ATTACHMENT A – STUDY AREA MAP AND PROJECT LAYOUT DRAWINGS
Kansas City Streetcar Riverfront Extension Project; Kansas City, Missouri

Study Area and Features

- Existing 3rd & Grand Park-n-Ride
- Existing Streetcar Route
- Existing 3rd & Grand Boulevard Viaduct
- Existing Rite Singleton Yard
- Riverfront West
- Columbus Park Neighborhood
- Berkley Riverfront
- Existing Kite Singleton Yard
- Proposed Streetcar Riverfront Extension Route
- Missouri River
- Casino

Legend:
- Proposed Alignment
- Existing Alignment
- Study Area Boundary

Land Use Types:
- Commercial
- Industrial
- Surface Lot Parking
- Tourist Venue
- Undeveloped
- Park
- N/I

Kansas City Streetcar Riverfront Extension Project; Kansas City, Missouri
Study Area and Features
1-31-19
30% DESIGN
NOT FOR CONSTRUCTION
1-31-19
30% DESIGN
NOT FOR CONSTRUCTION

GENERAL NOTES
1. SHEET NUMBERS REFER TO ALIGNMENT SHEET NUMBERING.
### Curve Table

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### General Notes

1. Profile shown is at a 30% level and intended to illustrate the existing street grades and to confirm platform locations.
2. All elevations and dimensions given are in feet unless otherwise noted.
3. All curves are based on arc definition.
4. Profiles designed to final top of rail elevation.

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### Legend

- **Embedded Track**
- **Ballast Track**
- **Track Switch**

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**RIVERFRONT STREETCAR EXTENSION**

**Northbound and Southbound Track Alignment**

**Grand Boulevard**

**NB Sta, 113+00 to 118+00**

**NOT FOR CONSTRUCTION**

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**1-31-19**

**30% Design**

**Not For Construction**
1-31-19
30% DESIGN
NOT FOR CONSTRUCTION

GENERAL NOTES
1. PROFILE SHOWN IS AT A 20% LEVEL AND INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM PLATFORM LOCATIONS.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. SEE SHEET NO. 8 FOR CURVE INFORMATION.

LEGEND
- EMBEDDED TRACK
- BALLAST TRACK
- TRACK SWITCH

RIVERFRONT STREETCAR EXTENSION
NORTHBOUND AND SOUTHBOUND TRACK
ALIGNMENT
GRAND BOULEVARD
NB STA, 123+00 TO 128+00

NOT FOR CONSTRUCTION
1-31-19
30% DESIGN
NOT FOR CONSTRUCTION

RIVERFRONT HERITAGE TRAIL

SCALE

MATCHLINE SHEET NO. 10

MATCHLINE SHEET NO. 12

GENERAL NOTES

1. PROFILE SHOWN IS AT A 5% SLOPE AND INTENDED TO ILLUSTRATE THE EXISTING STREET GRIDES AND TO CONFIRM PLATFORM LOCATIONS.

2. ALL ELEVATIONS AND Dimensions GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.

3. ALL CURVES ARE BASED ON ARC DEFINITION.

4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.

5. SEE SHEET NO. 8 FOR CURVE INFORMATION FOR CURVES SB-4 AND NB-3.

LEGEND

EMBEDDED TRACK
BALLAST TRACK
TRACK SWITCH

RIVERFRONT STREETCAR EXTENSION
NORTHBOUND AND SOUTHBOUND TRACK ALIGNMENT
GRAND BOULEVARD
NB STA, 133+00 TO 138+00

NOT FOR CONSTRUCTION
1-31-19
30% DESIGN
NOT FOR CONSTRUCTION

RIVERFRONT STREETCAR EXTENSION
NORTHBOUND AND SOUTHBOUND TRACK
ALIGNMENT
GRAND BOULEVARD
NB STA, 148+00 TO 153+00

GENERAL NOTES
1. PROFILE SHOWN IS AT 20% LEVELS AND INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM PLATFORM LOCATIONS.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.

LEGEND
- EMBEDDED TRACK
- BALLAST TRACK
- TRACK SWITCH

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1-31-19
30% DESIGN
NOT FOR CONSTRUCTION

LEGEND
- 2" MILL & OVERLAY
- CONCRETE
- FULL DEPTH ASPHALT
- REMOVAL

GENERAL NOTES
1. PROFILE SHOWN IS AT A 10% GRADE AND INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM PLATFORM LOCATIONS.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.

RIVERFRONT STREETCAR EXTENSION
SOUTHBOUND TRACK
PLAN AND PROFILE
GRAND BOULEVARD
SIB STA, 200+00 TO 203+00
LEGEND

- 4" MILL & OVERLAY
- CONCRETE
- FULL DEPTH ASPHALT

GENERAL NOTES

1. PROFILE SHOWN AT A 3% LEVEL AND INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM PLATFORM LOCATIONS.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
1-31-19
30% DESIGN
NOT FOR CONSTRUCTION

LEGEND

≪ 2" MULL & OVERLAY
 ≫ CONCRETE

GENERAL NOTES
1. PROFILE SHOWN IS AT 3% VELOCITY AND INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM PLATFORM LOCATIONS.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.

RIVERFRONT STREETCAR EXTENSION
NORTHBOUND AND SOUTHBOUND TRACK
PLAN
GRAND BOULEVARD
NB STA, 116+00 TO 123+00

SCALE

NOT FOR CONSTRUCTION
1-31-19
30% DESIGN
NOT FOR CONSTRUCTION
1-31-19
30% DESIGN
NOT FOR CONSTRUCTION

LEGEND

2" MILL & OVERLAY

CONCRETE

GENERAL NOTES
1. PROFILE SHOWN IS AT 3% LEVEL AND
   INTENDED TO ILLUSTRATE THE EXISTING STREET
   GRADES AND TO CONFIRM PLATFORM LOCATIONS.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN
   FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL
   ELEVATION.

RIVERFRONT STREETCAR EXTENSION
NORTHBOUND AND SOUTHBOUND TRACK
PLAN
GRAND BOULEVARD
NS STA. 133+00 TO 138+00
NOT FOR CONSTRUCTION
RIVERFRONT STREETCAR EXTENSION
NORTHBOUND AND SOUTHBOUND TRACK
PROFILE
GRAND BOULEVARD
NB STA. 138+00 TO 143+00

NOT FOR CONSTRUCTION
1-31-19
30% DESIGN
NOT FOR CONSTRUCTION

NOTES:
1. DIMENSIONS AND MINIMUM CLEARANCES NOTED IN DETAIL ARE APPROXIMATE AND SHOULD BE UPDATED IN FINAL APPROVED SHOP DRAWINGS PRIOR TO INSTALLATION.
2. TRACK GAUGE IS MEASURED AT 5/8" BELOW TOP OF RAIL AND FROM THE GAUGE FACE TO GAUGE FACE.
3. SHALLOW GAUGE TIES SHOULD BE RIGID ENOUGH TO MAINTAIN LANE, GRADE, AND GAUGE OF THE RAIL. GAUGE TIE SHALL BE NO GREATER THAN 1/2" THICK AND 3" WIDE. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW BY ENGINEER.
4. CONTRACTOR TO SUBMIT INSTALLATION PLAN FOR HOLDING GAUGE IN ELASTOMERIC GROUT THOUGH TO ENGINEER FOR REVIEW AND APPROVAL.
5. TRACK SLAB LIMITS ON STRUCTURE SHOWN FOR REFERENCE, CONTRACTOR MAY PURGE BRIDGE PAVEMENT "MONOLITHICALLY" WITH TRACK SLAB.
NOTES:
1. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BY ENGINEERS PRIOR TO MANUFACTURING TRANSITION RAIL.
2. A MINIMUM OF 3" CONCRETE DEPTH BELOW ELASTOMERIC GROUT REQUIRED.
3. CONTRACTOR TO FOLLOW ELASTOMERIC GROUT MANUFACTURER'S RECOMMENDATION FOR INSTALLATION.

SECTION B

SECTION C

SECTION D

NOT FOR CONSTRUCTION
NOTES:

1. CONTRACTOR TO VERIFY RESISTIVITY AND PERFORMANCE OF INSULATED JOINT AND SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BY ENGINEER PRIOR TO INSTALLATION. SEE SPECIFICATIONS FOR RESISTIVITY REQUIREMENTS. SUGGEST TESTING RESISTIVITY AT FACTORY AND PRIOR TO EMBEDDING IN CONCRETE.

2. DIMENSIONS AND MINIMUM CLEARANCES NOTED IN DETAIL ARE APPROXIMATE AND SHOULD BE UPDATED IN FINAL APPROVED SHOP DRAWINGS PRIOR TO INSTALLATION.

3. A MINIMUM OF 7" CONCRETE DEPTH REQUIRED BELOW ELASTOMERIC GROUT.

4. INSTALL ELASTOMERIC GROUT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
NOTES:

1. PROPOSED PROFILE IS TOP OF LOW RAIL. NOTE THAT TOP OF CONCRETE BETWEEN RAILS IS 1/4" BELOW TOP OF RAIL.

2. AVOID DAMAGING THE RAIL BOOT DURING STORAGE AND INSTALLATION. REFER TO SHEETS (SEE NOTE 15). REFER TO SHEETS (SEE NOTE 15).

3. CROSS SLOPE Varies (UP OR DOWN), REFER TO SHEETS 08-02-A601-15.

4. EMBEDDED RAIL MAY BE INSTALLED WITHOUT CANT UNLESS SPECIFIED SHOWN OTHERWISE.

5. BETWEEN SEPARATOR BLOCK ASSEMBLIES, SPACING BETWEEN RAIL AND RESTRAINING RAIL SHALL BE 18" TO 24" AS PER MANUFACTURER'S INSTRUCTIONS TO PREVENT STRAY CURRENT LEAKAGE.

6. RAIL RAIL AND RESTRAINING RAIL ALL SHALL BE IN EMBEDDED TRACK ONLY. MAINTAIN A FLANDERED DEPTH OF 2 1/8" BELOW THE TOP OF RAIL.

7. WEB FILLER REQUIRED ALONG THE SLOTS OF THE RAIL AND RESTRAINING RAIL ASSEMBLY BETWEEN LOCATIONS OF SEPARATOR BLOCK HEAD BOLTS.

8. MAXIMUM SEPARATOR BLOCK SPACING 48" CENTER TO CENTER. SEPARATOR BLOCK MAY BE SOLID TYPE OR SPLICE TYPE.

9. END 36" OF RESTRAINING RAIL TO BE FLARED FROM X (SEE NOTE 6) (FLANGED TO 3 1/2')

10. RAIL ASSEMBLY AND FLANGEWAY DETAIL

11. RESTRAINING RAIL TO BE INSTALLED ON THE INSIDE OF RUNNING RAIL FOR CURVES WITH 115 RE RAIL AND A RADIUS UNDER 420 AND SMALL EXTEND 10' BEYOND THE LIMITS OF THE CURVE.

12. FOR REAR SERVICE TRACK USING 115 RE RAIL, USE RESTRAINING RAIL ON BOTH RAILS FOR RADIUS UNDER 10'.
RIVERFRONT STREETCAR EXTENSION

RAIL EXPANSION JOINTS

NOT FOR CONSTRUCTION
1-31-19
30% DESIGN
NOT FOR CONSTRUCTION

MATCHLINE SHEET NO. 47

MATCHLINE SHEET NO. 48

LEGEND

- ILLUMINATED SIGN
- TRAFFIC SIGNAL HEAD WITH BACKPLATE
- VEHICULAR DETECTION CAMERA
- TRANSIT SIGNAL HEAD

RIVERFRONT STREETCAR EXTENSION
NORTHBOUND AND SOUTHBOUND TRACK
TRAFFIC SIGNAL LAYOUT
GRAND BOULEVARD
NS STA. 133+00 TO 138+00

NOT FOR CONSTRUCTION