Section 5: Service Concepts

Various service concepts intended to address the transit goals and markets previously identified as well as the available transit resources in the community were developed. First, however, the ATA proposal to implement the 2001 transit proposal was evaluated. This section presents a number of possible alternatives to the 2001 plan reflecting some changes in local conditions as well as to potentially tap funding for an expanded system.

5.1 ATA Bus Plan

The Flint Hills Area Transportation Agency (ATA)[3] is a private, non-profit entity that provides transportation service to the general public, elderly and disabled populations within Riley County. In 2009, ATA prepared a service and funding proposal based on a 2001 transit implementation plan developed for the City of Manhattan. This proposal is included as in Appendix D. This section will briefly review and evaluate that proposal with the purpose of determining whether it could serve as a building block for a Manhattan transit system.

5.1.1 Summary of ATA Plan

Though not specifically identified as such, the ATA Plan has three main parts:

- A *plan preface* that describes the purpose of the 2010 plan and recent history of ATA Bus which includes ridership and funding trends as well as its initial foray into deviated, fixed route transportation.
- *Budget information* regarding the implementation of a fixed-route transit system in Manhattan. Also included are rationales for some of the budget assumptions.
- *Future funding* potential that reviews sources of system financing.

Plan Preface

The plan begins by describing its purpose as a proposal to implement portions of a transit system contained in the City of Manhattan's transit plan developed in 2001. That plan provided a blueprint to implement a two-route citywide system along with an on-campus shuttle for Kansas State University as well as a Friday and Saturday late night service connecting parts of Manhattan with the Aggieville entertainment district.

The impetus for ATA to implement the 2001 plan is to gain increased efficiency of its operation which has seen significant ridership increases over the last two to three years. Currently, ATA provides demand response service within Riley County with most trips starting and ending in Manhattan. By converting to a fixed-route system, ATA believes it can provide services more efficiently.

Budget Information

The heart of the plan is a financial description of the services to be provided as well as rationale for key budgeted items. The ATA plan calls for partial implementation of the 2001 Plan, namely:

- The two-route citywide system from the 2001 Plan. ATA would only implement weekday (Monday through Friday) service.
- The ATA Plan would not implement weekend service from the 2001 plan.
- The ATA plan would also not implement the KSU shuttle or the Aggieville Special.

[3] Formerly known as the Riley County Area Transportation Agency.

- The weekday service would operate 30-minute frequencies from 6:00 AM to 6:00 PM followed by hourly service until 10:00 PM.

ATA proposed to begin operation of the plan in the fourth quarter of 2010. ATA would run its current demand response service until then. ATA also assumes its current demand response service would continue after the implementation of the fixed-route system. While shifting of riders from the demand response service to the fixed route service is expected, ATA has not been able to quantify this shift.

Capital funding for the new service would consist of a $520,000 grant from a federal stimulus program called the American Recovery and Reinvestment Act (ARRA) which would buy five 20-passenger vehicles ($325,000), $135,000 in communication/dispatch and computer equipment as well as $60,000 in passenger amenities such as shelters, benches, and information sign posts.

Operating funds would come primarily from federal section 5311 grants, which subsidizes up to 50 percent of the net operating cost (operating cost less passenger revenue) of general public transit services in rural areas of the country. Other operating funding would come from the City of Manhattan's Social Service Advisory Board (SSAB) and KDOT.

Passenger revenue for the operation would be based on the fare structure proposed in 2001. ATA found the structure to be consistent with other Kansas communities. The ATA Plan assumes KSU students would pay the adult fare. Ridership for the 2010 system was based on the 2001 estimate but was discounted to reflect the absence of weekend service.

Operating cost assumptions were based on operating parameters presented in the 2001 Plan as well as ATA's current experience in maintaining and operating its demand response service.

Future Funding

Future funding of the ATA's fixed route service could come from a number of sources including federal section 5316 (Job Access and Reverse Commute—JARC), section 5317 (New Freedoms), section 5309 (which is a discretionary capital program), and section 5307 (which is similar to the 5311 program except for urban areas with populations over 50,000). Future funding could also come from Fort Riley, although discussions with the Fort have been in an infancy stage.

Finally, KDOT has designated Riley County as a pilot demonstration for regional transportation coordination. Riley County would, along with surrounding counties in the region, have a singular transportation entity that would be responsible for providing all transit services. Currently there are a number of providers in the region. By consolidating to one regional provider, KDOT hopes to see greater efficiencies in the provision of service. The ATA Plan envisions that the ATA would become the lead agency for regional coordination.

5.1.2 Analysis of ATA Plan

The analysis of the ATA Plan focuses mainly on key cost and funding assumptions. While the Plan only presents information for three months of operations, the analysis will first compare the reasonableness of assumptions based on one quarter of operation. However, it should be noted that any transit system should be implemented only with a three- to five-year operating commitment. This analysis will first look at the capital assumptions of the plan, then the operating assumptions.

Capital

There are two main capital items in the ATA proposal that have a direct bearing on the fixed-route service. [4] First are the revenue vehicles and second is funding for passenger amenities (shelters, benches, and information sign posts). Since the plan was written, the requested ARRA funding has been secured. Thus, the ability to obtain capital funding is not an issue. In fact, ATA has already ordered the vehicles and at least some of the passenger amenities will be implemented at some point in the foreseeable future.

Vehicles

The ATA Plan calls for purchasing five 20-passenger vehicles. The vehicles are similar to ones operating in Salina as part of their CityGo transit system. The vehicles, according to the operator of the Salina service, seem to be holding up well and are adequate for the job. While these vehicles can work in Manhattan, it is possible that within one or two years, passenger loads during some peak trips might tax the capacity of the vehicles. Unlike Salina, KSU in Manhattan would be a significant and intense generator of ridership. If the service is successful, high passenger loads will result. For a starter service, however, the 20-passenger vehicles can be used thoughout the community though ATA should be prepared to acquire additional and/or larger capacity vehicles in the not too distant future. In addition, the system will have just one spare vehicle (assuming four vehicles are in operation). As ATA has another vehicle similar to this type in their demand response fleet, it could possibly be pressed into service if the one spare proves insufficient.

Passenger Amenities

Six shelters, four benches, and 16 information signposts have been budgeted as part of the ARRA grant. The total funding for this portion of the grant is $60,000. The funding could likely provide for the shelters (including installation) but it is not certain if funds would be sufficient for the rest of the amenities. A typical shelter with installation can cost up to $10,000 each. With six shelters, the $60,000 would be virtually expended. The locations proposed in the plan for the shelters seem reasonable but a final service plan should be developed before committing to specific locations. The purchase of benches and signposts are not necessarily critical at the start of service. The $60,000 budget should be adequate to put some kind of amenities on the street whether just six shelters or fewer shelters along with some benches and signposts.

Operating

There are three aspects of the operating portion of the ATA Plan that bear discussion. These are:

1. Operating Revenue (passenger fares)
2. Operating Expenses
3. Operating Funding (not including passenger revenue)

Table 4 presents a summary of the ATA budget.

As seen in Table 4, overall operating revenue is projected to be just over $8,000 during the first quarter of service. Operating expenses which include driver labor, vehicle maintenance, operations management (which is primarily insurance and a part-time dispatcher to cover evening operations) and system administration (which is printing and

[4] The third item is computer aided dispatch/scheduling technology which are not crucial to the fixed route operation.

advertising, telephone and office expenses) total $114,142. Finally, operating funding includes federal, state and local sources of financing.

Table 4: Summary of ATA Fixed Route Budget

Item		4th Quarter 2010
Operating Revenue		
Passenger Fares		$ 8,161
Operating Expenses		
Driver Labor	$ 54,101	
Vehicle Maintenance	26,357	
Operations Management	24,684	
System Administration	9,000	
Total Expenses		$ 114,142
Net Operating Deficit (Surplus)		$ 105,981
Funding		
Federal 5311	44,000	
Kansas 5311	13,385	
SSAB (City of Manhattan)	40,477	
Riley County	3,718	
5311 Project Administration	4,400	
Total Funding		$ 105,980
Deficit (Surplus)		$ (1)

Operating Revenue

The ATA Plan operating revenue is based on the 2001 plan but discounted for fewer operating days. The 2001 plan assumed $61,000 annually ($15,250 quarterly) in passenger revenue with KSU students not paying a fare since they would pay a semester fee instead. In ATA's plan KSU students would need to pay a fare as a fee would not be in effect. Taking these factors into account, as well as no weekend service, ATA's assumption of quarterly fare revenue of $8,161 is reasonable.

Operating Expenses

In general, the ATA Plan presents cost information for essentially one quarter of operation. The expenses presented tend to mix pro-rated operating expenses with annualized costs as well as one-time costs associated with starting up a new operation. In addition, the costs also tend to be incremental to the overall ATA operation and do not allocate respective overhead expenses. For example, ATA has two dispatchers that control the on-street provision for its demand response service. While this same staff would be used to oversee the fixed-route operation as well, none of these expenses are reflected in the fixed-route budget. It is at some level a business decision by the ATA to allocate such overhead expenses but it is a common and prudent practice to make such adjustments. On the other hand, ATA has relatively few overhead costs. For example, its office space and information technology support is provided by Riley County at no monetary cost to ATA. ATA stores its vehicles at no cost in a parking lot at Manhattan Town Center.

Table 5 presents a comparison of ATA's fourth quarter 2010 fixed-route budget with an analysis performed as part of this study. The expense categories shown in the table are the same as shown earlier in Table 4. Overall, quarterly costs are estimated to be $134,000 as compared with $114,142 estimated in the ATA Plan. This is a difference of 14.6 percent or nearly $20,000. On an annualized basis the cost of the fixed-route system using ATA's incremental cost approach is estimated to be $535,000 compared with $457,000 based on the ATA Plan. In summary, the differences between the ATA Plan and this study's cost estimates are due to:

- *Driver Labor* — the ATA Plan did not fully take into account deadhead associated with the service (this is the time a vehicle leaves its operating base to the time it arrives in service).
- *Vehicle Maintenance* — assumes higher price for fuel ($3.50 a gallon versus $2.95) as well as higher vehicle maintenance costs. The higher maintenance cost mainly reflects assigning a labor cost which is not part of the ATA Plan. While ATA Bus outsources its vehicle maintenance and would continue to do so until its maintenance facility is built, the out-of-house maintenance service cost includes parts and labor (as well as profit). The parts/tire budget included in Table 5 is based on Salina's CityGo's experience; labor is an allocated cost in Salina. The added labor cost in the table reflects 0.5 Full Time Equivalent (FTE) mechanic.
- *Operations Management* — the main difference is the ATA Plan included an annual insurance cost while this study prorates that cost by quarter.
- *System Management* — the ATA Plan annualized certain advertising and printing expenses which are pro rated in this study.

As mentioned above, the typical transit operation with multiple services like the ATA would allocate overhead expenses to each portion of its operation. This is done in Salina where the CityGo service is part of a larger transportation and social service operation.[5] If ATA were to operate a City of Manhattan service, its overhead expenses should be allocated as well.

Based on ATA's current operation, about $42,000 in annual overhead would be potentially allocated to the fixed-route operation.[6] On a quarterly basis, this adds $10,500 to the estimate in Table 5 resulting in $144,247 (as compared with $133,747 in the table) in quarterly costs. This would be about $30,000 in variance with the ATA Plan or 26 percent over the quarterly budget. Annualized, the fixed-route operation would cost $576,988, up almost $42,000 from nearly $535,000 using the incremental cost analysis.

If the ATA expands into a regional provider role, this allocated overhead would likely increase even more as ATA would assume more administrative and management expenses that would be shared with the fixed-route service. It is difficult at this time to estimate what that might be. Using Salina as an example, an additional $80,000 to $125,000 could be added to the fixed-route service above the $42,000.

[5] The CityGo service is operated by the Occupation Center of Central Kansas, Inc. (OCCK) which is mainly a social service agency with a transportation function. The overall agency has a budget of about $21 million annually with transportation accounting for $1.5 million of this amount. In turn, the CItyGo service is about half of the overall transportation budget.

[6] This is using vehicles as an allocation mechanism. With a fixed route operation, ATA would have a fleet of 13 vehicles of which 5 would be the fixed route vehicles. This represents

Table 5: Analysis of ATA Plan Fourth Quarter 2010 Operating Expenses (Incremental Costs)

Category/Item		Base Assumptions	Annual	Consultant One Quarter*	ATA Budget Oct-Dec 2010	Variance	Comments
Driver Labor							
	Wages	*$11.25 hour wage/12 drivers incls training new staff*	$ 262,724	$ 65,681	$ 50,179	$ 15,502	*Consultant assuming more hours to account for deadhead and paying drivers for fueling and bus cleaning.*
	Benefits and Taxes	*FICA, uemployment, drug and alcohol testing*	26,118	$ 6,530	$ 3,922	$ 2,608	
	Sub-Total		$ 288,843	$ 72,211	$ 54,101	$ 18,110	
Vehicle Maintenance							
	Wages	*Assumed outsourced maintenance*	$ 21,929	$ 5,482	$ -	$ 5,482	
	Benefits and Taxes	*Group Health insurance; FICA, drug and alcohol testing*	7,934	$ 1,984	$ -	$ 1,984	
	Fuel	*$3.50 gallon/gasoline or diesel*	116,053	$ 29,013	$ 20,357	$ 8,656	*Assuming higher gasoline prices; more mileage/gallons*
	Parts/Tires	*About 249,000 annual miles; outsourced maintenance*	22,382	$ 5,595	$ 6,000	$ (405)	*Based on Salina experience*
	Sub-Total		$ 168,297	$ 42,074	$ 26,357	$ 15,717	
Operations Management							
	Wages	*One part time dispatcher, 30 hrs/week*	$ 15,990	$ 3,998	$ 3,280	$ 718	
	Benefits and Taxes	*Taxes drug and alcohol testing*	1,883	$ 471	$ 251	$ 220	
	Insurance	*$12,000/ vehicle/year; incls workers' comp*	39,674	$ 9,919	$ 18,362	$ (8,443)	*ATA used an annual cost; Consultant pro-rated quarterly.*
	Facility Lease and Utilities	*O&M of facility*	-	-	-		
	Corporate Overhead	*Estimated*	-	-			
	Other	*Office expenses, government fees, telephone (ATA)*	7,500	$ 1,875	$ 2,791	$ (916)	
	Sub-total		$ 65,047	$ 16,262	$ 24,684	$ (8,422)	
System Administration							
Other	*Office expenses, travel, trade association membership; telephone (consultant)*		$ 12,944	$ 3,236	$ 9,000	$ (5,764)	*ATA cost annualized*
Total			$ 12,944	$ 3,236	$ 9,000	$ (5,764)	
Grand Total Operations			$ 534,988	$ 133,747	$ 114,142	$ 19,605	

* Annual cost divided by 4

Operating Funding

It should be emphasized that the ATA Plan will require funding beyond passenger fares. This is typical of all U.S. transit systems. In the U.S., such funding is typically provided by federal, state and local sources. Table 6 shows the quarterly funding in the ATA plan as well as those amounts annualized.

Table 6: Sources of ATA Fixed Route Funding—Quarterly and Annualized

Item	4th Quarter 2010	Annualized
Federal 5311	$ 44,000	$ 176,000
Kansas 5311	13,385	53,540
City of Manhattan	40,477	161,908
Riley County	3,718	14,872
5311 Project Administration	4,400	17,600
Total Funding	$ 105,980	$ 423,920

As seen in Table 6, the ATA Plan assumes almost $106,000 in quarterly funding to subsidize the cost of the fixed-route service. This annualizes to about $424,000 in funding. In discussions with KDOT, which administers the 5311 program, the federal and state 5311 sources (including project administration) appear to be reasonable and can be reasonably expected to be available. As 5311 funding is awarded through KDOT annually, it would be expected that these funds would be expended by ATA within a year of award. However, agencies typically have three years to fully expend such funds. The main funding uncertainty is with the SSAB (Social Service Advisory Board) funding from the City of Manhattan. The Fourth Quarter 2010 amount while voted on by the City Commission was not, at this writing, actually appropriated and was more of a placeholder until the Commission had more information regarding the ATA Plan. It is also uncertain whether the City has intended to commit to funding the fixed-route on an annualized basis in the amount of nearly $162,000 or just the initial $40,477 shown in the Table.

However, if City funding was not forthcoming KSU might be another potential source of local funding. KSU expends a significant amount of funds for a campus shuttle and an evening service called "Safe Ride."[7] Together, these amount to about $200,000 in funds annually. It may be possible to design the fixed-route system to serve the KSU functions and perhaps work out a funding partnership with the university. This KSU funding could possibly replace some or all City of Manhattan funding.

5.1.3 Summary Observations

Key observations about the ATA Plan are:

- Capital costs seem reasonable, though not all of the passenger amenities under consideration may be obtainable with the stated budget. However, there is some flexibility in deploying these amenities and the shortfall is not a fatal flaw to the plan.
- Operating revenue in the form of passenger revenue appears reasonable.
- Operating expenses are underestimated and did not take into account an allocation of overhead expenses. While overhead costs are difficult to estimate given the changes that are likely to occur with the ATA in

[7] The shuttle service connects the campus with the KSU Foundation on Anderson Avenue. Safe Ride is a night time taxi subsidy service that transports students from Aggieville to their residential locations within the community.

becoming a regional transportation provider, expenses could increase by $42,000 to $125,000 annually to account for overhead.

- Local funding for the service is unsettled. However, there may be opportunities to tap funding used by KSU to operate a campus shuttle as well as the evening "Safe Ride" service.
- Assumptions regarding federal and state funding availability appear to be reasonable.

Despite some of the above issues relating to costs and funding, it does seem reasonable to use the quantity of service in the ATA Plan as a starting point in developing a transit system for Manhattan.

5.2 Service Alternatives

The purpose of this overview is to provide basic information about possible services for the Manhattan community. Included in the overview are:

- How alternative concepts were developed
- Summary of Alternatives
    - Maps of initial Service Concepts

5.2.1 Alternative Concept Development

A total of 19 alternative concepts were developed and include the ATA Bus's proposal for implementing the 2001 transit plan. The concepts are divided into three groups: citywide service, airport service, and Aggieville service. Citywide service attempts to provide transit in Manhattan to serve key markets identified in this study process. These markets include Kansas State University, general city residents, employers including hoteliers, and people who access social and medical services. Fourteen of the 19 concepts are related to the citywide service. Airport service is intended to provide a transit connection from the Manhattan Regional Airport, the nearby Corporate Technology Park (also known as Tech Park), and the main part of the city. Two of the concepts relate to airport service. Finally, Aggieville service is intended to provide late evening service from the Aggieville entertainment district to nearby neighborhoods. This service is aimed primarily at K-State students though the general public would be able to use the service as well. There are three Aggieville service concepts.

These factors are also important as it relates to the concepts:

- *The level of citywide services* is generally intended to be initial or starter system services. This would represent the first step in public transit in the city.
- *Services are generally fixed route* as the February 2010 market analysis indicated that this service type was most appropriate for Manhattan. Other major service types include demand response and deviated-fixed route services. Currently, ATA runs demand response service in the city and believes a fixed-route service would be more efficient.
- *Citywide and Aggieville services* were designed to operate at a minimum frequency of 60 minutes. While 60-minute service is a minimum, students using transit to get to and from class may find this level too infrequent. Typical class start times are on the half hour and end twenty minutes after the hour. A 60-minute frequency will either cause people to arrive very early for class or wait a significant time after class before returning home.
- *To further the potential K-State funding for citywide transit,* options that preserve a transit connection from Edwards Hall to the KSU Union to the KSU Foundation were developed and given preference. As KSU runs a shuttle on this route, it is hoped that the university would contribute to a citywide system in lieu of operating their service.

As potential Fort Riley service initially seemed more of a long term possibility, alternative concepts were not developed for the Fort or Junction City. However, a service concept for each area are later presented and described. Finally, as the transit market analysis showed that Wamego was best served by flexible services no concepts were developed for that community either. It is assumed that existing rural providers will serve these areas.

5.2.2 Summary of Alternatives

Table 7 presents the nineteen alternatives arranged by group.

With each alternative in the table the days of the week of operations, hours of operation, and frequency of service are indicated. Further, estimated annual hours of service and estimated annual costs are presented. For example, alternative 1 is the citywide system proposed by ATA. It would operate weekdays only from 6:00 AM to 10:00 PM. Frequencies would vary throughout the day and either be 30 minutes or 60 minutes. Annual operating costs are projected to be just over $577,000.

Referring to Table 7, alternatives 1 and 2 are two-route concepts. Alternatives 3 through 5S are concepts for Route 1 with alternatives 6 through 8S for Route 2. These two sets of alternatives will be mixed and matched to present full citywide alternative concepts.

Figure 39 through Figure 58 present each of the above 19 concepts.

Table 7: Summary of Citywide Service Alternatives

Group	Alternative		Description	Days of Operation			Hours of Operation			Frequency *(minutes)*			Approximate Annual Hours of Service	Approximate Annual Cost
				Weekdays	Saturday	Sunday	Weekdays	Saturday	Sunday	Weekdays	Saturday	Sunday		
Citywide Service	1	Citywide 2001 Original (ATA Bus)	Two route system from 2001 plan.	X			6am to 10pm			30/60			14,300	$ 577,300
	2	Citywide 2001 Original Modified *(incls. Original Aggieville Special)*	Two route system from 2001 plan, reduced frequencies	X	X	X	6am to 10pm	6am to 10pm	10am to 7pm	60	60	60	11,800	$ 507,600
	3	Route 1 West Split End	Route 1 from 2001 splits west side.	X			6am to 10pm			30/60			8,160	$ 329,400
	4	Route 1 West Split End v. Edwards	Route 1 from 2001 splits west side w/Edwards Hall service	X			6am to 10pm			30/60			12,240	$ 494,100
	4S	Route 1 West Split End v. Edwards; Shorten		X			6am to 10pm			30/60			8,160	$ 329,400
	5	Route 1 West Split End v. Edwards and eastside loop	Route 1 from 2001 splits west side w/Edwards Hall service	X			6am to 10pm			30/60			12,240	$ 494,100
	5S	Route 1 West Split End v. Edwards and eastside loop; Shorten		X			6am to 10pm			30/60			8,160	$ 329,400
	6	Route 2 East/West Split Ends	Route 2 from 2001 splits west and east sides.	X			6am to 10pm			30/60			12,240	$ 494,100
	6S	Route 2 East/West Split Ends; Shorten		X			6am to 10pm			30/60			8,160	$ 329,400
	7	Route 2 East/West Split Ends via Edwards	Route 2 from 2001 splits west and east sides; via Edwards Hall.	X			6am to 10pm			30/60			12,240	$ 494,100
	7S	Route 2 East/West Split Ends via Edwards; Shorten		X			6am to 10pm			30/60			8,160	$ 329,400
	8	Route 2 East/West Split Ends via Bluemont/Fremont	Route 2 from 2001 splits west and east sides.	X			6am to 10pm			30/60			12,240	$ 494,100
	8S	Route 2 East/West Split Ends via Bluemont/Fremont; Shorten		X			6am to 10pm			30/60			8,160	$ 329,400
	9	Hybrid Route	Combines 2001 Routes 1 and 2	X	X		6am to 10pm	6am to 10pm		30/60	30/60		14,736	$ 608,500
Airport	10	Airport/Tech Park Fixed Route	Fixed route service from central Manhattan to airport.	X			6am to 10pm			Irregular			4,590	$ 185,300
	11	Airport/Tech Park Demand Response	Demand response service from central Manhattan to airport.	X			6am to 10pm			On Demand			4,590	$ 185,300
Aggieville	12	Aggieville Special 2001 Loop	Original one loop service with deviation.	Thur,Fri	X		10pm to 3am	10pm to 3am		60	60		540	$ 32,300
	13	Aggieville Special 2 Loops	Two loops; no deviation.	Thur,Fri	X		10pm to 3am	10pm to 3am		20 approx.	20 approx.		1,080	$ 54,100
	14	Aggieville Special 2 Loops/Deviated	Two loops; deviation.	Thur,Fri	X		10pm to 3am	10pm to 3am		30	30		1,080	$ 54,100

Figure 39: Alternative 1—Citywide 2001 Plan

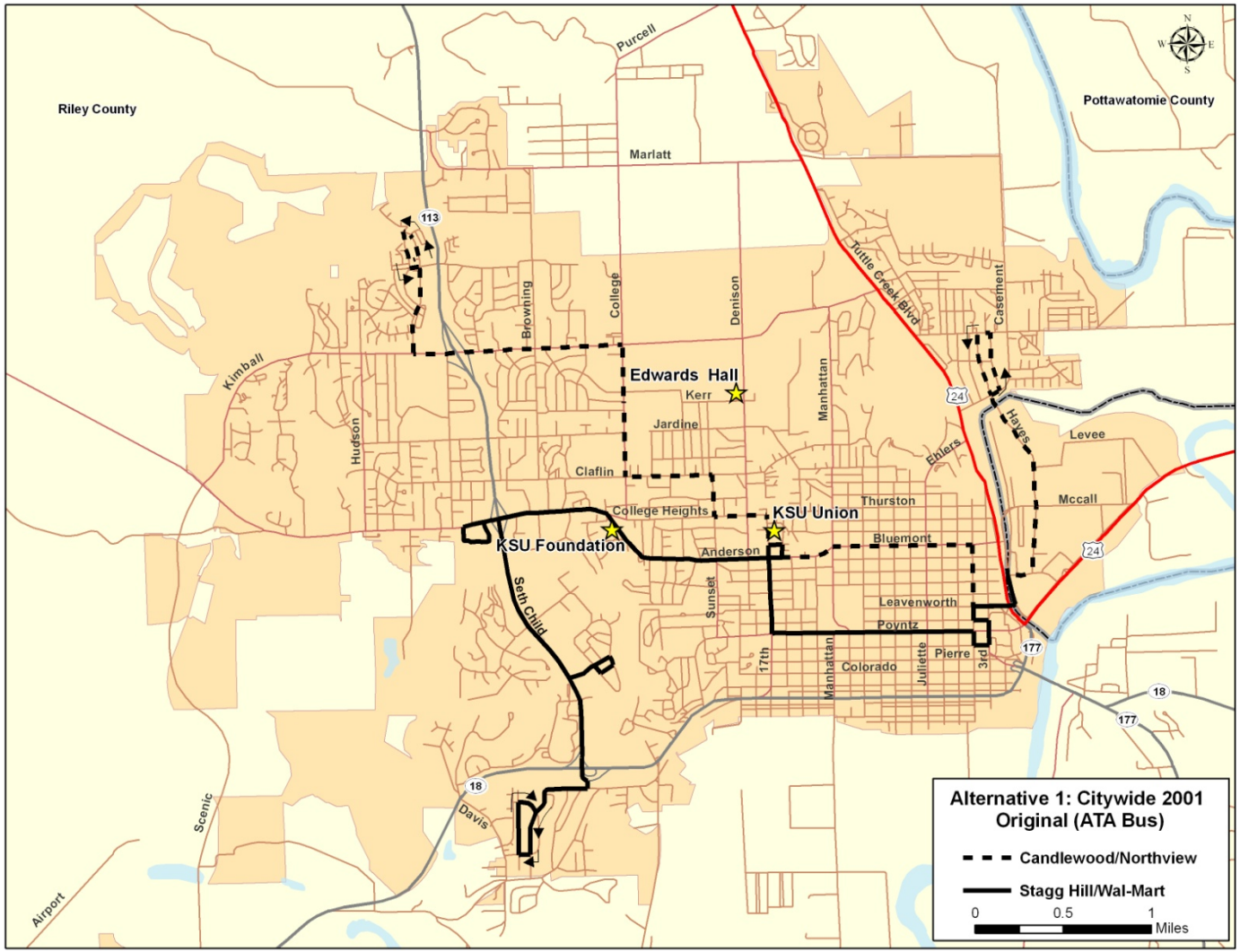

Figure 40: Alternative 2—2001 Citywide Modified

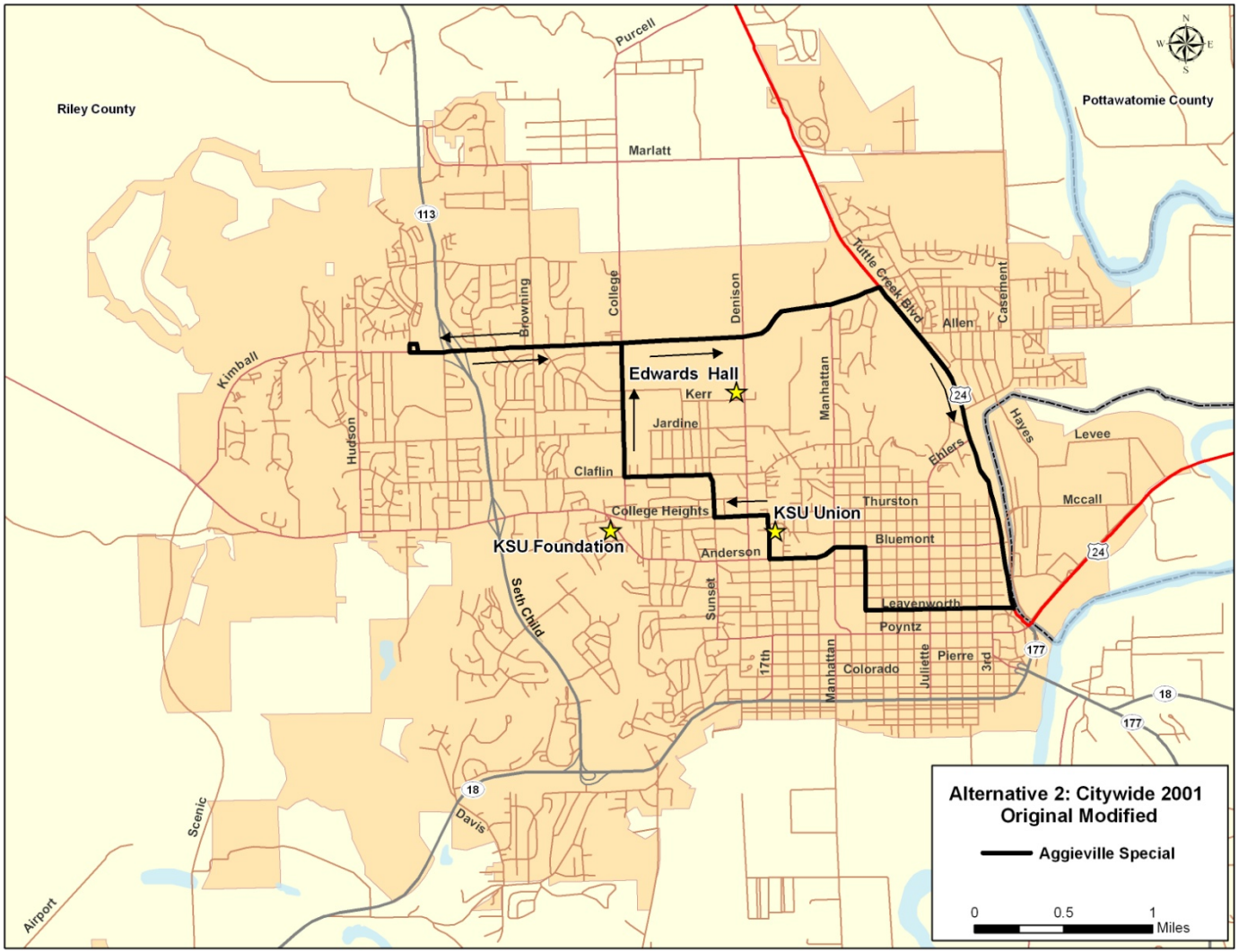

Figure 41: Alternative 2—Aggieville Special Service

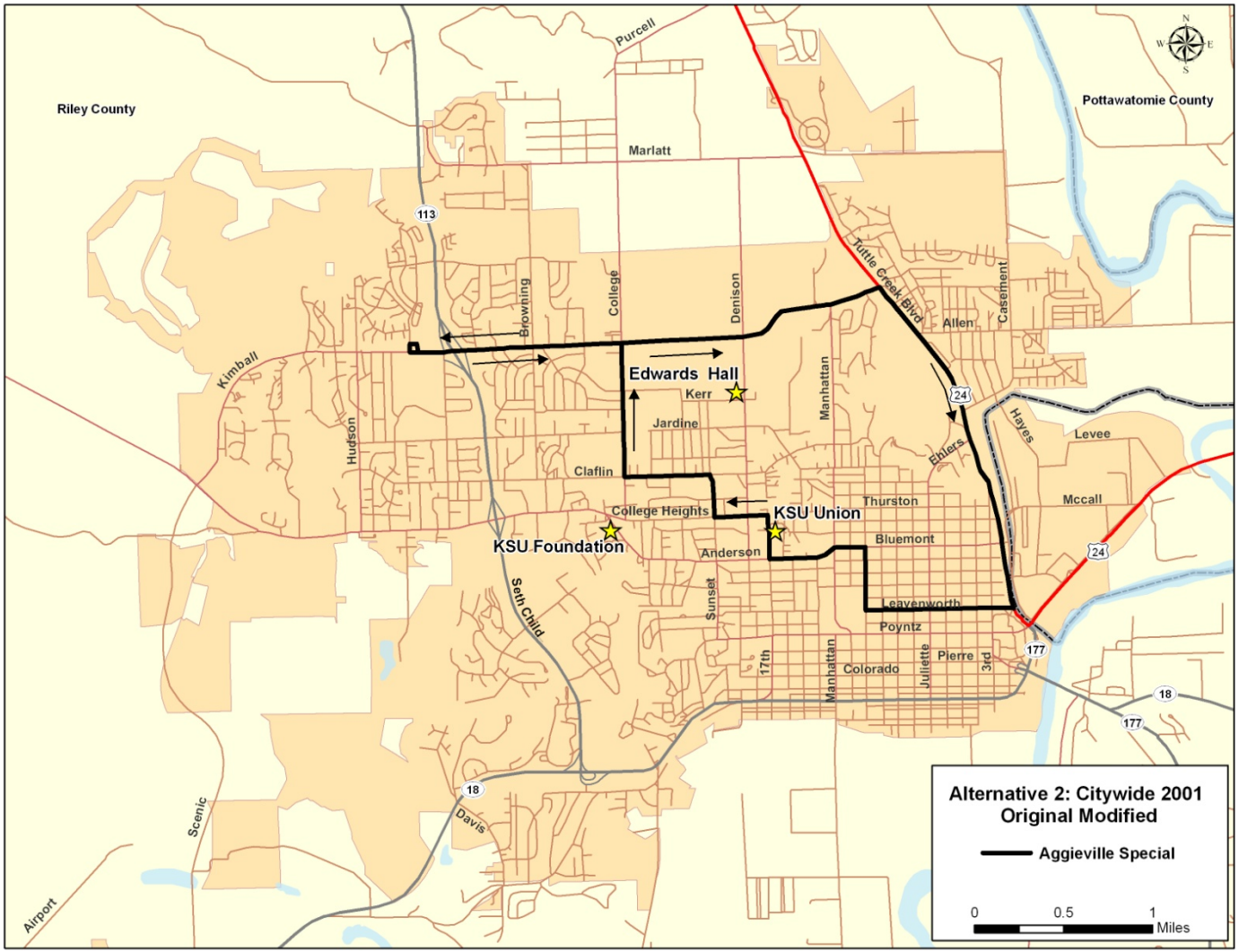

Figure 42: Alternative 3—Route 1 West Split End

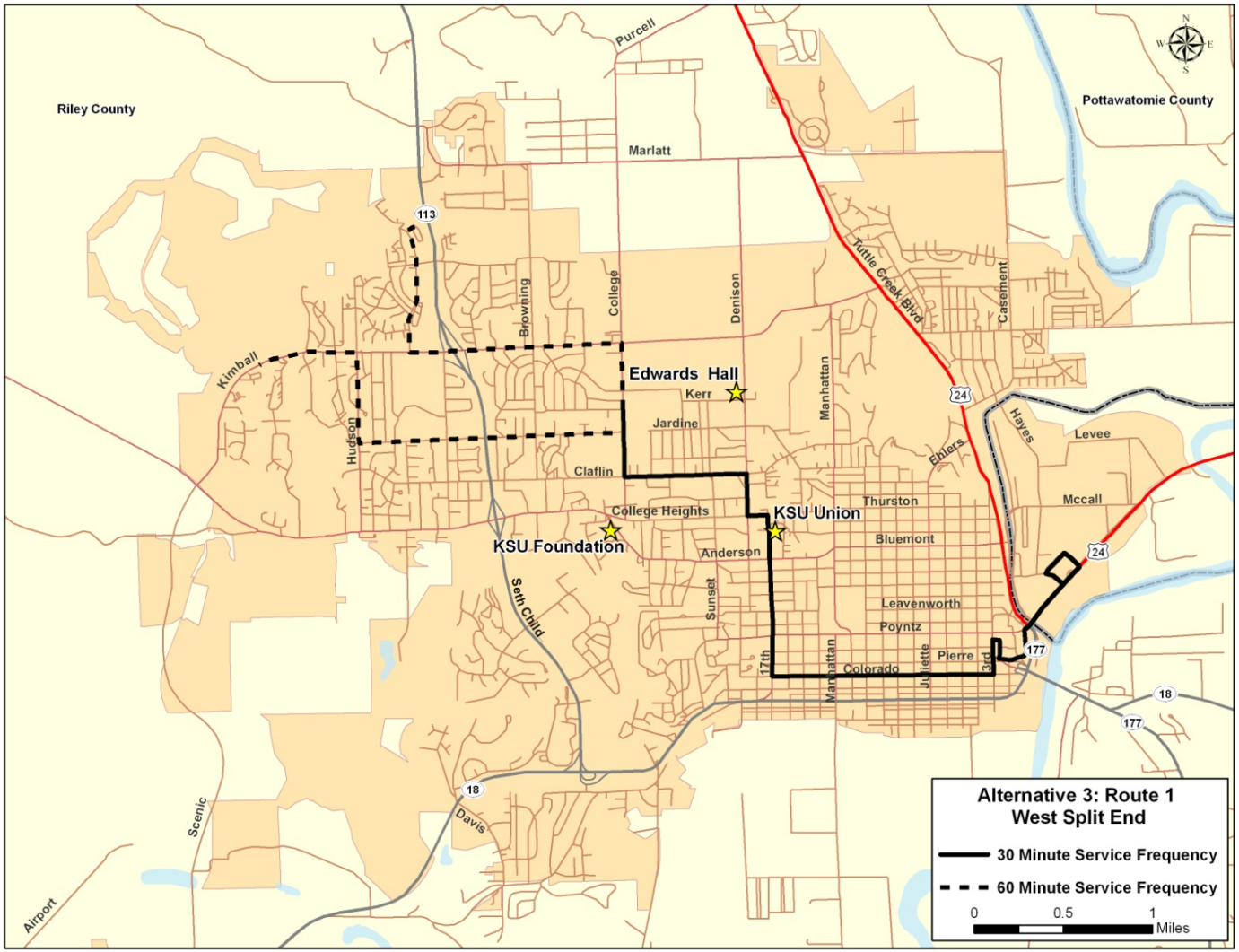

Figure 43: Alternative 4—West Split End via Edwards Hall

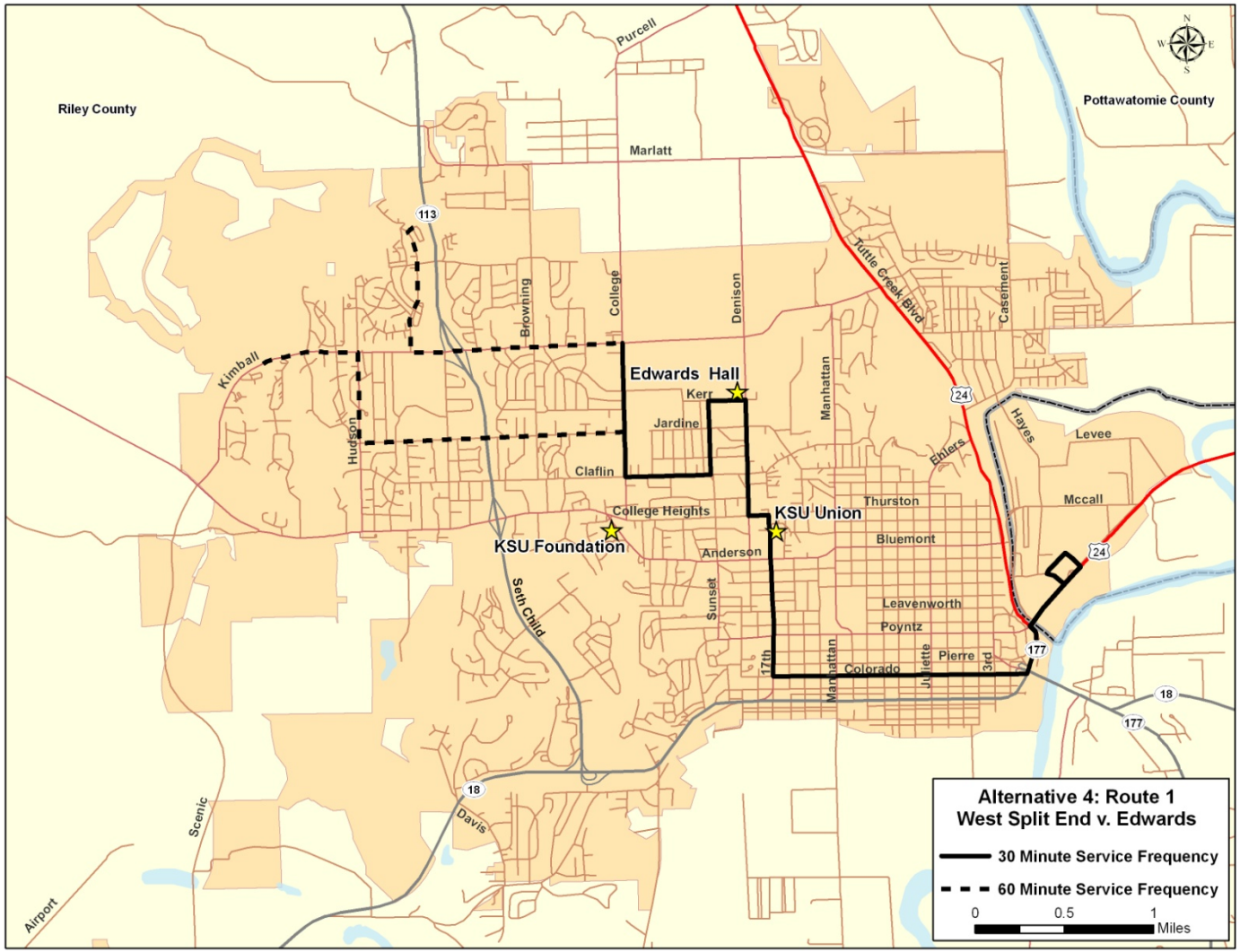

Figure 44: Alternative 4S—Alternative 4 Shorten

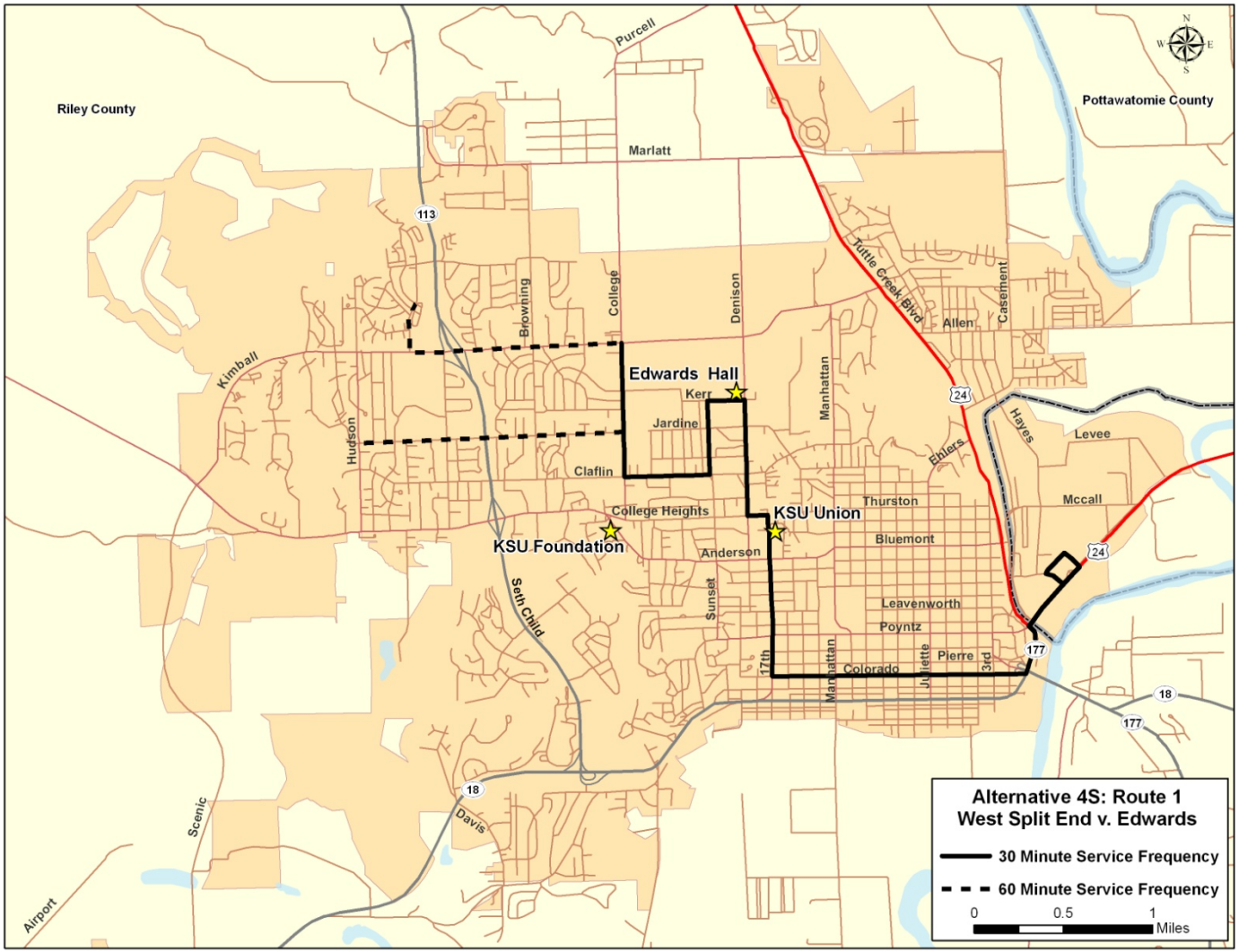

Figure 45: Alternative 5—Route 1 West Split End via Edwards and Eastside Loop

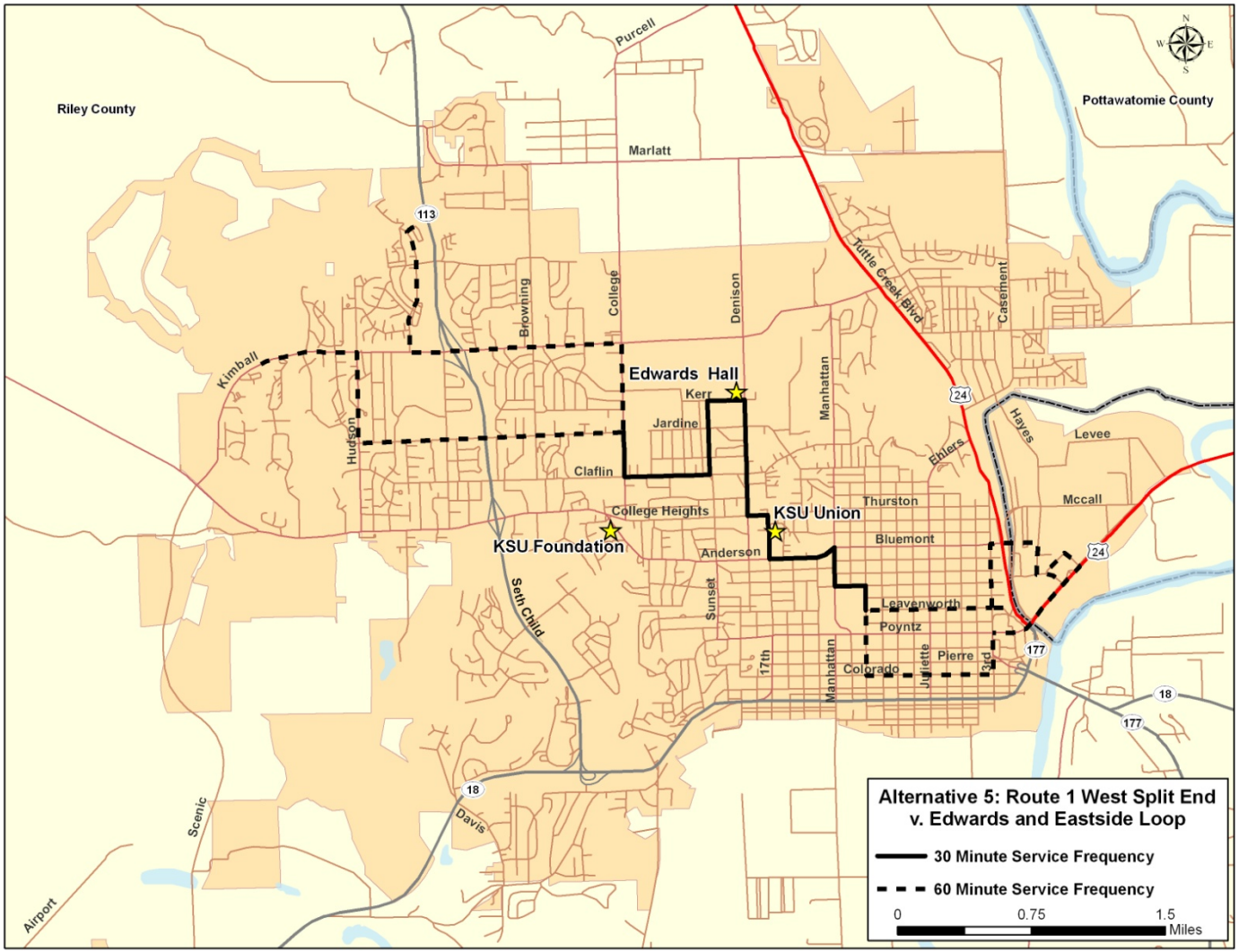

Figure 46: Alternative 5S—Alternative 5 Shorten

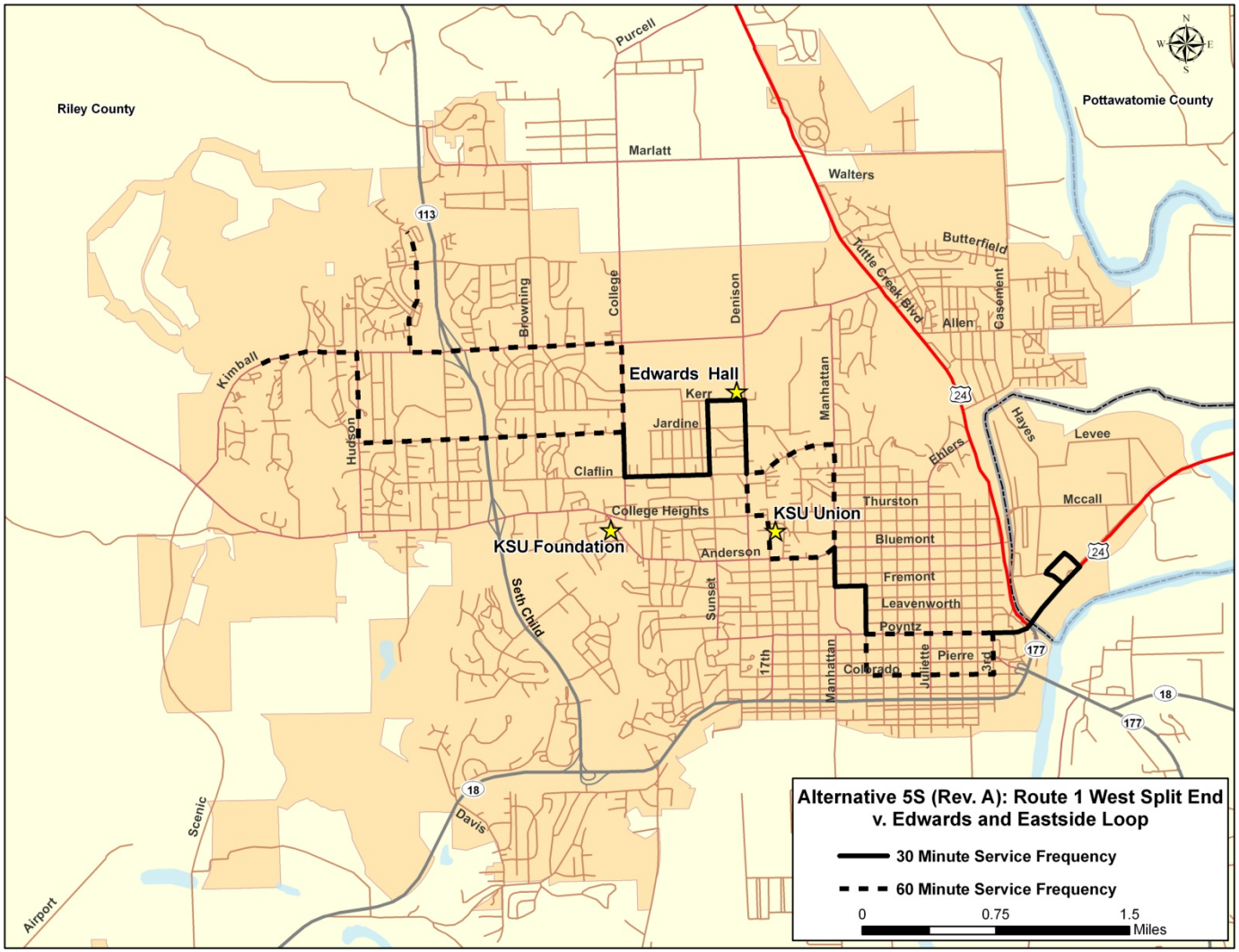

Figure 47: Alternative 6—Route 2 East/West Split Ends

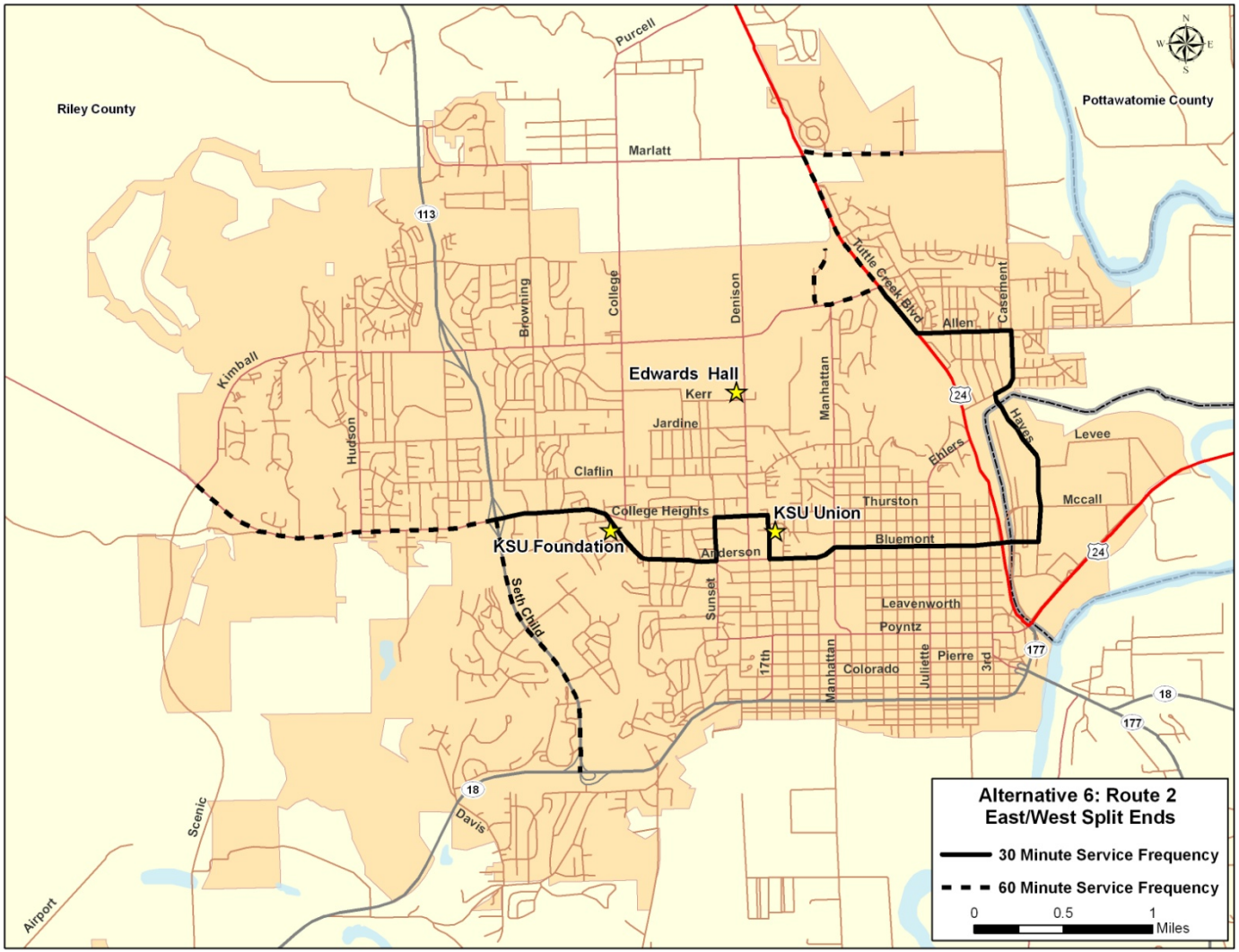

Figure 48: Alternative 6S—Alternative 6 Shorten

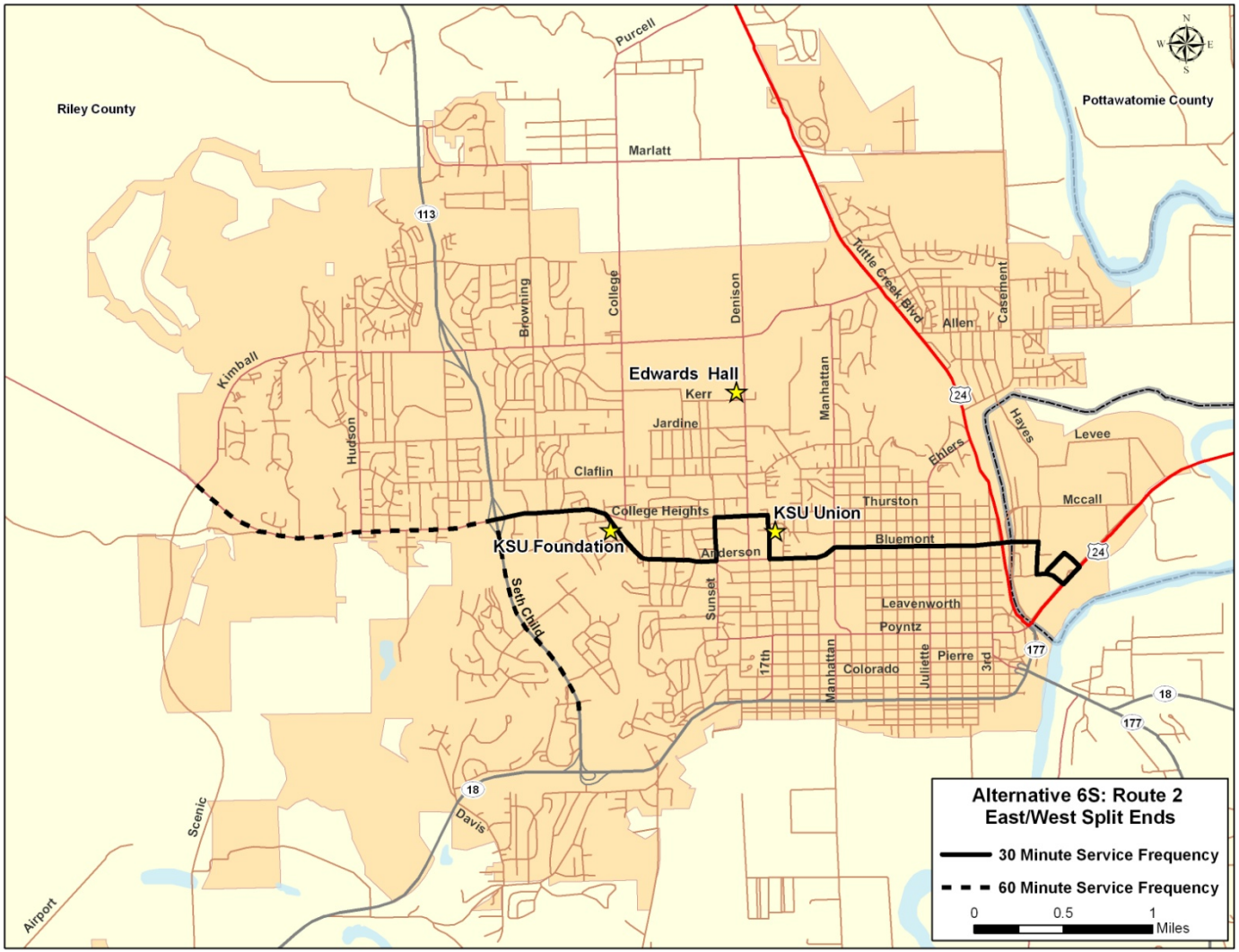

Figure 49: Alternative 7—Route 2 East/West Split Ends via Edwards Hall

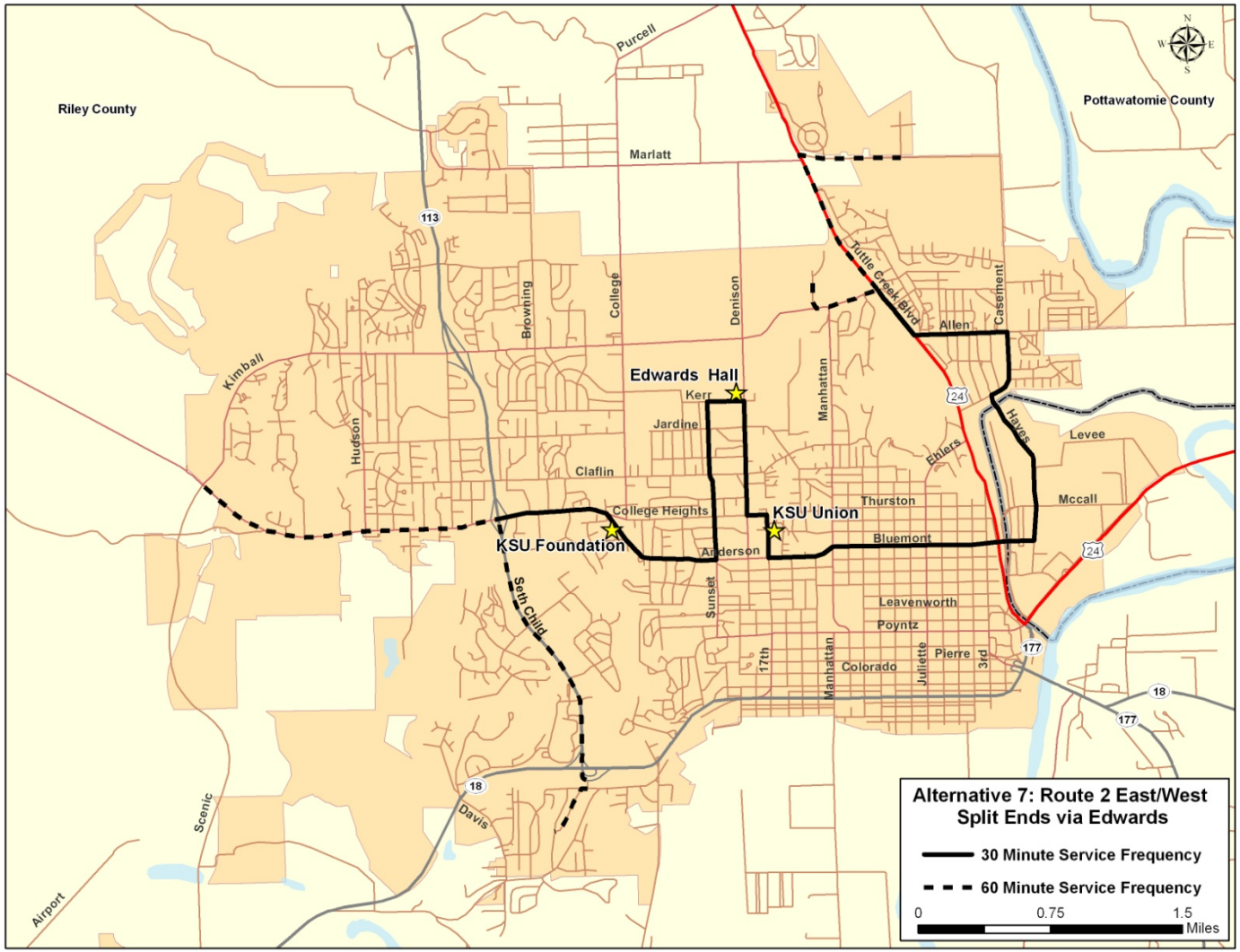

Figure 50: Alternative 7S—Alternative 7 Shorten

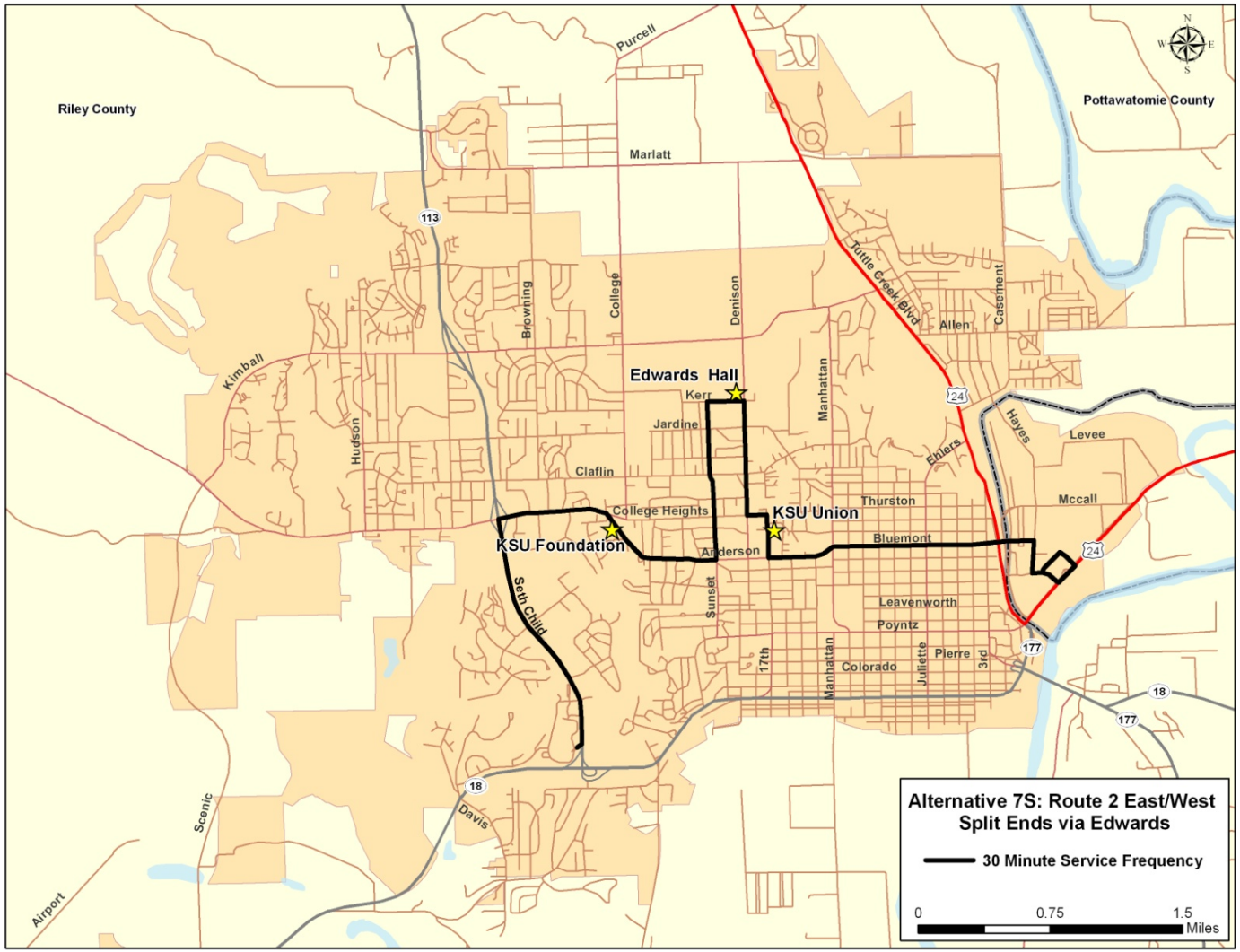

Figure 51: Alternative 8—Route 2 East/West Split Ends via Bluemont/Fremont

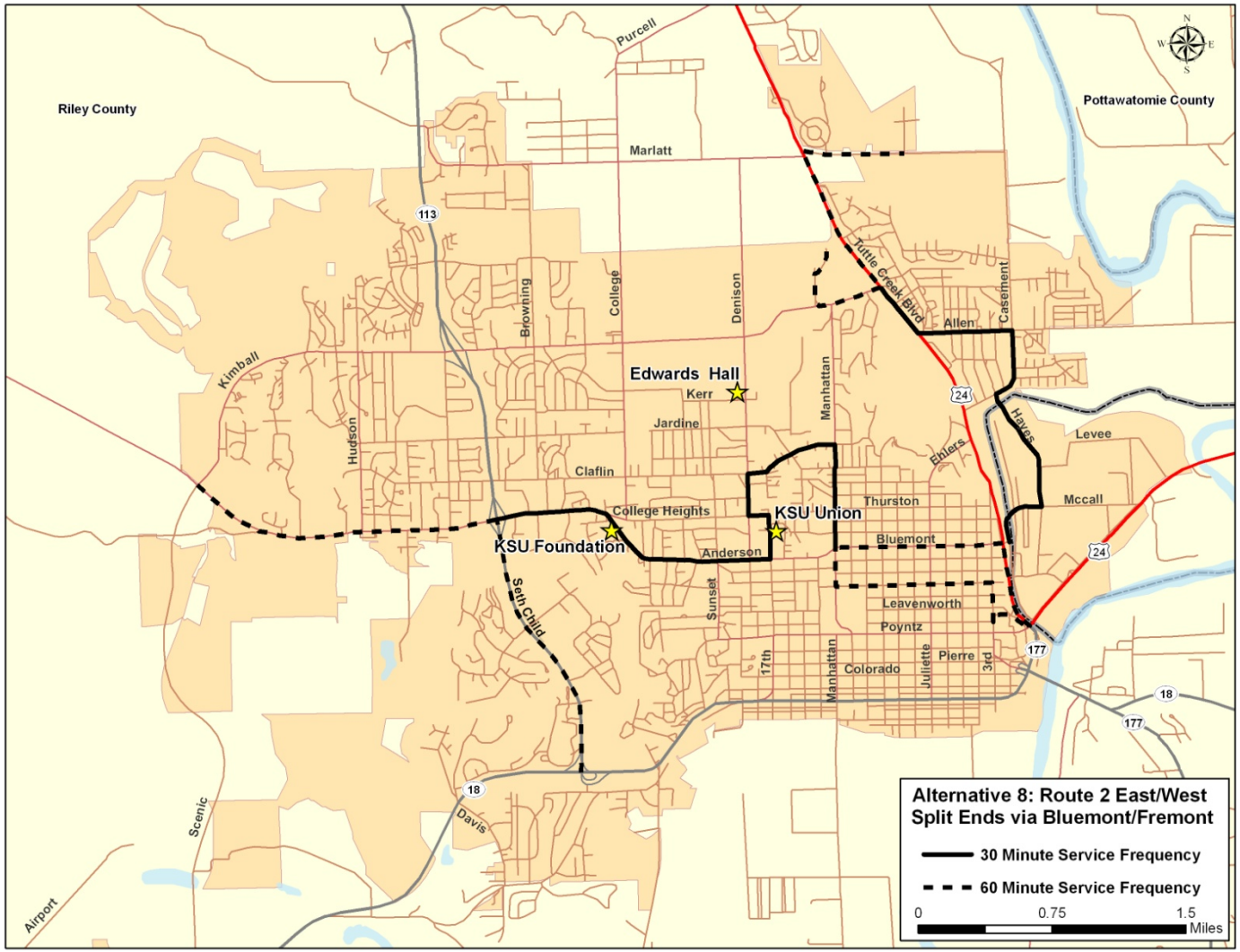

Figure 52: Alternative 8S—Alternative 8 Shorten

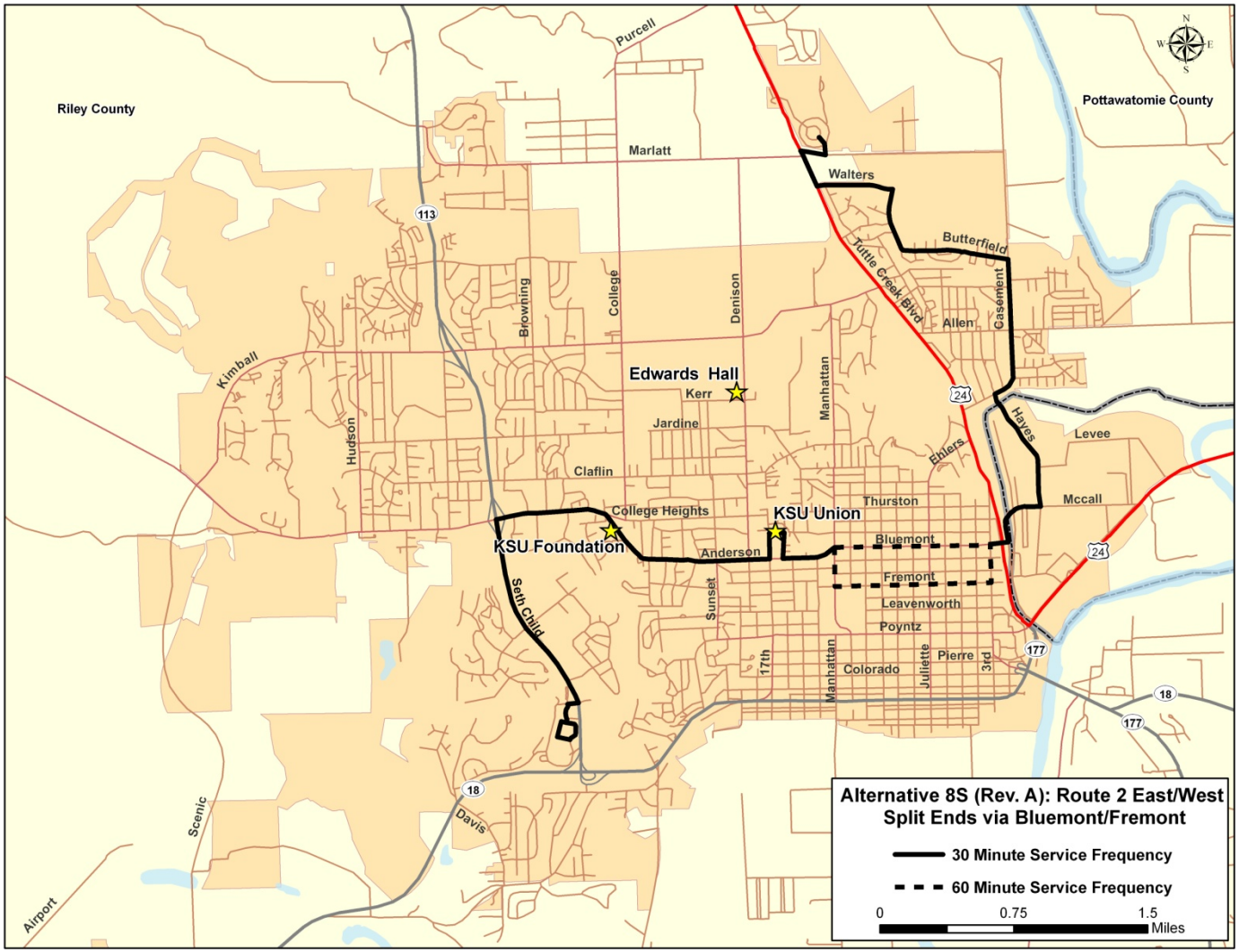

Figure 53: Alternative 9—Hybrid Route

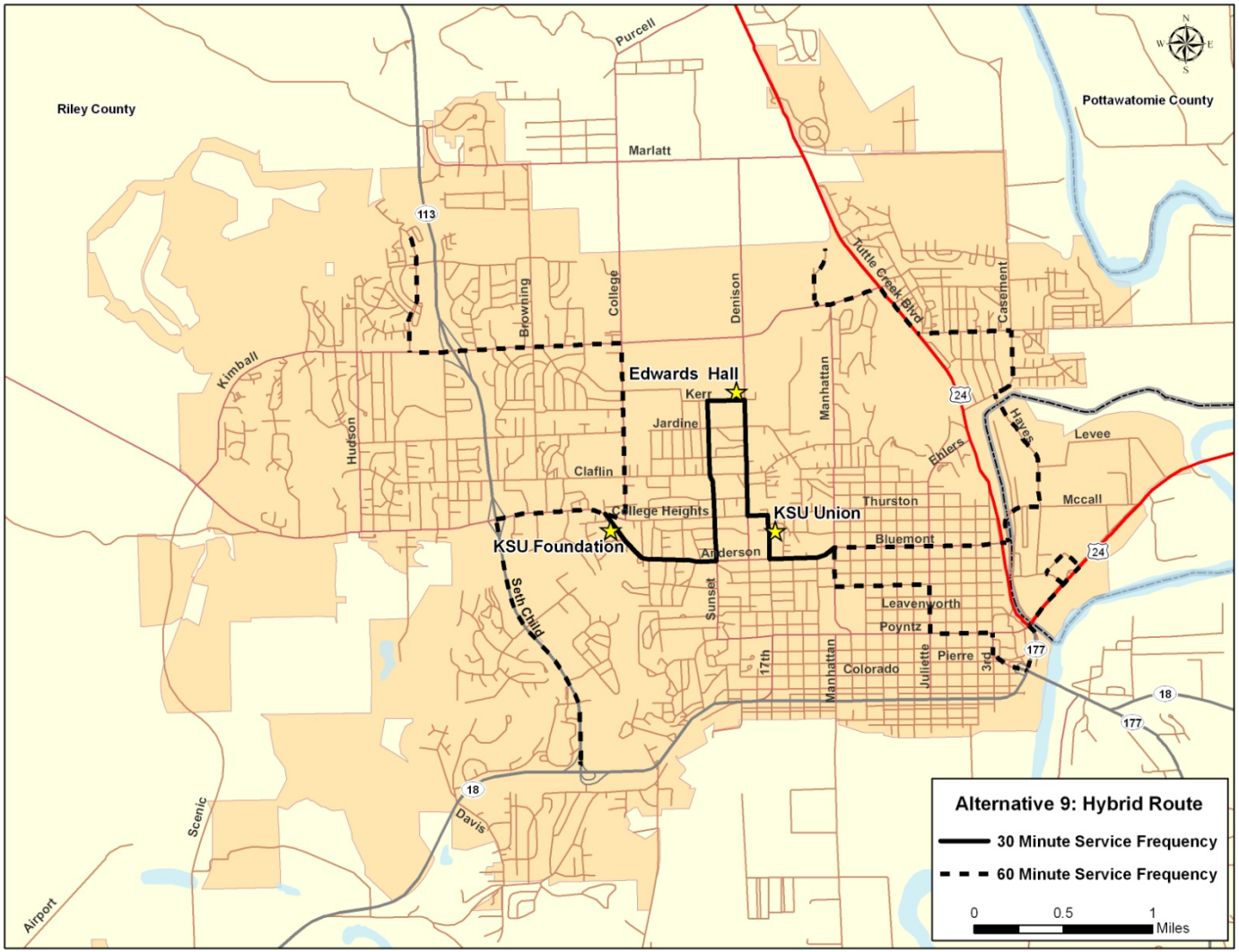

Figure 54: Alternative 10—Airport/Tech Park Fixed Route Service

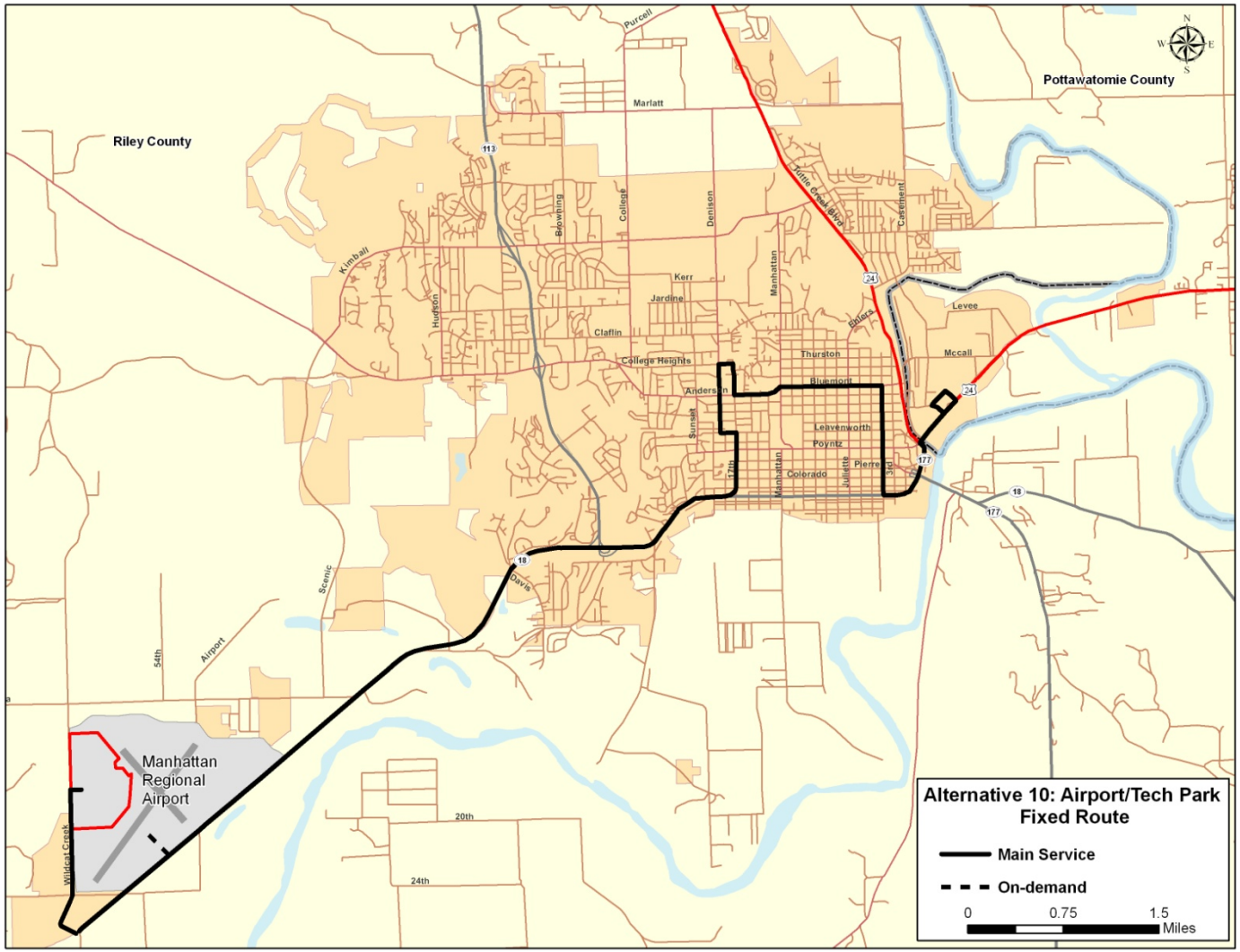

Figure 55: Alternative 11—Airport/Tech Park Demand Response Service

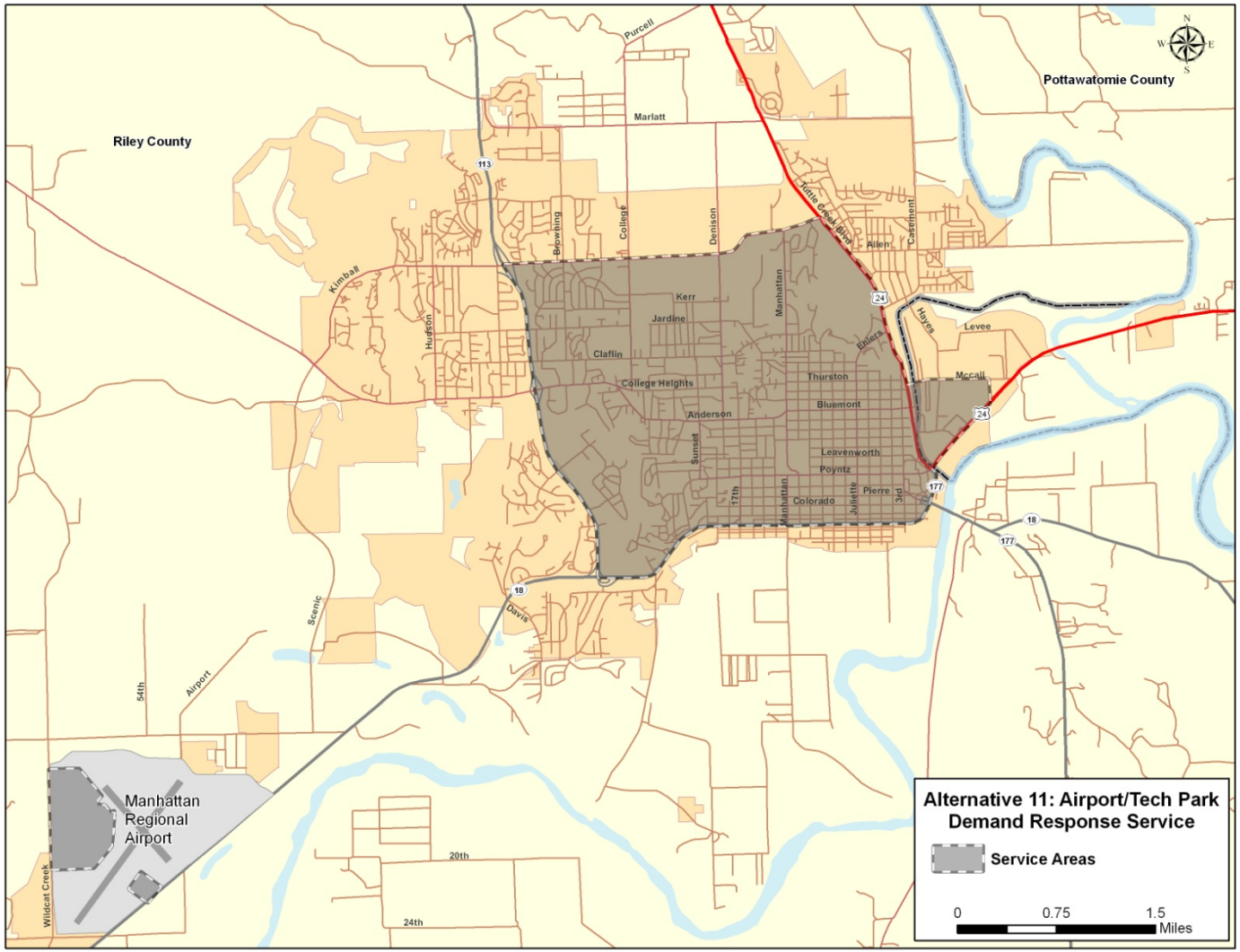

Figure 56: Alternative 12—Aggieville Special 2001 Loop

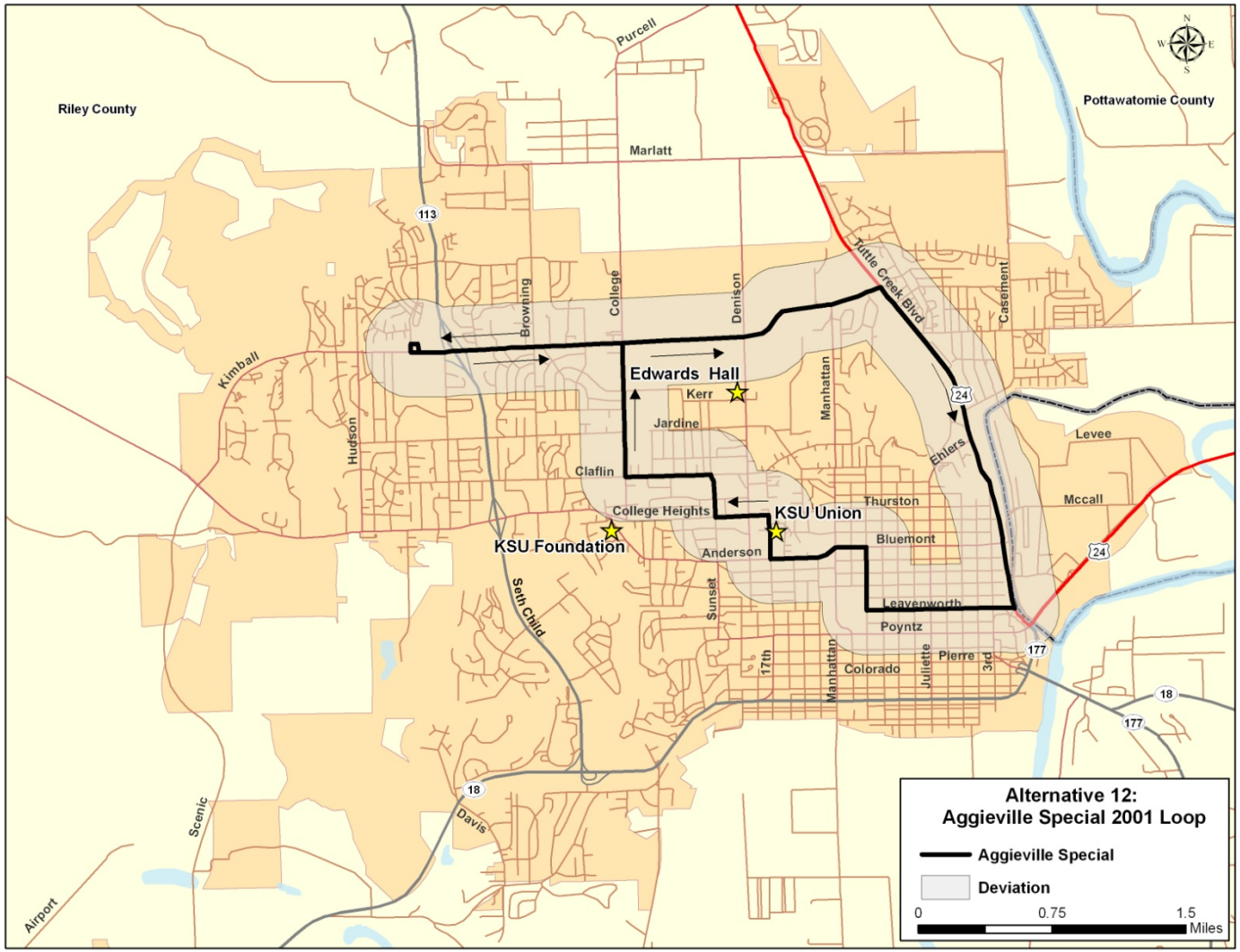

Figure 57: Alternative 13—Aggieville Special Two Loops

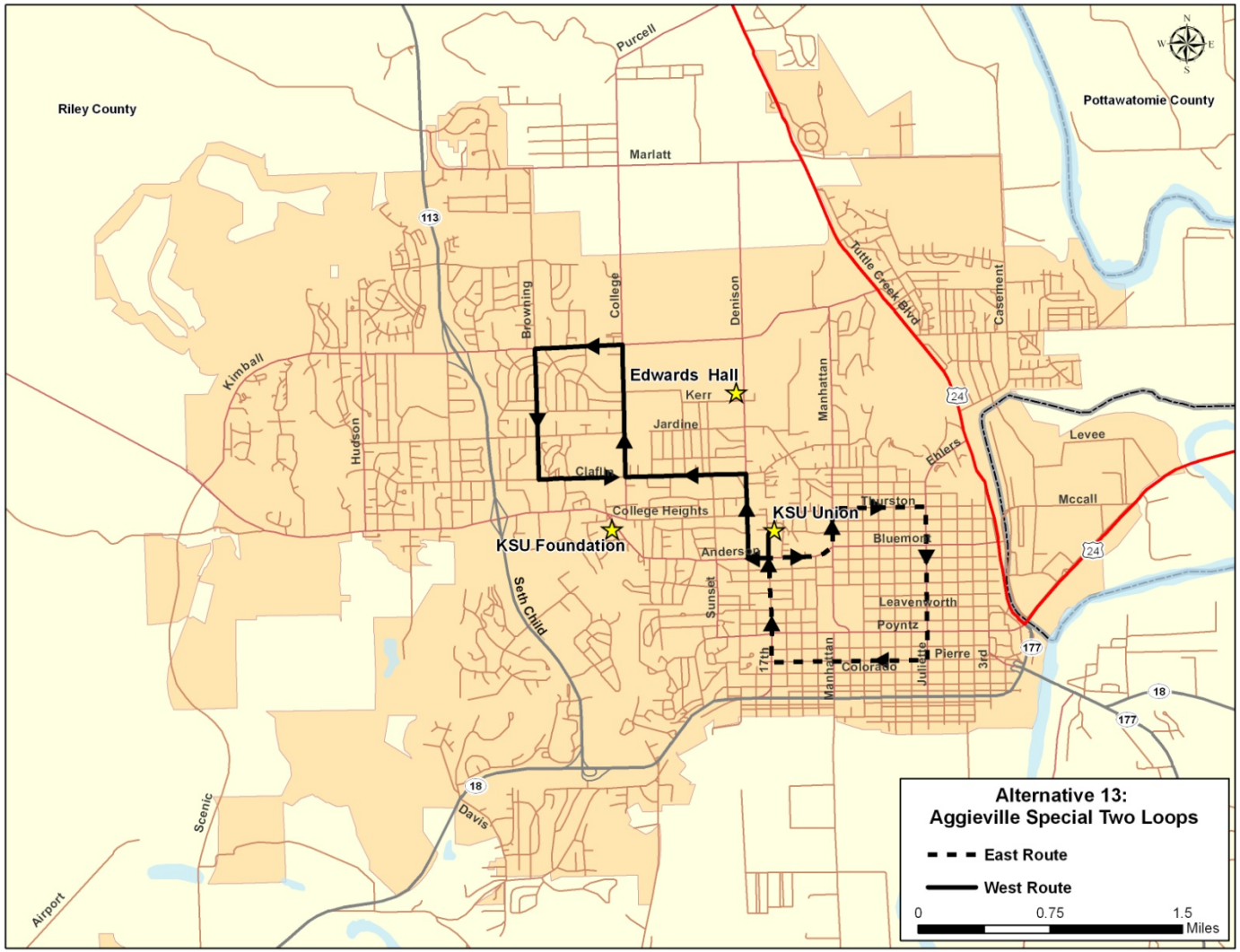

Figure 58: Alternative 14—Aggieville Special Two Loops/Deviated