CITY OF LANSING
Council Chambers
800 1st Terrace
Lansing, KS 66043

COUNCIL AGENDA
Regular Meeting
Thursday, February 18, 2021
7:00 P.M.

WELCOME TO YOUR CITY COUNCIL MEETING

Regular meetings are held on the first and third Thursday of each month at 7 pm and are televised on Cable Television Channel 2 on Monday 7 pm, Tuesday 10 am & 7 pm, Friday 5 pm, Saturday 1 pm and Sunday 7 pm.

Any person wishing to address the City Council, simply proceed to the microphone in front of the dais after the agenda item has been introduced and wait to be recognized by the Mayor. When called upon, please begin by stating your name and address. A time designated "Audience Participation" is listed on the agenda for any matter that does not appear on this agenda. The Mayor will call for audience participation. Please be aware that the city council and staff may not have had advance notice of your topic and that the city council may not be able to provide a decision at the meeting. If you require any special assistance, please notify the City Clerk prior to the meeting.

- ***In order to adhere to social distancing and limiting large gatherings of people to mitigate the spread of COVID-19, the Lansing City Meeting will not be open to the public. In accordance with Kansas Open Meetings Act (KOMA), the meeting can be viewed live via YouTube at www.lansingks.org/live and will be available for viewing on Spectrum Cable Channel 2 the following day.***
- ***Want to comment during Audience Participation?***
  - ***Submit your comment to Cityclerk@lansingks.org no later than 6:00 pm on February 17th.***
- ***Questions on agenda items will be read during discussion on that topic.***
  - ***Submit your question to Cityclerk@lansingks.org no later than 6:00 pm on February 17th.***

Call To Order

Pledge of Allegiance

Roll Call

OLD BUSINESS:

1. Approval of Minutes

NEW BUSINESS:

Audience Participation

Presentations:

2. Leavenworth County Eastern Gateway Project Presentation

Council Consideration of Agenda Items:

3. Road Maintenance Agreement – Lansing and Leavenworth County
4. Fence Request – 630 Hillcrest Circle
5. 9G/9H Sanitary Sewer Interceptor Final Report

Reports:

City Attorney, City Administrator, Department Heads, Councilmembers

Proclamations

Other Items of Interest:

- Monthly Department Vehicle and Equipment Mileage Reports
- Community & Economic Development Permits/Licenses & Code Enforcement Report

Adjournment

AGENDA ITEM

TO: Tim Vandall, City Administrator
THRU: Sarah Bodensteiner, City Clerk SLB
FROM: Shantel Scrogin, Assistant City Clerk SS
DATE: February 12, 2021
SUBJECT: Approval of Minutes

The Regular Meeting Minutes for February 4, 2021, are enclosed for your review.

Action: Staff recommends a motion to approve the Regular Meeting Minutes for February 4, 2021, as presented.

AGENDA ITEM # 1

CITY OF LANSING
CITY COUNCIL MEETING

REGULAR MEETING MINUTES
February 4, 2021

Call To Order:
The regular meeting of the Lansing City Council was called to order by Mayor McNeill at 7:00 p.m.

Roll Call:
Mayor McNeill called the roll and indicated which Councilmembers were in attendance.

Councilmembers Present:
Ward 1: Gene Kirby and Dave Trinkle
Ward 2: Don Studnicka and Marcus Majure
Ward 3: Jesse Garvey and Kerry Brungardt
Ward 4: Ron Dixon and Gregg Buehler

Councilmembers Absent:

Councilmembers were present via Zoom video conference.

OLD BUSINESS:

Approval of Minutes: Councilmember Buehler moved to approve the Special Meeting Minutes of January 21, 2021, the Regular Meeting Minutes of January 21, 2021 and the Special Meeting Minutes of January 28, 2021, as presented. Councilmember Garvey seconded the motion. The motion was unanimously approved.

Audience Participation: Mayor McNeill called for audience participation and there was none.
Presentations

COUNCIL CONSIDERATION OF AGENDA ITEMS:

Ordinance No. 1054 – Rezone Request 00000 Centre Drive: Councilmember Studnicka moved to approve Ordinance No. 1054. Councilmember Dixon seconded the motion. The motion was unanimously approved.

Final Plat – Saddle Ridge: Councilmember Studnicka moved to approve the final plat for Saddle Ridge. Councilmember Buehler seconded the motion.

- Councilmember Majure stated I'm excited about it. So, let's hurry up and get this going.
    - Councilmember Buehler asked Matt, just out of curiosity. They were going to initially put in 149 houses, something like that. Now that it is divided, do we know the plan yet. I didn't see it in the packet.
        - Community & Economic Development Director Matthew Schmitz replied the three plots he is doing right now will allow him to build two homes immediately on the two 5 acres tracts. The large 80-acre tract that is going to be left behind, he can redevelop or replat that at some point in the future and split it further. There was enough width left out to Mary Street so that he can get a road in to get back to that should he ever decide to do that in the future. Does that answer your question?
            - Councilmember Buehler responded ok, so he is putting houses on the two 5 acre lots.
                - Community & Economic Development Director Matthew Schmitz replied that is my understanding. Mark is in on the meeting as well.
                    - Mark Linaweaver replied yes, I am here if anybody has any questions.
                        - Councilmember Buehler asked you are going to put two houses or a house on each of the 5 acre lots. And then just wait for potential redevelopment for the other 80 acres.
                            - Mark Linaweaver responded yeah, right now the existing water line only allows for two lots. So, until future development or

stuff happens out there, I've left an opportunity to develop the next 80.
    - Councilmember Buehler stated ok, thank you.
- Mayor McNeill stated thank Mark.

The motion was unanimously approved.

Final Plat – Ryan Family Farms: Councilmember Brungardt moved to approve the final plat for Ryan Family Farms. Councilmember Majure seconded the motion.

- Councilmember Studnicka asked does this maintain our right of way for Gilman to go through the southern part of that property.
    - City Administrator Tim Vandall replied so to clarify this lops off a portion of the right of way that we had before and exchanges that to the Ryan Family Farms property owners and then as a component of this, we would be purchasing that right of way for the future of Gilman Road all the way to DeSoto.
        - Councilmember Studnicka asked but don't we already own part of that right of way.
            - City Administrator Tim Vandall responded the portion that we own wasn't really useable due to the terrain. So, we traded the part that wasn't useable and did kind of a land swap for I want to say about an acre and a half. We would be purchasing the rest of the right of way all the way to 147th.
                - Councilmember Studnicka replied ok, thank you.

The motion was unanimously approved.

Final Plat – Fawn Valley South, 2nd Plat: Councilmember Buehler moved to approve the final plat for Fawn Valley South, 2nd Plat. Councilmember Dixon seconded the motion.

- Councilmember Majure asked I believe this property or the plat where the nice gentleman gave us a presentation on it, wasn't it.
    - Councilmember Studnicka replied this is the property that is right across from City Hall.
        - Councilmember Majure responded yep, that's it. Thank you, that is what I thought. Thanks.

The motion was approved with Councilmember Garvey voting against the motion.

2021 Independence Days Event: Mayor McNeill asked does anyone want to make a motion.

- City Administrator Tim Vandall stated I think Gene has a question.
    - Councilmember Kirby asked we need to pick a date though don't we.
        - Councilmember Garvey replied yep.

Councilmember Kirby moved to approve the date of July 3rd. Councilmember Buehler seconded the motion.

- Mayor McNeill asked so 3 July.
    - Councilmember Kirby replied yeah, that's my motion.
        - Councilmember Majure asked what's the history in Lansing. Is it more of an actual weekend July 3rd or does the public tend to want to attend things prior to the actual July 3rd weekend because I love the fact that we're talking about July 3rd. What is the norm that draws a crowd and large attendance.
            - Councilmember Buehler stated hey Marcus.
                - Mayor McNeill stated let me ask Matt a question real quick. Matt, to issue the RFP to see how much its going to cost on either one of those days and then pick a day after that or what?
                    - Community & Economic Development Director Matthew Schmitz replied so the intent here would be to get a bid from the same fireworks distributor who has done our show the last two years. I've talked with them already and

they have both of those dates available as of right now. They could do either one. The authorization through the motion would be for us to enter into a contract not to exceed the twenty-two thousand that we've spent, same as what we've done in the past.

- Mayor McNeill asked so currently we don't have a motion, correct.
  - Councilmember Buehler responded yeah, Gene motioned.
    - Mayor McNeill replied Gene just motioned to pick a date. So, can you take that back.

Councilmember Buehler withdrew his second. Councilmember Kirby withdrew his motion.

Councilmember Buehler moved to approve the issuance of an RFP and enter into a contract with a vendor for the 2021 Independence Days Fireworks on July 3rd in an amount not to exceed $22,000. Councilmember Trinkle seconded the motion.

- Councilmember Buehler stated hey Marcus, so what happened a few years ago is we were running into conflicts trying to get people on the 4th of July. So, a few years ago we moved it to a week early and started doing it the weekend prior. And we haven't had it fall on a Saturday or Sunday like this since we started doing it. But we've always had really good turnout, I mean 4,000 to 4,500 people would show up because it was the weekend prior. Now this is the first time we've actually had it where it's the day before the 4th because of the way the weekend falls.
  - Councilmember Majure responded ok, sounds good. Thank Gregg.
    - Councilmember Buehler stated you're welcome.
      - Councilmember Garvey asked what happens and I believe at this time we are still going to be shut down as a country by July. So, what happens if we are still social distancing, we still have the mask mandate in order and all this stuff is still going on. What is the plan then?
        - City Administrator Tim Vandall replied one thing I would say, the motion and this is just for the fireworks too. So, if things continue to get crazy in the next couple of months, I guess we can hit pause on all the ancillary things. But this is just for the fireworks portion. We can shift that somewhere else. Matt what are your thoughts on that?
          - Community & Economic Development Director Matthew Schmitz responded that's exactly what I was going to say Tim. You know, if we get closer to the event and things are not looking like we are going to be able to have it, we can certainly do a similar thing to what we did last year. Where we shifted the fireworks and did it later in the year. Like Tim said, this motion or this item tonight is just to get the fireworks outlined. So, we'll have that under contract because its by far the biggest piece of this event.
            - Councilmember Garvey stated I remember last year we gave our deposit and it was nonrefundable so we had to blow it up or lose our deposit. I just wanted to make sure we were on the same page with that.
              - Community & Economic Development Director Matthew Schmitz responded and that is how I would envision it being this year as well. Just because you know when you sign a contract with a fireworks vendor they have to go out and buy the

ordinance, they have to get all that stuff lined out. So, they are going to want some sort of security that they're not spending money they are never going to see.
    - Councilmember Garvey stated I understand that. Thank you.

The motion was unanimously approved.

2021 Bernard BBQ Battle Event: Councilmember Studnicka moved to cancel the 2021 Bernard BBQ Battle Event. Councilmember Trinkle seconded the motion.

- Councilmember Buehler asked Matt how much money does that normally bring into the city.
    - Community & Economic Development Director Matthew Schmitz replied it's really difficult for an event like that for us to quantify the amount of money it brings in. The people that visit the city that may go to our restaurants, may visit things in town while they are here but there really isn't any, since this isn't open to the public, it's not necessarily as big of a benefit I guess I would say as some of the other events. It's a really neat event, it's just we don't feel like it is appropriate this year.
        - Councilmember Buehler asked so is cancelling it this year going to put future years at risk.
            - Community & Economic Development Director Matthew Schmitz replied I don't believe so. You know last year we cancelled the BBQ contest and they moved our registration fees forward to this year so we didn't have to pay any registration fees for this year. I would envision something similar to that but I haven't approached that topic quite yet with them. It's definitely something I will ask for when we notify them if we are not going to have it. Does that answer your question?
                - Councilmember Buehler stated you did. Thank you.

The motion was unanimously approved.

Approval of Quote – Belt Filter Press Rehabilitation Project: Councilmember Studnicka moved to approve the quote from Andritz Separation in an amount not to exceed $217,943. Councilmember Trinkle seconded the motion.

- Mayor McNeill asked any discussion on this one. I think everyone talked about this at the work session but if you have any other questions.
    - Councilmember Majure stated I thought he did a great job laying it out in the work session.

The motion was unanimously approved.

REPORTS:

City Attorney: City Attorney Greg Robinson had nothing to report.

City Administrator: City Administrator Tim Vandall let the Council know he and the Public Works Director attended the recent County Commission meeting and talked about how we had applied to the cost share grant for the roundabout at 4-H Road and DeSoto. The County got a grant for a different road project and now they need the money to match that grant. So, the cost share with the County has been shelved for now. We were able to close out 2020 with our general fund balance at nearly $3 million. Finance Director Beth Sanford has done a terrific job. Credit also goes to Mayor Kirby, Smith and McNeill along with the Councilmembers for making positive decisions for getting us on a firm financial ground. We're getting some new businesses in town, Bases Loaded Card Shop and Select Physical Therapy are now located in Lansing.

Department Heads: Department Heads had nothing to report.

Governing Body: Councilmember Brungardt let everyone know it is Black History month and on this day in history, Rosa Parks was born. What a hero she is.

Councilmember Studnicka stated to be careful at Super Bowl parties and go Chiefs.

Councilmember Trinkle cheered go Chiefs.
Councilmember Kirby reminded everyone we are getting there with COVID. Let's don't get carried away and keep up the great work.
Councilmember Majure thanked Ken Miller for getting information out from the County Health Department with the vaccines. He let Tim know he appreciates what he, Beth and staff are doing for cost savings. It speaks volume for what we are trying to do for the city.
Councilmember Garvey congratulated City Clerk Sarah Bodensteiner on receiving her Certified Municipal Clerk designation. We appreciate everything she does for the City.
Councilmember Buehler congratulated Sarah as well. He knows she worked hard for that designation. He provided a fun fact, on this day in 1789, George Washington was unanimously elected the first president of the United States by the US Electoral College, he ended his remarks with a "Go Chiefs".

ADJOURNMENT:
Councilmember Dixon moved to adjourn. Councilmember Studnicka seconded the motion. The motion was unanimously approved. The meeting was adjourned at 7:25 p.m.

ATTEST:

Mayor, Anthony R. McNeill

City Clerk, Sarah Bodensteiner, CMC

AGENDA ITEM

TO: Tim Vandall, City Administrator

FROM: Mike Spickelmier, Director of Public Works MWS 02/11/2021

DATE: February 11, 2021

SUBJECT: Leavenworth County to provide an update on the Eastern Gateway Project

Commissioner Culbertson and Bill Noll (LVCO Public Works) has asked for an opportunity to discuss the Eastern Gateway Project. This project envisions a connection between Leavenworth/Lansing from Eisenhower Road with a bridge across the Missouri River tying into the intersection of I-435 and MO Highway 152 in Parkville, Mo.

A copy of the initial report is included in the packet for reference. They have also prepared video presentation to show the proposed route.

AGENDA ITEM # 2

Eastern Gateway Concept Study

Leavenworth County, Kansas | September 2020

TranSystems

EXPERIENCE | Transportation

Eastern Gateway Concept Study

Leavenworth County, Kansas
September 2020

Leavenworth County, Kansas

Leavenworth County, Kansas is located in the northwestern portion of the bi-state Kansas City region. The vision of the Public Works Department is to see that its efforts result in improved public streets, roads, bridges, rights of way, and traffic safety; providing convenience, safety, and comfort to the users of public infrastructure.

Bill Noll, *Infrastructure and Construction Services Director*

Consultant Team

TranSystems
2400 Pershing Road, Suite 400
Kansas City, Missouri 64108

TABLE OF CONTENTS

SECTION 1 | INTRODUCTION

Purpose

Leavenworth County, Kansas expressed interest in exploring a new potential roadway connection, referred to as the Eastern Gateway, to provide connectivity across the Missouri River. There are currently two river crossings that generally serve Leavenworth County:

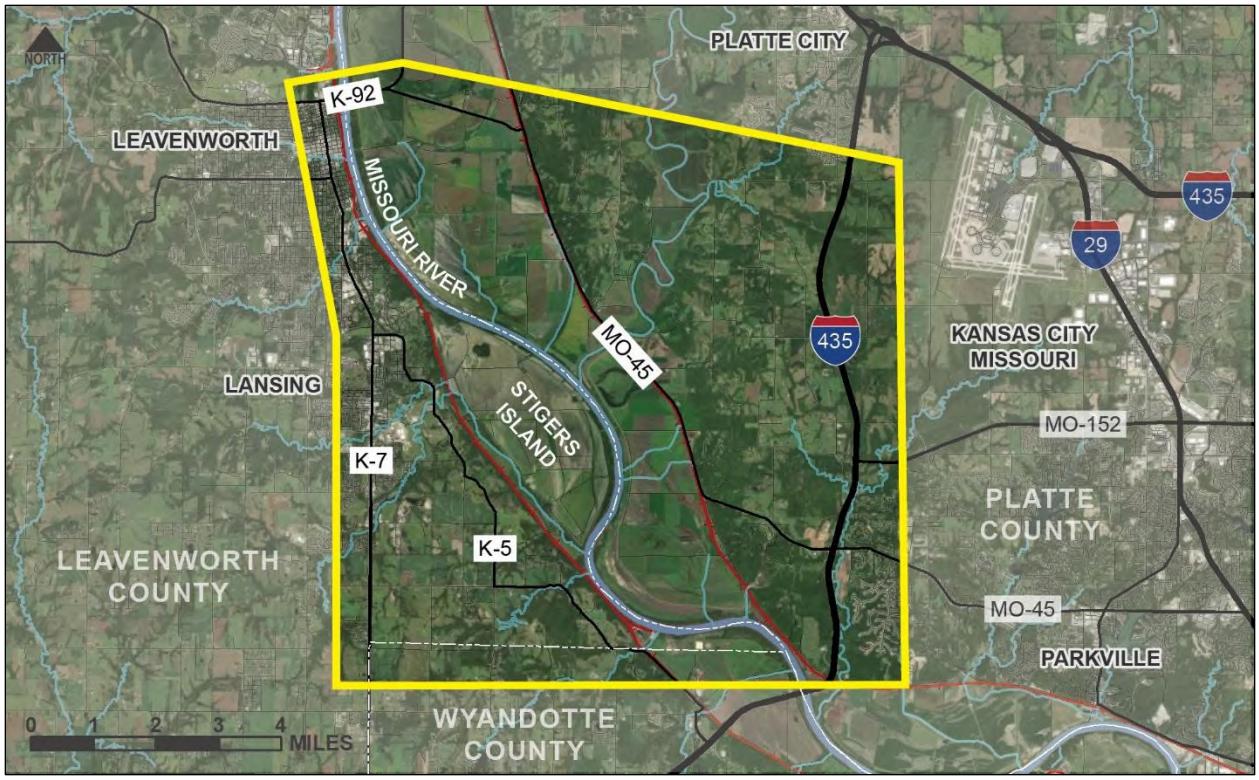
- Centennial Bridge (K-92) located in northern Leavenworth County, Kansas
- Interstate 435 Bridge (I-435) located in northern Wyandotte County, Kansas

With a distance of approximately 12 miles between the Centennial Bridge (K-92) crossing and the I-435 Bridge crossing, there is limited bi-state connectivity to areas within Leavenworth County, particularly the City of Lansing. Therefore, this study evaluated a new potential connection across the Missouri River from K-7 in Leavenworth County, Kansas to I-435 in Platte County, Missouri. The study is a high-level feasibility study to achieve consensus on the next stage of the Eastern Gateway concept.

Study Area

The study area, displayed in Exhibit 1.1, generally contains the bi-state area bounded by K-92 to the north, Leavenworth County/Wyandotte County border to the south, K-7 to the west, and I-435 to the east. Several potential connections between K-7 and I-435 were evaluated within this study area.

Exhibit 1.1: Study Area



Source: TranSystems, 2020

SECTION 2 | ALTERNATIVE ASSESSMENT

Alignment Development

Mapping Analysis

The study utilized available GIS data including transportation networks, environmental features, terrain models, and aerials to develop a basemap for the study area. Initial alignment development considered major physical features such as the Missouri River and its tributaries, floodplains, terrain, and railroads.

Traffic Analysis

Traffic projections for a new Missouri River bridge crossing were developed by the Mid-America Regional Council (MARC), the metropolitan planning organization for the bi-state Kansas City region, using the regional travel demand model. The model assumed a four-lane facility, limited access (an intersection at K-5 in Kansas and an intersection near MO-45 in Missouri), and a design speed of 70 mph. For comparison purposes two scenarios were tested:

- *North Alignment*: K-7/Gilman Road in Kansas to I-435/MO-152 in Missouri
- *South Alignment:* K-7/Gilman Road in Kansas to I-435/MO-45 in Missouri

The traffic model scenarios are summarized in Exhibit 2.1. Overall, the model indicates that the potential corridor will attract approximately 17,000 daily trips. Many of the trips appear to be new trips across the river, indicating that the new corridor may make work or shipping trips between Kansas and Missouri more attractive due to increased access. Maps of the traffic model scenarios are included in Appendix B.

Exhibit 2.1: Traffic Model Scenarios

Location	2017 Existing Traffic[1]	2015 Base Year Model	2050 No Build Scenario	2050 North Alignment	2050 South Alignment
Centennial Bridge	12,100	16,100	20,700 +4,600	15,900 -200	16,900 +800
Eastern Gateway	N/A	N/A	N/A	16,400	17,500
I-435 River Bridge	34,200	27,100	46,300 +16,500	44,700 +17,600	48,000 +20,900

[1] Based on 2017 Kansas Department of Transportation (KDOT) traffic counts

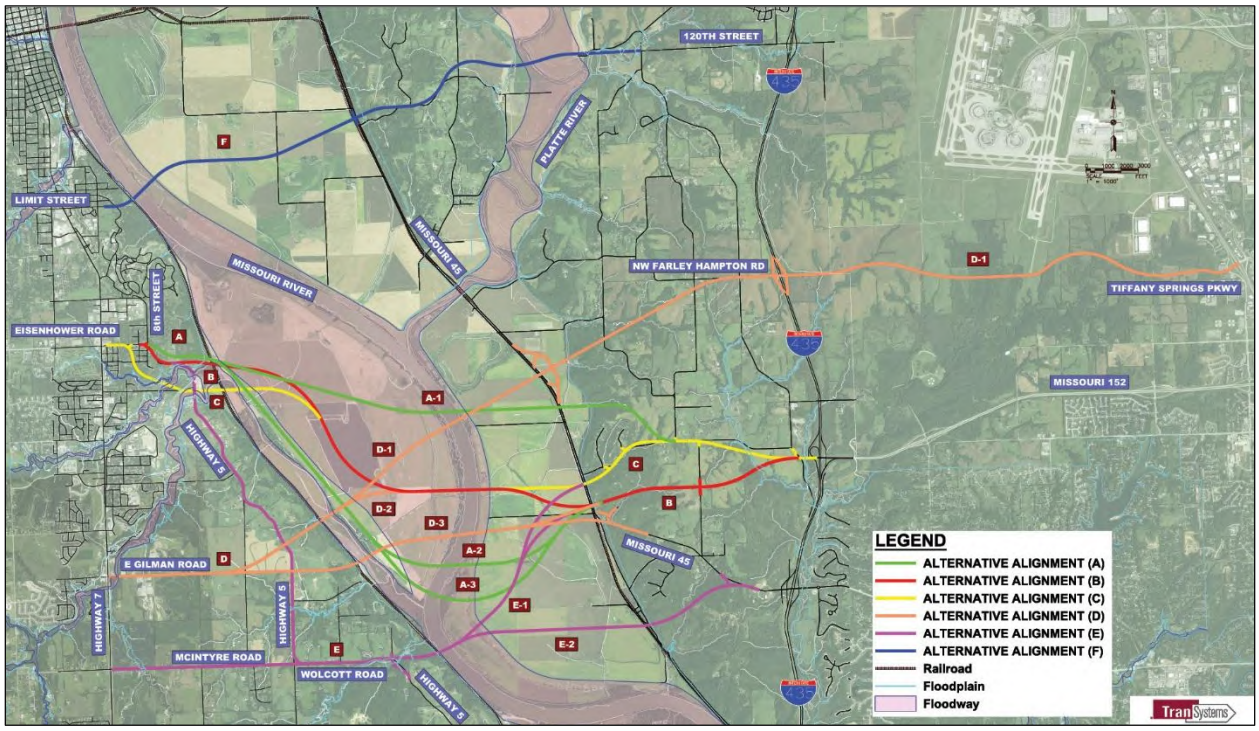
The potential river crossing in the study area was fairly sensitive to speed. For example, utilizing a design speed of 45 mph resulted in an approximately 30 percent reduction in traffic on the new roadway. This should be considered when planning access points along the route as they will have a negative effect on the attractiveness of the route due to the impact on travel speeds on the corridor.

While the model assumed a four-lane facility, this was done in order to not artificially constrain the demand for traffic on the facility. The projected 17,000 trips per day can feasibly be accommodate by a two-lane facility, particularly if access along the route is limited. For an urban roadway with frequent access, 17,000 trips per day is near the upper threshold for capacity for a two-lane facility, even with auxiliary turn lanes provided at access points.

Alignment Alternatives

Based on this initial mapping and traffic analysis, a series of high-level potential alignments were developed within the study area. Initial alignments are displayed in Exhibit 2.2. Roadway approach connections under consideration generally included Limit Street, Eisenhower Road, Gilman Road, and McIntyre Road/Wolcott Road (K-5) in Kansas and 112th Street, NW Farley Hampton Road, MO-152, and MO-45 in Missouri.

Exhibit 2.2: Alignment Alternatives



Source: TranSystems, 2020

Larger versions of the map are included in Appendix C.

Alignment Assessment

The alignment alternatives were assessed based on technical, financial, and institutional feasibility:

- *Technical:* Terrain Limitations; Transportation Resources; Historic and Cultural Resources
- *Financial:* Project Construction Cost; Related Construction Cost; Land Impacts
- *Institutional:* Connectivity Benefits; Stakeholder Input; Economic Development Potential

Technical Feasibility

Terrain Limitations

The Missouri River floodway, its tributaries, and associated floodplains were major considerations in the technical feasibility assessment of a potential corridor alignment. Based on Federal Emergency Management Agency (FEMA) data, the majority of the valley west of the Missouri River (Stigers Island) is within the floodway. This presents a significant challenge as embankments cannot be placed within the floodway and a new roadway would need to be constructed on bridge structure, which would greatly increase construction cost. However, an elevated strip of land outside the floodway runs parallel to the western valley slope. The elevated strip separates the Missouri River floodway and the confluence of the Sevenmile Creek and Ninemile Creek floodway. Alignment alternatives utilizing this elevated strip of land were preferred.

Transportation Resources

The Union Pacific Railroad corridor follows the western bluff of the Missouri River in Kansas while the BNSF Railway corridor follows the eastern bluff of the Missouri River in Missouri. All alignment alternatives assumed bridge structures crossing the railroads would span the railroad right-of-way and meet minimum design clearances for construction. Impacts to Noah's Ark Airport, a private airport located near the NW River Road and MO-45 intersection in Missouri, were also preferred to be avoided.

Historic and Cultural Resources

Most historical and cultural resources are located within the northwestern portion of the study area near downtown Leavenworth and Fort Leavenworth. However, Leavenworth National Cemetery is located near the K-7 and K-5 intersection. Impacts to the cemetery were preferred to be avoided.

Financial Feasibility

Project Construction Cost

Project construction cost is significantly affected by the length of bridge structure required, which is influenced by the width of the floodway at any selected location. Alignments that utilize narrower portions of the Missouri River floodway or elevated areas outside of the floodway were preferred.

Related Construction Cost

In addition to the cost of the Eastern Gateway concept, improvements to existing roadways or other new roadway connections may be required to safely accommodate traffic. Over the past several years, Leavenworth County has implemented corridor improvements to Eisenhower Road and plans to

continue roadway widening westward from 13th Street to County Road 5. Leavenworth County, in partnership with the City of Leavenworth and City of Lansing, was also recently awarded cost share funds from the Kansas Department of Transportation (KDOT) to improve the K-7 and Eisenhower Road intersection. In contrast, other potential connecting roadways such as K-5, McIntyre Road, and Gilman Road would likely require corridor improvements to meet increased traffic demands. Therefore, alignments that connect to roadways that require less related construction were preferred.

Land Impacts

The majority of private property within the study area is farmland or rural residential. Residential and commercial density generally increases near K-7 in the City of Lansing and the City of Leavenworth. Fewer impacts to developed areas with increased density were preferred. In addition, impacts to Leavenworth Water Plant No 2, located near the K-5 and Eisenhower Road intersection, were also preferred to be avoided.

Institutional Feasibility

Connectivity Benefits

With approximately 12 miles between the Centennial Bridge (K-92) crossing and the I-435 Bridge crossing, an alignment generally near the midpoint of these existing bridge crossings would provide the greatest benefit in terms of river crossing spacing and decreased travel times. In Missouri, a connection to a major existing interchange at I-435 is preferred. As a major limited-access highway, MO-152 was the preferred connection in Missouri to provide significant regional connectivity.

Stakeholder Input

Throughout the study, discussions with Leavenworth County staff and elected officials indicated a preference for an alignment that generally connected to Eisenhower Road in Kansas and MO-152 in Missouri. Leavenworth County staff also considered connections to other east-west city streets south of Eisenhower Road, such as Gilman Road and McIntyre Road/Wolcott Road (K-5), as acceptable options.

Economic Development Potential

Increased transportation access afforded by a new connection may increase interest in economic development opportunities. Discussions with Leavenworth County suggested that a potential connection could trigger redevelopment of neighborhoods near K-7 and Eisenhower Road. The neighborhoods would likely remain residential but would experience new and redeveloped housing stock. Based on discussions with the Platte County Economic Development Council in Missouri, mixed-use is envisioned near the I-435 and MO-152 interchange with residential development further from the interchange. Some smaller industrial tracts in the area have the potential for development in areas with level terrain. Large lot residential is the anticipated development along MO-45 due to the terrain. No future development is expected in the floodplain. Based on the economic development potential, connections near Eisenhower Road in Kansas and at the MO-152 interchange in Missouri were preferred.

Alignment Assessment Summary

Each alignment alternative was assessed based on the outlined technical, financial, and institutional feasibility criteria. The high-level assessment, displayed in Exhibit 2.3, ranked the alignments as high, moderate, or low in terms of meeting the preferred criteria.

Exhibit 2.3: Alignment Assessment Summary

Assessment Criteria		A-1	A-2	A-3	B	C	D-1	D-2	D-3	E-1	E-2	F
Technical	Terrain Limitations	○	●	●	○	○	○	○	◐	○	◐	◐
	Transportation Resources	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐	◐
	Historic and Cultural Resources	●	●	●	●	●	●	●	●	●	●	◐
Financial	Project Construction Cost	○	●	●	○	○	○	○	●	◐	●	◐
	Related Construction Cost	●	●	●	●	●	○	○	○	○	○	○
	Land Impacts	◐	◐	◐	◐	○	◐	◐	◐	◐	◐	○
Institutional	Connectivity Benefits	●	●	●	●	●	○	◐	◐	◐	○	○
	Stakeholder Input	●	●	●	●	●	○	◐	◐	◐	○	○
	Economic Development	●	●	●	●	●	○	◐	◐	◐	○	◐
Assessment Summary		◐	●	●	◐	◐	○	○	○	◐	○	○

Meets Preferred Criteria

- ● High
- ◐ Medium
- ○ Low

SECTION 3 | PREFERRED ALTERNATIVES

Preferred Alternative Descriptions

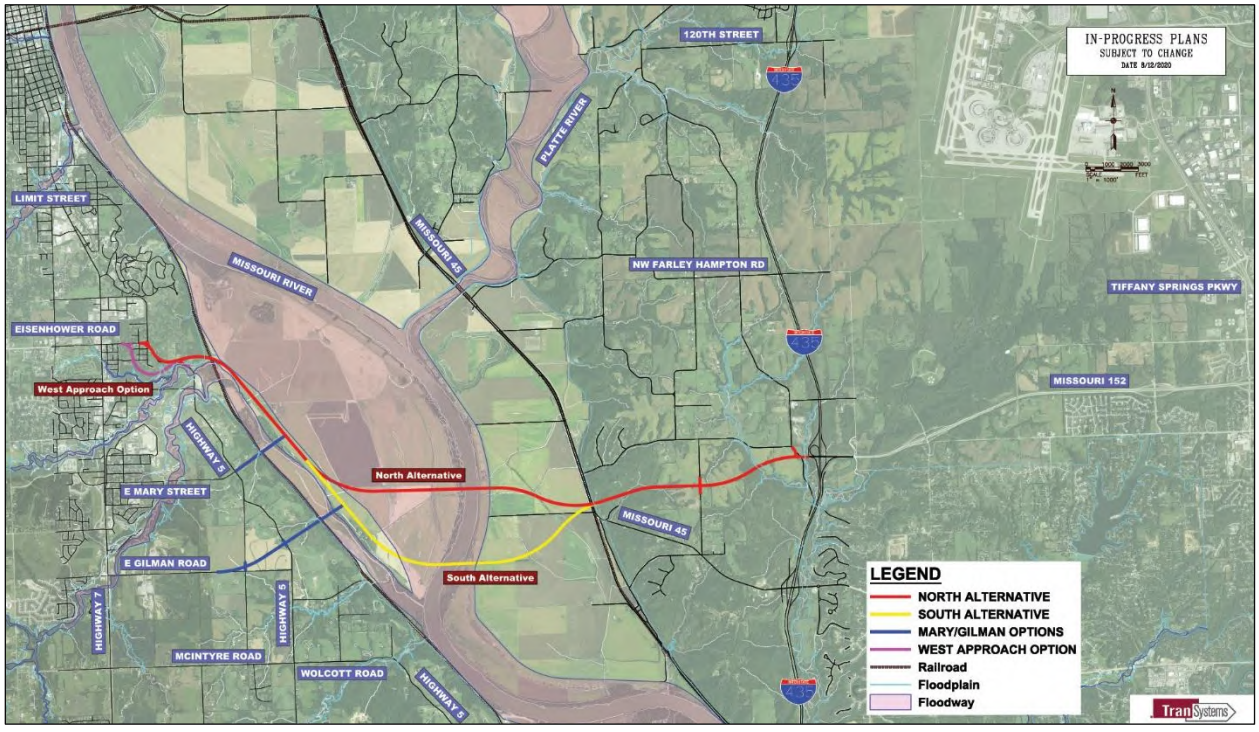
Based on the assessment of several alignment alternatives, two alternatives (A-2, A-3) were refined as preferred alignments. The preferred alternatives are displayed in Exhibit 3.1.

- *North Alternative (A-2):* The North Alternative (shown in red) connects Eisenhower Road in Kansas to MO-152 in Missouri. The approximately 8-mile alignment utilizes the elevated strip of land west of Stigers Island and has a longer bridge structure length over the Missouri River floodway.
- *South Alternative (A-3):* The South Alternative (shown in yellow) also connects Eisenhower Road in Kansas to MO-152 in Missouri. The approximately 8.5-mile alignment generally shares the same alignments as the North Alternative on the easternmost and westernmost ends, but shifts further south to utilize more of the elevated strip of land west of Stigers Island. This shift allows for a shorter bridge structure length over the Missouri River floodway.

Other Roadway Connection Options

Two other roadway connections from Mary Street and Gilman Road (shown in blue) were also explored to connect to the Eastern Gateway concept. These potential connections are also displayed in Exhibit 3.1.

Exhibit 3.1: Preferred Alignment Alternatives



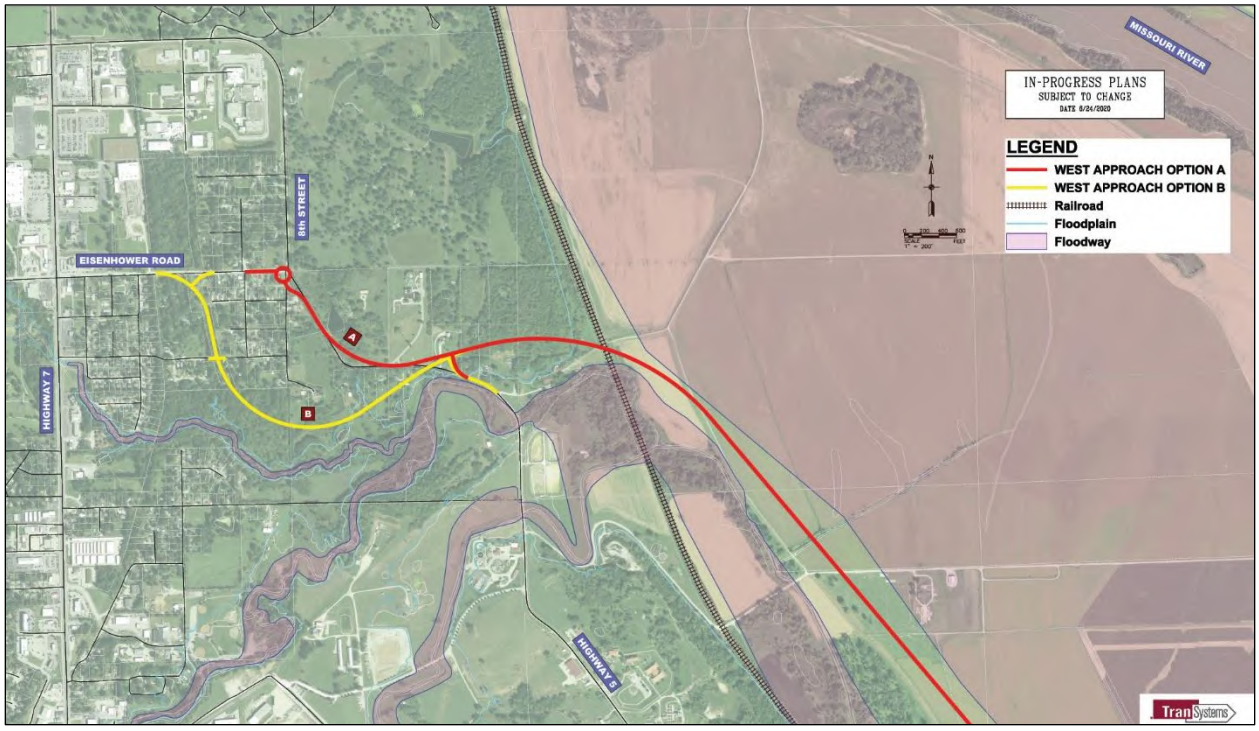
Source: TranSystems, 2020

Larger versions of the map are included in Appendix C.

West Approach Options

As displayed in Exhibit 3.2, the west approach to the Eastern Gateway concept presents two different options at Eisenhower Road. Option A generally follows the existing K-5 (Wolcott Road) corridor to an improved intersection, such as a conceptual roundabout, at Eisenhower Road and K-5 (Wolcott Road). Option B shifts the approach further south and west to connect to Eisenhower Road as the primary through movement. Both options remain north of local streams and avoid impacts to major resources such as the Leavenworth National Cemetery and Leavenworth Water Plant No. 2. However, some residential property impacts are likely in both options.

Exhibit 3.2: West Approach Options



Source: TranSystems, 2020
Larger versions of the map are included in Appendix C.

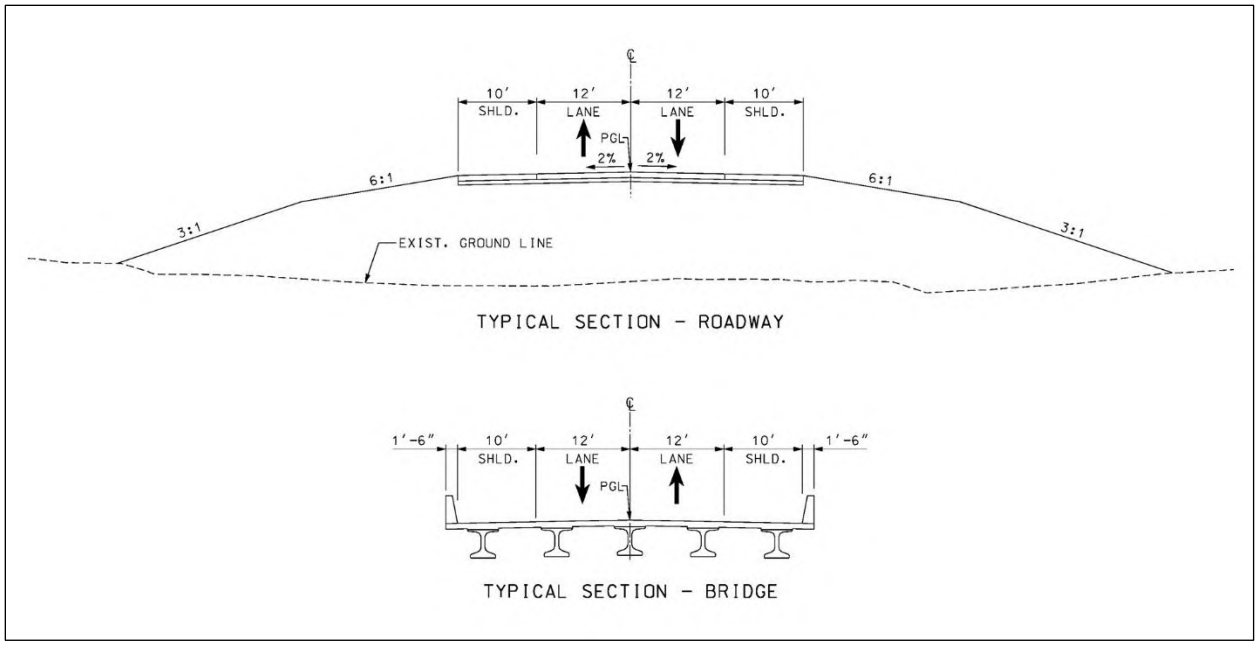
Bridge and Roadway Typical Section

Basic design criteria was established for the Eastern Gateway concept. A design speed of 55 mph was utilized in establishing the horizontal and vertical alignments. Based on the traffic demand anticipated by the traffic analysis, a typical section including two 12-foot lanes with 10-foot shoulders was utilized in establishing pavement and earthwork quantities (using Bentley OpenRoads Concept Station software). The bridge and roadway typical sections are displayed in Exhibit 3.3.

MARC has a policy regarding bicycle and pedestrian facilities on major river bridges. In summary, the policy states that safe, practical, and appropriate bicycle and pedestrian accommodations will be considered in the planning and design of all surface transportation projects that cross major rivers. For this study, a 10-foot shared-use path has been included in the bridge typical section for cost estimating purposes. Furthermore, the extension of the 10-foot shared-use path on all roadway

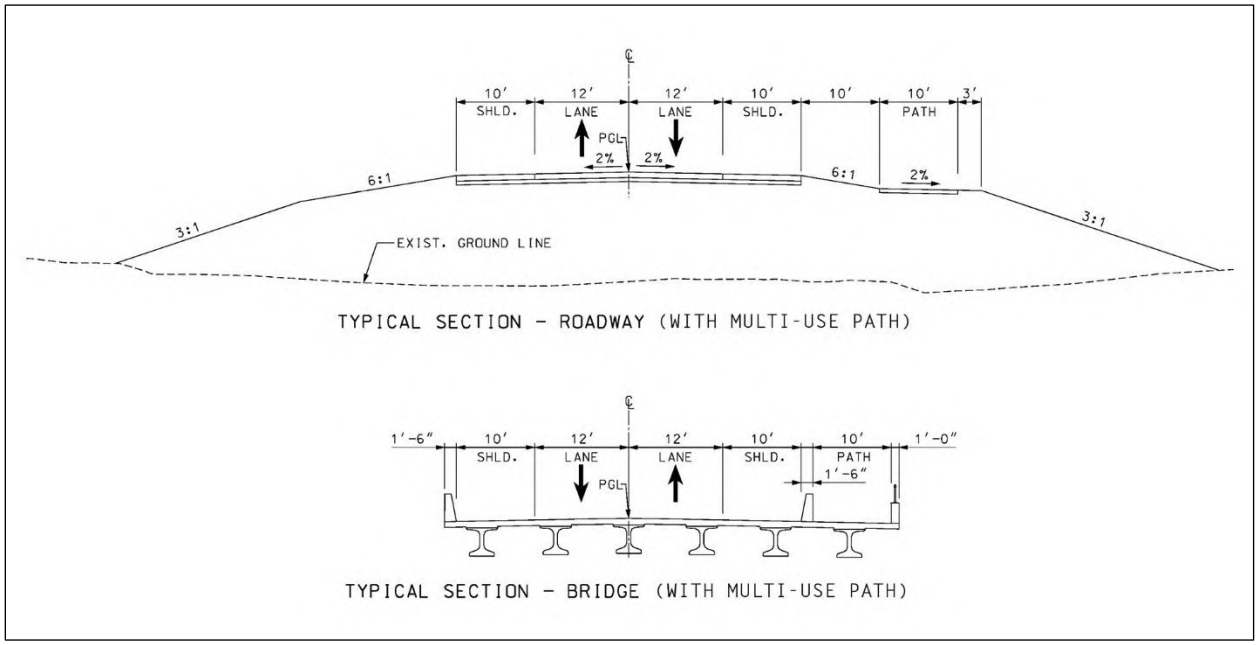
approaches is included as an additional option in the cost estimate. The bridge and roadway typical sections with the shared-use path option are displayed in Exhibit 3.4.

Exhibit 3.3: Typical Section



Source: TranSystems, 2020

Exhibit 3.4: Typical Section with Shared-Use Path



Source: TranSystems, 2020

Cost Estimate

A cost estimate summary is provided in Exhibit 3.5. The North Alternative costs approximately $301.4 million. The South Alternative, which requires a shorter bridge structure length, is less expensive with a cost of approximately $253.9 million. The additional cost of including a 10-foot shared-use path beyond the bridge structure throughout the remainder of the roadway project limits adds an additional $5.4 million to $6.9 million to the project cost depending on the alternative.

In order to reduce the number of cost estimate combinations, the study evaluated the difference between the two West Approach options. Overall, West Approach Option B that extends further west (see Exhibit 3.2) has an additional cost of approximately $2.4 million.

Other roadway connection options that were explored include approximately $25.3 million for the Mary Street Connector and approximately $27.7 million for the Gilman Road Connector.

Exhibit 3.5: Cost Estimate Summary (2020 Dollars)

Alternative	Cost Estimate	Optional Cost with Shared-Use Path[1]
North Alternative	$301,372,000	$306,787,000
South Alternative	$253,935,000	$260,818,000
Mary Street Connector	$25,311,000	N/A
Gilman Road Connector	$27,691,000	N/A

[1] Includes cost to extend the shared-use path beyond the river bridge structure throughout the remainder of the roadway project limits.

Cost Estimate Assumptions

Detailed cost estimates are provided in Appendix A. The cost estimates are divided into major elements of work such as roadway, river bridge, railroad bridges, interchange and intersections, and major drainage structures. Cost estimates include right-of-way for each alignment based on a per acre of square foot costs, utility costs, environmental permitting and mitigation costs, and railroad permitting costs. Percentage factors are also included for future engineering services and contingency.

Other cost estimate assumptions included:

- *Typical Section:* The cost estimate assumes two 12-foot lanes with 10-foot shoulders. The shoulder costs are included in the concrete pavement cost.
- *Shared-Use Path:* It is assumed that MARC would require a 10-foot shared-use path on the bridge. Therefore, the shared-use path cost has been included in the river bridge structure cost. The optional cost with the shared-use path represents the additional cost to extend the path throughout the remainder of the roadway project limits.

- *River Coordination:* Navigation clearance and requirements are under the jurisdiction of the U.S. Coast Guard (8th District). Further coordination would be required to establish sailing line and horizontal and vertical clearance requirements at the final bridge location. For this study, a vertical clearance of 70 feet was utilized to establish the alternate profiles. A haunched steel plate girder structure with an overall river bridge length of 880 feet was assumed for cost estimating purposes. This structure length would accommodate a 400-foot horizontal navigation clearance requirement.
- *Levee Coordination:* Farmland along the Missouri River is protected by a levee system, which is managed by a levee district with oversight provided by the U.S. Army Corps of Engineers (USACE). USACE general requirements include no construction or permanent structures within 500 feet of the land side and 300 feet of the river side. However, approval is typically granted to construct deep foundations within this no-build zone provided USACE requirements for design and construction are met. Additional requirements and inspection during construction may include levee stability, settlement and seepage analysis, site monitoring during construction, contingency flood condition measures, and special backfill measures. A minimum vertical clearance over the levee of 14.0 feet was assumed for this study.
- *Railroad Coordination:* Minimum clearance for railroad grade separations must meet the requirements of the American Railway Engineering and Maintenance-of-Way Association (AREMA) or be in accordance with the requirements of the railroad having jurisdiction. In general, all piers and abutments shall be located outside the railroad right-of-way limits and no permanent obstructions shall be within a vertical height of 23.5 feet above the top of rail. All alternatives for this study assumed the bridge structures crossing the railroads would span railroad right-of-way and meet minimum design clearances for new construction. Railroad coordination cost estimates also included plan review, flaggers, and inspections.

SECTION 4 | NEXT STEPS

Summary

The purpose of the study was to evaluate a new potential connection, referred to as the Eastern Gateway concept, across the Missouri River between Leavenworth County, Kansas and Platte County, Missouri. The study is a high-level feasibility study to achieve consensus on the next stage of the potential connection.

An assessment of alignment alternatives included a review of technical, financial, and institutional factors. Based on this assessment, two alternatives were refined as preferred alignments. The North Alternative connects Eisenhower Road in Kansas to MO-152 in Missouri. The South Alternative also connects Eisenhower Road in Kansas to MO-152 in Missouri, but shifts further south to utilize more of an elevated strip of land west of Stigers Island, thereby allowing a shorter bridge structure length over the Missouri River floodway. The North Alternative costs approximately $301.4 million while the South Alternative is less expensive at a cost of approximately $253.9 million, primarily due to the need for less bridge structure.

Next Steps

Next steps to advance the study could include coordination with the bi-state Kansas City region, an economic development study, environmental permitting, and conceptual design.

Bi-State Region Coordination

As a potential major bi-state project, advocacy, communication, and coordination with several government entities will be needed. At a minimum, coordination should include Leavenworth County, Platte County, Fort Leavenworth, City of Leavenworth, City of Lansing, City of Parkville, City of Kansas City Missouri, Kansas Department of Transportation, Missouri Department of Transportation, and the Mid-America Regional Council. Due to the regional connectivity implications of the Eastern Gateway concept, other entities to consider including in the process are Unified Government of Kansas City Kansas and Wyandotte County, Clay County, City of Platte City, Kansas Turnpike Authority, and Kansas City International Airport (KCI).

Economic Development Study

An economic development study could be performed in order to better understand the positive impact of the Eastern Gateway concept on growth and economic development

Environmental Permitting

Based on this high-level study, National Environmental Policy Act (NEPA) documentation at the Environmental Assessment (EA) level is anticipated. This level of assessment must include an alternatives analysis, public meetings, and scoping meetings.

Overall, anticipated environmental permitting includes:

- Noise Study
- Historic and Cultural Resources Investigation
- Hazardous Materials Review
- Threatened and Endangered Species Analysis
- Farmland Policy Protection Act
- Waters of the U.S. Delineation
- Floodplain Permit
- U.S. Coast Guard Bridge Permit
- U.S. Army Corps of Engineers Section 408 Permit
- Clean Water Act Section 404 Permit/Rivers and Harbors Section 10 Permit
- Stormwater Construction Permit
- U.S. DOT Section 4(f) Analysis/Land and Water Conservation Fund Section 6(f) Analysis

Expanding upon environmental permitting, FEMA coordination will be a significant part of this project due to the Missouri River crossing. FEMA requires that an increase in the 100-year water surface elevation due to the construction of a new bridge will not occur. An Engineering "No Rise" Certificate must be obtained by demonstrating through hydrological and hydraulic analyses performed in coordinate with standard engineering practice that the proposed encroachment would not result in any increase in flood levels during the occurrence of a 100-year flood. A hydraulic modeling analysis will be required during the design phase and well serve as documentation for the Floodplain Development Permit.

Conceptual Design

Engineering for the study can be advanced with a concept level design to further determine the critical elements of the project and feasible engineering solutions.

.

Appendix A | Cost Estimate

Eastern Gateway Concept Study

8/19/2020

LEAVENWORTH GATEWAY
NORTHERN - CONCEPTUAL ALTERNATIVE
OPINION OF PROBABLE COST

ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
1	CLEARING AND GRUBBING	ACRE	$ 7,500.00	50	$ 375,000.00
2	REMOVAL OF IMPROVEMENTS	LS	$ 200,000.00	1	$ 200,000.00
3	CLASS A EXCAVATION	CY	$ 14.00	683539	$ 9,569,546.00
4	EMBANKMENT IN PLACE	CY	$ 20.00	1556265	$ 31,125,300.00
5	COMPACTING EMBANKMENT	CY	$ 3.25	569616	$ 1,851,252.00
6	TYPE 5 AGGREGATE FOR BASE (6 IN. THICK)	SY	$ 12.50	168262	$ 2,103,275.00
7	CONCRETE PAVEMENT (10 IN. NON-REINFORCED, 15 FT. JOINTS)	SY	$ 60.00	168262	$ 10,095,720.00
8	MGS GUARDRAIL	LF	$ 22.00	25170	$ 553,740.00
9	CURB AND GUTTER TYPE B	LF	$ 33.00	3670	$ 121,110.00
10	TRAFFIC CONTROL	LS	$ 150,000.00	1	$ 150,000.00
11	MOBILIZATION	LS	$ 6,635,000.00	1	$ 6,635,000.00
12	PAVEMENT MARKING	LS	$ 135,000.00	1	$ 135,000.00
13	CONTRACTOR FURNISHED SURVEYING AND STAKING	LS	$ 1,658,700.00	1	$ 1,658,700.00
14	DRAINAGE	LS	$ 1,280,000.00	1	$ 1,280,000.00
15	SEEDING - COOL SEASON MIXTURES	ACRE	$ 3,000.00	110	$ 330,000.00
16	EROSION CONTROL	LS	$ 3,000,000.00	1	$ 3,000,000.00
17	LIGHTING	LS	$ 310,000.00	1	$ 310,000.00
18	TRAFFIC SIGNAL	EA	$ 275,000.00	2	$ 550,000.00
19	PERMANENT SIGNING	LS	$ 1,000,000.00	1	$ 1,000,000.00
20	BRIDGE	SF	$ 150.00	559189	$ 83,878,350.00
21	RIVER BRIDGE (with 10' sidewalk)	SF	$ 380.00	51040	$ 19,395,200.00

Total Major Items	$	174,317,193.00
Contingency (25%)	$	43,579,298.25
Utilities	$	3,500,000.00
Environmental Permitting/Mitigation	$	2,150,000.00
FEMA Coordination	$	250,000.00
Railroad Coordination	$	460,000.00
Right of Way	$	11,747,000.00
TOTAL	$	236,003,491.25

Section Breakout	Sub-Total
Roadway	$ 69,183,643.00
Lighting	$ 310,000.00
Signals	$ 550,000.00
Signing	$ 1,000,000.00
Bridge	$ 103,273,550.00
Total Major Items	$ 174,317,193.00

Prelim. Engineering (15%)	$	32,684,473.69
Construction Engineering (15%)	$	32,684,473.69
GRAND TOTAL (2020 dollars)	**$**	**301,372,438.63**
10' Multi-use Path (optional)	$	5,414,632.01
GRAND TOTAL (2020 dollars) with Optional 10' path	**$**	**306,787,070.64**

8/19/2020

LEAVENWORTH GATEWAY
SOUTHERN - CONCEPTUAL ALTERNATIVE
OPINION OF PROBABLE COST

ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
1	CLEARING AND GRUBBING	ACRE	$ 7,500.00	50	$ 375,000.00
2	REMOVAL OF IMPROVEMENTS	LS	$ 200,000.00	1	$ 200,000.00
3	CLASS A EXCAVATION	CY	$ 14.00	679569	$ 9,513,966.00
4	EMBANKMENT IN PLACE	CY	$ 20.00	2098302	$ 41,966,040.00
5	COMPACTING EMBANKMENT	CY	$ 3.25	566308	$ 1,840,501.00
6	TYPE 5 AGGREGATE FOR BASE (6 IN. THICK)	SY	$ 12.50	207150	$ 2,589,375.00
7	CONCRETE PAVEMENT (10 IN. NON-REINFORCED, 15 FT. JOINTS)	SY	$ 60.00	207150	$ 12,429,000.00
8	MGS GUARDRAIL	LF	$ 22.00	39974	$ 879,428.00
9	CURB AND GUTTER TYPE B	LF	$ 33.00	3670	$ 121,110.00
10	TRAFFIC CONTROL	LS	$ 150,000.00	1	$ 150,000.00
11	MOBILIZATION	LS	$ 5,505,000.00	1	$ 5,505,000.00
12	PAVEMENT MARKING	LS	$ 135,000.00	1	$ 135,000.00
13	CONTRACTOR FURNISHED SURVEYING AND STAKING	LS	$ 1,376,100.00	1	$ 1,376,100.00
14	DRAINAGE	LS	$ 1,080,000.00	1	$ 1,080,000.00
15	SEEDING - COOL SEASON MIXTURES	ACRE	$ 3,000.00	120	$ 360,000.00
16	EROSION CONTROL	LS	$ 3,210,000.00	1	$ 3,210,000.00
17	LIGHTING	LS	$ 310,000.00	1	$ 310,000.00
18	TRAFFIC SIGNAL	EA	$ 275,000.00	2	$ 550,000.00
19	PERMANENT SIGNING	LS	$ 1,000,000.00	1	$ 1,000,000.00
20	BRIDGE	SF	$ 150.00	260084	$ 39,012,600.00
21	RIVER BRIDGE (with 10' sidewalk)	SF	$ 380.00	58000	$ 22,040,000.00

Total Major Items	$	144,643,120.00
Contingency (25%)	$	36,160,780.00
Utilities	$	3,500,000.00
Environmental Permitting/Mitigation	$	1,925,000.00
FEMA Coordination	$	250,000.00
Railroad Coordination	$	460,000.00
Right of Way	$	12,755,000.00
TOTAL	$	199,693,900.00
Prelim. Engineering (15%)	$	27,120,585.00
Construction Engineering (15%)	$	27,120,585.00
GRAND TOTAL (2020 dollars)	**$**	**253,935,070.00**
10' Multi-use Path (optional)	$	6,882,946.74
GRAND TOTAL (2020 dollars) with Optional 10' path	**$**	**260,818,016.74**

Section Breakout	Sub-Total
Roadway	$ 81,730,520.00
Lighting	$ 310,000.00
Signals	$ 550,000.00
Signing	$ 1,000,000.00
Bridge	$ 61,052,600.00
Total Major Items	$ 144,643,120.00

8/19/2020

LEAVENWORTH GATEWAY
STRANGER (E. Mary St.) CONNECTION - CONCEPTUAL ALTERNATIVE
OPINION OF PROBABLE COST

ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
1	CLEARING AND GRUBBING	ACRE	$ 7,500.00	8	$ 60,000.00
2	REMOVAL OF IMPROVEMENTS	LS	$ 50,000.00	1	$ 50,000.00
3	CLASS A EXCAVATION	CY	$ 14.00	144550	$ 2,023,700.00
4	EMBANKMENT IN PLACE	CY	$ 20.00	0	$ -
5	COMPACTING EMBANKMENT	CY	$ 3.25	63828	$ 207,441.00
6	TYPE 5 AGGREGATE FOR BASE (6 IN. THICK)	SY	$ 12.50	11430	$ 142,875.00
7	CONCRETE PAVEMENT (10 IN. NON-REINFORCED, 15 FT. JOINTS)	SY	$ 60.00	11430	$ 685,800.00
8	MGS GUARDRAIL	LF	$ 22.00	1800	$ 39,600.00
9	CURB AND GUTTER TYPE B	LF	$ 33.00	0	$ -
10	TRAFFIC CONTROL	LS	$ 50,000.00	1	$ 50,000.00
11	MOBILIZATION	LS	$ 538,000.00	1	$ 538,000.00
12	PAVEMENT MARKING	LS	$ 15,000.00	1	$ 15,000.00
13	CONTRACTOR FURNISHED SURVEYING AND STAKING	LS	$ 134,400.00	1	$ 134,400.00
14	DRAINAGE	LS	$ 80,000.00	1	$ 80,000.00
15	SEEDING - COOL SEASON MIXTURES	ACRE	$ 3,000.00	7	$ 21,000.00
16	EROSION CONTROL	LS	$ 150,000.00	1	$ 150,000.00
17	LIGHTING	LS	$ 50,000.00	1	$ 50,000.00
18	TRAFFIC SIGNAL	EA	$ 275,000.00	2	$ 550,000.00
19	PERMANENT SIGNING	LS	$ 25,000.00	1	$ 25,000.00
20	BRIDGE	SF	$ 150.00	62275	$ 9,341,250.00
21	RIVER BRIDGE (with sidewalk)	SF	$ 380.00	0	$ -

Total Major Items	$	14,164,066.00
Contingency (25%)	$	3,541,016.50
Utilities	$	1,000,000.00
Environmental Permitting/Mitigation	$	220,000.00
FEMA Coordination	$	250,000.00
Railroad Coordination	$	230,000.00
Right of Way	$	594,200.00
TOTAL	$	19,999,282.50
Prelim. Engineering (15%)	$	2,655,762.38
Construction Engineering (15%)	$	2,655,762.38
GRAND TOTAL (2020 dollars)	$	25,310,807.25

Section Breakout	Sub-Total
Roadway	$ 4,197,816.00
Lighting	$ 50,000.00
Signals	$ 550,000.00
Signing	$ 25,000.00
Bridge	$ 9,341,250.00
Total Major Items	$ 14,164,066.00

8/19/2020

LEAVENWORTH GATEWAY
GILMAN CONNECTION - CONCEPTUAL ALTERNATIVE
OPINION OF PROBABLE COST

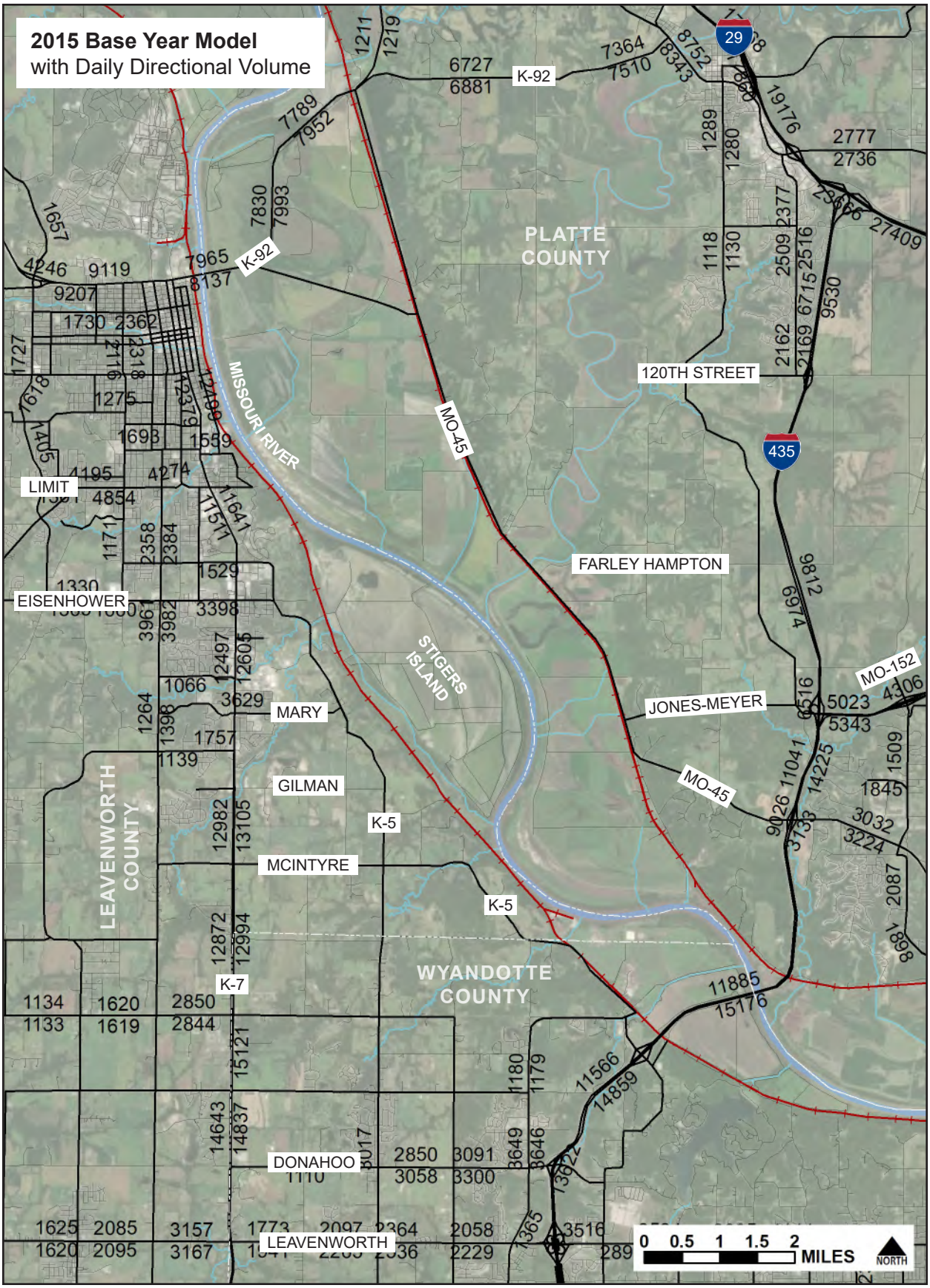
ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL COST
1	CLEARING AND GRUBBING	ACRE	$ 7,500.00	4	$ 30,000.00
2	REMOVAL OF IMPROVEMENTS	LS	$ 50,000.00	1	$ 50,000.00
3	CLASS A EXCAVATION	CY	$ 14.00	121435	$ 1,700,090.00
4	EMBANKMENT IN PLACE	CY	$ 20.00	19984	$ 399,680.00
5	COMPACTING EMBANKMENT	CY	$ 3.25	101196	$ 328,887.00
6	TYPE 5 AGGREGATE FOR BASE (6 IN. THICK)	SY	$ 12.50	35320	$ 441,500.00
7	CONCRETE PAVEMENT (10 IN. NON-REINFORCED, 15 FT. JOINTS)	SY	$ 60.00	35320	$ 2,119,200.00
8	MGS GUARDRAIL	LF	$ 22.00	1500	$ 33,000.00
9	CURB AND GUTTER TYPE B	LF	$ 33.00	0	$ -
10	TRAFFIC CONTROL	LS	$ 50,000.00	1	$ 50,000.00
11	MOBILIZATION	LS	$ 546,000.00	1	$ 546,000.00
12	PAVEMENT MARKING	LS	$ 12,000.00	1	$ 12,000.00
13	CONTRACTOR FURNISHED SURVEYING AND STAKING	LS	$ 136,400.00	1	$ 136,400.00
14	DRAINAGE	LS	$ 340,000.00	1	$ 340,000.00
15	SEEDING - COOL SEASON MIXTURES	ACRE	$ 3,000.00	11	$ 33,000.00
16	EROSION CONTROL	LS	$ 150,000.00	1	$ 150,000.00
17	LIGHTING	LS	$ 50,000.00	1	$ 50,000.00
18	TRAFFIC SIGNAL	EA	$ 275,000.00	0	$ -
19	PERMANENT SIGNING	LS	$ 25,000.00	1	$ 25,000.00
20	BRIDGE	SF	$ 150.00	52875	$ 7,931,250.00
21	RIVER BRIDGE (with sidewalk)	SF	$ 380.00	0	$ -

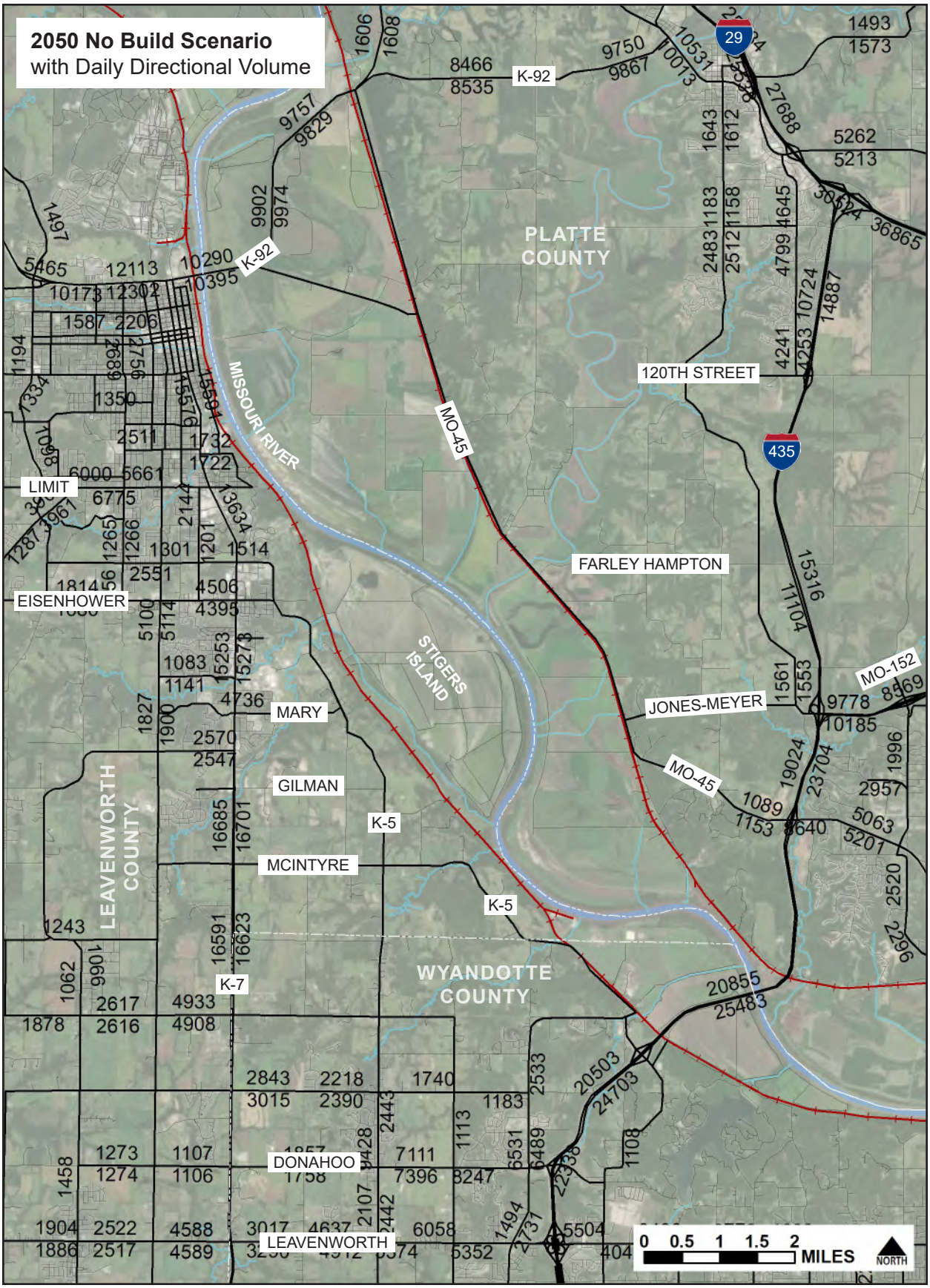
Total Major Items	$	14,376,007.00
Contingency (25%)	$	3,594,001.75
Utilities	$	1,000,000.00
Environmental Permitting/Mitigation	$	615,000.00
FEMA Coordination	$	250,000.00
Railroad Coordination	$	230,000.00
Right of Way	$	2,234,600.00
TOTAL	$	22,299,608.75
Prelim. Engineering (15%)	$	2,695,501.31
Construction Engineering (15%)	$	2,695,501.31
GRAND TOTAL (2020 dollars)	$	27,690,611.38

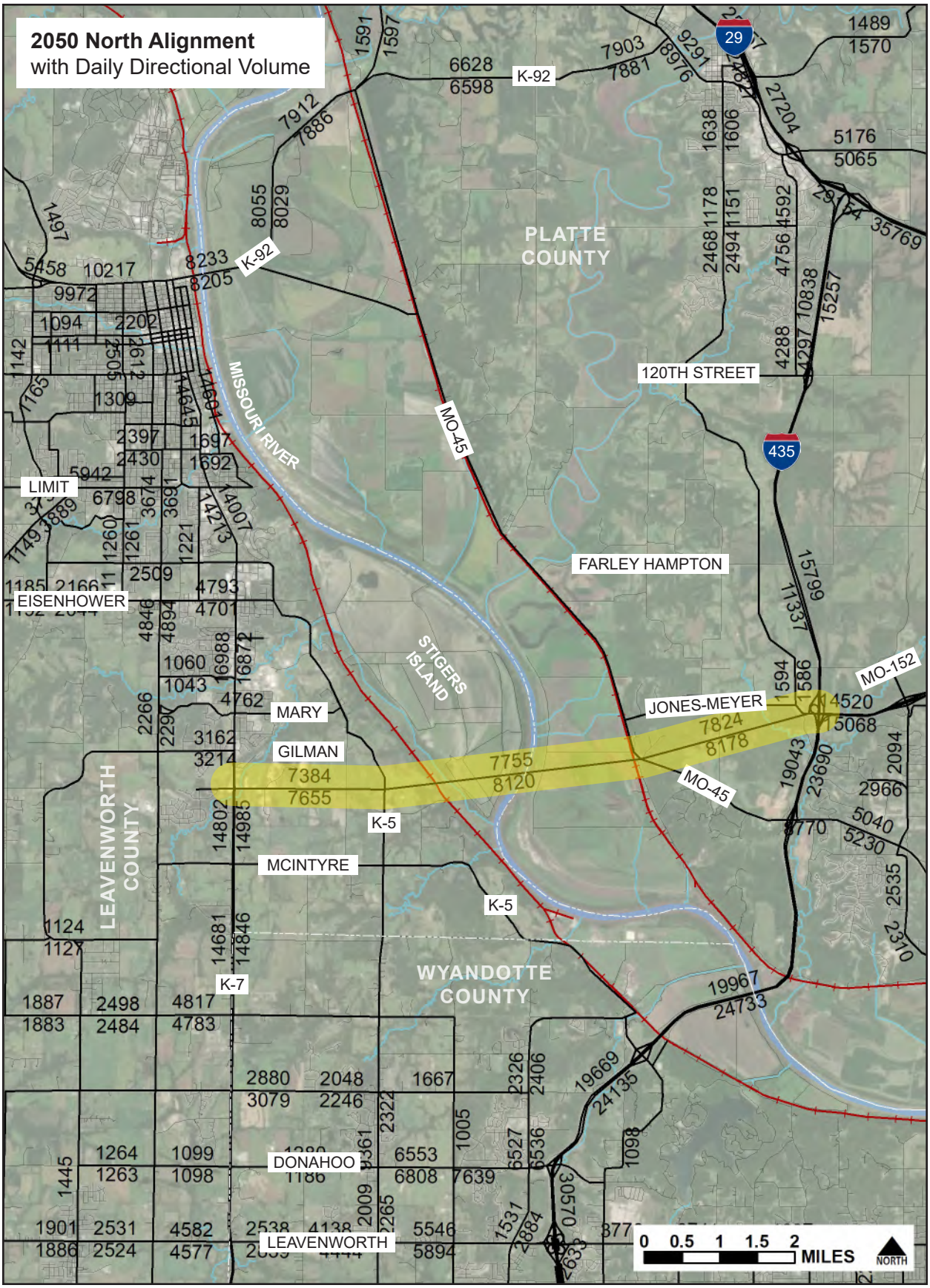
Section Breakout	Sub-Total
Roadway	$ 6,369,757.00
Lighting	$ 50,000.00
Signals	$ -
Signing	$ 25,000.00
Bridge	$ 7,931,250.00
Total Major Items	$ 14,376,007.00

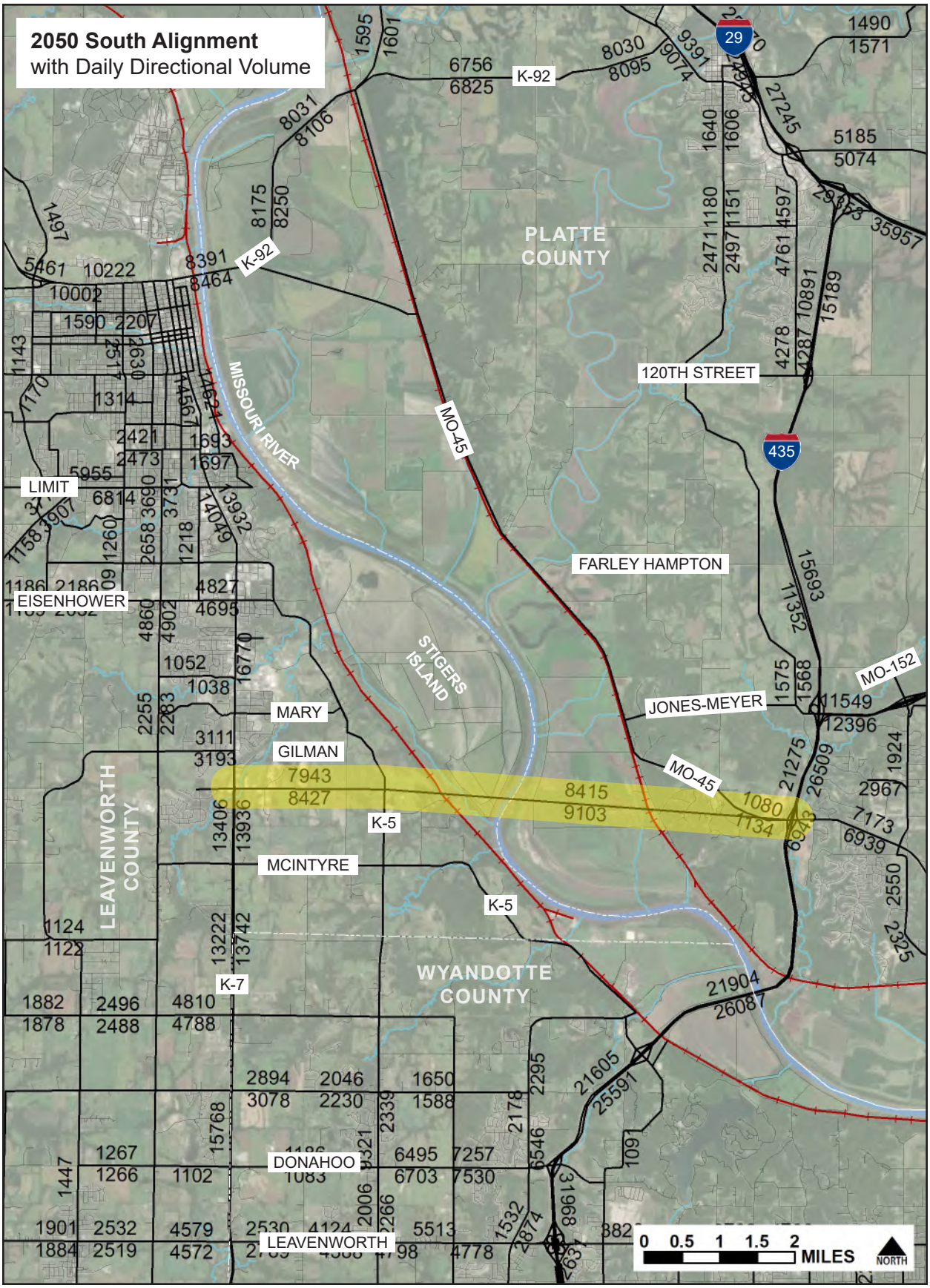
Appendix B | Traffic Analysis Maps

Eastern Gateway Concept Study


2015 Base Year Model
with Daily Directional Volume
PLATTE COUNTY
LEAVENWORTH COUNTY
WYANDOTTE COUNTY
MISSOURI RIVER
STIGERS ISLAND
K-92
MO-45
120TH STREET
FARLEY HAMPTON
JONES-MEYER
MO-152
MARY
GILMAN
K-5
MCINTYRE
K-7
EISENHOWER
LIMIT
DONAHOO
LEAVENWORTH
29
435
0 0.5 1 1.5 2 MILES
NORTH

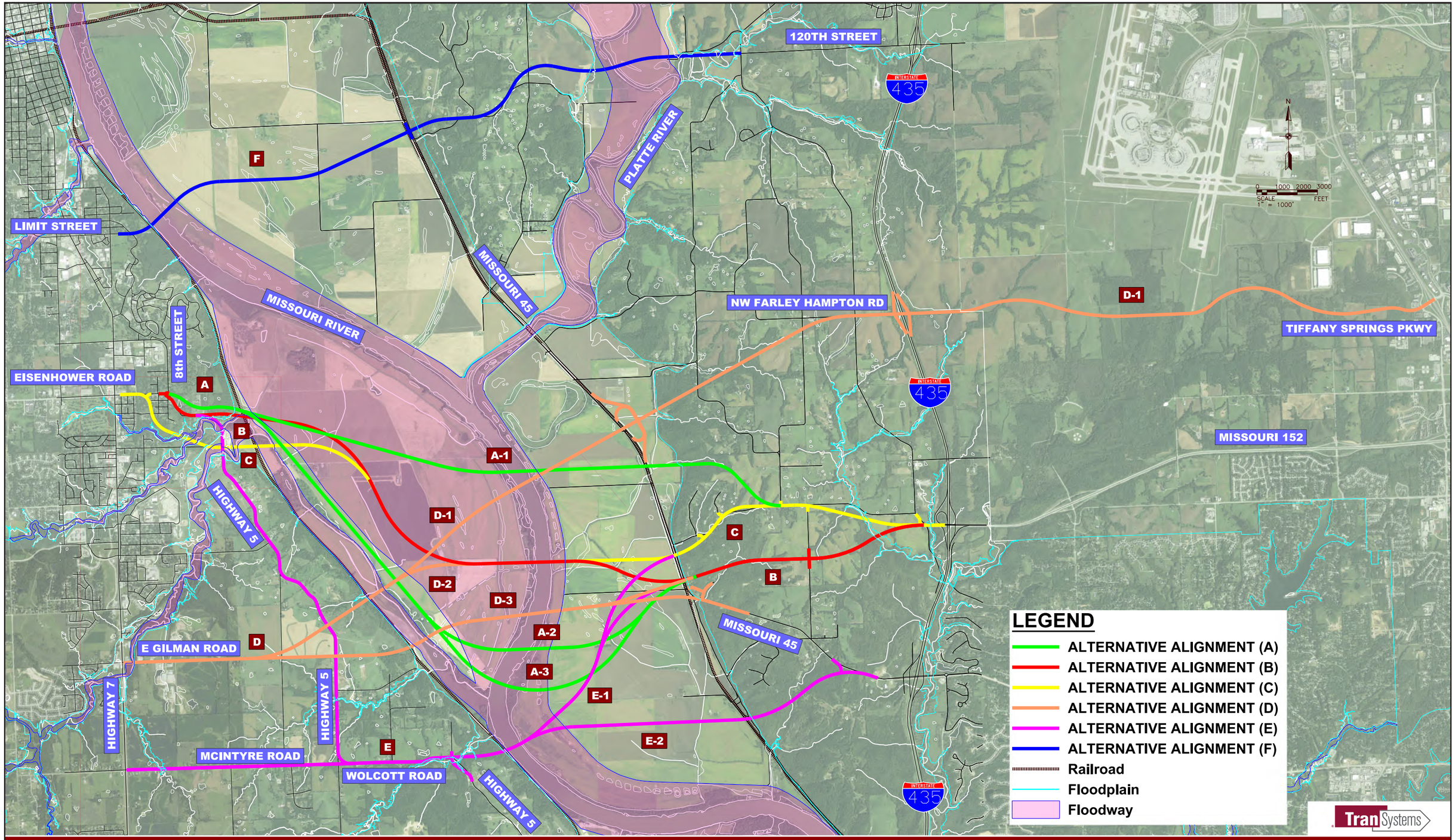

2050 No Build Scenario
with Daily Directional Volume
PLATTE COUNTY
LEAVENWORTH COUNTY
WYANDOTTE COUNTY
MISSOURI RIVER
STIGERS ISLAND
K-92
MO-45
120TH STREET
435
29
LIMIT
EISENHOWER
MARY
GILMAN
K-5
MCINTYRE
K-7
FARLEY HAMPTON
JONES-MEYER
MO-152
DONAHOO
LEAVENWORTH
0 0.5 1 1.5 2 MILES
NORTH


2050 North Alignment
with Daily Directional Volume
PLATTE COUNTY
LEAVENWORTH COUNTY
WYANDOTTE COUNTY
MISSOURI RIVER
STIGERS ISLAND
120TH STREET
FARLEY HAMPTON
JONES-MEYER
LIMIT
EISENHOWER
MARY
GILMAN
MCINTYRE
DONAHOO
LEAVENWORTH
K-92
K-5
K-7
MO-45
MO-152
29
435
7824
8178
7755
8120
7384
7655
0 0.5 1 1.5 2 MILES
NORTH

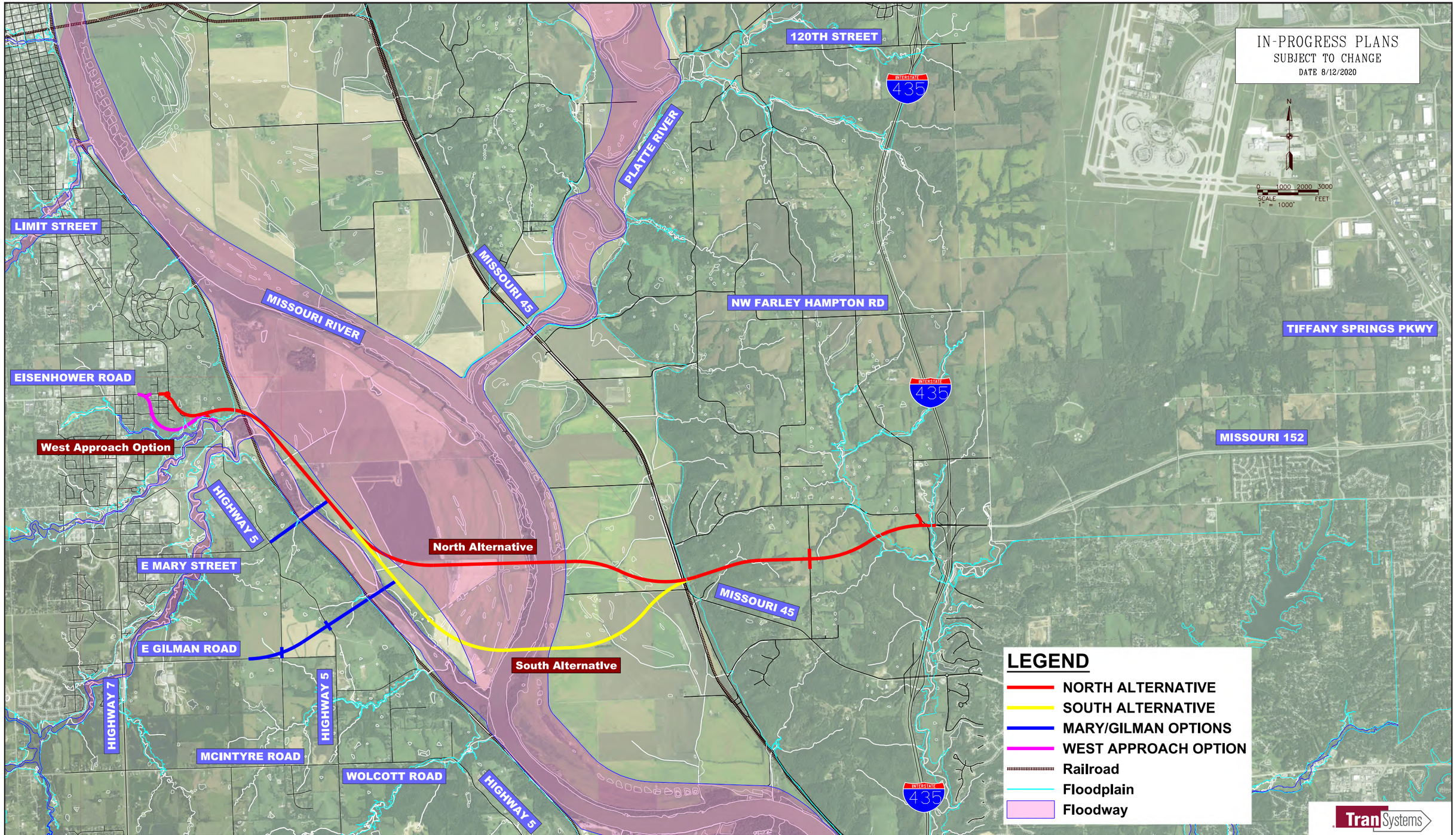

2050 South Alignment
with Daily Directional Volume
PLATTE COUNTY
LEAVENWORTH COUNTY
WYANDOTTE COUNTY
MISSOURI RIVER
STIGERS ISLAND
120TH STREET
FARLEY HAMPTON
JONES-MEYER
EISENHOWER
LIMIT
MARY
GILMAN
MCINTYRE
DONAHOO
LEAVENWORTH
K-92
K-5
K-7
MO-45
MO-152
29
435
0 0.5 1 1.5 2 MILES
NORTH

Appendix C | Alternative Alignment Maps

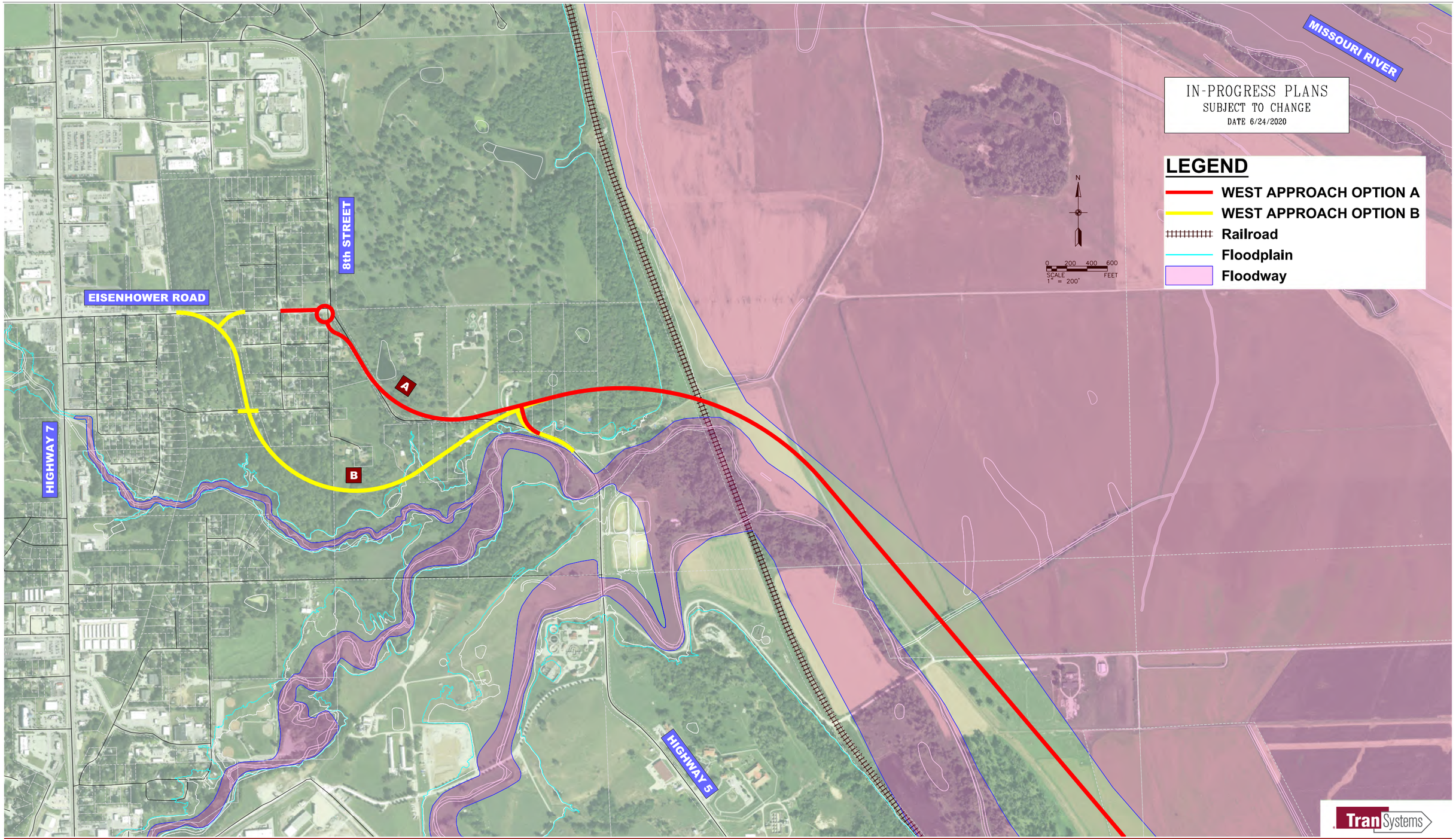
Eastern Gateway Concept Study



EASTERN GATEWAY - ALIGNMENT ALTERNATIVES



EASTERN GATEWAY - ALIGNMENT ALTERNATIVES



EASTERN GATEWAY - ALIGNMENT ALTERNATIVES

TranSystems

EXPERIENCE | Transportation

AGENDA ITEM

TO: Tim Vandall, City Administrator

FROM: Mike Spickelmier, Director of Public Works MWS 02/11/2021

DATE: February 12, 2021

SUBJECT: Leavenworth County / Lansing City Road Maintenance Agreement

Policy Consideration: This agreement was discussed at the 1/28/21 works session by the Lansing City Council. The proposed revisions were sent back to Leavenworth County, and were incorporated into the version presented herein. The Leavenworth Board of County Commissioners approved this agreement at their regular meeting on 2/10/2021.

The following work session items were addressed in the agreement:

1. Acknowledgement of the separate agreements for Eisenhower Road
2. Acknowledgement of the separate agreement for the DeSoto Bridge
3. Identification of LVCO maintenance past KBP
4. Clarification of the references in Exhibit A

Financial Consideration: This agreement memorializes the current responsibilities. As such, it does not obligate or relive either part of what is currently being performed, resulting in no change in financial considerations.

Action:

1. Approve the City/County agreement between Lansing and Leavenworth County for Road Maintenance Responsibilities and authorize the Mayor to sign.

AGREEMENT FOR MAINTENANCE OF ROAD IN CITIES

Leavenworth County
City of Lansing

This Agreement made and entered into this ____ day of _____, _____ by and between the City of Lansing, Kansas, hereinafter referred to as the "City", and Leavenworth County hereinafter referred to as the "County".

RECITALS:

WHEREAS, statue K.S.A. 68-572 allows the Board of County Commissioners and the governing body of the City of Lansing within such county to enter into agreements for the construction, reconstruction, or maintenance of any roads; and

WHEREAS, THE Board of County Commissioners desire to define the maintenance responsibilities of roads in cities and roads adjacent to the city limits, for the public safety and economic good of the county.

NOW THEREFORE, BE IT AGREED:

1. That the City will maintain all roads that are located within the city limits of said city, from the date of this agreement forward, unless stated otherwise by Exhibit "A" to this agreement.

2. All signs on roads in the City Limits to be maintained by the City, regardless of roadway maintenance responsibility.

3. That roads in and adjacent to the City and/or the City has annexed to the center-line of road, will be maintained from right-of-way to right-of-way as agreed to by Exhibit "A" to this agreement. "Maintenance" shall include but not limited to:

    - Maintenance of the road surface, shoulders, draining structures and back slopes as required
    - Maintenance, repair and replacement of road culverts
    - Routine maintenance and inspection of existing bridge structures
    - Snow Removal

4. All entrances along roadways shall be permitted and in accordance with the established policies and procedures by the jurisdiction maintaining the roadway.

5. Any finish mowing, trimming, or landscaping along any trail/sidewalk constructed by the City will be maintained by the city, regardless of roadway maintenance responsibility.

6. Curb and gutter roadways with storm water inlets and facilities will be maintained by the City. Road surface maintenance in these areas may be performed by the County, but only with explicit written agreement between both parties prior to commencement. These facilities are outside of the normal scope of operations for County maintenance crews.

7. The Board of County Commissioners or City Council may, if they so desire to, enter into agreement to reconstruct roads in City Limits or adjacent to City. This will typically be through a supplemental MOU to this document.

8. It is mutually agreed that if, at any time, improvements are made solely by the City, to any County maintained roadway, the City immediately accepts all future maintenance responsibility.

9. It is mutually agreed that the City can ask for assistance from the County for maintenance of city roads, or vice versa, whereby the machinery, equipment and employees of the county may maintain city roads with just compensation for the county. Compensation shall be determined and agreed upon before work begins. Compensation may include trading equipment, machinery and employees of the City and County for defined work.

10. Acquisition of any easements or right-of-ways necessary for the maintenance of any road shall be obtained by the party having legal jurisdiction of the road and shall be obtained in a timely manner upon determination such easements or right-of-ways are required.

11. This agreement shall not have a set term, rather it is the right of either the City or the County to terminate the agreement by providing to the other, in writing, notice of termination not less than one (1) year prior to the time of termination which shall take effect on the anniversary date of this agreement.

12. It is mutually agreed that the City will take over maintenance of all roads in the City Limits when the City reaches the status of a first class city.

13. The County agrees to waive any permit fees that may be assessed to the City when working within the right-of-way adjacent to a County Road, and vice versa.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be signed by their duly authorized officers, on this _____ day of _____, 2020.

Recommend for Approval

Attest:

Janet Klasinski

Janet Klasinski, County Clerk

(SEAL)

BOARD OF COUNTY COMMISSIONERS

Mike Smith, Chairman, 4th District

Jeff Culbertson, 1st District

Vicky Kaaz, 2nd District

Doug Smith, 3rd District

Mike Stieben, 5th District

IN WITNESS WHEREOF the parties here to have caused this Agreement to be signed by their duly authorized officers, on this _____ day of _____, 2020

Attest:

Sarah Bodensteiner, City Clerk

CITY OF LANSING, KANSAS

Tony McNeill, Mayor

AGREEMENT FOR MAINTENANCE OF ROADS IN CITIES
CITY OF LANSING
EXHIBIT "A"

1. Roads within or adjacent to the City Limits to be maintained by the City of Lansing **<Shown in Green in Map Attachment>**
    a. E Mary Street (US-73/K-7 east to City Limits at Lost 80 Park)
    b. New Lawrence Road (Eisenhower Rd to 1,100ft south [City Limits])
    c. 155th Street (1 mile South of Eisenhower Rd)
    d. Gilman Rd (US-73/K-7 to 2500 feet East [City Limits])
    e. McIntyre Rd (US-73/K-7 to City Limits)
    f. DeSoto Rd/147th St/CR11 (Eisenhower to 0.8 miles South of McIntyre Rd& bridge D-18)
    g. 136th St (Gilman Rd to Transfer Station gate)
    h. 4-H Road (US-73/K-7 west to DeSoto Rd)

2. Roads within or adjacent to the City Limits not specifically identified in Exhibit A, Paragraph 1 to be maintained by the County of Leavenworth **<Shown in Yellow in Map Attachment>**
    a. Gilman Rd (End of City Maintenance [Exhibit A No. 1.d] to 127th)
    b. McIntyre Road (East of City Limits)
    c. 4-H Road (West of DeSoto Rd to 159th St)

3. Roads within or adjacent to the City Limits not specifically identified in Exhibit A, Paragraph 1 or 2 to be maintained by the County of Leavenworth with snow removal provided by the City of Lansing **<Shown in Blue in Map Attachment>**
    a. Whispering Winds Subdivision
        i. 162nd Street (Eisenhower to 1000ft south)
        ii. Whispering Winds Rd
        iii. Sloan Road
        iv. E Mary Street (City Limits east to K-5)

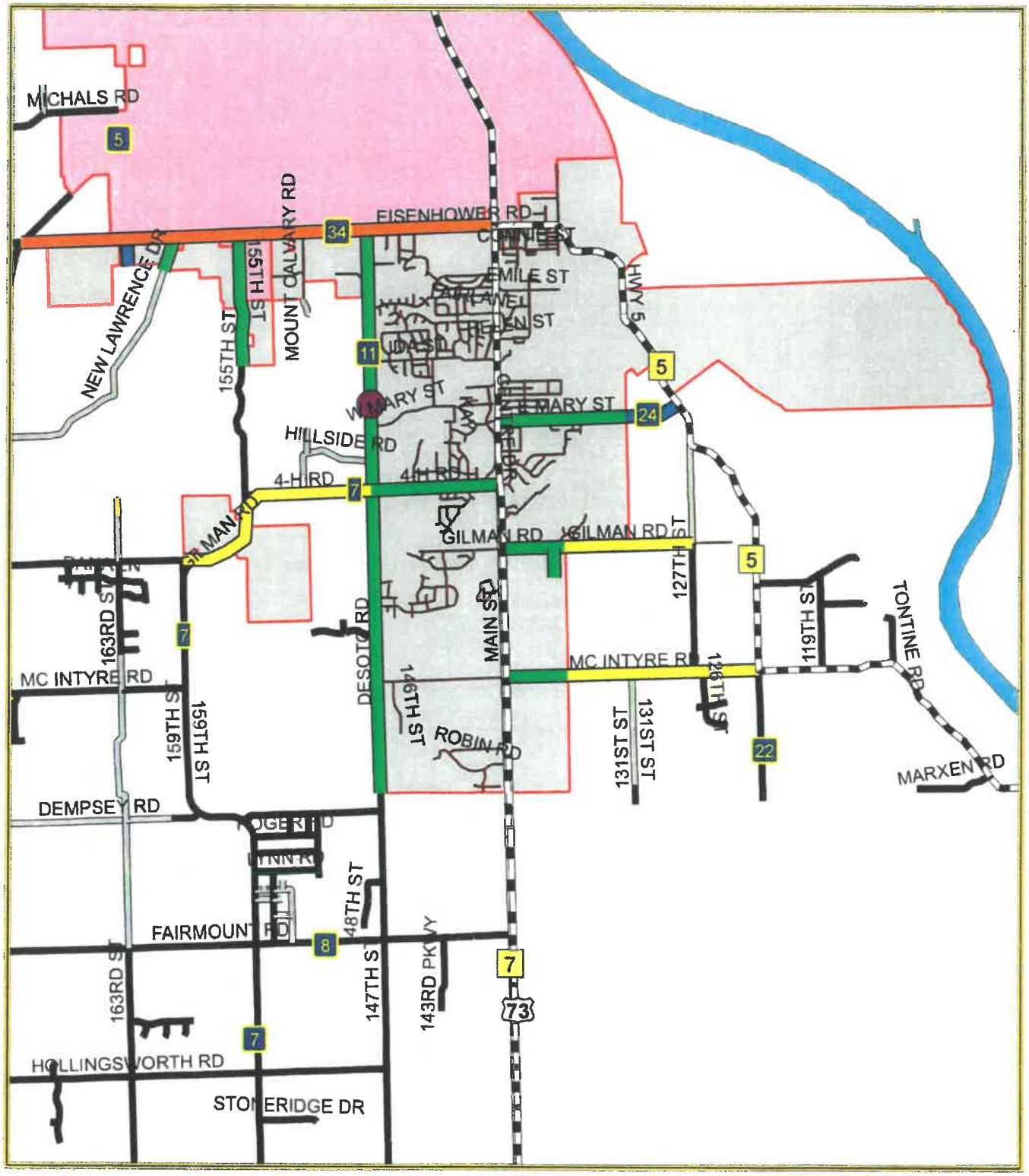
4. Eisenhower Road Maintenance is established by separate three party agreement between Leavenworth, Lansing and Leavenworth County **<Shown in Orange in Map Attachment>**

5. 7-Mile Bridge Maintenance is established by separate agreement between Lansing and Leavenworth County **<Shown in Purple in Map Attachment>**

6. All other roads not specifically listed that lie within the City Limits of the City of Lansing will be maintained by the City.

7. Any annexation by the city of Lansing that incorporates the adjacent ground on both sides of a road will be considered a city street. The maintenance of those roads will then transfer to the City of Lansing, except for the roads specifically listed in Exhibit A, Paragraph 1

INTERLOCAL AGREEMENT EXHIBIT
CITY OF LANSING & LEAVENWORTH COUNTY



Prepared By:
Leavenworth County Public Works
300 Walnut St. Ste. 007
Leavenworth, KS 66048
DATE

0 0.225 0.45 0.9 1.35 1.8
Miles

Legend

State_Maintained_Roads
Maint
Roads Maint By Lansing
Roads Maint By LVCC
See Eisenhower Maint Agreements
Snow Removal By Lansing
7 Mile Creek Agreement
Lansing City Roads

CITYLIMITS_2011
CITY
LANSING
LEAVENWORTH

AGENDA ITEM

TO: Tim Vandall, City Administrator

THRU: Matthew R. Schmitz, Director, Community and Economic Development MRS

FROM: Rebecca L. Savidge, City Inspector RLS

DATE: February 18, 2021

SUBJECT: Fence Request – 630 Hillcrest Circle

Timothy Supplee, property owner at 630 Hillcrest Circle, wishes to extend his fence into the platted setback of 20 feet. The planned placement of the fence will be outside of the right of way line, which is 16 feet from the back of the curb. The fence would be installed 26 feet from the curb, parallel with the street, on the north side of the property. The variance request is for a 10-foot expansion into the building setback, toward the street, and adjoining the side of the structure.

The fence is proposed as a 5-foot spaced picket fence to be installed by the property owner. Pictures are attached to provide visuals in determining the approval or denial.

The City Code allows residents to bring before the City Council consideration of variances on fence requests. In reviewing the application to construct the fence with a reduced setback as shown in the attached drawing, staff finds no apparent conflicts with adjoining site triangles, easements, or road right of ways. Attached is the plat for Maples of Woodland Hills, Phase 3.

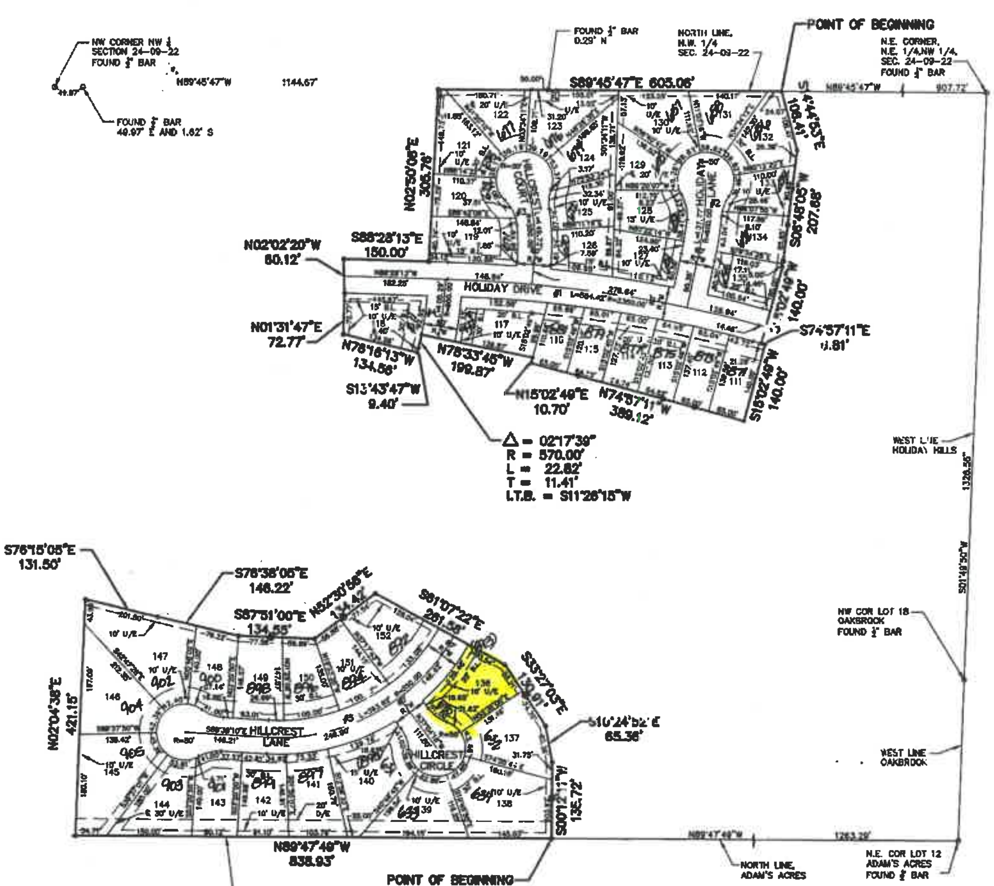
Staff will issue or deny the building permit based on the City Council's subsequent decision.

Action: Staff recommends the Council approve the fence request from Timothy Supplee for 630 Hillcrest Circle.

THE MAPLES OF WOODLAND HILLS - PHASE 3

FINAL PLAT

LOTS 111 - 152



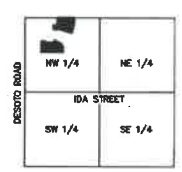
LOT NUMBER	LOT AREA (SQ. FT.)
111	9094
112	9014
113	8792
114	8468
115	8012
116	7511
117	13146
118	12309
119	12609
120	9191
121	11972
122	11053
123	12442
124	11360
125	9146
126	8573
127	9804
128	9848
129	9389
130	13327
131	10152
132	12107
133	8407
134	9318
135	9472
136	14324
137	15286
138	20682
139	14123
140	18852
141	13391
142	12443
143	11953
144	14194
145	20595
146	17179
147	21942
148	11458
149	12348
150	11097
151	10999
152	14474

CURVE DATA:

CURVE NO. 1	CURVE NO. 2	CURVE NO. 3	CURVE NO. 4	CURVE NO. 5
Δ = 13°31'03"	Δ = 13°09'21"	Δ = 24°30'43"	Δ = 10°03'16"	Δ = 64°28'12"
R = 2350.00'	R = 600.00'	R = 350.00'	R = 600.00'	R = 350.00'
L = 554.42'	L = 137.77'	L = 149.73'	L = 105.29'	L = 393.82'
T = 278.50'	T = 69.19'	T = 76.03'	T = 52.78'	T = 220.70'
C = 553.13'	C = 137.46'	C = 148.60'	C = 105.16'	C = 373.37'

NOTE:

ALL FRONT AND REAR LOT CORNERS WILL BE SET USING 1/2" BARS AND CAPS AFTER CONSTRUCTION OF ALL PROPOSED UTILITIES ARE COMPLETED.



LOCATION MAP
1"=2000'
SECTION 24-09-22

LEGEND

- ○ FOUND 1/2" IRON BAR UNLESS OTHERWISE NOTED
- ◉ FOUND 1/2" BAR & CAP (PY P.A.)
- ● SET 1/2" BAR & CAP (PY P.A.) IN CONCRETE

REFERENCE BEARING:
EAST LINE NE 1/4, NW 1/4,
SEC. 24-09-22
S01°49'50"W

DESCRIPTION

ALL THAT PART OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 09 SOUTH, RANGE 22 EAST, OF THE 6TH PRINCIPAL MERIDIAN, CITY OF LANSING, LEAVENWORTH COUNTY, KANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 1/2" BAR AT THE NORTHEAST CORNER OF SAID NORTHWEST 1/4,
THENCE NORTH 89°45'47" WEST, ALONG THE NORTH LINE OF SAID NORTHWEST 1/4, 907.72 FEET TO A 1/2" BAR AND CAP (PY P.A.) AND THE POINT OF BEGINNING;
THENCE SOUTH 14° 44' 53" EAST, 108.41 FEET TO A 1/2" BAR AND CAP (PY P.A.);
THENCE SOUTH 06° 48' 05" WEST, 207.68 FEET TO A 1/2" BAR AND CAP (PY P.A.);
THENCE SOUTH 15° 02' 49" WEST, 140.00 FEET TO A 1/2" BAR AND CAP (PY P.A) SET IN CONCRETE;
THENCE SOUTH 74° 57' 11" EAST, 6.61 FEET TO A 1/2" BAR AND CAP (PY P.A) SET IN CONCRETE;
THENCE SOUTH 15° 02' 49" WEST, 140.00 FEET TO A 1/2" BAR AND CAP (PY P.A);
THENCE NORTH 74° 57' 11" WEST, 389.12 FEET TO A 1/2" BAR AND CAP (PY P.A);
THENCE NORTH 15° 02' 49" EAST, 10.70 FEET TO A 1/2" BAR AND CAP (PY P.A);
THENCE NORTH 78° 33' 45" WEST, 199.67 FEE TO A 1/2" BAR AND CAP (PY P.A) SET IN CONCRETE.
THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 570.00 FEET, A CENTRAL ANGLE OF 02°17'39", AND AN INITIAL TANGENT BEARING OF SOUTH 11°26'15" WEST, AN ARC DISTANCE OF 22.82 FEET TO A 1/2" BAR AND CAP (PY P.A) SET IN CONCRETE;
THENCE SOUTH 13° 43' 47" WEST, 9.40 FEET TO A 1/2" BAR AND CAP (PY P.A);
THENCE NORTH 76° 16' 13" WEST, 134.56 FEET TO A 1/2" BAR AND CAP (PY P.A);
THENCE NORTH 01° 31' 47" EAST, 72.77 FEET TO A 1/2" BAR AND CAP (PY P.A) SET IN CONCRETE;
THENCE NORTH 02° 02' 20" WEST, 60.12 FEET TO A 1/2" BAR AND CAP (PY P.A) SET IN CONCRETE;
THENCE SOUTH 88° 28' 13" EAST, 150.00 FEET FEET TO A 1/2" BAR AND CAP (PY P.A) SET IN CONCRETE;
THENCE NORTH 02° 50' 06" EAST, 305.76 FEET TO A 1/2" BAR AND CAP (PY P.A) SET IN CONCRETE ON THE NORTH LINE OF SAID NORTHWEST 1/4;
THENCE SOUTH 89° 45' 47" EAST ALONG THE NORTH LINE OF SAID NORTHWEST 1/4, 605.06 FEET TO THE POINT OF BEGINNING;
SAID PARCEL CONTAINING AN ERROR OF CLOSURE OF 1 IN 256,308

AND

COMMENCING AT A 1/2" BAR AT THE NORTHEAST CORNER OF SAID NORTHWEST 1/4;
THENCE SOUTH 01°49'50" WEST ALONG THE WEST LINE OF HOLIDAY HILLS AND OAKBROOK, SUBDIVISIONS IN THE CITY OF LANSING, LEAVENWORTH COUNTY, KANSAS, 1,326.55 FEET TO A 1/2" BAR AT THE NORTHEAST CORNER OF LOT 12, ADAM'S ACRES, A SUBDIVISION IN THE CITY OF LANSING, LEAVENWORTH COUNTY, KANSAS;
THENCE NORTH 89°47'49" WEST ALONG THE NORTH LINE OF SAID ADAM'S ACRES, 1,263.29 FEET TO A 1/2" BAR AND CAP (PY P.A.) AND THE POINT OF BEGINNING;
THENCE CONTINUING NORTH 89°47'49" WEST ALONG SAID NORTH LINE, 838.93 FEET TO A 1/2" BAR AND CAP (PY P.A.) SET IN CONCRETE;
THENCE NORTH 02°15'19" EAST, 421.15 FEET TO A 1/2" BAR AND CAP (PY P.A.) SET IN CONCRETE;
THENCE SOUTH 76°15'05" EAST, 131.50 FEET TO A 1/2" BAR AND CAP (PY P.A.);
THENCE SOUTH 78°38'05" EAST 146.22 FEET TO A 1/2" BAR AND CAP (PY P.A.);
THENCE SOUTH 87°51'00" EAST, 134.55 FEET TO A 1/2" BAR AND CAP (PY P.A.);
THENCE NORTH 52°30'56" EAST, 134.42 FEET TO A 1/2" BAR AND CAP (PY P.A.);
THENCE SOUTH 61°07'22" EAST 261.58 FEET TO A 1/2" BAR AND CAP (PY P.A.);
THENCE SOUTH 33°27'03" EAST, 130.91 FEET TO A 1/2" BAR AND CAP (PY P.A.);
THENCE SOUTH 10°24'52" EAST, 65.36 FEET TO A 1/2" BAR AND CAP (PY P.A.);
THENCE SOUTH 00°12'11" WEST, 135.72 FEET TO THE POINT OF BEGINNING;
SAID PARCEL CONTAINING AN ERROR OF CLOSURE OF 1 IN 240,034

DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT THE UNDERSIGNED OWNERS OF THE ABOVE DESCRIBED TRACT OF LAND HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, BLOCKS, AND PUBLIC WAYS (STREETS AND ROAD). THE PUBLIC WAYS HERETOFORE DEDICATED ARE DEDICATED TO THE PUBLIC. THE UTILITY EASEMENTS ARE DEDICATED, BUT NOT LIMITED TO, THE USE OF THE PUBLIC UTILITIES.

IN TESTIMONY WHEREOF, THE OWNER OF THE ABOVE DESCRIBED PROPERTY, LANSING DEVELOPERS, INC., HAS CAUSED THESE PRESENTS TO BE SIGNED BY ITS PRESIDENT, DUANE BROWN, AND ITS VICE PRESIDENT, GARY AUS, THIS ___ DAY OF April, 2002.

LANSING DEVELOPERS, L.L.C.

DUANE BROWN, PRESIDENT

GARY AUS, VICE-PRESIDENT

STATE OF KANSAS

COUNTY OF Leavenworth

BE IT REMEMBERED THAT ON THE DAY AND YEAR LAST WRITTEN ABOVE, BEFORE ME, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, CAME DUANE BROWN, PRESIDENT, AND GARY AUS, VICE-PRESIDENT OF LANSING DEVELOPERS, INC., SAID COMPANY BEING DULY ORGANIZED AND EXISTING UNDER AND BY VIRTUE OF THE LAWS OF THE STATE OF KANSAS, WHO ARE PERSONALLY KNOWN TO ME TO BE SUCH PERSONS WHO EXECUTED, AS SUCH OFFICERS, THE WITHIN INSTRUMENT OF WRITING ON BEHALF OF SAID COMPANY AND SUCH PERSONS DULY ACKNOWLEDGE THE EXECUTION OF THE SAME TO BE THE ACT AND DEED OF SAID COMPANY.

IN WITNESS THEREOF, I HAVE SET MY HAND AND AFFIXED MY NOTARY SEAL.

NOTARY PUBLIC

TREASURER'S CERTIFICATE:

I HEREBY CERTIFY, AS THE COUNTY TREASURER OF LEAVENWORTH COUNTY, KANSAS, THAT ALL TAXES AND SPECIAL ASSESSMENTS DUE AND PAYABLE ON THE FOREGOING SUBDIVISION HAVE BEEN PAID THIS ___ DAY OF ______________, 2002.

COUNTY TREASURER

ATTEST:

COUNTY CLERK

THE PLAT OF THE MAPLES OF WOODLAND HILLS - PHASE 3 HAS BEEN SUBMITTED TO AND APPROVED BY THE LANSING PLANNING COMMISSION THIS 15 DAY OF ______ 2001

CHAIRMAN

SECRETARY

THESE EASEMENTS AND RIGHTS-OF-WAYS ACCEPTED BY THE CITY COUNCIL OF LANSING, KANSAS, THIS 15 DAY OF November, 2001.

MAYOR

ATTEST:

CITY CLERK

ENTERED ON TRANSFER RECORD THIS 5th DAY OF June, 2002. Bk 14 Pg 67

COUNTY REGISTER OF DEEDS

CERTIFICATE OF SURVEYOR

SURVEYED AND PLATTED BY
PONZER-YOUNGQUIST, P.A.
CONSULTING ENGINEERS AND LAND SURVEYORS
227 E. DENNIS AVE.
OLATHE, KS 66061
913-7

I HEREBY CERTIFY THAT THE WITHIN PLAT IS BASED ON AN ACTUAL FIELD SURVEY PERFORMED IN MARCH, 2002 UNDER MY DIRECT SUPERVISION AND THAT THE RESULTS OF SAID SURVEY ARE REPRESENTED ON THIS PLAT.

JO..., R.L.S. 1193

PONZER-YOUNGQUIST P.A., INC.
Consulting Engineers & Land Surveyors
227 E. Dennis Avenue
Olathe, Kansas 66061

Phone: (913)-782-0541
Fax: (913)-782-0109
Email: py@pyengineers.com

APPROVED:

COUNTY SURVEYOR

DATE 4 June 2002

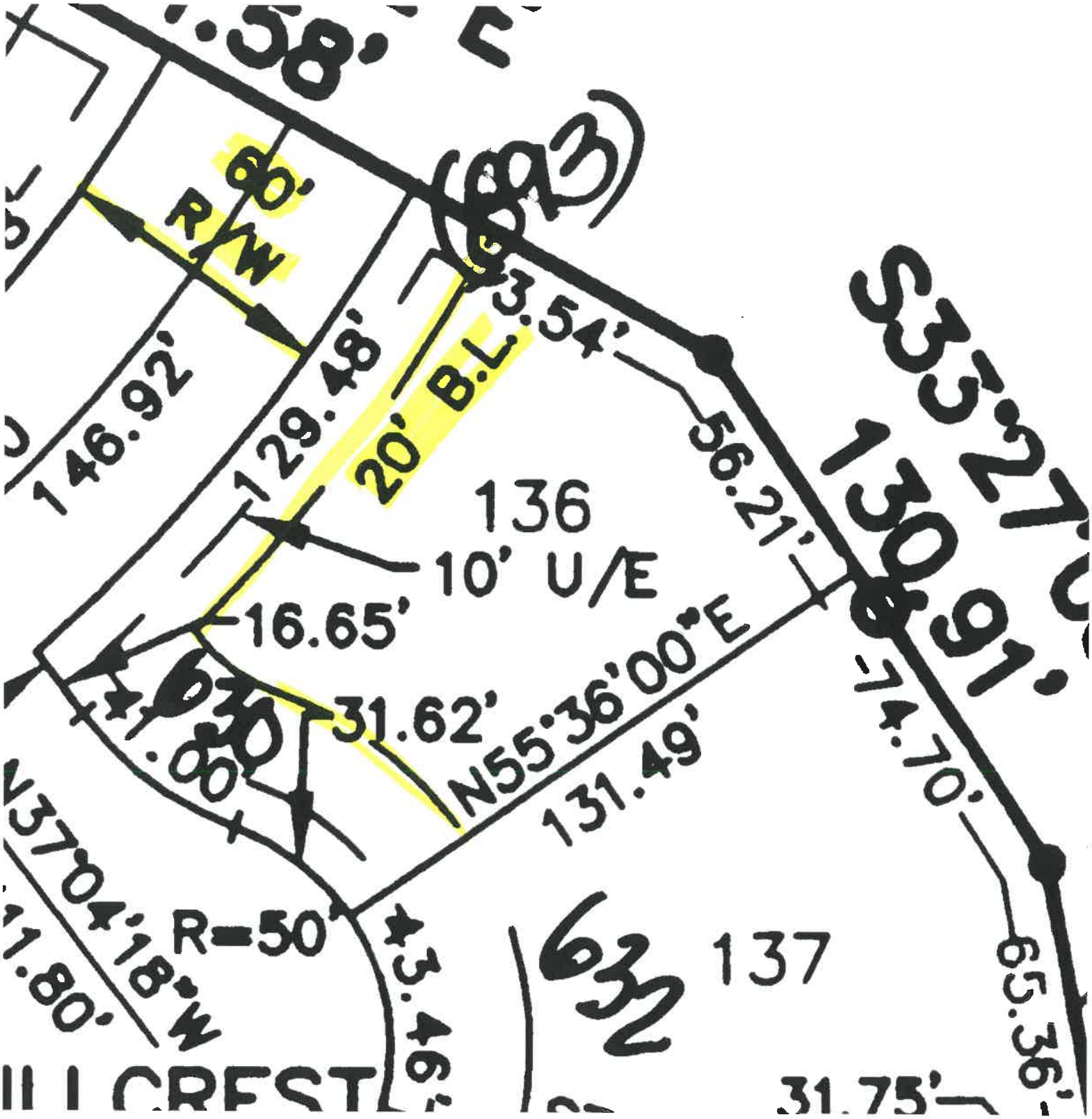
APPROVED:

CITY ENGINEER

DATE 4-04-02

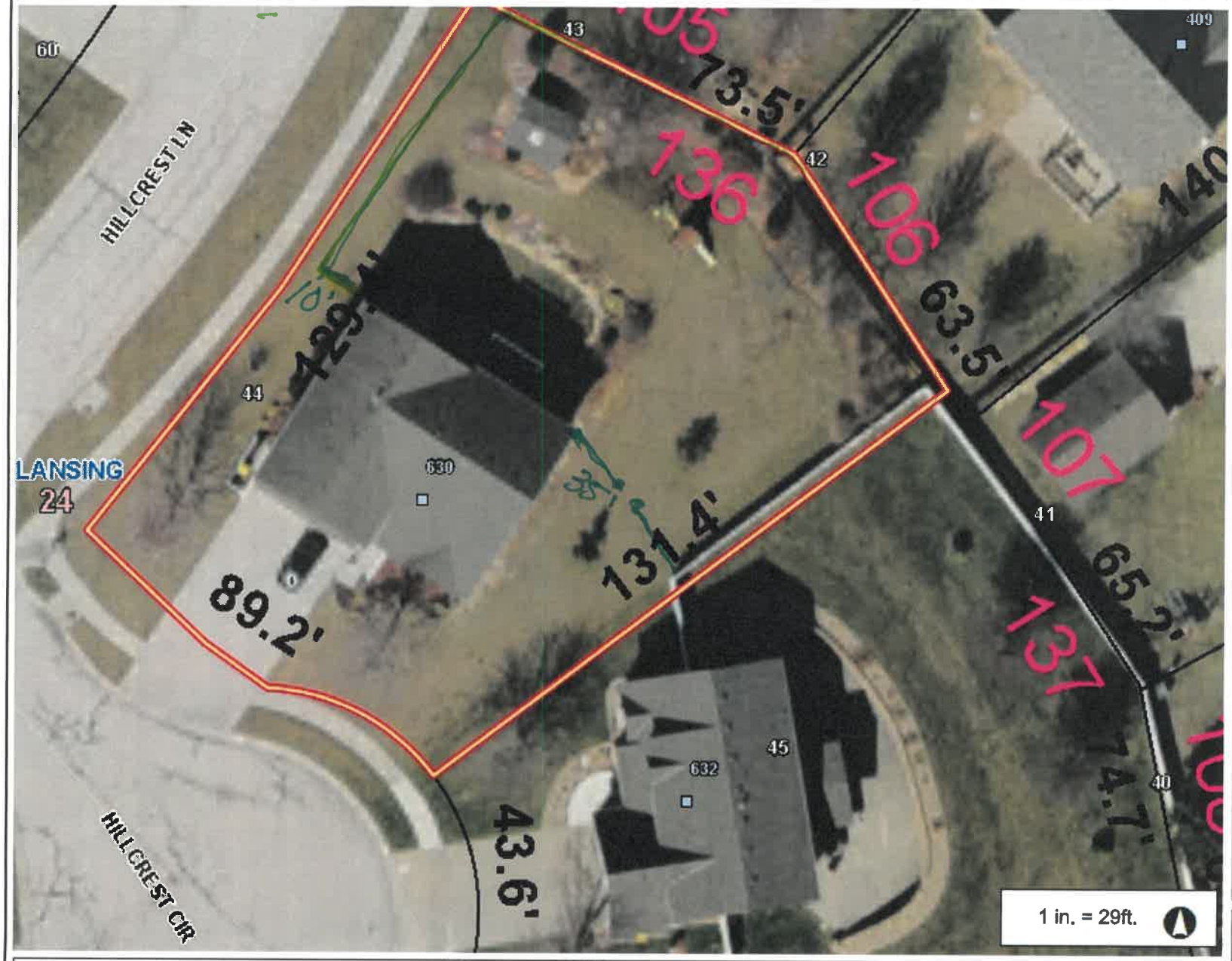
NOVEMBER, 2001

MAPLES OF WOODLAND HILLS
SUB PHASE III


R/W 80'
146.92'
129.48'
20' B.L.
3.54'
56.21'
136
10' U/E
16.65'
31.62'
N55°36'00"E
131.49'
74.70'
65.36'
R=50'
137
31.75'

Supplied

Leavenworth County, KS



Legend

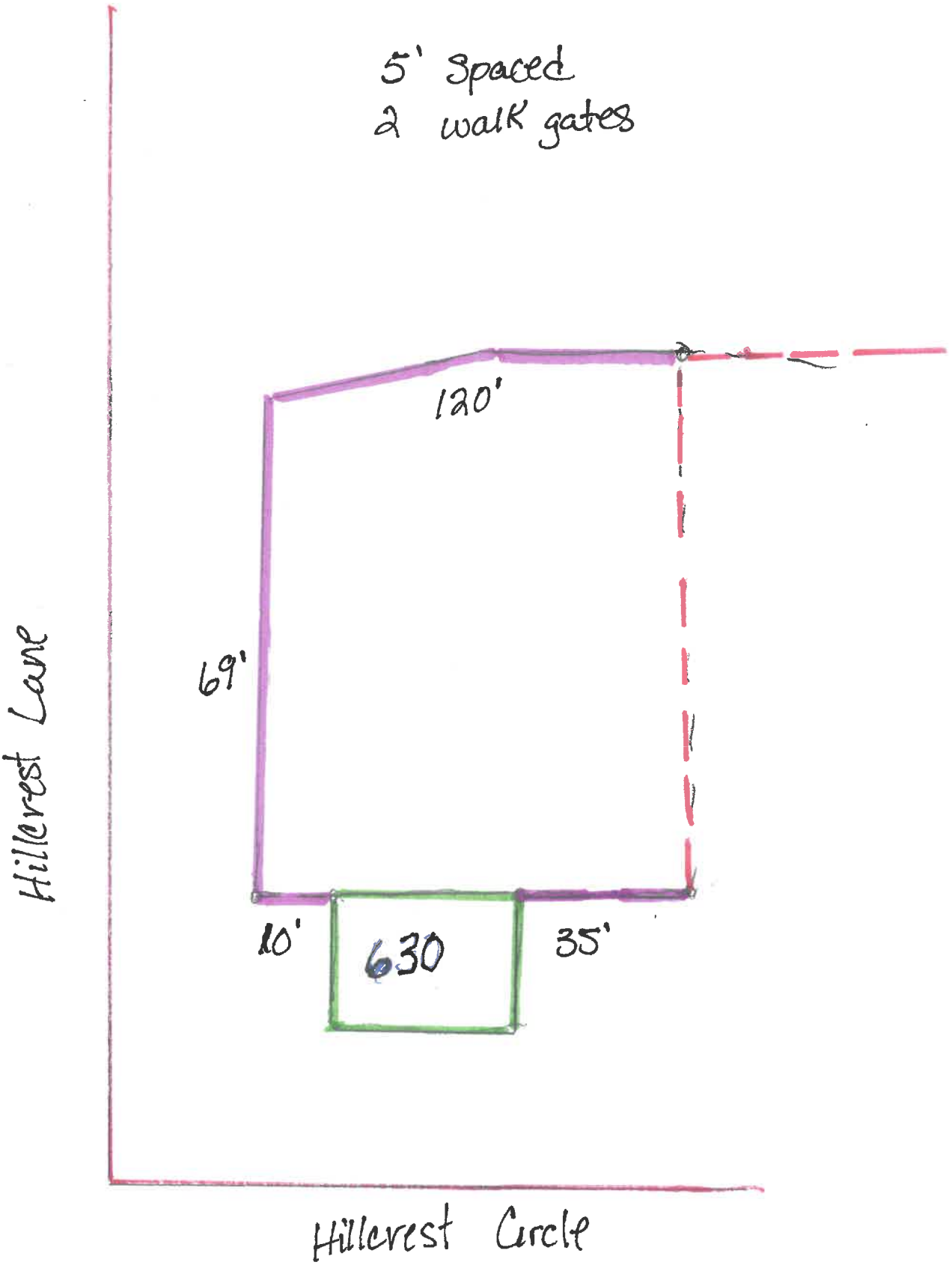
- Address Point
- Parcel Number
- Lot Line
- Parcel
- City Limit Line
- Major Road
  - <all other values>
  - 70
- Road
- Railroad
- Section
- Section Boundaries
- County Boundary

Notes

58.6 0 29.31 58.6 Feet

This Cadastral Map is for informational purposes only. It does not purport to represent a property boundary survey of the parcels shown and shall not be used for conveyances or the establishment of property boundaries.

THIS MAP IS NOT TO BE USED FOR NAVIGATION


5' Spaced
2 walk gates
120'
69'
10'
630
35'
Hillcrest Lane
Hillcrest Circle

30+ Years of experience

Fencing of all Types

J.P. WELCH FENCING

LEAVENWORTH, KANSAS

Joseph "Pat" Welch
Vicki Welch

Leavenworth, KS 66048
ph: (913) 682-6927

Dear Homeowner,

The city of Lansing has an ordinance that states that a fence has to be 1 foot off the property line. So that we do not have property that will be hard to maintain we will need written permission from homeowners to install fences on the property line.

As property owner of 632 Hillcrest Cir, I am giving permission to install the fence and/or connect to the existing fence at East + West endpoints of existing fencing.

Signature

2-5-21
Date

AGENDA ITEM

TO: Tim Vandall, City Administrator

FROM: Anthony J. Zell, Jr., Wastewater Utility Director

DATE: February 16, 2021

SUBJECT: 9G/9H Sanitary Sewer Interceptor Final Report

Attached for review and consideration is the 9G/9H Sewer Interceptor Report, more commonly known as the East McIntyre Sewer Extension. The report was completed by George Butler Associates for $43,244 at the request of the City Council.

Two alternatives were examined to provide sanitary sewer service to the 146 acres at the northeast corner of Main Street and E McIntyre Road. Costs for both alternatives are summarized below and include a 25% contingency. Costs for design (engineering, survey, geotechnical work) would increase overall costs by an additional 20%. Detailed cost estimates are included in the final report.

The first alternative consists of 3,355 feet of six-inch forcemain, a duplex (2) pump station, excess flow basin, and a standby generator. This alternative only accommodates growth on the 146-acre site and does not include flows from adjacent properties or other sub basins within the area. As growth continues this alternative would have to be replaced with larger equipment or a gravity sewer. The cost per acre served for this alternative is $9,212. The initial cost estimate for alternative 1 is $1,345,000 (25% contingency).

The second alternative is a gravity sewer, extending from Willow Park to the northwest corner of the 146 acres. The largest gravity sewer pipe could be installed initially, provided there is sufficient flows to maintain KDHE minimum standards of design, which in this case would be approximately 61 acres. GBA has recommended that the city proceed with this alternative and install the ultimate pipe size necessary. The cost per acre served for alternative 2 is $1,554. The initial cost estimate for alternative 2 is $1,880,000 (25% contingency).

Both alternatives have advantages and disadvantages and are outlined in detail within the report. It should be noted that additional flows from the McIntyre property, as well as any new flows from undeveloped land served by the 9 Mile Interceptor cause minor surcharging within the existing system, located between E Mary Street and E Gilman Road. As these areas develop, consideration must be given to replacing the existing interceptor with the appropriate sized piping. Costs for the replacement of the existing system are approximately $3,228,000.

At the request of staff, a cost breakout for sewers within the 146 acres was provided. Typically, developers pay for the cost of on-site improvements, and the City has offset any additional costs for increasing the pipe size to accommodate upstream future growth. To provide adequate sewer on site, 10” pipe is required, but to accommodate ultimate growth in the watershed, 24” pipe would be needed. The 9H sewer extension is shown on the west side of Main Street but could be shifted to either side of Main Street as needed. The total cost estimate for on site improvements are $1,980,000. The 9H Interceptor would add approximately $640,000. The

developers' cost total approximately $1,395,000, with the remaining $585,000 attributable to the city.

Staff will be available to discuss the report with the city council. While no immediate decision needs to be made regarding the alternatives presented, staff would like direction from the governing body on how they would like to proceed.

Policy Consideration: None at this time.

Financial Consideration: None at this time.

Recommended Action: A motion to accept the 9G/9H Sanitary Sewer Interceptor report as presented.

City of Lansing, Kansas
South Sewer Engineering Study Report

FINAL

February 2021

2-15-21

GBA

PN: 14691

TABLE OF CONTENTS

A. Introduction

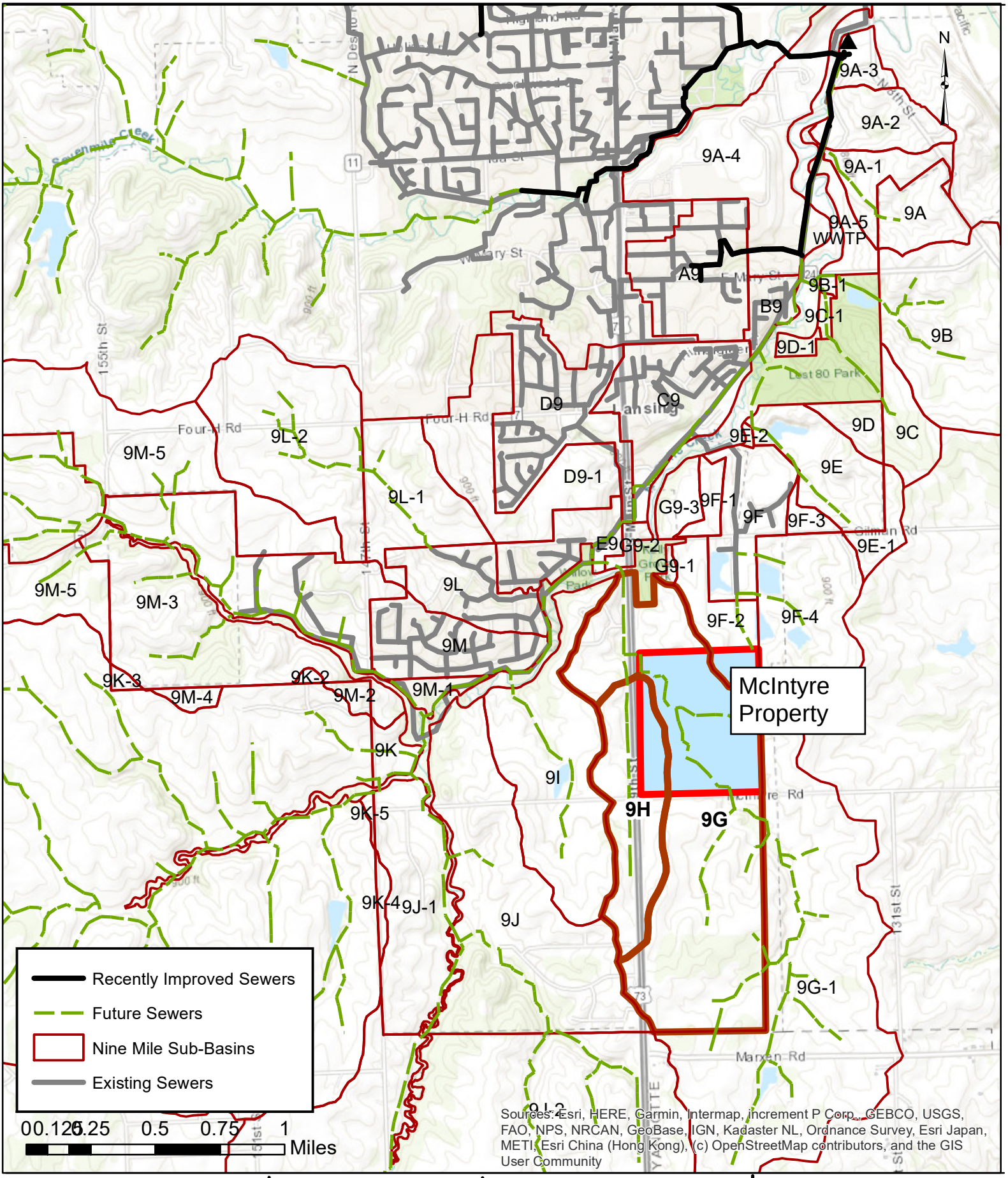
In 2014, the City of Lansing, Kansas, contracted with George Butler Associates, Inc. (GBA) to develop the Sanitary Sewer Collection System Master Plan Report (master plan). Since then, GBA has completed several updates to the master plan. Recently, the City contracted with GBA to complete this South Sewer Study for the property at the northeast corner of McIntyre and Main.

The City of Lansing, Kansas is poised for development with new infrastructure potentially expanding into the south portion of the City near McIntyre Road. Leavenworth County is in the process of studying the extension of Highway 152 in the area, as well as a potential Leavenworth County Airport near Gilman and McIntyre Roads, east of K-7 (Main Street). Additionally, a private developer has expressed interest in developing approximately 163 acres of land at the northeast corner of McIntyre & Main Streets (McIntyre property). With the widening and improvements to McIntyre Road from Main Street to Highway K-5, the area has a high potential for development and needs sewer service. This study evaluates options to provide sewer service to this area, and provides phasing and cost considerations. This study focuses on the McIntyre property. This property is located mostly within future growth basin 9G. Figure 1 presents a location map of the McIntyre property and the proposed sanitary sewer system as laid out in the Master Plan.

The study includes reviewing design flows, analyzing the impacts of the future McIntyre development, and evaluating the potential implications on the existing Nine Mile interceptor sewer to accept more flow.

Alternatives that were considered for review include the following.

- Alternative 1 – Temporary pump station and force main tied to development to convey flows to existing Nine Mile interceptor sewer
- Alternative 2 – Gravity sewer to convey flows to the existing Nine Mile interceptor sewer



GBA
architects
engineers

PROJECT NUMBER
14691.00

FEBRUARY 2021

FIGURE 1
LOCATION MAP

LANSING, KS
SOUTH SEWER STUDY

B. Existing Conditions

The Nine Mile interceptor was previously studied in the Master Plan. To accommodate ultimate growth flows, a parallel sewer was constructed from the treatment plant upstream to Mary Street in 2017. The development area studied for this study would discharge several thousand feet upstream of the Nine Mile relief sewer installed in 2017. The Nine Mile interceptor currently has two locations with limited capacity due to flat slopes.

There are currently no sewers able to serve the McIntyre property. The topography of the site presents some challenges to providing sewer service. The majority of the property (122 acres) is located in the 9G sewer basin, with a portion of the property in the 9F (17 acres) and 9H (24 acres) sewer basins, as previously outlined in the 2014 Master Plan (see Figure 1). This analysis evaluates providing service for the property within the 9G and 9H basins. These two areas are likely to develop earlier, because they are situated close to access roads, and flow naturally to the existing sewers downstream. The very northeast corner of the lot is in sub-basin 9F; it was not evaluated for this sewer analysis, as it is not as likely to develop soon due to its more remote location, and due to the steep topography therein.

C. Design Flows

As previously stated, the McIntyre property straddles three sewer sub-basins: 9F, 9G, and 9H. Sewershed areas were determined for the portion of the McIntyre property in each sub-basin and are shown in Table 1.

Table 1 Drainage Areas

	Total Area	Area per Basin, ac		
Site Name	ac	9F	9G	9H
McIntyre and Main	163	17	122	24

Design flows were calculated for ultimate growth in the 9G and 9H portions of the McIntyre property, which are anticipated to be more likely to develop in the near-term.

Gravity design sewer flows were calculated using the City's design flow curve. To attenuate the flow generated by this development, it was analyzed as an additional 146-acre flow with the larger 600-acre basin flowing into the Nine Mile interceptor line. Using the City's sanitary sewer design curve, 746 acres is expected to generate 1.93 cfs of peak flow. This flow is an estimate based on a per-acre flow rate and includes existing areas further upstream on the Nine Mile interceptor. The actual flow may be more or less depending on the density of the final development. This analysis method is similar to past analyses for developments previously completed.

For Alternative 1, the pump station, the flow was divided into pumped flow and stored flow. The pumped flow would be the peak daily flow (PDF). This was calculated using KDHE Minimum Standards of Design for Water Pollution Control Facilities. The McIntyre property is shown as office land use in the City's Future Land Use Map.

Design flows are shown in Table 2. The City Design Flow listed below is based on the city's curve and includes wet weather flow. The KDHE Design Flow listed is a peak daily flow.

Table 2 Design Flows

Sub-Basin	Total Area ac	Design Flow cfs City	KDHE
9G	122	1.67	0.93
9H	24	0.26	0.18
Total	146	1.93	1.11

D. Alternatives

Two alternatives were considered for this study and are described below. Detailed capital cost estimates, including potential easement costs, are shown in Appendix 1. The costs for these alternatives, and planning costs for ultimate growth sewers, are summarized in the conclusions.

1. Alternative 1 – Pump Station and Force Main

This alternative consists of constructing a pump station, excess flow holding basin (EFHB) and force main to convey wastewater from the McIntyre property to the Nine Mile interceptor. A pump station designed for the entire basin flows would be inefficient at the lower flows for just this property. Therefore, this configuration would convey flows generated only from the McIntyre property and not the entire basin upstream. The force main alignment would follow the right-of-way along Main Street and connect at D-12-060 on the Nine Mile interceptor. The pumping capacity would be the peak daily flow, or 500 gpm (1.1 cfs) for both the 9G and 9H areas (146 acres). When the watershed develops enough that the pump station no longer has capacity, the sewer service would need to be upgraded. This could include larger pumps and upsizing the force main.

a. Pump Station

To pump the wastewater to the Nine Mile interceptor, a duplex lift station and approximately 3,355 feet of six-inch force main must be constructed. The pump station would be located near the northwest corner of the McIntyre property. Site improvements potentially include a paved driveway, a block building, a jib lift for portable pumps, and fencing. Gravity sewer would need to be constructed to convey flow from other parts of the McIntyre property; that is not included in this alternative as it would depend on which parts of the property develop. See Section 4 for Development Considerations.

Each pump should be designed to handle anticipated flows as follows:

1. Design Peak Flowrate = 720,000 gpd = 500 gpm (1.1 cfs)

2. Two 500-gpm submersible pumps would be installed in the new lift station, each capable of handling the anticipated peak hourly flowrates. Only one pump would run at a time under normal conditions.

3. The preliminary motor size for each pump is 20 horsepower (hp), based on friction losses through approximately 3,355 feet of six-inch PVC and roughly 25 feet of static head.

In case of power outage, a backup generator would be used to maintain pump station operation.

b. Excess Flow Holding Basin

An underground EFHB should be constructed at the site to store wet weather flows and in case of a power outage. The EFHB gives staff time to respond with a backup generator and pump. The storage volume would equal the peak design flow over a four-hour period, which would total approximately 16,000 cubic feet or 120,000 gal. This would be accomplished using underground storage or a graded basin.

A gravity sewer pipe would extend from the wet well to the EFHB, allowing excess volume to overflow into the basin during wet weather or power outage conditions, and then flow back into the wetwell by gravity.

c. Force Main/Sewer

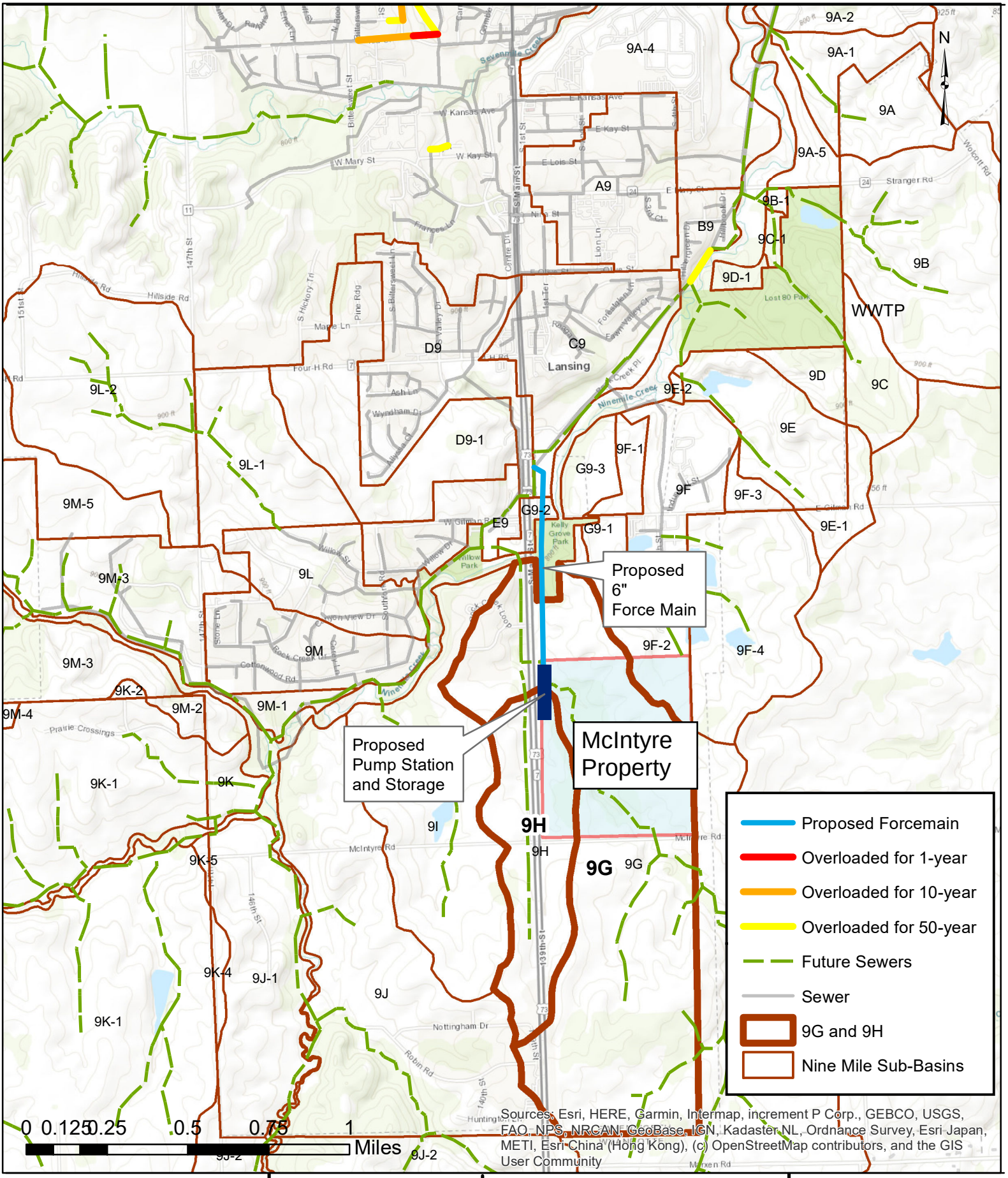
The velocity through the six-inch force main at 500 gpm is approximately 5.6 feet per second (fps), which is adequate to prevent settling. To prevent air pockets in the force main, approximately five air release valves would be installed at high points.

The new six-inch force main alignment for this alternative begins at the lift station at the northwest corner of the property and proceeds northward along the east side of Main St. It would then turn north east and connect to existing manhole D-12-060 at approximately Rock Creek Place and Main Street, at the north end of the church parking lot. Lining the receiving manhole with epoxy is recommended to prevent corrosion at the discharge point.

The City's Hydra model was used to determine the impact on the Nine Mile interceptor for this pumping alternative. The additional flow in the interceptor would be limited by the pumping capacity of 500 gpm (1.1 cfs). The model shows that the sewer will surcharge no more than 0.2 feet, which is not anticipated to result in an overflow or basement backup.

The approximate capital cost for this alternative is $1,345,000 for the pump station, EFHB, force main, and appurtenances. This cost includes site improvements, such as a block building, driveway, and fencing. The costs include a 25% contingency, but do not reflect design fees. These costs do not include installation of gravity sewers within the property to convey flows to the pump station; these are presented in Section 4, Development Considerations.

A schematic of this alternative and the results of the capacity analysis are shown in Figure 2.



GBA architects engineers

PROJECT NUMBER
14691

JANUARY 2021

FIGURE 2
ALTERNATIVE 1
MODEL RESULTS
EXISTING CONDITIONS WITH
McINTYRE DEVELOPMENT
PUMP STATION

LANSING, KS
McINTYRE SOUTH
SEWER STUDY

2. Alternative 2 - Gravity Sewer

Alternative 2 consists of constructing a gravity sewer to collect flows from the McIntyre property and convey them to the Nine Mile interceptor. The gravity sewer would follow the alignment and sizing described in the Master Plan and illustrated in Figure 1. The sewer would be bored under Main Street and Nine Mile creek and discharge to the Nine Mile interceptor at manhole E-13-115, near the southeast corner of the youth soccer fields at Willow Park.

Analyzing a gravity sewer conveying flows from the McIntyre property only, results in required sewer sizes of 12 to 18 inches in diameter. While a smaller sewer could be constructed for the McIntyre property, it would need to be upsized in the future when additional areas in the watershed develop.

Analysis of the basin 9G and 9H sewer in the Master Plan for ultimate growth indicated a required size of 24 to 30 inches in diameter downstream of the McIntyre property. To position the area for growth in the future, it is recommended to install sewers for ultimate growth, provided adequate cleansing velocities could be maintained. The design flow for the McIntyre property results in a minimum velocity of 2.4 feet per second (fps), which is greater than the standard minimum cleansing velocity of 2 to 3 fps. The design flow for the north half of the McIntyre property (61 acres) is 2 feet per second (fps). The analysis in this report evaluates the installation of the ultimate growth-sized sewers.

A schematic of this alternative and the results of the capacity analysis are shown in Figure 3.

The approximate capital cost for this alternative is $1,880,000. This cost includes the sewer interceptor from the northwest corner of the McIntyre property to the Nine Mile interceptor connection point near Willow Park. The costs include a 25% contingency, but does not include design fees. This does not include costs for sewers within the McIntyre property; those are discussed in Section 4.

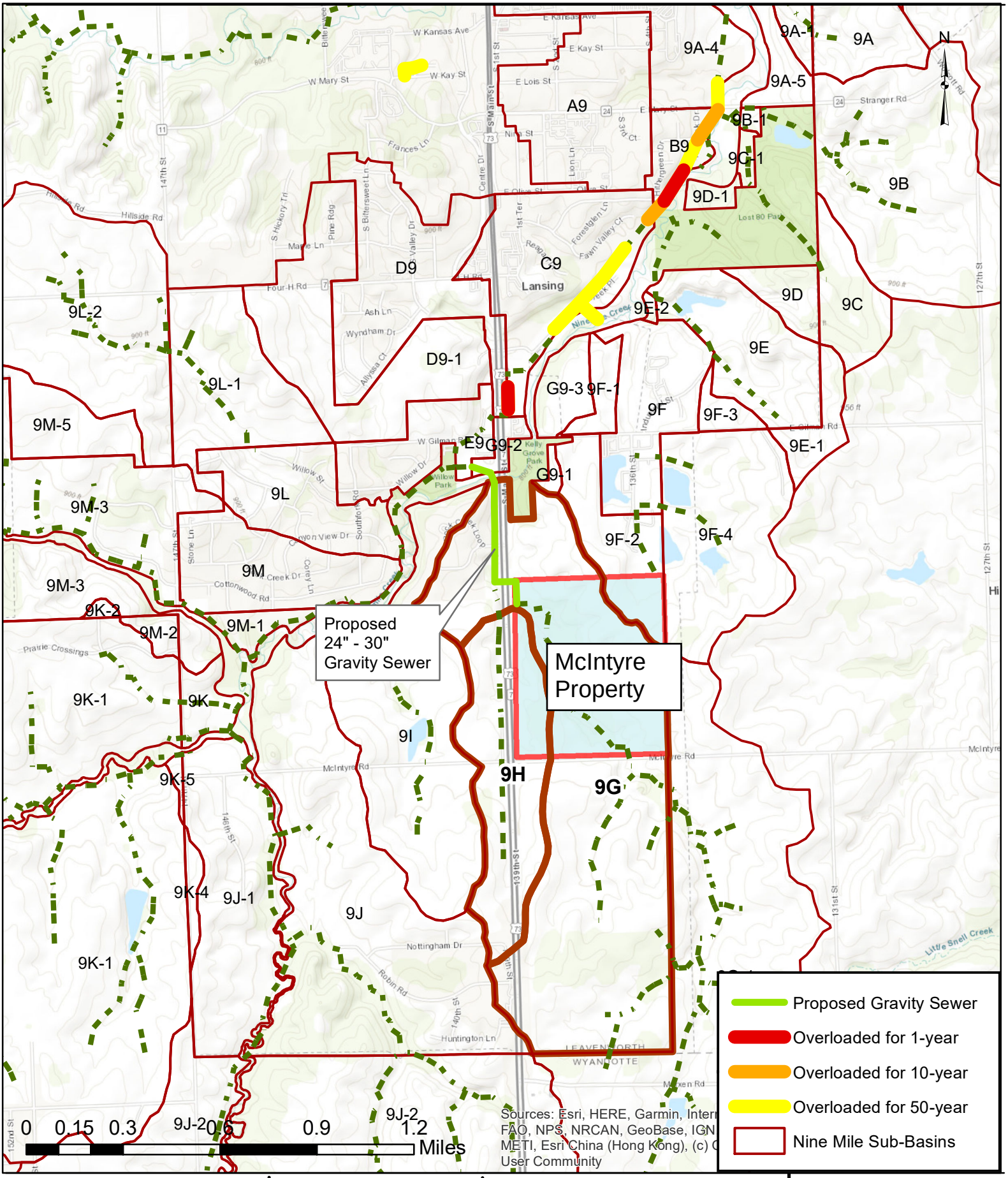
3. Downstream Impacts

Both alternatives would impact the Nine Mile Interceptor downstream. As previously stated, there are two segments of the interceptor that show minimal surcharge under existing conditions due to flat slopes. The City is unaware of issues related to the surcharges indicated in the existing model.

The City's Hydra model was used to determine the impact on the Nine Mile interceptor for both alternatives. The model results show that the Nine Mile interceptor surcharges less than one foot for Alternative 2, gravity sewer, as shown in Table 3, on the following page. For Alternative 1, pump station and force main, the surcharge was less than 0.2 ft. These surcharges are not anticipated to result in an overflow or basement backup for either alternative, but indicate that the City will need to monitor flows in the Nine Mile interceptor as development continues.

Table 3 Nine Mile Interceptor Surcharges

Segment	Length (ft)	Exist. Pipe Size (in)	Existing Flow (cfs)	Surcharge with Existing Flow (ft)	Post Development Flow (cfs)	Surcharge with Devlpmt. Flow (ft)
D-12-055_D-12-060	370.62	21	4.08	0.03	6.12	0.23
C-10-005_C-09-045	601.15	21	5.02	0.04	7.25	0.83



GBA architects engineers

	PROJECT NUMBER 14691	FIGURE 3 ALTERNATIVE 2 MODEL RESULTS EXISTING CONDITIONS WITH McINTYRE DEVELOPMENT GRAVITY SEWER	LANSING, KS McINTYRE SOUTH SEWER STUDY
	FEBRUARY 2021		

4. Development Considerations

The alternatives described above included extending sewer service from existing City sewers to the northwest corner of the McIntyre property. Regardless of which alternative is selected for conveying flows to the Nine Mile interceptor, additional gravity sewer will be required to serve the McIntyre property itself. This analysis determines the capital costs for bringing sewer to the areas of the McIntyre property in sub-basins 9G and 9H.

The gravity sewer within the property (collectively referred to as "McIntyre Sewers") was evaluated in the original Master Plan for ultimate sizing and slopes. The primary developable area on the property lies in Basins 9G and 9H:

a. McIntyre 9G Sewers – From the northwest corner of the McIntyre property southeasterly to McIntyre Road. These sewers range from 8 inches to 30 inches in diameter and are approximately ten to twenty feet deep to accommodate ultimate growth in the basin.

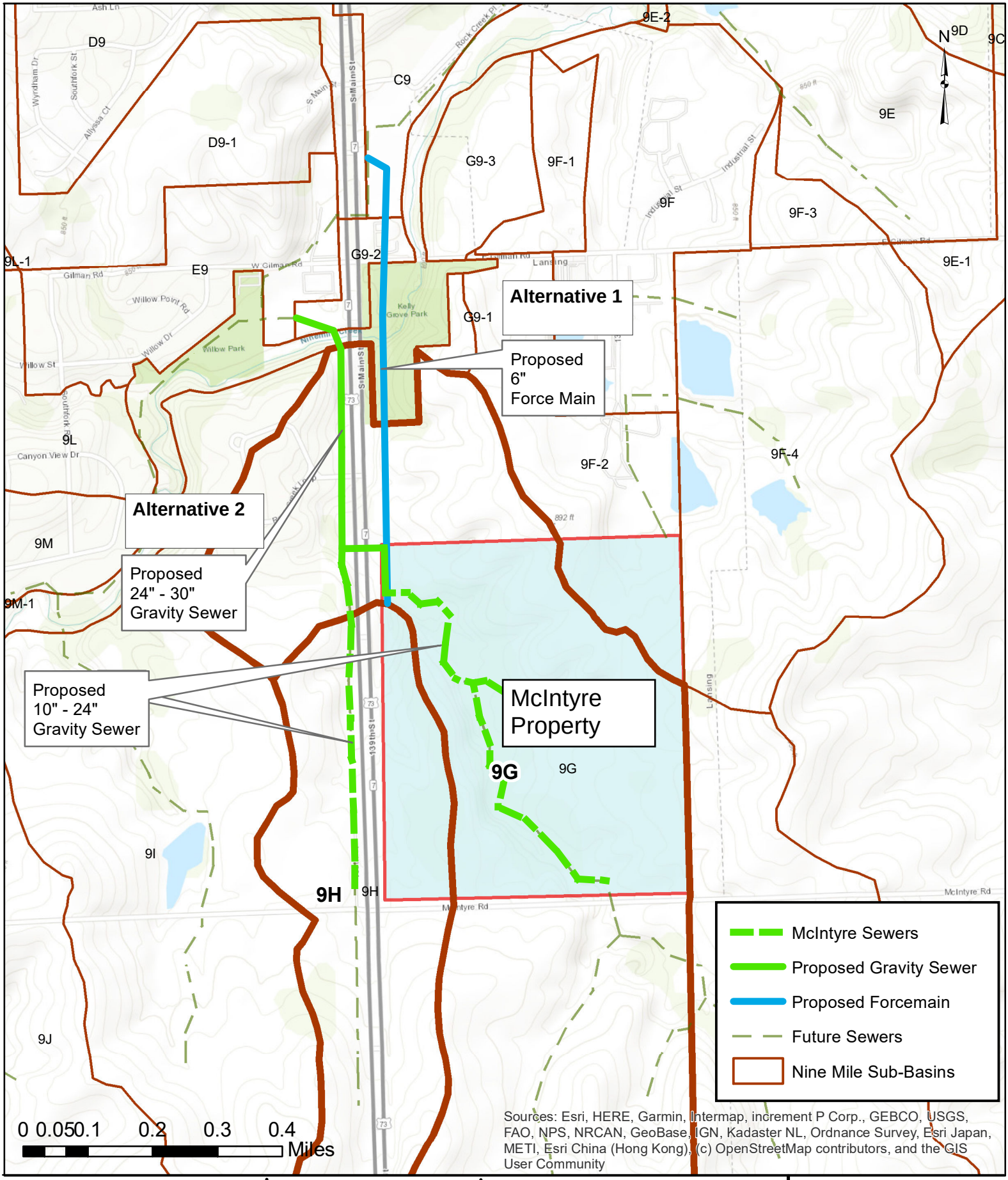
b. McIntyre 9H Sewers – This basin runs along Main Street; sewers would extend from the connection point at the 9G interceptor upstream along Main Street to McIntyre Road. These sewers range from 8 inches to 18 inches in diameter and are approximately ten to twenty feet deep to accommodate ultimate growth in the basin.

The sewers in these basins are assumed to be installed for ultimate future growth flows so that the City would not face the additional expense of installing larger or deeper sewers in the future. Figure 4 illustrates the proposed development sewers on the McIntyre property. The sewers sized for ultimate buildout range from 10 to 24 inches in diameter. The capital cost for constructing the sewers within Basins 9G and 9H on the McIntyre property would be approximately $1,980,000. This cost includes a 25% contingency, but does not include easements or engineering fees. It is anticipated that easements within the McIntyre property would be donated during development.

Cost sharing allows the City and the developer to benefit from a plan for sanitary services that serves private and public interests. The cost to develop a shallower sewer with smaller pipes that would serve only the sanitary flows from the McIntyre Development along the alignments shown in the Master Plan would be approximately $1,395,000. Sewers sized to serve only the McIntyre Property are anticipated to range in size from 8 to 10 inches.

Table 4 Public Vs. Private Sewer Costs

Service within McIntyre Property		
Serving Full Watershed (9G and 9H)	1,274	$1,980,000
Serving only McIntyre Property	122	$1,395,000
Estimated City Cost Share		**$585,000**



GBA architects engineers

PROJECT NUMBER
14691

JANUARY 2021

FIGURE 4
ALTERNATIVES 1 AND 2
McINTYRE SEWERS

LANSING, KS
McINTYRE SEWER STUDY

E. Selection of Alternative

This section describes advantages and disadvantages of each alternative in light of the City's goals. Criteria include both financial and non-financial measures. The advantages and disadvantages for each option are listed below:

1. Alternative 1 – Pump Station and Force Main

The approximate capital cost for Alternative 1, pump station and force main is $1,345,000, not including the sewers within the development. This alternative is sized to serve only the McIntyre property (146 acres), rather than the entire basin. The approximate capital cost per acre served for Alternative 1 is $9,212 per acre.

Advantages: This is the lower capital cost option. The pump station would have capacity to serve 146 acres of the McIntyre property, or a total of 146 acres in the 9G and 9H sewersheds. This option does not require a creek crossing or a bore under Main St. This alternative also impacts surcharging on the existing Nine Mile interceptor less than in Alternative 2. It allows the sewer to discharge downstream of an area of known limited capacity on the Nine Mile interceptor

Disadvantages: While operations and maintenance costs were not calculated for this study, the pump station requires significantly more resources including replacement, repair, and ongoing preventive maintenance. The City would not have capacity for further development in the sub-basins beyond the ultimate development of the McIntyre property without upsizing the pumps and force main. Effectively, this would be a stop-gap measure, to be abandoned or replaced when land further upstream develops.

Table 5 Alternative 1: Pump Station

	Acres Served	Cost per Acre	Capital Cost
Pump Station and Force Main from Church Parking lot to NW Corner of McIntyre Property	146	$9,212	$1,345,000
Gravity Sewer within McIntyre Property (Ultimate Buildout)	1,274	$1,554	$1,980,000
		Total	**$3,325,000**

2. Alternative 2 – Gravity Sewer

The approximate capital cost for Alternative 2, gravity sewer, is $1,880,000. This alternative is sized to serve the entire 9G and 9H sub-basins within City limits (1,274 acres). Calculating a cost per acre served results in a capital cost of $1,475 per acre.

Advantages: This alternative would prepare the City for development beyond the McIntyre property up to ultimate growth flows for this sewershed. The City would not have to upgrade sewers when areas outside the McIntyre property develop in the sub-basins. Operations and maintenance for gravity sewers is minimal.

The area is poised for growth due to the anticipated expansion of commercial areas, especially around the intersection at McIntyre and Main streets. There is approximately 1,274 acres of developable land upstream (southeast) of this project.

Disadvantages: This is not the lower-cost option. This option has a more significant impact on the Nine Mile interceptor, which will require improvements sooner due to developments in the watershed.

Table 6 Alternative 2: Gravity Sewer

	Acres Served	Cost per Acre	Capital Cost
Gravity Sewer Main Extension from Willow Park to NW Corner of McIntyre Property	1,274	$1,476	$1,880,000
Gravity Sewer within McIntyre Property (Ult. Buildout)	1,274	$1,554	$1,980,000
		Total	**$3,860,000**

F. Conclusions and Recommendations

The City needs to determine a plan for providing sewer service to the McIntyre property. The McIntyre property and the area around it has a high likelihood of developing in the near future. Two alternatives were evaluated for this study, pumping and gravity sewer service. Based on financial and non-monetary factors, it is recommended that the City implement Alternative 2, gravity sewer. This option would cost approximately $535,000 more than Alternative 1, but with a lower capital cost per serviceable acre of $1,476. In addition, the gravity sewer requires significantly less operations and maintenance resources than the pump station and force main. Furthermore, installing these sections of sewer that can convey ultimate flows from sub-basins 9G and 9H will allow the City to avoid upgrading undersized sewers if the City continues to grow toward the southeast (within the 9G and 9H sub-basins).

The City has recently studied the impacts of other proposed developments within the Nine Mile watershed. If these properties (including Ryan Property, Lansing Land, LLC, Native Crossings and Buffo Property) develop at the same time as the McIntyre property, the City will need to reevaluate the status of the Nine Mile interceptor and implement the planned improvements as shown in Chapter 6 of the Wastewater Management Plan. Phase 1 of the Master Plan describes improvements needed to this segment of the Nine Mile interceptor, with the cost for these improvements summarized on the following page. The Phase 1 improvements costs were estimated at $3,227,490, adjusted to 2021 costs.

The approximate capital cost for Alternative 2, gravity sewer, along with gravity sewer within the McIntyre property for ultimate buildout, would be $3,860,000. When considering cost sharing for the construction of the sewers within the McIntyre property, the cost would be less, as outlined in Table 7 below.

Table 7 Cost Summary – Recommended Alternative

	Acres served[1]	Capital Cost
Alternative 2:		
Gravity Sewer Main Extension from Willow Park to NW Corner of McIntyre Property (24"-30" Dia.)	1,274	$1,880,000
Gravity Sewer within McIntyre Property - City Share to Serve Watershed (Basins 9G and 9H)[2]	1,274	$585,000
Total, McIntyre Improvements		**$2,465,000**
Additional Improvements on 9 Mile Interceptor		
Master Plan, Phase 1[3]		**$3,227,490**

Note:

1. From the Master Plan, within City Limits.

2. This is the estimated City's cost share to upgrade from shallower 8"-10" sewers, to sewers sized for Ultimate Buildout (8"-24"), within the McIntyre Property only.

3. Phase 1 improvements include the Nine Mile interceptor segment between C-09-065 and D-11-030. This line segment is approximately 4,500 feet long. Improvements needed when other developments occur in basin.

City of Lansing
Engineers Estimate of Probable Project Costs

PROJECT INFORMATION			
PROJECT:	South Sewer Study	DATE:	February 10, 2021
PROJECT NO.:	Alternative 1 - Pump Station	PROJECT MANAGER:	Colleen Connor
PROJECT PHASE:	Study	PREPARED FOR:	City of Lansing

Item No.	Description	Units	Quantity	Unit Price	Extension
	Force Main from the NW corner of McIntyre Property to the church parking lot				
1	Mobilization	LS	1	$55,000.00	$ 55,000.00
2	Clearing and Grubbing	LS	1	$30,000.00	$ 30,000.00
3	Site Improvements	LS	1	$180,000.00	$ 180,000.00
4	Wet well structure - pre-cast concrete	EA	1	$53,000.00	$ 53,000.00
5	Valve vault structure	EA	1	$27,000.00	$ 27,000.00
6	Electrical and controls	LS	1	$85,500.00	$ 85,500.00
7	2 Pumps and accessories	EA	1	$71,550.00	$ 71,550.00
8	Generator and pad	EA	1	$65,000.00	$ 65,000.00
9	Valves	EA	8	$2,500.00	$ 20,000.00
10	Steel and Ductile Iron Pipe	LF	350	$48.00	$ 16,800.00
11	Underground storage	LS	1	$215,000.00	$ 215,000.00
12	Air Release Valve	EA	5	$12,000.00	$ 60,000.00
13	6" PVC force main	LF	3355	$40.00	$ 134,200.00
14	Standard Manhole	EA	2	$10,000.00	$ 20,000.00
15	12" PVC	LF	50	$52.00	$ 2,600.00
16	Epoxy Lining Existing Manhole	EA	1	$17,000.00	$ 17,000.00
17	Connection to Existing Manhole	EA	1	$2,500.00	$ 2,500.00
18	Permanent Easement	SF	38,550	$0.07	$ 2,698.50
19	Temporary Easement	SF	100,650	$0.18	$ 18,117.00
				Construction:	$1,075,965.50
				Contingency (%): 25%	$268,990.00
				Total	$1,344,955.50
				Rounded:	**$1,345,000.00**

City of Lansing
Engineers Estimate of Probable Project Costs

PROJECT INFORMATION			
PROJECT:	South Sewer Study	DATE:	February 10, 2021
PROJECT NO.:	Alternative 1 - Pump Station (with McIntyre Sewers)	PROJECT MANAGER:	Colleen Connor
PROJECT PHASE:	Study	PREPARED FOR:	City of Lansing

Item No.	Description	Units	Quantity	Unit Price	Extension
1	Mobilization	LS	1	$45,000.00	$ 45,000.00
2	Clearing and Grubbing	LS	1	$60,000.00	$ 60,000.00
3	Site Improvements	LS	1	$173,600.00	$ 173,600.00
	Subtotal				$ 278,600.00
Force Main From the NW corner of McIntyre Property to the church parking lot					
4	Wet well structure - pre-cast concrete	EA	1	$53,000.00	$ 53,000.00
5	Valve vault structure	EA	1	$27,000.00	$ 27,000.00
6	Electrical and controls	LS	1	$85,500.00	$ 85,500.00
7	2 Pumps and accessories	EA	1	$71,550.00	$ 71,550.00
8	Generator and pad	EA	1	$65,000.00	$ 65,000.00
9	Valves	EA	8	$2,500.00	$ 20,000.00
10	Steel and Ductile Iron Pipe	LF	350	$48.00	$ 16,800.00
11	Underground storage	LS	1	$215,000.00	$ 215,000.00
12	Air Release Valve	EA	5	$12,000.00	$ 60,000.00
13	6" PVC force main	LF	3355	$40.00	$ 134,200.00
14	Standard Manhole	EA	2	$10,000.00	$ 20,000.00
15	12" PVC	LF	50	$52.00	$ 2,600.00
16	Epoxy Lining Existing Manhole	EA	1	$17,000.00	$ 17,000.00
17	Connection to Existing Manhole	EA	1	$2,500.00	$ 2,500.00
18	Permanent Easement	SF	38,550	$0.07	$ 2,698.50
19	Temporary Easement	SF	100,650	$0.18	$ 18,117.00
	Subtotal				$ 810,965.50
9G McIntyre Sewer, within the McIntyre Property from SE to NW					
19	Standard Manholes (up to 8' depth)	EA	23	$5,000.00	$ 115,000.00
20	Manhole (beyond 8' depth)	LF	166	$475.00	$ 78,612.50
21	24" PVC	LF	1,195	$175.00	$ 209,125.00
22	21" PVC	LF	2,709	$165.00	$ 446,985.00
23	8" PVC	LF	1,412	$120.00	$ 169,440.00
	Subtotal				$ 1,019,162.50
9H McIntyre Sewer Extention South on the West Side of Main					
24	Standard Manholes (up to 8' depth)	EA	10	$5,000.00	$ 50,000.00
25	Manhole (beyond 8' depth)	LF	67	$475.00	$ 32,015.00
26	18" PVC	LF	292	$150.00	$ 43,800.00
27	15" PVC	LF	1,328	$140.00	$ 185,920.00
28	10" PVC	LF	1,101	$130.00	$ 143,096.20
	Subtotal				$ 454,831.20
				Construction:	$2,563,559.20
				Contingency (%): 25%	$640,890.00
				Total	$3,204,449.20
				Rounded:	**$3,205,000.00**

City of Lansing
Engineers Estimate of Probable Project Costs

PROJECT INFORMATION			
PROJECT:	South Sewer Study	DATE:	February 10, 2021
PROJECT NO.:	Alternative 2 - Gravity Sewer	PROJECT MANAGER:	Colleen Connor
PROJECT PHASE:	Study	PREPARED FOR:	City of Lansing

Item No.	Description	Units	Quantity	Unit Price	Extension
	Willow Park to the NW corner of McIntyre Property				
1	Mobilization	LS	1	$75,000.00	$ 75,000.00
2	Clearing and Grubbing	LS	1	$50,000.00	$ 50,000.00
3	Standard Manholes (up to 8 depth)	EA	8	$5,000.00	$ 40,000.00
4	Manhole (beyond 8 depth)	LF	55	$475.00	$ 26,220.00
3	30" PVC	LF	995	$245.00	$ 243,775.00
4	24" PVC	LF	1,228	$175.00	$ 214,900.00
5	Bore under Main Street -- 24 inch Pipe	LF	345	$1,550.00	$ 534,750.00
6	Bore 3 beneath Nine Mile Creek -- 30 inch Pipe	LF	163	$1,750.00	$ 285,250.00
7	Permanent Easement	SF	55,260	$0.07	$ 3,868.20
8	Temporary Easement	SF	165,780	$0.18	$ 29,840.40
				Construction:	$1,503,603.60
				Contingency (%): 25%	$375,900.00
				Total	$1,879,503.60
				Rounded:	**$1,880,000.00**

City of Lansing
Engineers Estimate of Probable Project Costs

PROJECT INFORMATION			
PROJECT:	South Sewer Study	DATE:	February 10, 2021
PROJECT NO.:	Alternative 2 - Gravity Sewer (with McIntyre Sewers)	PROJECT MANAGER:	Colleen Connor
PROJECT PHASE:	Study	PREPARED FOR:	City of Lansing

Item No.	Description	Units	Quantity	Unit Price	Extension
1	Mobilization	LS	1	$120,000.00	$ 120,000.00
2	Clearing and Grubbing	LS	1	$80,000.00	$ 80,000.00
	Subtotal				$ 200,000.00
Willow Park to the NW corner of McIntyre Property					
3	Standard Manholes (up to 8 depth)	EA	8	$5,000.00	$ 40,000.00
4	Manhole (beyond 8 depth)	LF	55	$475.00	$ 26,220.00
5	30" PVC	LF	995	$245.00	$ 243,775.00
6	24" PVC	LF	1,228	$175.00	$ 214,900.00
7	Bore under Main Street -- 24 inch Pipe	LF	345	$1,550.00	$ 534,750.00
8	Bore 3 beneath Nine Mile Creek -- 30 inch Pipe	LF	163	$1,750.00	$ 285,250.00
9	Permanent Easement	SF	55,260	$0.07	$ 3,868.20
10	Temporary Easement	SF	165,780	$0.18	$ 29,840.40
	Subtotal				$ 1,378,603.60
9G McIntyre Sewer, within the McIntyre Property from SE to NW					
11	Standard Manholes (up to 8 depth)	EA	23	$5,000.00	$ 115,000.00
12	Manhole (beyond 8 depth)	LF	166	$475.00	$ 78,612.50
13	24" PVC	LF	1,195	$175.00	$ 209,125.00
14	21" PVC	LF	2,709	$165.00	$ 446,985.00
15	8" PVC	LF	1,412	$120.00	$ 169,440.00
	Subtotal				$ 1,019,162.50
9H McIntyre Sewer Extention South on the West Side of Main					
16	Standard Manholes (up to 8 depth)	EA	10	$5,000.00	$ 50,000.00
17	Manhole (beyond 8 depth)	LF	67	$475.00	$ 32,015.00
18	18" PVC	LF	292	$150.00	$ 43,800.00
19	15" PVC	LF	1,328	$140.00	$ 185,920.00
20	10" PVC	LF	1,101	$130.00	$ 143,096.20
	Subtotal				$ 454,831.20
				Construction:	$3,052,597.30
				Contingency (%): 25%	$763,150.00
				Total	$3,815,747.30
				Rounded:	**$3,816,000.00**

City of Lansing
Engineers Estimate of Probable Project Costs

PROJECT INFORMATION			
PROJECT:	South Sewer Study	DATE:	February 10, 2021
PROJECT NO.:	Gravity Sewer on McIntyre Property - Buildout	PROJECT MANAGER:	Colleen Connor
PROJECT PHASE:	Study	PREPARED FOR:	City of Lansing

Item No.	Description	Units	Quantity	Unit Price	Extension
1	Mobilization	LS	1	$80,000.00	$ 80,000.00
2	Clearing and Grubbing	LS	1	$30,000.00	$ 30,000.00
	Subtotal				$ 110,000.00
9G McIntyre Sewer, within the McIntyre Property from SE to NW					
11	Standard Manholes (up to 8' depth)	EA	23	$5,000.00	$ 115,000.00
12	Manhole (beyond 8' depth)	LF	166	$475.00	$ 78,612.50
13	24" PVC	LF	1,195	$175.00	$ 209,125.00
14	21" PVC	LF	2,709	$165.00	$ 446,985.00
15	8" PVC	LF	1,412	$120.00	$ 169,440.00
	Subtotal				$ 1,019,162.50
9H McIntyre Sewer Extension South on the West Side of Main					
16	Standard Manholes (up to 8' depth)	EA	10	$5,000.00	$ 50,000.00
17	Manhole (beyond 8' depth)	LF	67	$475.00	$ 32,015.00
18	18" PVC	LF	292	$150.00	$ 43,800.00
19	15" PVC	LF	1,328	$140.00	$ 185,920.00
20	10" PVC	LF	1,101	$130.00	$ 143,096.20
	Subtotal				$ 454,831.20
				Construction:	$1,583,993.70
				Contingency (%): 25%	$396,000.00
				Total	$1,979,993.70
				Rounded:	**$1,980,000.00**

City of Lansing
Engineers Estimate of Probable Project Costs

PROJECT INFORMATION			
PROJECT:	South Sewer Study	DATE:	February 10, 2021
PROJECT NO.:	Gravity Sewer on McIntyre Property - Developer	PROJECT MANAGER:	Colleen Connor
PROJECT PHASE:	Study	PREPARED FOR:	City of Lansing

Item No.	Description	Units	Quantity	Unit Price	Extension
1	Mobilization	LS	1	$45,000.00	$ 45,000.00
2	Clearing and Grubbing	LS	1	$30,000.00	$ 30,000.00
	Subtotal				$ 75,000.00
9G McIntyre Sewer, within the McIntyre Property from SE to NW					
3	Standard Manholes (up to 8' depth)	EA	23	$5,000.00	$ 115,000.00
4	Manhole (beyond 8' depth)	LF	83	$475.00	$ 39,306.25
8	10" PVC	LF	1,677	$110.00	$ 184,470.00
9	8" PVC	LF	3,639	$100.00	$ 363,900.00
	Subtotal				$ 702,676.25
9H McIntyre Sewer, within the McIntyre Property along Main					
16	Standard Manholes (up to 8' depth)	EA	10	$5,000.00	$ 50,000.00
17	Manhole (beyond 8' depth)	LF	34	$475.00	$ 16,007.50
21	8" PVC	LF	2,721	$100.00	$ 272,100.00
	Subtotal				$ 338,107.50
				Construction:	$1,115,783.75
				Contingency (%): 25%	$278,950.00
				Total	$1,394,733.75
				Rounded:	**$1,395,000.00**

City Clerk's Office/Building Maintenance Vehicle and Equipment Report

Vehicles

Year	Make	Model	Description	Mileage Start	Mileage Ending	Miles Driven	Comments
2007	Ford	Econoline	15 Passenger Wagon	20825	20,878	53	
						0	
						0	
						0	
						0	
Total						53	

Equipment

Year	Make	Model	Description	Hours Start	Hours End	Hours Used	Comments
2018	Advance	SC1500	AutoScrubber Floor Machine	37.02	37.02	0	Community Center Cleaning
2018	Kubota	ZG227-A	Mower	162.5	162.5	0	
						0	
						0	
						0	
						0	
Total						0	

Lansing Community and Economic Development Department

Monthly Fleet Report

Month January **Year** 2021

Vehicles

Year	Make	Model	License Plate #	Description	Mileage Starting	Mileage Ending	Miles Driven	Comments
2006	Ford	Ranger XLT	67211	LT. Pick-up Ext	51,964	52,549	585	
2005	Ford	Ranger	57932	LT. Pick-up Ext	47,996	48,149	153	
2015	Dodge	Journey	A6545	SUV	76,207	76,211	4	
2006	Dodge	Caravan	66257	Van	49,676	49,689	13	

Parks and Recreation Fleet Report January 2021

Vehicles:

Year	Make	Model	Description	Mileage Start	Mileage Ending	Miles Driven	Current Use	*Comments*
2011	Dodge	Charger	passenger car	78,525	78,525	0	AC/Parks use	
2014	Ford	F-350	Dump truck	18813	19608	795	Parks maintenance	
2016	Jeep	Patriot	SUV	64888	64920	32	Activity Center use	
2017	Chevrolet	Silverado	truck	15839	15995	156	Parks maintenance	
2018	Ford	F-350	4-dr crew	17626	18035	409	Parks maintenance	
Total						1392.00		

Equipment:

Year	Make	Model	Description	Hours Start	Hours End	Hours used	Current Use	*Comments*
1992	Massey Ferguson	1020	Tractor	1980.7	1980.7	0	Parks maintenance	
2005	Kubota	F3060	mower	315.4	315.4	0	Parks maintenance	
2007	Turbo Tool Cat	5600	utility vehicle	1186.5	1189.9	3.4	Parks maintenance	
2012	Wright	ZK	stander mower	1109	1109	0	Parks maintenance	
2016	ABI	Force	infield groomer	228.3	236.4	8.1	Parks maintenance	
2017	Kubota	ZD1211	mower	623.1	623.4	0.3	Parks maintenance	
2018	Polaris	Ranger	utility vehicle	223.2	226.2	3	Parks maintenance	
2019	Exmark	LZ 72	mower	338.9	339.1	0.2	Parks maintenance	
2019	Emark	LZ 96	mower	193.2	193.5	0.3	Parks maintenance	
2020	Kubota	ZD1211	mower	13.1	13.3	0.2	Parks maintenance	
Total						15.50		

Lansing Police Department

Jan-2021

Vehicle Fleet End of Month Report

Unit	Year	Make/Model	Last 5 VIN	Mileage as of 01/06	Mileage as of 02/01	Miles Driven	Current Use	Future Use	Comments
1	2013	Ford Explorer	40459	83432	84506	1074	Detective	Detective	Limited Use - Detective
2	2020	Dodge Durango	96952	9397	10331	934	Patrol	Patrol	Fit for patrol duty
3	2015	Ford Explorer	40975	76084	77531	1447	Patrol	Patrol	Fit for patrol duty
4	2015	Ford Explorer	40976	56989	57947	958	Patrol	Patrol	Fit for patrol duty
5	2012	Dodge Charger	07027	50355	51216	861	Patrol	Patrol	Fit for patrol duty
6	2019	Dodge Durango	85334	28250	29447	1197	Sergeants	Sergeants	Limited Use - Sergeants
7	2018	Ford Explorer	34004	8497	8625	128	Captain	Captain	Limited Use - Captain
8a	2017	Dodge Charger	86270	56123	56806	683	Patrol	Patrol	Fit for patrol duty
9	2018	Ford Explorer	34003	29371	29520	149	Patrol	Patrol	Limited Use - Lieutenant
10	2011	Dodge Charger	52349	68177	68664	487	Patrol	Patrol	Fit for patrol duty
11	2003	Ford F150	64639	85473	85725	252	Animal Control	Animal Control	Fit for animal control duty
12	2019	Dodge Durango	85335	10217	10731	514	Chief	Chief	Limited Use - Chief
13a	2017	Dodge Charger	96163	54790	55217	427	Patrol	Patrol	Down for repairs
15	2018	Ford Explorer	34002	32120	32601	481	Patrol	Patrol	Fit for patrol duty
17	2016	Dodge Charger	23367	48222	49146	924	Patrol	Patrol	Fit for patrol duty
					Mileage Total:	10516			

Lansing Public Works Department
Monthly Fleet Report
Month January **Year** 2021

Vehicles

Year	Make	Model	License Plate #	Description	Mileage Starting	Mileage Ending	Miles Driven	Comments
2008	Ford	Ranger XLT	70321	LT. Pick-up Ext	58,431	58,520	89	
1998	Ford	1/2 ton	48091	Pick-up	67,037	67,037	0	IN SHOP
2005	Sterling	LT 8500	64614	Dump Truck	56,183	56,769	586	
2007	Elgin	Crosswind J+	70295	Street Sweeper	6,547	6,547	0	
1992	Ford	700	25616	Dump Truck	64,361	64,361	0	
2017	Chevrolet	3500	88437	Pick-up Truck	20,360	20,685	325	
2011	International	7400	75269	Dump Truck	19,306	19,577	271	
2016	Ford	F350 4x4	88468	One-ton Dump Truck	13,984	14,334	350	
2013	Ford	Explorer	80551	SUV	69,520	69,740	220	
2019	Ford	Ecosport	A4358	SUV	4,704	4,766	62	
2020	Chevrolet	3500		One-ton Dump Truck	716	971	255	

Equipment

Year	Make	Model		Description	Hours Starting	Hours Ending	Hours Used	Comments
1997	JD	770BH		Grader	5,709	5,709	0	
2004	IR	DD-24		Asphalt Roller	299	299	0	
2006	IR	185		Air Compressor	215	215	0	
1997	Bobcat	763		Skid Steer	2,245	2,246	1	
2014	Case	580 SNWT		Backhoe	1,491	1,546	55	
2002	Crafco	110		Crack Sealer	821	821	0	
2003	Kubota	L3710		Tractor	1,631	1,631	0	
2009	Case	465		Skid Steer	685	686	1	
2018	John Deere	5065E		Tractor	114	114	0	
2018	Vermeer	BC1000		Chipper	8	8	0	

January

City Influent	24.44	City Avg Daily	.788 MGD
LCF Influent	.495 MG	LCF Daily Avg	.160 MGD
Total Biosolids	0.828	Precip	1.89 inches

Vehicles

Year	Make	Model	Description	Mileage Start	Mileage Ending	Miles Driven	Current Use	Comments
1999	Sterling	Vactor	Jet Truck	8335	8336	1	Collection System	
2012	Chevrolet	Tahoe	SUV	104868	104940	72	Ops/Maint.	
2019	Ford	F250	Pick Up Truck	8068	8351	283	Ops/Maint.	
2019	Ford	F250	Flatbed Truck	2383	2522	139	Ops/Maint.	
2005	Freightliner	M2106	Dump Truck	24560	24621	61	Biosolids Disposal	
Total						556		

Equipment

Year	Make	Model	Description	Hours Start	Hours Ending	Hours Used	Current Use	Comments
1991	Case	1825	Uni-Loader	965	965	0	Plant Activities	
1999	Sterling	Vactor	Jet Truck	2268	2268	0	Collection System	
2004	John Deere	7920	Tractor	1276	1278	2	Biosolids Disposal	
2005	Polaris	Ranger #1	Utility Vehicle	1355	1358	3	Operations	
2004	Case	621D	Loader	2396	2400	4	Operations	
2005	Polaris	Ranger #2	Utility Vehicle	1419	1433	14	Maintenance	
2006	JCB	531-70	Telehandler	629	630	1	Plant Activities	

COMMUNITY AND ECONOMIC DEVELOPMENT
PERMITS/LICENSES AND CODE ENFORCEMENT REPORT FOR JANUARY

TO: **Tim Vandall, City Administrator**

FROM: **Matthew R. Schmitz, Director, Community and Economic Development** MRS

DATE: **02/05/2021**

PERMITS AND LICENSES:	**Current Month**	**Year to Date**
Number of permits issued	14	14
Number of permits for new single-family housing completed	0	0
Number of permits for new multi-family housing completed	0	0
Number of occupancy certificates issued	2	2
Number of permits for new single-family housing currently in process or pending issuance		0
Number of permits for new multi-family housing currently in process or pending issuance		0
Total valuation of residential and commercial construction and remodeling for which permits were issued	$82,040.17	$82,040.17
Permit fees	$1,529.00	$1,529.00
Number of inspections performed	31	31
Number of trade licenses issued	47	47
Total trade contractor licenses issued	205	205
Number of occupational licenses issued	14	14

CODE ENFORCEMENT:	**Current Month**	**Year to Date**
Nuisance Report		
Three Day Warnings:	38	38
Certified Letters Sent:	0	0
Compliance:	36	36
Compliance Review:	36	36
Vehicle Report		
Warning Letters/Verbal:	3	3
Certified Letters Sent (20 Days):	0	0
Compliance:	2	2
Compliance Review:	2	2
Weeds Report		
Three Day Warnings:	0	0
Certified Letters Sent:	0	0
Compliance:	0	0
Compliance Review:	0	0
Infiltration of Storm Water System		
Three Day Warnings:	0	0
Certified Letters Sent:	0	0
Compliance:	0	0
Compliance Review:	0	0
Additional Actions		
Violation Publications:	0	0
Number of Court Actions:	0	0
Abated:	0	0
Citations:	0	0
Contracted for Work:	0	0