**

The amount of completed work, measured as set forth above, shall be paid for at the contract unit price bid per item described in the Proposal and shall be full compensation for furnishing all materials, labor, equipment, tools, supplies and incidental related items necessary to complete the work in accordance with the Specifications. Work not measured separately for payment is subsidiary to the item to which it pertains.

**SC-6. MOBILIZATION OF EQUIPMENT**

All equipment used by the Contractor having metal tracks shall not be driven over City streets other than those streets being constructed. Such equipment must be transported from one work area to the next work area.

Observe legal load restrictions when operating equipment, hauling equipment, or hauling materials on public roads; newly constructed/reconstructed base, pavement, and structures; and any existing base, pavement or structures that will remain in place. Assume responsibility for changes in legal load restrictions that occur after the project was let. Obtain the Consultant’s written approval and a special permit to exceed legal load restrictions on the City street system and on newly constructed/reconstructed portions of the project.

Protect roadways and structures within project limits from damage. Observe curing periods before operating equipment or hauling loads on newly constructed pavement, reconstructed pavement, or structures. Do not haul loads of any size on pavement base, except when operations require equipment on pavement base to place material. The Contractor shall assume all responsibility for damages to roadways and structures caused by the Contractor from operating equipment or hauling loads.

**SC-7. INSPECTION OF WORK**

The Contractor shall not commence placing concrete or backfilling of pipe/structures until such time as the City’s designated representative has made inspection. Form location, grades, slopes and subgrade shall have been approved prior to placing any concrete.

**SC-8. BRACING AND SHORING**

It shall be the contractor’s responsibility to brace and shore existing structures during construction. Any additional damage to or collapse of existing structures during the contract period shall be the sole responsibility of the Contractor.

The Contractor shall brace and shore all trenches in full accordance with Occupational Safety and Health Standards - Excavations; Final Rule 29 CFR Part 1926.

Bracing and shoring shall not be paid for directly but shall be considered subsidiary to other bid items. No additional payment shall be considered for increased quantities of earthwork, asphalt removal and replacement, or increases in other items as a result of compliance with this specification.

**SC-9. TRENCH BACKFILL**

Flowable Fill is required for all trenches within all paved portions of the ROW including future paving, if they are known, per the Manual for Infrastructure Standards For Right of Way Restoration and City of Overland Park Standard Details.

**SC-10. SAMPLING AND TESTING**

All sampling and testing deemed necessary by the Consultant shall be performed by a Testing Laboratory selected by the City, except that all Asphaltic Concrete mix design and tests shall be performed by a Certified Testing Laboratory selected by the Contractor, as stated in specification section “Asphaltic Concrete Surface and Intermediate Course”. The costs of all such tests, showing compliance with the Specifications, shall be paid by the City, except that all Asphaltic Concrete mix design and testing costs

shall be paid by the Contractor. However, in the event that any test indicates non-compliance with the Specifications, additional testing will be paid for by the Contractor to determine acceptability of the material or methods. City reserves the right to weigh any selected truck as determined by the Consultant. The City shall only pay weighing costs and any additional costs shall be at the Contractor's expense.

#### **SC-11. TRAFFIC SAFETY**

When working in the traveled way, the Contractor shall provide adequate and suitable barriers, signs, warning lights, flaggers, and all other equipment necessary to direct and reroute traffic and protect the public from moving or stationary vehicles, equipment, and materials, and other obstructions. Also, adequate protective warning lights and signs shall be provided to warn of any obstruction or excavation in the street, and easement area. All barricades, signs, lights and other protective devices in public right-of-way and easements shall be installed and maintained in conformity with applicable statutory requirements, the latest edition of the "Manual on Uniform Traffic Control Devices", and the "Overland Park Traffic Control Handbook for Street Maintenance and Construction Operations".

The Police Department, Fire Department, and Med-Act shall be notified prior to closing a street with the approval of the City's designated representative.

#### **SC-12. NOTIFICATION OF PROPERTY OWNERS**

The Contractor shall provide advance notification to the adjacent property owners on all phases of the operations.

#### **SC-13. TREE AND PLANT PROTECTION**

All trees and other vegetation which must be removed to perform the work shall be removed and disposed of by the Contractor; however, no trees or cultured plants shall be unnecessarily removed unless their removal is indicated on the drawings. All trees and plants not removed shall be protected against injury from construction operations.

The Contractor shall take extra measures to protect trees designated to be preserved, such as erecting barricades or fences around the drip line, and trimming low hanging branches to prevent damage from construction equipment. Barricade or fence shall not be removed without consent of the Consultant. When installing a pipe, or any other work that may damage the tree, hand excavating or tunneling methods shall be used. Where encroachment by vehicles or equipment is expected within the drip line of the tree, the contractor will be required to place at least a 6 inches layer of organic mulch on top of the affected area to offset possible compaction. Such trees shall not be endangered by stockpiling excavated material or storing equipment within the drip line of the tree. No backfill material exceeding 4 inches in depth shall be placed within the drip line area of any tree designated to be preserved without prior consent from the Consultant.

When excavation is required within the drip line of any protected tree, the contractor shall take extra measures to protect as many roots as possible. All roots to be cut or removed shall be "cut" with a chain saw, trencher, or other methods as approved by the engineer that will leave a smooth cut surface. All roots exposed during excavation shall be protected to prevent the roots from drying out by covering the exposed area with canvas or burlap, peat moss, or mulch, and kept damp until the area has been backfilled.

Where shown on the plans, trees requiring root removal of one third or more of the circumference of the root system, may require the pruning of limbs on the opposite side of the root removal or thinning the entire tree equally as directed by the Consultant. All pruning, repair, and replacement of trees and plants shall be performed by qualified nurserymen or arborists. Trees requiring trimming are as noted on the plans. This work shall not be paid for directly but shall be considered subsidiary to other bid items.

When the injury or removal of trees designated to be preserved cannot be avoided; each tree injured beyond repair or removed shall be replaced with a similar tree, or provide compensation to the City as determined by the Consultant.

#### **SC-14. WEEDS**

The Contractor shall restrict the excessive growth of weeds, grasses, and other uncultivated vegetations within the project limits in accordance with the Mission Municipal Code. The Contractor shall cut down any excessive growth by mowing or trimming or as directed by the engineer.

No direct payment will be made for this work as it shall be considered subsidiary to other bid items in the contract.

#### **SC-15. RESTORATION**

##### **a. Pre-Restoration Meeting**

The Contractor shall be responsible for scheduling a pre-restoration meeting within one (1) week prior to beginning final grading, select soil placement, and restoration of the sodded areas in the project. The time and location of the meeting shall be approved by the Consultant, with required attendance by the Contractor's superintendent and any/all subcontractors involved in the restoration. The purpose of this meeting is to discuss in detail the requirements of sod restoration in the Specifications. At this meeting the Contractor shall provide:

- 1) A complete schedule of operations and proposed methods for soil preparation, sod placement, and watering.
- 2) A list of the equipment to be used for soil preparation and compaction, fertilizer distribution, sod delivery, placement and rolling, and watering.
- 3) The proposed source or sources of the sod, select soil, and water.
- 4) A list or set of "marked up" plans indicating the proposed location of each type of sod.
- 5) A list of at least 3 locations that the sod crew to be used on this project has placed sod within the previous 2 weeks.

#### **SC-16. UTILITY MEETINGS AND UTILITY ADJUSTMENT**

It shall be the duty of the Contractor to notify the serving utility companies of pending construction operations and the schedule of same, prior to any work being done on this project. The Consultant will furnish plans to the utility companies for their records. These companies will relocate and adjust their own facilities at no cost to the Contractor, except for sanitary and storm sewers. The Contractor shall be responsible for the adjustment and protection of all sanitary and storm sewer facilities. Some minor grading and backfill work may be required of the Contractor at locations of utility adjustments. This work shall be considered subsidiary to other items of work.

The Contractor shall be responsible for holding periodic utility meetings with the City, the Consultant, and utility companies during the relocation of utility lines. The frequency of meetings will initially be bi-weekly (or more frequently if necessary) and then, as relocation work begins to diminish, will be held more infrequently. The Contractor shall keep minutes of the meetings and send copies to all those in attendance.

#### **SC-17. WATER POLLUTION CONTROL**

Contractor shall prevent the pollution of streams, lakes, wetlands, drainageways or storm sewers from fuel, oils, hazardous chemicals, sediment, trash, debris, or other substances resulting from construction activities.

All trash shall be placed in dumpsters or trash barrels provided by the Contractor and accumulated trash shall be hauled offsite and properly disposed. Floating debris found in any waterbody on or immediately adjacent to construction shall be removed immediately, regardless of source. Hazardous wastes shall be stored, transported offsite, and disposed of properly. Sanitary facilities must be made available and their use enforced by the Contractor.

All equipment used onsite shall be free of leaks and receive regular preventative maintenance and be inspected daily to reduce chance of leakage. No fueling, servicing, maintenance, or repair of equipment shall be done within 50 feet of a stream, drainageway, lake, storm sewer manhole or other water body. Fuel tanks onsite shall in good condition, free of leaks or drips, painted brightly for visibility, monitored daily and shall sit behind or within a secondary containment tank or earthen berm.

Concrete wash or rinsewater from concrete mixing equipment, tools and/or ready-mix trucks, tools, etc, may not be discharged into or be allowed to run directly into any existing water body or storm inlet. One or more locations for concrete wash out will be designated on site, such that discharges during concrete washout will be contained in a small area where waste concrete can solidify in place and excess water evaporated or infiltrated into the ground.

Chemicals or materials capable of causing pollution may only be stored onsite in their original container. Materials stored outside must be in closed and sealed water-proof containers and located outside of drainageways or areas subject to flooding. Manufacturers data regarding proper use and storage, potential impacts to the environment if released, spill response, and reportable quantities for spill reporting shall be maintained by the field superintendent onsite at all times. Locks and other means to prevent and reduce vandalism shall be used.

All spills in excess of reportable quantities shall be reported to all of the following within 24 hours of their occurrence: KDHE 24-hour spill response center (785) 296-1679; KDHE Northeast District, Lawrence, (785) 842-4600; and the National Spill Response Center 1-800-424-8802. Spills that pose immediate threat to public safety or contamination of a water body shall be reported immediately to the Fire Department at 911. Such spills shall also be reported to the Kansas Division of Emergency Management, (800) 275-0297 or (785) 296-8013.

Contractor shall respond immediately by containing with an appropriate device or earthen berms and shall prevent its migration with sawdust, sand, kitty litter, rags or other absorbents. Manufacturer recommendations shall be followed. Leaks from broken hoses will be immediately contained with house clamps, plugs, or drained into leak-tight containers. Contractor shall have onsite at all times and ready for immediate use the necessary tools, equipment, and supplies to respond to a spill or leak. Contractor personnel shall be trained to properly respond immediately to a leak or spill. All spills shall be cleaned up and disposed of in accordance with applicable regulations or as directed by Kansas Division of Health and Environment or other applicable agency.

Herbicides, pesticides and fertilizers used as part of the work shall be applied only in accordance with manufacturer recommendations. Direct spray into water bodies shall be avoided. Such chemicals shall not be used if rain is forecast within 24 hours, unless they are approved for wet weather application.

Care will be taken to avoid excessive disturbance or erosion of land area and controls shall be maintained to prevent migration of silt and sediments into water bodies. Provisions of the contract for erosion and sediment control shall be followed.

#### **SC-18. RIGHT-OF-WAY**

Right-of-way and easements are currently available for this project.

The Contractor shall confine his construction operations to the right-of-way limits and easements provided for the project. Equipment or materials shall not be stored beyond these limits without the express approval of the owner of such property. The Consultant shall be informed as to any arrangements that Contractor makes on his behalf in these matters.

**SC-19. CONSTRUCTION TIMELINE AND LIMITATIONS**

The following limitations shall apply:

- A. The Notice to Proceed is anticipated to be no sooner than March 23, 2016.**
  
- B. The undersigned further agrees to substantially complete all work no later than 120 days following issuance of the Notice to Proceed.**

**CITY OF MISSION**  
**MISSION CROSSING PARK CONSTRUCTION**  
**PROJECT SPECIFICATIONS**

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## S-1 PRODUCT SUBSTITUTIONS

### PART 1: GENERAL

#### 1.1 GENERAL SUBSTITUTION INFORMATION

- A. In general, these drawings and specifications identify the required materials and equipment by naming one or more manufacturer's brand, model, catalog number and/or other identification; the first-name indicates the manufacturer's product used as the basis for design.
- B. Other brands will be considered for equivalence if Architect receives written request within the time period defined by the Instructions to Bidders. Note: No proposal for "Substitute" will be considered unless it is properly submitted to the Architect, and "substitutes" must be approved by the Architect in writing prior to bidding.
- C. To be considered, equivalent brand manufacturer must furnish complete submittals for products consistent with the specifications for the first-name product, as determined by Architect.
- D. Materials and equipment proposed for substitution shall be equal or superior to that specified in construction, efficiency, utility, aesthetic design and color, as determined by the Architect whose decision shall be final and without further recourse.
- E. Physical size of substitute brand shall not be larger than the space provided for it. Requests must include full description and technical data, in three (3) copies, including clearly marked or highlighted manufacturer's name, model, catalog number, photographs or cuts, and all other information necessary for comparison.
- F. All differences between specified item and "substitute item" shall be listed.
- G. Where materials or equipment are described but not named, provide required first-quality items, adequate in every respect for the intended use.

#### 1.2 PRODUCT SUBSTITUTION PROCESS

- A. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract are considered requests for "substitutions". The following are not considered substitutions:
  - 1. Substitutions requested by Bidders during the bidding period, and accepted prior to award of Contract, are considered as included in the

Contract Documents and are not subject to requirements specified in this Section for substitutions.

2. Revisions to Contract Documents requested by the Owner or Architect.
3. Specified options of products and construction methods included in Contract Documents.
4. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

B. Substitution Request Submittal: Requests for substitution will be considered if received within 30 days after commencement of the Work. Only one request for substitution will be considered for each product. Requests received more than 30 days after commencement of the Work may be considered or rejected at the discretion of the Architect.

1. Submit 3 copies of each request on form provided (Contractor shall reproduce form as needed).
2. Identify the product, fabrication or installation method to be substituted. Include related Specification Section and Drawing numbers. Provide submittals for the product, fabrication or installation method to be substituted.

C. Conditions: Substitution Requests will be received and considered by the Architect assuming the request is timely, fully documented and properly submitted. Unsatisfactory requests will be returned without action except to record noncompliance. Requests shall be evaluated by the following conditions:

1. Extensive revisions are not required to Contract Documents.
2. Proposed changes are in keeping with the general design intent of Contract Documents.
3. The specified product or method of construction can be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
4. The specified product or method of construction can receive necessary approval by a governing authority, and requested substitution can.
5. A substantial advantage is offered the Owner in terms of cost, time, energy conservation or other considerations of merit after deducting offsetting responsibilities the Owner may be required to bear (example: Architectural design fees).
6. The specified product or method of construction can be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.
7. The specified product or method of construction can be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.

8. The specified product or method of construction can provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provide the required warranty.
- D. The Contractor's submittal and Architect's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

SUBSTITUTION REQUEST FORM

ONE ITEM PER FORM  
FILL IN ALL BLANKS

Project:

Date:

We hereby submit for your review the following substitution for the following specified material for the above project:

Section:

Page:

Paragraph:

Specified Material:

PROPOSED SUBSTITUTION:

Attach complete technical data, including laboratory tests, if applicable. Include complete information on changes to Drawings and/or Specifications that proposed substitution will require for its proper installation.

- A. Does the substitution affect the dimensions shown on Drawings in any way?
- B. Will the undersigned pay for any changes to the building design, including engineering and detailing costs caused by the requested substitution?
- C. What effect does substitution have on schedule or other trades?
- D. What effect does substitution have on cost?
- E. Differences between proposed substitution and specified product?
- F. Manufacturer's guarantees of proposed and specified items are:  
     Same                  Different (explain).
- G. Bidder (Contractor) represents that he has investigated the proposed product and determined that it meets or exceeds the quality of the specified product.

APPROVED      REJECTED

\_\_\_\_\_   
Date

END OF SECTION

## S-2 PRODUCT SUBSTITUTIONS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

#### 1.3 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

### PART 2 - PRODUCTS

#### 2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
  - 1. Submit electronic submittals directly to required recipients specifically established for Project.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
  - 2. Mark each copy of each submittal to show which products and options are applicable.
  - 3. Include the following information, as applicable:
    - a. Manufacturer's written recommendations.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Standard color charts.

- e. Manufacturer's catalog cuts.
  - f. Standard product operation and maintenance manuals.
  - g. Compliance with specified referenced standards.
  - h. Testing by recognized testing agency.
  - i. Application of testing agency labels and seals.
  - j. Notation of coordination requirements.
4. Submit Product Data before or concurrent with Samples.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
- a. Dimensions.
  - b. Identification of products.
  - c. Fabrication and installation drawings.
  - d. Roughing-in and setting diagrams.
  - e. Shopwork manufacturing instructions.
  - f. Templates and patterns.
  - g. Schedules.
  - h. Design calculations.
  - i. Compliance with specified standards.
  - j. Notation of coordination requirements.
  - k. Notation of dimensions established by field measurement.
  - l. Relationship to adjoining construction clearly indicated.
  - m. Seal and signature of professional engineer if specified.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:
- a. Generic description of Sample.
  - b. Product name and name of manufacturer.
  - c. Sample source.
  - d. Number and title of appropriate Specification Section.
3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
- a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
  - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

## PART 3 - EXECUTION

### 3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

### 3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
- C. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- D. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

## S-3 QUALITY REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

#### 1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.

- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
  - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.

#### 1.4 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

#### 1.5 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
  - 1. Specification Section number and title.
  - 2. Description of test and inspection.
  - 3. Identification of applicable standards.
  - 4. Identification of test and inspection methods.
  - 5. Number of tests and inspections required.
  - 6. Time schedule or time span for tests and inspections.
  - 7. Entity responsible for performing tests and inspections.
  - 8. Requirements for obtaining samples.
  - 9. Unique characteristics of each quality-control service.

- C. Reports: Prepare and submit certified written reports that include the following:
1. Date of issue.
  2. Project title and number.
  3. Name, address, and telephone number of testing agency.
  4. Dates and locations of samples and tests or inspections.
  5. Names of individuals making tests and inspections.
  6. Description of the Work and test and inspection method.
  7. Identification of product and Specification Section.
  8. Complete test or inspection data.
  9. Test and inspection results and an interpretation of test results.
  10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
  11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  12. Name and signature of laboratory inspector.
  13. Recommendations on retesting and reinspecting.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

## 1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirement for specialists shall not supersede building codes and regulations governing the Work.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
  2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
1. Contractor responsibilities include the following:
    - a. Provide test specimens representative of proposed products and construction.
    - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
    - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
    - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
    - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
    - f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on Project.
  2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

## 1.7 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.

2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
  3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
    - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
  2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
  3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
  3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  6. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify

agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
  2. Incidental labor and facilities necessary to facilitate tests and inspections.
  3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
  4. Facilities for storage and field curing of test samples.
  5. Delivery of samples to testing agencies.
  6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

#### 1.8 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Conducted by a qualified special inspector as required by authorities having jurisdiction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014000

## S-4 EXECUTION AND CLOSEOUT REQUIREMENTS

### PART 1: PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
1. Inspection procedures.
  2. Project record document submittal.
  3. Operating and maintenance manual submittal.
  4. Submittal of warranties.
  5. Final cleaning.

#### 1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following:
1. List exceptions in the request.
  2. Contractor's employee who signed construction contract will personally inspect project to ensure that entire project is substantially complete so that Owner is capable of utilizing the project for its intended purpose.
  3. Submit claims for additional work related to the area of work.
  4. Complete start-up testing of systems, and instruction of the Owner's operating and maintenance personnel.
  5. Prepare a preliminary punch list of items which remain to be completed.
- B. Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfulfilled requirements. The Architect and Owner's representatives will, following inspection, acknowledge that substantial completion has been achieved, or advise the Contractor of construction that must be completed or corrected before the certification.
- C. The Architect will repeat inspection once when requested and assured that the Work has been substantially completed. Results of the completed inspection will form the basis of requirements for final acceptance.

#### 1.3 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for final acceptance and final payment, complete the following:
1. List exceptions in the request.
  2. Submit the final payment request with supporting documentation.
  3. Submit consent of surety to final payment.
- B. Re-inspection Procedure: The Architect will re-inspect the work upon receipt of notice that the work, including inspection list items from earlier inspections, has

been completed, except items whose completion has been delayed because of circumstances acceptable to the Architect.

- C. Upon completion of re-inspection, the Architect will prepare a certificate of final acceptance, or advise the Contractor of work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
- D. The Owner's representatives will prepare "Affidavit of Contractor" and Substantial Completion Certificate for contractor's signature.
- E. Final payment will not be made until all work is complete, all close-out forms complete, final Change Orders processed, all warranties & as-builts approved, and all manuals and training complete.

#### 1.4 RECORD DOCUMENT SUBMITTALS

- A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure location; provide access to record documents for the Architect's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies from the work as originally shown. Mark whichever drawings are most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
  - 1. Mark record sets in red; use other colors to distinguish between variations in separate categories of the work.
  - 2. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.
  - 3. Note related Change Order numbers where applicable.
  - 4. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
- C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual work performed in comparison with the text of the Specification and modification. Give particular attention to substitutions, selection of options and similar information of elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data. Upon completion of the Work, submit record Specifications to the Architect for the Owner's records.

- D. Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the work, which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and specification.
  - 1. Upon completion of mark-up, submit complete set of record Product Data to the Architect for the Owner's records.
  - 2. Submit three (3) sets of all MSDS sheets.
  
- E. Maintenance Manuals: Organize operating and maintenance data into suitable sets of manageable size. Identify specific equipment provided on data sheets. Bind properly indexed data in an electronic file in PDF format. Include the following types of information:
  - 1. Spare parts list.
  - 2. Copies of warranties.
  - 3. Recommended "turn around" cycles.
  - 4. Inspection procedures.
  - 5. Shop Drawings and Product Data.

PART 2: PRODUCTS  
Not Applicable.

PART 3: EXECUTION

### 3.1 CLOSEOUT PROCEDURES

- A. Operating and Maintenance Instructions: Arrange for each manufacturer's representative of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. Include a detailed review of the following items:
  - 1. Maintenance manuals.
  - 2. Record documents.
  - 3. Tools.
  - 4. Identification systems.
  - 5. Control sequences.
  - 6. Hazards.
  - 7. Cleaning.
  - 8. Warranties and Bonds.
  - 9. Maintenance agreements and similar continuing commitments.
  
- B. As part of instruction for operating equipment, demonstrate the following procedures:
  - 1. Start-up.

2. Shutdown.
3. Safety procedures.
4. Economy and efficiency adjustments.

### 3.2 FINAL CLEANING

- A. Clean each surface or unit to the condition expected in a normal cleaning and maintenance program. Comply with manufacturer's instructions.
- B. Final cleaning performed at Substantial Completion for areas accepted by the Owner will not require additional cleaning except in situations where Contractor's operations have required so.
  1. Complete the following cleaning operations before requesting inspection for Certificate of Substantial Completion:
    - a. Remove labels that are not permanent labels.
    - b. Clean exposed hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances.
    - c. Wipe surfaces of electrical equipment. Clean light fixtures and lamps.
    - d. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits.
- C. Return site, path to site, and adjacent areas to original condition, including any necessary repairs.

END OF SECTION

## S-5 PIPE AND TUBE RAILINGS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Steel pipe and tube railings.
- B. Related Sections include the following:
  - 1. Division 03 Section "Cast-In-Place Reinforced Concrete".
  - 2. Division 32 Section "Concrete Paving".

#### 1.3 PERFORMANCE REQUIREMENTS

- A. General: In engineering railings to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:
  - 1. Steel: 72 percent of minimum yield strength.
- B. Structural Performance: Provide railings capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
  - 1. Handrails:
    - a. Uniform load of 50 lbf/ ft. (0.73 kN/m) applied in any direction.
    - b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
    - c. Uniform and concentrated loads need not be assumed to act concurrently.
- C. Thermal Movements: Provide exterior railings that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
- D. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

#### 1.4 SUBMITTALS

- A. Product Data: For the following:
  - 1. Manufacturer's product lines of mechanically connected railings.
  - 2. Grout, anchoring cement, and paint products.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
  - 1. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

#### 1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of railing through one source from a single manufacturer.
- B. Welding: Qualify procedures and personnel according to the following:
  - 1. AWS D1.1, "Structural Welding Code--Steel."

#### 1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication and indicate measurements on Shop Drawings.
  - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating railings without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions.
  - 2. Provide allowance for trimming and fitting at site.

#### 1.7 COORDINATION AND SCHEDULING

- A. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- B. Schedule installation so wall attachments are made only to completed walls. Do not support railings temporarily by any means that do not satisfy structural performance requirements.

## PART 2 - PRODUCTS

### 2.1 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails, unless otherwise indicated.

### 2.2 STEEL AND IRON

- A. Tubing: ASTM A 500 (cold formed) or ASTM A 513.
- B. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.
  - 1. Provide galvanized finish for exterior installations and where indicated.
- C. Plates, Shapes, and Bars: ASTM A 36/A 36M.
- D. Castings: Either gray or malleable iron, unless otherwise indicated.
  - 1. Gray Iron: ASTM A 48/A 48M, Class 30, unless another class is indicated or required by structural loads.
  - 2. Malleable Iron: ASTM A 47/A 47M.

### 2.3 FASTENERS

- A. General: Provide the following:
  - 1. Hot-Dip Galvanized Railings: Type 304 stainless-steel or hot-dip zinc-coated steel fasteners complying with ASTM A 153/A 153M or ASTM F 2329 for zinc coating.
  - 2. Provide exposed fasteners with finish matching appearance, including color and texture of railings.
- B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.
- C. Fasteners for Interconnecting Railing Components:
  - 1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless otherwise indicated.
  - 2. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless exposed fasteners are unavoidable or are the standard fastening method for railings indicated.
  - 3. Provide tamper-resistant flat-head machine screws for exposed fasteners, unless otherwise indicated.

- D. Anchors: Provide cast-in-place anchors, fabricated from corrosion-resistant materials with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.

## 2.4 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Shop Primer for Galvanized Steel: Zinc-dust, zinc-oxide primer formulated for priming zinc-coated steel and for compatibility with finish paint systems indicated, and complying with SSPC-Paint 5.
- C. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in steel, complying with SSPC-Paint 20.
- D. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.
- E. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- F. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.
  - 1. Water-Resistant Product: At exterior locations provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended by manufacturer for exterior use.

## 2.5 FABRICATION

- A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm), unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- G. Connections: Fabricate railings with welded connections, unless otherwise indicated.
- H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove flux immediately.
  - 4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
- I. Form changes in direction as follows:
  - 1. By bending.
- J. Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.
- K. Close exposed ends of railing members with prefabricated end fittings.
- L. Provide wall returns at ends of wall-mounted handrails, unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch (6 mm) or less.
- M. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work, unless otherwise indicated.
- N. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.
- O. For railing posts set in concrete, provide steel sleeves not less than 6 inches (150 mm) long with inside dimensions not less than 1/2 inch (13 mm) greater than outside dimensions of post, with steel plate forming bottom closure.

## 2.6 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are

acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

- D. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

## 2.7 STEEL AND IRON FINISHES

### A. Galvanized Railings:

1. Hot-dip galvanize exterior steel and iron railings, including hardware, after fabrication.
2. Comply with ASTM A 123/A 123M for hot-dip galvanized railings.
3. Comply with ASTM A 153/A 153M for hot-dip galvanized hardware.

- B. Fill vent and drain holes that will be exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.

- C. For galvanized railings, provide hot-dip galvanized fittings, brackets, fasteners, sleeves, and other ferrous components.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Fit exposed connections together to form tight, hairline joints.
- B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
  1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
  2. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).
  3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (5 mm in 3 m).
- C. Corrosion Protection: Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.
- D. Adjust railings before anchoring to ensure matching alignment at abutting joints.
- E. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

### 3.2 RAILING CONNECTIONS

- A. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in Part 2 "Fabrication" Article whether welding is performed in the shop or in the field.
- B. Expansion Joints: Install expansion joints at locations indicated but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve extending 2 inches (50 mm) beyond joint on either side, fasten internal sleeve securely to 1 side, and locate joint within 6 inches (150 mm) of post.

### 3.3 ANCHORING POSTS

- A. Cover anchorage joint with flange of same metal as post, welded to post after placing anchoring material.
- B. Leave anchorage joint exposed; wipe off surplus anchoring material; and leave 1/8-inch (3-mm) buildup, sloped away from post.
- C. Anchor posts to metal surfaces with oval flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members as follows:
  - 1. For steel pipe railings, weld flanges to post and bolt to metal supporting surfaces.
- D. Install removable railing sections, where indicated, in slip-fit metal sockets cast in concrete.

### 3.4 ANCHORING RAILING ENDS

- A. Anchor railing ends to concrete and masonry with round flanges connected to railing ends and anchored to wall construction with anchors and bolts.
- B. Anchor railing ends to metal surfaces with flanges bolted to metal surfaces and welded to railing ends.

### 3.5 ADJUSTING AND CLEANING

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

### 3.6 PROTECTION

- A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.
- B. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION 055213

## S-6 JOINT SEALANTS

### PART 1: PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Pavement joint sealants.
  - 2. Exterior sealants.
  - 3. Related accessories.
  
- B. Related Sections:
  - 1. Section 033000 - Cast-In-Place Reinforced Concrete.
  - 2. Section 321314 - Concrete Paving.

#### 1.2 REFERENCES

- A. ASTM International (ASTM):
  - 1. ASTM C834-00e1: Standard Specification for Latex Sealants.
  - 2. ASTM C920-02: Standard Specification for Elastomeric Joint Sealants.
  - 3. ASTM C1193-00: Standard Guide for Use of Joint Sealants.
  - 4. ASTM D1056-00: Standard Specification for Flexible Cellular Materials-  
Sponge or Expanded Rubber.

#### 1.3 Sealant, Waterproofing & Restoration Institute (SWRI):

- A. SWRI: Sealants: The Professional's Guide

#### 1.4 SUBMITTALS

- A. Product Data: Manufacturer's specifications and technical data including the following.
  - 1. Sealant chemical characteristics, performance criteria, substrate preparation, and limitations.
  - 2. Manufacturer's installation instructions.
  
- B. Color Samples: Two set of samples of the following.
  - 1. Manufacturer's full color range of each type of sealant specified.
  
- C. Quality Control Submittals:
  - 1. Statement of qualifications of installer.
  - 2. Sample of proposed special warranty.

#### 1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Not less than 5 years experience in the actual production of specified products.
  
- B. Installer's Qualifications: Firm experienced in installation of systems similar in complexity to those required for this Project, plus the following.
  - 1. Not less than 3 years experience with systems.
  - 2. Successfully completed not less than 5 comparable scale projects using

this system.

3. Trained in accordance with SWRI Applicator Training Program.

## 1.6 DELIVERY, STORAGE AND HANDLING

- A. Packing and Shipping: Deliver products in original unopened packaging with legible manufacturer's identification.
- B. Storage and Protection: Comply with manufacturer's recommendations.

## 1.7 PROJECT CONDITIONS

- A. Environmental Requirements: Comply with sealant manufacturer's recommendations for maximum and minimum application temperatures and humidity.

## 1.8 SPECIAL WARRANTIES

- A. Contractor and installer shall warranty installed system for a period of 5 years from the Date of Substantial Completion against all of the conditions indicated below. When notified in writing from the Owner, contractor and installer shall promptly, and without inconvenience and cost to the Owner, correct said deficiencies in accordance with the requirements of Division 1.
  1. Failure to maintain airtight seal.
  2. Failure to maintain watertight seal.
  3. Failure to cure.
  4. Exhibiting loss of adhesion or cohesion.

## PART 2: PRODUCTS

### 2.1 MATERIALS

- A. Self-Leveling Polyurethane Sealant: Polyurethane base, 2 part self-leveling elastomeric sealant complying with ASTM C920, Type M, Grade P, Class 25, Use T, NT, and M.
  1. Color: As selected by Architect from manufacturer's standard colors.
  2. Acceptable manufacturers and product:
    - a. ChemRex Inc., Sonneborn Building Products: Sonolastic SL 2.
    - b. Pecora Corporation: Urexpan NR-200.
    - c. Tremco Incorporated: THC-900.
- B. Low-Modulus Silicone Rubber Sealant
  1. Color: As selected by Architect from manufacturer's standard colors.
  2. Acceptable manufacturers and product:
    - a. Dow Corning Corporation: 756 SMS.
    - b. Dow Corning Corporation: 795.
    - c. General Electric Company: Silpruf NB SCS9000.
    - d. Tremco Incorporated: Spectrem 3.

### 2.2 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suite application.
- B. Joint Cleaner: Non-corrosive, non-staining type, recommended by sealant manufacturer to suit application; compatible with joint forming materials.
- C. Bond Breaker Tape: Pressure sensitive tape, recommended by sealant manufacturer to suit application.
- D. Joint Backing: ASTM D1056, Type 2 closed cell polyethylene, Class as recommended by sealant manufacturer, round rod; non-gassing when punctured, unless otherwise recommended by sealant manufacturer.
  - 1. Size: 30 percent larger than joint width, unless larger size recommended by sealant manufacturer.

## PART 3: EXECUTION

### 3.1 EXAMINATION

- A. Verification of Conditions: Examine areas and conditions under which Work is to be performed and identify conditions detrimental to proper and timely completion.
  - 1. Ensure that concrete has cured for not less than 28 days.
  - 2. Do not proceed until unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean and prepare joints in accordance with manufacturer's instructions.
  - 1. Remove loose materials and foreign matter which might impair adhesion of sealant.
  - 2. Etch masonry and concrete surfaces as recommended by sealant manufacturer.
  - 3. Roughen vitreous and glazed materials as recommended by sealant manufacturer.
  - 4. Clean and prime joints in accordance with manufacturer's instructions.

### 3.3 INSTALLATION

- A. Comply with manufacturer's instructions.
- B. Measure joint dimension, and size materials to achieve width/depth ratio recommended by sealant manufacturer.
  - 1. Install joint backing using blunt instrument to avoid puncturing backing material, to achieve a neck dimension no greater than 1/3 the joint width.
  - 2. Do not leave voids or gaps between ends of joint backing units.
- C. Install bond breaker tape at locations where joint backing cannot be used.
- D. Install sealant in uniform, continuous ribbons without gaps, air pockets, ridges, or sags with complete "wetting" of joint bond surfaces equally of opposite sides.

- E. Tool joints concave, slightly below adjoining surfaces.
    - 1. Where horizontal joints are between horizontal and vertical surfaces, tool joint to a slight cove so joint will not trap moisture or dirt.
  - F. Install sealant to widths indicated on Drawings and as recommended by sealant manufacturer, but with the following general limitations as measured at center of joint.
    - 1. Joints sealed with epoxy sealant: Fill concrete saw joints with epoxy sealant in accordance with manufacturer's instructions.
      - a. Tool joints flush with top of floor slabs.
  - G. Do not allow sealants or compounds to overflow or spill onto adjoining surfaces, or to migrate into voids of adjoining surfaces.
  - H. Cure sealants in accordance with sealant manufacturer's instructions.
- 3.4 CLEANING
- A. Remove excess materials from adjoining surfaces in accordance with sealant manufacturer's instructions as Work progresses to eliminate evidence of spillage and damage to adjacent surfaces.
- 3.5 SCHEDULES
- A. General: Provide sealants where indicated on Drawings and where required to achieve a weather tight assembly.
  - B. The following schedule is listed as a guide and is not intended to be all inclusive of the Work of this Section.
    - 1. Concrete pavement joint sealants: Self-leveling Polyurethane Sealant.

END OF SECTION

## **S-7 EXTERIOR SUN CONTROL DEVICES**

### **PART 1 – GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General Conditions and Division 1 Specifications Sections, apply to this section.

#### **1.2 SUMMARY**

- A. The shade structure contractor shall be responsible for design, engineering, fabrication and supply of the work specified herein. The intent of this specification is to have only one manufacturer be responsible for the aforementioned functions.

#### **1.3 SUBMITTALS**

- A. Submit in accordance with Division 1- General Requirements unless otherwise noted.

- B. Pre-Bid Submittals

1. Provide proof of installed reference sites with structures for similar scope of project and installation that are engineered to International Building Code (IBC) specifications. Include in reference list of structure dimensions with install dates and project locations.
2. Provide information to establish desired fabric color and powder coat color.
3. Provide proof of all quality assurance items including:
  - a. A list of at least three (3) reference projects that have been installed a minimum of five (5) years.
  - b. Proof of Liability and Umbrella Insurance.
4. Substitutions
  - a. Drawings, cut sheets, material data sheets, testing results and samples demonstrating substitute product in context of specific project's context.

- C. Post-Bid Submittals

1. Shop Drawings
  - a. All relative design information such as footings, posts, hardware, and general notes shall be clearly specified on the drawings
  - b. Indicate dimensions, description of material and finishes, general construction, specific modifications, component connections, anchorage methods, and hardware for the structure

- c. All drawings shall include an original seal and signature of an engineer licensed in the State of Kansas
  - d. Drawings shall have cross referenced details and sheet numbers
2. Design Calculations
- a. Provide structural design calculations for the structure signed and sealed by the same Professional Engineer registered in the State of Kansas.
3. Provide fabric color and powder coat color selections for final order.
4. Provide manufacturer's instructions on assembly and maintenance.

#### **1.4 PROJECT CONDITIONS**

- A. Field Measurements: verify layout information for shade structures shown on the drawings in relation to the property survey and existing structures. Verify locations by field measurements prior to construction.

#### **1.5 DESIGN**

- A. The shade product shall be designed and manufactured to the most exacting specifications by skilled craftsmen, and certified by a Professional Engineer for structural soundness of its design.
- B. Structures are engineered to meet or exceed the requirements of International Building Code (IBC), and the following standard specifications:
  - Wind Speed (Frame only): 150 M.P.H.
  - Wind Speed (Frame w/canopy): 90 M.P.H.
  - Live Load: None
  - Snow Load: None

#### **1.6 DELIVERY**

- A. Shade components shall be shipped knocked-down with each major piece individually wrapped in protective plastic and cushioning cardboard.
- B. Assembly instructions shall be included for easy in-field installation.
- C. Fabrics, cables, and brackets which are not pre-assembled at the factory are not acceptable.

#### **1.7 WARRANTY**

- A. The successful bidder shall provide a one (1) year warranty on all labor and materials. A supplemental non-prorated warranty from the manufacturer shall be provided for a period of ten (10) years on fabric including stitching and twenty (20) years on the structural integrity of the steel, from date of substantial completion.
- B. The warranty shall not deprive the Owner of other rights the Owner may have under the provisions of the Contract Documents, and will be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contractor documents.
- C. Because of surety requirements, any performance and payment bond that might be required will cover only the first year of the warranty. The manufacturer's warranty will be a separate document, and will be executed at the time of completion of the work.

## **PART 2 – PRODUCTS**

### **2.1 MANUFACTURER**

- A. Product
  - 1. Model SK30300714 produced by Shade Systems, Inc. and distributed by Out and About, LLC, Lenexa, Kansas.
  - 2. Approved Equal
- B. General
  - 1. All materials shall be structurally sound and appropriate for safe use.
  - 2. Product durability shall be ensured by the use of corrosion-resistant metals such as stainless steel, and coatings such as zinc-plating, galvanizing, and powder-coating on steel parts, subject to the Product-Specific requirements.
- C. Welded Connections
  - 1. All tubing members are factory-welded by Certified Welders to American Welding Society (AWS) specifications and to the highest standards of quality workmanship.
  - 2. Welded connections are finished with a zinc-rich galvanized coating.
  - 3. No field welding is required in the assembly of the shade products.
- D. Posts, Structural Frame Tubing, and Hardware
  - 1. All tubing used shall be cold-formed and milled per ASTM A-135 and ASTM A-500.
  - 2. Material testing is in accordance with ASTM E-8.
  - 3. Minimum yield is 40,000 psi with a minimum tensile strength of 45,000 psi on all posts.

4. Support pipes shall be schedule 40 black steel with appropriate pre-treatment for powder-coating. All fastening hardware shall be stainless steel.
  5. Finish: Powder-coated meeting ASTM D2431-06
  6. Color: Selected by Owner from Manufacturer's standard colors.
- E. Standard Footings
1. Footings shall be designed per stringent International Building Code (IBC) for the specified structure.

## **2.2 FASTENING SYSTEM**

- A. Posts shall be equipped with an adjustable 360-degree swivel and pivot attachment mechanism to which the tensioning plate fastens.
- B. Tensioning Plate
1. Factory-formed stainless steel pre-attached to fabric canopies at each corner
  2. Includes a stainless steel adjustment bolt which, when turned, tensions the fabric for a taut fit.
- C. Cable Fasteners
1. Zinc-plated copper
- D. Cables
1. Minimum ¼" diameter galvanized cables; vinyl covered
  2. Cables shall be hemmed into the fabric at the factory and terminate at the bracket

## **2.3 FABRIC**

- A. Composition and Performance
1. Knitted of monofilament and tape construction high density polyethylene with Ultra Violent (U.V.) stabilizers and flame retardant. UV-Block Factor varies by standard color offered from 91% to 99%.
    - a. Normal Thickness: 0.057 inches
    - b. Fabric Mass: Min 340 g/m<sup>2</sup>
    - c. Light Fastness: 7-8 (Blue Wool Scale)
    - d. Weather Fastness: 4-5 (Grey Scale Test)
    - e. Tear Resistance: Warp 210N, Weft 276N
    - f. Breaking Force: Warp 786N, Weft 2494N
    - g. Bursting Pressure: Mean 3500kPa
    - h. Bursting Force: Mean 2146N

- B. All hems and seams are double row lock stitched using exterior grade UV-stabilized polyethylene GORE™ TENARA™ sewing thread (GORE and TENARA are trademarks of W.L. Gore & Associates).
- C. Flammability
  - 1. Treat with fire retardants to meet requirements established under the NFPA 701 Test Method 2 test standards for flammability, including the accelerated water leaching protocol.
    - a. Written evidence of compliance with this standard, including with accelerated water leaching protocol, must be furnished with bid proposal.
- D. Color: Selected by Owner from Manufacturer's standard colors.

### **PART 3 – EXECUTION**

#### **3.1 INSTALLATION**

- A. Installations of shade structure shall be performed by an installer who shall follow the manufacturer's instructions for assembly, installation, and erection, per approved drawings.
- B. Concrete
  - 1. Concrete work shall be executed in accordance with the latest edition of the American Concrete Building Code, ACI 318.
  - 2. All reinforcement shall conform to ASTM A-615, Grade 60.
  - 3. Reinforcing steel shall be detailed, fabricated, and placed in accordance with the latest ACI Detailing Manual, and Manual of Standard Practice.

END OF SECTION

## S-8 SITE FURNISHINGS

### PART 1: GENERAL

#### 1.1 SUMMARY

- A. Section Includes
  - 1. Benches
  - 2. Picnic Tables
  - 3. Cigarette Receptacles
  - 4. Litter Receptacle
  - 5. Pet Waste System

#### 1.2 SUBMITTALS

- A. Product Data: Manufacturer's specifications and technical data including the following:
  - 1. Detailed specifications of construction and fabrication.
  - 2. Manufacturer's installation instructions.

#### 1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Not less than 5 years experience in the actual production of specified products.
- B. Installer's Qualifications: Firm experienced in installation of systems similar in complexity to those required for this Project.

#### 1.4 DELIVERY, STORAGE AND HANDLING

- A. Packing and Shipping: Deliver products in original unopened packaging with legible manufacturer's identification.
- B. Storage and Protection: Comply with manufacturer's recommendations.

### PART 2: PRODUCTS

#### 2.1 MANUFACTURED UNITS

- A. Benches
  - 1. Manufacturer: Barco Products
  - 2. Model: Aurora 6' straight back bench
  - 3. Mounting: surface mounted
  - 4. Color: Owner to select from manufacturer's standard colors
- B. Picnic Tables

1. Manufacturer: Kay Park
  2. Model: Octagon Concrete Table (CT04S)
  3. Color: Owner to select from manufacturer's standard colors
- D. Litter Receptacle
1. Manufacturer: Kay Park
  2. Model: 32 Gallon Litter Receptacle (WS30321.RRP)
  3. Lid: Plastic Dome (DLMP32-55)
  4. Color: Owner to select from manufacturer's standard colors
- E. Pet Waste System
1. Manufacturer: Mutt Mitt
  2. Model: Mutt Mitt Dispenser (MMDISPG)
  3. Receptacle: Mutt Mitt 22 Gallon Perforated Receptacle (MM22GALG)
  4. Color: Owner to select from manufacturer's standard colors

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verification of Conditions: Examine areas and conditions under which Work is to be performed and identify conditions detrimental to proper and timely completion.
- B. Do not proceed until unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Comply with manufacturer's recommendations.
- B. Install plumb and level, accurately fitted, free from distortion or defects, and securely anchored in place.
- C. Site furnishings to be field located by Owners Representative.
- D. Except for the planting urns, set furnishings and top of foundation to ensure either brick paving or concrete pavement covers the foundations.

END OF SECTION

## S-9 SITE CLEARING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Clearing and grubbing.
  - 2. Stripping and stockpiling topsoil.
  - 3. Disconnecting, capping or sealing, and abandoning site utilities in place removing site utilities.
  - 4. Temporary erosion and sedimentation control measures.
- B. Related Sections include the following:
  - 1. Division 31 Section "Earth Moving" for soil materials, excavating, backfilling, and site grading.

#### 1.3 DEFINITIONS

- A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; and free of subsoil and weeds, roots, toxic materials, or other non-soil materials.

#### 1.4 MATERIAL OWNERSHIP

- A. Except for stripped topsoil or other materials indicated to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

#### 1.5 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.

2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
1. Do not proceed with work on adjoining property until directed by Architect.
- C. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.
- D. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- E. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.

## PART 2 - PRODUCTS[ (Not Applicable)]

### 2.1 SOIL MATERIALS

- A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 31 Section "Earth Moving."
1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly flag trees and vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
1. Restore damaged improvements to their original condition, as acceptable to Owner.

### 3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to the Drawings.
- B. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

### 3.3 UTILITIES

- A. Owner will arrange for disconnecting and sealing indicated utilities that serve existing structures before site clearing, when requested by Contractor.
  - 1. Verify that utilities have been disconnected and capped before proceeding with site clearing.
- B. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
  - 1. Arrange with utility companies to shut off indicated utilities.
  - 2. Owner will arrange to shut off indicated utilities when requested by Contractor.
- C. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Architect not less than two days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Architect's written permission.
- D. Excavate for and remove underground utilities indicated to be removed.

### 3.4 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
  - 1. Remove subsoil and non-soil materials from topsoil, including trash, debris, weeds, roots, and other waste materials.

- C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
  - 1. Limit height of topsoil stockpiles to 72 inches (1800 mm).
  - 2. Do not stockpile topsoil within tree protection zones.
  - 3. Dispose of excess topsoil as specified for waste material disposal.
  - 4. Stockpile surplus topsoil to allow for re-spreading deeper topsoil.

### 3.5 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
  - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.
  - 2. Paint cut ends of steel reinforcement in concrete to remain to prevent corrosion.

### 3.6 DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 311000

## S-10 EARTH MOVING

### PART 1: GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
1. Excavation for paving and grading.
  2. Site filling and backfilling.
  3. Building filling and backfilling.
  4. Consolidation and compaction.
  5. Rough grading.

#### 1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
1. ASTM C33-92a: Standard Specification for Concrete Aggregates.
  2. ASTM D698-91: Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft<sup>3</sup>(600kN-m/m<sup>3</sup>)).
  3. ASTM D1556-90: Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
  4. ASTM D2167-94: Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
  5. ASTM D2922-91: Standard Test Methods for Density of Soil and Soil-Aggregate Placed by Nuclear Methods (Shallow Depth).
  6. ASTM D3017-88 (1993): Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
  7. ASTM D4318-84: Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

#### 1.3 DEFINITIONS

- A. Unclassified Excavation: Removal of all material encountered regardless of its nature.

#### 1.4 SUBMITTALS

- A. Submit in accordance with Section 013300 unless otherwise indicated.
- B. Contract Closeout Submittals: Submit in accordance with Section 017000.
1. Project Record Documents.
    - a. Accurately record location of underground utilities remaining, rerouted utilities, and new utilities by horizontal dimensions from above grade permanent fixtures, elevations or inverts, and slope gradients.

#### 1.5 QUALITY ASSURANCE

- A. Installer's Qualifications: Firm experienced in construction similar in complexity to that required for this Project, plus the following.
1. Not less than 3 years experience with systems.
  2. Successfully completed not less than 5 comparable scale projects using this system.

## 1.6 PROJECT CONDITIONS

- A. Existing Conditions:
  - 1. Locate existing underground utilities in areas of excavation Work.

## 1.7 MAINTENANCE

- A. Where settling is measurable or observable at excavated areas during correction period, remove surface (pavement, lawn, or other finish), add backfill material, compact, and replace surface treatment.
  - 1. Restore appearance, quality, and condition of surface or finish to match adjacent materials.
  - 2. Eliminate evidence of restoration.

## PART 2: PRODUCTS

### 2.1 MATERIALS

- A. General:
  - 1. Fill material shall be subject to the approval of Owner's testing agency and Owner's Representative.
  - 2. For approval of fill material, notify Owner's testing agency and Owner's Representative at least 5 working days in advance of intention to import material.
    - a. Designate proposed borrow area and excavate test pits to permit Owner's testing agency to sample as necessary from borrow area for the purpose of making acceptance tests to confirm quality of proposed material.
- B. General Fill Material:
  - 1. Definition: That material used to obtain subgrade levels.
  - 2. Acceptable material: Excavated on-Site material or off-Site borrow material which is free from debris, organics, decomposable, and corrodible materials containing the proper moisture content, liquid limit, and plastic limit to obtain specified compaction requirements.
    - a. Existing on-Site material proposed for reuse, and off-site borrow material shall be approved by the Owner's testing agency.
- C. Granular Fill:
  - 1. Definition: Free-draining granular base used beneath concrete slabs-on-grade.
  - 2. Acceptable materials: Clean crushed stone or gravel, free of shale, clay, friable material, and debris, complying with ASTM C33 Size No. 57.
- D. Backfill:
  - 1. Definition: Material requiring placement and compaction with manual procedures because of restricted spaces or new construction.
  - 2. Acceptable materials: Either General Fill Material or Granular Fill.

- E. Unsuitable Material:
  - 1. Definition: That excavated material which does not meet the consistency requirements of any other defined materials in this Section, including muck, frozen material, organic material, top soil, rubbish, and rock having a maximum dimension greater than 24 inches (60.96 centimeters).
  - 2. If site earthwork balance indicates that unsuitable material will occur, dispose of unsuitable material off-Site.
    - a. Submit an acceptable agreement with the property owner on whose property the unsuitable material is placed.

## PART 3: EXECUTION

### 3.1 EXAMINATION

- A. Verification of Conditions: Examine areas and conditions under which Work is to be performed and identify conditions detrimental to proper and timely completion.
  - 1. Verify location and elevations of existing building foundations.
  - 2. Verify location and elevations of existing underground utilities.
  - 3. Verify erosion control systems are in place.
  - 4. Do not proceed until unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Protection:
  - 1. Protect trees, shrubs, lawns, other plant growth, and other features indicated on Drawings to remain.
  - 2. Protect bench marks, monuments, existing structures, existing fences, existing roads, existing sidewalks, existing paving, and existing curbs from damage and displacement.
  - 3. If damaged or displaced, notify Owner's Representative and correct defects as directed by Owner's Representative.
  - 4. Protect above and below grade utilities which are to remain.
  - 5. Protect adjacent and downstream properties from pollution, sedimentation, or erosion caused by the Work of this Contract.
- B. Preparation:
  - 1. Use all means necessary to control dust on and near the Work, and on and near off-Site borrow, storage, and spoil areas, if such dust is caused by performance of the Work of this Section, or if resulting from the condition in which Project Site is left by Contractor.
  - 2. Moisten surfaces as required to prevent dust from being a nuisance to the public, neighbors, and concurrent performance of other Work on Project Site.
  - 3. Identify required lines, levels, contours, and datum.
  - 4. Identify above and below grade utilities.
  - 5. Provide and maintain positive surface drainage.

### 3.3 EXCAVATION

- A. Excavation is unclassified and includes excavation of every character of materials and obstructions encountered within the construction area, and shall be performed to the lines and grades indicated on Drawings.
- B. Perform excavation Work in compliance with applicable requirements of authorities having jurisdiction.
- C. Use of explosives is not permitted.
- D. Perform Work in a manner and sequence that will provide drainage at all times and that will prevent surface water from draining into excavations.
- E. Protect excavation for floor slabs and building foundations from frost.
- F. Excavation cut shall not interfere with normal 45 degree bearing splay of foundations.
- G. Machine slope banks to comply with local codes, ordinances, and requirements of agencies having jurisdiction.
  - 1. Provide materials for shoring and bracing.
    - a. Maintain shoring and bracing in excavations regardless of time period excavations will be open.
    - b. Extend shoring and bracing as excavation progresses.
  - 2. Control surface drainage down slopes.
  - 3. Cover slopes to prevent loss of moisture content of soil and to prevent raveling.
- H. Hand trim excavations.
  - 1. Remove loose matter.
- I. When subgrade materials are encountered which the Owner's testing agency determines to be unacceptable for use, remove such material to depths and limits determined by Owner's testing agency.
  - 1. Backfill with material acceptable to Owner's testing agency and compact to density equal to the specified requirements for subsequent fill material.
- J. Where depressions result from, or have resulted from the removal of surface or subsurface obstructions, open depressions to equipment working width, and remove debris and soft material as directed by Owner's testing agency.
- K. Backfill and compact over-excavations and unauthorized excavations as specified for the area at which it occurs, at no increase in Contract Sum or extension of Contract Time.

- L. Stockpile excavation material which Owner's testing agency has approved for reuse, in area designated on-Site.
  - 1. Place, grade, and shape stockpiles for proper drainage.
  - 2. Do not stockpile within drip line of trees which are to remain.
- M. Remove unacceptable excavation material from Site.

### 3.4 WATER CONTROL

- A. Provide berms or channels to prevent flooding of subgrade.
- B. Prevent infiltration of water into excavations from whatever sources as may exist.
- C. Promptly remove water collecting in depressions.
  - 1. Provide and maintain ample means and devices with which to remove and dispose of water entering excavations.
  - 2. Ensure dry excavations and preservation of final lines and grades of bottoms of excavations.

### 3.5 SUBGRADE PREPARATION

- A. General:
  - 1. Owner's testing agency shall be present during placement and compaction of fill material.
  - 2. Fill material shall not be placed, spread, or rolled while the material is frozen or thawing, or during unfavorable weather conditions.
  - 3. Moisture condition or dry fill material as required to obtain specified moisture content limits.
    - a. Material which is too wet to allow proper compaction, as determined by the Owner's testing agency, may be spread and permitted to dry assisted by disking, harrowing, or pulverizing.
  - 4. Place fill material using spreading equipment capable of obtaining uniform loose lift thickness.
  - 5. Compact fill material using equipment appropriate to the material being compacted, as determined by the Owner's testing agency.
  - 6. When Work is interrupted by rain, do not resume Work until Owner's testing agency indicates that moisture content and density of previously placed fill area is as specified.
  - 7. Where soil has been softened or eroded by flooding or placement during unfavorable weather conditions, remove damaged areas and recompact to required density at no increase in Contract Sum or extension of Contract Time.
  - 8. Maintain subgrade moisture content within specified range until concrete floor slabs-on-grade and pavements are installed.
  - 9. In excavations where the Owner's testing agency determines that existing subgrade material is unacceptable, remove unacceptable material and backfill in accordance with procedures determined by Owner's testing agency.

10. Minimize construction traffic, including foot traffic, from footing and pavement finished subgrades in order to prevent unnecessary disturbances of subgrade materials.
  - a. If Owner's testing agency determines that finished subgrades have been disturbed, remove disturbed areas and replace and recompact to required density as directed by Owner's testing agency at no increase in Contract Sum or extension of Contract Time.
  - b. If Owner's testing agency determines that rutting has occurred, excavate 6 inches, or other depth as directed by Owner's testing agency, of subgrade material and recompact as specified for affected area.
  - c. Owner's testing agency shall be present during compaction of material.
  
- B. In fill areas below pavements, scarify, moisture condition, and recompact exposed subgrade for a depth of 6 inches below subbase.
  1. Compact to a minimum density of 95 percent of standard Proctor maximum dry density with a moisture content between 0 and 4 percent above optimum moisture content in accordance with ASTM D698.
    - a. Field density tests shall be taken after the compaction of each layer of fill by Owner's testing agency.
    - b. When tests indicate that any layer of fill or portion thereof does not meet the required compaction density or moisture content, rework non-complying area as required to achieve specified requirements.
  2. Place approved fill materials in loose lifts not exceeding 8 inches.
    - a. Compact each lift to a minimum density of 95 percent of standard Proctor maximum dry density with a moisture content between 0 and 4 percent above optimum moisture content in accordance with ASTM D698.
      - i. Field density tests shall be taken after the compaction of each layer of fill by Owner's testing agency.
      - ii. When tests indicate that any layer of fill or portion thereof does not meet the required compaction density or moisture content, rework non-complying area as required to achieve specified requirements.
  3. Fill operations shall continue in compacted layers until subgrade elevations have been obtained.
  4. Protect excavations from excessive wetting and drying during construction.
    - a. Remove water entering excavation, and remove disturbed or softened soil.
  
- C. In cut areas below pavements, excavate existing subgrade material to a depth of not less than 6 inches below bottom of subbase.
  1. Stockpile excavated material.
  2. Scarify, moisture condition, and recompact exposed subgrade for a depth of 6 inches.

- a. Compact to a minimum density of 95 percent of standard Proctor maximum dry density with a moisture content between 0 and 4 percent above optimum moisture content in accordance with ASTM D698.
        - i. Field density tests shall be taken after the compaction of each layer of fill by Owner's testing agency.
        - ii. When tests indicate that any layer of fill or portion thereof does not meet the required compaction density or moisture content, rework non-complying area as required to achieve specified requirements.
  - 3. Place approved excavated materials in loose lifts not exceeding 8 inches.
    - a. Compact each lift to a minimum density of 95 percent of standard Proctor maximum dry density with a moisture content between 0 and 4 percent above optimum moisture content in accordance with ASTM D698.
      - i. Field density tests shall be taken after the compaction of each layer of fill by Owner's testing agency.
      - ii. When tests indicate that any layer of fill or portion thereof does not meet the required compaction density or moisture content, rework non-complying area as required to achieve specified requirements.
  - 4. Protect excavations from excessive wetting and drying during construction.
    - a. Remove water entering excavation, and remove disturbed or softened soil.
- D. Immediately prior to placement of pavements, proof-roll subgrade in presence of Owner's testing agency using a fully loaded tandem axle dump truck or similar type of pneumatic tired equipment with a minimum gross weight of 25 tons.
- 1. Remove soft areas as directed by Owner's testing agency and recompact in loose 8 inch lifts compacted to minimum density of 95 percent of standard Proctor maximum dry density with a moisture content between 0 percent and 4 percent above optimum moisture content in accordance with ASTM D698.

### 3.6 GENERAL SITE FILL

- A. Perform grading to the contours and elevations indicated on Drawings.
- B. Fill material shall not be placed, spread, or rolled while the material is frozen or thawing, or during unfavorable weather conditions.
  - 1. Moisture condition or dry fill material as required to obtain specified moisture content limits.
    - a. Material which is too wet to allow proper compaction, as determined by the Owner's testing agency, may be spread and permitted to dry assisted by disking, harrowing, or pulverizing.
  - 2. Place fill material using spreading equipment capable of obtaining uniform loose lift thickness.

3. Compact fill material using equipment appropriate to the material being compacted, as determined by the Owner's testing agency.
  4. When Work is interrupted by rain, do not resume Work until Owner's testing agency indicates that moisture content and density of previously placed fill area is as specified.
  5. Where soil has been softened or eroded by flooding or placement during unfavorable weather conditions, remove damaged areas and recompact to required density.
- C. Place general fill material in systematic and uniform horizontal lifts not exceeding the following loose-depth-measurements.
1. For fill material to be compacted with heavy compaction equipment: 8 inches.
  2. For fill material to be compacted with hand operated tampers: 4 inches.
- D. Compact each lift of material to a minimum of 95 percent of maximum dry density, and a moisture content between 0 and 4 percent above optimum moisture in accordance with ASTM D698.
- E. Bench existing slopes in horizontal sections equal in width to equipment used.
- F. Where embankments, regardless of height, are placed against hillsides or existing embankments having a slope of steeper than 1 vertical to 4 horizontal, bench or step existing slope in approximately 24 inch rises.
1. Place fill in lifts not exceeding 9 inches in loose-depth-measurement.
  2. Compact material bladed out, bottom area which was cut to form benches, and fill material being placed to a minimum of 95 percent of maximum dry density, and a moisture content between 0 and 4 percent above optimum moisture in accordance with ASTM D698.
- G. Field density tests shall be taken after the compaction of each layer of fill by Owner's testing agency.
1. When tests indicate that any layer of fill or portion thereof does not meet the required compaction density or moisture content, rework non-complying area as required to achieve specified requirements.
- H. Remove surplus materials from Site.
- I. Tolerances:
1. Top surface of subgrade under paved areas: Plus or minus 1/4 inch from required elevations.
  2. Top surface of subgrade under unpaved surfaces: Plus or minus 1/2 inch from required elevations.

### 3.7 GRANULAR FILL

- A. Place granular fill in equal continuous layers not exceeding 6 inches compacted depth.

- B. Compact fill to minimum 95 percent of standard Proctor maximum dry density in accordance with ASTM D698 using vibrating equipment.

### 3.8 BACKFILL

- A. Remove forms, lumber, rock, paper, and other debris from areas to be backfilled.
- B. Backfill areas to contours and elevations indicated on Drawings, using unfrozen backfill material.
  - 1. Do not backfill over porous, wet, frozen, or spongy surfaces.
  - 2. Moisture condition or dry fill material as required to obtain specified moisture content limits.
    - a. Material which is too wet to allow proper compaction, as determined by the Owner's testing agency, may be spread and permitted to dry assisted by disking, harrowing, or pulverizing.
  - 3. Place fill material using spreading equipment capable of obtaining uniform loose lift thickness.
  - 4. Compact fill material using equipment appropriate to the material being compacted, as determined by the Owner's testing agency.
- C. Backfilling of curbs, slabs-on-grade, and other structures whose foundation is unprotected from water shall be accomplished as soon as forms are removed, to eliminate possibility of softening of subbase below structure.
- D. Backfill simultaneously on each side of unsupported foundation walls.
  - 1. Foundation walls: Backfill with granular material as indicated on Drawings.
- E. Compaction of Backfill:
  - 1. Maintain optimum moisture content of backfill materials to attain required compaction density.
  - 2. General Fill Materials used for backfill shall be placed in lifts not exceeding 9 inches in loose-depth-measure and compacted as specified for General Site Fill.
  - 3. Granular Fill Materials used for backfill shall be placed in lifts not exceeding 6 inches in loose-depth-measure and compacted as specified for Granular Fill.
  - 4. Field density tests shall be taken after the compaction of each layer of fill by Owner's testing agency.
    - a. When tests indicate that any layer of fill or portion thereof does not meet the required compaction density or moisture content, rework non-complying area as required to achieve specified requirements.
- F. Remove surplus fill materials from Site.
- G. Tolerances:

1. Top surface of subgrade under paved areas: Plus or minus 1/4 inch from required elevations.
2. Top surface of subgrade under unpaved surfaces: Plus or minus 1/2 inch from required elevations.

### 3.9 FIELD QUALITY CONTROL

- A. Provide in accordance with Section 014000.
- B. Tests:
  1. Field density tests shall be taken by Owner's testing agency as specified in this Section in accordance with ASTM D1556, ASTM D2167, or ASTM D2922.
    - a. Field density tests will be taken at a rate of not less than 4 test for each layer of fill under foundations.
    - b. Field density tests will be taken at a rate of not less than 1 test for every 2,000 square feet of pavement area for each layer of fill, but in no case fewer than 3 tests for each layer of fill.
    - c. Field density tests will be taken at a rate of not less than 1 test for every 4,000 square feet of general Site fill area for each layer of fill, but in no case fewer than 6 tests for each layer of fill.
  2. Moisture content tests shall be taken by Owner's testing agency as specified in this Section in accordance with ASTM D3017.
    - a. Moisture content test will be taken for each field density test.
  3. Bearing capacity of undisturbed soil under footings will be tested by Owner's testing agency to verify an allowable bearing pressure of 2,000 pounds per square foot.

### 3.10 PROTECTION

- A. Protect newly graded areas from erosion.
- B. Repair and reestablish grades in settled, eroded, and rutted areas to specified tolerances.
- C. Minimize construction traffic, including foot traffic, from footing, floor slab, and pavement subgrades in order to prevent unnecessary disturbances of subgrade materials.
  1. If Owner's testing agency determines that subgrades have been disturbed, remove disturbed areas and replace and recompact to required density as directed by Owner's testing agency at no increase in Contract Sum or extension of Contract Time.
  2. Owner's testing agency shall be present during compaction of material.
- D. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction at no increase in Contract Sum or extension of Contract Time.
  1. Owner's testing agency shall be present during compaction of material.

END OF SECTION

## S-11 CONCRETE PAVING

### PART 1: PART 1 - GENERAL

#### 1.1 SUMMARY

##### A. Section Includes:

1. Formwork
2. Reinforcement
3. Control and expansion and contraction joint devices associated with concrete paving.

##### B. Related Sections:

1. Section 312000 – Earth Moving
2. Section 079200- Joint Sealants

#### 1.2 REFERENCES

##### A. American Concrete Institute (ACI):

1. ACI 301 Specification for Concrete
2. ACI 305 Hot Weather Concreting
3. ACI 306 Cold Weather Concreting
4. ACI 308 Curing Concrete
5. ACI 310 Decorative Concrete

##### B. American Society for Testing and Materials (ASTM):

1. ASTM A185-90a: Standard Specification for Steel Welded Wire, Fabric, Plain, for Concrete Reinforcement.
2. ASTM A615/A615M-93: Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
3. ASTM C29 Test for Bulk Density (Unit Weight) & Voids in Aggregate
4. ASTM C33 Specification for Concrete Aggregates
5. ASTM C39-86: Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
6. ASTM C42 Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
7. ASTM C94 Specification for Ready-Mixed Concrete
8. ASTM C138 Test Method for Density (Unit Weight), Yield and Air Content (Gravimetric) of Concrete
9. ASTM C143-90a: Standard Test Method for Slump for Hydraulic Cement Concrete.
10. ASTM C150 Specifications for Portland Cement
11. ASTM C172 Practice for Sampling Freshly Mixed Concrete (air content, composite sample, slump, temperature, wet sieving, etc.)
12. ASTM C173-94: Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
13. ASTM C309 Liquid Membrane-Forming Compounds for Curing Concrete

14. ASTM C494 Standard Specification for Chemical Admixtures for Concrete
  15. ASTM C1064-86 (1993): Standard Test Method for Temperature of Freshly Mixed Portland Cement Concrete.
  16. ASTM C1315 Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete
  17. ASTM D1752-84 (1992): Standard Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction
- C. Portland Cement Association (PCA) ([www.cement.org](http://www.cement.org))
1. PCA SP388 Guide for Specifying White and Colored Concrete
  2. PCA IS528 Finishes: Creating Visual Appeal
  3. PCA PL993 White Cement Concrete and Colored Concrete Construction
  4. PCA PA020 Exploring Color and Texture
  5. PCA DX039 Plastic Forms for Architectural Concrete
- D. KCAPWA
1. All the requirements of the Kansas City Metropolitan Chapter of the American Public Works Association (APWA), Standard Specifications and Design Criteria apply as amended and supplemented by the Department of Public Works of the City of Kansas City, Missouri (KCMO). Sections of said Specifications will be hereinafter referred to as "APWA-KCMO."

### 1.3 SUBMITTALS

- A. Product Data: Manufacturer's specifications and technical data for accessories, including the following.
1. Detailed specifications of construction and fabrication.
- B. Concrete Design Mix: Submit for each class of concrete.
1. Include description of method by which mix design was formulated and supporting backup data.
  2. Include manufacturer's product data sheets for each admixture.
- C. Quality Control Submittals:
1. Design data.
  2. Laboratory test reports.
    - a. Mill certification of reinforcement products.
    - b. Concrete aggregate graduation.
    - c. Deleterious substances within concrete aggregate.
    - d. Concrete aggregate durability.
    - e. Concrete mix additives.
    - f. Cement.
  3. Field quality control submittals are specified under PART 3.
- D. Contract Closeout Submittals:

1. Project Record Documents.
  - a. Record actual location of embedded utilities and components which are concealed from view.

#### 1.4 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Not less than 5 years experience in the actual production of specified products.
- B. Installer's Qualifications: Firm experienced in installation of systems similar in complexity to those required for this Project, plus the following.
  1. Not less than 3 years experience with systems.
  2. Successfully completed not less than 5 comparable scale projects using this system.
- C. Product/Material Qualifications: Obtain cement and aggregate from same source for all Work.
- D. Regulatory Requirements:
  1. Comply with applicable requirements for paving on public property.

#### 1.5 FIELD QUALITY ASSURANCE

- A. Water to concrete ratio
  1. Care should always be taken when adding water onsite that the W/C ratio is not exceeded.
  2. If water must be added onsite it should be added before the placement begins, no further addition of water should be allowed after placement starts.
  3. Water should never be used during the placement and finishing of the concrete as a finishing aide as surface discoloration will result.
- B. Texture Control
  1. Care should also be exercised during finishing that the concrete receives even texture throughout the entire surface regardless of the finish.
  2. Variances in the texture will cause light refraction to occur giving the appearance of color inconsistencies.
  3. On site testing when applicable should refer to ASTM 172. Testing could include:
    - a. Slump test ASTM C 143
    - b. Air content ASTM C 231 / C 173
    - c. Compressive strengths ASTM C 31 / C 39
    - d. Yield calculations ASTM C 138

#### 1.6 DELIVERY, STORAGE AND HANDLING

- A. Packing and Shipping: Deliver products in original unopened packaging with legible manufacturer's identification.

1. Ready mixed concrete shall be handled and preserved in its “batched” proportions during transportation.
  2. Mixing time shall not exceed the following.
    - a. 45 minutes when ambient temperature is above 80 degrees F.
    - b. 60 minutes when ambient temperature is below 80 degrees F.
  3. Water shall not be added to the mixed concrete.
- B. Storage and Protection: Comply with manufacturer’s recommendations.

## 1.7 PRE-CONSTRUCTION CONFERENCE

- A. To be conducted at least two weeks prior to the placement.
- B. Attendance should be mandatory for the sub contractor, general contractor and architect
- C. For a pre-construction meeting checklist refer to the pre construction checklist produced by the Midwest Industry Concrete Board (MCIB) [www.mcibconcrete.org](http://www.mcibconcrete.org) or the National Ready Mixed Concrete Association (NRMCA) [www.nrmca.org](http://www.nrmca.org) .

## 1.8 PROJECT CONDITIONS

- A. Environmental Requirements:
  1. When maximum daily temperature exceeds 85 degrees F. or rapid drying conditions exist (evaporation rate exceeds 0.15 pounds per square foot per hour) comply with ACI 305R.
  2. When mean daily temperature is below 40 degrees F. comply with ACI 306.1.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Pavement and Sidewalk Formwork: Contractor has option of the following.
  1. Metal forms with height equal to or greater than required thickness of pavement slab height, of sufficient cross section and strength and secured to withstand pressures and loads imposed on forms by placement of concrete, vibration of concrete, and finishing, including loads or impact from equipment.
  2. Slip form machines designed for placement of pavement, equipped with mechanical internal vibrators, and capable of placement of concrete to the correct thickness, cross section, line and grade within the specified tolerances.
- B. Reinforcement
  1. Reinforcing steel: ASTM A615/A615M, Grade 60.
  2. Welded wire fabric: ASTM A185 plain type.

## 2.2 ACCESSORIES

- A. Form Release Agent; Colorless material which will not stain concrete, absorb moisture, or impair natural bonding or color characteristics of concrete, and with maximum volatile organic compound (VOC) at 250 grams per liter
- B. Chairs, Bolster, Bar Supports, and Spacers: Wire bar type complying with CRSI Manual of Standard Practice recommendations, size and shape for strength and support of reinforcement during concrete placement.
  - 1. Provide plastic coating at locations adjacent to weather exposed concrete surfaces.
  - 2. Provide plastic feet on chairs and support
  - 3. Provide epoxy-coated accessories at epoxy-coated reinforcement locations.
- C. Expansion Joint Filler: ASTM D1752, closed cell sponge rubber
- D. Keyways: Nominal 2 inch thick lumber or metal screed key, cut to size and shape indicated on Drawings.
- E. Evaporation Retardant:
  - 1. Acceptable manufacturers and products:
    - a. Master Builders, Inc ConFilm
    - b. Comparable products of the following manufactures:
      - i. Conspec Marketing & Manufacturing Co., Inc
      - ii. The Euclid Chemical Company
      - iii. L & M Construction Chemicals, Inc
- F. Curing Materials
  - 1. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

## 2.3 CONCRETE MIXES

- A. Concrete shall conform to the specifications of the Kansas City Metro Materials Board (KCMMB) 4K mix. Mix designs shall be approved KCMMB mixes.
- B. Compressive strength shall be determined in accordance with ACI 318.
- C. Coarse aggregate shall be entirely granite, calcite cemented sandstone, quartzite, basalt, diabase, rhyolite, or trap rock and shall meet the gradation requirements of the current ASTM C33.
- D. Fine aggregate shall meet the requirements set forth in the current ASTM C33.
- E. Water cement ratio shall not exceed 0.44. Only potable water shall be used. The minimum water cement ratio shall be 0.25.
- F. Air Entrainment shall meet the requirements set forth in the current ASTM C260. The percentage of air content by volume shall be 6.5% plus/minus 1.5%. Mixes shall be designed for 6.5% air content.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verification of Conditions: Examine areas and conditions under which Work is to be performed and identify conditions detrimental to proper and timely completion.
  - 1. Verify compacted subgrade is acceptable and ready to support paving and imposed loads.
  - 2. Verify gradients and elevations of subgrade are correct.
  - 3. Verify manholes, inlets, and other structures are at correct elevation, grade, and alignment.
  - 4. Do not proceed until unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Surface Preparation:
  - 1. Immediately before concrete placement, thoroughly wet base material that will be in contact with concrete. Do not let standing water develop.
  - 2. Coat surfaces of manholes, curb inlets, and other structures with oil to prevent bonding of concrete.
  - 3. Ensure water proofing and vapor barrier is in place before pouring exposed aggregate layers.

### 3.3 INSTALLATION OF REINFORCEMENT

- A. Comply with the ACI 301.
- B. Place reinforcement at mid-height of slabs.
- C. Interrupt reinforcement at expansion joints.
- D. Provide doweled joints at interruptions of concrete placement with one end of dowel set in capped sleeve to allow longitudinal movement.

### 3.4 INSTALLATION OF JOINT DEVICES

- A. Expansion Joints
  - 1. Install expansion joints at locations indicated on Drawings, and at the following.
    - a. Separate exterior slabs on grade from vertical surfaces.
    - b. Radius points
    - c. 50-foot maximum straight runs of pavement.
  - 2. Align joints where appropriate
  - 3. Extend expansion joint filler from bottom of slab to within 1/2 inch of finished slab top surface.
- B. Control Joints

1. Install control joint per the Drawings in coordination with slab pattern and placement sequence as indicated in Drawings, but never more than 24 times the depth of pavement in any direction. Control Joints

### 3.5 CONCRETE PLACEMENT AND CONSOLIDATION

- A. Notify Architect and testing laboratory not less than 24 hours prior to commencement of concrete operations.
- B. Perform work in accordance with the following:
  1. ACI 301
  2. ACI 302.1R
  3. ACI 309R
  4. ACI 318

### 3.6 CONCRETE FINISHING

- A. Conform to ACI 301 Chapters 10 and 11 for the following.
  1. Floated finish followed by a medium broom finish.
- B. Hand tool edges of sidewalks forming a rounded edge.
- C. Sawed Joints
  1. Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades.
  2. Cut 1/8 inch wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before random contraction cracks.
    - a. Profile: V-Shape.

### 3.7 CURING AND PROTECTION

- A. Conform to ACI-305, ACI 306, ACI-308, ASTM C-309 and/or ASTM C-1315 while following manufacturer's recommended stone.

### 3.8 TOLERANCES

- A. Conform to ACI 117 as follows.
  1. Sidewalks and paving:
    - a. Class AX: Depressions in concrete between high spots shall not be greater than 3/16 inch below a 10 foot long straight edge.
    - b. Sidewalks and paving shall not pond water.

### 3.9 JOINT SEALING/WATER REPELLENTS

- A. Install joint sealant in accordance with Division 1- General Requirements after concrete has cured for not less than 28 days and prior to traffic being allowed on pavement.
- B. Apply water repellents to surfaces as defined in the Drawings

### 3.10 PROTECTION

- A. Immediately after placement, protect pavement from traffic and mechanically injury for not less than 7 days or until concrete has reached 80 percent of design strength.

### 3.11 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete which, in the opinion of the Architect, does not conform to required lines, details, dimensions, tolerances, or specified requirements, or, in the opinion of the Architect, concrete with excessive embedded debris.
- B. Concrete which has been determined by Architect to be defective shall be repaired or replaced as directed by Architect.
  - 1. Surface defects, shall be repaired immediately after form removal and observation by Architect

### 3.12 CLEAN-UP

- A. Keep all areas of work clean, neat and orderly at all times.
- B. Clean up and remove all equipment, deleterious materials and debris from the entire work area prior to Final Acceptance.

END OF SECTION

## S-12 LANDSCAPE GRADING

### PART 1: GENERAL

#### 1.1 SUMMARY

- A. This section includes the following:
  - 1. Preparing and supplying topsoil and/or planting mediums for landscape work.
  - 2. Testing methods of existing and/or imported material.
  - 3. Soil supplements.
  - 4. Fine grading.
- B. Related Work in Other Sections:
  - 1. Section 329200- Turf Grass
  - 2. Section 329300- Exterior Plants

#### 1.2 QUALITY ASSURANCE

- A. Topsoil
  - 1. Submit certificates of inspection required by law for transportation with invoice. File copies of certificates after acceptance of material.
  - 2. Inspection by governmental officials at point of origin does not preclude rejection of materials at project site.
- B. References
  - 1. American Society for Testing and Materials (ASTM):
    - a. ASTM D5268-92: Standard Specifications for Topsoil Used for Landscaping Purposes.
  - 2. United States Department of Agriculture (USDA)
    - a. USDA Particle Size Definition.
- C. Installer's Qualifications
  - 1. Firm experienced in installation of systems similar in complexity to those required for this Project.

#### 1.3 SUBMITTALS

- A. Product Data: Prior to delivery to site, submit manufacturers' literature to the following items:
  - 1. Organic Amendments
  - 2. Topsoil
  - 3. Soil Mixes
  - 4. Sand
  - 5. Chemical Additives/Fertilizer
  - 6. Erosion Control
- B. Test Data: Laboratory test data for each specified material.

#### 1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Labeling: Furnish standard products in unopened manufacturer's standard containers bearing original labels showing quantity, analysis and name of manufacturer.

- B. Storage: Store products with protection from weather or other conditions that would damage or impair the effectiveness of the product.

## 1.5 ANALYSES OF SAMPLES AND TESTS

- A. Sampling: Samples of materials may be taken and analyzed for conformity to specifications at any time. Furnish samples as requested.
  - 1. Rejected Materials: Remove rejected materials immediately from the site at Contractor's expense.
  - 2. Testing Agency: Pay cost of testing imported materials not meeting specifications.

## 1.6 SOILS ANALYSIS

- A. General
  - 1. Obtain an agricultural soil suitability analysis test from an accredited laboratory at the contractor's expense to assess existing topsoil and/or confirm that imported materials meet the specifications.
  - 2. Analysis must include recommendations from laboratory for soil supplements to ensure fertility for any specific uses, including cool season lawns and commercial landscaping.
  - 3. Analysis must be submitted to Landscape Architect for approval.
  - 4. Contractor is responsible for amending soil to achieve nutrient and pH levels recommended by the soil test.
- B. Sample Source
  - 1. The collection of soil samples shall comply with the recommendations of the accredited laboratory.
  - 2. If existing soils are to be utilized, a minimum of (1) sample shall be taken from the site for every acre of treatable area. Location(s) to be determined by Landscape Architect upon the Contractor's request and documented by the Contractor.
- C. Testing Scope
  - 1. Soil pH
  - 2. Buffer pH
  - 3. Phosphorus
  - 4. Potassium
  - 5. NO<sub>3</sub>
  - 6. Organic Matter
- D. Testing Agencies
  - 1. University of Missouri Extension Offices, Soil and Plant Testing Laboratory, 23 Mumford Hall, University of Missouri, Columbia, MO 65211. Phone: (573) 882.0623 Fax: (573) 884.4288
  - 2. Kansas State University Extension Offices, Soil Testing Laboratory, Throckmorton Hall, Room 2308, Kansas State University, Manhattan, KS 66506. Phone: (785) 532.7897
  - 3. Approved Equal

## 1.7 ACCEPTANCE

- A. Acceptance: Work will not be accepted until the satisfactory completion of all soil preparation work.

- B. Notification: Give notification of completion of soil preparation prior to initiating planting operations.

## PART 2: PRODUCTS

### 2.1 TOPSOIL

- A. General Qualifications
  1. Only fertile, friable, well-drained soil, of uniform quality, free of stones over 1 in. diameter, sticks, oils, chemicals, plaster, concrete and other excess materials.
  2. Acidity range (ph): 6.0 and 7.5.
  3. Organic matter content: 4 to 25 percent.
  4. No particles larger than 1 inch in size.
  5. Process, clean, and prepare imported topsoil to comply with specified criteria.
- B. Imported Topsoil
  1. Topsoil shall meet the general requirements listed in this subsection.
  2. Samples: The Landscape Architect reserves the right to take samples of the imported topsoil delivered to the site for conformance to the Specifications.
  3. Rejected Topsoil: Immediately remove rejected topsoil off the site at Contractor's expense.
  4. Obtain topsoil from naturally, well-drained sites, where topsoil occurs in a depth of not less than 4 inches. Do not obtain from bogs or marshes.
  5. Soil Texture: loam or silt loam
- C. Existing On-Site Topsoil
  1. Topsoil shall meet the general requirements listed in this subsection.
  2. Topsoil shall include any amendments recommended by the soil test.

### 2.2 CHEMICAL ADDITIVES

- A. The following additives may or may not be used depending on the outcome of the soils agricultural suitability report
  1. Ground limestone
  2. Agricultural limestone containing not less than 85% of total carbonates, ground to such fineness that 50% will pass #100 sieve and 90% will pass #20 sieve.
  3. Dolomite lime: Agricultural grade mineral soil conditioner containing 35% minimum magnesium carbonate and 49% minimum calcium carbonate, 100% passing #65 sieve. "Kaiser Dolomite 65 AG" as manufactured by Kaiser, Inc. Mineral Products Department, or equal.
  4. Gypsum: Agricultural grade product containing 80% minimum calcium sulfate.
  5. Iron Sulfate (Ferric or Ferrous): Supplied by a commercial fertilizer supplier, containing 20% to 30% iron and 35% to 40% sulfur.
  6. Sulfate of Potash: Agricultural grade containing 50% to 53% of water-soluble potash.
  7. Single Superphosphate: Commercial product containing 20% to 25% available phosphoric acid.
  8. Ammonium Sulfate: Commercial product containing approximately 21% ammonia.

9. Ammonium Nitrate: Commercial product containing approximately 34% ammonia.
10. Calcium Nitrate: Agricultural grade containing 15-1/2% nitrogen.
11. Urea Formaldehyde: Granular commercial product containing 38% nitrogen.
12. I.B.D.U. (Iso-Butyldiene Diurea): Commercial product containing 31% nitrogen.
13. Soil Sulfur: Agricultural grade sulfur containing a minimum of 96% sulfur.
14. Iron Sequestrene: Geigy Iron Sequestrene 330 Fe.

### 2.3 PRE-EMERGENCE WEED CONTROL

- A. General
  1. Enide 50W, as manufactured by Tuco Division, Kalamazoo, Michigan, OR
  2. Approved Equal

### 2.4 WATER

- A. General: Clean, fresh and potable, furnished and paid for by Contractor. Transport as required.

### 2.5 EROSION CONTROL PRODUCTS

- A. Source: North American Green or approved equal
- B. Slopes less than 33% and low flow channels: S75BN Single Net Straw Blanket or approved equal
- C. Slopes more than or equal to 33% and high flow channels: SC150BN Double Net Straw-Coconut Blanket or approved equal

## PART 3: EXECUTION

### 3.1 JOB CONDITIONS

- A. Utilities and Excavation
  1. Determine location of underground utilities and perform work in a manner that will avoid possible damage. Hand-excavate, as required.
  2. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Landscape Architect before planting.
  3. Give written notification if other construction activities threaten to damage existing plants to remain.
- B. Verification of Previous Work
  1. Verify that all areas to receive imported topsoil have been completed prior to commencement of fine grading.

### 3.2 SOIL PREPARATION

- A. Scarify and recompact all subgrades to a depth of 6" that are not already addressed.
- B. Moisture Content:

1. Inadequate Moisture Content: Add water and thoroughly mix into fill material until the moisture necessary is uniformly dispersed throughout.
  2. Excessive Moisture Content: Aerate fill material by blading or other acceptable methods until moisture content is uniformly reduced to achieve required compaction.
  3. Maintain within 2 percent above or below optimum moisture content at all times during the work.
- C. Clearing of Debris:
1. Clear all planting areas of stones 1" inch diameter and larger, weeds, debris and other extraneous materials prior to amending existing soil incorporating imported topsoil.
- D. Establish extent of grading by area and elevation. Designate and identify datum elevation and project engineering reference points. Set required lines, levels and elevations.
- E. Do not cover or enclose work of this section before obtaining required observations, tests, approvals, and location recording.

### 3.3 INSTALLATION

- A. Roll placed topsoil ensuring a total thickness of topsoil after compaction shall be not less than:
1. Turf areas – 4 inches
  2. Planting beds – 18 inches
- B. Import topsoil as required to achieve required total compacted thickness.
- C. General
1. Grade smooth all planting areas after weeding, topsoil spreading, soil preparation, and soil conditioning have been completed and soil has been thoroughly compacted.
  2. Provide finish subgrade elevations parallel to finished surface grades to allow for pavement depths, topsoil and soil amendments. Provide uniform levels and slopes.
  3. Provide all grades for natural runoff of water without low spots or pockets. Accurately set flow line grades at 2% minimum gradient unless otherwise noted in drawings.
  4. Finish grades shall be smooth, even and on a uniform plane with no abrupt changes of surface unless conveyed otherwise.
  5. Grades shall be uniform levels or slopes between points where elevations are given, or between points established by walks, paving, curbs or catch basins unless otherwise indicated.
  6. Tops and toes of all slopes shall be rounded to produce a gradual and natural appearing transition between relatively level areas and slopes unless specified otherwise.
- D. Grades:
1. Tolerance: All planting areas, including lawn areas, shall be true to grade within 1 in. when tested in any direction within a 10 ft. straightedge.
  2. Finish Grades of Shrub, Perennial, and Groundcover Areas: 1-1/2 in. below top of adjacent pavement, headers, curbs, or walls unless otherwise indicated on the Drawings.
  3. Finish Grades of Lawn Areas: 3/4 in. below top of adjacent pavement, curbs or headers.

4. Finish grades along wall caps: ensure finish grade falls at base of stone cap.

### 3.4 SOIL CONDITIONING

1. Preparation of Shrub and Perennial Groundcover Beds:
  - a. Till all shrubs and perennial groundcover planting beds to a depth of 12” below finish grade incorporating amendments as necessary.
  - b. Bring to pH of 6.0 to 6.5 for non-ericaceous plants and 5.0 to 5.5 for ericaceous plants. Verify pH by testing.
  - c. Dispose of excess native site soil excavated from plant bed.
2. Till all turf areas to a depth of 4” below finish grade incorporating amendments as necessary.
3. Pre-Emergent Herbicide
  - a. Apply pre-emergent weed control to all areas to be mulched and under erosion control fabric.
  - b. Comply with the manufacturer’s recommendations to avoid incompatible uses with specific plants.

### 3.5 CLEAN UP

1. Keep all areas of work clean, neat and orderly at all times.
2. Clean up and remove all excess materials and debris from the entire work area prior to Acceptance.

END OF SECTION

## S-13 TURF GRASS

### PART 1: GENERAL

#### 1.1 DESCRIPTION

- A. Related Requirements: Review the General Contract Conditions and Division One, General Requirements, which contain information and requirements that apply to this Section.
- B. Work Included: Provide complete as shown and specified.
  - 1. All new seeded areas
  - 2. Lawn fertilizer
  - 3. Erosion Control Blanket
  - 4. Reconditioning of existing lawns damaged during construction.
- C. Related Work in Other Sections:
  - 1. Section 329119- Landscape Grading
  - 2. Section 329300- Exterior Plants

#### 1.2 QUALITY ASSURANCE

- A. Certificates of Inspection
  - 1. Submit as required by law for transportation of each shipment of seed along with invoice.
  - 2. Submit copies of certificates after acceptance of material.
  - 3. Inspection by Federal or State Governments at place of growth does not preclude rejection at project site.
- B. Experience Requirements
  - 1. Supplier: not less than 5 years experience in the supplying of the types of products specified.
  - 2. Installation contractor: not less than 3 years successful experience in the installation of similar types of products specified.

#### 1.3 SUBMITTALS

- A. Samples and Product Data:
  - 1. Seed Mix(es)
    - a. Seed and seed labels shall conform to all current State and Federal regulations and will be subject to the testing provisions of the Association of Official Seed Analysis.
    - b. Submit seed labels to Landscape Architect for approval prior to seeding.
- B. Submit the Following Materials Certification:
  - 1. Tackifier.
  - 2. A signed statement certifying that the seed furnished is from a lot that has been tested by a recognized laboratory for seed testing within six months prior to the date of delivery.

3. Test Data: Laboratory test data for each specified material.
4. Seed varieties: Guaranteed statement of composition, mixture and percentage of purity and germination of each variety, stating botanical and common names.
5. Selection and ordering of seed and sod

C. Unavailable Materials

1. If proof is submitted that any seed and sod is not obtainable, a proposal will be considered for use of the nearest equivalent variety with corresponding adjustment of Contract price.
2. Substantiate such proof in writing no later than 30 days after award of contract by citing (4) sources with their statements that the product is available.
3. Special Conditions: The above provisions shall not relieve Contractor of the responsibility for obtaining specified seed in advance if special growing conditions or other arrangements must be made in order to supply specified materials.

1.4 JOB CONDITIONS

- A. Notify Owner's Representative seven (7) days prior to start of seeding and sodding operations.
- B. Protect existing utilities, paving and other facilities from damage caused by seeding and sodding operation.
- C. Perform seeding and sodding work only after planting and other work affecting ground surface has been completed.
- D. Restrict traffic from lawn areas until grass is established. Erect signs and barriers as required.
- E. Provide hose and lawn watering equipment as required.

1.5 SEQUENCING AND SCHEDULING

- A. Proceed with, and complete landscape work as specified within the submitted planting schedule, working within seasonal limitations for each kind of landscape work required.
- B. Plant or install materials during normal planting seasons for each type of plant material required.
  1. Season and Conditions
- C. Correlate planting with specified maintenance periods to provide maintenance from date of substantial completion.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Store and protect all materials from weather or other conditions that would damage or impair the effectiveness of the product.
- B. Seed
  - 1. Delivery: Furnish standard seed in unopened manufacturer's standard containers bearing original certification labels showing quantity, analysis and name of manufacturer.

#### 1.7 ANALYSES OF SAMPLES AND TESTS

- A. Samples: Samples of materials may be taken and analyzed for conformity to specifications at any time. Furnish samples as requested.
- B. Rejected Materials: Remove rejected materials immediately from the site at Contractor's expense. Pay cost of testing materials not meeting specifications

#### 1.8 FINAL REVIEW AND FINAL ACCEPTANCE

- A. Specific Requirements:
  - 1. Seed and sod areas will be eligible for review once the lawn area has been mowed after reaching its prescribed mowing height.
  - 2. Only the entire project shall be considered for review unless partial review areas have been defined by the Landscape Architect.
  - 3. Seeded areas will be acceptable provided all requirements have been complied with, and a healthy, uniform, close stand of the specified grass is established free of weeds, undesirable grass species, disease, and insects.
  - 4. Lawn areas shall be mowed at least once
  - 5. All bare areas over 6" square shall be re-seeded.
- B. General:
  - 1. Final review and final acceptance procedure shall be combined with those defined Section 329300: Exterior Plants.

### PART 2: PRODUCTS

#### 2.1 SOD

- A. Age and Source: 12-18 months old, locally grown sod.
- B. Quality
  - 1. Sod shall be dense, healthy, field-grown on fumigated soil with the grass having been mowed at 1 inch before harvesting from field.
  - 2. Sod shall be dark green in color, (not dormant), relatively free of thatch, free from diseases, weeds and harmful insects.
  - 3. Sod shall be reasonably free of objectionable grassy and broadleaf weeds.
  - 4. Sod shall be considered weed free if no more that 10 such weeds are found per 100 square feet of sod.

5. Sod shall be rejected if found to contain but not be limited to the following weeds: quackgrass, johnsongrass, poison ivy, nimbleweed, thistle, bindweed, bentgrass, perennial sorrel, bromegrass.

2.2 TURF SEED

A. Composition

1. Fresh, clean, certified, new crop seed of the following varieties mixed by commonly approved methods in the proportions as shown.
2. All seed mixes shall not exceed a 9 month shelf life.

Seed Mix	Min. % of overall weight	Pure Live Seed (PLS)	Germination Rate
Improved Variety Turf-type Tall Fescue Apache III, 2 <sup>nd</sup> Millennium or Falcon IV.	90%	98%	90%
Annual Rye	10%	98%	90%
Total Seed Application Rate per 1,000 SF	8 pounds		

B. Labeling

1. All seed shall be furnished in bags or containers clearly labeled to show the name and address of the supplier, the seed name, the lot number, net weight, the percent of weed seed content and the guaranteed percentage of purity and germination.

C. Noxious Seeds

1. All brands furnished shall be free from noxious seeds including but not limited to Russian or Canadian Thistle, European Bindweed, Johnson Grass and Leafy Spurge.

D. Seed which has become wet, moldy or otherwise damaged in transit or in storage will not be acceptable

E. Seed shall not exceed 1% of weed content. If seed available on the market does not meet the minimum purity and germination percentages of purity or germination by furnishing sufficient additional seed to equal the specified product, product comparison shall be made on the basis of pure live seed in pounds. The formula used for determining the quantity of pure live seed shall be: Pounds of Seed x (Purity X Germination) = Pounds of Pure Live Seed (PLS)

2.3 WATER

- A. Either potable water as furnished by Contractor.

PART 3: EXECUTION

3.1 INSPECTION AND PREPARATION

- A. Soil conditioning, as defined in Section 329119 Landscape Grading, shall be completed between 2 weeks and 2 months prior to sod installation or seeding.
- B. Restore prepared areas to specified condition if eroded, settled, or otherwise disturbed after fine grading and prior to seeding.

### 3.2 INSTALLATION

- A. Seeding
  - 1. All sowing of seed shall be completed between March 1 and May 15 or September 1 and November 1 unless otherwise specified.
  - 2. Sowing delayed beyond the specified dates, and due to circumstances beyond the Contractor's control, may be continued upon written approval.
  - 3. The sowing shall be stopped when satisfactory results are not likely to be obtained due to excessive moisture conditions, high winds or other unfavorable conditions.
  - 4. It shall be resumed only when conditions are favorable again or when alternative or corrective measures and approved procedures have been adopted.
- B. Method of Sowing
  - 1. Drill sowing is required unless another method is approved by the Landscape Architect. Drills shall be set 8" apart.
  - 2. Subcontractor shall make 2 passes in the same direction to place rows 3" to 5" apart. Place seed 1/4" to 3/8" in ground.
  - 3. When drilled sowing is utilized, skipped areas wider than 5" between drills or areas averaging more than 5" in width shall be reseeded. Bare areas over 1 s.f. shall be reseeded.
- C. Compacting
  - 1. Immediately after sowing the seed, the entire area shall be compacted by means of a cultipacker, roller, or other approved equipment, in order to reduce air pockets and create good soil to seed contact.
  - 2. When a cultipacker or other approved equipment that leaves a roughened surface is used, the compacting shall be along the contour wherever possible.
  - 3. If the mulching operations can be accomplished the same working day the area is seeded, compacting the seed and spreading the mulch should be done at the same time.
- D. Mulching
  - 1. The mulch shall be spread uniformly in a continuous blanket, using not less than 2,000 pounds per acre or 1 bale per 1,000 square feet, approximately 1" loose measurable depth over seeded areas.
- E. Anchoring

1. Immediately following spreading of the straw, a V-type wheel land packer shall anchor the material to the soil.
2. A disc harrow set to cut only slightly or other suitable equipment that will secure the straw firmly in the ground shall be used to form soft binding mulch and prevent loss or bunching by the wind.

### 3.3 REPLACING AND RECONDITIONING OF EXISTING LAWNS

#### A. General

1. Seed all existing lawns damaged by Contractor's operations including but not limited to the storage of materials and equipment operations.
2. If the Contractor believes that the lawn in question may be reconditioned, he may request the Landscape Architect to review all the lawn areas in question for their eligibility for reconditioning.
3. The Contractor may recondition an existing lawn in lieu of replacement upon the approval of the Landscape Architect.
4. Both replacing and reconditioning of existing lawns shall be held to the same standards for acceptance, maintenance, and warranty outlined in these specifications.

#### B. Reconditioning Lawns

1. Mow, rake, and aerate if compacted, fill low spots, remove humps, fertilize, and seed conforming to the requirements set out in these specifications.
2. Remove weeds before seeding using selective chemical weed killers if necessary.
3. Apply a seedbed mulch, if required, to maintain moist condition.

### 3.4 MAINTENANCE

A. Contractor shall maintain all turf areas up until all turf areas have achieved final acceptance

#### B. Maintenance shall include

1. Watering seed and sod areas per industry standards for the particular plant type and compensating for recent precipitation.
2. Mowing all the planted lawn areas at the prescribed height, but shall not exceeding 3" in height.
3. Top dressing with 1 pound of Nitrogen 1,000 square feet of turf area after first mowing. Do not apply if grass is dormant.

### 3.5 EROSION BLANKET

A. Install erosion control blanket – staked per manufacturer's specification on all slopes exceeding a 3:1 slope that are specifically labeled in the drawing to be seeded. Otherwise these slopes shall be staked with sod per Part 3 of this section

- B. Provide straw bale checking in ditches or problem swales at intervals required to adequately slow water velocity and impede soil loss.

3.6 CLEAN-UP

- A. Perform cleaning during installation of the work and upon completion of the work.
- B. Repair damage resulting from seeding operations.
- C. Clean up and remove all deleterious materials and debris from the entire work area up until Acceptance.

END OF SECTION

## S-14 PLANTS

### PART 1: GENERAL

#### 1.1 DESCRIPTION

- A. Related Requirements: Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Work Included: Provide complete as shown and specified.
  - 1. Trees
  - 2. Topsoil Amendments
  - 3. Planting Accessories
- C. Related Work in Other Sections
  - 1. Landscape Grading           Section 329119
  - 2. Turf Grass                    Section 329220

#### 1.2 QUALITY ASSURANCE

- A. Certificates of Inspection
  - 1. Submit as required by law for transportation of each shipment of plantings along with invoice.
  - 2. Submit copies of certificates after acceptance of material.
  - 3. Inspection by Federal or State Governments at place of growth does not preclude rejection at project site.
- B. Experience Requirements
  - 1. Supplier: not less than 5 years experience in the supplying the types of products specified.
  - 2. Installation contractor: not less than 3 years successful experience in installing similar types of products specified.
- C. Applicable Standards
  - 1. ANSI Z60.1 "American Standard for Nursery Stock."

#### 1.3 SUBMITTALS

- A. General
  - 1. Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
  - 2. Certificates of inspection as required by governmental authorities.
- B. Analysis and Standards
  - 1. Package standard products with manufacturer's certified analysis.
  - 2. Right is reserved to take and analyze samples of materials for conformity to specifications at any time. Furnish samples upon request.
  - 3. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agriculture Chemists, wherever applicable.

### C. Plant Procurement Reports

1. Contractor shall submit a table listing the following.
  - a. plant species (common and scientific name)
  - b. quantity
  - c. size
  - d. nursery name and location
  - e. anticipated installation date.
2. Report shall be submitted to the Owner's Representative at the following project milestones.
  - a. One week after Project awarded.
  - b. One month prior to installation
  - c. Maximum six month intervals between previous two dates.
3. If substitutions are requested, contractor shall provide written statements from a minimum of four nurseries stating the lack of availability. Documentation should include a proposal for substitutions of the unobtainable plant material including material of the nearest equivalent size or variety with corresponding adjustment of Contract price.

### D. Maintenance Instructions

1. Typewritten instructions recommending procedures to be established by Owner to maintain installed landscape work.
2. Submit prior to Acceptance.

### E. Miscellaneous Materials

1. A sample of mulch, exemplifying its size, texture, and color shall be submitted for approval by the Landscape Architect
2. A sample edging type(s), 12" to 14" in length.

## 1.4 MATERIAL INSPECTIONS

### A. Plant Material

1. Contractor may request Landscape Architect to review plant materials at place of growth or from nursery shipment site. Contractor shall make the request at least 7 days prior to the review date.
2. Right is reserved to refuse review at this time if, in the Landscape Architect's judgement, an insufficient quantity of plants is available.
3. Label at least one plant of each variety with a securely attached waterproof tag bearing legible designation of botanical and common name.
4. Contractor shall accompany Landscape Architect to all review(s) of plant materials at the nursery.
5. Landscape Architect will review and tag plants at place of growth and upon delivery for conformity to specifications.
6. The Landscape Architect retains the right to further inspect trees and shrubs for size and condition of balls and root systems, insects, injuries and latent defects, and to reject unsatisfactory or defective material at any time during progress of work.

### B. Distant Plant Material

1. If on-site review of plant material is not feasible due to geographical location, submit photographs of plant material with point of reference to determine scale.
2. Such review shall not impair the right to inspect and reject once the Landscape Architect can inspect the material in person.

#### C. Rejected Materials

1. Remove rejected materials immediately from the site at Contractor's expense.
2. If conditions prohibit the immediate replacement of the rejected plant material, the Contractor shall fill open tree pits with mulch or an approved material.

### **1.5 DELIVERY, STORAGE AND HANDLING**

#### A. General

1. Ship landscape materials with certificates of inspection required by governing authorities.
2. Comply with regulations applicable to landscape materials.
3. Furnish standard products in manufacturer's standard containers bearing original labels legibly showing quantity, analysis, genus, species, variety, and name and location of source.
4. Store products with protection from weather or other conditions that would damage or impair the effectiveness of the product.
5. Do not lift or handle plants by branches or stems at any time.
6. Do not bind or handle plants with wire or rope at any time.

#### B. Packaged Materials

1. Deliver packaged materials in containers showing weight, analysis, and name of manufacturer.
2. Protect materials from deterioration during delivery and while stored at site.
3. Do not remove container-grown stock from containers until planting time.
4. Protect metal containers from sun during summer months with temperatures above 80 degrees F.

#### C. Trees and Shrubs

1. Dig balled and burlapped plants with firm, natural balls of earth of diameter not less than that recommended by USDA Standard for Nursery Stock, and of sufficient depth to include the fibrous and feeding roots.
2. Do not prune prior to delivery unless otherwise approved by Landscape Architect.
3. Do not bend or bind-tie trees or shrubs in such manner that would damage bark, break branches, or destroy natural shape.
4. Provide protective covering during delivery.
5. Do not drop balled and burlapped stock during delivery.
6. After preparations for planting have been completed, deliver trees and shrubs and plant immediately.
7. If trees or shrubs must be transplanted in full-leaf or in hot weather an anti-desiccant shall be applied to retard excessive loss of moisture from foliage of plant materials.
8. An emulsion type anti-desiccant liquid shall be sprayed on to the foliage of trees and shrubs at the nursery before transplanting and again after installation.

9. If planting is delayed more than 6 hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture.

## **1.6 JOB CONDITIONS**

### **A. Utilities and Excavation**

1. Determine location of underground utilities and perform work in a manner that will avoid possible damage. Hand-excavate, as required.
2. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Landscape Architect before planting.

## **1.7 SEQUENCING AND SCHEDULING**

### **A. Planting Time**

1. Proceed with, and complete landscape work as specified in the submitted plant schedule, working within seasonal limitations for each kind of landscape work required.
2. Plant or install materials during normal planting seasons for each type of plant material required.
3. Correlate planting with specified maintenance periods to provide maintenance from date of substantial completion.

## **1.8 MAINTENANCE**

A. Contractor is required to maintain all plant materials included in the Contract up until Acceptance.

B. Maintenance shall comply with professional standards and include but not be limited to the following practice.

1. Adequate watering for the given plant type
2. Removal of any undesirable species (weeding)
3. Replace/restore damages stakes, guy supports, or damaged wrappings and insure that trees are upright
4. Restore mulch beds to maintain proper cover defined in Drawings
5. Treatment of any disease, insect infestation, or other condition detrimental to the plants' survival
6. Mowing as prescribed for the grass type
7. Dead-heading of perennials and/or native grasses at the appropriate times

C. Contractor shall coordinate with Owner to avoid conflicts with the existing maintenance practices.

## **1.9 ACCEPTANCE**

A. Only the entire project shall be considered for review unless partial areas of acceptance have been defined by the Landscape Architect.

- B. Upon total completion of the specified work, the Contractor shall request the Landscape Architect to review the finished product for Acceptance. Contractor shall request the review 10 days before anticipated review date.
- C. If after completing the inspection, the Landscape Architect finds unsatisfactory items, he/she shall compose an Acceptance Punch List for the Contractor and Owner.
- D. The Contractor shall correct unsatisfactory items and request the Landscape Architect to review.
- E. Additional inspections beyond the previous two inspections shall be at the expense of the Contractor on an hourly basis plus traveling expenses that may be deducted from final payment.

## **1.10 WARRANTY PERIOD**

### **A. Requirements**

- 1. Warrant that all plant materials are true to species and variety.
- 2. Warrant that all plant materials installed under this Contract will be healthy and in flourishing condition of active growth for the specified duration.
- 3. Exceptions to this warranty are defects resulting from causes outside the Contractor's professional responsibility. These causes include but are not limited to:
  - a. vandalism
  - b. Acts of God
- 4. Only one (1) replacement will be required after acceptance, except for losses or replacements due to failure to comply with specified requirements.

### **B. Warranty Time Period**

- 1. Trees and Shrubs: one (1) year after date of acceptance
- 2. Warranty time period states the minimum amount of time before a Warranty Acceptance will be granted. If the Contractor is tardy in requesting a Warranty Inspection, the warranty shall be extended to the time of Warranty Acceptance.

### **C. Warranty Acceptance**

- 1. Once the warranty period is complete, the Contractor shall request the Landscape Architect to review all the items under warranty.
- 2. If any plants are dormant at the time of inspection, the review shall be postponed until they may be adequately assessed.
- 3. If after completing the inspection, the Landscape Architect finds unsatisfactory items, he/she shall compose a Warranty Replacement List for the Contractor and Owner.
- 4. The review process shall follow the same procedure as the Acceptance process described in this Section.
- 5. Materials will be evaluated and recorded by the Landscape Architect as to their qualifications for the one-time replacement warranty the Contractor assumes. Satisfactory replacements will be considered non-warranty items at the point of acceptance.

## **PART 2: PRODUCTS**

### **2.1 PLANT MATERIALS**

#### **A. General**

1. Provide trees, shrubs, and other plants of size, genus, species, and variety shown and scheduled for landscape work and complying with recommendations and requirements of ANSI Z60.1 "American Standard for Nursery Stock."
2. Provide healthy, vigorous stock, grown in recognized nursery in accordance with good horticultural practice and free of disease, including but not limited to insects, eggs, larvae, and defects such as knots, sun-scald, injuries, abrasions, or disfigurement.
3. Provide freshly dug trees and shrubs.
4. Samples must prove to be completely free of circling, kinked or girdling trunk surface and center roots and show no evidence of a pot-bound condition.
5. Size
  - a. If a range of size is given, do not use plant materials less than the minimum size.
  - b. Not less than 40% of the plants shall be as large as the maximum size specified.
  - c. The measurements specified are the minimum size acceptable and are the measurements after pruning, when pruning is required.
  - d. Plants that meet the measurements specified, but do not possess a normal balance between height and spread shall be rejected.
6. Substitutions
  - a. Substituted plants shall be true to species and variety and shall conform to measurements specified except the plants larger than specified may be used if accepted.
  - b. Substitute plants shall not increase Contract price unless a Change Order is approved.
  - c. If larger plants are accepted, increase the ball of earth proportion to the size of the plant.

#### **B. Broadleaf Trees**

1. Provide single stem trees except where special forms are shown or listed.
2. Multi-stem trees shall have a minimum of (3) stems with a minimum of (2) of the stems being within the caliper size range specified.
3. Provide balled and burlapped (B&B) broadleaf trees.

### **2.2 MISCELLANEOUS LANDSCAPE MATERIALS**

#### **A. Pre-Emergence Weed Killer**

1. Pre-emergence weed killer shall be granulated and shall be "Treflan" or "Dachtal", or approved equal 12 month weed preventer.

#### **B. Edging**

1. 4 inch deep by ¼ inch thick commercial steel edging fabricated in sections with loops welded to face of sections spaced 36 inch on center to receive stakes.
2. Stakes: 16 inch long tapered steel
3. Finish: Manufacturer's standard black painted finish

- C. Mulch
  - 1. Dark, double-grounded hardwood mulch.
- D. Anti-Erosion Mulch
  - 1. Provide clean, seed-free salt hay or threshed straw of wheat, rye, oats, or barley.
- E. Anti-Desiccant
  - 1. Emulsion type, film-forming agent designed to permit transpiration, but retard excessive loss of moisture from plants not removable by rain or snow.
  - 2. Deliver in manufacturer's fully identified containers and mix in accordance with manufacturer's instructions.
- F. Filtration/Separation Fabric
  - 1. Water permeable filtration fabric of fiberglass or polypropylene fabric.
- G. Tree Wrapping
  - 1. Tree-wrap tape not less than 4 inches wide, bituminous, impregnated tape, corrugated or crepe paper, brown in color, designed to prevent borer damage and winter freezing.
- H. Water
  - 1. Clean, fresh and potable, furnished and paid for by Contractor.
- I. Stakes and Guys
  - 1. Provide stakes and deadmen of sound new hardwood, treated softwood, or metal, free of defects.
  - 2. Provide wire ties and guys of 2-strand, twisted, pliable galvanized iron wire, not lighter than 12 Ga. with zinc-coated turnbuckles.
  - 3. Provide not less than 1/2-inch diameter rubber or plastic hose, cut to required lengths and of uniform color, material, and size to protect tree trunks from damage by wires.

### **PART 3: EXECUTION**

#### **3.1 REVIEW OF EXISTING CONDITIONS & PLANT LAYOUT**

- A. Do not commence planting work prior to acceptance of soil preparation and final grades.
- B. Submit written notification of all conditions inconsistent with specifications for any related Sections before commencing work.
- C. Layout plants at locations shown on Drawings.
  - 1. Stake each tree and shrub Using 3-foot lath; large shrub massings may be outlined.
  - 2. Outline planting beds with lime as needed to define limits.
  - 3. Contractor shall request Landscape Architect to review staking and outlining locations for approval before installation.
  - 4. Locations of markings will be checked in the field and will be adjusted to exact position before planting begins.
  - 5. Right is reserved to refuse review at this time if, in the Landscape Architect's opinion, an insufficient amount of staking or outlining is available for review.

#### **3.2 PLANTING OPERATIONS**

- A. General

1. Protect plants at all times from sun or drying winds
2. Keep plants that cannot be planted immediately upon delivery in the shade, well-protected and well-watered.
3. Heel in and protect with burlap all B&B plant materials which cannot be planted upon delivery.

#### B. Handling and De-potting of Plant Materials

1. Avoid all damage to containers and rootballs. If rootball is cracked or broken during handling, plant will be rejected.
2. Cut metal containers on two sides with accepted cutting tool. Do not use spade.
3. For plastic containers, tip container to horizontal orientation and carefully remove shrub. Support rootball during installation to prevent cracking or shedding of soil.

#### C. Installation

1. If rock, underground utilities, tree roots or other obstructions are encountered in the excavation of plant pits, alternate locations may be used as directed by Landscape Architect.
2. Where locations cannot be changed, Contractor shall submit a proposal to remove or relocate the obstructions to the Landscape Architect.
3. If left unattended, tree pits shall be temporarily fenced off to avoid potential hazard.
4. Scarification
  - a. Plant Rootball
    - i. After removing plant from container, scarify the sides of the rootball to a depth of 1 inch at four to size equally-spaced locations around the perimeter of the ball.
    - ii. Completely sever or remove all circling roots over 3/8-inch in diameter.
  - b. Plant Pit
    - i. Compact before setting of plants
    - ii. Scarify sides of plant pit, thoroughly breaking up all surfaces and eliminating all “glazed” areas.
5. Positioning
  - a. Backfill plant pit as required allowing crown of ball 2” above new finish grade.
  - b. Thoroughly foot-tamp all backfill.
  - c. Position plant in planting pit, maintaining plumb location.
  - a. Brace each plant plumb and rigidly in position until planting soil has been tamped solidly around the ball and roots.
  - b. When plant pits have been backfilled approximately 2/3 full, water thoroughly and saturate rootball, before installing remainder of the backfill mix to top of pit, eliminating all air pockets.
6. Fertilizer Tablets:
  - a. Place evenly distributed in plant pits when backfilled 2/3 according to the following schedule.
    - i. Shrub – 0.05 lbs.
    - ii. Ornamental Tree – 0.20 lbs.
    - iii. Other Trees – 0.30 lbs.

- D. Adjustment: Adjust plants so that after full settlement has occurred, the grade at the base of the plants is 2 inches above the adjacent planting finish grade.

### **3.3 STAKING AND GUYING**

#### **A. General**

1. Trees shall be able to stand upright without support, and shall return to the original vertical position after their tops have been deflected horizontally and released.
2. Stake or guy trees that do not meet this qualification.
3. All plant materials shall remain plumb and straight for all given conditions from installation through the guarantee period.

#### **B. Staking**

1. Locate stakes in around the trunk equidistant from the trunk of tree and from each other, with one stake aligned with the trunk and the source of prevailing winds.
2. Drive stakes at least 30 inches into firm ground.

#### **C. Guying**

1. Wire support straps shall be placed around the trunk in a single loop.
2. Run wire through grommets on support strap, tighten, and keep taut.
3. Guy trees at points of branching, with guys spaced equally around and outside perimeter of ball.
4. Provide one turnbuckle for each guy.
5. Use 2 cable clamps at each cable connection.
6. Place white plastic guy covers on all guys.

### **3.4 APPLICATION OF PRE-EMERGENCE WEED KILLER**

- A. Use under mulch around all plants and under mulch for ground covers.
- B. Prior to application of pre-emergence weed killer the area shall be smooth and be free of clods and debris larger than 1”.
- C. Check manufacturer’s instructions to avoid weed killers that may be harmful to ground cover and other desirable plants.
- D. Rate of application and use shall be according to the manufacturer’s recommendations.

### **3.5 MISCELLANEOUS MATERIALS & WORK**

- A. Labels: Remove all plant labels, wires and ties from plants.
- B. Mulch: Install a 3” deep layer of specified mulch over all planting areas unless otherwise noted on drawings.
- C. Watering Basin: Form saucer with 3” high berm centered around tree and shrub pits 12 inches wider than ball diameter
- D. Watering: Water all plants immediately after completion of planting operations.
- E. Wrapping: Wrap trunks of deciduous trees of 1-1/2 inch caliper or more with a spiraling to the height of the third branch from the top down, tying the end securely in place.

### **3.6 CLEAN-UP**

- A. Keep all areas of work clean, neat and orderly at all times; remove excess materials and debris from the entire work area up until Acceptance.

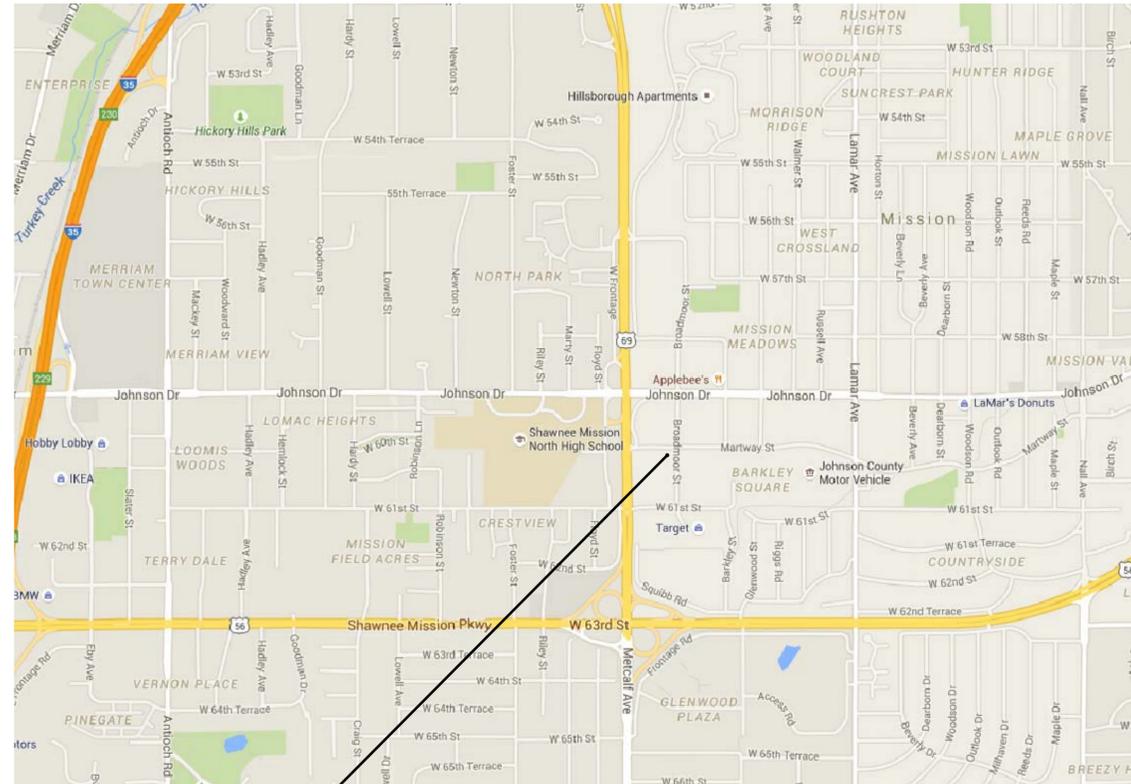
**END OF SECTION**

# MISSION CROSSING PARK

## CONSTRUCTION DOCUMENTS

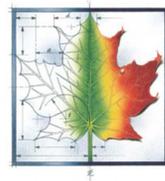
MAY 28, 2015

6901-6951 MARTWAY ST.  
MISSION, KANSAS 66202



PROJECT LOCATION 

INTEGRATING NATURE  
AND ARCHITECTURE  
**BBN**  
ARCHITECTS  
INC



ARCHITECTURE/ LANDSCAPE  
ARCHITECTURE

BBN ARCHITECTS, INC.  
411 NICHOLS RD, SUITE 246  
KANSAS CITY, MO 64112  
(816) 753-2550

### INDEX TO THE DRAWINGS:

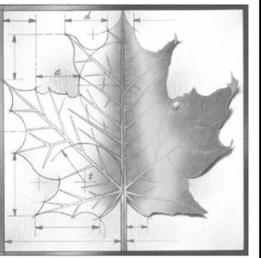
	COVER SHEET
L101	SITE LAYOUT AND MATERIALS
L201	GRADING PLAN
L301	DETAILS

### GENERAL NOTES:

- EXISTING CONDITIONS SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE AND ARE INCLUDED FOR THE CONTRACTOR'S CONVENIENCE. THE CONTRACTOR SHALL VERIFY THESE CONDITIONS, INCLUDING THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION IN ORDER TO PROVIDE NON-INTERRUPTION OF SERVICE AND TO INSURE PROPER CLEARANCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR & ASSOCIATED COSTS OF ANY DAMAGE TO UTILITIES CAUSED BY WORK PERFORMED AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS.
- ANY DAMAGE TO EXISTING PAVED, GRASSED, OR TREADED AREAS NOT SCHEDULED FOR DEMOLITION ARE TO BE REPLACED WITH IN-KIND MATERIALS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL STREETS SURROUNDING THE PROJECT FREE OF MUD AND OTHER DEBRIS.
- ALL MATERIALS TO BE DEMOLISHED ARE TO BE REMOVED FROM THE SITE AND DISPOSED OF IN A LEGAL MANNER.
- ALL CONSTRUCTION SHALL FOLLOW ALL LOCAL APPLICABLE CODES.
- ALL DISTURBED LANDSCAPE AREAS SHALL BE SEEDED.

### DEMOLITION AND EROSION CONTROL NOTES:

- TOTAL DISTURBED AREA = 0.24 AC
- REVIEW EROSION CONTROL MEASURES WITH OWNER'S REPRESENTATIVE.
- IN THE EVENT THE PREVENTION MEASURES ARE NOT EFFECTIVE, THE CONTRACTOR SHALL REMOVE ANY EROSION DEBRIS AND RESTORE ADJACENT PROPERTY AND/OR THE RIGHT-OF-WAY TO ORIGINAL OR BETTER CONDITIONS.
- EROSION CONTROL FEATURES SHOWN ARE ON SHEET L201 ARE THE MINIMUM REQUIREMENTS ACCEPTABLE.
- PLACE ADDITIONAL EROSION CONTROL DEVICES AS RUNOFF AND DRAINAGE PATTERNS CHANGE DURING CONSTRUCTION TO PROHIBIT LOSS OF SOIL FROM THE SITE.
- LEAVE GRADED AREAS WITH A ROUGH TEXTURE TO PROMOTE INFILTRATION.
- LIMIT UNNECESSARY TRAFFIC ON GRADED AREAS.
- INSTALL EROSION CONTROL MEASURES FOR THE EXTENT OF THE CONSTRUCTION LIMITS PRIOR TO BEGINNING ANY GRADING OPERATIONS.
- STORE CONSTRUCTION MATERIALS AWAY FROM LOW AREAS AND DRAINAGE WAYS.
- FILTER BARRIERS SHALL BE INSPECTED BY CONTRACTOR IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
- SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
- SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROX. HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.



# BBN

BBN ARCHITECTS INC.  
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Information provided on the drawings regarding existing conditions has been obtained from the best sources available, but cannot be guaranteed in all respects. Contractor shall verify all such information prior to proceeding with any new work that may be affected. Include as part of the contract all work required to produce the indicated result. All drawings and written material appearing herein constitute the original and unpublished work of the Architect, and same may not be duplicated, used or disclosed without the written consent of the Architect.

A

B

C

D

SHEET TITLE:

**COVER**

PROJECT:

**MISSION  
CROSSING PARK**

**CITY OF MISSION PARKS  
AND RECREATION  
MISSION, KANSAS**

REVISIONS:


PROJECT NO.:

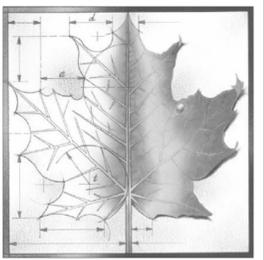
**MCP2011**

DATE:

**5-28-15**

SHEET:

OF:



# BBN

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### PLAN LEGEND

- 00.0 FINISH GRADE ELEVATION
- # LAYOUT CONTROL POINT
- EXPANSION JOINT
- HC WHEELCHAIR AREA
- EJ EXPANSION JOINT
- CJ CONTROL JOINT
- XJ CONSTRUCTION JOINT
- U.N.O. UNLESS NOTED OTHERWISE
- TYP. TYPICAL
- SIM SIMILAR TO
- RE: REFER TO, REFERENCE
- OC ON CENTER
- BOC BACK OF CURB
- ℄ CENTERLINE
- NIC NOT IN CONTRACT

### SHEET TITLE:

## LAYOUT AND MATERIALS

### PROJECT:

### MISSION CROSSING PARK

CITY OF MISSION PARKS AND RECREATION  
MISSION, KANSAS

### REVISIONS:


### PROJECT NO.:

MCP2011

### DATE:

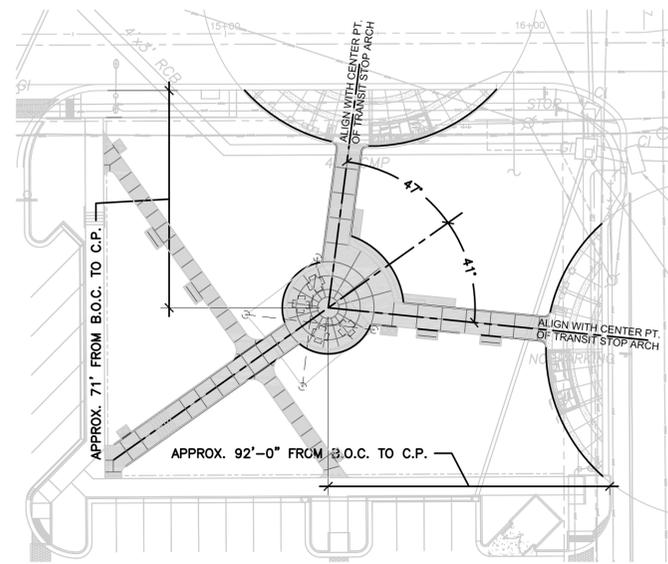
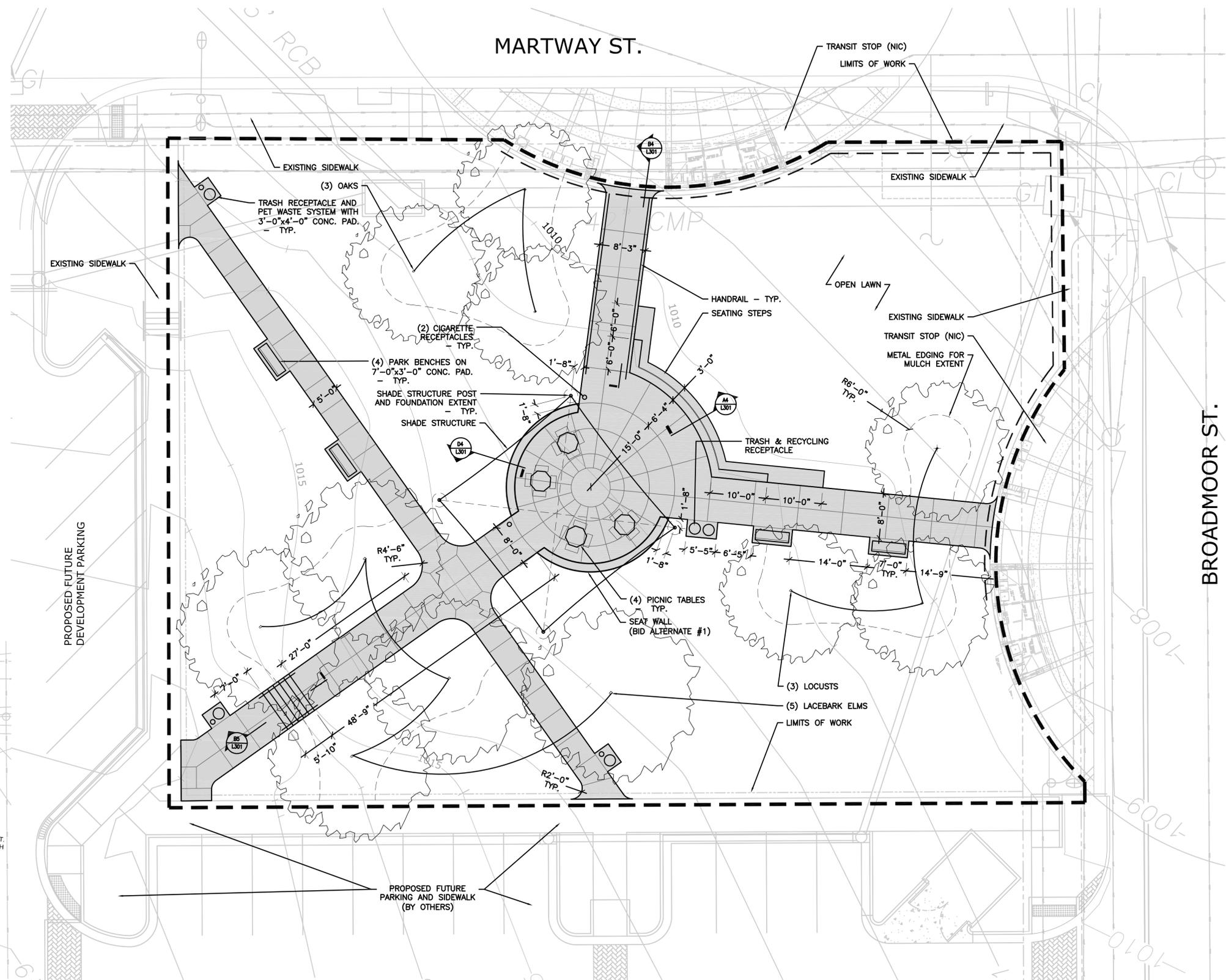
5-28-15

### SHEET:

L101

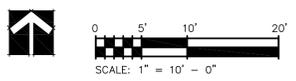
### OF:

L101



D5 GENERAL LAYOUT PLAN  
L101 1" = 30'-0"

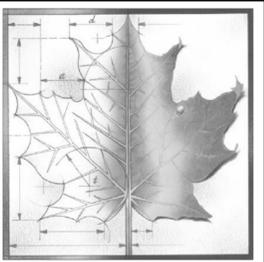
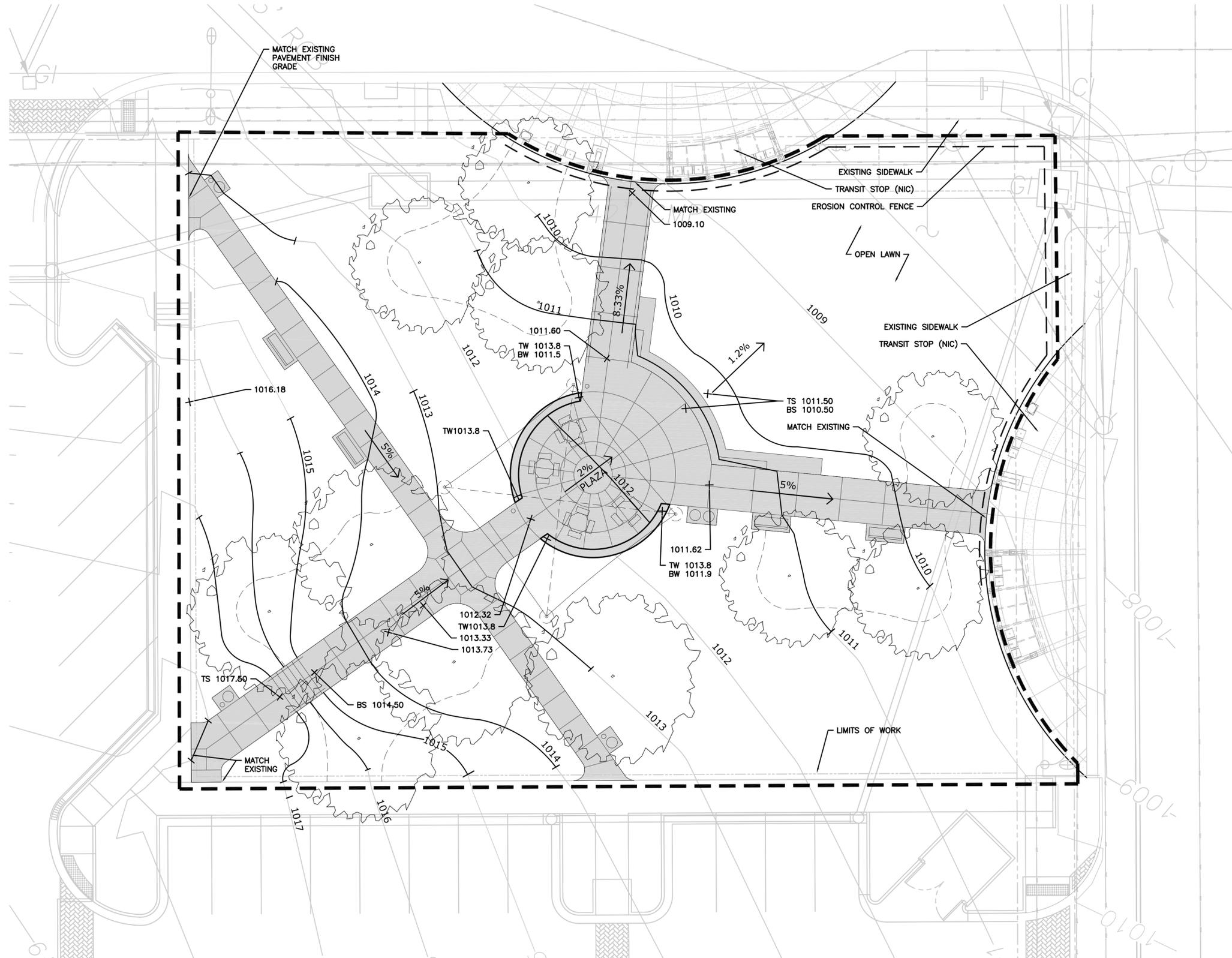
D4 MISSION CROSSING PARK PLAN  
L101 1" = 10'-0"



GRADING NOTES:

- 1. PEDESTRIAN CROSS SLOPES SHALL NOT EXCEED 2%.
- 2. ELEVATIONS REPRESENT TOP OF PAVEMENT WHERE APPLICABLE.

TC TOP OF CURB  
 BC BOTTOM OF CURB  
 TW TOP OF WALL  
 BW BOTTOM OF WALL



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**PLAN LEGEND**

00.0	FINISH GRADE ELEVATION
#	LAYOUT CONTROL POINT
—	EXPANSION JOINT
HC	WHEELCHAIR AREA
EJ	EXPANSION JOINT
CJ	CONTROL JOINT
XJ	CONSTRUCTION JOINT
U.N.O.	UNLESS NOTED OTHERWISE
TYP.	TYPICAL
SIM	SIMILAR TO
RE:	REFER TO, REFERENCE
OC	ON CENTER
BOC	BACK OF CURB
℄	CENTERLINE
NIC	NOT IN CONTRACT

SHEET TITLE:  
**GRADING**

PROJECT:  
**MISSION CROSSING PARK**

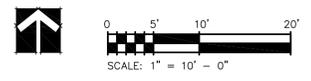
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 MISSION, KANSAS

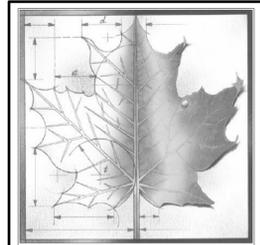
**REVISIONS:**


PROJECT NO.: **MCP2011**  
 DATE: **5-28-15**

SHEET: **L201**  
 OF:

**D4 GRADING PLAN**  
 L101 1" = 10'-0"

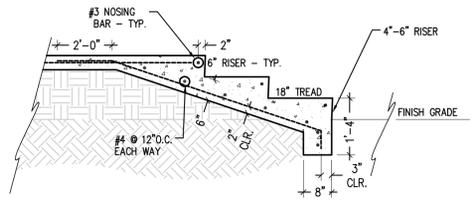




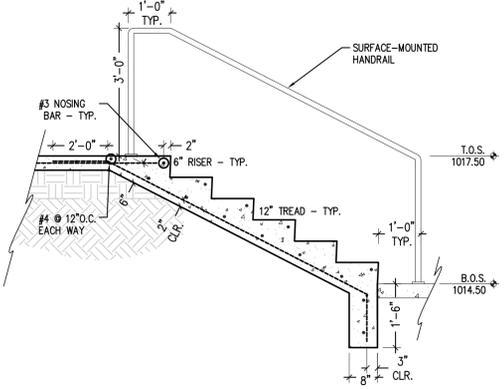
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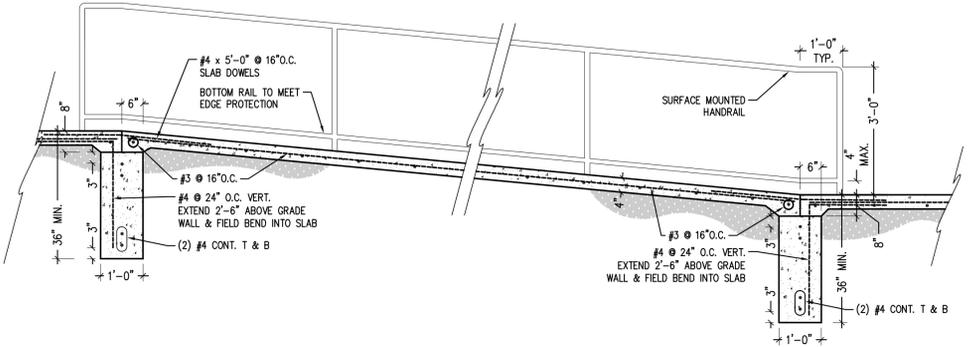
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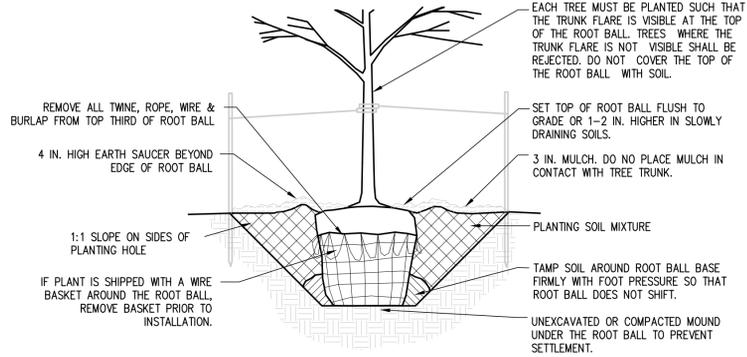
**A4 SEATING STEPS SECTION**  
L301 1/2" = 1'-0"



**B5 DETAIL OF STAIR**  
L301 NTS

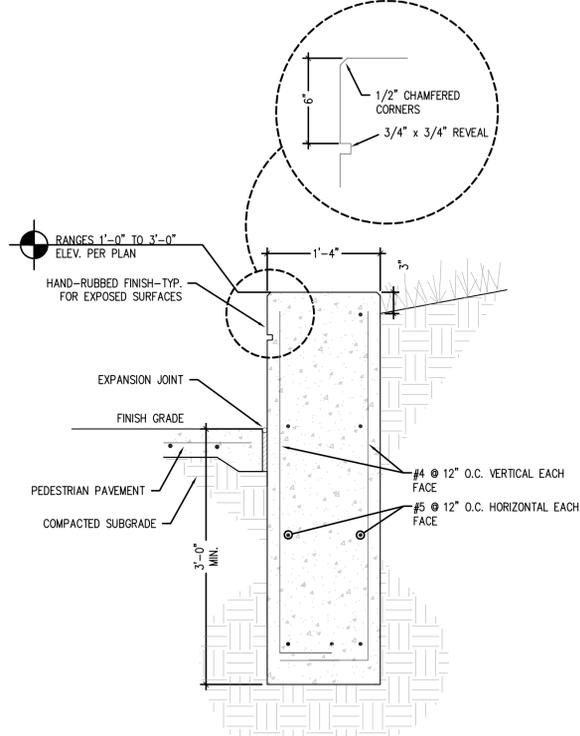


**B4 RAMP SECTION**  
L301 1/2" = 1'-0"



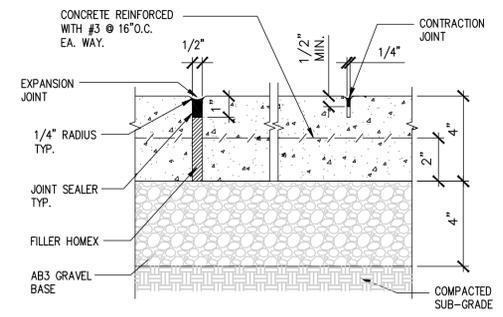
- TYPICAL TREE PLANTING NOTES**
- DO NOT HEAVILY PRUNE THE TREE AT PLANTING.
  - PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
  - MARK THE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE. STAKE & WRAP TREES PER PLANT SUPPLIERS RECOMMENDATIONS. MULCH RING 6 FT. DIA. MIN.

**D5 TREE PLANTING DETAIL**  
L301 1" = 1'-0"



**D4 PLAZA WALL DETAIL (BID ALTERNATE #1)**  
L301 1" = 1'-0"

- NOTES:**
- CONCRETE: CONTRACTOR SHALL PLACE AT A MIN. OF 4" OF CONCRETE. CONCRETE SPEC: 4000PSI STRENGTH @ 28 DAYS; 4 INCHES ± 1 INCH SLUMP; AND 6% ± 1% AIR ENTRAINMENT.
  - PLACEMENT: ON 4 INCH THICK AB3 GRAVEL BASE OVER SUB-GRADE, EACH COMPACTED TO 95% MAX. DENSITY AT OPTIMUM MOISTURE. PARKS AND REC. TO INSPECT FORMS PRIOR TO PLACING CONCRETE.
  - REINFORCING: #3 @ 16" O.C. EA. WAY ON 1 1/2" INCH HIGH CHAIRS AT 36 INCHES O.C. CUT REINFORCING AT EXPANSION JOINTS.
  - EXPANSION JOINTS: 1/2" INCH THICK PREMOLDED NON-EXTRUDING FILLER HOMEX-300 OR APPROVED EQUAL JOINT SEALER SHALL BE AS ONE COMPONENT, GUN-GRADE, MOISTURE CURED EPOXY OR URETHANE SUCH AS "VALCUM 45" OR EQUAL AS APPROVED BY THE ENGINEER. PLACE AT INTERFACE WITH OTHER STRUCTURES AND AS REQUIRED WITH A MAX. 100 FOOT SPACING.
  - CONTRACTION JOINTS: SAW-CUT JOINTS PER THE SPECIFICATIONS. CLEAN AND SEAL JOINT. MATCH SPACING OF ADJOINING SIDEWALK WHERE PRESENT OR STANDARD SPACING OF 6 FEET.
  - FINISHING: METAL FLOAT THEN LIGHT BROOM. DO NOT PICTURE FRAME FINISH UNLESS SPECIFIED OTHERWISE BY OWNER'S REPRESENTATIVE.
  - CURING: ONE COAT OF WHITE PIGMENT LIQUID MEMBRANE FORMING COMPOUND TYPE 2 IN ACCORDANCE WITH ASTM C-309, APPLIED @ 250-275 SQ. FT./GALLON OR APPROVED EQUAL.



**B2 JOINT DETAILS**  
L301 3" = 1'-0"

SHEET TITLE:  
**DETAILS**

PROJECT:  
**MISSION CROSSING PARK**

**MISSION, KANSAS**

**REVISIONS:**

1	
2	
3	
4	
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PROJECT NO.: **MCP2011**  
DATE: **5-28-15**  
SHEET: **L301**  
OF: