

March 13, 2020

Dear Consultant:

The Tax Increment Commission of Kansas City is requesting the services of a consulting engineering firm to perform the described professional services for the project included on the attached list. If your firm would like to be considered for these consulting services, you may express your interest by responding to the appropriate office, which is indicated on the attachments. Limit your letter of interest to no more than five pages. This letter should include any information which might help us in the selection process, such as the persons or team you would assign to each project, the backgrounds of those individuals, and other projects your company has recently completed or are now active. It is required that your firm's Statement of Qualification (RSMo 8.285 through 8.291) be submitted with your firm's Letter of Interest. The statement of qualification is not included in the total page count limit.

DBE firms must be listed in the MRCC DBE Directory located on MoDOT's website at <u>www.modot.gov</u>, in order to be counted as participation towards an established DBE Goal. We encourage DBE firms to submit letters of interest as prime consultants for any project they feel can be managed by their firm.

It is required that your firm be prequalified with MoDOT and listed in MoDOT's Approved Consultant Prequalification List, or your firm will be considered non-responsive.

We request all letters be received by 1:00 p.m., April 13, 2020, addressed to the Tax Increment Financing Commission and sent to the Commission's redeveloper at the following address:

MD Management Attn: Garry Hayes 5201 Johnson Drive, Suite 100 Mission, KS 66205

Sincerely,

Heather A. Brown Executive Director

Attachments

| City/County: Kansas City, Platte and Cla | y Route MO Route 152 |
|--|--|
| Federal Aid No: | J4S3477/J4S3347 |
| Location: | Clay/Platte Counties |
| Proposed Improvement: | Interchange improvement and bike/ped |
| | connections as noted in attached "MO |
| | 152 and Platte Purchase Drive |
| | Interchange, Platte and Clay Counties |
| | Conceptual Study Report-September |
| | 2019" |
| Length: | 0.5 miles |
| Approximate Construction Cost: | \$ 5,358,316 |
| DBE Goal Determination: | 10% |
| Consultant Services Required: | As noted in but not limited to the |
| | attached Sample Scope of Services |
| Other Comments: | Please review attached conceptual |
| | report |
| Contact: | Name: Garry Hayes |
| | Address: 5201 Johnson Drive, Ste 100 |
| | Mission, KS 66205 |
| | Phone: 913-831-2996 |
| | Email: garry@mdmgt.com |
| Deadline: | |
| Submit: Letter of interest should not exce | ed five pages total. A page is defined as 8- |
| 1/2 by 11 inches and printed on one side | Three paper copies and one electronic |
| copy of the letter interest should be recei | ved at the address and by the time |
| specified. | |

Pursuant to the Brooks Act for Consultant Selection – the following criteria will be the basis for selection. Additional criteria can be added with the approval of Central Office Design- MoDOT.

| Experience and Technical Competence - | 25 | Max Points |
|---------------------------------------|----|------------|
| Capacity and Capability - | 25 | Max Points |
| Past Record of Performance - | 25 | Max Points |
| Project Approach | 25 | Max Points |

Fig 136.4.7

Oct 2019

RFQ Sample Scope of Services

Project Background:

Missouri Route 152 west of US 169 was constructed in the early 1990's. Since that time period, the population of Clay and Platte Counties has grown from 211,278 to 349,350. The Platte Purchase Interchange was constructed without signalization or appropriate turn lanes as the development of these two counties has rapidly changed the transportation demands on this interchange. The Tax Increment Financing Commission in partnership with the City of Kansas City, Missouri is investing \$40M in a new tournament quality sports facility scheduled to open in 2021 and designed to attract visitors and participants from Kansas, Iowa, and Nebraska. This new sports facility will include a twelve turf fields and is part of the Kansas City region's bid to host 2026 World Cup events.

Purpose and Need:

The purpose and need for improvements to the Route 152 and Platte Purchase Interchange are to provide for the efficient movement of people, goods, and services from the Route 152 and US 169 freeways to the planned 12 field all weather sporting complex, future Platte County R-3 middle and high schools, and existing Barrytowne Shopping District by improving the efficiency of the interchange without additional bridge widening and to remove barriers and gaps in the City's bicycle and pedestrian network.

Roadway:

The engineering responsibilities may include but are not limited to the following: The preparation of Conceptual plans, Preliminary plans, Contract plans and Right of Way Plans. Design services may include, right of way plans, surveying, geotechnical investigations, public involvement, environmental and historic preservation services/permits, contract documents, assisting with the bidding process, construction support/construction inspection, utility coordination/permits and traffic controls including the preparation of PS&E and final documents. The PS&E and final documents will be completed and delivered in MoDOT format for use in the MoDOT bidding system. MO 152 and Platte Purchase Drive Interchange, Platte and Clay Counties Conceptual Study Report-September 2019

INTRODUCTION

Missouri Route 152 west of US 169 was constructed in the early 1990's. Since that time period, the population of Clay and Platte Counties has grown from 211,278 to 349,350. The Platte Purchase

Interchange was constructed without signalization or appropriate turn lanes and the development of these two counties has rapidly changed the transportation demands on this interchange. The City of Kansas City, Missouri is investing \$40M in a new tournament quality sports facility scheduled to open in early 2021 and designed to attract visitors and participants from Kansas, Iowa, and Nebraska. This new sports facility will include a twelve turf fields and <u>is part of the Kansas City</u> <u>region's bid to host 2026 World Cup</u> <u>events.</u>

This facility will be located along Missouri Route 152 at the Platte Purchase Interchange. In addition to the sporting complex, the Platte County R-3 School

District, which is one of the fastest growing school districts in the state, is planning to construct a new middle school in 2025 and has secured land for a future second high school to be served by the interchange.

In addition to the planned soccer complex, the City of Kansas City with funding from its Platte Purchase Redevelopment Plan has funded \$12M in street improvements on Platte Purchase, Old Stagecoach Road, and Line Creek Parkway. These arterial streets are currently under construction and will be complete by the end of 2020.

Platte Purchase north of the Route 152 interchange will be improved four lane arterial street with a raised median and include sidewalks, street lights, and a ten foot multi-use separated bicycle facility.



Proposed Sporting and School Complexes



2020 Adjacent Street Improvements

The extension of Old Stagecoach Road will be similar to Platte Purchase and will be the direct entrance to the sporting complex and future school district campuses.

INTERCHANGE EXISTING CONDITIONS

The interchange and bridge were constructed in 1990 and the bridge had some rehabilitation completed in 2015. The Route 152 freeway corridor was not fully completed until 2004. As the corridor was completed, the area has seen a substantial amount of economic development and growth because of the proximity to Kansas City International Airport, downtown Kansas City, Ford Motor Company, and other employment centers in the Kansas City region.

EXHIBIT II

Route 152 is a major east/west limited access highway with two lanes of travel in each direction separated by a grassed median. The intersections of the Platte Purchase ramps are both controlled by stop signs. At Platte Purchase Drive the on and off ramps provide for only one lane of travel for access to the highway. The ramp terminals do provide triangular islands which designates the separated right turn movement. The geometrics provide approximately 50 feet of left turn storage before access to the right turn radius is blocked by any queue that occurs for left turns.

Within the MoDOT right-of-way of the Route 152 interchange area, Platte Purchase Dr. has a 4-lane typical section, with shoulders on either side. There are no auxiliary turn lanes within the interchange area, so all left turns from Platte Purchase Dr. to a highway on-ramp must be made from the inside through lane. This creates a safety issue for trailing vehicles that need to stop or change lanes to avoid the queued vehicle(s). South of the interchange area, Platte Purchase Drive retains four lanes for through traffic, but a divided center median and auxiliary left turn lanes are introduced. The speed limit through the 4-lane interchange area is signed as 45 mph in the northbound direction, which appears to be the intended speed limit. The speed limit transitions to 35 mph where there is a 2-lane typical section for Platte Purchase Drive.

No sidewalks or facilities for non-motorized exist within the interchange area. Platte Purchase Drive has continuous sidewalk facilities a half mile south to Barry Road. The KCI Corridor TIF improvements under construction north of the interchange will have continuous sidewalk facilities for approximately a mile north of the interchange. Able bodied and disabled users do not have a safe facility to use on MoDOT right of way and will be forced to use the shoulder on the bridge with bridge sidewalls which do not meet code requirements to prevent either bicyclists or pedestrians from falling onto the Route 152 freeway.

TRAFFIC SIGNAL AND OPERATIONAL ANALYSIS

The following discussion and traffic analysis have been excerpted from a "Traffic Study of Proposed Arterial and Parkway Improvements" completed by McClure Engineering, Inc. on behalf of MD Management, Inc.. MD Management is the redeveloper for the Platte Purchase Tax Increment Financing District and is completing infrastructure improvements on behalf of the City of Kansas City, Missouri through redevelopment agreements with the City's Tax Increment Financing Commission.

The interchange ramp terminals serve significant traffic volumes. A review of signal warrants was completed as outlined in the Manual on Uniform Traffic Control Devices (MUTCD) and contains extensive guidelines on the selection and application of traffic signals as a form of traffic control at intersections.

When considering traffic signals, there are nine "warrants" that have been established as minimum thresholds of when it is appropriate to consider a traffic signal over other forms of traffic control, such as stop signage. The nine warrants cover a variety of conditions, including school crossings, high crash locations, and intersections near railroad grade crossings. The three most commonly applied warrants deal solely with combinations of vehicular volumes. For each volume based warrant, there are certain hourly traffic volumes which much be present on the combined approaches of the major street while, during the same hour, there is a certain minimum volume on the highest of the minor street approaches. The three volume warrants, numbered 1 through 3, address traffic conditions which are present for differing lengths of time. Warrant 1 requires the lowest volumes to be present, but the volumes must be present for eight

EXHIBIT II

different hours of an average day. Warrant 2 requires higher volumes to be present, but the volumes need only to be present for four different hours of an average day. Finally, warrant 3 requires the highest volumes to be present, but the volumes need only occur during a single hour of an average day. Application of Warrant 3 is generally reserved for unusual cases, where a high traffic generator, such as office complexes cases or manufacturing plants attract and discharge large numbers of vehicles over a short time. Thus, for a traffic signal warrant analysis of the interchange ramp intersections, the volume warrants 1 and 2 were both considered.

In considering warrants 1 and 2 for the two intersections with the Route 152 interchange ramps, the minor street approaches (the off-ramps) were considered as one-lane approaches. There is a radius and a triangular island that define a separate right turn at the intersection, but there is only a very short distance before access to this radius is blocked. Thus, the approach was treated as containing only one lane. Also, the interchange area was assumed to have a speed limit of 45-mph, as this is the posted speed for northbound movements entering the interchange area. Southbound, the last speed limit sign currently installed in advance of the interchange area displays 35-mph, but this sign is located on a section of Platte Purchase Drive that is still a 2-lane typical section. The difference in assumed speed limit can be important, as the warrants allow for a 30% reduction in the traffic volumes needed to satisfy a signal warrant if the 85th percentile speed (typically close to the speed limit) is 40 mph or greater.

The existing traffic volumes at the intersection of Route 152 EB Ramps with Platte Purchase Drive were found to meet the 100% values of signal warrants 1 and 2, meaning that even when considered at a lower speed limit requiring full warrant values, the volumes still met both signal warrants. The existing volumes at the intersection of Route 152 WB Ramps with Platte Purchase Drive were found to meet the 70% values for warrant 2. Copies of the warrant summaries are contained in the Appendix for reference.

OPERATIONAL LEVEL OF SERVICE (LOS)

The following discussion and traffic analysis have been excerpted from a more detailed study on the interchange titled "MO 152 and Platte Purchase Interchange Recommendations" completed by McClure Engineering, Inc. on behalf of MD Management, Inc.. MD Management is the redeveloper for the Platte Purchase Tax Increment Financing District and is completing infrastructure improvements on behalf of the City of Kansas City, Missouri through redevelopment agreements with the City's Tax Increment Financing Commission.

Six scenarios were evaluated to evaluate traffic in 2021 in the AM peak hour, PM peak hour, and weekend. The design team chose 2021 because that is when the sporting complex and associated development will open and the design year volumes were estimated in 2041 based on a 1.5% annual growth rate. These scenarios were used to evaluate three different interchange alternatives:

- 1. Diamond Interchange
- 2. Diverging Diamond Interchange (DDI)
- 3. Roundabout

The configurations of the interchange options were determined based on alternatives which would consider traffic operations, safety, existing infrastructure, existing right-of-way and driver familiarity. One of the critical factors of this interchange is the limited bridge deck width of 70° 10". As the bridge was still in good operating condition after being constructed in the early 1990's with a 2015 rehab, all alternatives were developed assuming no additional deck width would be added. Another consideration for alternatives was their accommodation of facilities for pedestrians and bicycles. In addition to the interchange, lane geometry and turn lane lengths were evaluated at the study intersections to ensure operations remain within preferred levels.

After the trip generation/distribution, scenario and alternative development, A total of VISSIM18 models were developed from the 3 alternatives and 6 scenarios. Each model had a 15-minute seeding phase to populate the model and then was run for an additional 60 minutes. Each model took the average of 20

simulation runs to estimate the operational performance. Several Measures of Effectiveness (MOE)s were used to evaluate the model: Vehicle Travel Time, Vehicle Delay, Number of Stops, Average Queue, and Max Queue. The excerpted summary of the evaluation results for the different models are shown on following table.

| Scenario | Alt | Delay Avg. (sec) | Delay Latent (hrs) | Delay Stop Avg. (sec) | Delay Stop Total (hrs) | Delay Total (hrs) | Demand Latent | Dist. Total (ft) | Speed Avg. (mph) | Stops Avg. | Stops Total | Travel Time Total (hrs) | Veh Act | Veh Arr |
|----------|---------|------------------------|-----------------------|-----------------------------|---------------------------|-------------------------|------------------|---------------------|------------------------|---------------|-------------|----------------------------|------------|---------|
| 2021 AM | Diamond | 24 | 0 | 13 | 30 | 53 | 0 | 8,342 | 42 | 0.8 | 6,346 | 200 | 206 | 7,892 |
| | DDI | 22 | 0 | 12 | 26 | 50 | - | 8,301 | 42 | 0.7 | 5,488 | 197 | 214 | 7,874 |
| | RAB | 24 | 0 | 11 | 25 | 55 | 0 | 7,537 | 37 | 0.9 | 7,239 | 204 | 205 | 7,891 |
| 2021 PM | Diamond | 32 | 1 | 17 | 53 | 100 | 1 | 11,854 | 38 | 1.0 | 11,522 | 308 | 310 | 10,744 |
| | DDI | 31 | 1 | 16 | 50 | 95 | - | 11,815 | 39 | 0.9 | 10,024 | 304 | 326 | 10,715 |
| | RAB | 121 | 157 | 55 | 162 | 359 | 448 | 9,468 | 17 | 7.8 | 83,328 | 548 | 651 | 10,015 |
| 2021 | Diamond | 92 | 64 | 55 | 179 | 297 | 222 | 12,159 | 24 | 3.5 | 40,837 | 512 | 607 | 11,053 |
| Weekend | DDI | | 1 | 18 | 58 | 112 | - | 12,448 | 37 | 1.0 | 11,806 | 334 | 338 | 11,517 |
| | RAB | 265 | 1,134 | 139 | 356 | 680 | 2,775 | 7,587 | 9 | 19.8 | 182,939 | 839 | 890 | 8,376 |
| 2041 AM | Diamond | 27 | 1 | 13 | 36 | 76 | 2 | 10,612 | 41 | 0.8 | 8,258 | 258 | 266 | 9,799 |
| | DDI | 24 | 0 | 11 | 30 | 68 | - | 10,583 | 42 | 0.6 | 6,507 | 251 | 248 | 9,807 |
| | RAB | 46 | 3 | 21 | 59 | 130 | 13 | 9,498 | 31 | 2.0 | 20,454 | 310 | 327 | 9,736 |
| 2041 PM | Diamond | 65 | 222 | 32 | 115 | 235 | 480 | 14,189 | 30 | 2.0 | 25,856 | 480 | 514 | 12,575 |
| | DDI | 43 | 232 | 16 | 57 | 158 | 363 | 14,336 | 35 | 1.0 | 13,775 | 407 | 386 | 12,804 |
| | RAB | 177 | 909 | 83 | 267 | 571 | 2,111 | 10,311 | 13 | 10.6 | 122,540 | 771 | 860 | 10,757 |
| 2041 | Diamond | 118 | 487 | 67 | 247 | 437 | 1,068 | 14,070 | 21 | 4.1 | 54,073 | 681 | 825 | 12,546 |
| Weekend | DDI | 51 | 358 | 21 | 79 | 195 | 569 | 14,687 | 32 | 1.4 | 19,126 | 453 | 467 | 13,349 |
| | RAB | 295 | 2,386 | 169 | 447 | 783 | 5,161 | 7,856 | 8 | 19.3 | 183,982 | 944 | 995 | 8,573 |

Table 3: Network Operations Summary

During the 2041 Weekend Peak hour the average vehicle travel time dropped by nearly 50% from the Diamond to the DDI alternatives. Even more pronounced was the decrease in average queue as it fell on average by nearly 350 feet for the WB 152 off-ramp during the 2041 Weekend scenario.

One issue arising during operational analysis was accommodating for the failing levels of service experienced by several models. The Demand Latent column of Table 3 showed over 5,000 vehicles in the Roundabout 2041 Weekend model were unable to enter the network due to excessive congestion. To a lesser degree both the Diamond and DDI scenarios also experienced excessive delays that restricted vehicles from joining the network due to crowding issues. However, the DDI experienced the least latent demand.

These breakdown conditions across the 3 scenarios reflect the high volume of peak hour vehicle demand vs. limited infrastructure available across the Platte Purchase Drive bridge over MO 152. Caution was used analyzing traffic operations under such heavy conditions due to the unpredictable simulation behavior.

Overall, the DDI performed the best among the three alternatives. It not only experienced the least latent vehicle demand, but also had the smallest delay, travel time and number of stops verses the Diamond and Roundabout alternatives across all scenarios. During the 2021 Weekend peak hour the number of stops fell on average from 3.5 to 1 stop per vehicle and the travel time fell by 34%

The DDI would eliminate any delay failures on the off-ramps that would have traffic backing up onto the freeway and potentially impacting the US 169 cloverleaf interchange.



Interchange Proximity to US 169 Cloverleaf

In summary, installing signals without geometric improvements to the interchange will not increase the operational level of service of the existing conditions nor will the interchange with just signalization accommodate the future development of the new sporting complex and school facilities. The project will be within existing MoDOT right of way and previously disturbed soil and should require minimal environmental mitigation and permitting. Information is provided for a programmatic or a categorical exclusion as supplemental information for this conceptual study report.

Major Route

DESIGN TRAFFIC (Platte Purchase Drive)

ADT (Const.) = 5,318 vpdADT (Design) = 28,549 vpdDHV = 10%D = 50%% Trucks = 4%Operational (Posted) Speed= 35 mph <u>CONCEPTUAL COST (\$1,000's)</u> Design: \$595,000 Right of Way: \$0 Construction: \$6,464,250 Total: \$7,074,250

EXISTING FACILITIES

| Beginning | Pavement | | Year | Roadbed | Min. R/W | Access |
|-----------|----------|----------|-------|---------|----------|---------|
| Log Mile | Width | Туре | Built | Width | Width | Control |
| | 48' | Concrete | 1995 | 48' | 120' | Limited |

EXISTING BRIDGES

There will be no work on the existing bridge structures other than attachment of barrier to protect bicyclists and pedestrian from vehicles.

PROPOSED DESIGN CRITERIA

| Functional | Design | No. & Width | Roadbed | Right of Way | | | | |
|----------------|--------|-------------|---------|--------------|-----------|--|--|--|
| Classification | Speed | Of Lanes | Width | Width | Control | | | |
| Minor Arterial | 40mph | Varies | 48' | No change | No change | | | |

PROPOSED DESIGN

The proposed improvements for the Route 152 and Platte Purchase Interchange will be a diverging diamond interchange within the existing right of way with little to no environmental impacts.

These interchange types are being evaluated rather than traditional diamond widening because they do not require any expansion of the existing Platte Purchase Bridge nor multi-lane widening on the interchange ramps which would create substantial new maintenance obligations for MoDOT.

The DDI provides an acceptable level of service for the funded development adjacent to the project area with minimal increases in turn lane widening when compared to a tradition diamond interchange.



Proposed Diverging Diamond Interchange Option

CHANGE IN ROUTE STATUS

The proposed project makes no changes to function of MO 152 so a "Change in Route Status" will not be required.

UTILITIES

Initial review of the site conditions shows no major utility impacts. There is a 24" waterline on the southeast corner which goes along the east side of Platte Purchase but then turns 90 degrees to go along the south side of Route 152. This 90 degree bend may need to be relocated but should relocation be necessary, the City of Kansas City would be responsible for the cost. Utility boxes will need to be adjusted to the grade but no overhead facilities are anticipated to be impacted. Further coordination with utilities will be completed during project development but all improvements are within existing right of way and will be moved by the respective utility company at their expense with the exception of Kansas City owned utilities which will be done by the City prior to or will be included in project at the City's expense.

ENVIRONMENTAL SUMMARY

A preliminary environmental review has been completed by Kansas City. The project sits at the top ridge between the Second and Line Creek watersheds and is will be wholly within the existing interchange right of way which has previously been disturbed. It is anticipated this project will be a Categorical Exclusion based on the initial environmental review and comments on the following categories.

Community Impacts: This project is will not impact community cohesion or hamper community service provisions. Based on the current description of the project, socioeconomic impacts will be limited to temporary traffic disruptions during construction and detours during construction of the project. Project will be a net positive benefit by providing bicycle and pedestrian accommodations through an interchange where residents must walk in the street or on dirt paths to traverse the interchange and access the Route 152 Trail and safer traffic operations by removing queueing on the highway off ramps.

The project will serve a proposed \$40M multi-purpose sporting complex and a future Platte County R-3 School District middle and high school. The project will improve access and walkability for the existing developed areas to the proposed new developments. Currently anyone wanting to cross the Route 152 freeway have to walk in the ditch and then on the bridge shoulder without any barrier protection.

Farmland Impacts (Type and Area): Recognizing the importance of protecting farmland from conversion to non-agricultural use, Congress passed the Farmland Protection Policy Act (FPPA) in 1981. Before a federal project or federally-funded program can use farmland, the farmland that would be affected must be assessed in a collaborative process with the Natural Resources Conservation Service (NRCS).

This project is entirely within city limits of Kansas City; therefore, it meets the Farmland Protection Policy Act (FPPA) definition of "land committed to other uses", and impact will not be evaluated.

Wetland Impacts: Wetlands are defined (Federal Register, 1982) as "Those areas that are inundated or saturated by surface or groundwater at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil condition." Recognizing the variety of beneficial functions performed by wetlands, Executive Order 11990 (Wetlands Protection) mandates consideration of wetland impacts, as does Missouri's Executive Order 96-03. Furthermore, Executive Order 11990 mandates a no-net-loss-of- national-wetlands policy. Section 404 of the Clean Water Act of 1977 authorizes the U.S. Army Corps of Engineers (COE) to regulate the discharge of dredged or fill material in all waters of the United States, including wetlands.

According to US Fish and Wildlife Services National Wetlands Inventory (NWI) map, there is a historical wetland located within the project limits which was removed when MoDOT built the EB onramp and has been developed with the new Costco development.



National Wetland Mapper Database

The project is widening within the existing interchange and no changes will be made to the existing cross road box culvert underneath MO 152 and west of Platte Purchase where the blue line stream is located.

Water Quality Impacts: The project will include a Storm Water Pollution Prevention Plan (SWPPP) on site which shall be implemented to prevent or minimize adverse impacts to streams, water courses, lakes, ponds, or other impoundments within and adjacent to the project area. This plan will describe best management practices and procedures designed to reduce suspended solids, turbidity, and downstream sedimentation that may degrade water quality and adversely impact aquatic life. The plan provides for temporary erosion and sediment control measures that will be included within construction contract specifications.

404 Permit Required (Yes/No): No. Disturbed area will not impact any waters of the United States and site disturbance will be less than 1 acre.

Floodplain Impacts: Executive Order 11988, Floodplain Management, and subsequent federal floodplain management guidelines mandate evaluation of floodplain impacts. When available, flood hazard boundary maps (National Flood Insurance Program) and flood insurance studies for the project area used to determine the limits of the base (1%) floodplain and the extent of encroachment.



FEMA Map Service Center Floodplain Map

There are no floodplains within the project area as the project is at the watershed ridge.

Federal Emergency Management Agency (FEMA) Buyout Lands: The Flood Disaster Protection Act of 1973, as amended by the Disaster Relief and Emergency Assistance Act of 1988 (The Stafford Act), identified the use of disaster relief funds under Section 404 for the Hazard Mitigation Grant Program (HMGP), including the acquisition and relocation of flood-damaged property. The Volkmer Bill further expanded the use of HMGP funds under Section 404 to "buy out" flood-damaged property that had been affected by the Great Flood of 1993. There are numerous restrictions on these FEMA buyout properties and processing an exemption from FEMA to use a parcel can require two to three years.

TMS FEMA Buyout Layer reveals no FEMA buyout properties within the project area.

Air Quality Impacts: The Clean Air Act (CAA) requires the adoption of air quality standards, quality control regions, and state implementation plans. The federal government established the National Ambient Air Quality Standards (NAAQS), to protect public health, safety, and welfare from known or anticipated effects of sulfur dioxide, particulate matter, carbon monoxide, nitrogen dioxide, ozone, and lead. The State of Missouri established additional criteria for hydrogen sulfide and sulfuric acid. Transportation can contribute to four of the six NAAQS pollutants: ozone, carbon monoxide, particulate matter, and nitrogen dioxide. Transportation conformity with the NAAQS, as required by the CAA, ensures that federally funded or approved transportation plans, programs, and projects conform to the air quality objectives established in State Implementation Plans.

The Kansas City region is currently in "attainment" for ground-level ozone — meaning that the area currently meets those standards. The project also adds a bicycle/pedestrian facility where none exists further promoting air quality by promoting non-motorized transportation.

Noise Impacts: The 1972 Federal-aid Highway Act required FHWA to develop a noise standard for new Federal-aid highway projects. FHWA Noise Standards give highway agencies flexibility in conforming to national requirements. MoDOT's noise policy (found in the Engineering Policy Guide at 127.13) on highway traffic noise and construction noise describes MoDOT's implementation of the requirements of the FHWA Noise Standard at 23 Code of Federal Regulations (CFR) Part 772. The policy was developed by MoDOT and approved by FHWA.

The primary sources of highway traffic noise are the tire-pavement interface, engine noise and exhaust noise. In very general terms, the lower threshold of highway noise impact is roughly the point at which interference with normal human speech is appreciable.

This project's improvements meet the definition to designate it as a Type III Project which is a proposed Federal or Federal-aid project that does not meet the criteria for Type I or Type II. Type III projects do not require noise analysis.

In addition, the project is located in an area according to the EPG under section 127.13.6, where the existing land uses would meet the definition of Activity Category F which is defined as "Activity Category F, Land uses that are not sensitive to highway traffic noise. These land uses include: Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical) and warehousing." The EPG under section 127.13.6 states that under Activity Category F: "Activity Category F No action required" as the area consists of agricultural use and retail facilities.

Cultural Resources/Section 4(f) Historic Sites: Efforts to identify historic properties and assess potential adverse effects pursuant to 36 CFR Part 800, Protection of Historic Properties, regulations

implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470) have been implemented.

The project is widening within the interchange and will not require any grading or fill outside of existing right of way which has previously been disturbed. Formal SHPO concurrence that no historic sites will be impacted is pending. Kansas City recently obtained SHPO clearance to build the Route 152 Trail along the south side of the interchange

Parkland Section 4(f)/6(f) Involvement (Types and Area): Section 4(f) is part of the Department of Transportation Act of 1966 that was designed to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. To be Section 4(f) eligible, the property must be publicly owned, except for historic sites, which could be either public or privately owned. Federally funded actions cannot impact Section 4(f) eligible sites unless there is no feasible and prudent alternative.

The project is widening within the interchange and will not require any grading or fill outside of existing infrastructure. The project will enhance the Route 152 Trail by providing safer connections to it and will also include an underpass underneath Platte Purchase to allow trail users to avoid crossing the four lane arterial street. The project is a benefit to the Route 152 Trail as it connects the Fountain Hills neighborhood north of the interchange to the trail system and will also connect the existing and planned Platte County schools with each other.

Threatened and Endangered Species: The Endangered Species Act (ESA) provides for the protection of threatened and endangered species, both plants and animals, and the habitats that are considered critical to the survival of these species, e.g., breeding, nesting, roosting, and foraging areas. The ESA additionally requires FHWA and LPA's to consult with the U.S. Fish and Wildlife Services (USFWS) regarding their projects and measures that can be implemented to minimize or eliminate project impacts to these species.

The State of Missouri also maintains endangered species legislation that protects these species. The state Endangered Species Act and the Missouri Wildlife Code protect state listed species. The Missouri Cave Resources Act protects caves from trespass, vandalism, contamination, and destruction. The Missouri Department of Conservation is the administrative, regulatory, and enforcement agency for state sensitive species.

The Missouri Department of Conservation (MDC) Heritage Database was reviewed for the potential to impact sensitive natural communities and protected species. The database evaluates a two-mile radius around the project area. There were sites within two miles and formal consultation was required and has been completed.

A formal review was submitted to MDC and it was determined the project would have impacts to species of concern. The review did note that: *Natural Heritage records identify American Badger* (*Taxidea taxus, State Rank S3*) 0.2 and 1.1 mi from project area. The proposed project should have minimal impacts on this species.





| Missouri I Natural He Septe | Department of C Pritage Re mber 18, 2019 Pa | onservation view Report ge 1 of 2 | P. O. Box 180 Jefferson City, MO 65102 Prepared by: Environmental Review Coordinator NaturalHeritageReview@mdc.mo.go (573) 522 – 4115 ext. 3182 |
|---|--|---|---|
| | Project type: | ROAD / HIGHWAY | |
| WES MINDER | Location/Scope: | T51N R33W S3 AN | D S4 |
| OFFICE OF THE CITY MANAGER | County: | PLATTE AND CLA | Y |
| | Query reference: | ROUTE 152/PLATT | E PURCHASE |
| KANSAS CITY MO 6/106 | Oursense and the | | |
| WES MINDER@KCMO ORG | Query received. | 8/1/2019 | |
| This NATURAL HERITAGE REVIEW is not a site clea | nrance letter. Rather, it | identifies public lands and ser | nsitive resources known to have been |
| were identified at some date and location. This report of plant communities. To say "there is a record" does not i species will not be encountered. These records only pre should be considered. Look for additional information a information is at http://mdc.mo.gov/discover-nature(). | onsiders records near but mean the species/habitat ovide one reference and o bout the biological and ha laces-go/natural-areas a | not necessarily at the project sit is still there. To say that "there is other information (e.g. wetland or bitat needs of records listed in o nd mdc4 mdc mo gov/applicati | e. Animals move and, over time, so do s no record" does not mean a protected soils maps, on-site inspections or survey rder to avoid or minimize impacts. More onstmoliwis/mofiwis. search 1 aspx |
| Aval 3 issues: Pasarda affalla | ral listod (these | aro also stata lista | d) enocios or critical |
| habitats near the project site | al-listed (these | e are also state-liste | uj species of chilical |
| habitats hear the project site. | | | |
| habitats, and <u>no</u> federal-listed specie section listed above or sections adja FEDERAL LIST species/habitats are protected under the Feder Missouri 65203-0007; 573-1 | es records within cent. al Endangered Species Act. (234-2132) for Endangered Spe | the project area, or in Contact the U.S. Fish and Wildlife Se acces Act coordination and concurrence | n the public land survey rvice (101 Park Deville Drive Suite A, Columbia, information. |
| state-ranked (not state-listed enda concern. The Department tracks t declines and/or apparent vulnerat Natural Heritage records identify Am | ingered) species a these species a bility. erican Badger () | s and natural comm nd natural commun Faxidea taxus. State I | ities due to population |
| from project area. The proposed pro | ject should have | minimal impacts on t | his species. |
| Definitions of each rank: | | | |
| S1: Critically imperiled in the making it especially vulnerabl very few remaining individuals | state because of e to extirpation fi s. | extreme rarity of or b rom the state. Typica | ecause of some factor(s) Illy 5 or fewer occurrence o |
| S2: Imperiled in the state bec vulnerable to extirpation from S3: Vulnerable in the state more restricted range (even if abun | ause of rarity or l the state. (6 to 2 eans this species dant in some loc | because of some fact 0 occurrences or few s is rare and uncomm ations), or because o | tor(s) making it very remaining individuals). on, or found only in a f other factors making it |
| vulnerable to extirpation. Typ individuals. | ically 21 to 100 o | occurrences or betwe | en 3,000 and 10,000 |
| S4: Uncommon but not rare, a term concern. Usually more t | and usually wide han 100 occurre | spread in the nation on nces and more than a | or state. Possibly of long- 10,000 individuals. |
| Prepared Septembe | er 18, 2019; Minder_Plat | teClay_RoadHwy_NHR Page 1 | 1 of 2 |
| ere are no permanent streams to be | crossed, and no | sensitive aquatic res | source concerns. There ar |

project area. The project is widening within the interchange which are cleared and maintained by MoDOT pariodically. Formal TES consurrance that no sites will be imported will be completed during final plan

periodically. Formal TES concurrence that no sites will be impacted will be completed during final plan development.

EXHIBIT II

Hazardous Waste Sites: A records review was conducted for the project area. The following sources were searched for potential hazardous and solid waste concerns: Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS); Missouri Department of Natural Resources (DNR) Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri; DNR Missouri Hazardous Waste Treatment, Storage, and Disposal Facilities List; DNR Solid Waste Facilities List; DNR Underground Storage Tank (UST) database; Center for Agricultural, Resource and Environmental Systems; Google Earth and Missouri Petroleum Storage Tank Insurance Fund database Missouri Hazardous Substance Site Locator (MHSSL) map.



MDNR Hazardous Site Map

No hazardous waste sites are located within the project area and the area has historically been farmed.

Attachments:

- At. II-1 Conceptual plan exhibits
- At. II-2 Signal warrant analysis
- At. II-3 Cost breakdown

Was Marde

Prepared by:

Wes Minder, P.E. City of Kansas City, Missouri



N. PLATTE PURCHASE DR.

SP (11)

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ATTENTION OF A DESCRIPTION OF A DESCRIPR



N. Platte Purchase Interchange Improvements Diverging Diamond Concept

Kansas City, MO









At. II-1 Conceptual plan exhibits

| | | 1 | — I |
|---|-------------------------------------|---------------------|--------------|
| 7 B. Reported crashes susceptible to correction by signal | (12-month period)and | | |
| 7 C. (56%) Volumes for Warrants 1A, 1Bor 4 are satis | sfied | | \checkmark |
| Warrant 8: Roadway Network | | | |
| 8 A. Weekday Volume (Peak hour totaland projected | warrants 1, 2 or 3)or | | |
| 8 B. Weekend Volume (Five hours total) | | | |
| Warrant 9: Grade Crossing | | | |
| 9 A. Grade Crossing within 140 ftand | | | |
| 9 B. Peak-Hour Vehicular Volumes | | | |
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At. II-2 Signal Warrant Analysis Warrants Volume

| | Warrants Volume | | | | | | | | | | | | | | | | | | | | | | |
|---|------------------------------|----------------|---------------------------|---------------------------------------|--|--|-------------------------|------------------------------|---------------------------------------|----------|--|-------------------------------|--------------------------------|---------------|--------------------------|------------------------|------------------|---------------------|----------------------------|-------------------------|------------------------------------|--|--|
| Information | on | | | | | | | | | | | | | | | | | | | | | | |
| Analyst Agency/Co Date Perform Project ID East/West St File Name | ed reet | | | CI M 6/ K0 Hi EI E2 | LBK EC 21/201 CMO 1 CMO 1 Wy 152 B Ram kisting. | 18 FIF - Plai 2 EB Rai p & Plat .xhy | tte Pur mp te Pur | chase D chase W |)ev /arrant | - | Intersection Platte Purchase & WB Ramps Jurisdiction Kansas City, Platte County, MO Units U.S. Customary Time Period Analyzed North/South Street Platte Purchase Major Street North-South | | | | | | | | | | 0 | | |
| Project Desci | ription KCN | IO TIF | - Plati | te Purcl | hase D | Dev | | | | | | | | | | | | | | | | | |
| | | | | | | | | | и | arra | ant | t 1 | | | | | | | | | | | |
| | | Condit | on A—I | Minimum | Vehicu | ılar Volum | lê | | | _ | Condition B—Interruption of Continuous Traffic | | | | | | | | | | | | |
| Number of lar traffic on ea | es for moving ch approach | Vehick (tot | es per hou tal of both | ar on major approach | rstreet es) | Vehicle minor-stree | s per hou et approa | r on higher- ch (one dire | volume ction only | | | Number of la traffic on ea | nes for moving ich approach | Vehick (to | es per ho tal of both | ur on majo approact | r street nes) | Vehick minor-str | es per hour eet approad | on higher h (one din | igher-volume ne direction only) | | |
| Major Street | Minor Street | 100% | 80% | 70% | 56% | 100% | 80% | 70% | 56% | | | Major Street | Minor Street | 100% | 100% 80% | | 56% | 100% | 80% | 70% | 56% | | |
| 1 | 1 | 500 | 400 | 350 | 280 | 150 | 120 | 105 | 84 | 4 | | 1 | 1 | 750 | 600 | 525 | 420 | 75 | 60 | 53 | 42 | | |
| 2 or more | 1 | 600 | 480 | 420 | 336 | 150 | 120 | 105 | 84 | 11 | | 2 or more | more 1 | | 720 | 630 | 504 | 75 | 60 | 53 | 42 | | |
| 2 or more | 2 or more | 600 | 480 | 420 | 336 | 200 | 160 | 140 | 112 | 41 | | 2 or more | 2 or more | 900 | 720 | 630 | 504 | 100 | 80 | 70 | 56 | | |
| 1 | 2 or more | 500 | 400 | 350 | 280 | 200 | 160 | 140 | 112 | | | 1 | 2 or more | 750 | 600 | 525 | 420 | 100 | 80 | 70 | 56 | | |
| | | | И | Varraı | 1t 2 | | | | | | | | | | V | Varra | nt 3 | | | | | | |
| 문 ⁵⁰⁰ [| | -2 | OR MOP | RE LANES | & 2 OR | MORE LA | NES | | | | | - ⁶⁰⁰ | | | | T | Π | | ТТ | | | | |
| >- 곳 400 - | | X | | . 2 OR M | IORE LA | NES & 1 LA | ANE | | | | | HA 500 | \mathbf{X} | | | 20 | R MORE | LANES & 2 | OR MORE L | ANES | +-1 | | |
| NOA(| | 1 | X | \triangleleft | | 1 LANE & | | | · · · · · · · · · · · · · · · · · · · | | RET | 400 - | | | | \checkmark | | 2 OR MOR | RE LANES & | 1 LANE | | | |
| APP 300 | | 1 | 2 | J | X | | | | | | R STR | 300 - | | | | \prec | C | | 1 LAN | E & 1 LAN | E T | | |
| MINO | | | T | 4 | 4 | - | 1 | - | | 115 | MINO | 200 - | | | | - | 1 | | | | •150 | | |
| DA HS | | | | | | _ | - | | - | 80 | | 월 100 - 동 | | 1 | | + | | \square | +-+ | | *100 | | |
| 主 L 300 | 400 50 | 30 60 | 0 700 | 0 800 | 900 | 1000 | 1100 | 1200 130 | 0 1400 | , | | ± ∟ 400 | 500 600 | 700 8 | 00 900 | 1000 | 1100 12 | 200 1300 | 1400 150 | 0 1600 | 1700 1800 | | |
| MA | JOR STR | EET - | TOTA | LOFB | OTH A | PPROA | CHES | S - VPH | | | | 1 | MAJOR ST | REET | - TOT | AL OF I | вотн | APPRO | ACHES | - VPH | | | |
| Hd A00 | | | | | | | | | | | | ਜ [| | | T | | | | | | | | |
| - 100 - 40H | | 20 | OR MORE | LANES | 8 2 OR 1 | WORE LAN | ES | | | | | 5 400 · | | \checkmark | 2 OR M | ORELA | NESAS | | RELANES | _ | | | |
| PRO/ | 1 | | × | 2 OR M | RELAN | NES & 1 LA | NE | | | | REET | 300 YOA | \rightarrow | P | - | 1 | ORMO | DRE LANE | S&1LA | NE | | | |
| NE AF | | 7 | ~ | | K | LANE & 1 | LANE | | _ | | ORST | HAP 30 - | | 1 | \prec | 1 | - | 1 | LANE & 1 | LANE | | | |
| MW 100 | | | | X | | - | - | | | | MIM | VOLUN | | | 1 | + | X | 1 | | | *100 | | |
| HCH | | | | | | | | 2 | | 80 50 | | HSH 100 | | | | | | - | | ~ | *75 | | |
| 200 | 300 | 400 | 50 | 00 1 | 300 | 700 | 800 | 900 | 1000 | | | - L 30 | 0 400 | 500 | 600 | 700 | 800 | 900 1 | 1000 110 | 00 12 | 00 1300 | | |
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| | | | | | | | | ١ | /olun | ne S | un | nmary | | | | | | | | | | | |
| Maj | or Street L | anes | 2+ | | | Minor | Stree | t Lanes | 2+ | | | Speed | | 45 | 5 | | Ρορι | ulation | | 1000 |)0+ | | |
| Hours | Maj | or | M | inor | | Total | | 1A | | 1/ | A | | 1B | 1 | B | | 2 | | 3A | | 3B | | |
| 00.07 | Volu | me | Vo | lume | \downarrow | olume | ; | (70%) | | (56 | %) | (7 | '0%) | (56 | %) | (7 | <u>70%)</u> | (| (70%) | _ | (70%) | | |
| 05-07 | 35 | ו ג | | 28 | + | 402 656 | + | NO No | | | <u>ე</u> | _ | NO No | N V | 0 | + | | | NO No | + | NO No | | |
| 08-09 | 469 | <u>)</u> | 1 | 25 | | 594 | | No | | Ye | s | | No | N | 0 | + | No | | No | | No | | |
| 09-10 | 43 | 1 | 1 | 52 | | 583 | | Yes | | Ye | s | | No | N | 0 | | No | | No | | No | | |
| 10-11 | 575 | 5 | 2 | 06 | | 781 | | Yes | | Ye | s | | No | Ye | es | | Yes | | No | | No | | |
| 11-12 | 686 | 3 | 2 | 24 | _ | 910 | _ | Yes | | Ye | s | | res (| Ye | es | | Yes | | No | _ | No | | |
| 12-13 | 750 | 5 7 | 2 | 40 | - | 998 | _ | Yes | | Ye | s s | | res /es | | 25 | ╉─ | res | _ | NO | | No | | |
| 14-15 | 662 | 2 | 2 | 64 | + | 926 | + | Yes | | Ye | s | | res | Ye | es | +-, | Yes | | No | + | No | | |
| 15-16 | 754 | 1 | 2 | 36 | | 990 | | Yes | | Ye | s | | /es | Ye | es | Ľ | Yes | | No | | Yes | | |
| 16-17 | 878 | 3 | 3 | 11 | | 1189 | | Yes | | Ye | s | | ⁄es | Ye | es | | Yes | | No | | Yes | | |
| 17-18 Tatala | 96 | 1 | 3 | 93 | | 1354 | + | Yes | | Ye | s | \rightarrow | res | Ye | es | + | Yes | | No | + | Yes | | |
| L OLAIS | 116 Univer | U sity of | Elorida | | ahts R | eserved | | Э | | 10 | ر | HCSC | | areion 4 | 2 3 80 | | Ó | Gene | U erated: 3 | 8/3/201 | 4 8 8:58 A | | |

| | | | | | Warra | ants S | Summ | ary | | | | | | |
|--|--------------|---------------------------|---------------------|---------------------------|-------------|----------|--|------------|---------|---------|------------------|---------|--------|---------|
| Information | | | | | | | | | | | | | | |
| Analyst Agency/Co Date Performed | C M 7/ | LBK EC '19/20 | 18 | | | | Intersec | tion | | F | Platte F Ramp | Purchas | se & V | VB |
| Project ID | K | CMO | | - Pla | atte | | Jurisdiction MO | | | | | | | County, |
| East/West Street | H W P | urchas wy 15 /B Rai | se D 2 W np 8 | ev BRa Pla Varra | amp atte | - | Units U.S. Customary Time Period Analyzed North/South Street Platte Purchase | | | | | | | |
| | E | xisting | .xhy | / | ant - | | Major S | treet | | 1 | North-S | outh | | |
| Project Description KCM |) TIF | = - Pla | tte F | Purc | hase D | lev | | | | | | | | |
| General | | 1 | | | | | | | Road | dway N | letworl | k | | |
| Major Street Speed 45 Population < 10,000 Two Major Routes | | | | | | | | | | | | | | |
| Nearest Signal (ft) | 0 | | | Coo | rdinate | d Sign | al Syste | em | Wee | ekend (| Count | | | |
| Crashes (per year) | 0 | | | Ade | quate 7 | Trials o | f Alterna | atives | 5-yr | Growt | h Facto | or | | 0 |
| | | . <u>p</u> | E | ΕB | | | WB | | | NB | | | SB | |
| Geometry and Traffic | | LT | Т | Ή | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of lanes, N | | 0 | 0 |) | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 |
| Lane usage | | | | | | | LR | | | LT | | | TR | |
| Vehicle Volume Average (vph) | s | 0 | (| 0 | 0 | 175 | 1 | 45 | 167 | 81 | 68 | 2 | 83 | 37 |
| Peds (ped/h) / Gaps (gaps/h) | | | 0 | / 0 | | | 0 / 0 | | | 0/0 | | | 0/0 | |
| Delay (s/veh) / (veh-hr) | | | 0 | / 0 | | | 0/0 | | | 0/0 | | | 0/0 | |
| Warrant 1: Eight-Hour \ | /ehio | cular | Volu | ume | | | | | | | | | | |
| 1 A. Minimum Vehicular | Volur | mes (I | Both | maj | jor app | roache | sand- | highei | r mino | r appro | ach) | -or | | |
| 1 B. Interruption of Contin | nuou | s Traf | fic (| Both | n major | approa | aches | and hi | igher r | ninor a | pproac | h)or- | - | |
| 1 (56%) Vehicularand | - Inte | errupti | on V | /olur | nes (Bo | oth ma | jor appr | roaches | and- | - highe | r minor | r appro | ach) | |
| Warrant 2: Four-Hour V | 'ehic | ular V | /olu | me | | | | | | | | | | - |
| 2 A. Four-Hour Vehicular | Volu | umes | (Bot | h ma | ajor ap | proach | esano | d highe | er min | or appr | oach) | | | ~ |
| Warrant 3: Peak Hour | | | | | | | | | | | | | | > |
| 3 A. Peak-Hour Conditior | ns (N | 1inor c | lelay | ya | nd mi | nor vo | lumea | and tot | al volu | ıme) | or | | | |
| 3 B. Peak- Hour Vehicula | ar Vo | lumes | i (Bo | oth n | najor ap | oproac | hesar | nd higł | ner mir | nor app | roach) | | | > |
| Warrant 4: Pedestrian V | /olur | me | | | | | | | | | | | | |
| 4 A. Four Hour Volumes | or | - | | | | | | | | | | | | |
| 4 B. One-Hour Volumes | | | | | | | | | | | | | | |
| Warrant 5: School Cros | sing | 1 | | | | | | | | | | | | |
| 5. Student Volumesand | J | | | | | | | | | | | | | |
| 5. Gaps Same Period | | | | | | | | | | | | | | |
| Warrant 6: Coordinated | Sig | nal Sy | /ste | m | | | | | | | | | | |
| 6. Degree of Platooning (| Pred | lomina | ant d | direc | tion or | both d | irection | s) | | | | | | |
| Warrant 7: Crash Exper | rienc | e | | | | | | | | | | | | |
| 7 A. Adequate trials of all | terna | tives, | obs | erva | ance an | nd enfo | rcemen | t failed · | and | | | | | |
| | | | | | | | | | | | | | | |

| 7 B. Reported crashes susceptible to correction by s | ignal (12-month period)and | 1 | |
|---|-------------------------------------|---------------------|---|
| 7 C. (56%) Volumes for Warrants 1A, 1Bor 4 are | satisfied | | Image: A start of the start of |
| Warrant 8: Roadway Network | | | |
| 8 A. Weekday Volume (Peak hour totaland proje | cted warrants 1, 2 or 3)or | | |
| 8 B. Weekend Volume (Five hours total) | | | |
| Warrant 9: Grade Crossing | | | |
| 9 A. Grade Crossing within 140 ftand | | | |
| 9 B. Peak-Hour Vehicular Volumes | | | |
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At. II-2 Signal Warrant Analysis Warrants Volume

| | Warrants Volume | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------------------------|----------------|---------------------------|------------------------------------|---|--|---------------------------|--------------------------------|-----------------------|-------------|---|---|---------------------------------|---------------|----------------|----------------------|------------------------|---|---|---------------------------|-----------------|-----------|------|
| Informatio | n | | | | | | | | | | | | | | | | | | | | | | |
| Analyst Agency/Co Date Performe Project ID East/West Stro File Name | ed eet | | | CI M 7/ K H W E> | _BK EC 19/201 CMO 1 Wy 152 B Ran kisting. | I8 IIF - Pla 2 WB Ra 1p & Pla .xhy | tte Pur amp itte Pu | rchase D rchase V | ev Varrant - | - | Inte Jur Uni Tir Noi Maj | ersectior isdiction its ne Perio rth/Soutl jor Stree | n d Analyz n Street et | ed | | | F K U F | Platte P (ansas J.S. Cu Platte P lorth-S | Purchase City, Pl Istomary Purchase Jouth | e & WB atte Cou / | Ramp unty, M | D | |
| Project Descri | ption KCM | 10 TIF | - Platt | te Purch | nase D |)ev | | | | | | | | | | | | | | | | | |
| | | | | | | | | | W | 'arra | nt | t 1 | | | | | | | | | | | |
| | | Condit | ion A—I | Minimum | Vehicu | ılar Volum | 1e | | | | | | | Co | ndition | B—Int | erruption | n of Con | ntinuous 1 | raffic | | | |
| Number of lane traffic on eac | es for moving h approach | Vehick (tot | es per hou tal of both | ir on major approache | street s) | Vehicle minor-stre | es per hou et approa | ur on higher- ich (one dire | volume ction only) | | [| Number of traffic on | lanes for m each appro | oving ach | Vehick (tot | s perho al of bot | ur on maj h approac | r on major street Vehicles per hour on higher-volum approaches) minor-street approach (one direction | | | | | |
| Major Street | Minor Street | 100% | 80% | 70% | 56% | 100% | 80% | 70% | 56% | | | Major Stre | et Minor S | breet | 100% | 80% | 70% | 56% | 100% | 80% | 70% | 56% | |
| 1 | 1 | 500 | 400 | 350 | 280 | 150 | 120 | 105 | 84 | | | 1 | 1 1 | | 750 | 600 | 525 | 420 | 75 | 60 | 53 | 42 | |
| 2 or more | 1 | 600 | 480 | 420 | 336 | 150 | 120 | 105 | 84 | | | 2 or more | | | 900 | 720 | 630 | 504 | 75 | 60 | 53 | 42 | |
| 2 or more | 2 or more | 600 | 480 | 420 | 336 | 200 | 160 | 140 | 112 | | | 2 or more | 2 or m | iore | 900 | 720 | 630 | 504 | 100 | 80 | 70 | 56 | |
| 1 | 2 or more | 500 | 400 | 350 | 280 | 200 | 160 | 140 | 112 | | | 1 | 2 or m | iore | 750 | 600 | 525 | 420 | 100 | 80 | 70 | 56 | |
| | - | | | | | | | Varra | nt 3 | | | | | _ | | | | | | | | | |
| ₹ ⁵⁰⁰ [| | | anua | | upper Lui | | 1 | | Ť | | 600 | | N | | | T | T | | TT | | | _ | |
| H> - H 400 | | K | | | | | | | _ | | | HdA - | - | | | \vdash | -20 | RMORE | LANES & 2 | OR MORE L | ANES | + | |
| 20AC | | / | > | ZORM | | NES&1L/ I 1LANE& | I I 1 LANE | | | | E | 400 HOPC | | F | | \rightarrow | \triangleleft | - | 2 OR MOR | RE LANES 8 | 1 LANE | + | |
| APPF | | 1 | \leq | \backslash | X | | | | | | STRE | 300 APPR(| _ | 1 | | | - | × | | 1 LAN | E & 1 LAN | | |
| BONIN 200 | | | | X | 4 | | - | | | = | NOR | 200 N | | + | | | - | \triangleright | X | | - | + | |
| 200 100 - | | | | | - | | - | | =" | 80 | 2 | 100 H | | - | - | - | _ | - | | | | | 100 |
| 말 _ | | | | | | | | | | | | 9H | 0 600 | | 700 90 | 10 00 | 1000 | 1100 12 | 200 1200 | 1400 150 | 0 1600 | 1700 1800 | |
| 500 | | сст. | TOTA | | отц / | PPPO | CHE | | 0 1400 | ~ | | 807 | MALOE |) ет | DEET | тот | | POTH | | ACHES | VPU | | |
| 표 400 | | - 133 | IOTA | | | | | 5- VFI | | | | | | (51 | | T | | T | | T | - vrn | _ | |
| л - н: | | 20 | OR MORE | LANES | 2 OR I | NORE LAN | ES | | | | | 400 | | ~ | | 2 OR M | IORE LA | NES&2 | | RE LANES | | | |
| ROAC | 1 | 1 | | -2 OR MC | RELAN | ES&1LA | NE | | | | E | OACH | | - | X | 1 | 1 | | DRE LANE | 5 & 1 LA | NE | | |
| App 200 | - | \geq | \langle | | 1 | LANE & 1 | LANE | _ | _ | | STR | APPR | | / | | $\mathbf{\nabla}$ | | _ | 1 | LANE & 1 | LANE | | |
| MINO | | 1 | 1 | X | | - | | | | | MINOF | 200 EV | | | | + | 1 | \mathbf{z} | _₹ | | | - | |
| 00 100 | | + | | - | - | - | | 2 | *80 | 0 | | 0 100 | | - | + | - | - | 4 | - | Þ | ~ | | 100 |
| ₽ L | | | | | | | | | 101 | 0 | | H | | _ | | | | | | | | | |
| 200 | 300 | 400 | 50 | 00 e | 00 | 700 | 800 | 900 | 1000 | j. | | | 300 40 | 0 | 500 | 600 | 700 | 800 | 900 1 | 000 11 | 00 12 | 1300 | ŝ |
| MA | JOR STR | EET - | TOTA | LOFE | OTH. | APPRO | ACHE | S - VPH | 1 | | | | MAJC | R S | TREE | T - T | OTAL | OF B | OTHA | PROA | CHES | - VPH | |
| Maio | r Street L | anes | 2+ | | | Mino | r Strov | V ot Lance | | ie S | un | Speed | / | | 45 | | | Pop | Ilation | | 1000 | 0+ | — |
| | Maio | or | М | inor | | Total | | 1A | | 1/ | Δ | | 1B | Т | 1 | B | | 2 | | 3A | | 3B | _ |
| Hours | Volur | me | Vo | lume | V | olume | | (70%) | | (569 | ` %) | (| 70%) | | (56 | %) | (7 | 70%) | | (70%) | | (70%) | |
| 06-07 | 208 | } | ļ | 98 | | 306 | | No | | No |) | | No | | N | 0 | | No | | No | | No | |
| 07-08 | 358 | } | 1 | 53 | | 511 | | No | | Ye | s | | No | | N | 0 | | No | | No | | No | |
| 08-09 | 339 |) | 1 | 32 | + | 471 | | No | | Ye | s | _ | No | 4 | <u>N</u> | 0 | _ | No | | No | | No | |
| 10-11 | 254 | + | | 06 | + | 411 511 | _ | NO | | | <u>ר</u> | | No | + | | 0 | + | No | | No | | No | _ |
| 11-12 | 364 | , | 2 | 21 | | 585 | | No | | Ye | s | | No | | N | 0 | - | No | | No | | No | _ |
| 12-13 | 405 | 5 | 2 | 49 | | 654 | | No | | Ye | s | | No | | N | 0 | | Yes | | No | | No | _ |
| 13-14 | 394 | ł | 2 | 18 | | 612 | | No | | Ye | s | | No | | N | 0 | | Yes | | No | | No | _ |
| 14-15 | 391 | | 2 | 14 | _ | 605 | | No | | Ye | s | | No | $ \downarrow$ | N | 0 | + | No | | No | | No | |
| 15-16 | 404 | + > | 2 | 42 | + | 046 762 | + | NO | + | Ye | s | + | NO | + | N | 0 | | Yes | _ | NO | _ | N0 | _ |
| 17-18 | 578 | | 4 | 26 | + | 1004 | + | Yes | + | Ye | s S | + | No | + | IN Ye | s S | + | Yes | _ | No | + | Yes | _ |
| Totals | 443 | 2 | 26 | 647 | + | 7079 | ╉ | 2 | + | 9 0 1 5 0 2 | | | | | | | | | | | | | |
| Copyright © 20 | 16 Univers | sity of | Florida | a, All Rig | ghts R | eserved | 1 | | | | | HCS | 2010 TM | Ve | ersion 6 | 6.80 | | | Gene | erated: | 8/3/201 | 8 9:15 | 5 AN |

Route 152 and Platte Purchase Interchange Improvements

Cost Breakdown:

| Task | ٦ | Fotal Cost | C | commission KC District Share | MoDOT Cost Share | E | ntity Local Share |
|---|----|------------|----|---------------------------------|---------------------|----|----------------------|
| Feasibility Study | \$ | 70,000 | \$ | - | \$ - | \$ | 70,000 |
| Preliminary Engineering (8% PE) and environmental plus 2% boundary survey | \$ | 642,998 | \$ | - | | \$ | 642,998 |
| PE Review/Environmental (MoDOT staff) | \$ | 25,000 | \$ | 25,000 | \$ - | \$ | - |
| Utilities | \$ | - | \$ | - | \$ - | \$ | - |
| Right of Way | \$ | - | \$ | - | \$ - | \$ | - |
| Construction Contract | \$ | 5,358,316 | \$ | - | \$ 2,679,158 | \$ | 2,679,158 |
| Construction Contingency 2% | \$ | 107,166 | \$ | - | \$ 53,583 | \$ | 53,583 |
| Construction Engineering (7%) | \$ | 375,082 | \$ | 375,082 | \$ - | \$ | - |
| Subtotal | \$ | 6,578,562 | \$ | 400,082 | \$ 2,732,741 | \$ | 3,445,739 |
| Total Funding | | | \$ | 400,082 | \$ 2,732,741 | \$ | 3,445,739 |

Project Responsibilities: (Commission/Entity/Shared)

| Design | Commission |
|------------------------|------------|
| Right of Way/Utilities | Entity |
| Letting | Commission |
| Inspection | Commission |

Financial Responsibility:

| Commision Staff Time | \$400,082 | 6% |
|----------------------|-------------|-----|
| MoDOT Cost Share | \$2,732,741 | 42% |
| Entity | \$3,445,739 | 52% |
| TOTAL | \$6,578,562 | |

How will overrun/underrun be handled?

Entity is responsible for any overruns in the cost for the preliminary engineer, utilities, right of way and construction. Any underruns will be refunded to the entitiv based on the pro rata share.

The Commission (KC District) is 100% responsible for the costs of PE review, Environmental review, Construction review and Construction engineering.

Entity is 100% responsible for the costs to impacts to City-owned

Utilities and will done under separate contract if impacted.

Entity has an existing sidewalk license agreement in place for the 152 Trail work.

Entity will execute a sidewalk maintenance agreement for sidewalks, aethetics, vegetation on Platte Purchase Right of way should not be necessary for project, if impacted, the Entity will acquire right of way at its sole cost.

The City is committed to this project and to offset the future maintenance obligations of MoDOT would propose taking ownership and maintenance of Thomas Meyers Drive from Barry Road south to its dead end south of NW 79th Street and the west outer road of US 169 south of Shoal Creek Parkway. This is approximately 2.4 centerline miles of outer roads to be removed from the MoDOT system. The City will assume ownership and maintenance of these roads upon MoDOT resurfacing the outer road south of Shoal Creek Parkway. Thomas Meyers Drive and NW 79th will be assumed "as-is". The City will pay for the surveying necessary to conveyance. MoDOT will prepare and record the deeds.