ADDENDUM NUMBER _4_

Project Number: **STP 3400 (438) and 89002847**

Project Title: **Blue River Trail: Brush Creek to Stadium Dr (Segment B)**

ISSUE DATE: **May 15, 2018**

Bidders are hereby notified that the Bidding and Contract Documents for the above project, for which Bids are to be received on **Tuesday, May 22, 2018 at 2:00pm**, are amended as follows:

Information to Bidders The following is provided to Bidders for information only:

1. Addendum Number 1—Issued April 27, 2018 (Bid Date Extension)
2. Addendum Number 2—Issued May 3, 2018 (Bid Date Extension)
3. Addendum Number 3—Issued May 11, 2018 (Bid Date Extension, Pre-Bid Agenda/Roster)

Q1.	Drawings and specifications call for Welded Wire Fabric (WWF) reinforced concrete trail. Is Microfiber Reinforced concrete trail an acceptable alternative? Also (in other words), can the wire mesh in the trail be substituted for fibers? If so, what type and quantity per CY?
A1.	**'Concrete Trail (6" Reinforced)' shall be Micro-fiber Reinforced Concrete in lieu of WWF (Welded Wire Fabric) Reinforced Concrete. The Micro-fiber reinforcement shall be in accordance with the attached Specification Section 02301—Standard Sidewalks, Sidewalk Ramps, Driveways, and Bicycle/Pedestrian Paths (Revised 2018-04-24.)**
Q2.	What is included in 'UPRR – Construction Services' allowance of $19,000? Is required railroad insurance included? Will this insurance need to be renewed for second year if/when work extends beyond first year?
A2.	**Please note the Revised 00412 Unit Prices (Revised 5-8-18)-L.I.#44, and refer to Specification Section 20060.9, Exhibit E (RR's Summary Estimate), and for RR Insurance and Insurance Renewal terms refer to Specification Sections 20060.9 (UPRR) & 20060.10 (KCT).**
Q3.	Should welded wire fabric reinforcement in concrete trail be epoxy-coated?
A3.	**See Answer A1. above.**
Q4.	'Soil Stabilization' (18" shot rock) is shown as unit Linear Feet (LF). Is this for entire width of trail? Is soil stabilization to be provided in areas of fill as well as areas of cut? LF quantity may be difficult to measure. Area unit would be preferable.
A4.	**Per Typical Trail Section 2, Sheet B004, 'Soil Stabilization' shall be 18" depth and extend 1' beyond edge of trail on each side (12' total width). For bidding purposes, bidders shall assume 'Soil Stabilization' will be installed at depth and width shown on bid documents. Soil Stabilization(00412/Line Item#12, Spec#02102) and Soil Stabilization (Low Water Crossing) (00412/Line Item#33, Spec#02102) will both be measured per CY in lieu of LF and SY, respectively. Refer to the attached Form 00412 (5-8-18) for revised quantities.**

Q5.	36" drainage pipes beneath low water crossing are called out as CMP (corrugated metal pipe). Is this correct?
A5.	**36" drainage pipes shall be RCP (reinforced concrete pipe) <u>in lieu of</u> CMP (corrugated metal pipe). Pipes shall not be cut to match angle of side slopes. See Drawings, Note 11. below.**
Q6.	How were earthwork (cut and fill) quantities calculated?
A6.	**Earthwork quantities were calculated to base of subgrade (base of aggregate).**
Q7.	Is removal of large debris along trail corridor to be subsidiary to 'Clearing and Grubbing'?
A7.	**No further maintenance of the Blue River corridor will be performed prior to construction commencement. The City expects that the Contractor will remove and properly dispose of all large debris that interferes with trail construction as a part of 'Clearing and Grubbing.'**
Q8.	Detail 04 on Sheet B300 indicates that Concrete Drainage Aprons shall be bid subsidiary to Concrete Trail. Are these to be measured separately?
A8.	**Per Sheet B300-Details, Detail 04-Concrete Drainage Apron: Concrete used in the construction of Concrete Drainage Aprons is included in the Concrete Trail quantity and shall not be measured separately.**
Q9.	There is a discrepancy in the section details shown on Sheets B213 & B214. Trail cross slope is called out as 2% slope, while elevation drop is labeled as 2 1/2" (which equates to 2.083%).
A9.	**Per Sheets B213-Canopy 1, 2, 3 Typical Details & B214 Canopy 3 Typical Design, the Trail cross slope shall be 1.5%.**
Q10.	There is no 12" End Section called out on Sheet B501. Is one to be provided?
A10.	**Per Sheet B501-Storm Line B Plan & Profile: No, and an End Section is not desired at this location.**
Q11.	'Large Block Modular Wall' is shown as unit Square Foot Face (SFF). Does the quantity shown include the portion of the wall extending below finished grade?
A11.	**'Large Block Modular Wall' quantity is measured to the bottom of wall/top of leveling pad NOT to the existing ground line. Refer to Specification Section 02736—Large Block Modular Wall, Part 3-Execution, 3.3-Measurement and Payment – "The plan quantity listed in the Bid Form shall constitute the payment quantity unless an authorized change is made during construction."**
Q12.	I'm having difficulty in finding all of the 4" yellow pavement marking quantity for this project. I have found two access control posts which account for approximately 40 lf of marking but don't see the remaining quantities listed on the plans.
A12.	**The remaining quantity of 4" yellow pavement marking is associated with the low water crossing at Round Grove Creek and can be found / called out on Sheet B301-Details, Detail 01-Low Water Crossing.**

Q13.	Railroad Property Owner listed on Enlargement 03, Sheet B115 is listed as Kansas City Terminal Railway Company. Is this correct?
A13.	**Yes, and as displayed on Sheet B115-ROW Plan Parcel Summary Trail Easements, Easement Detail 03-Permanent Trail Esmnt Sta. 224+37.88. Also, refer to Sheet B208-Existing Railroad Bridge Underpass Sta. 224+68.58.**
Q14.	Construction access may be difficult between approximately Stations 205+00 and 226+00. Will the Contractor be able to utilize the City's existing maintenance access at approx. Station 222+00?
A14.	**Yes, the City's existing maintenance access along the preliminary trail is available. Construction Access from Sta. 207+00 to Sta. 229+00 is limited to use of a new low water crossing at Sta. 206+75 or from Stadium Drive to the north, any access across railroad or private property is not guaranteed but may be negotiated at Contractor's expense.**
Q15.	Construction access may be difficult between approximately Stations 205+00 and 226+00. Can a temporary low water crossing be installed across Round Grove Creek to provide access to this area for construction?
A15.	**Yes, a temporary low water crossing may be installed at this location in accordance with KCMO APWA standard drawings and specifications. Construction Access from Sta. 207+00 to Sta. 229+00 is limited to use of a new low water crossing at Sta. 206+75 or from Stadium Drive to the north, any access across railroad or private property is not guaranteed but may be negotiated at Contractor's expense.**
Q16.	Do you know when the Notice to Proceed (NTP) will be?
A16.	**Estimating approximately 5-6 weeks after bid date.**
Q17.	Subsidence has been observed on north side of Manchester Trafficway near SPEC building. Has an underlying issue been identified that is contributing to this condition?
A17.	**This subsidence is related to recent utility work in the area and is likely the result of improperly compacted backfill. It is expected that the Contractor will provide fill material and proper compaction as needed in the area of the trail to meet design intent/provide proper drainage.**
Q18.	There is conflicting information regarding the steel material for the canopy structures. Section 05500 Metal Fabrication 2.3.A calls for Steel Plates, Shapes, and Bars as ASTM A36. On plan sheet B212, Structural Notes 7.C.1 calls for Shapes W, C, MC, T to be A588 Gr 50 Weathering Steel and 7.C.3 calls for Plates to be A36. Then 7.H calls for non-weathering to be galvanized. Galvanized plates can't be welded to weathering steel beams as shown on detail BPI/B213. Please clarify.
A18.	**Specification Section 05500 Metal Fabrications does not apply to the canopy structures. Specifications for the canopy structures can be found on Sheet B212. Please refer to revised Sheet B212 for revisions to structural notes.**

Q19.	Can you send additional details about the fence security lock. In addition, I am unclear what the locking mechanism that you have specified is. Can you give me some more info?
A19.	**The locking mechanism shall be plunger bar type. Mechanism shall have a padlock eye and permit operation from either side of the gate. Keepers shall be provided for each gate leaf over 5'-0" wide and shall consist of a mechanical device for securing free end of the gate when in full open position.**
Q20.	For the required railroad insurance: what is the average number of trains per day and is this a main line?
A20.	**Please refer to Specification Section 20060.9 & 20060.10, or contact the appropriate Railroad for further train counts.**
Q21.	Does the contractor need to develop the SWPPP since one is provided in Specification section 20050?
A21.	**KC Water has prepared the required City portion of the SWPPP, including associated erosion control plans and it will be the Contractor's responsibility to finalize the submittal documents, including any required modifications to the erosion control plans and submit for approval before commencing performance of any construction work. (See Project Manual).**
Q22.	Are there any ROW permits the contractor is required to get? If so, are these fees waived as noted in general conditions.
A22.	**None, that we know of, but there may be access easements required on railroad property.**
Q23.	Topsoil Shoulder Fill—Can this be fill dirt from onsite? There is no specification.
A23.	**The quantity shown on the bid form is for hauled-in topsoil. It is assumed that there will be no suitable topsoil available on-site for use as topsoil shoulder fill. As noted in Specification Section 02100-Grading, topsoil shoulder fill material shall meet the requirements of APWA-KCMO Section 02100 Grading and Site preparation (See APWA-KCMO Section 2102.4 Topsoiling)**
Q24.	Are there any locations excess dirt and spoils material can be placed onsite?
A24.	**The design team has identified two (2) locations for construction staging activities, including the potential storage of dirt and spoils material as needed. These are (1) the northwest corner of Colorado Avenue and Manchester Trafficway (near the project beginning) and (2) the south side of Stadium Drive, immediately adjacent to the project end. Please note private property constraint with construction staging area at Stadium Drive, as noted on plan sheet B110-Plan & Profile Sta 242+00—Sta. 254+95.81. Construction staging/material storage locations shall be confined to City of Kansas, Missouri property; and, any disturbed areas shall be restored to prior condition at conclusion of project (grade, gravel, seed, etc.) at no additional cost to owner. Please refer to Exhibit B.**
Q25.	Could you describe what "Topsoil Shoulder Fill" is. Also, is it your intent to utilize existing site excavated material as topsoil….or do we import topsoil. Borings indicate no topsoil on site. I would think that you would not want topsoil in the river bank.
A25.	**See Answer A24. above**

Q26.	We feel that $19,000.00 for item 44, UPRR-Construction Services (Reimbursable/Not To Exceed) is not enough. This item is to cover the expenses for the railroad flagman that needs to be on site when construction operations take place on or within 25 feet of railroad property. Based on past experience that number will be exceeded because the flagger will be required not only their bridges to get to other locations on the project. Also, it takes approximately 10 to 15 days in advance to get a flagger scheduled to come out to the jobsite and 5 days to get the contract cancelled and they are scheduled for one week blocks. If the jobsite is shut down due to weather or some other reason and the flagman is scheduled to be there, the Railroad will still be reimbursed. We think the "Not to Exceed" provision needs to be removed or the quantity increased.
Q26.	**Please see attached 00412 Unit Prices, L.I.#44 (Revised 5-8-18), where the quantity has been increased. Also, please refer to Specification Sections 20060.9 & 20060.10.**
Q27.	Can you tell me which page on the plans the chain link fence is located?
A27.	**Please refer to Sheet B207-Existing Railroad Bridge Underpass Sta. 223+71.68.**

Bidding Requirements

1. Delete and replace the following section(s):
   a. **Delete,** Unit Prices (Form 00412) and **Replace** with the following attached Document, Unit Prices (Form 00412), Revised 05/08/2018.
   b. **Delete,** Page 00410-1, Construction Bid Form/Contract-Acceptance of Bid (Form 00410) and **Replace** with the following attached Document, Page 00410-1, Construction Bid Form/Contract-Acceptance of Bid (Form 00410), Revised 05/08/2018.

Contracting Requirements

1. None

Specifications

1. Delete and replace the following section(s):
   a. **Delete** Specification Section 02301 Standard Sidewalks, Sidewalk Ramps, Driveways, and Bicycle/Pedestrian Paths and **Replace** with the following Document, Specification Section 02301 Standard Sidewalks, Sidewalk Ramps, Driveways, and Bicycle/Pedestrian Paths Revised 2018-04-24.

2. Revise the following section(s):
   a. **Revise** Specification Section 02102-Soil Stabilization (Line Item#12), Subsection-Method of Measurement, "Soil Stabilization" will be measured by the linear foot." to "'Soil Stabilization' will be measured by the cubic yard (CY)."

   b. **Revise** Specification Section 02102 Soil Stabilization (Line Item#33), Subsection-Method of Measurement, "Soil Stabilization (Low Water Crossing)" will be measured by the square yard (SY)." to "Soil Stabilization (Low Water Crossing)" will be measured by the cubic yard (CY)."

Drawings:

1. Sheet B002: **Revise** quantity and unit for L.I.#12, Soil Stabilization to 1,600 CY.
2. Sheet B002: **Revise** quantity for L.I.#25, Trail Signage to 13 EA. Refer to attached Exhibit A.
3. Sheet B002: **Revise** quantity and unit for L.I.#33, Soil Stabilization (Low Water Crossing) to 133.5 CY.
4. Sheet B002: **Replace** L.I.#39, 36" CMP with 36" Class III RCP.
5. Sheet B002: **Add** L.I.#45 title and quantity:18" Class III RCP, 40 (LF) (Rev.5-10-18)
6. Sheet B002: **Add** L.I.#46 title and quantity, as 18" RCP End Section, 4 (EA)
7. Sheet B106: **Contractor shall furnish and install** two (2) 18" Class III RCPs with end sections beneath trail at approximately Sta. 202+35. RCPs shall be 20 LF in length each. Trail profile grade to be adjusted as needed to provide minimum 12" cover over drainage pipes. Final vertical alignment to be verified by Owner's representative prior to installation.
8. **Delete** Sheet B212, **Replace** with attached Sheet B212 (Revised 2018-04-26.)
9. Sheet B300, Detail 03-Concrete Pavement: **Replace** "6" WWF Reinforced […]" with "6" micro-fiber reinforced […]"
10. Sheet B301: **Replace** all instances of 36" CMP with 36" Class III RCP.
11. Sheet B301, Detail 01-Low Water Crossing: **Replace** "Cut ends of CMPs as necessary to match slope and angle of concrete […]" with "36" RCPs to remain uncut. Pipes shall extend beyond angle of concrete side slopes. No end sections shall be provided (typ. all pipe ends)."

NOTE: Bidders must acknowledge receipt of this Addendum by listing the number and date, where provided, on the Bid Form - Document 00410.

CITY OF FOUNTAINS
HEART OF THE NATION
KANSAS CITY
MISSOURI

BID FORM/CONTRACT (FORM 00410)

Project/Contract Number: **89002847/299**

Federal Aid Project Number: **STP 3400 (438)**

Project Title: **Blue River Trail-Brush Creek to Stadium Drive (Segment B)**

1. Bidder, having examined the Bidding Documents, related documents and the Site of the Work, and being familiar with all the conditions affecting the construction of the proposed Work, including Laws and Regulations and the availability of materials and supplies, agrees, if this Bid is selected by CITY, this Bid Form/Contract will become the Contract between Bidder and CITY for Bidder to furnish all labor and materials, equipment and services necessary for the proper completion of the Work in accordance with the Contract Documents, including general construction work at the price(s) stated below, which stated sums include fees and all other charges applicable to materials, appliances, labor and all things subject to and upon which other charges may be levied.
2. Bidder agrees the Contract Documents will comprise the entire agreement between CITY and Bidder. The Contract Documents are identified in the General Conditions and are incorporated into and made part hereof this Bid Form/Contract by reference.
3. Bidder agrees that if this Bid Form/Contract is executed by CITY, Bidder's offer is accepted and this Bid Form/Contract that incorporates all other Contract Documents shall constitute the Contract between the parties. Bidder authorizes the CITY to fill in the Contract Price on this Bid Form/Contract in accordance with Bidder's Bid. Bidder agrees that this Bid Form/Contract may be executed in one or more counterparts, each of which will be deemed an original copy of this Bid Form/Contract and all of which, when taken together, will be deemed to constitute one and the same Bid Form/Contract. This Bid Form/Contract shall be effective upon the execution of counterparts by both parties, notwithstanding that both parties may not sign the same counterpart. The parties' signatures transmitted by facsimile or by other electronic means shall be proof of the execution of this Bid Form/Contract and shall be acceptable in a court of law. A copy of this Bid Form/Contract shall constitute an original and shall be acceptable in a court of law.
4. The Bid Price(s) shall be shown in numeric figures only.

TOTAL BASE BID IN NUMERIC FIGURES	$_____
ALLOWANCE NO.	$ **57,000.00**
TOTAL BID IN NUMERIC FIGURES	$_____

5. The undersigned Bidder has given CITY'S Project Manager written notice of all conflicts, errors or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by the Project Manager or by the DESIGN PROFESSIONAL is acceptable to Bidder.
6. The undersigned Bidder agrees that this Bid shall remain subject to selection by CITY, and may not be withdrawn for ninety (90) days after the day Bids are opened.
7. The undersigned Bidder certifies that this Bid contains no modifications, deviations, riders or qualifications.

Bidder: _____

CITY OF FOUNTAINS
HEART OF THE NATION

KANSAS CITY
MISSOURI

UNIT PRICES (FORM 00412)

Project Number: Federal No. STP-3400 (438) KCMO No. 89002847

Project Title: Blue River Trail: Swope Park to Brush Creek (Segment B)

NOTE: IN THE EVENT OF DISCREPANCY, UNIT PRICE SHALL GOVERN.

Item No.	JSP No.	Unit	Quantity	Item Description:	Unit ($)	Extension ($)
1	01700	LS	1	MOBILIZATION		
2	02100	EA	1	TEMPORARY CONSTRUCTION ENTRANCE		
3	02101	LS	1	CLEARING AND GRUBBING AND DEMOLITION		
4	01800	LS	1	CONTRACTOR FURNISHED SURVEYING		
5	02150	LF	17,400	SEDIMENT FENCE		
6	02150	SY	4,076	EROSION CONTROL MAT (STRAW MAT)		
7	02100	CY	4,570	UNCLASSIFIED EXCAVATION		
8	02100	CY	2,023	COMPACTED EMBANKMENT		
9	02100	CY	1,272	TOPSOIL SHOULDER FILL		
10	02301	SY	12,912	CONCRETE TRAIL (6" REINFORCED)		
11	02301	SY	17,245	AGGREGATE BASE ROCK (6")		
12	02102	CY	1,600	SOIL STABILIZATION		
13	03350	TONS	31.06	STRUCTURAL STEEL FOR CANOPY		
14	03310	CY	217.2	CANOPY FOUNDATIONS		
15	03350	SF	3,767	REINFORCED SLAB ON GRADE FOR CANOPY		
16	03350	SF	4,383	STEEL ROOF DECK		
17	03350	SF	4,383	STANDING SEAM METAL ROOF		
18	02736	SFF	3,314	LARGE BLOCK MODULAR WALL		
19	02736	LF	275	REINFORCED CONCRETE TRAIL WITH INTEGRAL TYPE IV WALL		
20	03310	LF	162	4" YELLOW PAVEMENT MARKING		
21	02306	LF	5	12" WHITE PAVEMENT MARKING		
22	02831	LF	232	8' CHAIN LINK FENCE		
23	10470	LF	475	PRECAST CONCRETE SPLIT RAIL FENCE		
24	02875	EA	2	ACCESS CONTROL POST		
25	10431	EA	13	TRAIL SIGNAGE		
26	02734	SY	1,045	REMOVE AND REPLACE RIP RAP		
27	02150	ACRES	7	TEMPORARY SEEDING		
28	02400	ACRES	7	SEEDING		
29	02831	EA	1	FENCE GATE (20' DOUBLE SWING)		
30	02832	EA	1	SWING GATE		
31	02800	EA	1	RELOCATE STREET LIGHT		
32	03310	CY	91	CONCRETE CONSTRUCTION (LOW WATER CROSSING)		
33	02102	CY	133.5	SOIL STABILIZATION (LOW WATER CROSSING)		
34	03310	CY	10	CONCRETE FLUME		
35	02303	SY	431	ROCK BLANKET (LIGHT 18")		
36	02303	SY	176	ROCK BLANKET (1/4 TON)		
37	02600	EA	1	JUNCTION BOX		
38	02600	LF	40	12" CLASS III RCP		
39	02600	LF	134	36" CLASS III RCP		
40	02600	LF	67	72" CLASS III RCP		
41	02740	LF	1,395	4" PERFORATED DRAIN PIPE		
42	02600	EA	1	REMOVE AND REINSTALL 72" END SECTION		
43	02741	EA	7	CONCRETE HEADWALL WITH FLAP GATE		
44	20060.10	EA	1	UPRR--CONSTRUCTION SERVICES *(Reimbursable / Not To Exceed)*	$ 57,000.00	$ 57,000.00
45	02600	LF	40	18" CLASS III RCP		
46	02600	EA	4	18" RCP END SECTION		
				Total Unit Prices: (LAST PAGE ONLY)	TOTAL $	

Note: May be printed, for manual fill-in, or filled in on electronic excel spreadsheet version.

SECTION 02301 – STANDARD SIDEWALKS, SIDEWALK RAMPS, DRIVEWAYS, AND BICYCLE/PEDESTRIAN PATHS

A. GENERAL

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." The City's current standards can be found online under the Kansas City Public Works Department website under "Public Works Design & Construction Standards:"

http://kcmo.gov/publicworks/design-construction-standards/

Standard Sidewalks/Trail, Sidewalk Curb Ramps, Driveways, and Bicycle/Pedestrian Paths shall conform to APWA-KCMO Section 2301 with the following modifications, deletions, or additions. All provisions that are not so amended, removed, or supplemented remain in full force and effect.

1. Section 2301.2.A shall be replaced with the following:
   Concrete Mix: Concrete shall conform to APWA-KCMO 2208.2.B and shall conform to MCIB Section 1 and shall be MCIB Mix No. A658-1-2-.365 or No. WA561-1-2- 0.410 or approved equal with fiber reinforcement.

2. Section 2301.2 D shall be replaced with the following:
   Micro-fiber reinforcement shall be applied at the rate of 3 pounds per cubic yard (1.8 kg per cubic meter) of concrete. Micro-fibers for concrete reinforcement shall be composed of only 100% virgin homopolymer polypropylene, fibrillated and graded. Micro-fibers shall contain no reprocessed olefin materials, and shall be specifically manufactured to an optimum gradation for use as secondary concrete reinforcement, meeting the requirements of ASTM C 1116, Type III, 4.1.3, and ASTM C1116 Performance Level 1, and a minimum residual strength of 30 psi (210 kPa) per ASTM C 1399, average of 4 beams sampled at the point of discharge (or when appropriate, the point of placement).

   Concrete curb ramps shall be reinforced with 6 x 6 – W2.9 x W2.9 welded steel wire fabric placed with a three inch clearance from the ground and shall be constructed per the 2010 version of the United States Department of Justice's ADA Standards for Accessible Design. Concrete curb ramps shall be constructed at a minimum of 6" depth.

3. Section 2301.3.C.1 shall be replaced with the following:
   Material and Size: Forms for bicycle/pedestrian paths/trails shall be made of wood unless otherwise approved by the Engineer and shall have a height equal to or greater than the depth of the bicycle/pedestrian path. Forms for sidewalks, sidewalk ramps, or driveways can be metal or wood and shall have a height equal to or greater than the depth of the sidewalk, sidewalk ramp, or driveway. Formwork layout along curves shall consist of smooth, tangential curves and shall not include segmented sections.

4. Section 2301.4.A.1 shall be replaced with the following:
   Sidewalks: Sidewalk surfaces shall be marked with a transverse joint spaced at a distance equal to the width of the sidewalk. Sidewalks greater than 6 feet (21.8 m) in width shall be divided by longitudinal joints spaced not less than 30 inches (760 mm) nor more than 60 inches (1.5 m) with transverse joints spaced to form a square pattern. Edger tool marks cannot remain showing (no

"picture box frame" allowed). Curb joints should align with sidewalk joints where they abut.

5. Section 2301.4.B.4 shall be replaced with the following:
   Edging: The newly poured edges of these joints shall be rounded with an edging tool of 1/8 inch radius.

6. Section 2301.4.C shall be replaced with the following:
   Contraction joints: Contraction joints shall be sawed 1/8 inch (3 mm) wide by 1/4 the thickness of the slab. No edger marks shall remain. Contraction joints will be spaced every 10 feet.

   When sawing joints, the contractor shall begin as soon as the concrete hardens sufficiently to prevent excessive raveling along the saw cut and shall finish before conditions induce uncontrolled cracks, regardless of the time or weather. The longitudinal contraction joints shall be sawed immediately after sawing transverse joints. When joint sealing backup material is specified with sawed joints, the first stage, which provides a relief cut shall be approximately 1/8 inch (3 mm) wide, and shall be to plan depth. The second stage which widens the joints to allow the insertion of joint sealing backup material to plan depth shall not be performed until the concrete is at least 48 hours old, and shall be delayed longer when the sawing causes raveling of the concrete. If second stage sawing is performed prior to the completion of the curing period, the contractor shall maintain the cure by use of curing tapes, plastic devices, or other materials approved by the Engineer.

7. Section 2301.5.B shall be replaced with the following:
   Finishing:
   1. Strike off the concrete with a vibratory screed or a hand strike–off method when adequate consolidation is attained. Immediately after strike–off, the concrete may be bullfloated to remove any high or low spots. Minimize the use of the bullfloat.
   2. Do not finish concrete with water standing on the surface or when edging tool makes a ridge on its inside edge. Resume finishing when excess moisture evaporates. Edger tool marks cannot remain showing (no "picture box frame" allowed).
   3. After finishing, the surface of the concrete shall be broomed with a fine clean broom to provide an antiskid surface.
   4. In all cases the finished sidewalk, driveway, or bicycle/pedestrian path shall have a true surface, free from sags, twists, or warps, and shall have a uniform color and appearance.

8. The first paragraph in Section 2301.9 shall be modified as follows:
   ADA Pavers (Detectable Warnings): Detectable warnings are required standardized surface features *built in* to walking surfaces on sidewalks or ramps to warn visually impaired people of hazards on a circulation path. Those hazards include, but are not limited to interfaces between sidewalks and areas where moving vehicles may be present.

B. MEASUREMENT AND PAYMENT

Sections 2301.10 and 2301.11 shall be replaced with the following:

1. Method of Measurement:

   "Concrete Trail (6" Reinforced)" will be measured per square yard.
   "Aggregate Base Rock" (6") shall be measured per square yard or tenth part thereof the specified depth.

2. Payment: The accepted quantity shall be paid for at the Contract Unit Price as listed in Section 00412, Bid Form Unit Prices, and measured as stated above. Such payments shall include the whole cost of providing all labor, tools, equipment, materials, handling, storage, hauling, disposing and any other requirements and sundries associated with this item.

END OF SECTION

SUMMARY OF QUANTITIES - BLUE RIVER TRAIL - SEGMENT B

ITEM NO.	SPECIFICATION/JSP SECTION	DESCRIPTON	UNIT	PLAN QUANTITY	
GENERAL					
1	01700	MOBILIZATION	LS	1	
2	02151	TEMPORARY CONSTRUCTION ENTRANCE	EA	1	
3	02101	CLEARING AND GRUBBING AND DEMOLITION	LS	1	
4	01800	CONTRACTOR FURNISHED SURVEYING	LS	1	
EROSION CONTROL / EARTHWORK					
5	02150	SEDIMENT FENCE	LF	17400	
6	02150	EROSION CONTROL MAT (STRAW MAT)	SY	4076	
7	02100	UNCLASSIFIED EXCAVATION	CY	4570	
8	02100	COMPACTED EMBANKMENT	CY	2023	
9	02100	TOPSOIL SHOULDER FILL	CY	1272	
TRAIL / PAVEMENT					
10	02301	CONCRETE TRAIL (6" REINFORCED)	SY	12912	
11	02301	AGGREGATE BASE ROCK (6")	SY	17245	
12	02102	SOIL STABILIZATION	CY	1600	4
RAILROAD CANOPY					
13	03350	STRUCTURAL STEEL FOR CANOPY	TONS	31.06	
14	03310	CANOPY FOUNDATIONS	CY	217.2	
15	03350	REINFORCED SLAB ON GRADE FOR CANOPY	SF	3767	
16	03350	STEEL ROOF DECK	SF	4383	
17	03350	STANDING SEAM METAL ROOF	SF	4383	
TRAIL MISCELLANEOUS					
18	02736	LARGE BLOCK MODULAR WALL	SFF	3314	
19	03310	REINFORCED CONCRETE TRAIL WITH INTEGRAL TYPE IV WALL	LF	275	
20	02306	4" YELLOW PAVEMENT MARKING	LF	162	
21	02306	12" WHITE PAVEMENT MARKING	LF	5	
22	02831	8' CHAIN LINK FENCE	LF	232	
23	10470	PRECAST CONCRETE SPLIT RAIL FENCE	LF	475	
24	02875	ACCESS CONTROL POST	EA	2	
25	10431	TRAIL SIGNAGE	EA	13	4
26	02374	REMOVE AND REPLACE RIP RAP	SY	1045	
27	02150	TEMPORARY SEEDING	ACRES	7	
28	02400	SEEDING	ACRES	7	
29	02831	FENCE GATE (20' DOUBLE SWING)	EA	1	
30	02832	SWING GATE	EA	1	
31	02800	RELOCATE STREET LIGHT	EA	1	
STORM DRAINAGE					
32	03310	CONCRETE CONSTRUCTION (LOW WATER CROSSING)	CY	91	
33	02102	SOIL STABILIZATION (LOW WATER CROSSING)	CY	133.5	4
34	03310	CONCRETE FLUME	CY	10	
35	02303	ROCK BLANKET (LIGHT 18")	SY	431	
36	02303	ROCK BLANKET (1/4 TON)	SY	176	
37	02600	JUNCTION BOX	EA	1	
38	02600	12" CLASS III RCP	LF	40	
39	02600	36" CLASS III RCP	LF	134	4
40	02600	72" CLASS III RCP	LF	67	
41	02740	4" PERFORATED DRAIN PIPE	LF	1395	
42	02600	REMOVE AND REINSTALL 72" END SECTION	EA	1	
43	02741	CONCRETE HEADWALL WITH FLAP GATE	EA	7	
44	20060.10	UPRR--CONSTRUCTION SERVICES (REIMBURSABLE/NOT TO EXCEED)	EA	1	
45	02600	18" CLASS III RCP	LF	40	4
46	02600	18" RCP END SECTION	EA	4	

STATE OF MISSOURI
CRAIG A. RHODES
NUMBER LA-1993140039
LANDSCAPE ARCHITECT
5-25-18

BLUE RIVER TRAIL SEGMENT B

Brush Creek Confluence to Stadium Drive
Kansas City, Missouri
Federal Project # STP 3400 (438)

Vireo

LAC# MO-2002023826 KS-59

929 Walnut Street, Suite 700
Kansas City, Missouri 64106
P 816-756-5690

1111 N. 13th Street, Suite 11E
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www.BeVireo.com

FINAL PLANS

Revision Number	Description	Date
4	Addendum 04	05.10.18

March 7, 2018 (Date)
Vireo-P11061 (Project Number)

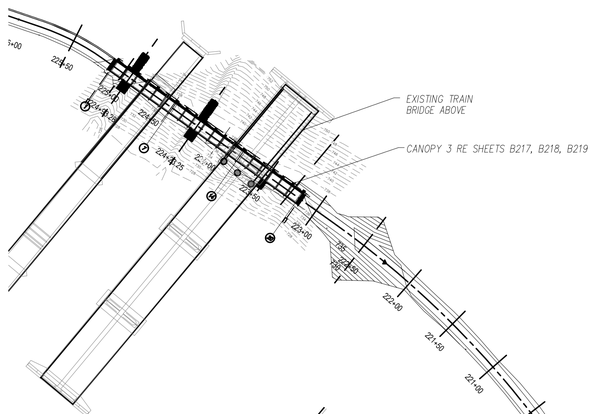
BS, BW (Drawn By)
CR (Checked By)

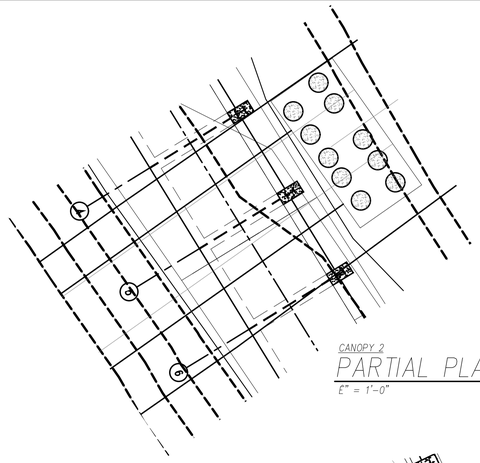
B002 Summary of Quantities (File Name)

SUMMARY OF QUANTITIES

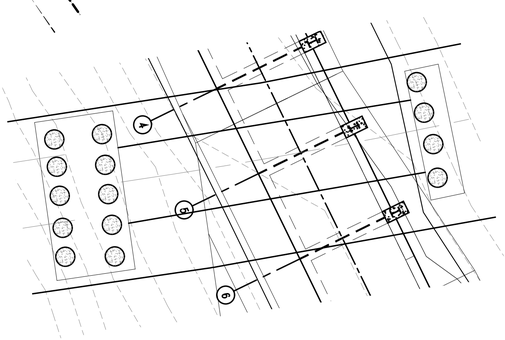
-

B002

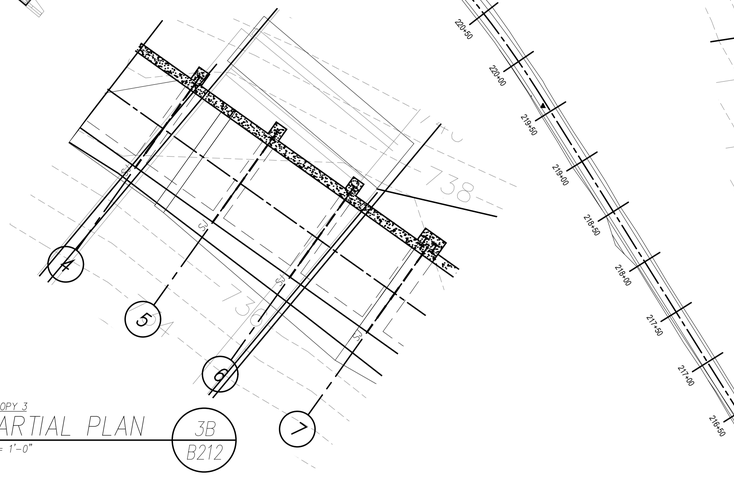




CANOPY 2
PARTIAL PLAN
E" = 1'-0"
2
B212

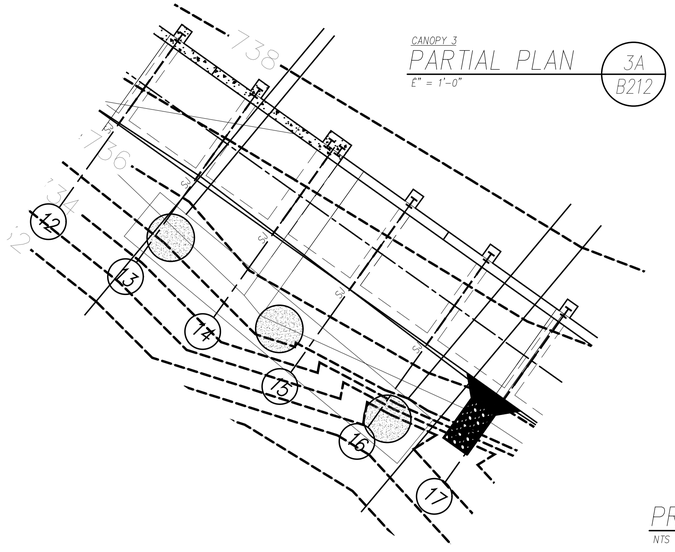


CANOPY 1
PARTIAL PLAN
E" = 1'-0"
1
B212

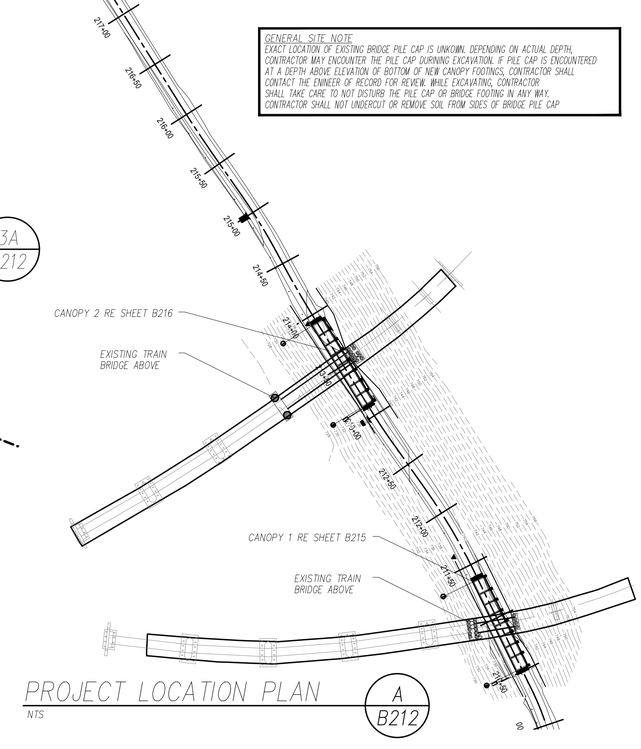


CANOPY 3
PARTIAL PLAN
E" = 1'-0"
3B
B212

GENERAL SITE NOTE
EXACT LOCATION OF EXISTING BRIDGE PILE CAP IS UNKOWN. DEPENDING ON ACTUAL DEPTH, CONTRACTOR MAY ENCOUNTER THE PILE CAP DURINNG EXCAVATION. IF PILE CAP IS ENCOUNTERED AT A DEPTH ABOVE ELEVATION OF BOTTOM OF NEW CANOPY FOOTINGS, CONTRACTOR SHALL CONTACT THE ENINEER OF RECORD FOR REVIEW. WHILE EXCAVATING, CONTRACTOR SHALL TAKE CARE TO NOT DISTURB THE PILE CAP OR BRIDGE FOOTING IN ANY WAY. CONTRACTOR SHALL NOT UNDERCUT OR REMOVE SOIL FROM SIDES OF BRIDGE PILE CAP



CANOPY 3
PARTIAL PLAN
E" = 1'-0"
3A
B212



PROJECT LOCATION PLAN
NTS
A
B212

STRUCTURAL NOTES:

1. GENERAL

A. Design and construction shall conform to the 2012 International Building Code (IBC) as amended by the City of Kansas City, Missouri.
B. The Contractor shall notify the Structural Engineer when actual conditions vary relevantly from what these drawings portray. The Engineer is not responsible for the consequences of construction that do not comply with the requirements specified or the reasonable intent conveyed in these drawings or approved revisions thereof.
C. The Contractor shall coordinate any miscellaneous structural requirements that may be shown in other consultant's drawings.
D. The Contractor shall coordinate dimensions shown herein with dimensions shown on other drawings in the document package, and in case of relevant conflict, seek clarification with the Structural Engineer before proceeding with construction.
E. This design is valid only for the dimensions shown. This design may not be valid if actual constructed dimensions vary substantially from what is shown.
F. On the drawings details marked "Typical" shall apply to all situations occurring on the project that are the same or similar, as may be ascertained by the title of the detail, whether the section is cut on the drawing at each required location or not. If it is not clear how a particular typical detail applies to a specific location, the Contractor shall seek clarification from the Engineer before proceeding with construction.
G. The Contractor shall take all necessary and prudent precautions to maintain the full integrity of the structure during construction. The Contractor is solely responsible for designing and installing all temporary shoring and bracing.
H. Structural members shall not be cut, notched, reduced or penetrated unless specifically approved by the engineer in advance or as shown on these drawings.
I. These drawings and notes are for this specific project and no other use is authorized.

2. DESIGN CRITERIA

A. Roof	Gravity		Live = 40 psf Snow = 20 psf + Drift Dead = Self + 10 psf roofing
B. Lateral	Occupancy		Risk Category "2"
	Wind		Velocity 115 mph, Exposure "C", Importance 1.00; Kzt = 1.00, Kd = 0.85; open structure.
	Seismic		Ss = 0.128, S1=0.058, Importance 1.00, Site Class "B" Design Category "A" (re: ASCE 7-10, Sec 11.6) R = 3.50 for ordinary steel moment-frame
C. Soil	Bearing		1500 psf on isolated spread footings

3. FOUNDATIONS

A. All foundation excavations shall be approved by a professional geotechnical engineer registered in the State of Missouri prior to placement of reinforcing steel or concrete.
B. The Contractor shall be entirely responsible for safely excavating into the ground and constructing stable soil slopes.
C. All footings and retaining structures shall bear minimally 3'-0" below grade.
D. Zones of soil encountered at the bottom of footing excavations deemed "soft" or inadequate shall be replaced or remediated as directed by the geotechnical engineer.
E. The Contractor shall provide dewatering of excavations from either surface water or seepage. The moisture content in soils prior to excavation should not be allowed to change relavantly after the excavation is made. Concrete for foundations shall not be placed on frozen ground or on ground softened from excess water.
F. The base of the excavation shall be free of water and loose soil prior to placement of reinforcing or concrete. Footing excavations left open for more than 24 hours shall be covered over and protected to reduce evaporation or entry of moisture. Ideally, foundation concrete shall be placed the same day the excavation is made.
G. Establish grades so that drainage flows positively away from the building perimeter.
H. Unless noted otherwise, all concrete slabs-on-grade shall be poured upon 4" gravel on stabilized compacted fill. The gravel shall consisted of well-graded crushed stone with 3/4" maximum particle size and less than 5% passing through No. 4 sieve. Prior to concrete placement, the gravel shall be compacted with a minimum of 4 passes of a vibratory plate compactor or vibratory drum roller.

4. STRUCTURAL CONCRETE

A. All concrete shall be designed and constructed according to ACI 318-11, "Building Code Requirements for Reinforced Concrete," and Commentary (ACI 318-11R).
B. All concrete shall develop a minimum ultimate compressive strength of 2800 psi in 3 days and 4000 psi in 28 days, with not less than 550 pounds of Type 1 Portland cement per cubic yard of concrete, regardless of the strengths obtained, not more than 6 gallons of water for each 100 pounds of cement, with aggregate not larger than 3/4" diameter, and slump that does not exceed 4-1/2".
C. All concrete other than flatwork may have up to 15% of Portland cement weight replaced with an equivalent weight of an approved Class F fly ash.
D. All admixtures shall be approved by the structural engineer in writing before use.
E. Entrain exterior exposed concrete and concrete flatwork with 6% +/- 1% air.
F. Isolate aluminum from concrete. Do not embed any aluminum items in concrete.
G. All concrete is reinforced unless specifically called out as unreinforced. Reinforce all concrete not otherwise shown with same steel as in similar sections or areas. Any sections not shown shall be detailed per ACI 315, "Details and Detailing of Concrete Reinforcement", current edition.
H. Clear minimum coverage of concrete over longitudinal reinforcing steel shall be minimized, but it shall not be less than the largest nominal bar diameter, nor less than the following (unless noted otherwise):

1. Concrete placed against trenched earth	3"
2. Concrete placed against form in earth	2"
3. Tied elements (columns & elevated beams)	1-1/2"

I. Limit control joints in dirt-formed slab areas to 16'-0" apart along any side.
J. Cut saw joints in slab-on-grade concrete maximum 8 hours after concrete pour.

5. REINFORCING STEEL

A. Fabrication, erection and placement of reinforcing steel shall conform to Concrete Reinforcing Steel Institute (CRSI), "Manual of Standard Practice".
B. Bar reinforcing shall conform to ASTM A615 Gr 60 deformed reinforcing steel, except stirrups and ties shall comply with CRSI requirements for improved bendability.
C. Reinforcing steel shall not be heated or welded. All bar bends shall be made cold.
D. Reinforcing steel shall be clean of rust, grease or other material likely to impair bond.
E. Fabricate reinforcing bars in continuous lengths as is practible. Where discrete rebars require splicing, use direct contact bar laps according to the Schedule:

BAR SIZE	MIN LAP IN CONC	90° HOOK IN CONC
#3	15"	6"
#4	20"	8"
#5	24"	10"
#6	30"	12"
#7	42"	14"

F. Place dowels between adjacent or sequential pours and as indicated. All dowels shall be same size and spacing as adjoining main bars. Unless noted otherwise, set equal legs into adjoining members and lap according to the Schedule above.
G. Prior to placing concrete all reinforcing shall be tied and secured in place from displacement using standard ties and anchorage devices.
H. Allow 500 lbs of reinforcing bars #4 and #5 to be used as directed in the field by the Structural Engineer for special conditions. Labor for placing same to be included.

7. STRUCTURAL STEEL

A. Design, fabrication and erection of steel shall be according to the AISC, "Manual of Steel Construction", 14th Edition, 2011 ["AISC #14"].
B. All steel shall be fabricated by an AISC-approved shop.
C. All structural steel shall be fabricated using the following materials:

1. Standard W, C, MC, T, Angles, rod, plate and other miscellaneous shapes: ASTM A588 Gr 50 "weathering steel" w/ 50 ksi yield.
2. Hollow structural sections (HSS): ASTM A847 "weathering steel".

D. All welding shall conform to American Welding Society (AWS) specification D1.1 as defined by AISC#14, Section J2.
E. All steel-to-steel fillet welds not otherwise detailed shall be 3/16". After completion all slag shall be removed from the weld surface and surrounding material.
F. All structural steel-to-steel connection bolts not otherwise specified shall be ASTM A325 (Type 3), 3/4" Ø, and shall be fully pre-tensioned according to "Specification for Structural Joints Using ASTM A325 or A490 Bolts", Section 8d.
G. Unless noted otherwise, anchors bolts shall be 3/4" ASTM F-1554 with at least 50 ksi yield, at least 12" long, which includes a 4" threaded projection above top of of concrete and threaded-end nut.
H. All non-weathering steel exposed to the environment shall be galvanized to prevent corrosion.

8. LIGHT-GAGE METAL ROOF DECK

A. Fabrication of light-gage steel roof deck shall comply with Steel Deck Institute (SDI), "Specifications for Steel Roof Deck", latest edition. Design and installation shall comply with AISI-96, Part 1, Section 2.4, with minimum 33 ksi yield.
B. Fasteners used to connect light-gage steel members to structural steel members shall be smooth-shank collated gas fasteners, Hilti type "X-EGN" or approved equivalent, comprised of AISI 1060-1065 steel, austempered to a core hardness of 52-58 Rc with minimum 270 ksi tensile breaking strength and 160 ksi ultimate shear strength.
C. Fasteners used to connect light-gage steel members to each other shall be self-drilling, thread-cutting tapping screws with the material, process and performance requirements of SAE J78, Buildex brand "tek" or approved equivalent, #10 (0.189" diameter) with 16 threads per inch, with at least 1450 lbs ultimate shear and 1400 lbs breaking tension.
D. Unless noted otherwise attach steel deck to structural steel roof frame as follows: to perimeter of roof @ 6" oc; to intermediate framing @ 12" oc; deck or panel sidelaps between framing members with #10 teks @ 24" oc.
E. At perimeter of diaphragm and around large holes thru the roof, where the deck is not otherwise continuously supported, provide continuous L4x3x1/4 for deck support.
F. All holes in metal roof deck shall be adequately plugged prior to placement of surface roofing materials.
G. All roof deck shall be galvanized or protected with approved durable epoxy products to prevent corrosion of metal.
H. Do not suspend loads from the roof deck.

9. EPOXY ANCHORING

A. Drill clean holes not to exceed 1-3/8 times the diameter of the bar or anchor being installed. Prior to epoxying, the holes shall be cleaned of laitenance and debris.
B. The bar or anchor shall be drilled to such depth as required to withstand 2-1/2 times the yield capacity of the anchor or reinforcing bar.
C. The epoxy product shall be waterproof and be able to maintain bond within the range of 10 degrees F below zero up to 120 degrees F above zero.

10. CONSTRUCTION ADMINISTRATION

A. The Owner shall engage a Special Inspector independent from the Contractor to perform testing of structural materials and to regularly inspect if ongoing construction is in compliance with project contract documents and IBC provisions.
B. Individuals performing special inspections shall be qualified by IBC 1704.1. All special inspections shall be reported in a timely manner, providing the time of inspection, to the engineer, Owner and contractor.
C. The Contractor shall notify Special Inspector at least 24 hours in advance of the requested time of inspection.
D. The Contractor shall submit the following shop drawings for review and approval prior to fabrication or construction.

1. Concrete mix design.
2. Mill verification for structural steel and reinforcing steel.
3. For concrete: reinforcing steel placement drawings w/ bar lists and bar bends.
4. For steel: structural steel shop drawings w/ bill-of-materials lists.
5. For roof deck: panel layout drawings.

E. The Special Inspector shall inspect:

1. Geotechnical verification of bearing condition - periodic.
2. Placement of reinforcing steel in concrete forms - periodic.
3. Placement of bolts cast in concrete - periodic.
4. Installation of anchors epoxied or set into existing concrete - periodic.
5. If required design concrete mix is being used - periodic.
6. Slump, air content & temperature of concrete - periodic.
7. Placement of concrete - periodic.
8. High-strength bolting (using twist-off legume bolts) - periodic.
9. Structural welding for grooves, plugs and fillets > 5/16" - periodic.
10. Erection of structural steel frame - periodic.
11. Placement and layout of fasteners for metal roof deck - periodic.

F. Materials testing shall be as dictated by project specifications.
G. The Contractor shall replace or repair all construction identified as defective in the Special Inspection reports, as required by the Engineer, without cost to the Owner.

11. COPYRIGHT & DISCLAIMER

A. Structural drawings marked B212, B213, B214, B215, B216, B217, B218 & B219 (8 - 24"x36") dated March 2014 is the copyrighted work of Taliaferro & Browne, Inc.
B. I, Christopher E. Orlando, P.E., registered engineer, do hereby accept professional responsibility as required bythe professional registration laws of the State of Missouri only for the aforementioned drawings prepared under my direct supervision and control.
C. I hereby disclaim responsibility for all other drawings in the document package, they possibly being the responsibility of other design professionals whose seals and signed statements may appear elsewhere in the construction document package.

Christopher E. Orlando, P.E.
Missouri license E-29232

STATE OF MISSOURI
LEONARD JAMES GRAHAM
NUMBER E-18801
PROFESSIONAL ENGINEER
20-302
4/26/18

TRAIL SEGMENT B BLUE RIVER

Brush Creek Confluence to Stadium Drive
Kansas City, Missouri
Federal Project # STP 3400 (348)

vireo

LAC# MO-2002023826 KS-59

929 Walnut Street, Suite 700
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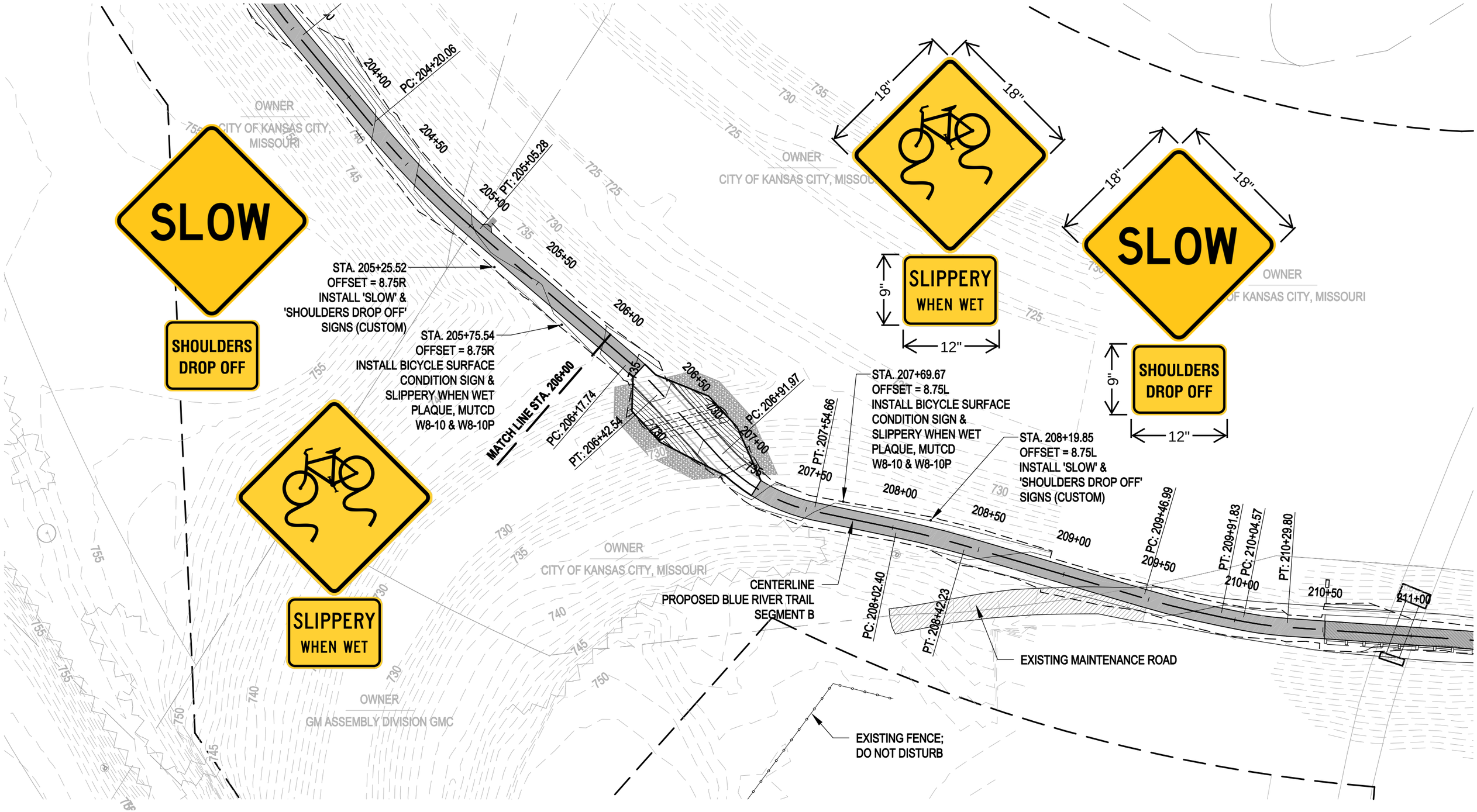
PROFESSIONAL ENGINEERING CORPORATION
MISSOURI LICENSE NO. 000466 KANSAS LICENSE NO. E-1481
PROFESSIONAL LAND SURVEYING CORPORATION
MISSOURI LICENSE NO. 000094

Revision Number	Description	Date
4	Addendum 04	04-26-18

May 2, 2014 — Date
Vireo - P11061 — Project Number
RKN — Drawn By
CEO — Checked By
File Name

PROJECT LOCATION MAP AND GENERAL NOTES

B212


SLOW
SHOULDERS DROP OFF
SLIPPERY WHEN WET
18"
18"
9"
12"
SLOW
SHOULDERS DROP OFF
STA. 205+25.52
OFFSET = 8.75R
INSTALL 'SLOW' &
'SHOULDERS DROP OFF'
SIGNS (CUSTOM)
STA. 205+75.54
OFFSET = 8.75R
INSTALL BICYCLE SURFACE
CONDITION SIGN &
SLIPPERY WHEN WET
PLAQUE, MUTCD
W8-10 & W8-10P
MATCH LINE STA. 206+00
STA. 207+69.67
OFFSET = 8.75L
INSTALL BICYCLE SURFACE
CONDITION SIGN &
SLIPPERY WHEN WET
PLAQUE, MUTCD
W8-10 & W8-10P
STA. 208+19.85
OFFSET = 8.75L
INSTALL 'SLOW' &
'SHOULDERS DROP OFF'
SIGNS (CUSTOM)
CENTERLINE
PROPOSED BLUE RIVER TRAIL
SEGMENT B
EXISTING MAINTENANCE ROAD
EXISTING FENCE;
DO NOT DISTURB
OWNER
CITY OF KANSAS CITY, MISSOURI
OWNER
GM ASSEMBLY DIVISION GMC
204+00
PC: 204+20.06
204+50
205+00
PT: 205+05.28
205+50
206+00
206+50
PC: 206+17.74
PT: 206+42.54
PC: 206+91.97
207+00
PT: 207+54.66
207+50
208+00
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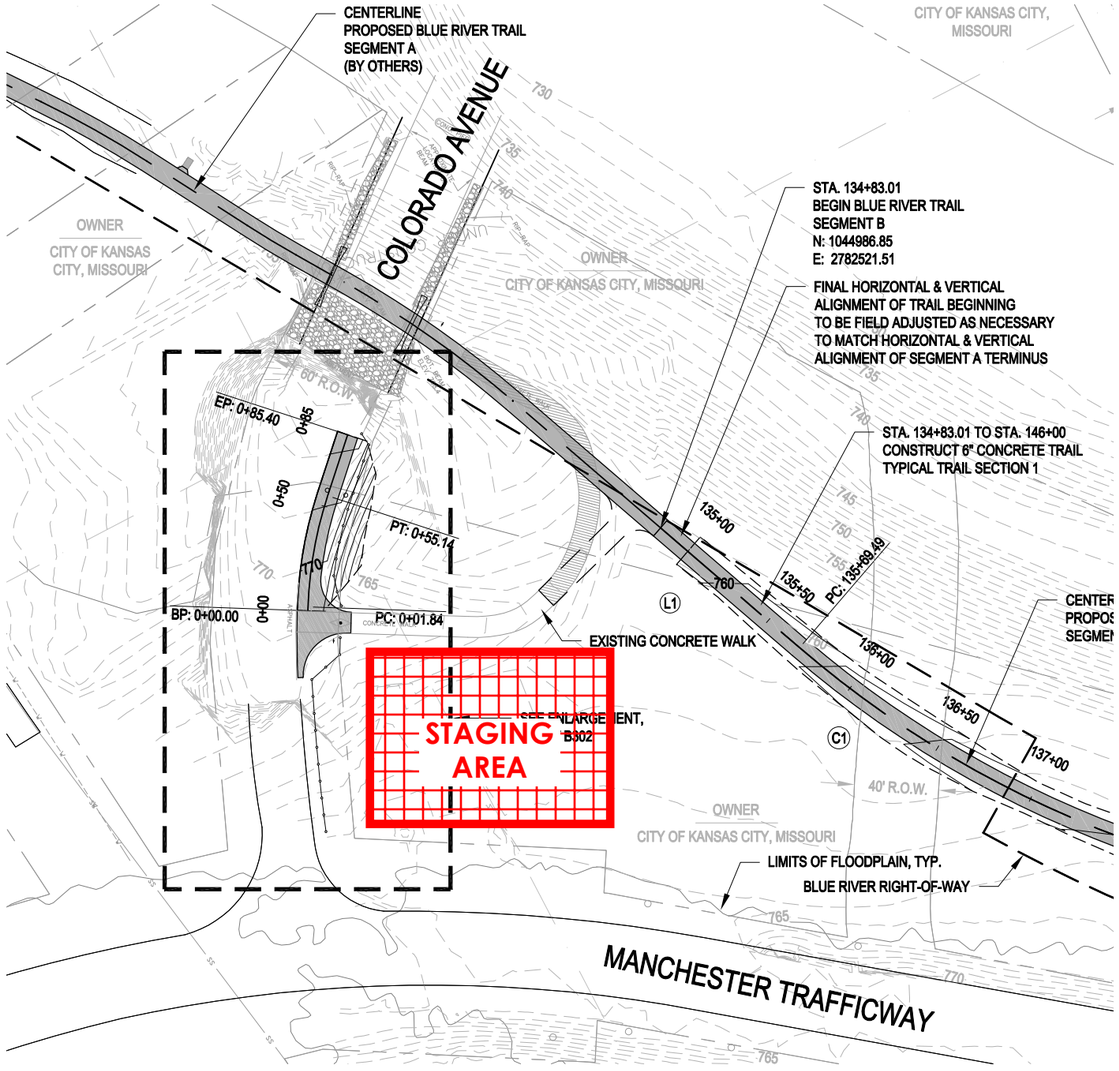
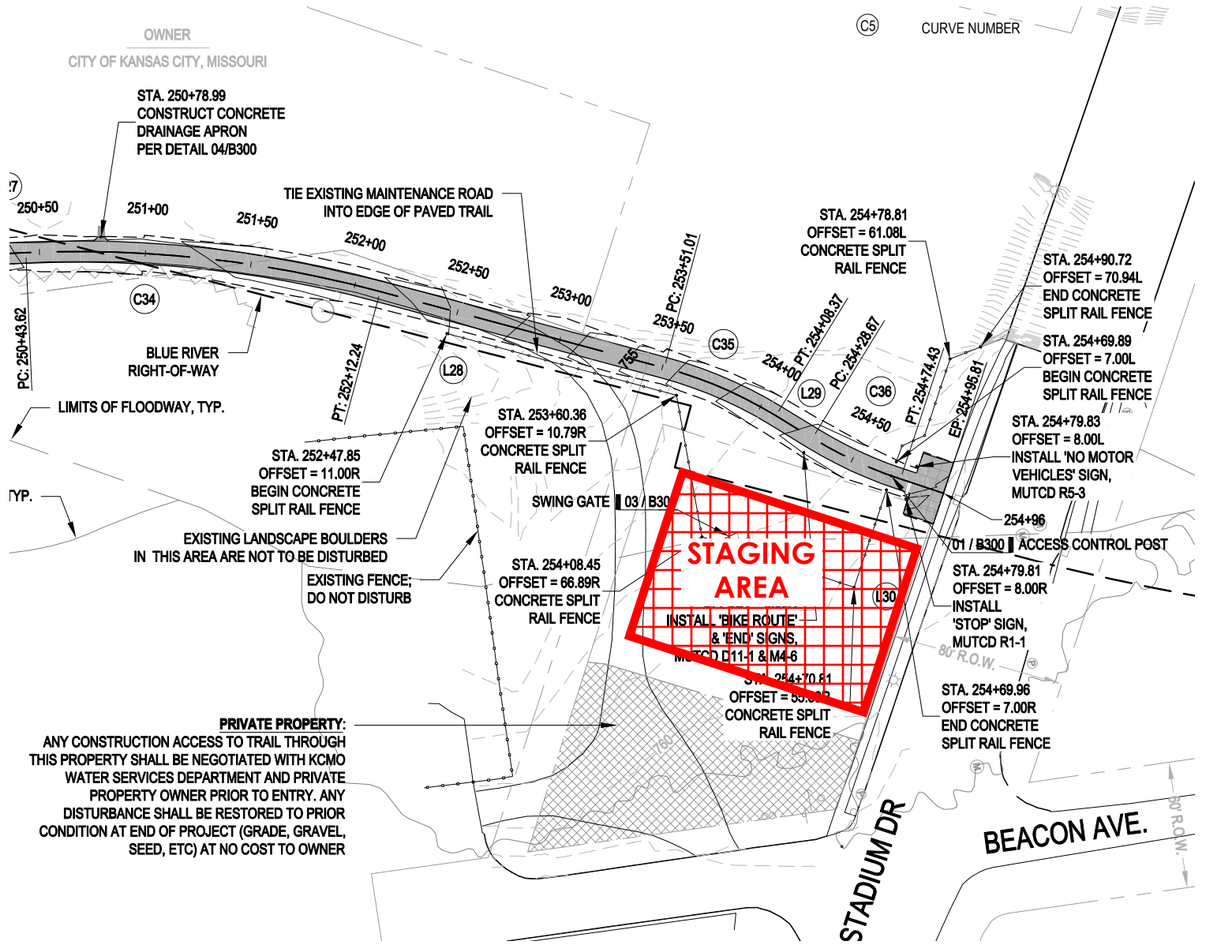
PC: 208+02.40
PT: 208+42.23
PC: 209+46.99
209+50
PT: 209+91.83
PC: 210+04.57
210+00
PT: 210+29.80
210+50
211+00
0
25
50
100
NORTH
SCALE IN FEET
HORIZONTAL SCALE: 1" = 50'

EXHIBIT A



NORTH

POTENTIAL CONSTRUCTION STAGING AREA A



NORTH

POTENTIAL CONSTRUCTION STAGING AREA B

EXHIBIT B - STAGING AREAS