

KU Transit Study



Wichita
Travels

Wichita Travels

- Wichitans want more transit (TDP/Visioneering/Downtown Master Plan)
- Wichita Transit should expand service
- Plan should serve commuters/major employers
- Routes need greater interconnectivity
- Wichita needs better transit options

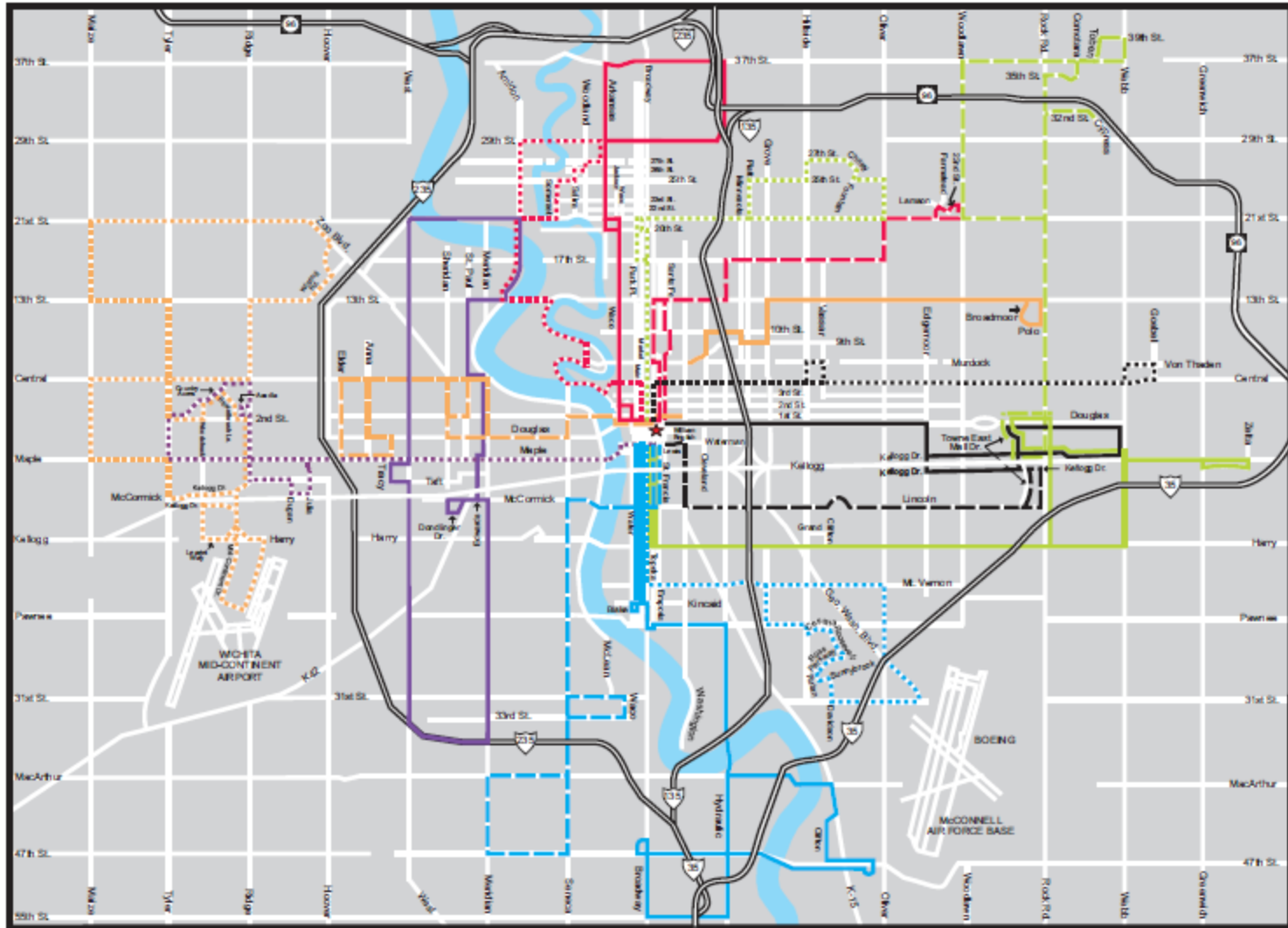
How Wichita Compares

City	Population of Service Area	Operating Costs (excluding capital)	Cost per Capita
Denver	2,800,000	\$391,800,000	\$139.93
Topeka	126,000	\$8,640,063	\$68.57
Little Rock	200,000	\$13,038,428	\$65.19
Kansas City	1,445,584	\$74,481,799	\$51.52
Oklahoma City	429,000	\$21,694,709	\$50.57
Springfield	155,000	\$7,605,242	\$49.07
Lincoln	251,624	\$9,885,935	\$39.29
Tulsa	486,665	\$17,508,000	\$35.98
Omaha	900,000	\$25,114,117	\$27.90
Wichita	365,000	\$10,006,930	\$27.42

Wichita Travels

- Implementation of ITS Project in Progress
 - Next Bus arrival time technology
 - Trip Planning
 - Smartphone technology
 - Scheduling system
- Q-Line Ridership up to 37,137 in 2010
- Transit Buses carry about 1,000 bikes a week
- Every dollar invested in Transit brings in \$3-\$4 to the community

Where We Are Now



The Vision – Grid System

Why the Grid?

- Minimize transfers
- Easier to understand
- Better coverage
- Easily expandable
- Wichita is based on a grid

The Vision – Grid System

What Wichita Wants



**Grid
System**

Operating Cost –Grid System

Phased Approach

- Move to a base Grid System with same hours of service and frequencies

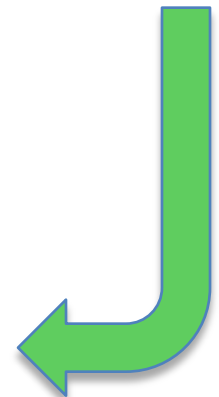
Peak Buses	83
Total Buses	100
Annual Hours	271,752
Annual Cost	\$23,093,000
Annual Riders	5,949,600
Cost per Rider	\$3.88
Annual Farebox	\$3,510,264.00
Total Route Miles	494.19

Revenue
Hours ×

Projected Operating Cost
\$85/hour

= Annual
Cost

Projected Annual Operating Cost (Base Grid System)
\$23,093,000



Capital Cost – Grid System

Phased Approach

Rolling Stock				Match
	Cost per Unit	Qty	Total Cost	
Standard Bus	\$410,000	47	\$19,270,000	\$3,275,900
Facilities				
	Cost per Unit	Qty	Total Cost	
Bus Facility (100 bus Facility)	<i>estimated</i> \$10-\$15 million			\$2-\$3 million
Shelters	\$10,000	300	\$3,000,000	\$600,000

Total Initial Capital Cost (high end)	Match
\$37,270,000	\$6,875,900

Annual Capital Expenditures	Annual
10% of Operating Costs	\$2,309,300
	\$461,860

Wichita Travels

Once we have a scalable grid we can:

- Make service more frequent
- Expand hours
- Offer Sunday service
- Expand service area

The Vision – KU Plan

Wichita Travels

Corridor Connector		
Span		
5am - 10pm Monday through Saturday		
6am - 6pm Sunday		
Frequencies - Monday through Friday		
Early AM and Evening (5am-6am, 6pm - 10pm)		30 Minutes
Peak (6am-9am, 3pm-6pm)		15 Minutes
Midday (9am-3pm)		30 Minutes
Frequencies - Saturday		
All Day (5am-10pm)		60 Minutes
Frequencies - Sunday		
All Day (6am-6pm)		60 Minutes

11 Proposed Routes

The Vision – KU Plan

Wichita Travels

Local	
Span	
5am - 8pm Monday through Friday	
6am - 8pm Sunday	
Frequencies - Monday through Friday	
Early AM and Evening (5am-6am, 6pm - 8pm)	30 Minutes
Peak (6am-9am, 3pm-6pm)	15 Minutes
Midday (9am-3pm)	30 Minutes
Frequencies - Saturday	
All Day (6am-8pm)	60 Minutes
Frequencies - Sunday	
No Service	

16 Proposed Routes

The Vision – KU Plan

Wichita Travels

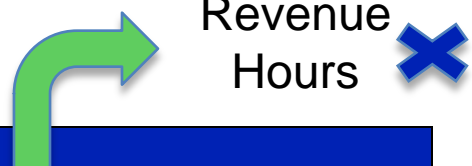
Bus Rapid Transit		
Span		
5am - 10pm Monday through Saturday		
6am - 6pm Sunday		
Frequencies - Monday through Saturday		
Early AM and Evening (5am-6am, 6pm - 10pm)		30 Minutes
Peak (6am-9am, 3pm-6pm)		10 Minutes
Midday (9am-3pm)		15 Minutes
Frequencies - Sunday		
All Day (6am-6pm)		60 Minutes

Douglas Corridor

Operating Costs – KU Plan

Wichita Travels

Route Costs							
Grid	Type	One-Way	Avg. Speed	Annual Hours	Annual Cost	Annual Riders	Peak Vehicles
Douglas	BRT	9.486	18	27,759	\$2,360,000	1,110,360	8
13th	Corridor Connector	15.866	15	34,065	\$2,896,000	1,021,950	10
21st	Corridor Connector	15.6556	15	34,065	\$2,896,000	1,021,950	10
Central	Corridor Connector	15.9984	15	34,065	\$2,896,000	1,021,950	10
Harry	Corridor Connector	10.7395	15	25,090	\$2,133,000	752,700	7
Hillside	Corridor Connector	9.0814	15	20,755	\$1,764,000	622,650	6
Maple	Corridor Connector	11.4223	15	25,090	\$2,133,000	752,700	7
Meridian	Corridor Connector	9.3621	15	20,755	\$1,764,000	622,650	6
Oliver	Corridor Connector	10.0937	15	25,090	\$2,133,000	752,700	7
Pawnee	Corridor Connector	14.765	15	32,535	\$2,765,000	976,050	9
Rock	Corridor Connector	8.0419	15	19,225	\$1,634,000	576,750	5
Washington	Corridor Connector	9.0944	15	20,755	\$1,764,000	622,650	6
119th	Local	4.9794	15	11,438	\$972,000	114,380	4
17th	Local	7.2277	15	15,991	\$1,359,000	159,910	5
25th	Local	10.8283	15	21,346	\$1,814,000	213,460	7



Projected Operating Cost	=	Annual Cost
\$85/hour		

Projected Annual Operating Cost
\$56,091,000

Capital Costs – KU Plan

Wichita Travels

Rolling Stock				Match
	Cost per Unit	Qty	Total Cost	
Standard Bus	\$410,000	130	\$53,300,000	\$9,061,000
Stylized Bus	\$600,000	10	\$6,000,000	\$1,020,000
Facilities				
	Cost per Unit	Qty	Total Cost	
Bus Facility (200 bus Facility)	<i>estimated</i> \$20-\$30 million			\$4-\$6 million
Shelters	\$10,000	0	\$0	\$0

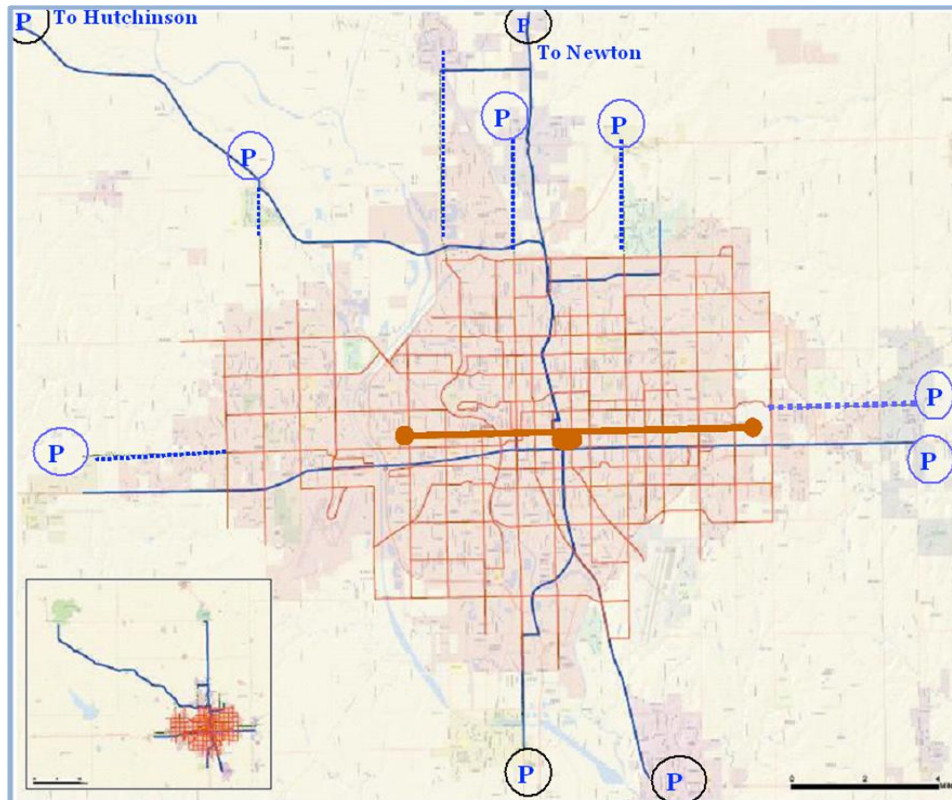
Facilities				
	Cost per Mile	Miles	Total Cost	
Right of Way, Signal Priority	\$3,000,000	9.49	\$28,470,000	\$5,694,000

Total Capital Cost (high end)	Match
\$117,770,000	\$21,775,000

Annual Capital Expenditures			Annual	
10% of Operating Costs			\$56,091,000	\$5,609,100

The Vision – KU Plan

Wichita Travels



Commuter Express

Costs – KU Plan

Wichita Travels

Grid Extension			
	Annual Pay to Play	Peak Vehicle	Initial Capital
Valley Center - Grid	\$217,000	2	820,000
Park City - Grid	\$260,000	2	820,000
Kechi - Grid	\$390,000	3	1,230,000
Bel Aire - Grid	\$130,000	1	410,000
Andover - Grid	\$260,000	2	820,000
Derby - Grid	\$260,000	2	820,000
Haysville - Grid	\$260,000	2	820,000
Goddard - Grid	\$260,000	2	820,000
Maize - Grid	\$130,000	1	410,000
Totals	\$2,167,000	17	\$6,970,000

Costs – KU Plan

Wichita Travels

Commuter Express Service			
	Annual Pay to Play	Peak Vehicle	Initial Capital Cost
North Express	\$390,000	3	1,230,000
Northeast Express	\$260,000	2	820,000
East Kellogg Express	\$390,000	3	1,230,000
West Kellogg Express	\$390,000	3	1,230,000
Haysville Express	\$390,000	3	1,230,000
Derby Express	\$390,000	3	1,230,000
Newton Express	\$390,000	3	1,230,000
Northwest Express	\$780,000	6	2,460,000
Maize Express	\$390,000	3	1,230,000
Totals	\$3,770,000	29	\$11,890,000

Wichita Travels

Anticipated Increases in Revenue

- Kansas T-Link Recommendation
 - Increase of \$.5 – \$1 million in state funding
- Farebox Revenues
 - Up to \$6.2 million increase for Full Vision
 - Up to \$2 million increase for Base Grid System
- With the Base Grid Wichita Transit could see up to a \$3 million increase over current farebox revenues and state assistance

Capital Funding

Wichita Travels

- Capital Expenses
- Federal Funding
 - FTA 5307 Funding
 - FTA 5309 Discretionary Funding
 - TIGER Grants
 - TIGGER Grants
 - Bus Livability Discretionary Grants

Operating Funding

Wichita Travels

Possible Funding Opportunities

- Sales Tax
- Transit Benefit District
- Contract Agreements (*e.g. Universities*)
- Advertising, Concessions
- Employer Payroll Taxes
- Rental Car/Hotel Tax
- Parking Fees
- Utility Fees

Goals for Transit Plan

1. Seek a sense of permanence for transit
2. Create a better operating environment for transit efficiency
3. Promote pedestrian and bicyclist access
4. Integrate regional and downtown bus service
5. Strengthen the transit and land use connection
6. Provide links among districts downtown
7. Increase frequencies for more convenience
8. Establish Douglas as a strong transit corridor

Downtown Master Plan



Coordinating the Plans

- Bring the two plans together by concentrating on key transit corridors
 - Douglas
 - Main
 - Central
 - Maple
 - Seneca
 - Broadway

Create a Transit Presence

- Create stops that accommodate the Q-lines and grid system fixed routes
- Use newly implemented ITS upgrades in LED signage at bus stops
- Coordinate with bicyclist by providing bike racks both on the bus and ground

Implementation

Possible Phases

- Implementation of Downtown Master Plan
 - Increase transit presence downtown
- Implementation of Grid System
 - Initiate implementation of phased plan by starting with grid system
- Implementation of Expanded Services
 - Expand hours and frequencies in increments
- Implementation of Regional Service
 - Work off of success to plan for regional service

The WTAB Recommends

- Retaining professional transit planning services to refine and phase the plan
- Breaking the plan into implementable and affordable phases
- Gather public input
 - Townhall Meetings
 - Surrounding Communities
 - DAB's
- Integrate the Regional Plan into the MTP Priorities

Wichita Travels

The Wichita Transit Advisory Board would like to recognize the KU planning students for their work on this study.

Thank You!!!