US-56 Corridor Management Plan

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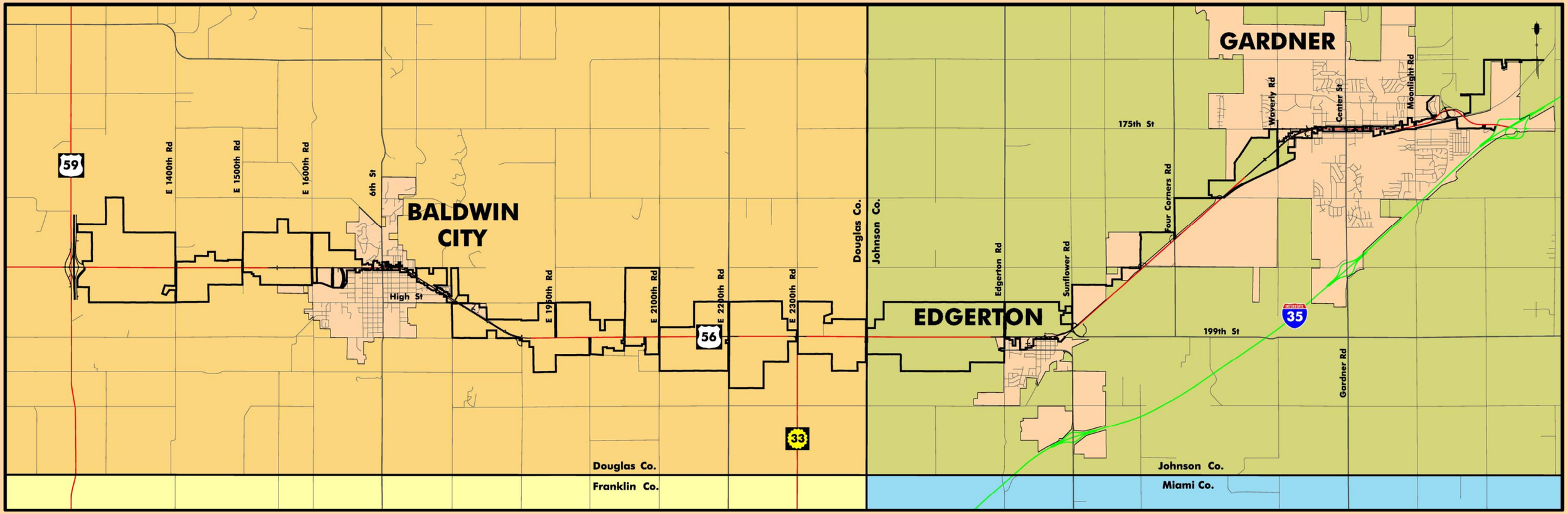
56-106 KA-1496-01
Douglas and Johnson Counties



KANSAS DEPARTMENT OF TRANSPORTATION

Douglas County
Johnson County
Lawrence-Douglas County Metropolitan Planning Area
Mid-America Regional Council
Baldwin City
City of Edgerton
City of Gardner

June 2010

TranSystems

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Technical Appendix - *Available on CD*
Existing Driveway and Crash Data
Gap Studies
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Traffic Analyses

Disclaimer

The concepts illustrated in this report depict the recommended improvements for US-56 and the local street network from US-59 to I-35. The exact location, design and right-of-way for this project cannot be determined from these concepts and could be different from that shown. Preliminary design will need to be performed to refine the improvements and right-of-way requirements.

Changes in access shown are conceptual in nature and subject to case-by-case review. Access modification may occur with a change in use of the property (including redevelopment and development), when roadway improvements are constructed, and/or when a safety issue needs to be addressed.

Chapter One - Introduction

The Kansas Department of Transportation (KDOT), partnering with several local entities, began the process of conducting the US-56 Corridor Management Plan beginning in 2008. These local entities, collectively referred to as the Partners, include:

- Baldwin City, Kansas
- Edgerton, Kansas
- Gardner, Kansas
- Douglas County, Kansas
- Johnson County, Kansas
- Lawrence-Douglas County Metropolitan Planning Organization
- Mid-America Regional Council

KDOT and Partners began the US-56 Corridor Management Plan with a stated purpose to improve access management and capacity along US-56 in a way that supports the needs and addresses the concerns of the Corridor community. The study area for US-56 encompasses approximately 22 miles, stretching from US-59 on the west to the I-35 interchange on the east, as shown on ***Figure 1***.

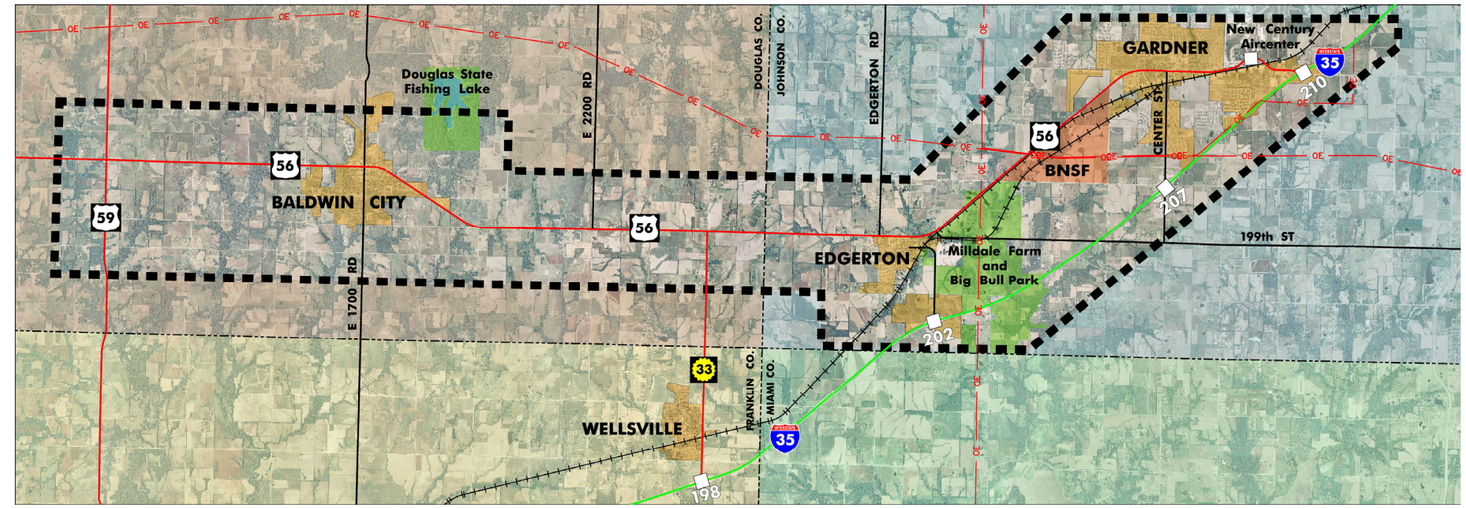


Figure 1 – Study Area

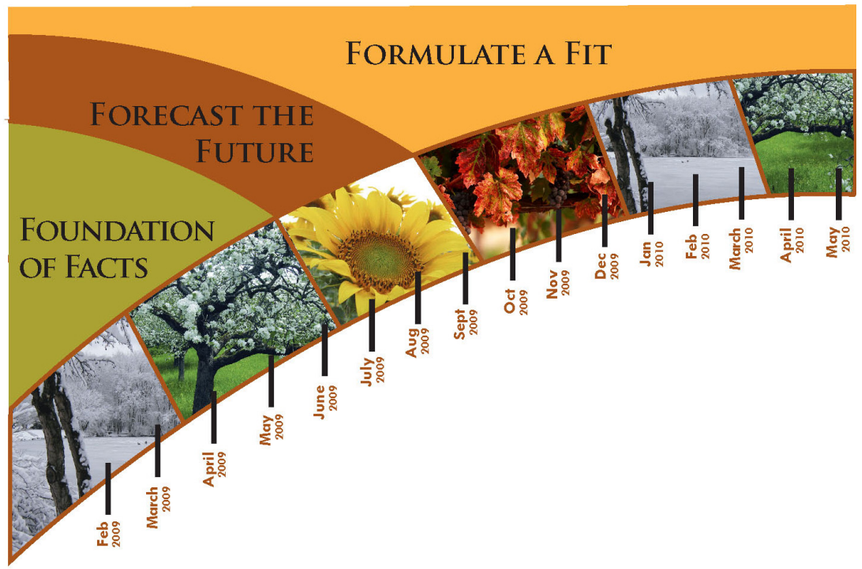


Figure 2 – Project Schedule

This US-56 Corridor Management Plan was developed in three overall phases:

- ***Foundations of Fact***
- ***Forecasting the Future***
- ***Formulating a Fit***

The schedule of the overall project is shown on ***Figure 2***.

In ***Foundations of Fact***, summarized in Chapter 2 of this report, existing information was collected and evaluated on land use, development trends, traffic volumes and patterns, traffic control, driveway locations, and roadway geometrics. In addition, input was collected from the general public by way of a survey. Interviews were also held with various stakeholders throughout the US-56 corridor.

The information gathered in this phase of the project was used to evaluate and document existing conditions to serve as a baseline for future projections.

During the ***Forecasting the Future*** phase of the project, summarized in Chapter 3, estimates were made on future land use, development trends, and traffic projections for the corridor, extending from the existing conditions out to year 2040. This information serves as the basis for evaluating future alternative improvements.

In the final phase of the project, ***Formulating a Fit***, options were developed and evaluated based on the developing character of the corridor. The final recommendations, including improvements to US-56 and changes in access to adjacent properties, are summarized in Chapter 4.

Chapter 5, ***Implementation***, discusses the means and methods in which the recommendations outlining in this report can be implemented. This includes the tools KDOT and Partners can utilize to preserve the US-56 corridor and general recommendations for changes to City and County codes and/or development guidelines.

A technical appendix, available electronically, has been prepared to document much of the information contained within this report.

PROJECT ORGANIZATION

Staff from KDOT and Partners met periodically throughout the development of the US-56 Corridor Management Plan, in both large groups (with all invited) as well as in smaller meetings which focused on issues relevant to specific community and county issues.

In addition, an Advisory Committee, consisting of a combination of elected officials, administration staff and directors of various departments, was formed to provide overall guidance through the plan's development.

PUBLIC INVOLVEMENT

The public involvement process for the US-56 Corridor Management Plan utilized several tools, including:

- Public Survey
- Stakeholder Interviews
- Workshops
- Public Officials Briefings
- Public Meetings
- Study Website

Figure 3 – Public Process

Public Survey

A survey of 742 corridor residents was conducted to gather opinions regarding US-56.

Major findings include:

- 83% of those surveyed indicated they felt either "very safe" or "somewhat safe" driving the corridor.
- Regarding the number of driveways entering onto US-56, residents felt there were "too many" driveways entering onto US-56, primarily through Gardner (38%) and Baldwin City (19%).
- There was support from those surveyed for directing future residential development inside or near the cities (86%).

Stakeholder Interviews

Questions were asked related to future development, character of the corridor, and recommendations for roadway improvements. Highlights of the interview include:

- The US-56 corridor is very diverse in terms of land use and character, and it is important to preserve those unique identities.
- There are concerns with truck traffic, sight distances at key locations, and narrow shoulders. Safety (including that of pedestrians) is a top priority.
- Various improvements suggested by stakeholders include: improve sight distance at key locations; add travel lanes or dedicated turn lanes at specific intersections to improve flow and alleviate congestion; and add shoulders for disabled vehicles and emergency management needs.

Interviews with the stakeholders were held on April 23, 2009.

Public Officials Briefings

Public Officials from all of the Partner communities were invited to meetings during the development of the US-56 Corridor Management Plan. Briefings were provided on the process of developing the Plan and the future steps that would be required to move the US-56 Corridor Management Plan to completion.

Public Officials Briefings were held on June 28th and 29th, 2009, and on January 12, 2010, as the study of US-56 transitioned between the major phases.

Workshops

Workshops were held throughout the development of the US-56 Corridor Management Plan to seek input and recommendations from a wide range of attendees. Those invited to the workshops, which were also open to the public, included key staff from KDOT and Partners, the Advisory Committee, stakeholders, and members of the public who had expressed interest.

Public Meetings

Preliminary recommendations were shared with the general public at two open house meetings, on February 9 and 11, 2010. Due to the length of the corridor (22 miles), separate meetings were held in Johnson County (at Mildale Farms) and Douglas County (in Baldwin City).

Study Website

Development of the US-56 Corridor Management Plan could be tracked online at www.us56corridorplan.org. Results of the survey, along with materials from the workshops and public meetings, were provided for those seeking alternative means of gathering information. Comments could be submitted on the study website as well.

Chapter Two – Foundations of Fact

In Foundations of Fact, the US-56 Corridor was evaluated based on existing and historical conditions. These conditions, including physical, geometric, and operating conditions, access points, and crash history, were compared against recognized standards and current design guidelines to provide a Foundation of Fact relative to the existing conditions.

PHYSICAL CONDITIONS

The physical conditions of the US-56 Corridor were divided between bridge, pavement, and geometric conditions.

Bridge Conditions - There are a total of twelve (12) bridges along the 22-mile long corridor. The majority of bridges cross natural features such as creeks, while only five bridges cross over roads or railroads. The longest bridges over natural features are 112 feet long, while the majority (five bridges) are less than 40 feet. The two longest bridges, over 400 feet in length, carry US-56 in the eastbound and westbound directions over I-35.

Only four of the bridges are greater than 50 years old, the remainder being less than 25 years old. The age of the bridges is reflected in their sufficiency index, a rating of 1 to 100 of the bridge conditions. Two bridges have a sufficiency index less than 50, while half have a sufficiency index greater than 90. The two with less than 50 are identified for replacement, while a third bridge is identified for rehabilitation. All three bridges are located in Douglas County.

Pavement Conditions - In general, the overall pavement condition along the US-56 roadway is rated as an acceptable condition. The majority of the roadway (more than 80 percent) consists of composite materials while the remainder varies between bituminous (one mile) and concrete pavement (approximately three miles). Along US-56, shoulders are narrow and terrain is often rolling.

Several different assessments of the pavement reinforce the overall acceptable conditions rating. In terms of roughness, only three miles are rated "tolerable", or minimally acceptable, one of those miles being the bituminous pavement and the other two miles essentially within Baldwin City. Approximately five miles have been identified as crack seal candidates, all in Douglas County. From a pavement performance assessment, only six miles are rated as "tolerable", all in Johnson County.

Geometric Conditions - Based on available data, the geometric conditions of US-56 were evaluated based on current design guidelines for horizontal and vertical design elements. From a horizontal design component, the curvature on US-56 generally is consistent with the posted speed limits. However, there are locations where the vertical alignment has provided less than ideal alignments due to the rolling terrain.

OPERATING CONDITIONS

The diverse nature of the US-56 Corridor brings with it different methods of evaluating the existing operating conditions, as rural highway segments are evaluated differently than intersections in communities.

Highway Segments - Two-lane highway segments are evaluated primarily by the ability for drivers to pass and travel at their preferred speed.

The rural highway segments, from US-59 to Baldwin City, from Baldwin City to Edgerton, and from Edgerton to Gardner, all operate today with acceptable conditions, although the segment from Edgerton to Gardner is beginning to approach the thresholds of acceptable conditions due to the heavy directional split of traffic (eastbound in the morning and westbound in the evening).

Intersections - In communities, traffic operating conditions are measured by the amount of delay experienced by drivers at intersections. For signalized intersections an average delay is calculated for all drivers while for stop-controlled intersections delay is calculated for movements that must yield to other traffic, such as a side-street approach or a left-turn off of US-56.

With the intersection improvements currently under construction at Moonlight and US-56, all of the intersections operate with acceptable conditions today.

TRAFFIC PATTERNS

Traffic data was collected along the US-56 Corridor, including peak hour traffic volumes, daily volumes, and travel speeds. ***Figure 2-1*** summarizes the existing traffic volumes on US-56, measured by mile marker from west to east. Travel speeds were also measured at several locations and found to be generally consistent with the posted speed limits.

ACCESS POINTS

Using KDOT's data set of access points, a rate of access points per mile rate was calculated that shows a range from 8 to over 60 access points per mile, illustrated on ***Figure 2-2***. As could be expected, access point rates increase in the city limits where traffic volumes, speed slows, and commercial activity increases. Public street access points are also shown.

Comparative access point rates vary based upon rural high-speed characteristics as well as low- to moderate-speed suburban/urban characteristics. In rural areas, a guideline of eight to ten access points per mile is suggested and is achieved along much of Douglas and Johnson County. Rural areas can exceed this threshold and currently occurs where six five-acre residential parcels each have direct access to US-56 between Edgerton and Baldwin City.

For urbanized areas, a guideline of 20 to 30 access points per mile is suggested. On a mile basis both Baldwin City and Edgerton are within or below this threshold. However, in the City of Gardner, essentially Waverly through Moonlight, the access point rate per mile are more than double the desired rates.

Access point rates are not the only means to assess access conditions. Maintaining the functional area of intersections is important as well as the spacing of traffic signals. Yet access point rates do offer a sense of the task ahead if the intent is to bring access point rates into a desired range. Techniques such as removal, consolidation, or relocation of access points can result in a reduction of rates.

CRASH HISTORY

The crash history along US-56 was collected for a five-year period from 2003 to 2007. During that time period there was an overall downward trend in crashes.

- Intersection and intersection-related crashes accounted for the majority of incidents (51%).
  - Top locations include Moonlight (in Gardner), US-59 and 6th St (in Baldwin City).
  - Each of these top locations has had improvements made to them or has improvements under construction.
- Five fatal accidents occurred.
  - Two occurred at the junction of US-59, which was addressed with the addition of a four-way STOP control.
- The majority (67%) of the crashes occurred within cities, with only 33% occurring in rural areas.

PLANNING ASSUMPTIONS

During this phase of the planning process, the study team assembled and reviewed adopted comprehensive, land use and policy plans, and other development plans. These plans were used as a basis of the Foundation of Facts, and served as a baseline for calculating residential and non-residential demand.

In addition, baseline assumptions were made regarding anticipated changes to the transportation elements in the region, including:

- the upgrading of K-7 to a freeway from I-35 north to I-70;
- changes in access crossing the BNSF Railroad in the vicinity of the anticipated intermodal facility; and
- a new interchange on I-35 in the vicinity of 199th Street and Waverly Road.

A summary of the project assumptions, including grade separations and grade crossing removals, near the BNSF intermodal facility is shown on ***Figure 2-4***.

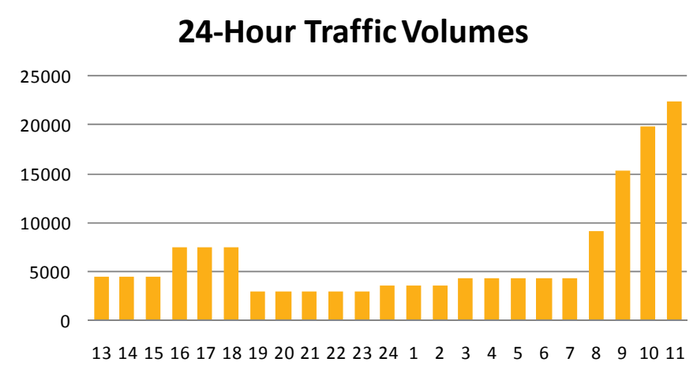


Figure 2-1 Existing Traffic Volumes

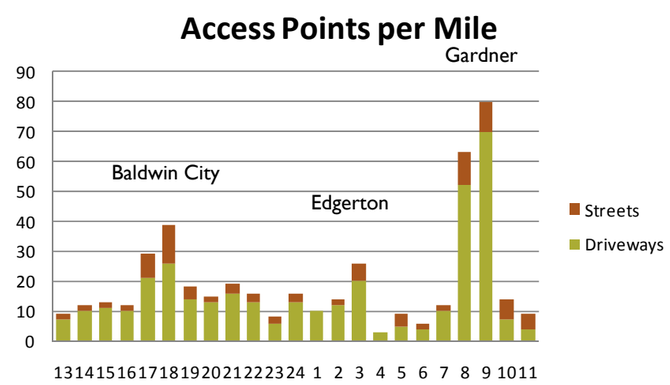


Figure 2-2 Access Points

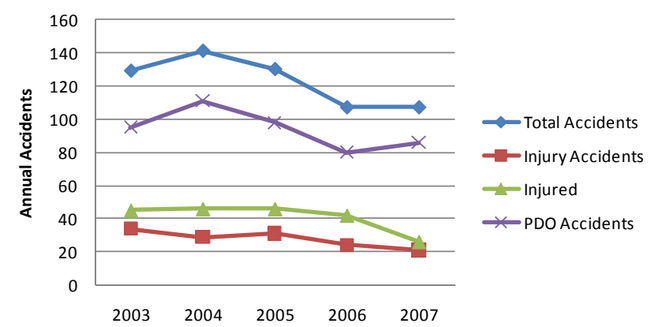


Figure 2-3 Crashes per Year

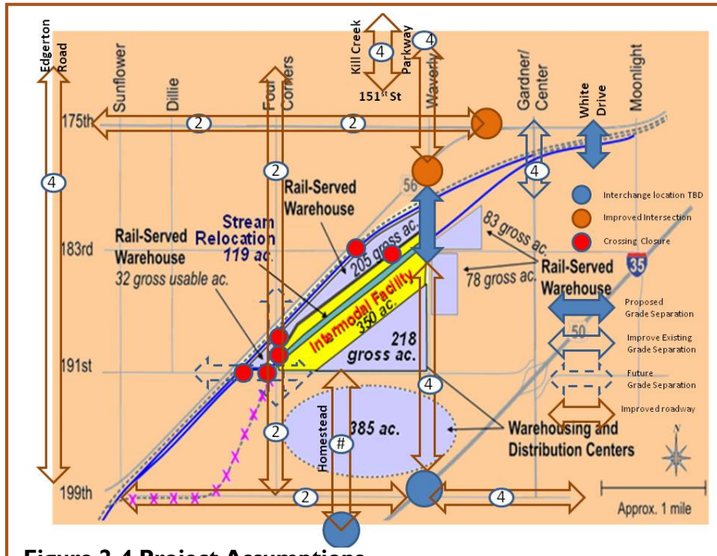


Figure 2-4 Project Assumptions

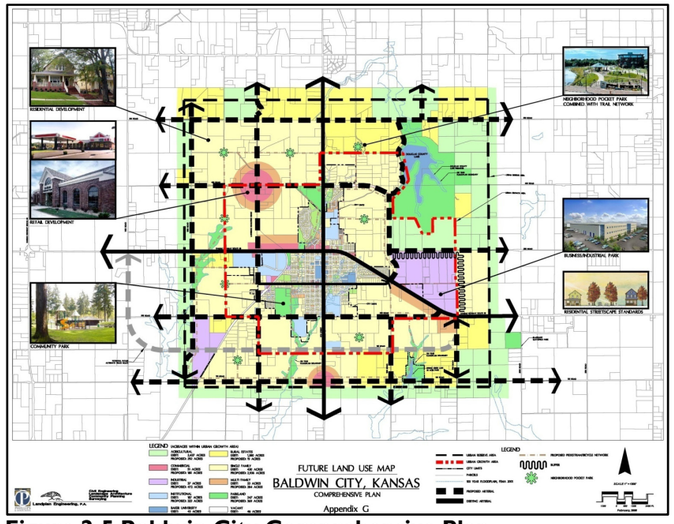


Figure 2-5 Baldwin City Comprehensive Plan

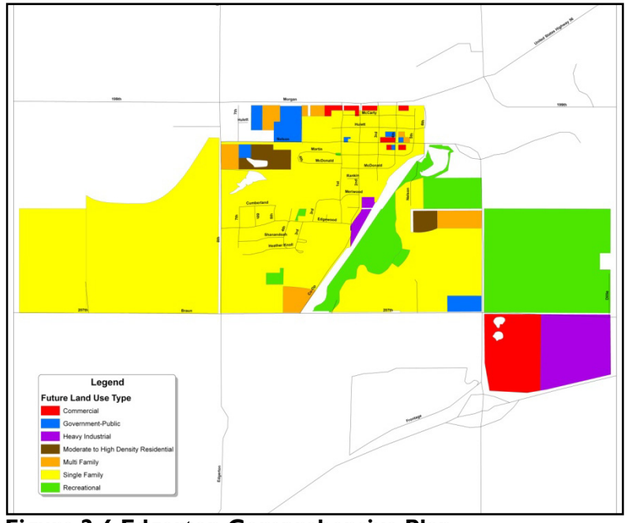


Figure 2-6 Edgerton Comprehensive Plan

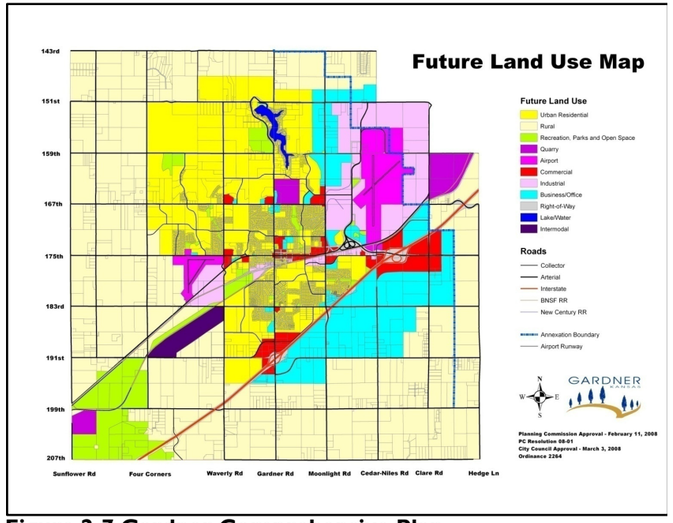


Figure 2-7 Gardner Comprehensive Plan

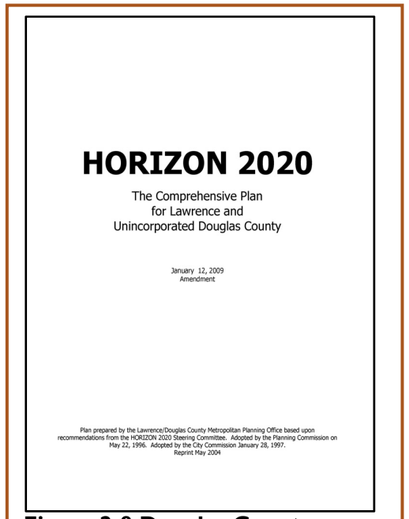


Figure 2-8 Douglas County

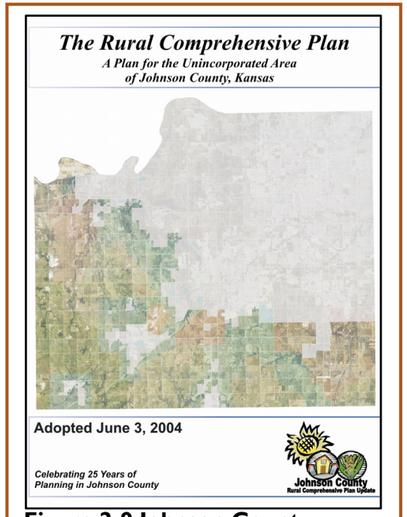


Figure 2-9 Johnson County

Chapter Three – Forecasting the Future

Forecasting the Future builds upon the data collected during the first phase, Foundations of Fact, and builds upon that by defining the changing character of the corridor, estimating future land uses, projecting traffic volumes, and establishing the concepts for improvements.

CORRIDOR CHARACTER

The US-56 Corridor is diverse. It includes stretches of rural and agricultural uses, major parks, and natural areas. Most corridor residents live in the communities of Baldwin City, Edgerton, and Gardner where there are local shopping opportunities, services, and such significant institutions as Baker University. Major existing and proposed industrial uses are located throughout the corridor, particularly in areas well-served by interstates, rail, and air.

At the first Workshop, Stakeholders helped identify four major "zones" along US-56:

- Rural-Agricultural Zone, which includes natural, agricultural, and low-impact recreation uses.
- Suburban Zone, which includes residential, civic, commercial, highway and auto-oriented uses.
- Town Center Zone, which includes residential, office and retail uses with good walking access.
- Industrial Zone, which includes industrial, warehousing, and major office uses.

Summaries and examples of the various character zones are described in more detail on ***Figure 3-1***.

Stakeholders discussed where the different zones begin and end, based on future development as shown in the adopted Comprehensive Plans. The location of future potential character zones are shown on ***Figure 3-2***.

Character

The character of the US-56 Corridor varies from Rural-Agricultural to Suburban to Town Center to Industrial/Heavy Business. This poster shows how character can relate to uses, transportation and access.

Rural-Agricultural Zone

- Uses: Natural, agricultural, low-impact recreation, agricultural related business
- Density: Very low; 1 unit per 20-40 acres
- Primary Users: Private vehicles, farm-related vehicles

Transportation Characteristics	
Roadway Configuration	
Multi-lane	
2-lane	✓
Shoulders	✓
On-Street Parking	
Drainage	
Open ditch	✓
Enclosed	
Speeds	
30 to 35 mph	
40 to 45 mph	
55 mph or greater	✓
Daily Traffic Volumes	
Less than 5,000	✓
Between 5,000 and 10,000	
Greater than 10,000	
Access points per mile	
Less than 20	✓
between 20 and 40	
Greater than 40	
Congestion Measure (mainline)	
Density	✓
Stopped Delay	
Intersection Control	
Side Street STOP	✓
Traffic signal	
Grade separated Interchange	✓
Pedestrian Treatment	
None	✓
Sidewalks	
Ped crossing buttons	

Suburban Zone

- Uses: Low density residential, civic and institutional uses, community commercial, and highway and auto-oriented uses
- Density: low; 1 unit per 3 - 5 acres up to around 3 units per acre
- Primary Users: Private vehicles

Transportation Characteristics	
Roadway Configuration	
Multi-lane	✓
2-lane	✓
Shoulders	
On-Street Parking	✓
Drainage	
Open ditch	✓
Enclosed	✓
Speeds	
30 to 35 mph	✓
40 to 45 mph	✓
55 mph or greater	
Daily Traffic Volumes	
Less than 5,000	✓
Between 5,000 and 10,000	✓
Greater than 10,000	✓
Access points per mile	
Less than 20	
between 20 and 40	✓
Greater than 40	
Congestion Measure (mainline)	
Density	✓
Stopped Delay	✓
Intersection Control	
Side Street STOP	✓
Traffic signal	✓
Grade separated Interchange	
Pedestrian Treatment	
None	✓
Sidewalks	✓
Ped crossing buttons	

Town Center Zone

- Uses: Medium & high density residential, office and retail uses with good walking access
- Density: medium to high; generally 5 units per acre or greater
- Primary Users: Private vehicles, business serving vehicles, pedestrians, bicyclists

Transportation Characteristics	
Roadway Configuration	
Multi-lane	✓
2-lane	
Shoulders	
On-Street Parking	✓
Drainage	
Open ditch	
Enclosed	✓
Speeds	
30 to 35 mph	✓
40 to 45 mph	
55 mph or greater	
Daily Traffic Volumes	
Less than 5,000	
Between 5,000 and 10,000	✓
Greater than 10,000	✓
Access points per mile	
Less than 20	
between 20 and 40	✓
Greater than 40	✓
Congestion Measure (mainline)	
Density	
Stopped Delay	✓
Intersection Control	
Side Street STOP	✓
Traffic signal	✓
Grade separated Interchange	
Pedestrian Treatment	
None	
Sidewalks	✓
Ped crossing buttons	✓

Industrial/Heavy Business Zone

- Uses: Intense industrial, warehousing, major offices, and highway commercial uses
- Density: 10 acres or greater
- Primary Users: Trucks, private vehicles

Transportation Characteristics	
Roadway Configuration	
Multi-lane	✓
2-lane	
Shoulders	
On-Street Parking	
Drainage	
Open ditch	✓
Enclosed	✓
Speeds	
30 to 35 mph	
40 to 45 mph	✓
55 mph or greater	
Daily Traffic Volumes	
Less than 5,000	✓
Between 5,000 and 10,000	✓
Greater than 10,000	✓
Access points per mile	
Less than 20	✓
between 20 and 40	✓
Greater than 40	
Congestion Measure (mainline)	
Density	
Stopped Delay	✓
Intersection Control	
Side Street STOP	✓
Traffic signal	✓
Grade separated Interchange	✓
Pedestrian Treatment	
None	✓
Sidewalks	✓
Ped crossing buttons	

Figure 3-1 Character Zones

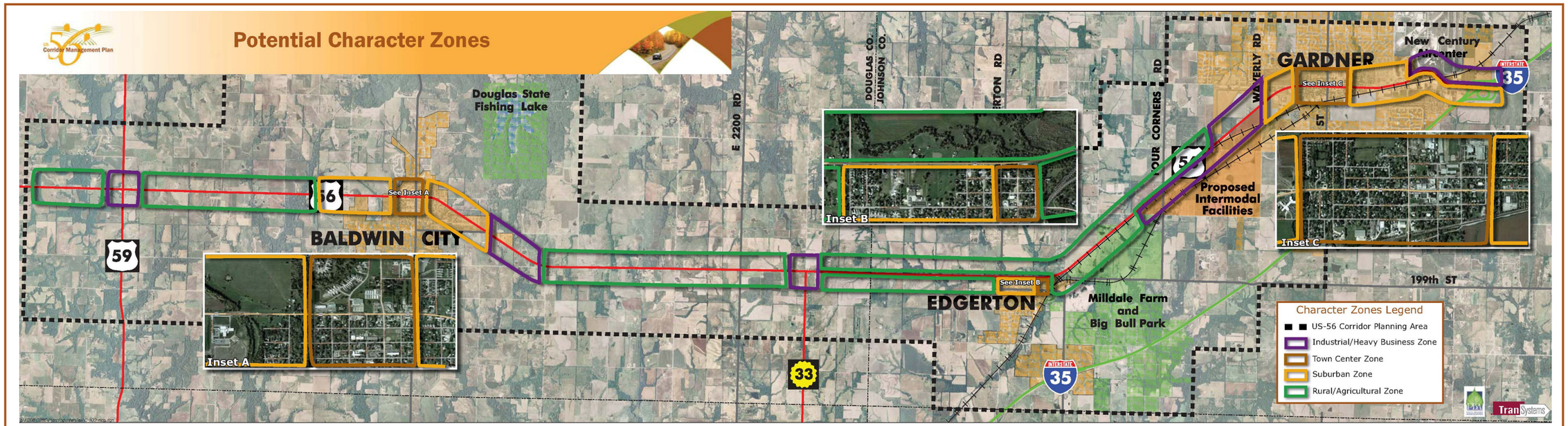


Figure 3-2 Character Zones

LAND USE FORECASTS

The Corridor study area has significant streams, floodplains, wetlands, and regionally and locally significant forest and grasslands. Identifying these sensitive areas when reviewing potential future development helps to protect valuable recreation areas, protect water quality, reduce flooding, and provide wildlife habitat. Key Geographical Information System (GIS) data was assigned weights producing a graphic classification of land ranging from "Highly Suitable for Urban and Rural Development to "Suitable Only for Passive Recreation". Weighted data included soil classifications, hydrology, land cover, slopes, land use, and habitat.

The capacity of land is a measure of how much future development the undeveloped lands can accommodate. Not all of the undeveloped areas, however, are open to development due to environmental constraints and natural resources. Accounting for land that is not already developed and not environmentally sensitive is the basis for determining what areas are deemed developable. ***Figure 3-3*** illustrates the environmentally sensitive areas within the vicinity of US-56, which, when added to the existing development land, results in a map of the developable land shown on ***Figure 3-4***.

To help guide future development along US-56, two land use scenarios were developed with the goal of framing an agreed upon or "Consensus" Land Use Scenario. The Land Demand Analysis projects the amount of land needed to accommodate residential and non-residential uses between now and the planning horizon of 2030, although the traffic projections were based on a 2040 horizon year.

Several assumptions were made in developing the various growth scenarios:

- Land use considerations were confined to the Study Area boundaries.
- Adopted Land Use Plans from the three Cities were used as the basis for developing the scenarios.
- Infrastructure constraints such as the provision of sewer and water.

Residential and non-residential market demands were based on population and employment projections in growth areas utilizing U.S. Census data, building permit trends, MARC Metrodataline Projections of Population and Employment, State of Kansas Division of the Budget. In addition, study partners, the advisory committee, and stakeholder input was also sought to fine tune the projections.

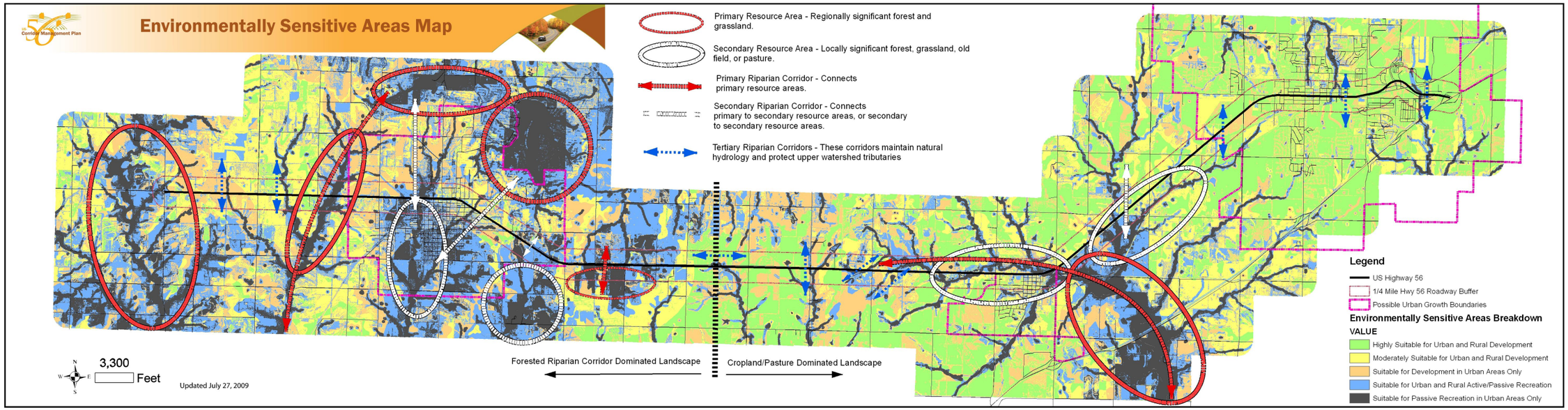


Figure 3-3 Environmentally Sensitive Areas

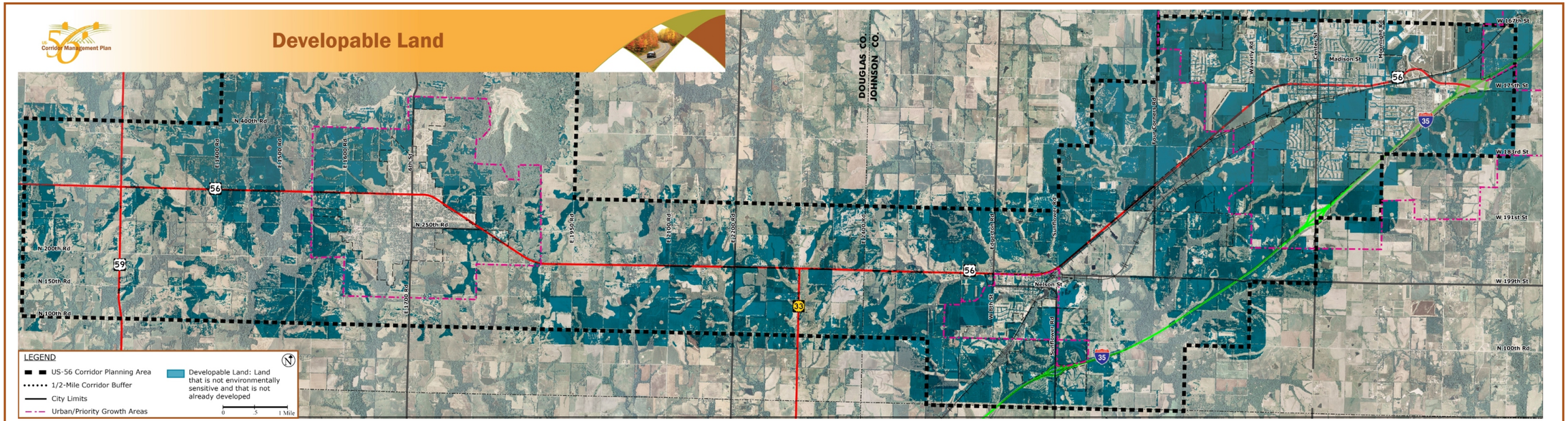


Figure 3-4 Developable Land

Low-Growth Scenario

- Demand was calculated to equal the market demand.
- Focusing upon infill first, and then developing around key intersections.
- Baldwin City and Edgerton have far more residential and non-residential capacity. than projected demand by the year 2030
- Gardner may need to build more densely or expand their growth area to meet future demand.

High-Growth Scenario

- Demand was calculated to be three times the market demand.
- Avoided areas difficult to serve with sewers unless needed for market demand.
- For Baldwin City and Edgerton, even three times the demand for residential and non-residential acreage could be accommodated.
- For Gardner, accommodating three times the projected demand would require building at greater densities or expanding growth boundaries.

Consensus Land Use Scenario

The Consensus Land Use Scenario is an integration of the Low Growth and High Growth Scenarios, and reflects input from Advisory Committee, Partners, and Stakeholders. It includes Low Growth Scenarios for Baldwin City and Gardner, and a High Growth Scenario for Edgerton. It was determined that no development would occur at regional intersections along rural segments of the corridor.

It is important to note that when performing the 2030 market demand analysis to determine initial land capacity and demand, the employment projections and estimated acreage assumed the proposed BNSF intermodal facility would be located within the Gardner city limits. A change in corporate boundaries will not impact the overall traffic patterns of the corridor.

As the planning process continued, the assignment of the projections associated with the proposed BNSF intermodal facility to a specific municipality began to change. Consequently, the assignment of employment projections to the cities may change. Nonetheless, the proposed Intermodal Facility is considered a

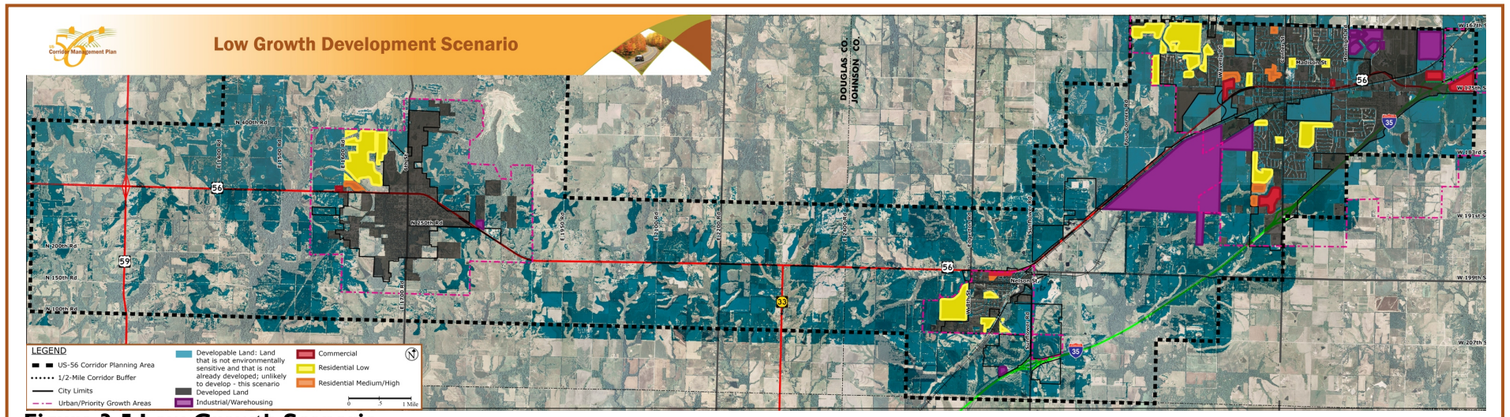


Figure 3-5 Low-Growth Scenario

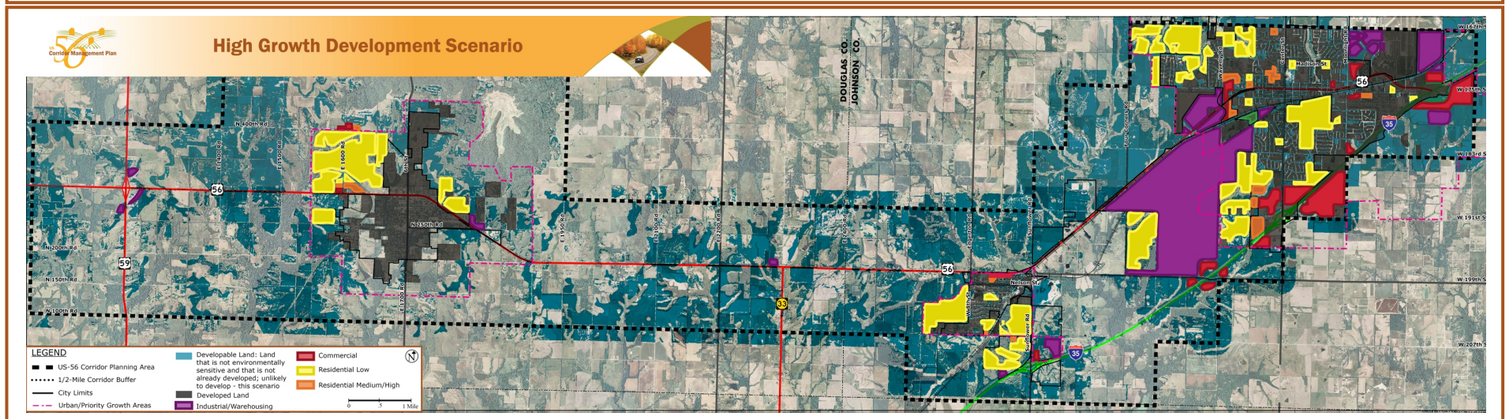


Figure 3-6 High-Growth Scenario

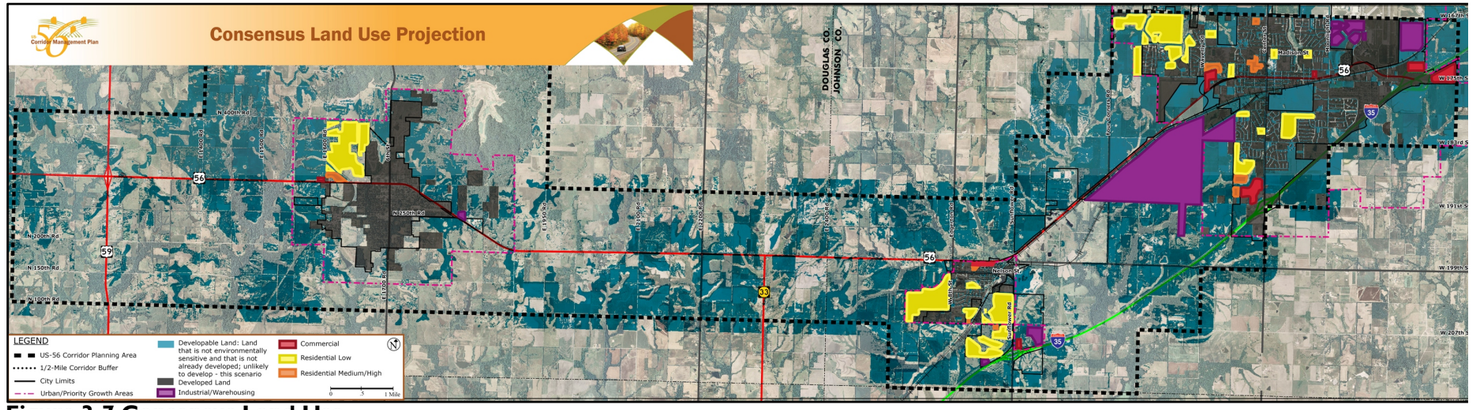


Figure 3-7 Consensus Land Use

committed project and its projections are included as part of the Consensus Scenario.

Based on the consensus land use projections, the cities along US-56 are anticipated to grow in population and employment over the next 30 years as summarized below. Again, this includes an initial assumption that the BNSF intermodal facility would be located in Gardner versus Edgerton as currently envisioned. The overall growth is not impacted by this change.

Population Forecasts

	2000	2030	New Units
Baldwin City	3,460	6,400	1,200
Edgerton	1,440	2,800	500
Gardner	9,400	47,800	14,300

Employment Forecasts

	2000	2030	Increase
Baldwin City	1,309	1,875	566
Edgerton	374	580	206
Gardner	4,408	16,016	11,608

Developable Land

Baldwin City	Available	1,700	acres
	New Residential	290	acres
	New Non-Residential	40	acres
	Remaining	***1,370***	***acres***
Edgerton	Available	800	acres
	New Residential	100	acres
	New Non-Residential	20	acres
	Remaining	***680***	***acres***
Gardner	Available	4,900	acres
	New Residential	3,600	acres
	New Non-Residential	1,300	acres
	Remaining	***0***	***acres***

2040 TRAFFIC PROJECTIONS

US-56, from US-59 to I-35, serves as a local highway to the overall region. While providing important access to the communities along the corridor, it is not utilized as a significant through corridor, such as I-35, I-70 or even K-10 and US-59.

Traffic volumes were projected out to Year 2040 to evaluate a long-term scenario for the corridor that included several major assumptions. Among those:

- K-7 would be upgraded to a freeway, extending from the new interchange at 159th Street/Lone Elm Road on I-35 to I-70.
- A new southern Johnson County interchange would be constructed on I-35, somewhere in the vicinity of 199th Street, Waverly Road or Homestead.
- The BNSF intermodal facility, and surrounding Logistics Park, would be developed.
- While the communities of Baldwin City, Edgerton and Gardner are anticipated to continue to grow and expand, the unincorporated areas in Douglas and Johnson Counties would remain rural in nature.

Forecasted traffic volumes were developed based on the City of Gardner's Transportation Forecasting Model, combined with historical growth trends, and supplemental information developed as part of the proposed BNSF intermodal facility. While both Gardner's model and the consensus land use projections have a horizon year of 2030, traffic projections were anticipated to increase in a similar manner out to year 2040. While projections along the corridor were made for the total volumes of traffic, an assessment of truck traffic that takes into account the new freight-generating facilities anticipated for the corridor was also made.

The Mid-America Regional Council (MARC) has established criteria to assess the regional significance of freight corridors based on the volume of truck traffic, designating corridors as having National (>4,000 trucks per day), Regional (>1,000 trucks per day) or Local (>500 trucks per day) significance. For comparison, I-35 south of US-56 carries approximately 5,600 trucks per day and is therefore designated as a National Freight Corridor.

By 2040, the majority of the US-56 corridor is anticipated to operate as a local freight corridor. In Gardner, US-56 is projected to cross the threshold and operate as a regional freight corridor.

Several factors contribute to a significant change in travel patterns by year 2040.

- The location of a new interchange in the vicinity of I-35 and 199th Street, Waverly Road or Homestead will create a more direct option to drivers headed to Edgerton and Baldwin City, allowing them to by-pass Gardner.
- The anticipated development in the northwest portions of Gardner results in a greater volume of traffic on Santa Fe/175th Street and Waverly Road than on US-56 in this west gateway of Gardner.

Existing and Projected Traffic Volumes

	Existing		2040 Projections	
Location	**ADT**	**Trucks**	**ADT**	**Trucks**
US-59 to 1600 Road	4,900	280	7,500	900
Baldwin City	**7,500**	**280**	**14,000**	**1,000**
1900 Road to K-33	4,600	260	5,500	900
K-33 to Edgerton Road	4,700	270	6,500	900
Edgerton	**4,900**	**270**	**12,000**	**800**
199th Street to Waverly	4,900	270	4,800	500
Waverly to Center	**9,000**	**270**	**30,000**	**1,200**
Center to Moonlight	**17,500**	**270**	**37,500**	**1,100**
Moonlight to I-35	**25,000**	**800**	**47,000**	**1,800**

ADT – Average Daily Traffic

Figure 3-8 illustrates the projected traffic volumes at the US-56/ 199th Street/ Sunflower Road intersection, with volumes shown in 1,000 vehicles per day (vpd). Similarly, ***Figure 3-9*** illustrates the projected traffic volumes in the vicinity of US-56, Waverly Road and 175th Street.

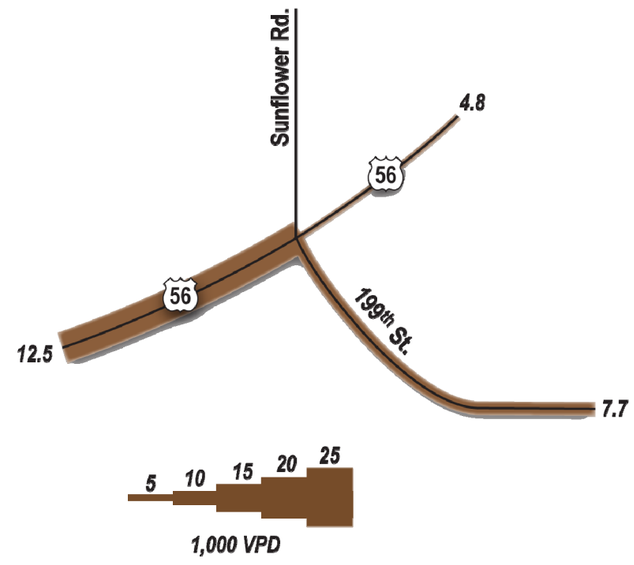


Figure 3-8 US-56 / 199th Street / Sunflower Road

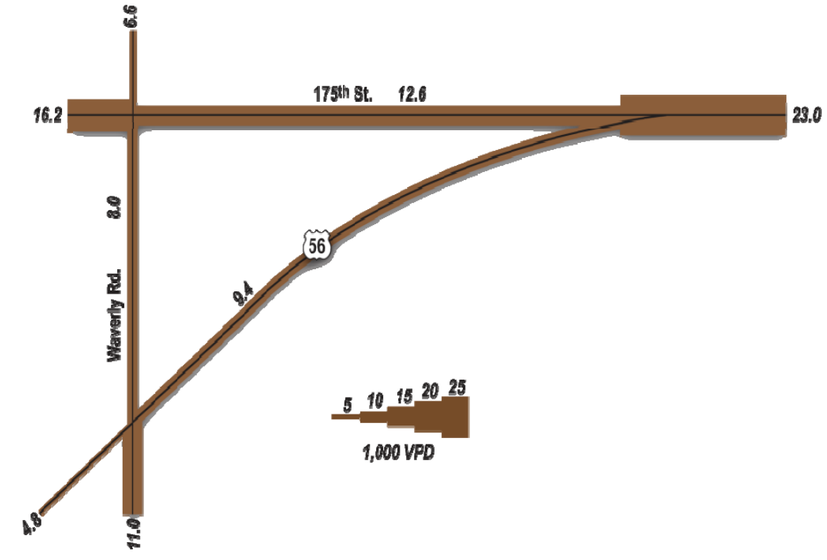


Figure 3-9 US-56 / Waverly Road / 175th Street

CONCEPTUAL IMPROVEMENTS

The conceptual improvements for US-56 were developed by overlaying the projected traffic volumes with the character zones along the corridor. The diversity of US-56 calls for cross-sections ranging from a rural two-lane highway with shoulders and drainage ditches to urban arterial sections with enclosed storm sewers and sidewalk. In urban areas on-street parking may be provided while in industrial areas the use of a raised median may be called upon to help facilitate movements and accommodate trucks turning on and off of US-56. Examples of some typical rural and suburban cross-sections are shown on ***Figures 3-10*** and ***3-11***.

The conceptual improvements for the entire US-56 Corridor Management Plan are illustrated on ***Figure 3-12***. Included on this summary are the characters of the corridor, existing and proposed number of lanes, existing posted speed limits, proposed design speed, and the existing and projected daily traffic volumes. These concepts are refined and detailed in the following chapter on **Formulating a Fit.**

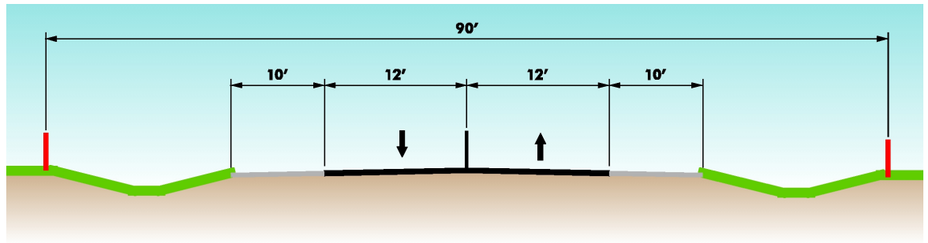


Figure 3-10 Typical Rural Cross-Section

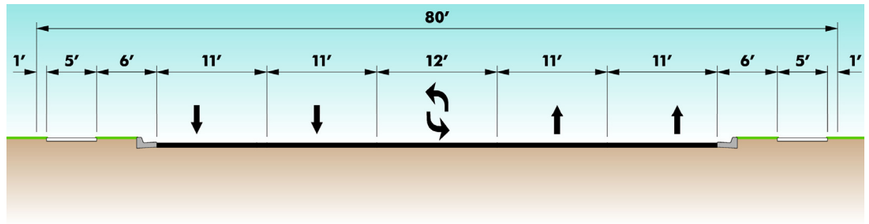


Figure 3-11 Typical Suburban Cross-Section

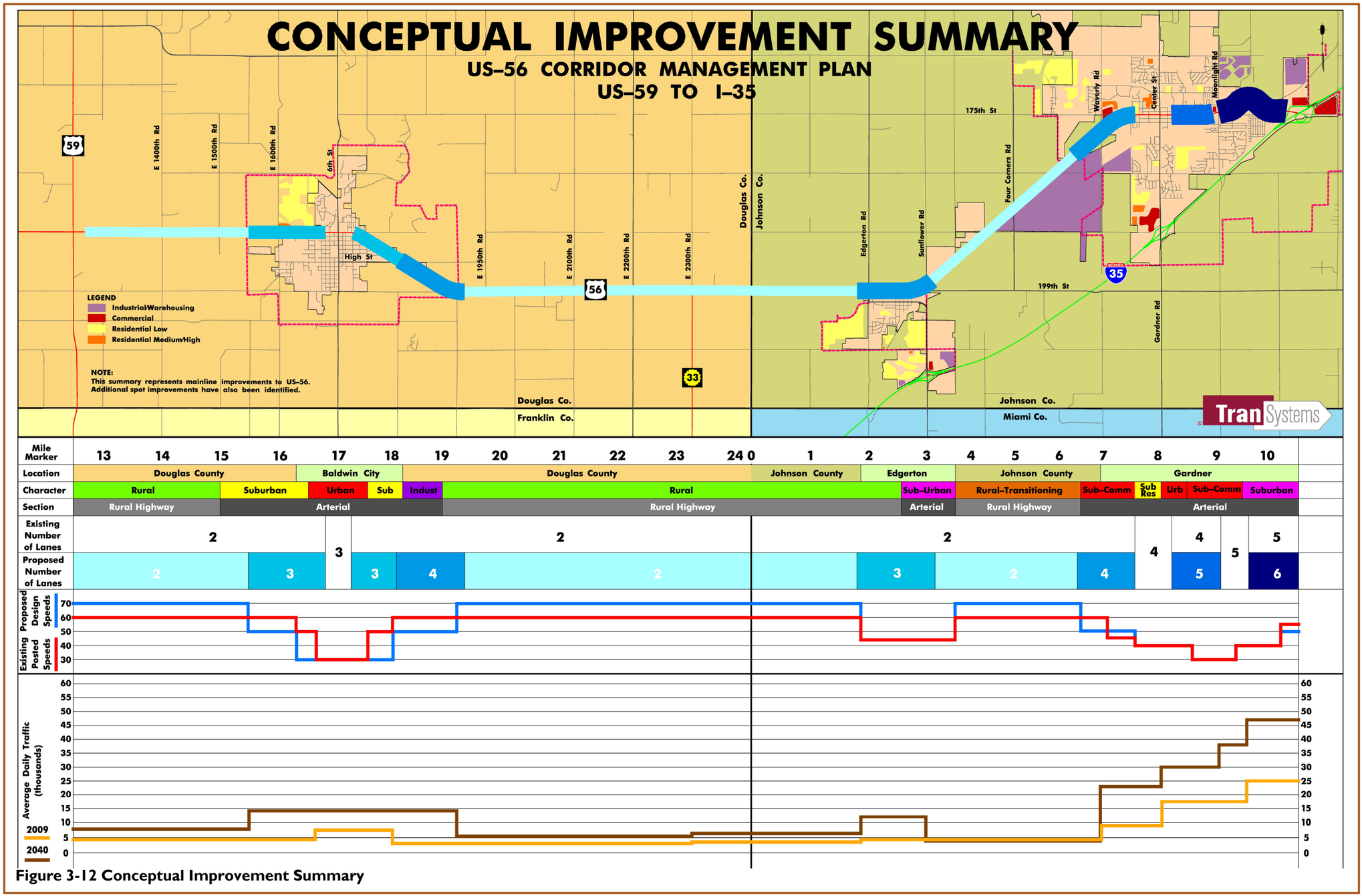


Figure 3-12 Conceptual Improvement Summary

Chapter Four – Formulating a Fit

The improvements developed for the US-56 Corridor Management Plan are shown on the following exhibits. Given the varying nature of the corridor, US-56 has been divided into the ***highway segments***, reflecting the rural nature of the corridor, and ***arterial segments***, coinciding to the changes in and around the cities.

In the rural ***highway segments***, the proposed improvements to US-56 include changes to access, improvements to the cross-sections of the roadway (including shoulders and additional turning lanes in key locations) as well as proposed vertical alignment changes. Given there are numerous unknowns in how construction may occur and the final grading limits of design, potential right-of-way envelopes were identified to reflect an area in which there may be impact. Further alignment studies and preliminary engineering will be required to identify the future right-of-way in greater detail.

In the ***arterial segments***, proposed improvements are also indicated; however, vertical alignment changes have not been identified. With the lower speeds and urbanized nature of US-56 in the cities, there is not anticipated to be any significant grade changes. Given the limited changes in vertical alignment combined with the use of an enclosed storm sewer system, a greater certainty can be placed on identifying future right-of-way. In the arterial segments, the potential future right-of-way is shown with a greater confidence. For cross-streets, the potential future city right-of-way is also shown.

Several pieces of information have been provided on these exhibits, including the spacing of driveway and public streets (adjacent and to opposite sides of the highway), parcel boundaries adjacent to US-56, as well as driveways and/or intersections anticipated to be removed or relocated.

In general, the plans shown indicate a concept of ***"No New Access"***, except at public streets. New development, or redevelopment, will be looked at to provide access to US-56 through an existing public street, adjacent to the development, or through the planning and development of a local street network in areas with limited existing options. The subdividing of parcels, each with its own access onto US-56, will generally not be permitted.

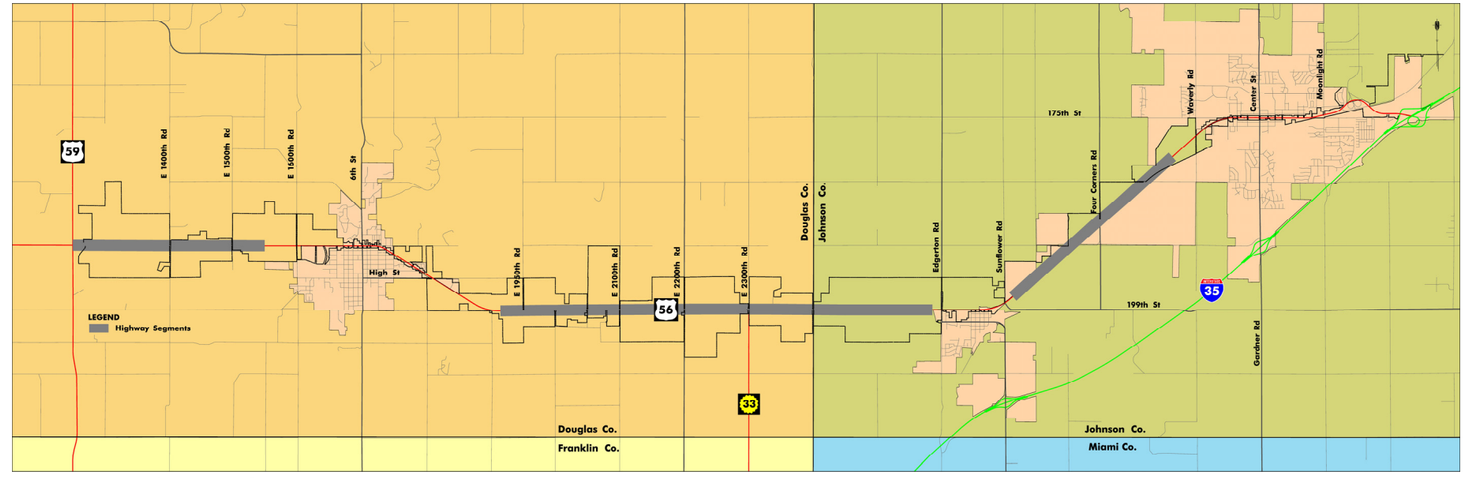


Figure 4-1 Highway Segment Map

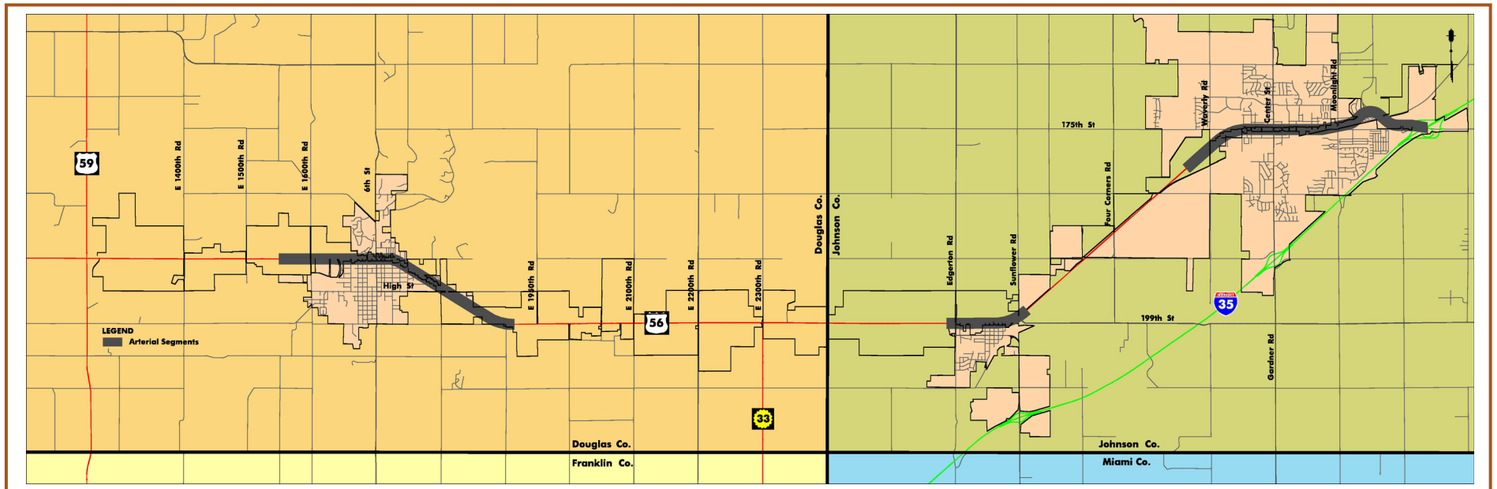
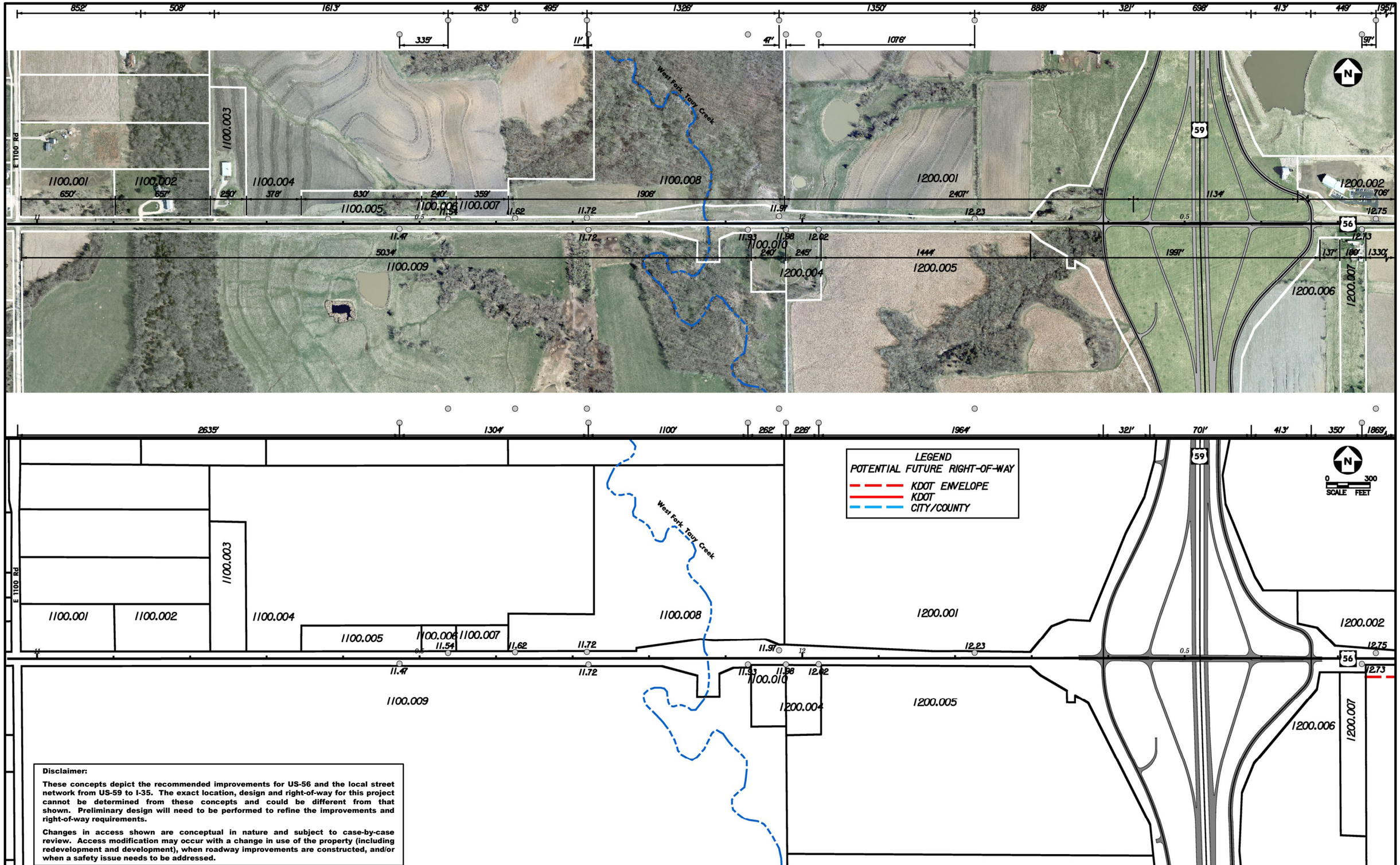


Figure 4-2 Arterial Segment Map



Disclaimer:

These concepts depict the recommended improvements for US-56 and the local street network from US-59 to I-35. The exact location, design and right-of-way for this project cannot be determined from these concepts and could be different from that shown. Preliminary design will need to be performed to refine the improvements and right-of-way requirements.

Changes in access shown are conceptual in nature and subject to case-by-case review. Access modification may occur with a change in use of the property (including redevelopment and development), when roadway improvements are constructed, and/or when a safety issue needs to be addressed.

US 56 Corridor Management Plan

2-3 | 4-5 | US 56 | 16-17 | 18-19 | 20-21 | 22-23 | 28-29 | 30-31

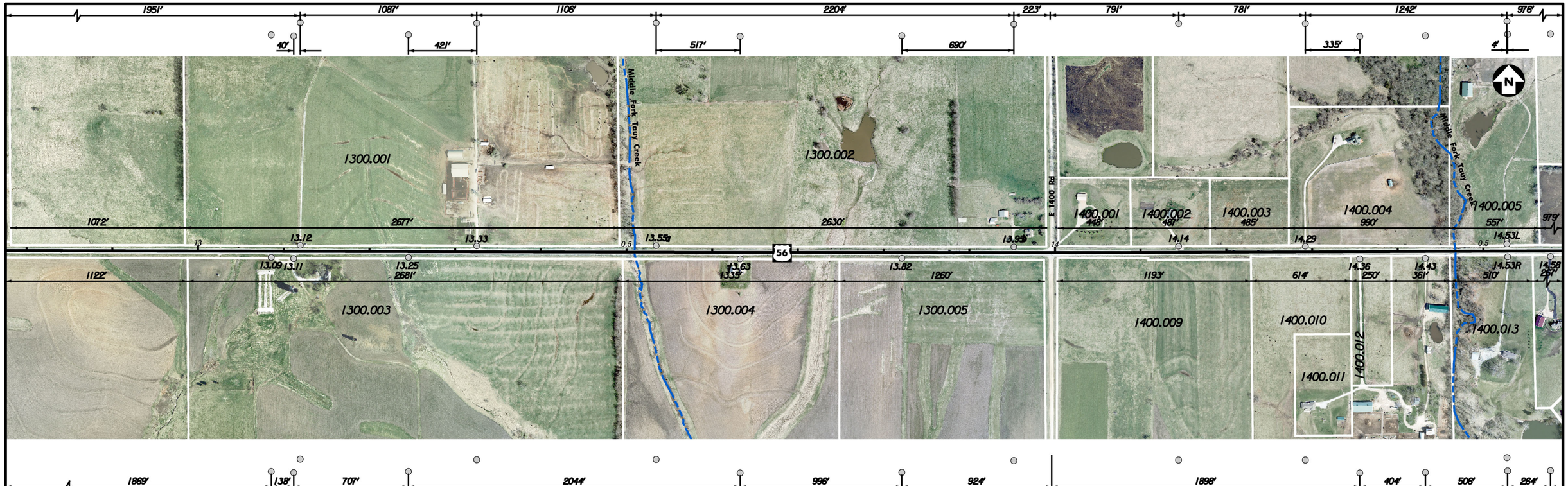
HIGHWAY INDEX MAP

Location:
Rural Douglas County

Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-1
July 2010



This section of US-56 is envisioned as an improved two-lane rural highway. Profile changes to the vertical profile and design elements such as design speed and shoulder widths will greatly influence the need for additional right-of-way. Typically the right-of-way for a 2-lane highway is on the order of 120 to 150 feet; however, for planning purposes a 250-foot wide envelope is shown here. The current right-of-way width varies yet is approximately 80 feet. The exact location and extent of right-of-way needs will be determined at a later stage.

LEGEND
POTENTIAL FUTURE RIGHT-OF-WAY
KDOT ENVELOPE
KDOT
CITY/COUNTY

Access point 13.95 is within the intersection functional area. It is desirable to relocate to CR 1400 with minimum 300 foot setback.

Relocate access to property 1400.001 with maximum separation from US-56.

Currently parcel 1400.003 is without an access point to US-56, yet when developed an access point may be permitted. The suggested window is to split the difference between the adjacent access points with the exact location to be determined after reviewing sight distance, grades and other design aspects.

Note – Bridge scheduled for replacement in Fiscal Year 2013.

EXIST RW

EXIST RW

Potential to consolidate access points 13.08 and 13.11 to be relocated opposite access point 13.12

A potential future County road network should be investigated in response to any proposed development. In general, no new access points are to be permitted except for new public streets. It is also the intent to reduce the number of access points per mile in association with any improvements to US-56.

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These concepts depict the recommended improvements for US-56 and the local street network from US-59 to I-35. The exact location, design and right-of-way for this project cannot be determined from these concepts and could be different from that shown. Preliminary design will need to be performed to refine the improvements and right-of-way requirements.

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US 56 Corridor Management Plan

1 4-5

US 56
16-17 18-19 20-21 22-23
HIGHWAY INDEX MAP
28-29 30-31

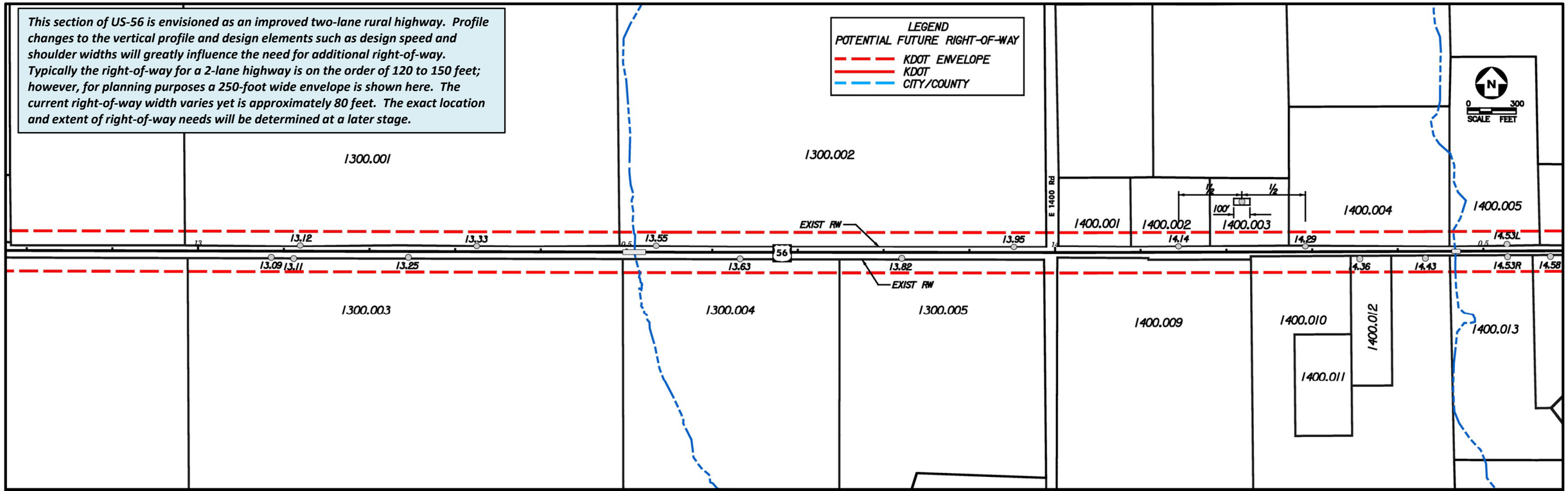
Location:
Rural Douglas County MM 13.0 to 14.5

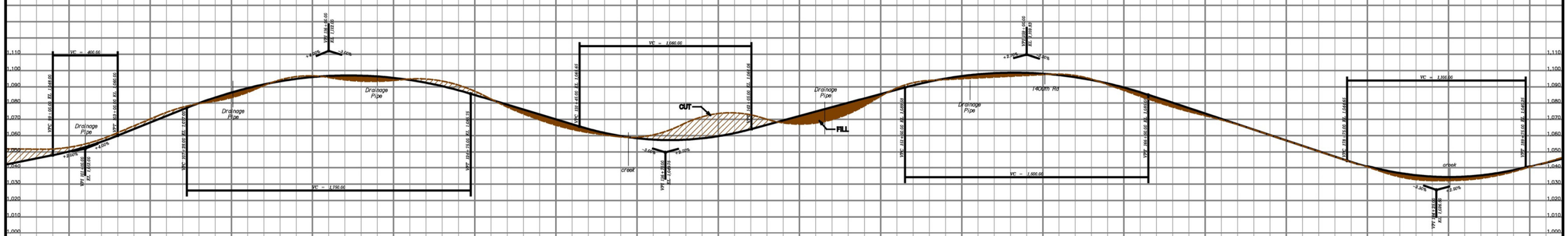
Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-2
July 2010

This section of US-56 is envisioned as an improved two-lane rural highway. Profile changes to the vertical profile and design elements such as design speed and shoulder widths will greatly influence the need for additional right-of-way. Typically the right-of-way for a 2-lane highway is on the order of 120 to 150 feet; however, for planning purposes a 250-foot wide envelope is shown here. The current right-of-way width varies yet is approximately 80 feet. The exact location and extent of right-of-way needs will be determined at a later stage.





Disclaimer:

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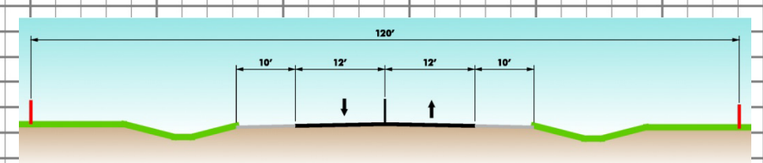


Typical Section – 2-lane

100+00 | 105+00 | 110+00 | 115+00 | 120+00 | 125+00 | 130+00 | 135+00 | 140+00 | 145+00 | 150+00 | 155+00 | 160+00 | 165+00 | 170+00 | 175+00 | 180+00 | 185+00

13.0 miles | 13.5 miles | 14.0 miles | 14.5 miles

Corridor Management Plan

1 4-5

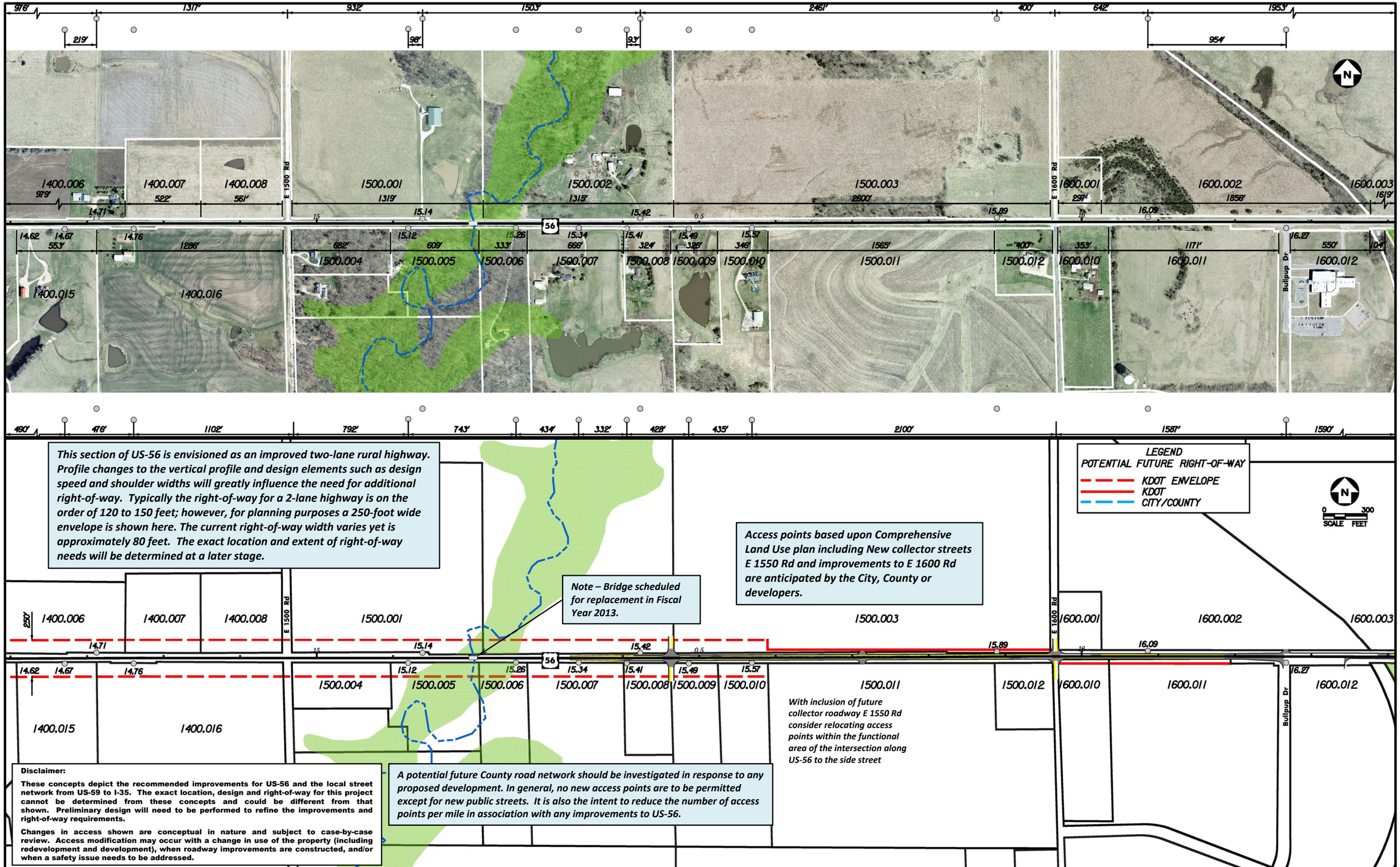
US 56
16-17 | 18-19 | 20-21 | 22-23
28-29 | 30-31
HIGHWAY INDEX MAP

Location:
Rural Douglas County, MM 13.0 to 14.5

Description:
Plan (upper) and Profile (lower)

TranSystems

Exhibit 4-3
July 2010


This section of US-56 is envisioned as an improved two-lane rural highway. Profile changes to the vertical profile and design elements such as design speed and shoulder widths will greatly influence the need for additional right-of-way. Typically the right-of-way for a 2-lane highway is on the order of 120 to 150 feet; however, for planning purposes a 250-foot wide envelope is shown here. The current right-of-way width varies yet is approximately 80 feet. The exact location and extent of right-of-way needs will be determined at a later stage.
Note – Bridge scheduled for replacement in Fiscal Year 2013.
Access points based upon Comprehensive Land Use plan including New collector streets E 1550 Rd and improvements to E 1600 Rd are anticipated by the City, County or developers.
LEGEND
POTENTIAL FUTURE RIGHT-OF-WAY
KDOT ENVELOPE
KDOT
CITY/COUNTY
With inclusion of future collector roadway E 1550 Rd consider relocating access points within the functional area of the intersection along US-56 to the side street
A potential future County road network should be investigated in response to any proposed development. In general, no new access points are to be permitted except for new public streets. It is also the intent to reduce the number of access points per mile in association with any improvements to US-56.
Disclaimer:
These concepts depict the recommended improvements for US-56 and the local street network from US-59 to I-35. The exact location, design and right-of-way for this project cannot be determined from these concepts and could be different from that shown. Preliminary design will need to be performed to refine the improvements and right-of-way requirements.
Changes in access shown are conceptual in nature and subject to case-by-case review. Access modification may occur with a change in use of the property (including redevelopment and development), when roadway improvements are constructed, and/or when a safety issue needs to be addressed.
E 1500 Rd
E 1600 Rd
Bullpup Dr
56
1400.006
1400.007
1400.008
1400.015
1400.016
1500.001
1500.002
1500.003
1500.004
1500.005
1500.006
1500.007
1500.008
1500.009
1500.010
1500.011
1500.012
1600.001
1600.002
1600.003
1600.010
1600.011
1600.012
0 300
SCALE FEET
US 56
16-17 18-19 20-21 22-23
HIGHWAY INDEX MAP
Location:
Rural Douglas County, MM 14.5 to 16.0
Description:
Existing (upper) and Proposed (lower) Conditions
TranSystems
Exhibit 4-4
July 2010

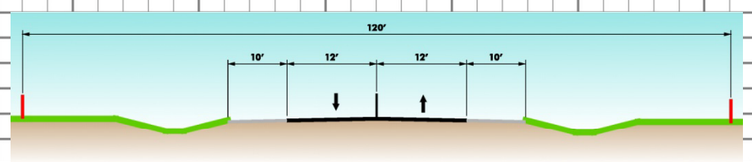
This section of US-56 is envisioned as an improved two-lane rural highway. Profile changes to the vertical profile and design elements such as design speed and shoulder widths will greatly influence the need for additional right-of-way. Typically the right-of-way for a 2-lane highway is on the order of 120 to 150 feet; however, for planning purposes a 250-foot wide envelope is shown here. The current right-of-way width varies yet is approximately 80 feet. The exact location and extent of right-of-way needs will be determined at a later stage.

East of the potential future E 1550 Road, the proposed right-of-way width is shown as 90 feet to match the width in town for a three-lane curb and gutter arterial section . However, the exact location and extent of right-of-way needs will be determined at a later stage.

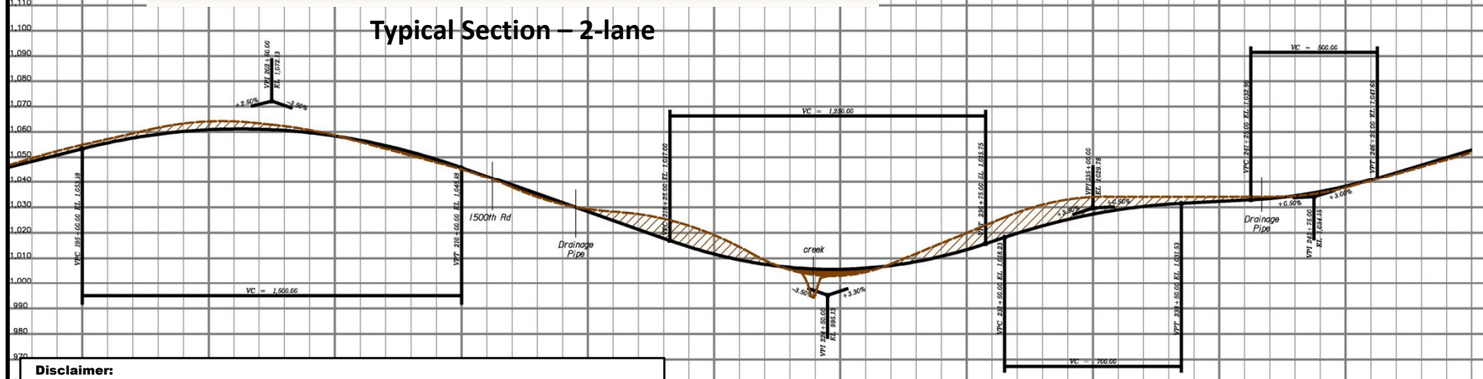
LEGEND
POTENTIAL FUTURE RIGHT-OF-WAY
KDOT ENVELOPE
KDOT
CITY/COUNTY

N
0 300
SCALE FEET

250'
1400.006 1400.007 1400.008 1500.001 1500.002 1500.003 1600.001 1600.002 1600.003
E 1500 Rd
E 1600 Rd
14.71 15 15.14 15.42 0.5 15.89 16 16.09
56
14.62 14.67 14.76 15.12 15.26 15.34 15.41 15.49 15.57 16.27
1400.015 1400.016 1500.004 1500.005 1500.006 1500.007 1500.008 1500.009 1500.010 1500.011 1500.012 1600.010 1600.011 1600.012
Bullpup Dr



Typical Section – 2-lane



Disclaimer:

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Changes in access shown are conceptual in nature and subject to case-by-case review. Access modification may occur with a change in use of the property (including redevelopment and development), when roadway improvements are constructed, and/or when a safety issue needs to be addressed.

195+00 200+00 205+00 210+00 215+00 220+00 225+00 230+00 235+00 240+00 245+00 250+00 255+00 260+00 265+00 270+00 275+00 280+00 285+00
15.0 miles 15.5 miles 16.0 miles

US 56 Corridor Management Plan

1 2-3
US 56
16-17 18-19 20-21 22-23
28-29 30-31
HIGHWAY INDEX MAP

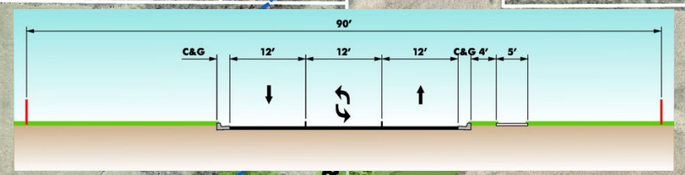
Location:
Rural Douglas County, MM 14.5 to 16.0

Description:
Plan (upper) and Profile (lower)

TranSystems

Exhibit 4-5
July 2010

This overview of the western half of Baldwin City illustrates the extent of the arterial street improvements, from the future proposed collector street of E 1550 Rd to 10th Street. This larger scale map affords an understanding of the roadway network relationships along with anticipated areas of growth and type of development as envisioned in the Comprehensive Plan



E 1500 Rd

E 1550 Rd

E 1600 Rd

400th Rd

6th St

4–8

4–9

4–10

4–11

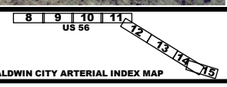
See Exhibit 4-11 for a larger scale view of the proposed improvements 6th Street at the junction with US-56.

Disclaimer:

These concepts depict the recommended improvements for US-56 and the local street network from US-59 to I-35. The exact location, design and right-of-way for this project cannot be determined from these concepts and could be different from that shown. Preliminary design will need to be performed to refine the improvements and right-of-way requirements.

Changes in access shown are conceptual in nature and subject to case-by-case review. Access modification may occur with a change in use of the property (including redevelopment and development), when roadway improvements are constructed, and/or when a safety issue needs to be addressed.

US 56 Corridor Management Plan



BALDWIN CITY ARTERIAL INDEX MAP

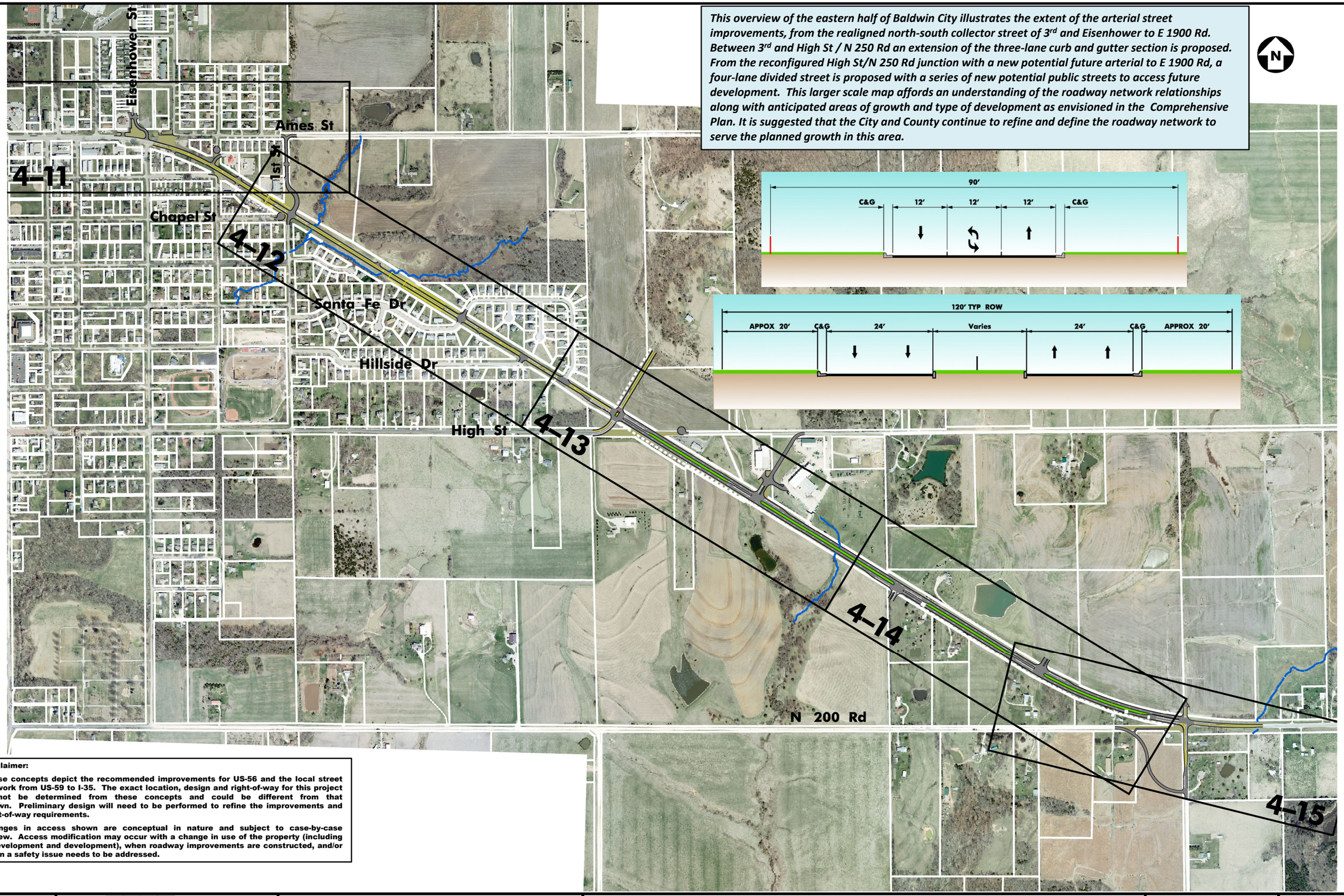
Location:
BALDWIN CITY

Description:
Overview

TranSystems

Exhibit 4-6
July 2010

This overview of the eastern half of Baldwin City illustrates the extent of the arterial street improvements, from the realigned north-south collector street of 3rd and Eisenhower to E 1900 Rd. Between 3rd and High St / N 250 Rd an extension of the three-lane curb and gutter section is proposed. From the reconfigured High St/N 250 Rd junction with a new potential future arterial to E 1900 Rd, a four-lane divided street is proposed with a series of new potential public streets to access future development. This larger scale map affords an understanding of the roadway network relationships along with anticipated areas of growth and type of development as envisioned in the Comprehensive Plan. It is suggested that the City and County continue to refine and define the roadway network to serve the planned growth in this area.



Disclaimer:

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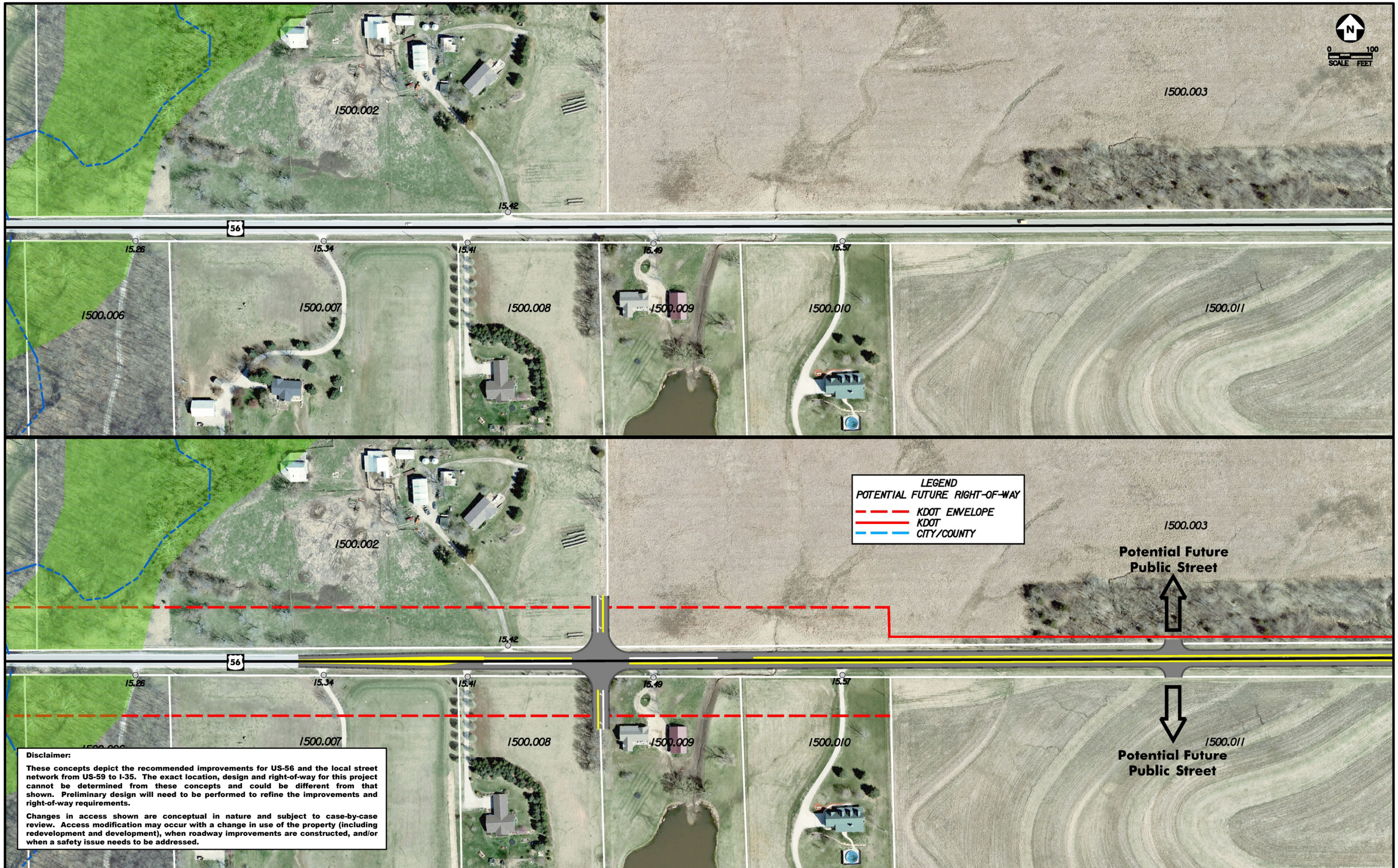
Changes in access shown are conceptual in nature and subject to case-by-case review. Access modification may occur with a change in use of the property (including redevelopment and development), when roadway improvements are constructed, and/or when a safety issue needs to be addressed.

Location:
BALDWIN CITY

Description:
Overview

Exhibit 4-7
July 2010



Disclaimer:

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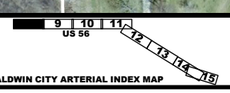
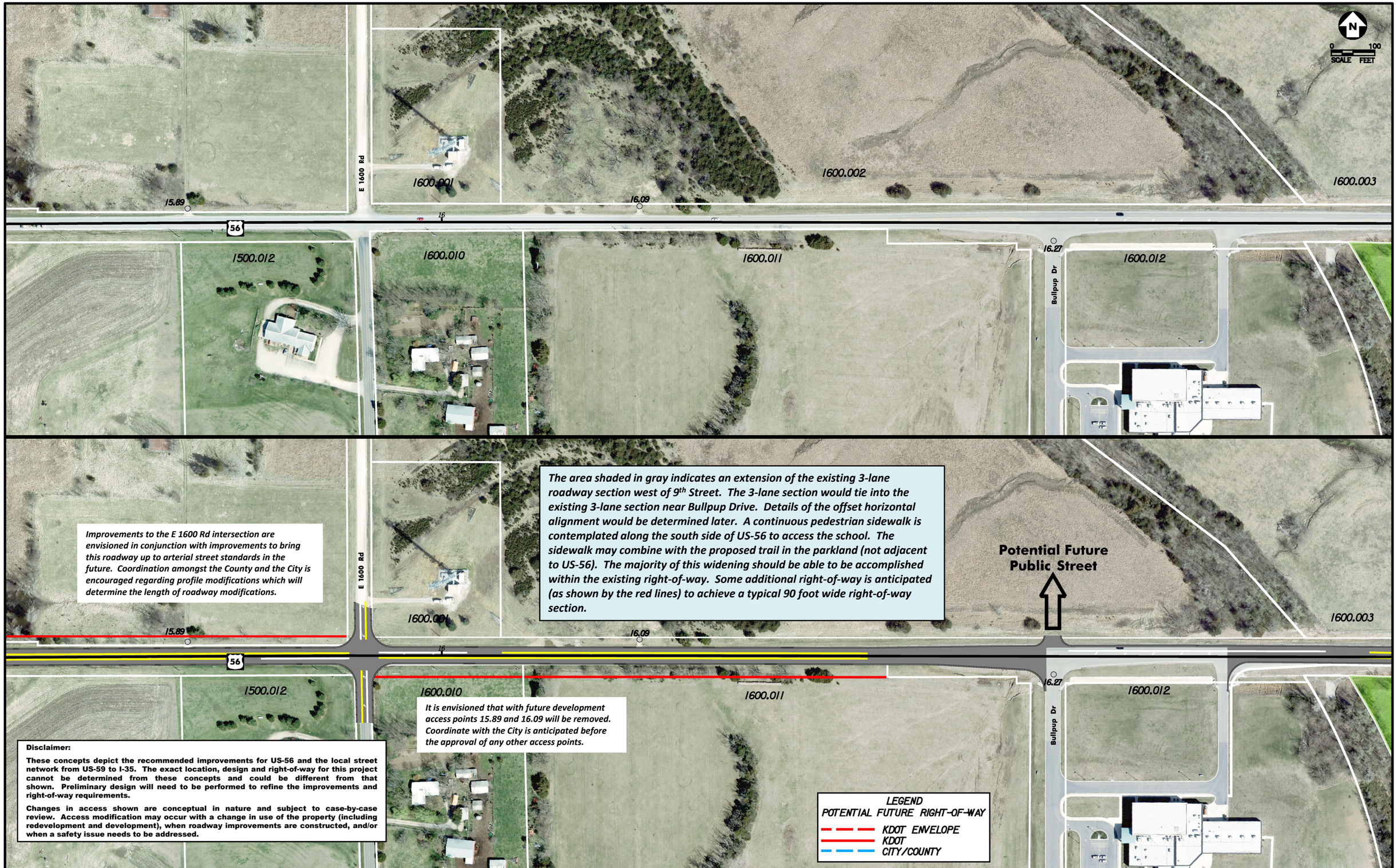


Location:
URBAN BALDWIN CITY

Description:
Existing (upper) and Proposed (lower) Conditions

Exhibit 4-8
July 2010



The area shaded in gray indicates an extension of the existing 3-lane roadway section west of 9th Street. The 3-lane section would tie into the existing 3-lane section near Bullpup Drive. Details of the offset horizontal alignment would be determined later. A continuous pedestrian sidewalk is contemplated along the south side of US-56 to access the school. The sidewalk may combine with the proposed trail in the parkland (not adjacent to US-56). The majority of this widening should be able to be accomplished within the existing right-of-way. Some additional right-of-way is anticipated (as shown by the red lines) to achieve a typical 90 foot wide right-of-way section.

Improvements to the E 1600 Rd intersection are envisioned in conjunction with improvements to bring this roadway up to arterial street standards in the future. Coordination amongst the County and the City is encouraged regarding profile modifications which will determine the length of roadway modifications.

It is envisioned that with future development access points 15.89 and 16.09 will be removed. Coordinate with the City is anticipated before the approval of any other access points.

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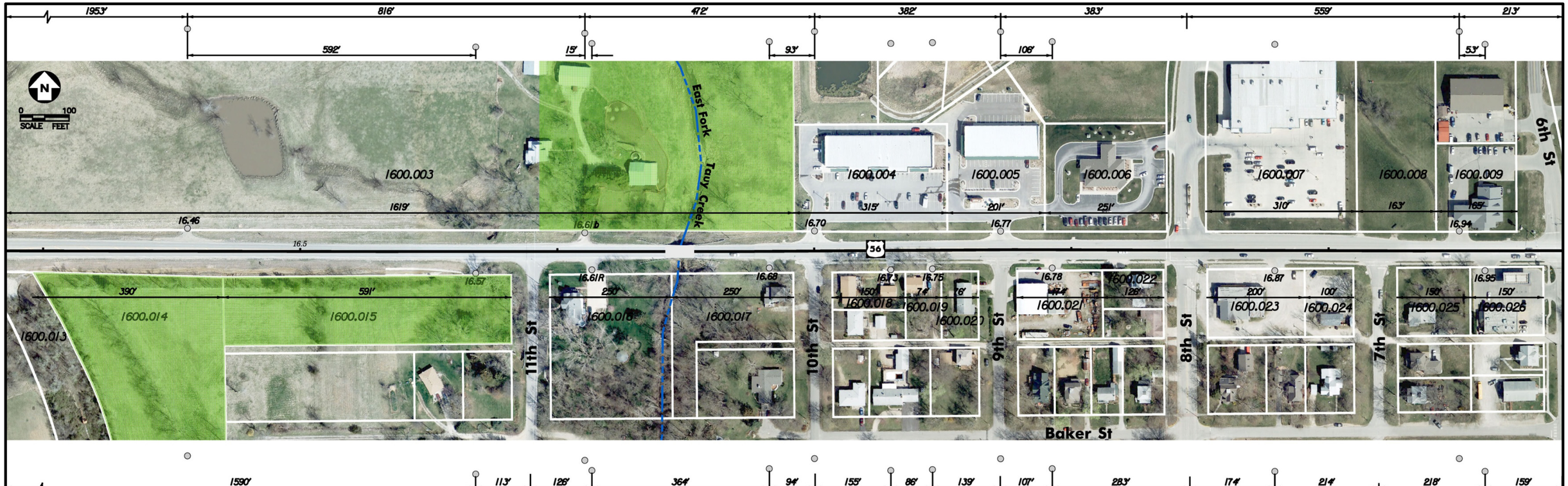
US 56 Corridor Management Plan	8 10 11 US 56 12 13 13 14 BALDWIN CITY ARTERIAL INDEX MAP	Location: URBAN BALDWIN CITY	Description: Existing (upper) and Proposed (lower) Conditions	TranSystems

Exhibit 4-9
July 2010



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The area shaded in gray indicates an extension of the existing 3-lane roadway section west of 9th Street. The 3-lane section would tie into the existing 3-lane section near Bullpup Drive. Details of the offset horizontal alignment would be determined later. A continuous sidewalk is contemplated along the south side of US-56 to access the school. The sidewalk may combine with the proposed trail through proposed parkland. The majority of this widening should be able to be accomplished within the existing right-of-way.

The majority of access points overlap within the intersection functional area. Consideration may be given to raised medians that would restrict turning movements.

Remove existing access points 16.91 and 16.92. Access to parcel is to be provided via cross access circulation.

Potential Future Public Street

Relocate access point 16.61L for future parkland opposite 11th St.

Note – Bridge scheduled for replacement in Fiscal Year 2013.

Remove access point 16.68 as property has access via 10th St.

Parcel 1600.023 is currently vacant. When redevelopment occurs, access point 16.87 should be relocated to 8th St.

Remove access point 16.57. Coordinate with City on future park access and/or potential trail head with access via 11th St.

LEGEND
POTENTIAL FUTURE RIGHT-OF-WAY
KDOT ENVELOPE
KDOT
CITY/COUNTY

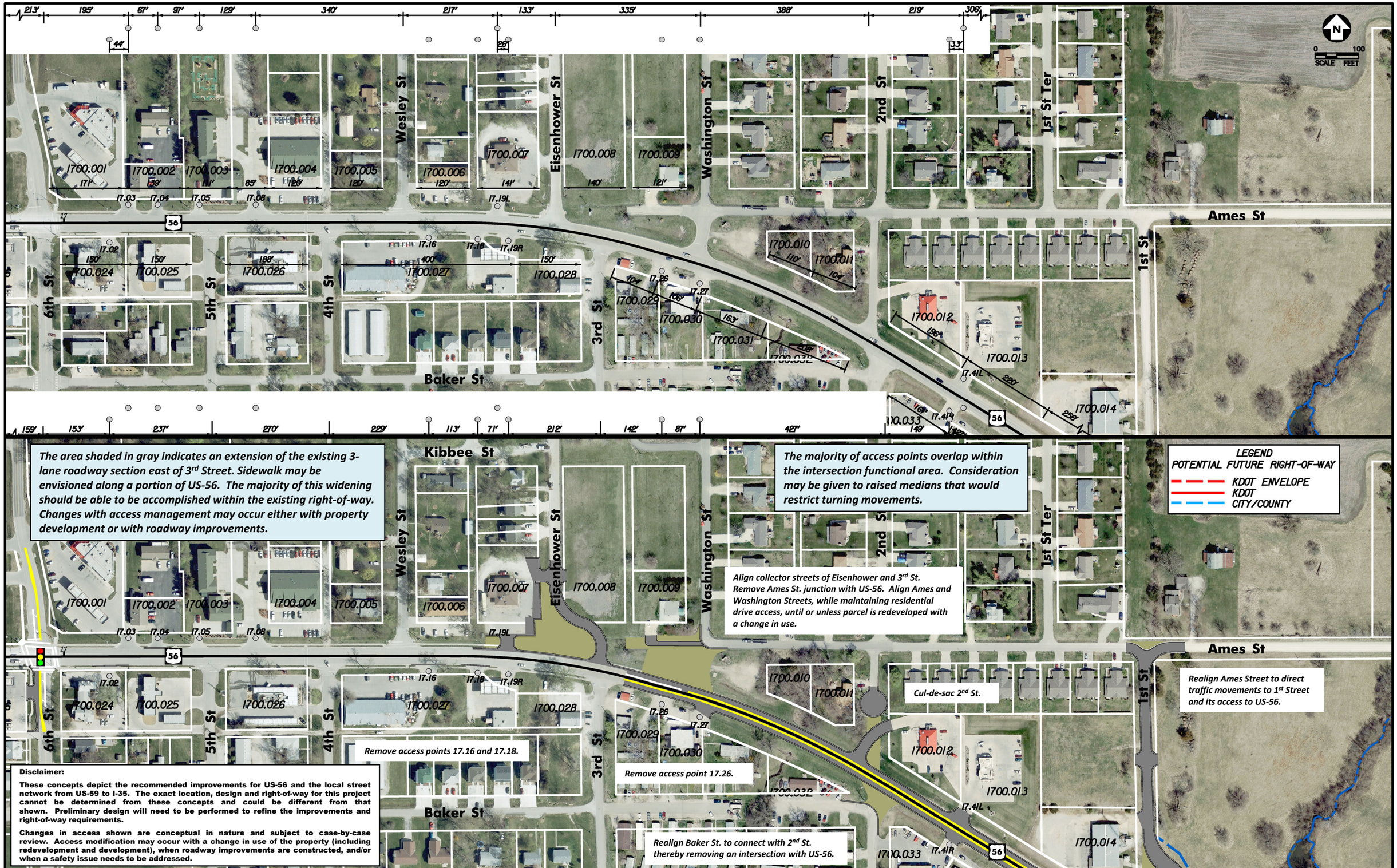
US 56 — 8 9 11 12 13 14 15
BALDWIN CITY ARTERIAL INDEX MAP

Location: URBAN BALDWIN CITY

Description: Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-10
July 2010



Disclaimer:

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US 56 Corridor Management Plan

8 9 10 US 56 12 13 14 15

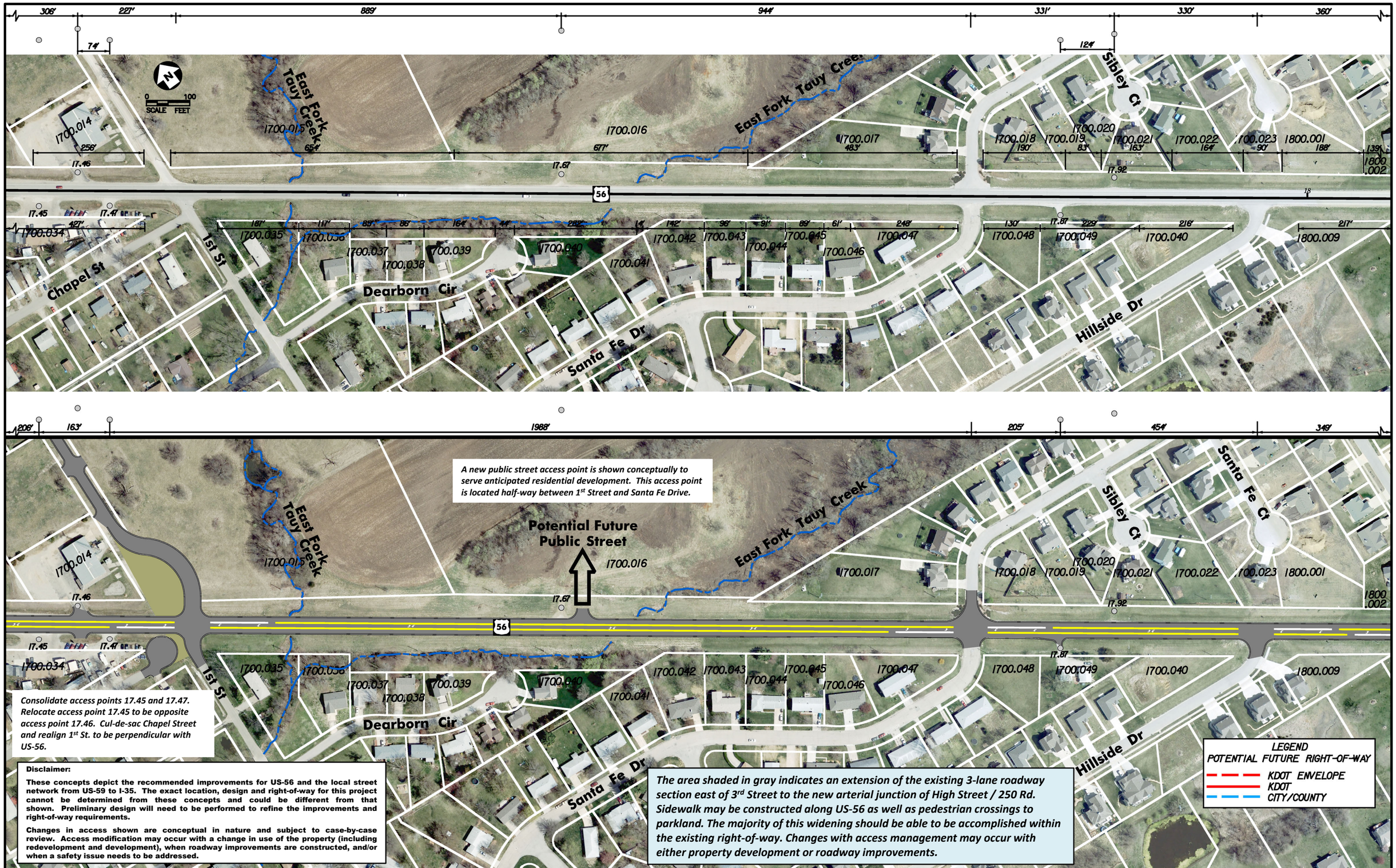
BALDWIN CITY ARTERIAL INDEX MAP

Location:
URBAN BALDWIN CITY

Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-11
July 2010



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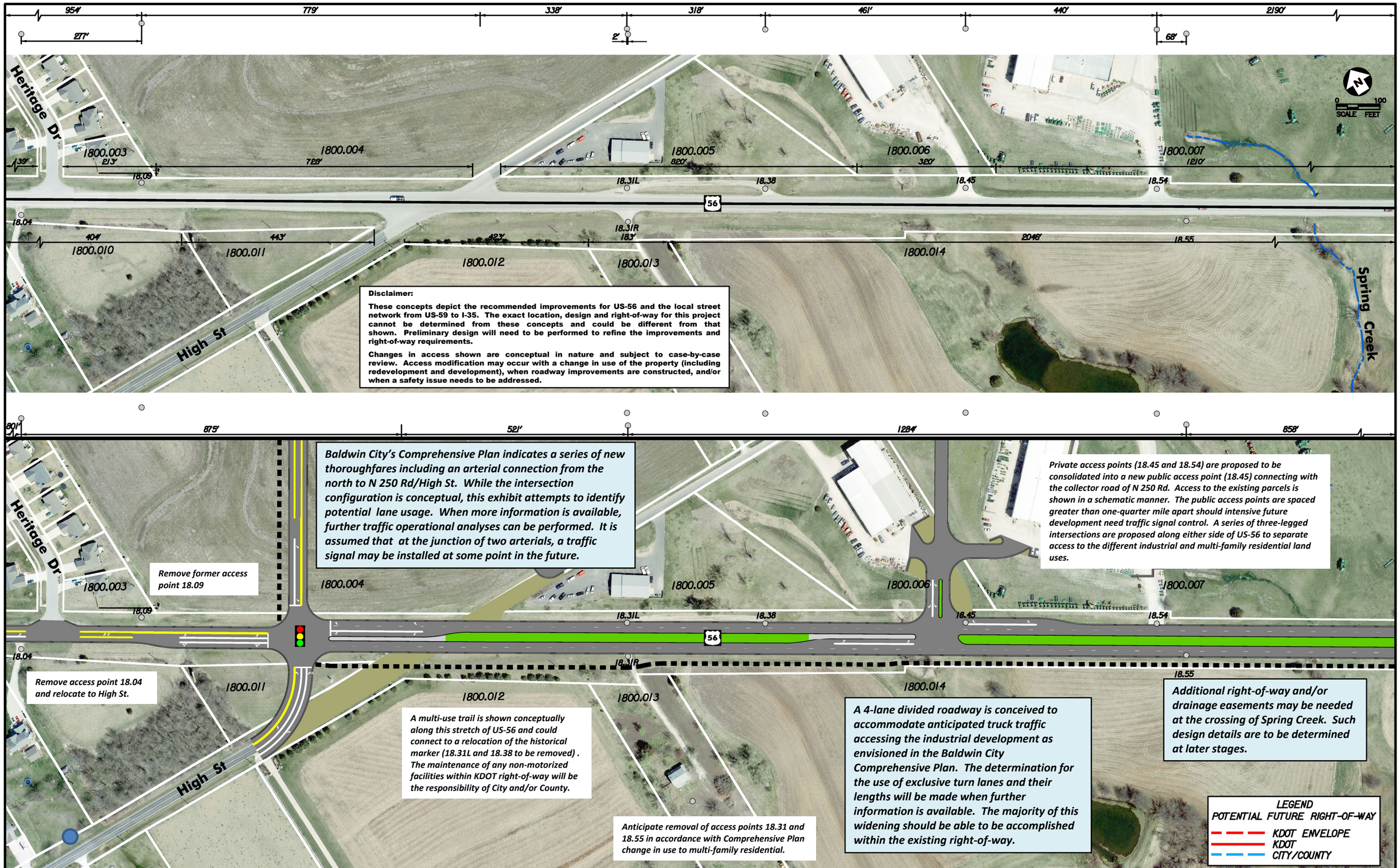
Location:
URBAN BALDWIN CITY

Description:
Existing (upper) and Proposed (lower) Conditions

Exhibit 4-12
July 2010



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Baldwin City's Comprehensive Plan indicates a series of new thoroughfares including an arterial connection from the north to N 250 Rd/High St. While the intersection configuration is conceptual, this exhibit attempts to identify potential lane usage. When more information is available, further traffic operational analyses can be performed. It is assumed that at the junction of two arterials, a traffic signal may be installed at some point in the future.

Private access points (18.45 and 18.54) are proposed to be consolidated into a new public access point (18.45) connecting with the collector road of N 250 Rd. Access to the existing parcels is shown in a schematic manner. The public access points are spaced greater than one-quarter mile apart should intensive future development need traffic signal control. A series of three-legged intersections are proposed along either side of US-56 to separate access to the different industrial and multi-family residential land uses.

A multi-use trail is shown conceptually along this stretch of US-56 and could connect to a relocation of the historical marker (18.31L and 18.38 to be removed) . The maintenance of any non-motorized facilities within KDOT right-of-way will be the responsibility of City and/or County.

A 4-lane divided roadway is conceived to accommodate anticipated truck traffic accessing the industrial development as envisioned in the Baldwin City Comprehensive Plan. The determination for the use of exclusive turn lanes and their lengths will be made when further information is available. The majority of this widening should be able to be accomplished within the existing right-of-way.

Additional right-of-way and/or drainage easements may be needed at the crossing of Spring Creek. Such design details are to be determined at later stages.

Corridor Management Plan

8 | 9 | 10 | 11 | 12 | 13 | 14 | 15
US 56
BALDWIN CITY ARTERIAL INDEX MAP

Location:
URBAN BALDWIN CITY

Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-13
July 2010

Disclaimer:

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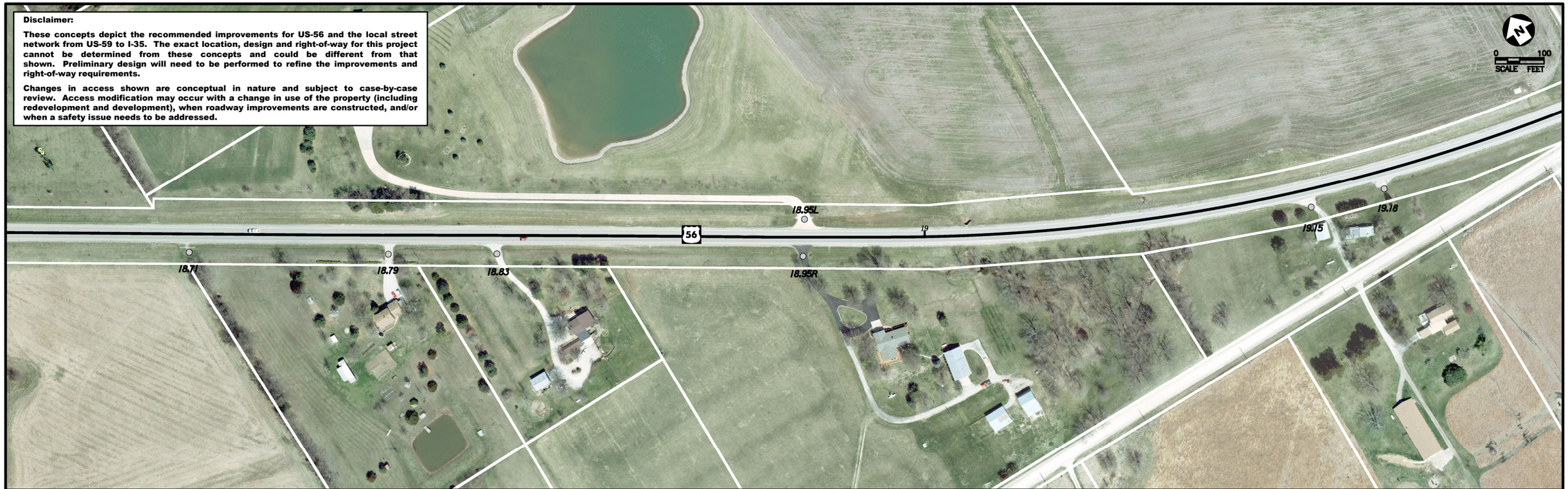
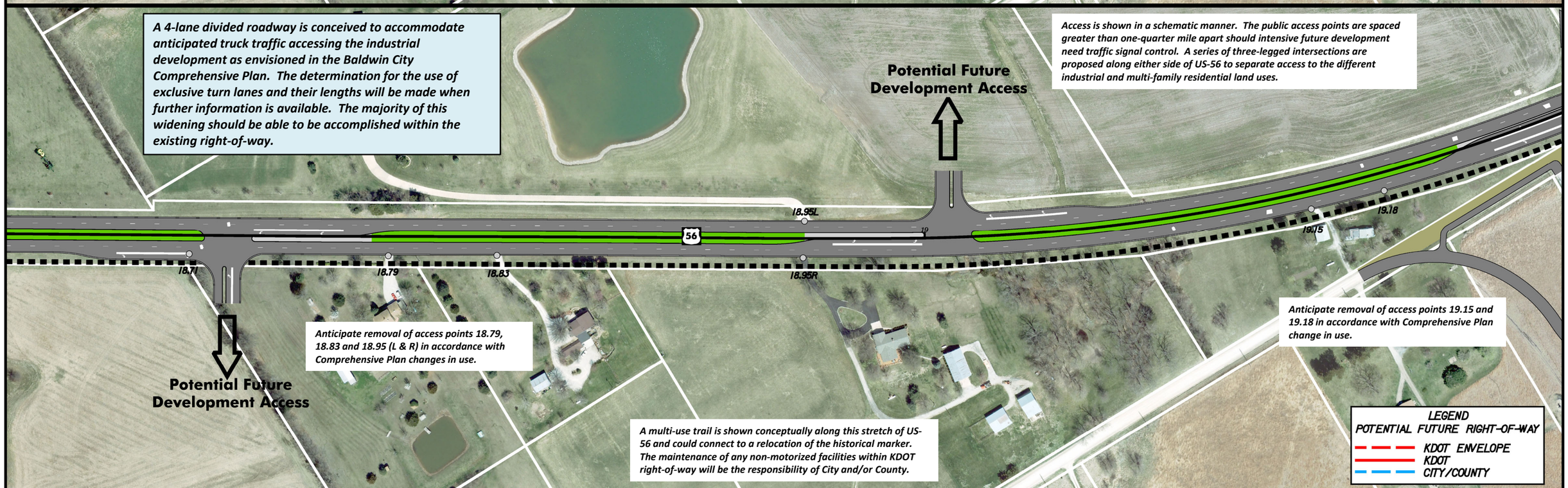
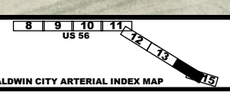




US 56 Corridor Management Plan



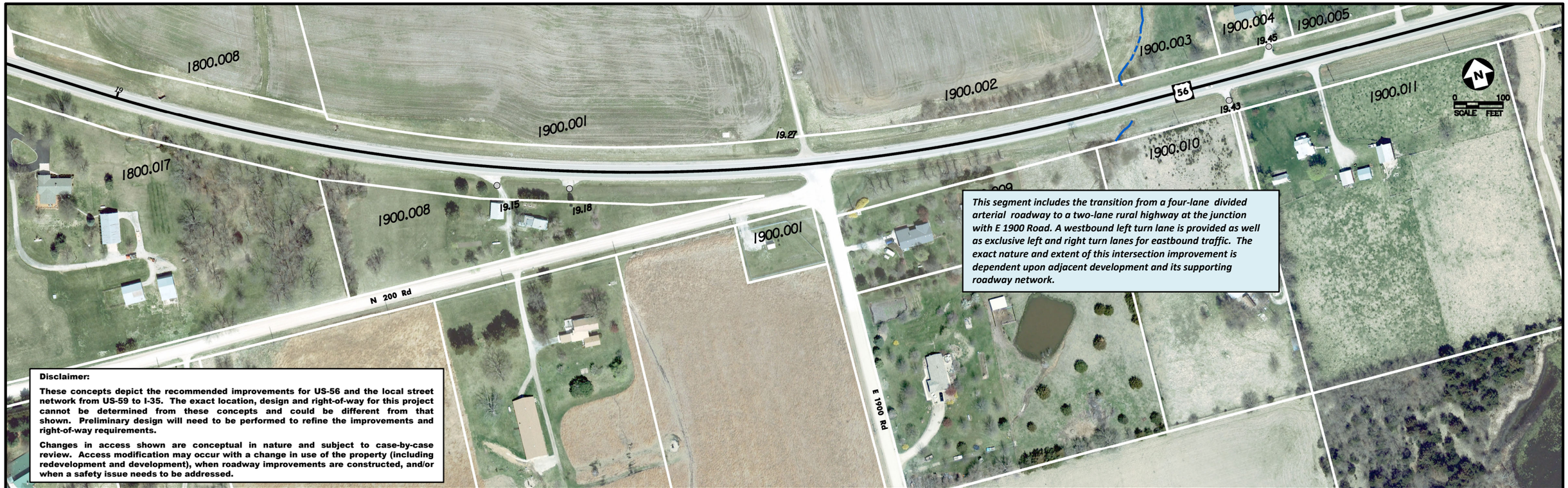
BALDWIN CITY ARTERIAL INDEX MAP

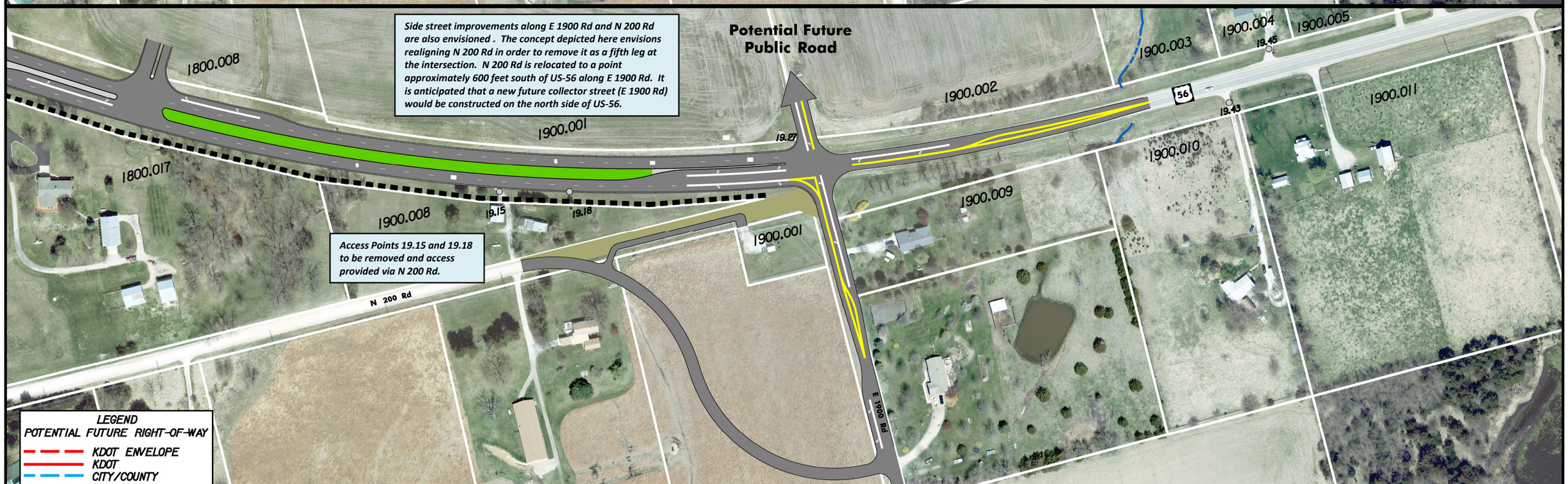
Location:
URBAN BALDWIN CITY

Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-14
July 2010





US 56 Corridor Management Plan

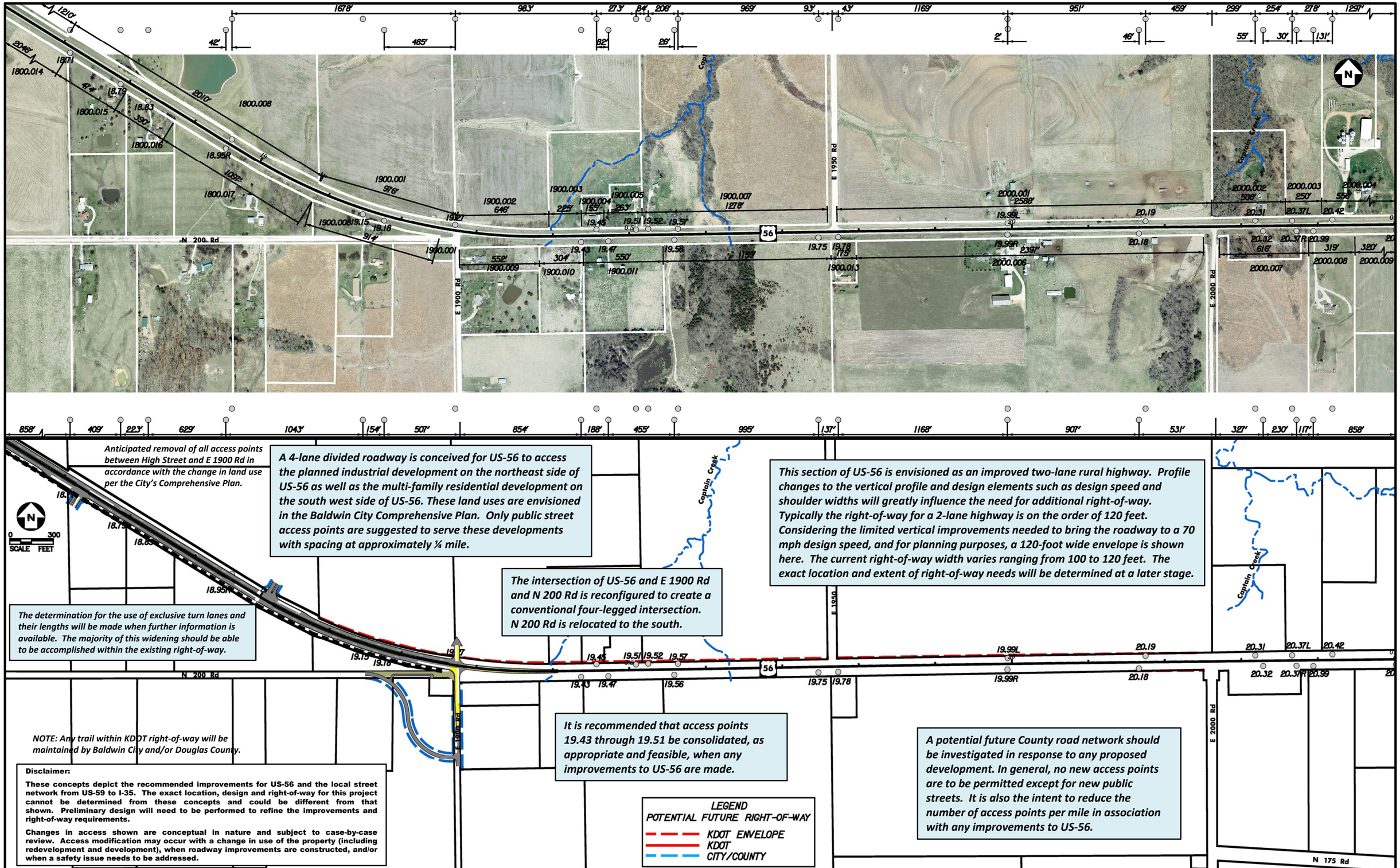
8 | 9 | 10 | 11 | 12 | 13 | 14
US 56
BALDWIN CITY ARTERIAL INDEX MAP

Location:
URBAN BALDWIN CITY

Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-15
July 2010



US 56 Corridor Management Plan

1 | 2-3 | 4-5 | 18-19 | 20-21 | 22-23 | 28-29 | 30-31

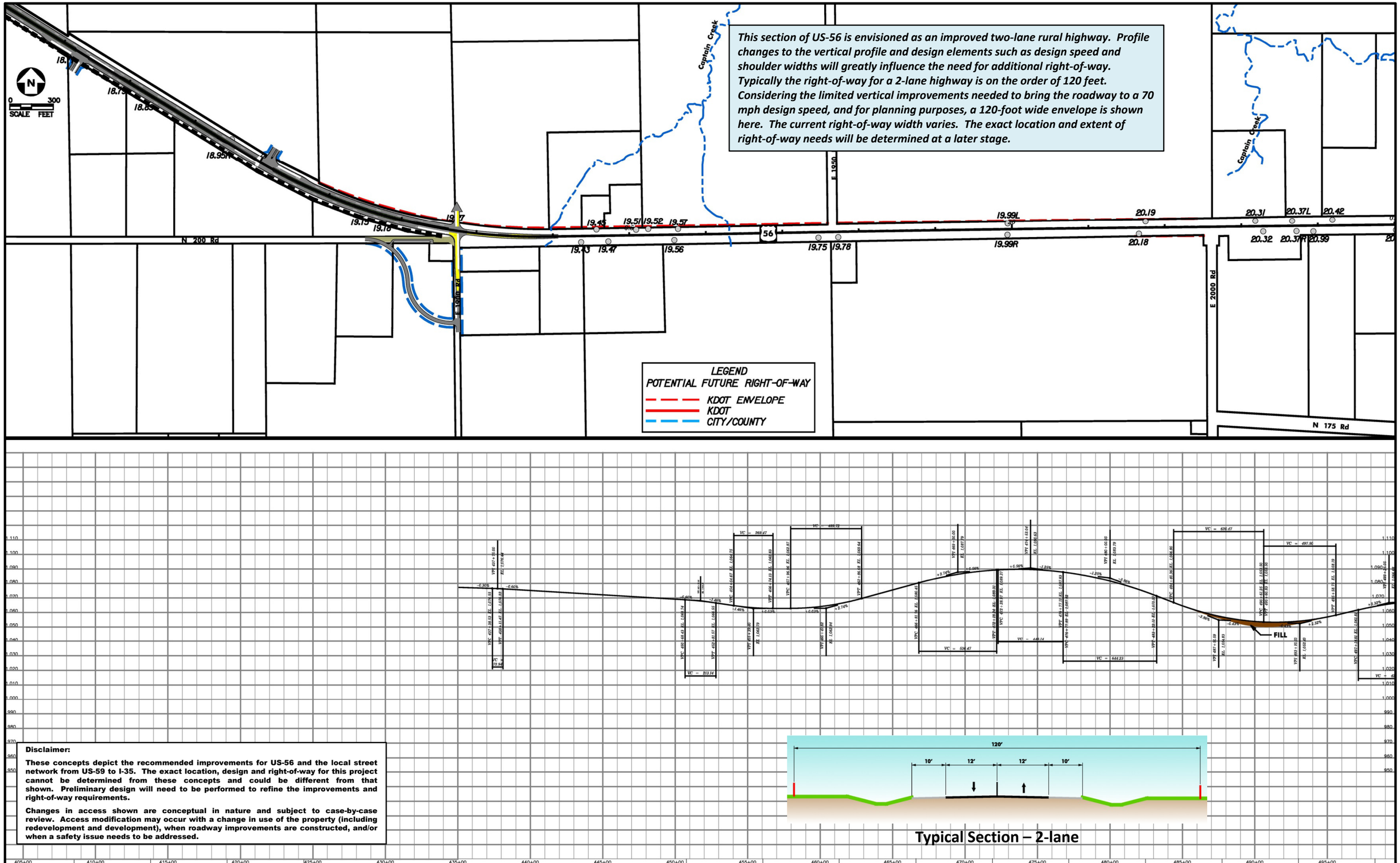
HIGHWAY INDEX MAP

Location:
Rural Douglas County, MM 18.5 to 20.0

Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-16
July 2010



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US 56 Corridor Management Plan

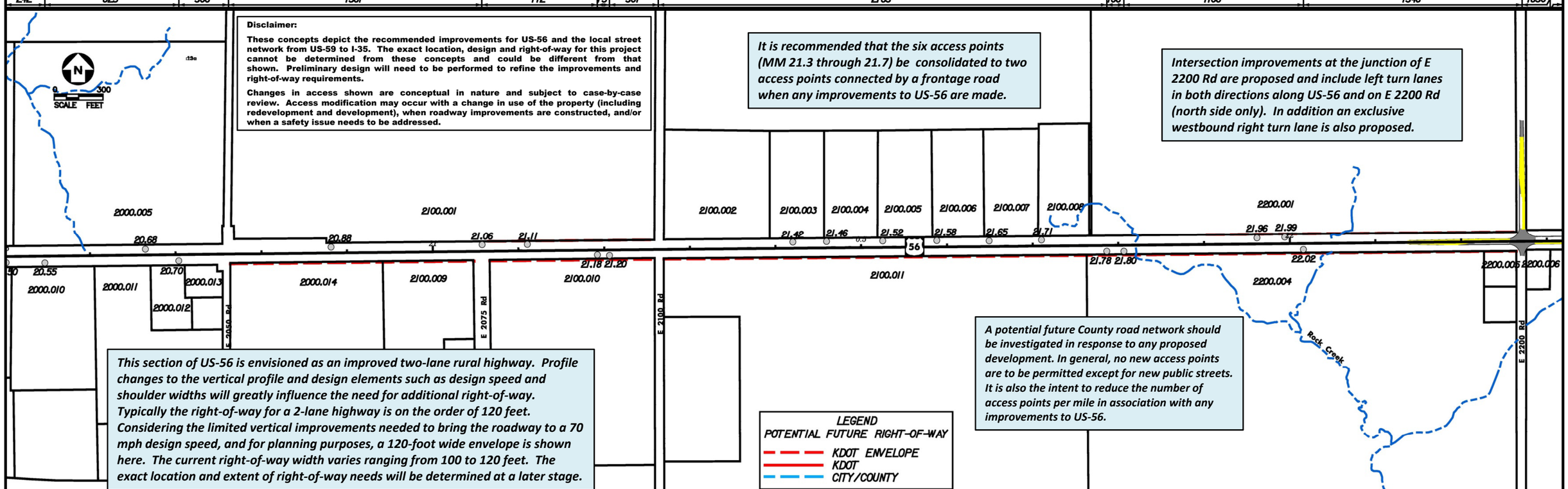
1 | 2-3 | 4-5
US 56
18-19 | 20-21 | 22-23
26-29 | 30-31
HIGHWAY INDEX MAP

Location:
Rural Douglas County, MM 18.5 to 20.0

Description:
Plan (upper) and Profile (lower)

TranSystems

Exhibit 4-17
July 2010



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It is recommended that the six access points (MM 21.3 through 21.7) be consolidated to two access points connected by a frontage road when any improvements to US-56 are made.

Intersection improvements at the junction of E 2200 Rd are proposed and include left turn lanes in both directions along US-56 and on E 2200 Rd (north side only). In addition an exclusive westbound right turn lane is also proposed.

This section of US-56 is envisioned as an improved two-lane rural highway. Profile changes to the vertical profile and design elements such as design speed and shoulder widths will greatly influence the need for additional right-of-way. Typically the right-of-way for a 2-lane highway is on the order of 120 feet. Considering the limited vertical improvements needed to bring the roadway to a 70 mph design speed, and for planning purposes, a 120-foot wide envelope is shown here. The current right-of-way width varies ranging from 100 to 120 feet. The exact location and extent of right-of-way needs will be determined at a later stage.

A potential future County road network should be investigated in response to any proposed development. In general, no new access points are to be permitted except for new public streets. It is also the intent to reduce the number of access points per mile in association with any improvements to US-56.

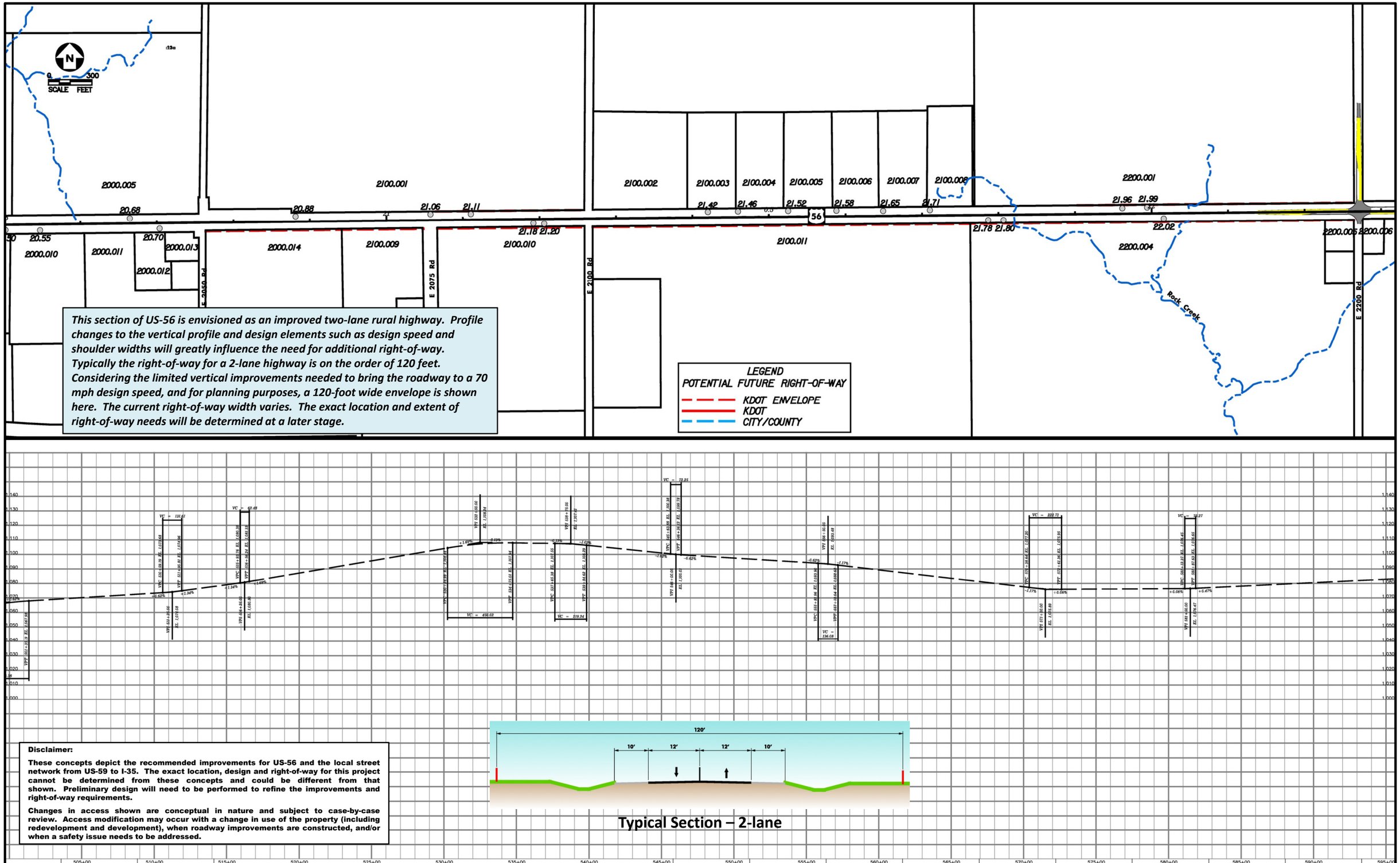
US 56 HIGHWAY INDEX MAP

Location: Rural Douglas County, MM 20.5 to 22.0

Description: Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-18
July 2010



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US 56 Corridor Management Plan

1	2-3	4-5
16-17	20-21	22-23

US 56
HIGHWAY INDEX MAP

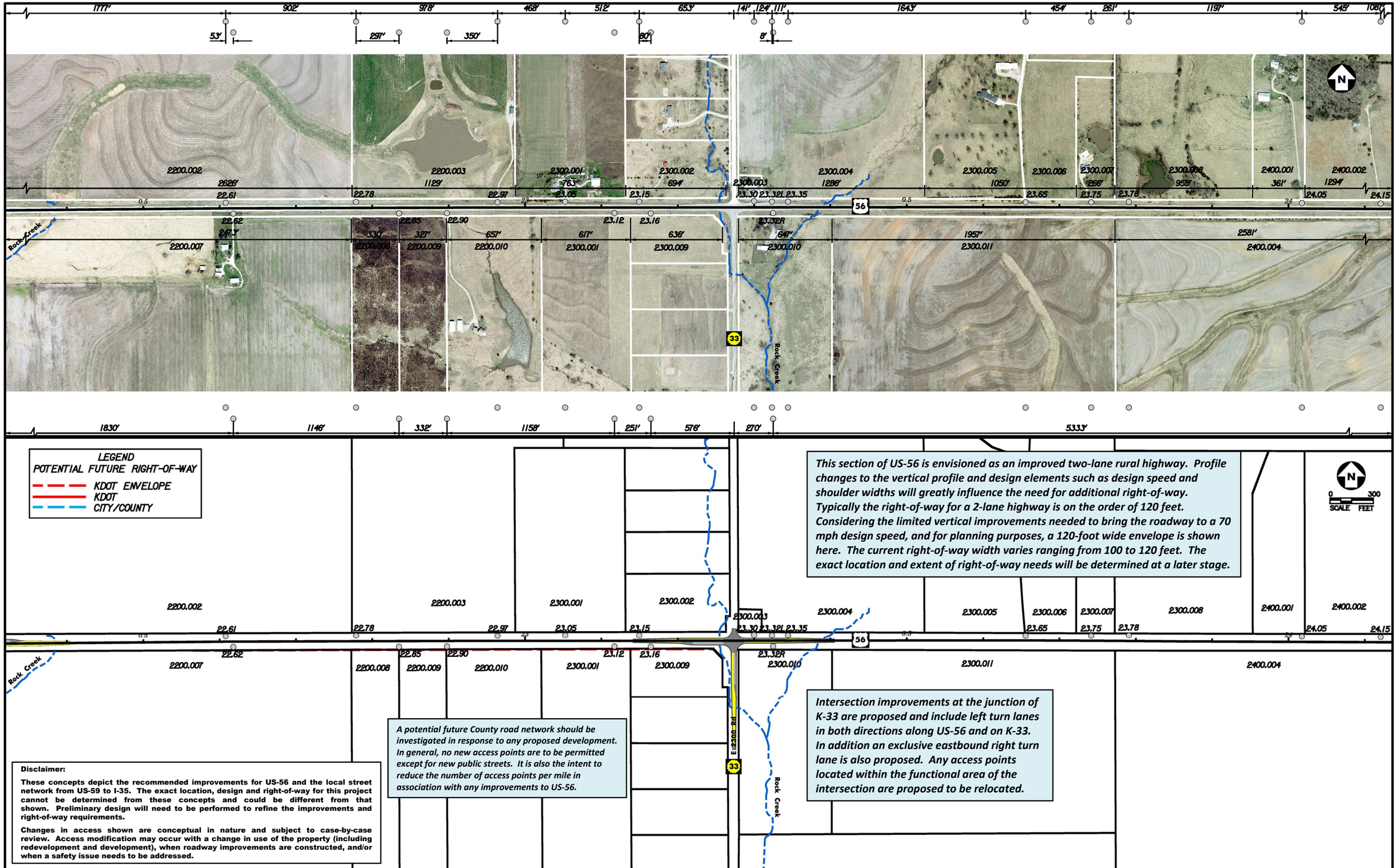
28-29 30-31

Location:
Rural Douglas County, MM 20.5 to 22.0

Description:
Plan (upper) and Profile (lower)

TranSystems

Exhibit 4-19
July 2010



Corridor Management Plan

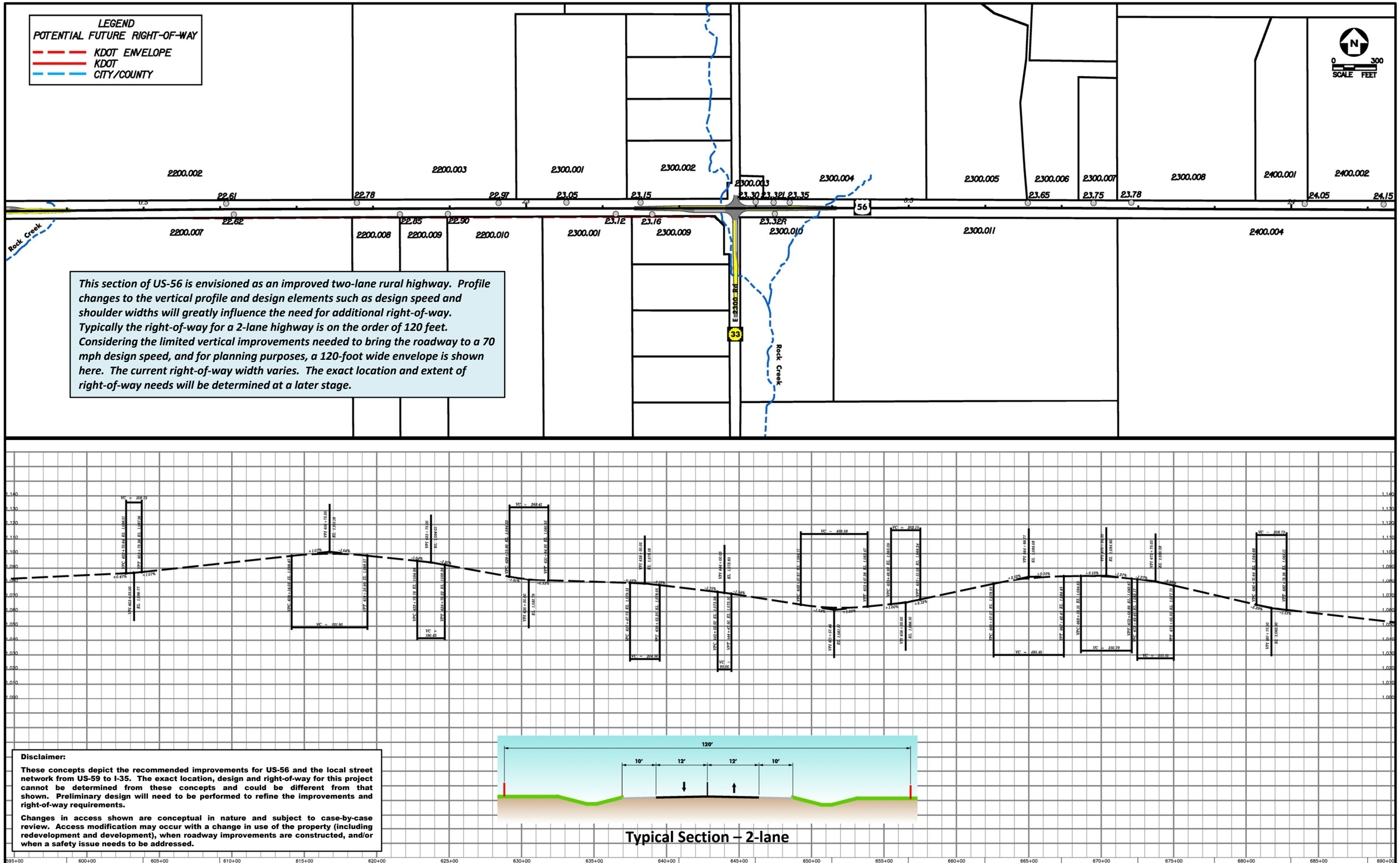
US 56 HIGHWAY INDEX MAP

Location:
Rural Douglas County, MM 22.0 to 24.0

Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-20
July 2010



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US 56 Corridor Management Plan

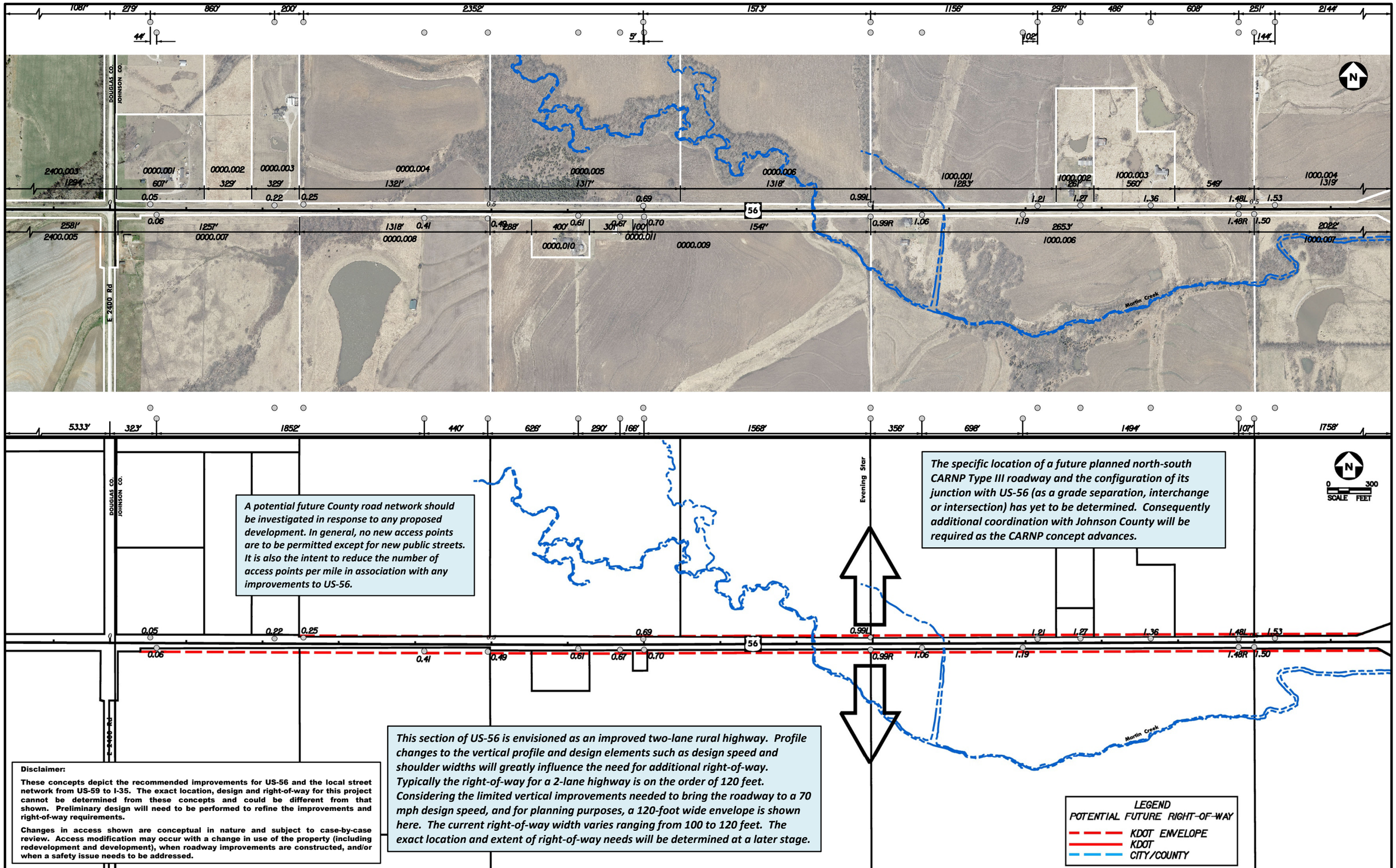
1 | 2-3 | 4-5
US 56
18-17 | 18-19 | 22-23
28-29 | 30-31
HIGHWAY INDEX MAP

Location:
Rural Douglas County, MM 22.0 to 24.0

Description:
Plan (upper) and Profile (lower)

TranSystems

Exhibit 4-21
July 2010



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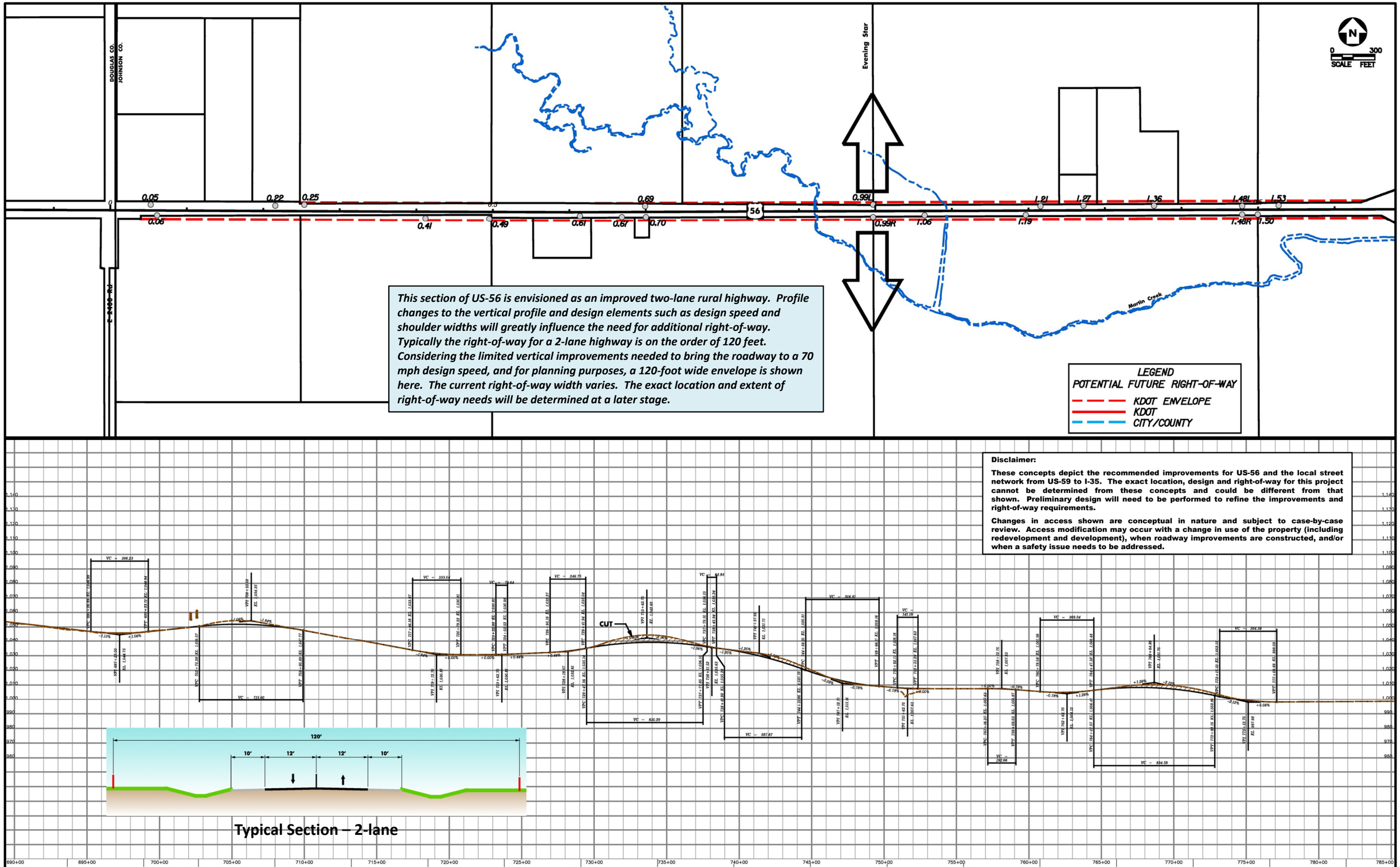
US 56 HIGHWAY INDEX MAP

Location: Rural Johnson County, MM 0.0 to 1.5

Description: Existing (upper) and Proposed (lower) Conditions

Exhibit 4-22
July 2010



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US 56 Corridor Management Plan

1 | 2-3 | 4-5
US 56
16-17 | 18-19 | 20-21
HIGHWAY INDEX MAP
28-29 | 30-31

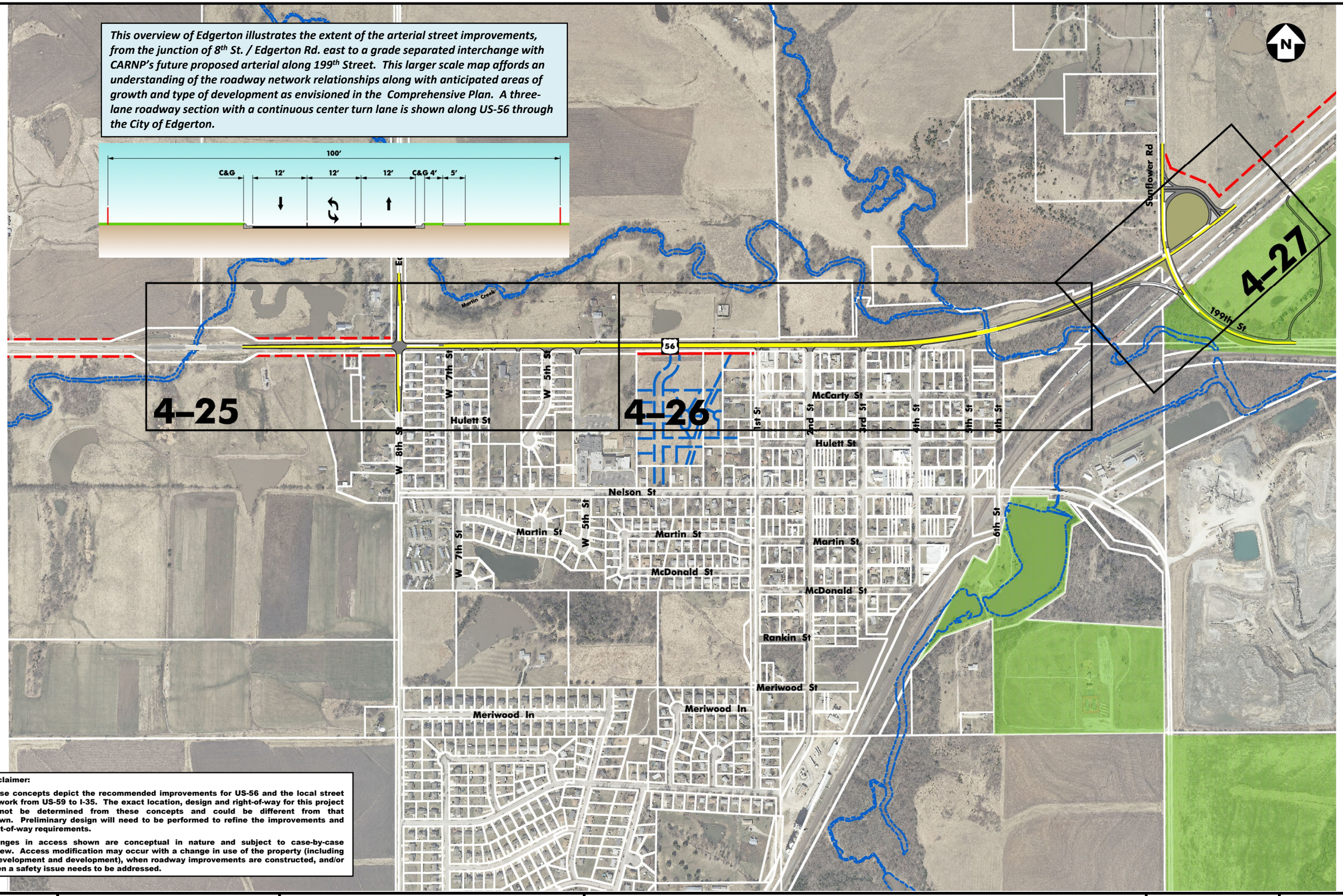
Location:
Rural Johnson County, MM 0.0 to 1.5

Description:
Plan (upper) and Profile (lower)

TranSystems

Exhibit 4-23
July 2010

This overview of Edgerton illustrates the extent of the arterial street improvements, from the junction of 8th St. / Edgerton Rd. east to a grade separated interchange with CARNP's future proposed arterial along 199th Street. This larger scale map affords an understanding of the roadway network relationships along with anticipated areas of growth and type of development as envisioned in the Comprehensive Plan. A three-lane roadway section with a continuous center turn lane is shown along US-56 through the City of Edgerton.



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US 56 Corridor Management Plan

US 56 | 25 | 26 | 27

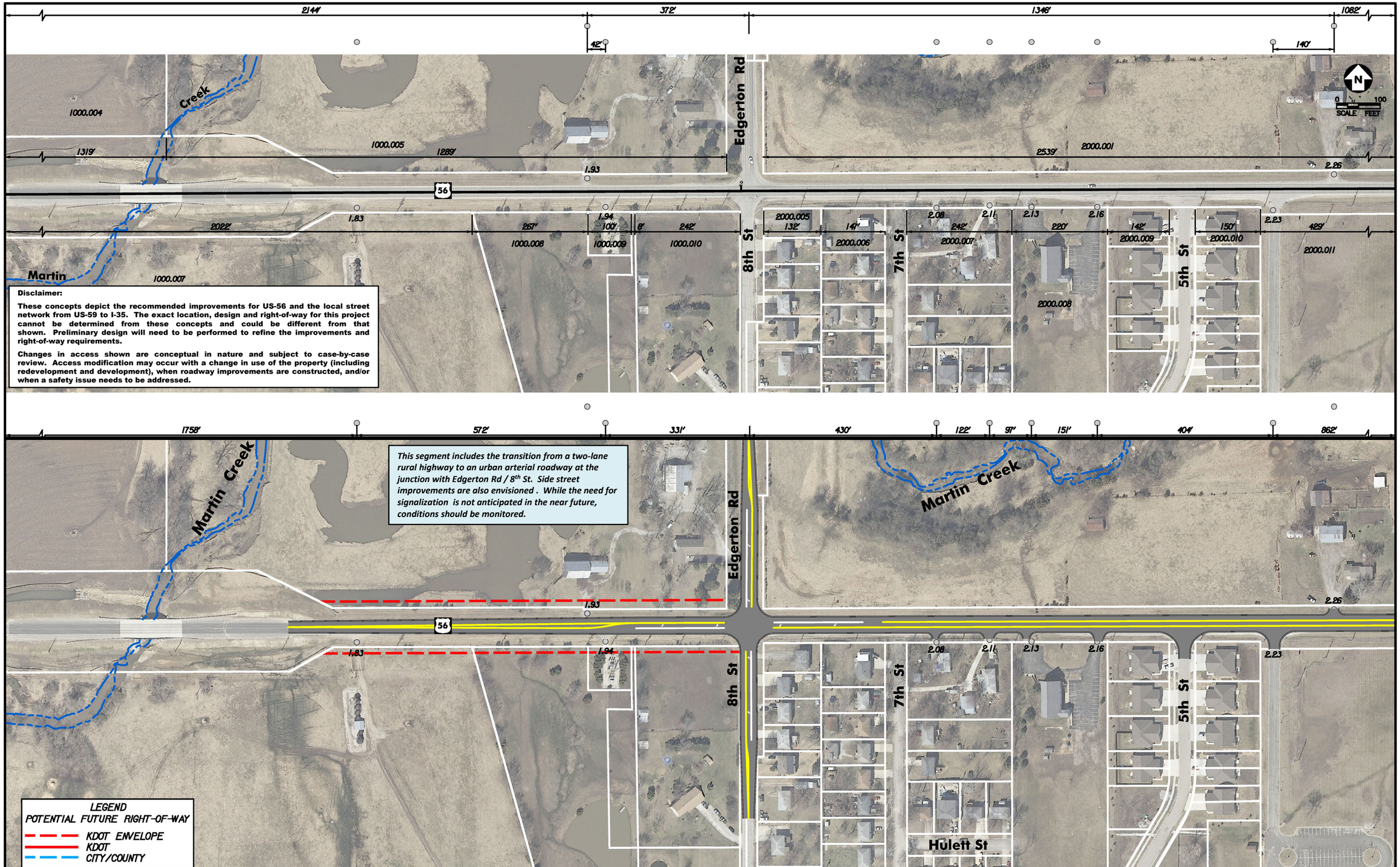
EDGERTON ARTERIAL INDEX MAP

Location: EDGERTON

Description: Overview

TranSystems

Exhibit 4-24
July 2010



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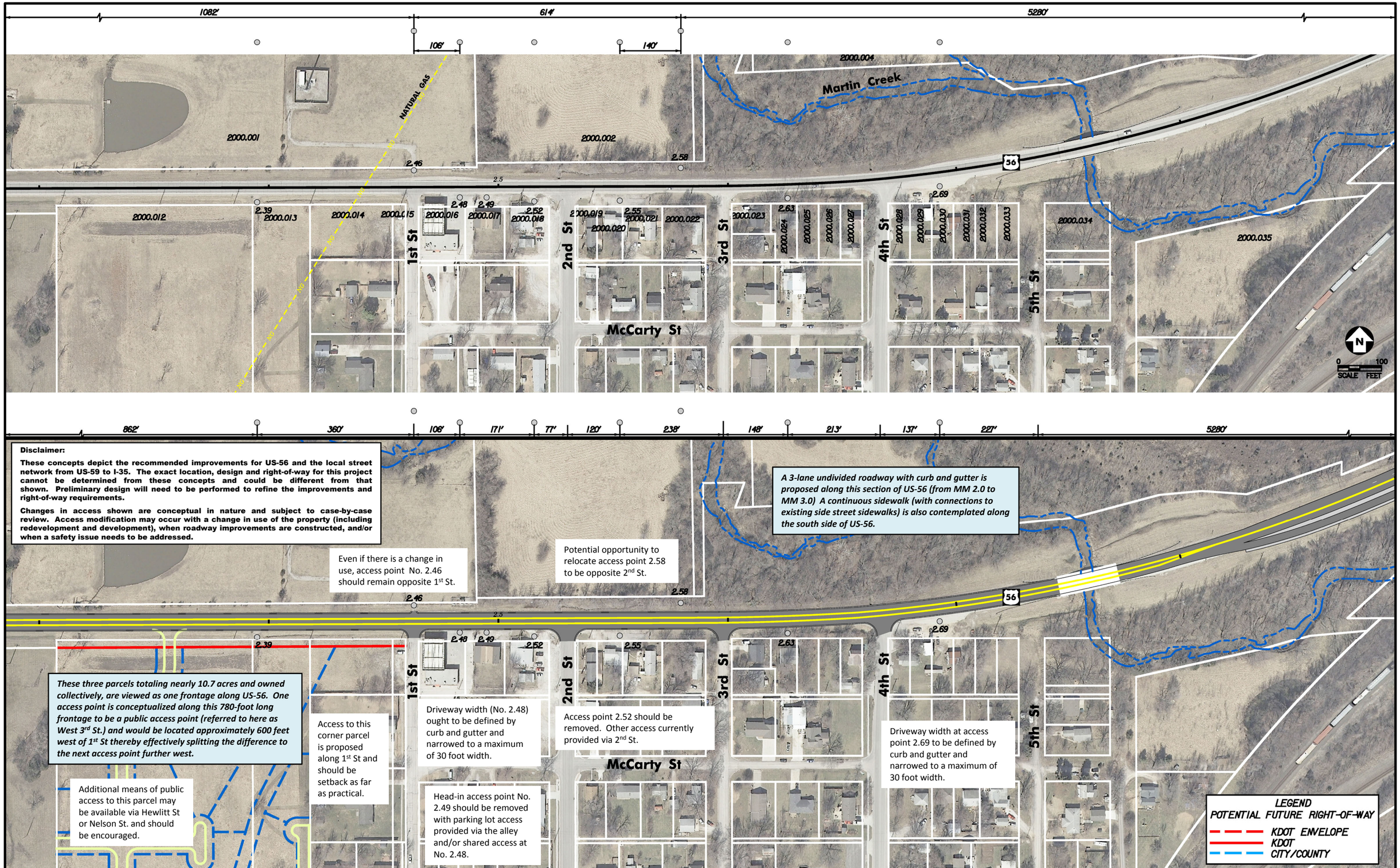
Corridor Management Plan	US 56 26 27 EDGERTON ARTERIAL INDEX MAP	Location: URBAN EDGERTON	Description: Existing (upper) and Proposed (lower) Conditions	TranSystems

Exhibit 4-25
July 2010



US 56 Corridor Management Plan

US 56 25 24

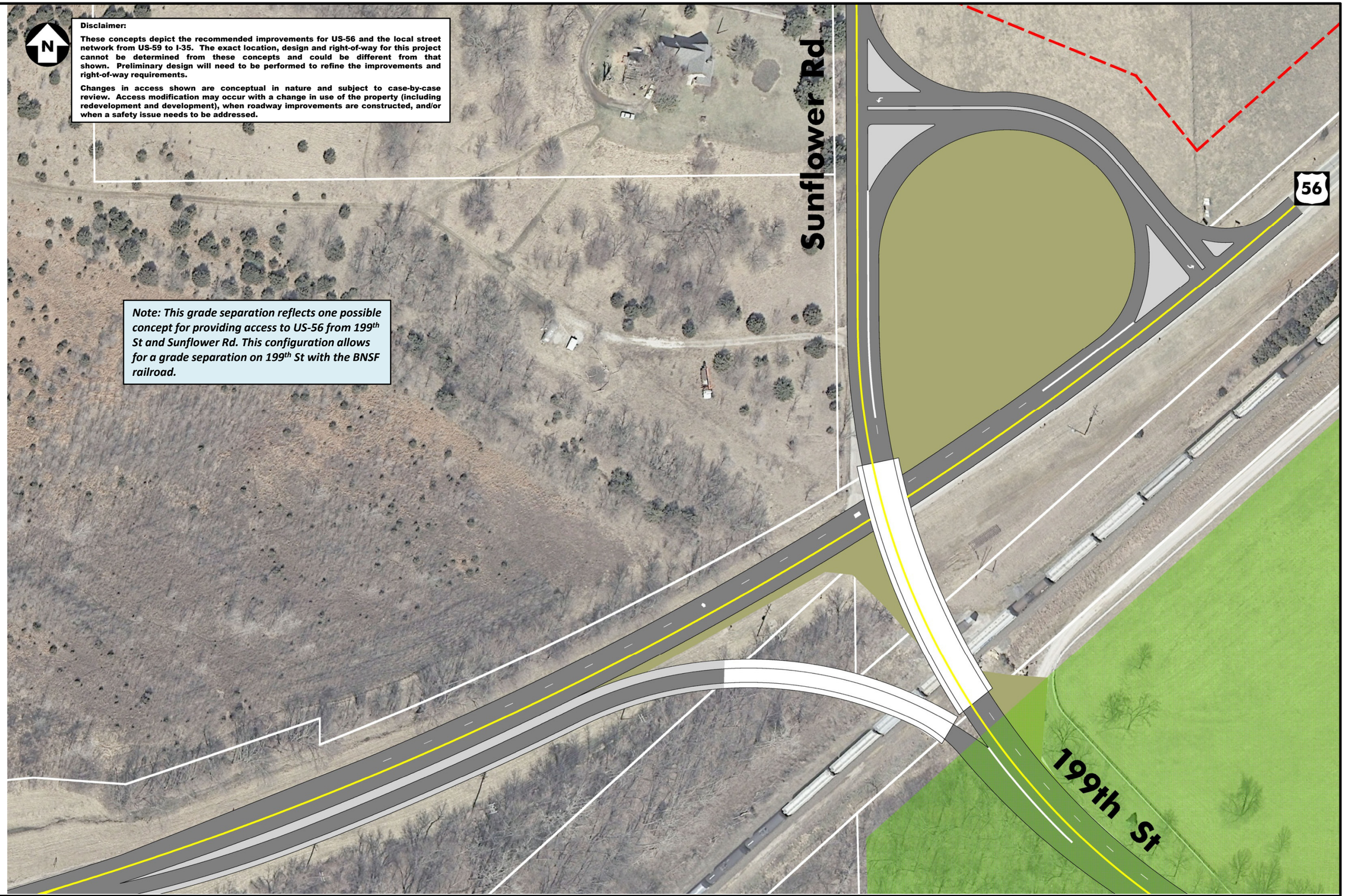
EDGERTON ARTERIAL INDEX MAP

Location:
URBAN EDGERTON

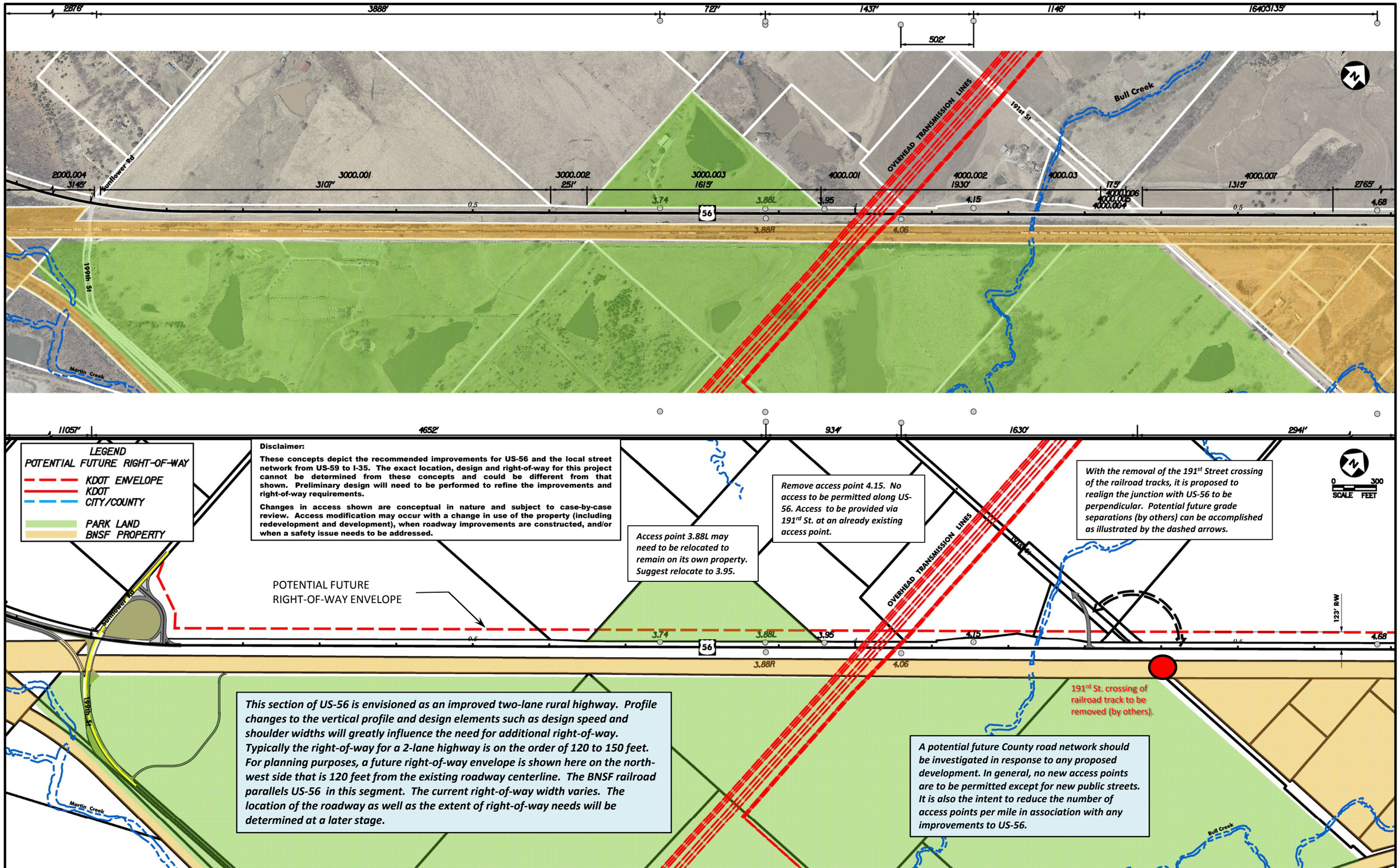
Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-26
July 2010



US 56 Corridor Management Plan	US 56 25 26 EDGERTON ARTERIAL INDEX MAP	Location: EDGERTON	Description: US-56/199th Street/Sunflower Road Detail	TranSystems	Exhibit 4-27 July 2010



US 56 Corridor Management Plan

1 | 2-3 | 4-5

US 56
16-17 | 18-19 | 20-21 | 22-23
HIGHWAY INDEX MAP

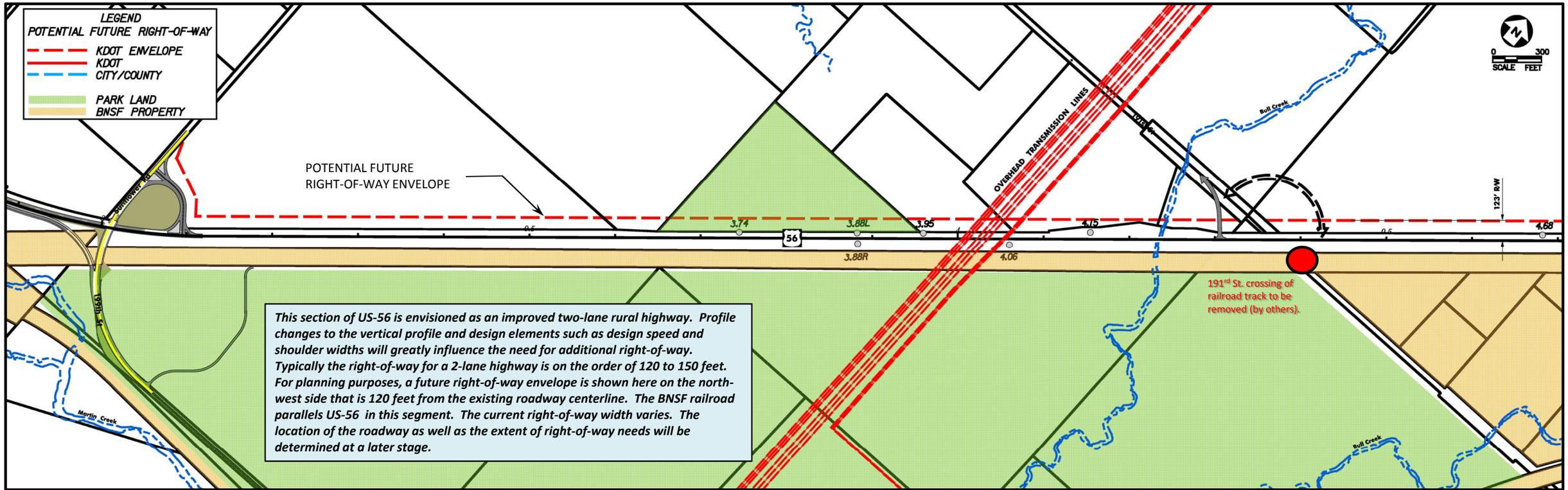
20-21

Location:
Rural Johnson County, MM 3.0 to 4.5

Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-28
July 2010



Disclaimer:

These concepts depict the recommended improvements for US-56 and the local street network from US-59 to I-35. The exact location, design and right-of-way for this project cannot be determined from these concepts and could be different from that shown. Preliminary design will need to be performed to refine the improvements and right-of-way requirements.

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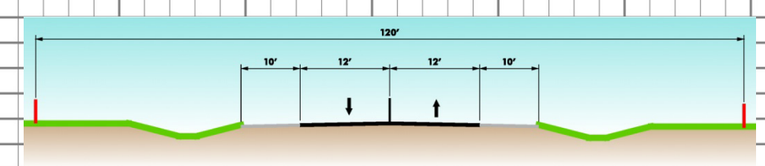
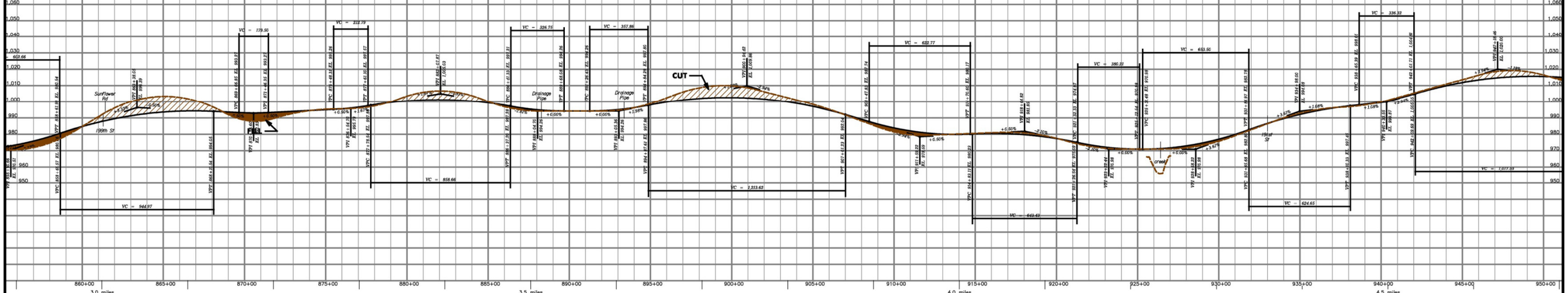


Typical Section – 2-lane



US 56 Corridor Management Plan

1	2-3	4-5

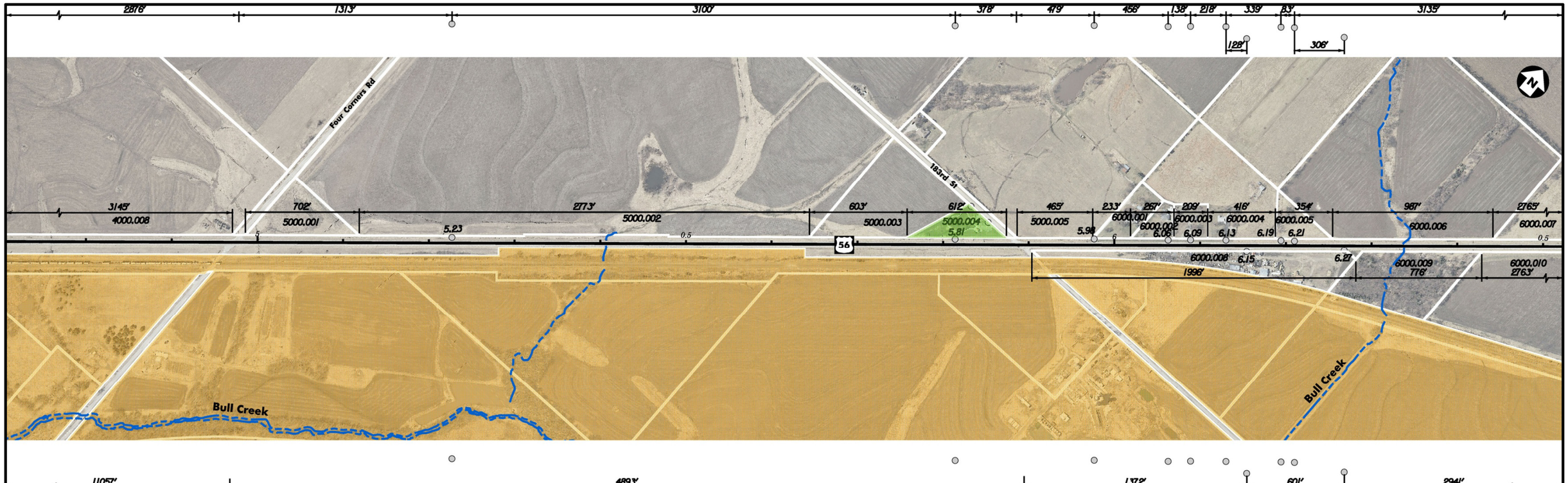
US 56
16-17 18-19 20-21 22-23
HIGHWAY INDEX MAP

Location:
Rural Johnson County, MM 3.0 to 4.5

Description:
Plan (upper) and Profile (lower)

TranSystems

Exhibit 4-29
July 2010



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This section of US-56 is envisioned as an improved two-lane rural highway. Profile changes to the vertical profile and design elements such as design speed and shoulder widths will greatly influence the need for additional right-of-way. Typically the right-of-way for a 2-lane highway is on the order of 120 to 150 feet. For planning purposes, a future right-of-way envelope is shown here on the north-west side that is 120 feet from the existing roadway centerline. The BNSF railroad parallels US-56 in this segment. The current right-of-way width varies. The location of the roadway as well as the extent of right-of-way needs will be determined at a later stage.

A potential future County road network should be investigated in response to any proposed development. In general, no new access points are to be permitted except for new public streets. It is also the intent to reduce the number of access points per mile in association with any improvements to US-56.

Corridor Management Plan

1	2-3	4-5

US 56

16-17	18-19	20-21	22-23

HIGHWAY INDEX MAP

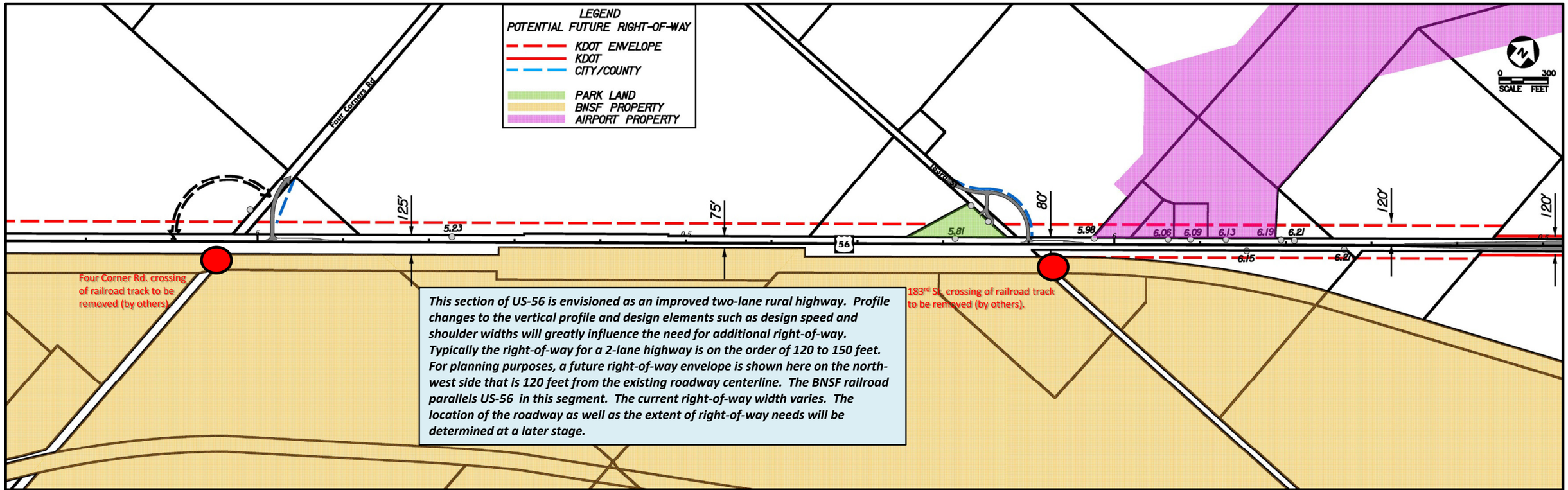
22-23

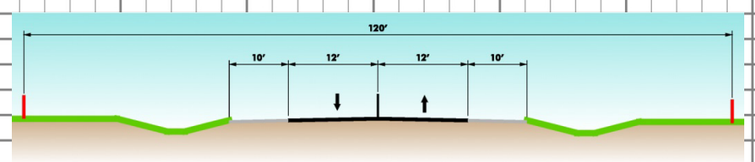
Location:
Rural Johnson County, MM 4.5 to 6.5

Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-30
July 2010





Typical Section – 2-lane

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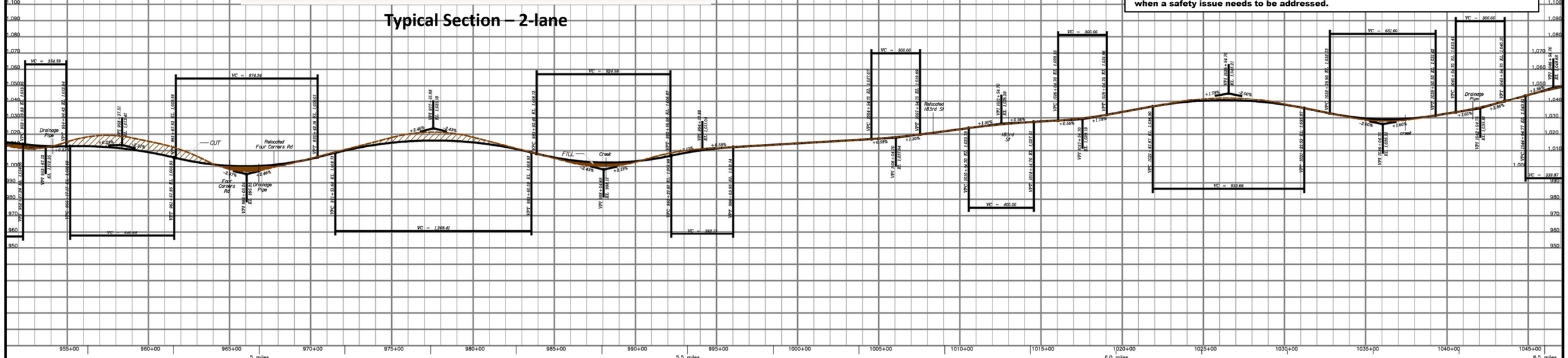

US 56 Corridor Management Plan	1 | 2-3 | 4-5 US 56 18-17 | 18-19 | 20-21 | 22-23 HIGHWAY INDEX MAP 28-29	Location: Rural Johnson County, MM 4.5 to 6.5	Description: Plan (upper) and Profile (lower)
TranSystems	Exhibit 4-31 July 2010		

Disclaimer:

These concepts depict the recommended improvements for US-56 and the local street network from US-59 to I-35. The exact location, design and right-of-way for this project cannot be determined from these concepts and could be different from that shown. Preliminary design will need to be performed to refine the improvements and right-of-way requirements.

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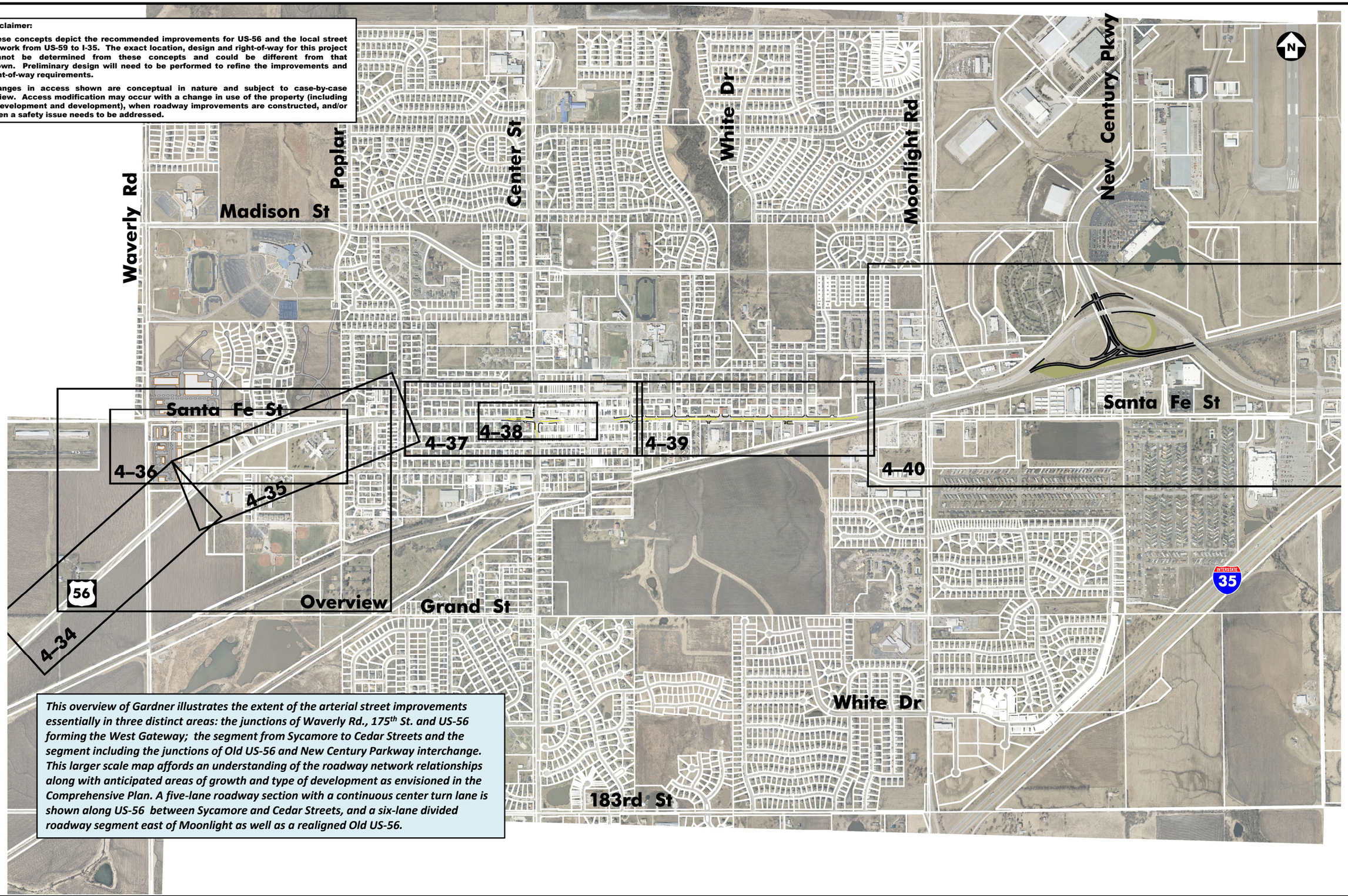
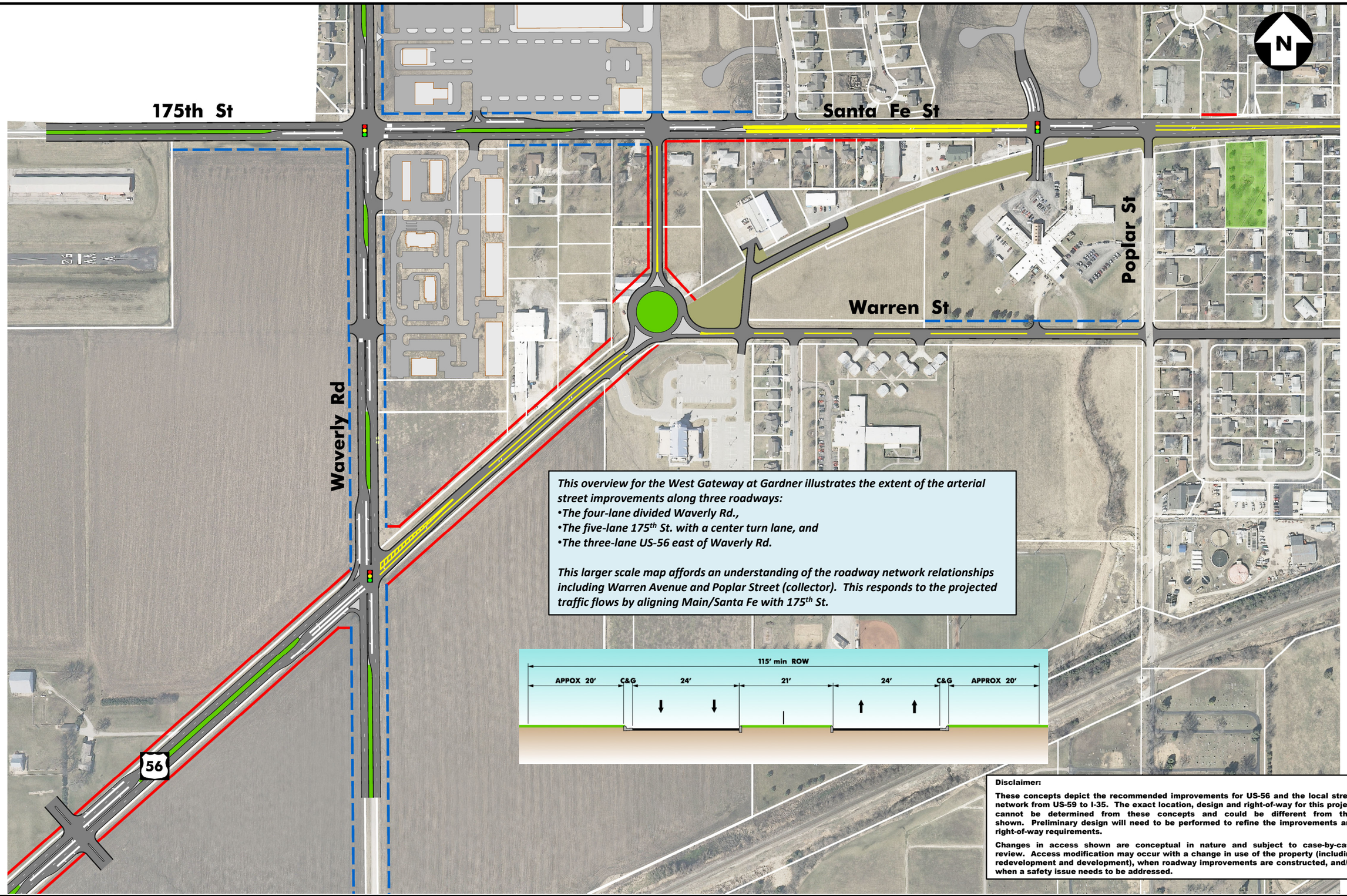


This overview of Gardner illustrates the extent of the arterial street improvements essentially in three distinct areas: the junctions of Waverly Rd., 175th St. and US-56 forming the West Gateway; the segment from Sycamore to Cedar Streets and the segment including the junctions of Old US-56 and New Century Parkway interchange. This larger scale map affords an understanding of the roadway network relationships along with anticipated areas of growth and type of development as envisioned in the Comprehensive Plan. A five-lane roadway section with a continuous center turn lane is shown along US-56 between Sycamore and Cedar Streets, and a six-lane divided roadway segment east of Moonlight as well as a realigned Old US-56.

Corridor Management Plan	US 56 / 40 / 34 35 37 38 39 / GARDNER ARTERIAL INDEX MAP	Location: GARDNER	Description: Overview	TranSystems	Exhibit 4-32 July 2010



This overview for the West Gateway at Gardner illustrates the extent of the arterial street improvements along three roadways:

- *The four-lane divided Waverly Rd.,*
- *The five-lane 175th St. with a center turn lane, and*
- *The three-lane US-56 east of Waverly Rd.*

This larger scale map affords an understanding of the roadway network relationships including Warren Avenue and Poplar Street (collector). This responds to the projected traffic flows by aligning Main/Santa Fe with 175th St.

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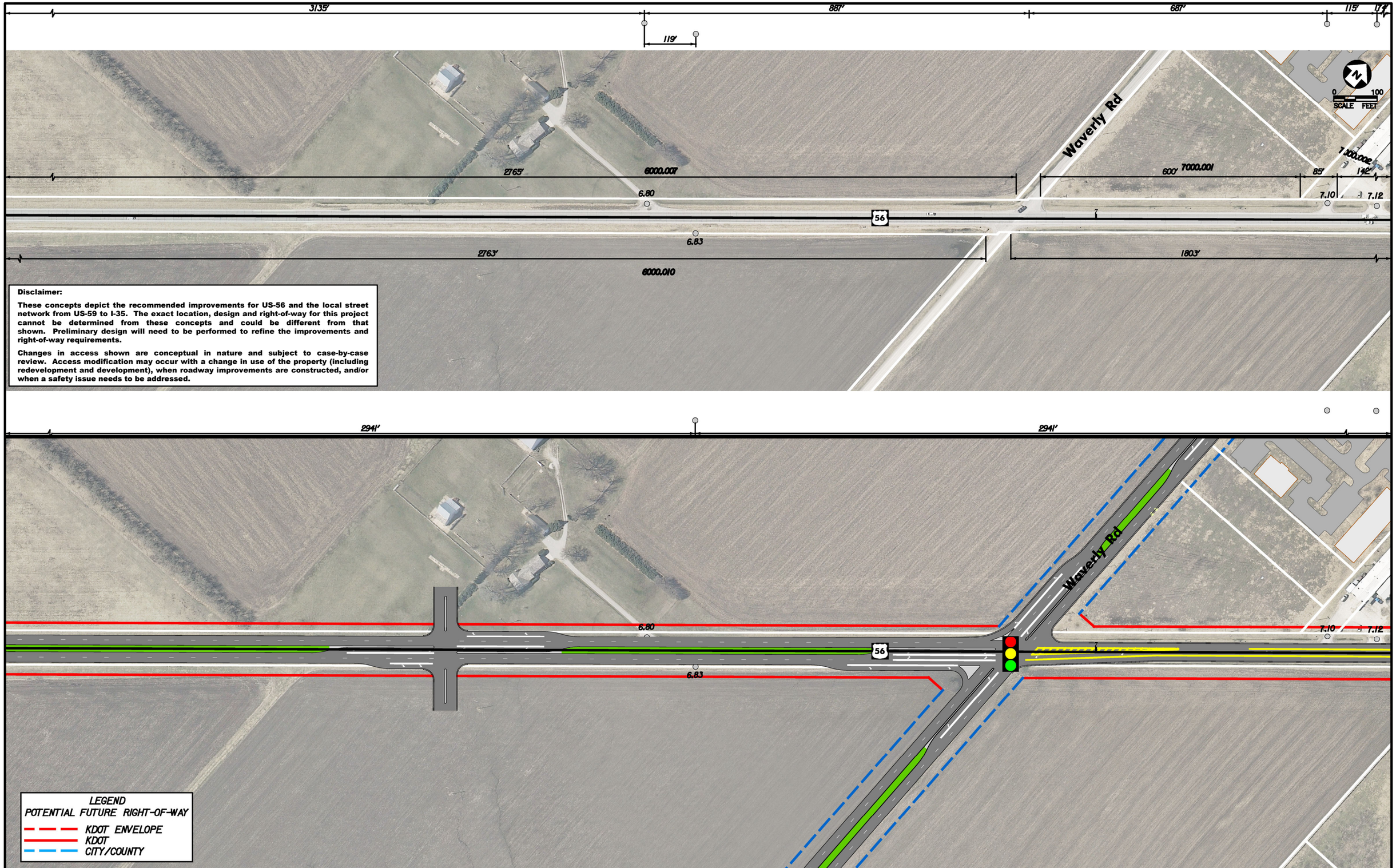
US 56 | 34 | 35 | 37(38) | 39 | 40

GARDNER ARTERIAL INDEX MAP

Location: URBAN GARDNER

Description: Overview for the West Gateway

Exhibit 4-33
July 2010



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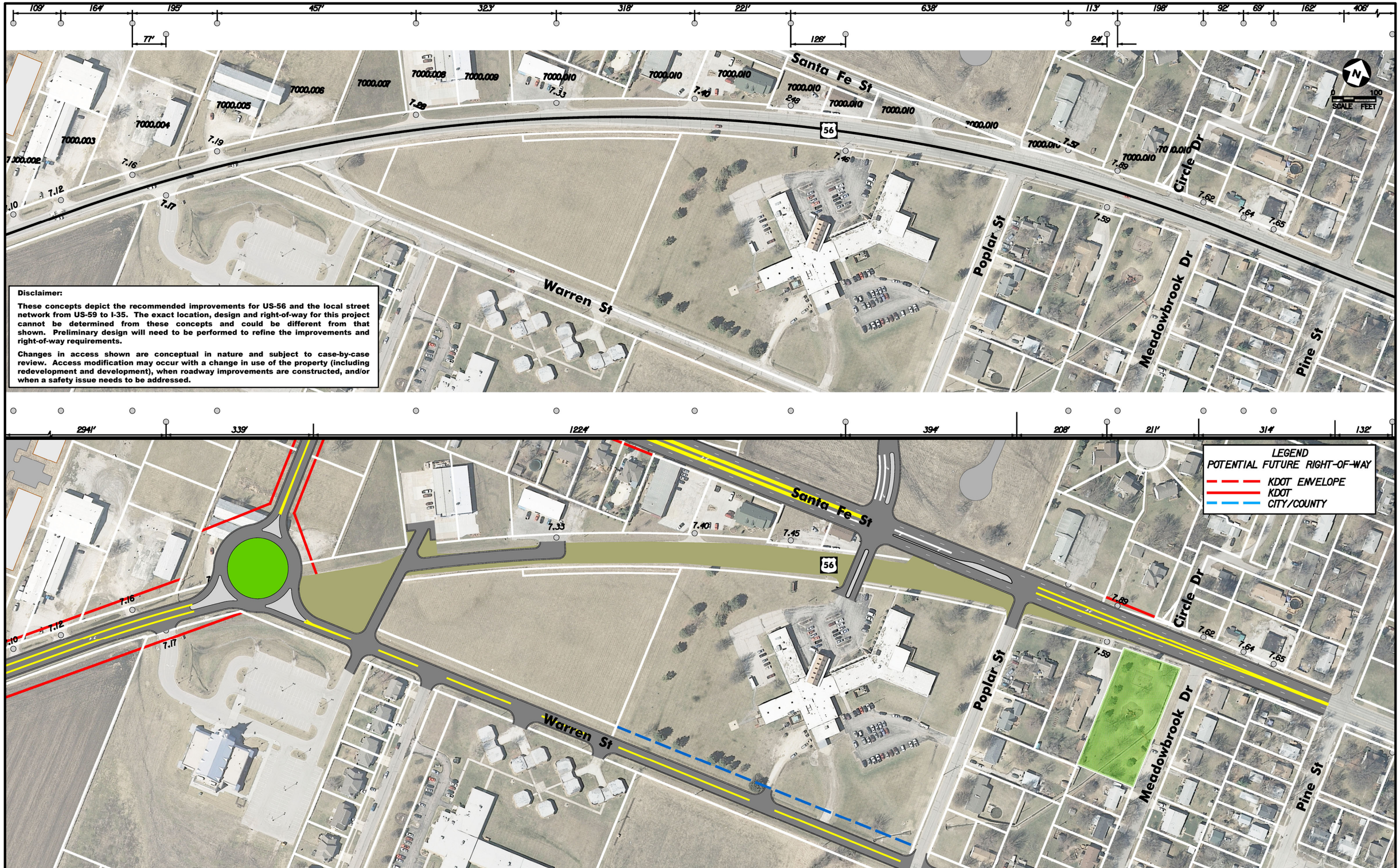
Corridor Management Plan	US 56 / 40 / 36 35 37 38 39 / GARDNER ARTERIAL INDEX MAP	Location: URBAN GARDNER	Description: Existing (upper) and Proposed (lower) Conditions	TranSystems	Exhibit 4-34 July 2010



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US 56 | 40 | 37 | 38 | 39 | 34

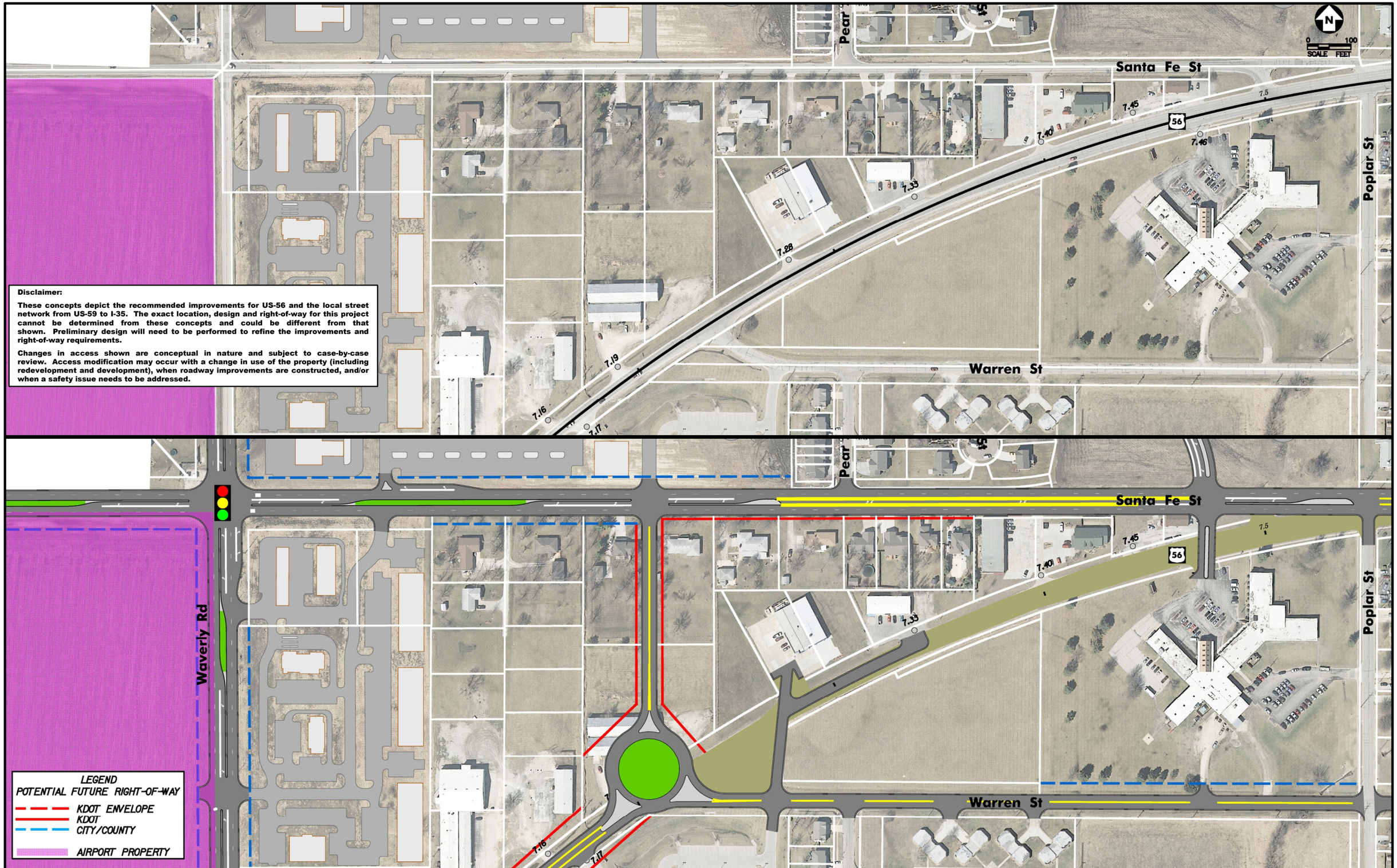
GARDNER ARTERIAL INDEX MAP

Location: URBAN GARDNER

Description: Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-35
July 2010



Disclaimer:

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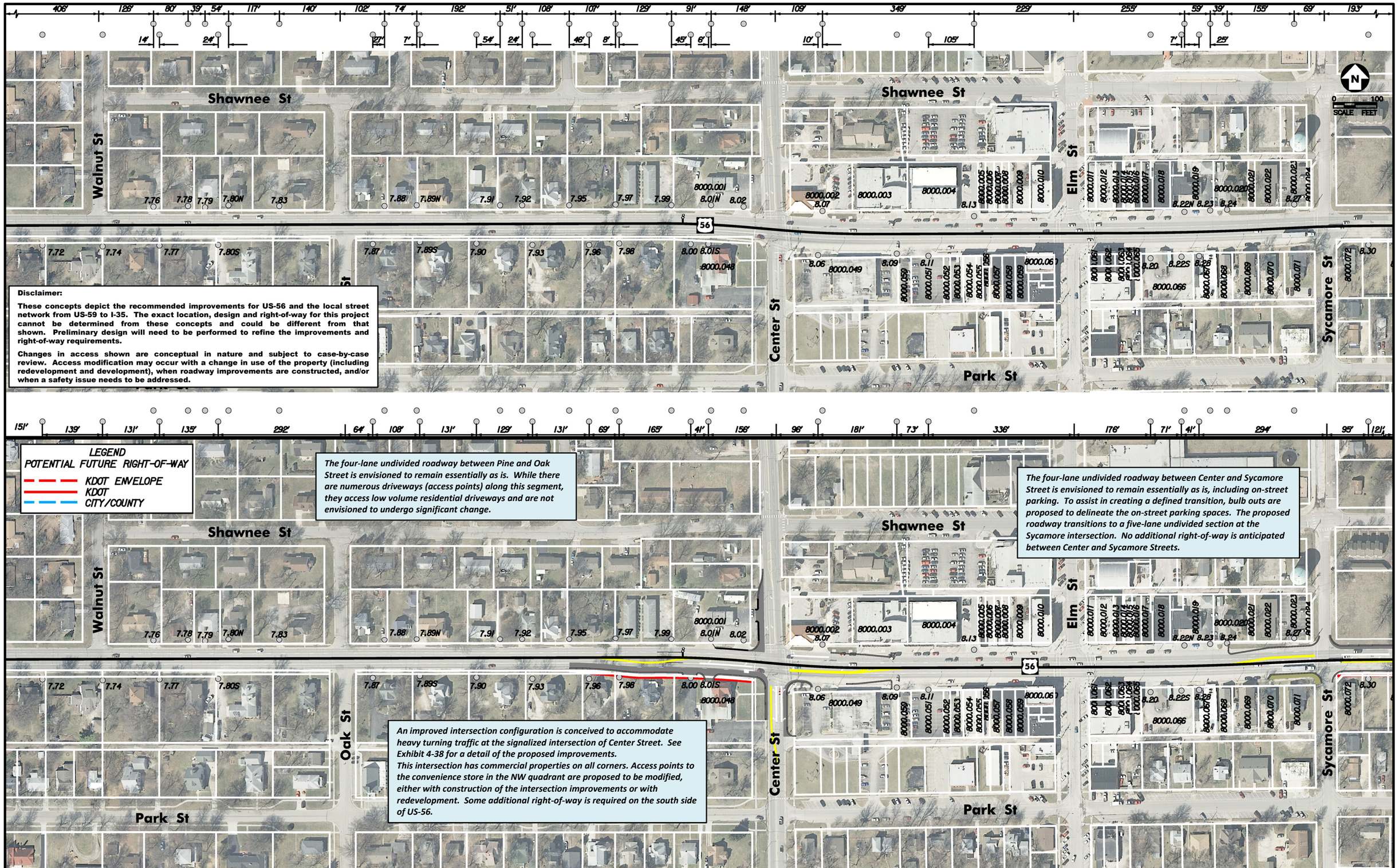
US 56 Corridor Management Plan	US 56 / 37 / 38 / 39 / 40 / 34 / GARDNER ARTERIAL INDEX MAP	Location: URBAN GARDNER	Description: Existing (upper) and Proposed (lower) Conditions	TranSystems

Exhibit 4-36
July 2010



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US 56 Corridor Management Plan

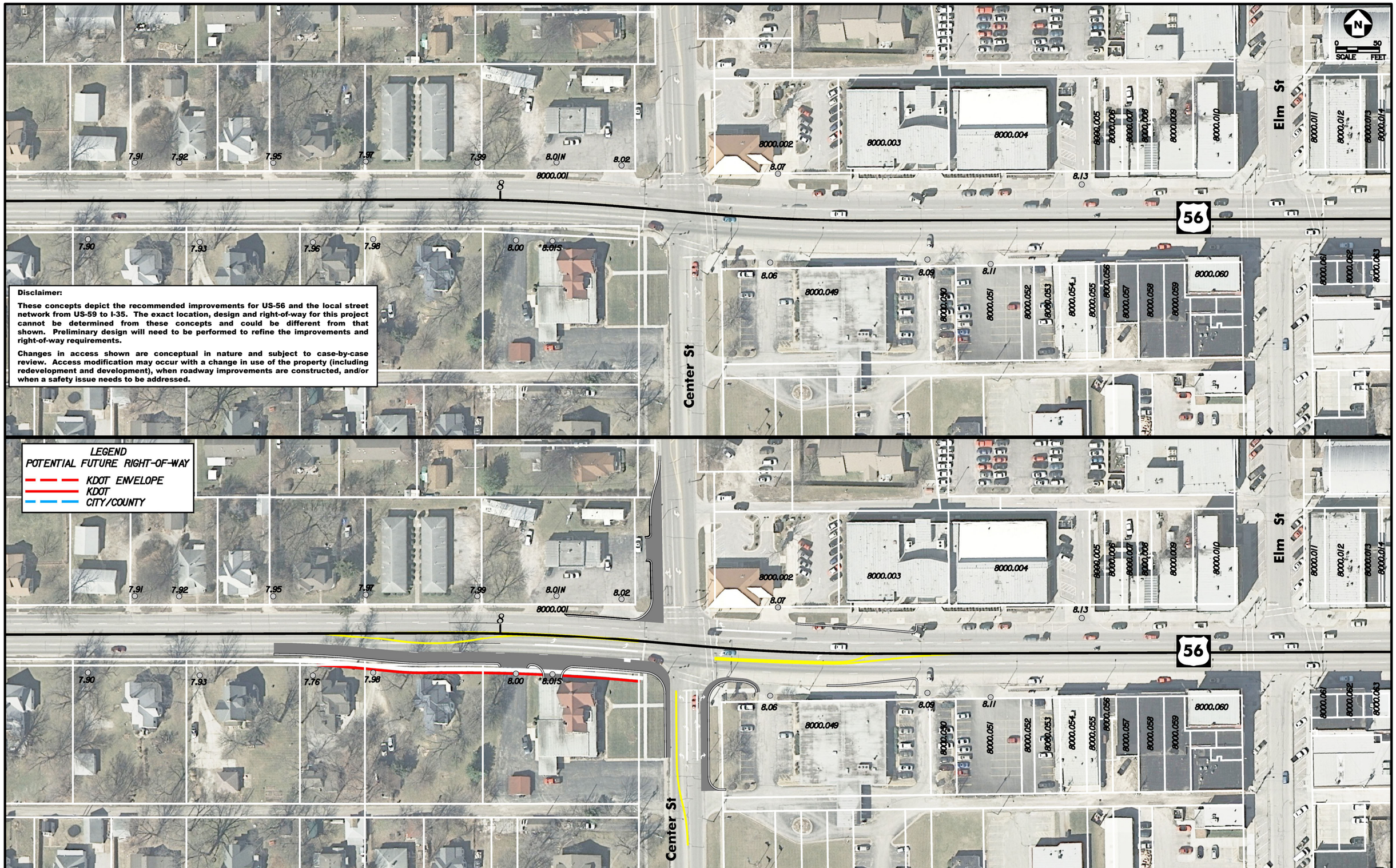
GARDNER ARTERIAL INDEX MAP

Location:
URBAN GARDNER, Walnut to Sycamore

Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-37
July 2010



US 56 Corridor Management Plan

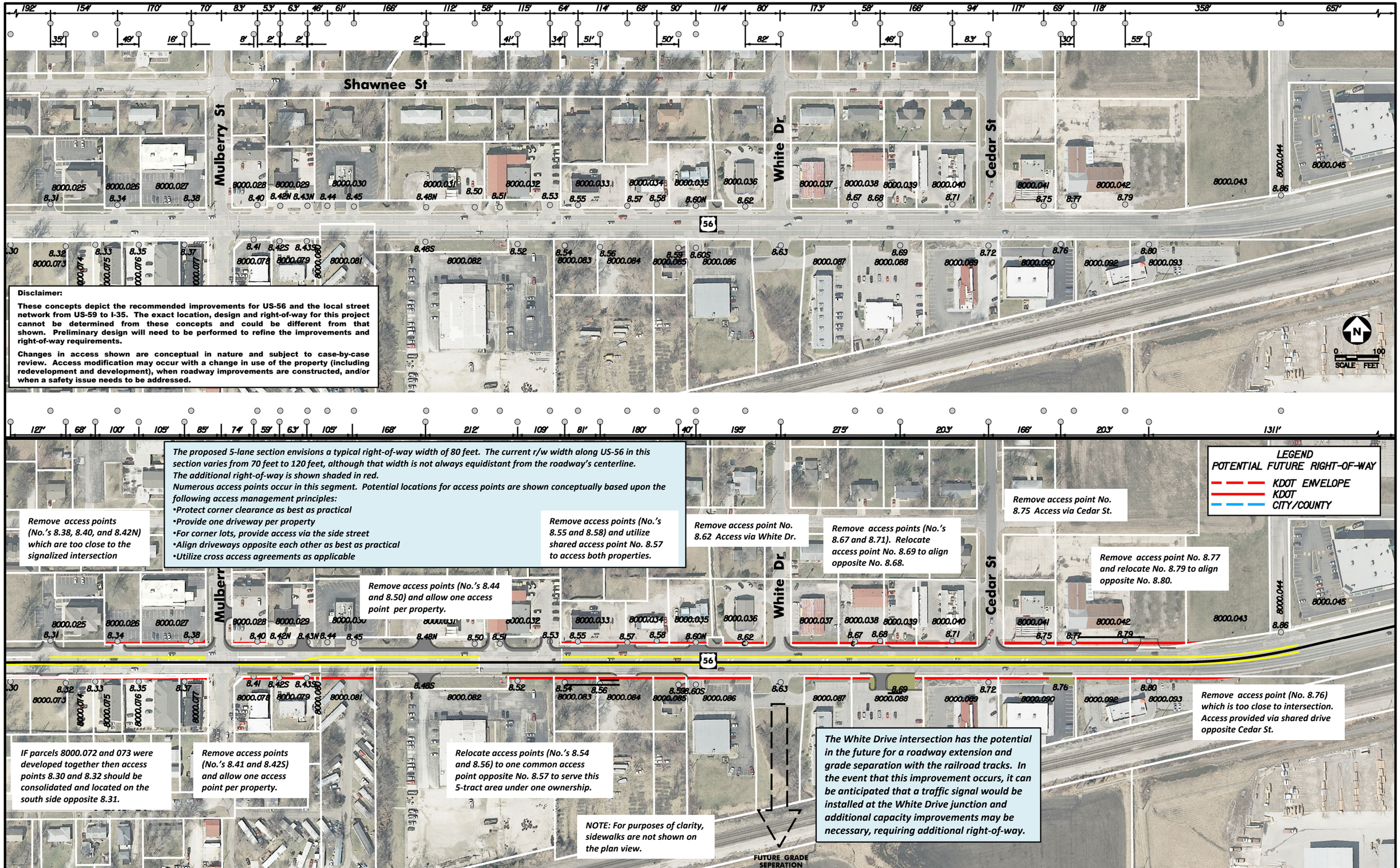
GARDNER ARTERIAL INDEX MAP

Location:
URBAN GARDNER, Center Street Detail

Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-38
July 2010



Corridor Management Plan

US 56 | 40

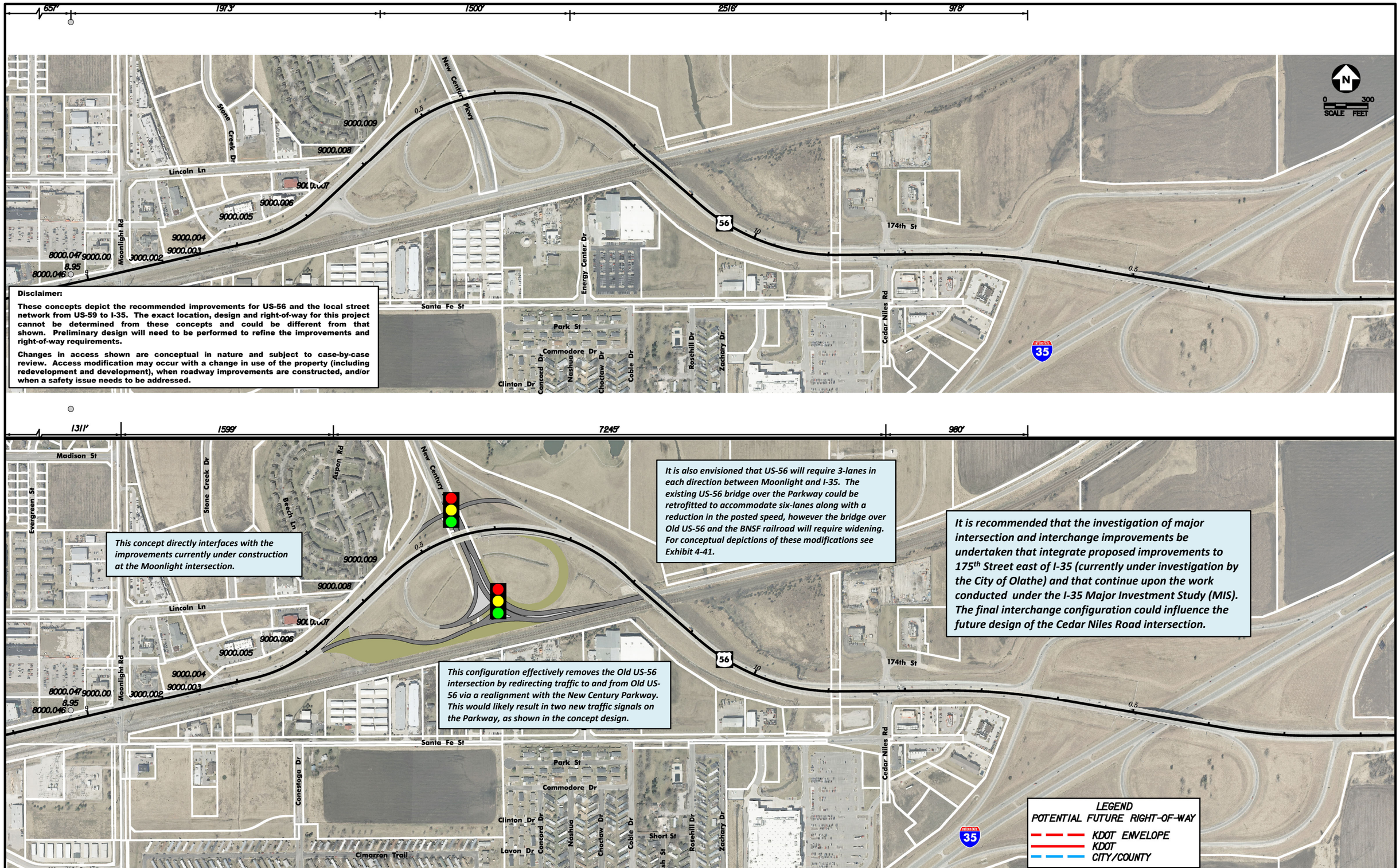
GARDNER ARTERIAL INDEX MAP

Location:
URBAN GARDNER, Sycamore to Cedar

Description:
Existing (upper) and Proposed (lower) Conditions

TranSystems

Exhibit 4-39
July 2010



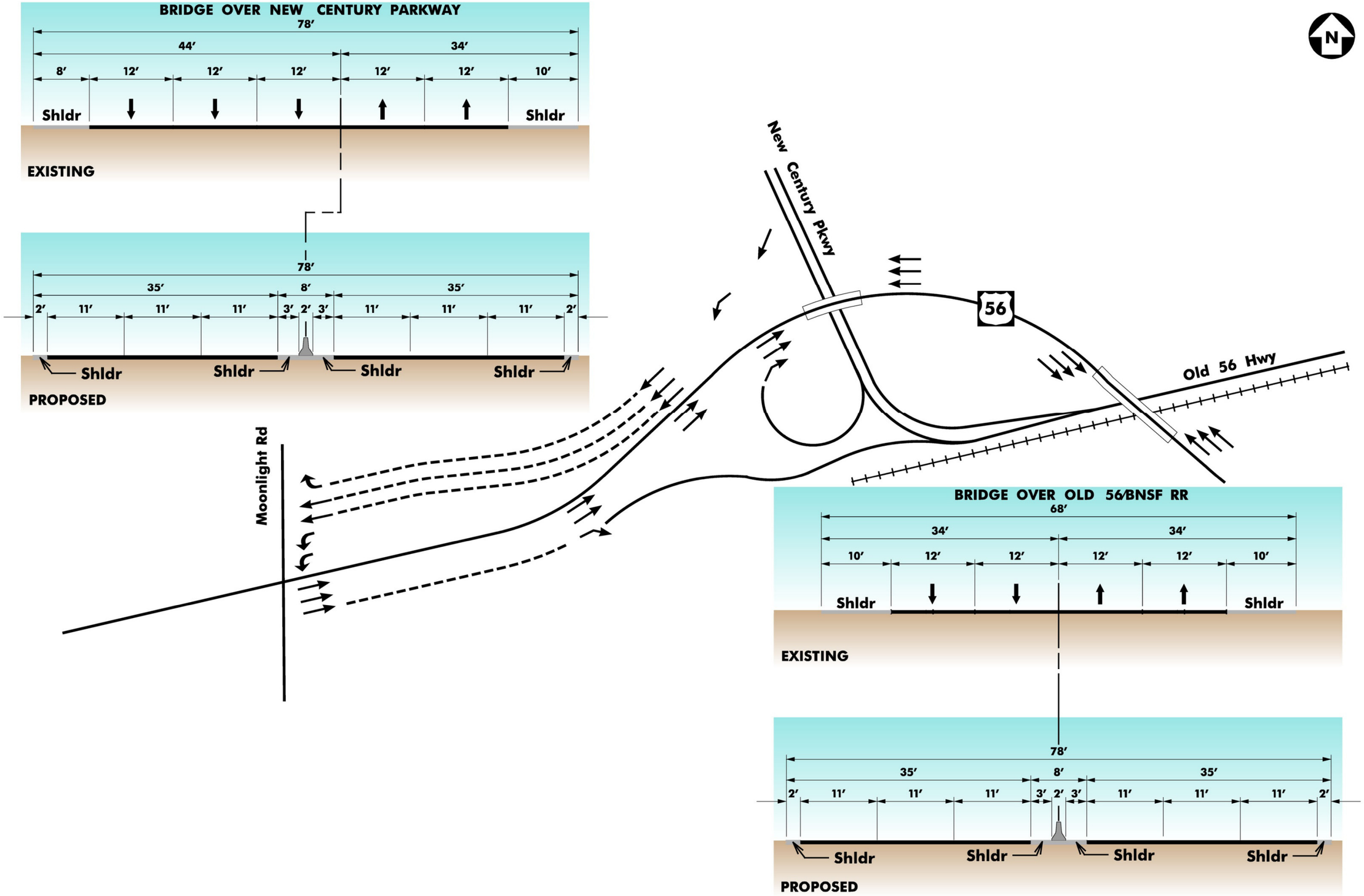
US 56

GARDNER ARTERIAL INDEX MAP

Location:
URBAN GARDNER, Moonlight to I-35

Description:
Existing (upper) and Proposed (lower) Conditions

Exhibit 4-40
July 2010



Location: GARDNER	Description: Travel Lane Schematic	TranSystems	Exhibit 4-41 July 2010

Chapter Five – Implementation

AGREEMENTS

The development and implementation of the US-56 Corridor Management Plan has been forged through the partnership of several impacted parties, including:

- Kansas Department of Transportation
- County of Johnson
- County of Douglas
- City of Baldwin City
- City of Edgerton
- City of Gardner
- Lawrence-Douglas County Metropolitan Planning Organization
- Mid-America Regional Council

Through this process, several agreements have been, or will be, reached between the parties outlining the intent, scope and implementation of this Corridor Management Plan. These agreements, including:

Partnership Agreement – Where the Parties agreed to jointly undertake a study of US-56 from I-35 to US-59. This included a commitment to complete the study and subsequent agreements.

Project Agreement – Where the Parties agreed to the scope of the US-56 Corridor Management Plan and the sharing of costs associated with the Study.

Interlocal Cooperative Agreement – Where the Parties adopted the Corridor Management Plan and commit to considering the Plan as appropriate in future decision making.

In addition to these agreements, a Gap Study (located in the technical appendix) has been completed for each of the county and city jurisdictions to identify "gaps" in existing codes, ordinances and design guidelines where modifications could be made to ease the implementation of the US-56 Corridor Management Plan. Ordinances were identified, along with the nature of the proposed changes, for all of the communities.

Figure 5-1 US-56 Designation

US-56 DESIGNATION

The US-56 Corridor Management Plan has been developed under the assumption that US-56 will continue to follow its current alignment through Johnson and Douglas Counties. During the study, however, consideration was made of alternative alignments, including:

- a bypass on the south side of Baldwin City (as shown in the City's Comprehensive Plan); and
- the designation of US-56 to 199th Street from I-35 to Sunflower Road.

The bypass alternative for Baldwin City was dismissed as a viable option as it 1) failed to connect to a planned interchange on US-59; 2) the projected traffic demands did not indicate a need for these improvements; and 3) there was not a significant amount of pass through traffic traveling through Baldwin City. The designation of US-56 to 199th Street, however, has several merits worthy of consideration.

As noted earlier, a baseline assumption made for this study is the construction of a proposed interchange on I-35 in the vicinity of 199th Street, be that on 199th Street, Waverly Road or Homestead. This new interchange will have a significant shift in travel patterns where traffic destined to Edgerton, Baldwin City or points further west will predominately by-pass Gardner, traveling the shorter, faster route of 199th Street.

A general consensus was reached by the Partners on the project that a change in designation of US-56 to 199th Street was worthy of consideration with the construction of a proposed interchange on I-35. Additional details will need to be worked out prior to any change in designation, including the long-term maintenance of the existing section of US-56 from New Century to I-35. This segment contains an interchange with several bridges that are currently beyond the capabilities of the City of Gardner to adequately maintain.

TOOL BOX OF IMPLEMENTATION STRATEGIES

Substantial effort and expense has been put into the development of this Corridor Management Plan. All of the parties have invested significant resources to:

- collect and analyze all available, relevant background information on the land area included within the corridor footprint map to fully understand current conditions;
- study and extrapolate projections from the current plans adopted and being prepared by the parties and other entities whose plans may have an impact on development within the Corridor to identify trends and prepare alternative scenarios of how future development may and can progress;
- prepare market projections on development opportunities and constraints that will either positively or adversely affect development potentials;
- reach out to all interested stakeholders to obtain input and guidance on what has occurred, what exists and what they feel should be the vision for this Corridor into the future; and
- forge a consensus among KDOT, the community partners and interested stakeholders on a plan that captures this shared vision for enhancements to the mainline highway and adjacent local street network and the interface between the two, including the type and location of points of access, as well as land uses and densities and intensities of development within the Corridor.

Successfully completing this planning effort is a major accomplishment in and of itself. The dividends which will flow to the parties from having achieved this goal are inestimable.

That being said, this Corridor Management Plan is just that: A PLAN. The real purpose for doing a plan is to, through comprehensive and thorough analysis, create a guide to decision-making by all the interested parties, so that the vision and, as much as possible, the details of the plan can become reality. To make the vision of the Plan a reality, KDOT and each of the local communities within the Corridor must take action to implement the Plan. This Chapter of the Plan describes a series of techniques that can be used by the partners to help turn the maps, illustrations, policies, goals, strategies and recommendations of the Plan into the actual facility improvements and the associated development patterns envisioned by the Plan. The tools described in this Chapter, when put into place, have the supplemental benefit of establishing additional criterion against which state, county, municipal and utility improvement plans and private development proposals can be evaluated, as each is brought forward through time. Having these supplemental criterion in place will give all parties greater assurance that all the resources the parties put toward creation of this Corridor Management Plan are realized upon and that the vision for this Corridor becomes a well-functioning component of each community.

The tool box of techniques described here is divided into four major sub-sets:

I. Corridor Preservation Strategies (Page 5-2);
II. Access Management Strategies (Page 5-9);
III. Financing Strategies (Page 5-12); and
IV. Interlocal Cooperation (Page 5-16).

Each of these sub-sets are, where appropriate, further categorized to give those using the Plan a better understanding of the role the technique plays in this tool box of implementation techniques, the authority to use the tool and how the techniques complement one another when used appropriately.

I. CORRIDOR PRESERVATION STRATEGIES

Corridor preservation is achieved through planning and the implementation of those resulting plans using a variety of regulatory strategies, including zoning, subdivision regulations, access management and exercise of the police power. One primary goal is to control or protect areas identified in the Plan that will be necessary for future enhancement to the mainline of the highway, as well as for improvements to the local street network within the Corridor. An equally important goal is to preserve and, wherever possible, enhance opportunities for development at locations within the Corridor that maximize the economic potential of the Corridor, while simultaneously preserving the functionality of the mainline highway, its access points and the interfacing adjacent local street network. Benefits of corridor preservation include:

- preventing incompatible development;
- minimizing adverse environmental/social/economic impacts;
- reducing displacements;
- establishing the location of transportation facilities which allows communities increased opportunities to achieve orderly development through future planning; and
- reducing future project costs.

Close coordination between KDOT and the local communities is essential since authority for some preservation tools are vested in the state and the authority for others is vested in the local governments.

The following two sections (Section A, Planning Tools and Section B, Regulatory Tools) cite numerous State of Kansas planning and zoning statutes applicable to all Kansas cities and counties except Johnson County, which is designated as an "urban area" (K.S.A. 2694) with separate planning and zoning statutes (K.S.A. 2956 et seq.).

A. Planning Tools

1. Comprehensive Planning - To help ensure that the land development decisions are consistent with and are made in accordance with the recommendations of the Corridor Management Plan, each community should adopt the Corridor Management Plan, including the footprint map covering areas lying within the city's planning area, as a part of the city's comprehensive plan. K.S.A. 12-747 authorizes city and county planning agencies to make or cause to be made a comprehensive plan for the development of that community. There is specific authority to adopt area or sector plans covering only a portion of the area within a community's jurisdictional boundaries. The plan must show the commission's recommendation for the development or redevelopment of the territory included in the portion of the plan prepared. The planning commission must hold a hearing on the adoption of the Corridor Management Plan and make a recommendation to the governing body on its adoption. The plan does not become effective unless approved by the governing body. Jurisdiction: Local.

2. Official Maps – An official map is a legally adopted map that conclusively shows the location and width of proposed roads or streets, public facilities and public areas and drainage rights-of-way. It is also commonly referred to as a major street plan. Although the Kansas statutes do not specifically authorize cities or counties to adopt an official map, K.S.A. 12-747, in its description of the elements that should be covered in a comprehensive plan,

clearly contemplates that the plan include the type of information that is traditionally included in an official map. It goes without saying that the lack of specific statutory authority to adopt an official map in no way precludes a city or county from acting pursuant to their home rule authority to do so. In addition, K.S.A. 12-765, discussed below, granting authority to cities and counties to establish building or setback lines, does authorize cities doing so to incorporate by reference an official map in the ordinance or resolution, as the case may be. The adoption of an official map as a part of the community's comprehensive plan or as a stand alone document gives that community one additional point of reference and source of guidance when considering development applications relating to land that lies within the Corridor to determine whether the development proposed will have an impact on the improvements contemplated by the Corridor Management Plan. Jurisdiction: Local.

3. Plan Consistency - To help ensure that the community's comprehensive plan is internally consistent and therefore effectively serves as a comprehensive guide to development within the community, upon adoption or in conjunction with the adoption of the Corridor Management Plan, the community should review its existing comprehensive plan to assure that other portions of the plan support and are not in conflict with the recommendations of the Corridor Management Plan. If the community identifies inconsistencies, it should revise and readopt the comprehensive plan with revisions designed to eliminate those inconsistencies using the procedures outlined for the adoption of a comprehensive plan. Jurisdiction: Local.

4. Utility Planning - Utilities necessary to support development will be constructed within the Corridor. It is critical that these utilities be located at places that are consistent with the Corridor Management Plan, so they will not have to be relocated upon construction of enhancements to the mainline highway at future dates. Each community within the Corridor should, in coordination with all providers of utility services within its corporate boundaries, prepare and continually update a utility master plan. These utility master plans must be carefully coordinated with the Corridor Management Plan to ensure consistency between the two. KDOT and communities within the Corridor should carefully evaluate the Corridor Management Plan, when making decisions about the location of new utilities and related easements. In addition, KDOT and each community should establish a regular point of interface with each utility provider to ensure coordination between the parties in ongoing planning efforts and land acquisition and placement decisions. Jurisdiction: KDOT/Local.

5. Conformity of Public Improvements - K.S.A. 12-748 provides that whenever a planning commission has adopted a comprehensive plan for an area, no "public improvement, public facility or public utility," of a type covered by the recommendations of that plan, may be constructed without first being submitted to and approved by the planning commission as being in conformity with the plan. Public entities with plans for construction of these improvements, facilities and utilities should consult with the representative of cities and counties with adopted comprehensive plans early in that entity's decision-making process and timely submit those plans to the appropriate planning commissions for this determination. This requirement applies to any public entity that is intending to do this type of construction within the jurisdictional boundaries of a city or county. This is an important way to ensure due consideration is given to the recommendations of the Management Plan, once it is made a part of a community's comprehensive plan. Cities and counties that learn of plans for construction of this type, by another public entity within their boundaries, should be diligent in contacting the entity to make sure they are aware of this obligation and then to facilitate the contemplated review, thereby helping to ensure the Plan is fully considered in these situations. It is important to note that the governing body of the entity proposing this construction can over-ride a negative recommendation of a local community planning commission, but even in that instance, an important opportunity for review of the consistency between the proposed construction and the Management Plan by the parties is captured. Jurisdiction: KDOT/Local.

B. Regulatory Tools

1. Development Moratoria - A public sector entity may, through passage of a development moratorium, temporarily halt the processing of applications for all or a specified type of development until a governmental activity is completed, such as the adoption of a plan or the passage of a revised ordinance on a specified subject. The Supreme Court recently held that a reasonable moratorium fulfills a legitimate public purpose and is not per se a taking.

As vigilant as the partners to this Plan may be in incorporating the Management Plan into local comprehensive plans and utilizing the regulatory strategies to implement the Plan, situations are bound to arise where development pressures overtake the local professional staff's ability to effectively manage those pressures. In those situations, development moratoria are a very effective tool to help stem those pressures while the community determines what approach will be most effective; be it an amendment to the comprehensive plan or passage of an ordinance/resolution establishing a new or updated regulatory implementation technique, such as an overlay district. The moratorium ceases the processing of applications during a legislatively established period of time needed to prepare and adopt strategies the community determines will best address the circumstance. It is important to note that adoption of moratoria is generally considered to be a zoning action. Accordingly, that ordinance/resolution must be passed pursuant to the hearing and notice requirement of Article 7 of the Kansas Statutes. For that reason, it is critical that communities act quickly to get a moratorium in place once a situation calling for a "time out" is identified. One way to close the window on the rush of applications that might result from notice of the consideration of a moratorium ordinance is for the community's governing body to adopt a resolution directing staff to stop accepting applications until the moratorium ordinance takes effect. The authority for adoption of a resolution of this type is found in the "pending ordinance" doctrine, which has been accepted by the courts of most states. Jurisdiction: Local.

2. Zoning – Zoning is one of the most prevalent and effective mechanisms for implementing a comprehensive plan. Zoning is a process utilized by local governments to classify land into areas and districts. These areas are generally referred to as "zones," and impose, in each area and district, restrictions related to building and structure designs, building and structure placement, and uses to which land, buildings, and structures within these districts may be put, including setbacks and height, lot coverage, and impervious cover restrictions. The authority to establish setbacks from rights-of-ways is not specifically mentioned, but is derived from the authority to set sizes of buildings, the percentage of each lot that may be occupied and the size of yard and other open space. See Subsection B.2 of the Chapter for a discussion of the authority to establish setbacks or building lines granted in K.S.A. 12-765 and the authority to establish setbacks derived from K.S.A. 12–749, which provides cities and counties with the authority to establish subdivision regulations. The implicit authority to establish setbacks

as a part of zoning district restrictions is located in K.S.A. 12-755. These statutory provisions provide authority to establish setbacks for more than just buildings. They may apply to any structure within the designated setback. Traditionally, however, though established at depths adequate to preserve rights-of-way for the local street network system, the normal front and side yard setbacks included in zoning ordinances and subdivision regulations are not generally sufficient in depth to preserve rights of way that may be necessary for enhancement to the mainline highway within the Corridor. Zoning ordinances may also make provisions for certain uses to be established community-wide or in individual zones only by issuance of a special or conditional use permit. Rezoning of parcels that have been previously zoned may be initiated by the local community or by a property owner.

Through the adoption of zoning ordinances, which are carefully tailored to implement the strategies and policies of the Corridor Management Plan, development within the Corridor can be effectively managed to ensure successful implementation of that Plan. K.S.A. 12-755 and 12-756 authorize both cities and counties to adopt zoning ordinances, and K.S.A. 12-757 authorizes the rezoning of properties in those instances where changing a property's zoning classification is advisable or necessary to adapt original zoning to current situations.

If a rezoning application proposes a zoning classification that is determined to have the potential of adversely impacting the Corridor, copies of the application, along with the staff report, should be provided to KDOT for input, at the same time any other affected party is provided notice of the hearing on the application.

K.S.A. 12 715b authorizes cities, with a couple of exceptions and under certain conditions, to adopt zoning regulations applicable to land located outside of its corporate limits, but only within three miles of those limits and only if the county has not adopted zoning regulations applicable to that area of the county. Written notice of a city's intent to adopt zoning outside its limits must be provided to the appropriate board of county commissioners. Jurisdiction: Local

a. Zoning Approval Criteria -- Arguably, the most important Kansas Supreme Court case dealing with zoning is Golden v. the City of Overland Park. Golden sets out a set of factors that planning commissions and governing bodies may consider when deciding whether to approve or deny a zoning application. One of those factors is consistency with the comprehensive plan. Each community along the corridor, when acting on a development application related to land that lies within the Corridor, should consider whether the development proposed by that application is consistent with the Corridor Management Plan, as adopted into its comprehensive plan.

b. Overlay Districts -- One of the most effective plan implementation zoning techniques is overlay districts, which are authorized in K.S.A. 12-755. An overlay district can be either mapped or narratively described to be mapped at some later point in time (floating). An overlay district superimposes certain additional restrictions that modify or supplement the restrictions of the underlying zoning district or districts, in recognition that distinguishing circumstances exist within the area that must be regulated in a manner different from the regulations of the underlying district. One misunderstanding about the term overlay district is that communities think there is a model that can be pulled off the shelf and adopted to serve as its overlay district. While it might be accurate to say that a model procedural framework might exist, nothing could be farther from the truth when talking about the real implementation aspects of the overlay district. The whole goal behind adoption of an overlay district is to address special and unique circumstances and considerations that affect a specific geographic area of the jurisdiction differently than other areas of the jurisdiction. Thus the objective is to identify those circumstances and considerations; articulate a vision for how that particular area should develop over time (while both accommodating and capitalizing on opportunities presented by those considerations); then develop regulations, restrictions and incentives to guide development to effectively realize that vision.

Overlay ordinances are generally composed mainly of design and performance guidelines and standards, and are filled with illustrations and graphics. They are carefully prepared to effectuate the plan for that specific area. In this instance, the Corridor Management Plan has created the vision, or at least, the superstructure of that vision. An overlay district is crafted to implement that Plan. It is also common for people to believe that the community could prepare one overlay district, and that it would apply to all land in its jurisdiction within the Corridor. For the very reasons stated above, that notion is incorrect also. Because the Plan identifies development scenarios that are unique to each different location within the Corridor, the idea that one set of regulations and incentives could be prepared to guide development along an entire length of a corridor is flawed. Each one of those locations should have its own overlay district with carefully chosen implementation techniques employed to achieve Plan objectives. Potentially, one overlay district could be prepared for each jurisdiction along the Corridor, but for it to have any real usefulness, it would have to break the Corridor into distinct segments with a separate set of standards created for each segment. For example, an overlay district can be effectively used to establish setback or building lines that are deeper than the setbacks set out in the underlying district regulations. This can be particularly effectual, as diverse setback distances can be established for different segments along the Corridor, depending on the need for additional rights-of-way at a specific location and on whether the segment is a developed or an undeveloped area, as well as on the nature and intensity of any existing development.

c. Planned Districts -- Conventional zoning allows for an amendment of the zoning classification of land upon application of the governing body or the planning commission. If the proposed amendment affects specific property, the landowner may make application. The procedures set forth above govern the consideration of and action on zoning amendments, generally called rezonings. So long as the decision to rezone is reasonable, in light of the Golden criteria, the rezoning may take place at any point in time. Most commonly, a rezoning is applied for just in advance of development of that property or when a change of use is contemplated as a part of redevelopment of the property. Nothing, however, requires that there be pending development for a rezoning of a particular property to be reasonable. Sometimes properties are rezoned well in advance of any potential development or redevelopment activity. There may be a very valid public purpose for rezoning land substantially before it is ripe for development or redevelopment, and in those instances, the application should be made by the governing body or planning commission. It is generally good planning, however, not to prematurely rezone land to a zoning category other than one that allows its current use or to a use that is imminent. A community can successfully illustrate its vision of how land should be developed, in terms of general uses, through the future land use map of its comprehensive plan. It really does not need to zone land to an anticipated land use well in advance of development to make its community vision for land use known.

Generally, a community's development objectives can best be served if it has as much information about contemplated uses,

proposed site terrain, location and type of infrastructure being proposed, building arrangement, architectural design and other features of development, as is possible, when it considers a rezoning application. Planned districts are an excellent tool to help in achieving this objective. A community's zoning ordinance can provide that all its zoning districts are planned districts, it can provide a parallel planned district for each or any number of its conventional districts (such as C-1 and C-1/P) or it can create separate planned districts for certain types of development or for development in certain locations.

The planned district process ensures this type of information is available to the planning commission and governing body by converting the traditional rezoning process into a two step process. The applicant submits two separate plans to the community at different points in the approval process. The plan contains an increasing level of detail commensurate with the stage at which the property is in the development process. These plans are generally called development plans; one a preliminary and the other a final development plan. Although what the submittal is called is without significance. The preliminary development plan is submitted along with the application for rezoning. The amount of information that is included in the preliminary plan can and should vary from community to community, but in any event should include enough to allow decisions makers to understand the nature and quality of the development being proposed. The following type of information would generally be included: topography, locations of building and other structures, dimensions portraying relationships between buildings and to property and setback/build to lines, on site and adjacent area circulation, storm water management approach, preliminary sketches depicting the general style, size and exterior construction materials of proposed structures and evidence of adequate public facilities. Both the planning commission and the governing body consider and act on the preliminary plan at the same meeting they consider the rezoning application. No rezoning application may be approved until and unless a preliminary plan for that property is approved. This helps ensure that the decision makers fully understand what is going to be developed on that property when the rezoning is approved. An applicant may opt to combine the two plans into one and submit the combined plan with the rezoning application. It is just necessary that all the submission requirements of the two plans are incorporated in the submitted plan.

If the development proposed by the preliminary development plan application is determined to have the potential of adversely impacting the Corridor, copies of the application, along with the staff report, should be provided to KDOT for input, at the same time any other affected party is provided notice of the hearing on the application.

Typically, the approved preliminary plan stays in effect for a set period of time; most commonly 2 years, with the possibility of an extension if justified and applied for before the expiration of the approval. This process can be easily adapted to phased projects.

The second step in the planned district approval process is the submission of a final development plan. This occurs after engineering drawings have been approved, but before any building permit may be issued. The final plan must be substantially consistent with the approved preliminary plan or be approved using the same process for preliminary plan approval. The final plan contains much more information than the preliminary, as, of course, the developer has moved farther along in designing the development, so more information is available to provide additional assurance to the community that the development proposed is appropriate for that location. These final plans, when consistent with the preliminary, can be approved administratively or legislatively or through a combination of the two. Once the plan is approved, it is filed of record with the county register of deeds. All development at the location covered by the rezoning and development plan application must then be constructed in accordance with the plan or risk stop work orders and zoning ordinance violations

d. Site Plans — Although a site plan itself is very similar to the development plans discussed above in the description of Planned Districts, the term is used here to describe a plan submitted during the course of the development approval process when the community does not employ a planned district process. It is also designed as a mechanism to inform the decision makers of the applicant's proposal for development of a property. Unlike the Planned District process, which is traditionally a two step plan submittal process undertaken in conjunction with a rezoning of land, the site planning process is generally a one step process that is required of developers that are not required to rezone their property prior to the issuance of a building permit. To institute this mechanism, the community would need to revise its land development codes to require that, in instances of proposed developments, where some other plan approval process is not required prior to issuance of a building permit, the applicant must submit a site plan for review and approval prior to building permit issuance. It would be common for certain types of development to be excluded from the site plan approval process, such as development of a single family house or similar smaller type developments that will have a minimal impact on facilities and services or on the landscape.

The usual site plan would be described as a plan for one or more lots on which is shown the existing and proposed conditions of the lot, including topography, vegetation, drainage, floodplains, wetlands, and waterways; landscaping and open spaces; walkways; means of ingress and egress; circulation; utility services; structures and buildings; signs and lighting; berms, buffers, and screening devices; surrounding development; and any other information that reasonably may be required for an informed decision to be made by the approving authority.

It is not uncommon for the site planning process to be divided formally or informally into two parts, and for that matter, for the planned district two step process to be modified to add a third step. In these circumstances, an initial submittal, often called a concept plan, is made to the technical staff for informal review. The applicant and its consultant sit down with the approving authority's technical staff to discuss the plan and exchange views on what the applicant is proposing and what the technical staff believes will be acceptable to the approving authority. It can also serve as an opportunity to fine-tune the plan for formal submittal. Once that process is complete, a formal site plan, as described above, or a preliminary development plan is submitted for staff review and report.

The nature of the approval required for a site plan can vary greatly, depending on the expertise of staff and the appetite of the community to delegate approval authority to an administrative official. So, for example, a community could decide to vest plan approval authority for some categories of development in an administrative official, other categories of development in its planning commission and retain to the governing body still another category of development approvals. One would expect that administrative approval would be available for those categories of development that are determined to be of the least potential community impact, moving up to governing body approval on those

that could have far reaching impacts, such as development at certain locations (key intersections) along the Corridor.

If the site plan posed in the application is determined to have the potential of adversely impacting the Corridor, copies of the application, along with the staff report, should be provided to KDOT for input, at the same time any other affected party is provided notice of the hearing on the application. If no hearing is required, this notice should be provided to KDOT in enough time before action on the application takes place to allow meaningful KDOT input.

Another excellent way to approach site planning is to combine site plan review with an overlay district. The site plan is then used to evaluate the extent to which the design and performance guidelines of the overlay district are met by the proposed development. Going a step further, the overlay district could set forth certain guidelines that are mandatory, others that are encouraged and a last tier that are desirable, or some variance of this approach. The nature of the approval could then be tied to the degree to which the different tiers of guidelines are achieved. For example, all proposals that achieve all the mandatory and encouraged guidelines can be approved administratively. If the staff determines that the proposals does not achieve the guidelines in both tiers, the site plan must be considered by the planning commission or governing body. The variants that can be employed here are nearly endless.

e. Subdivision Regulation - The subdivision of land through platting is the second most common method used by communities to manage the development of property within its jurisdiction. The control of the division of a parcel of land is effectuated by adopting subdivision regulations by ordinance or resolution that requires development be in accordance with set design standards and procedures adopted locally. K.S.A. 12 – 749 grants cities and counties the authority to adopt subdivision regulations. Subdivision regulations may include, but need not be limited to: efficient and orderly location of streets; reduction of vehicular congestion; reservation or dedication of land for open spaces; off-site and on-site public improvements; recreational facilities; flood protection; building lines; compatibility of design; storm water runoff; and any other services, facilities and improvements deemed appropriate. It is through the consideration and action on plats that communities are able to require that the distances which structures are set back from rights-of-way (a very important tool for preservation of rights-of-way for mainline highway), the layout of building lots, the points of ingress and egress from the lot(s) (effective in helping to manage access) and the public improvements associated with those lots do , in fact, conform to locally established standards, including adopted plans, such as corridor management plans.. In some locations, subdivision regulation and plat approval may actually be the most significant regulatory tool for managing development. In some more rural areas, it is more common for counties to have adopted subdivision regulations than to have adopted zoning. In those unincorporated areas, there would be no local legislative authority to manage development through zoning restrictions. Accordingly, subdivision regulation would be those counties' primary land management tool.

Subdivision regulations usually specify what improvements the subdivider will be required to provide and the standards to which the improvements need to be constructed. A plat is a map prepared by a registered civil engineer or licensed land surveyor showing the boundaries and locations of individual properties and the streets of the proposed subdivision. The plat generally also shows land to be dedicated to a public sector entity for streets and easements for public utilities. K.S.A. 12-749 authorizes a planning commission to adopt and amend regulations regarding the subdivision of land, including payment of a fee in lieu of dedication of land. This same section also authorizes a county planning commission to establish subdivision regulations. Much like zoning, a city may adopt subdivision regulations that control the subdivision of land outside of its corporate boundaries, but only within three miles of that limit or one half the distance between two cities, whichever is less. Similar written notice requirements apply. The regulations must be considered by the planning commission at a public hearing, and the commission must forward its recommendation to the governing body for its approval. K.S.A. 12-750 lays out a process that must be followed where a city desires to adopt extraterritorial subdivision regulations and the county has its own regulations in effect as to that area. That process can result in the creation of a joint city/county committee for subdivision regulation.

K.S.A. 12-752 establishes the procedure for the consideration of and action on plats. Each plat must be submitted to the planning commission, which determines if the plat conforms to the subdivision regulations. If it finds that it does, it notifies the owners of that fact and endorses that fact on the plat. A dedication of land for public purposes must be accepted by the governing body before it takes effect.

See Section C.2 below, of this Chapter, regarding notices that should be placed on plats prior to their recording with Registers of Deeds to help ensure that prospective purchasers of properties, which are included in the geographic area covered by the Corridor Management Plan, are informed of the ramifications on those properties of being within an the area covered by the Corridor Management Plan. In addition, if the preliminary plat application is determined to have the potential of adversely impacting the Corridor, copies of the application, along with the staff report, should be provided to KDOT for input, at the same time any other affected party is provided notice of the hearing on the application. Jurisdiction: Local.

f. Building Permits – The same section of Kansas Statutes discussed immediately above, prohibits the issuance of a building permit for the use or construction of any structure on any platted lot in an area governed by subdivision regulations, except in the manner provided by that section. It further authorizes subdivision regulations adopted by cities and counties to provide a procedure for the issuance of building permits that takes into account the need for adequate street rights-of-way, easements, improvements of public facilities and zoning regulations, if in existence.
The issuance of a building permit is obviously the last step in the typical development approval process. Although courts hold that a building permit must be issued upon submission of a complete application, if all code provisions governing the process for building permit issuance have been fulfilled, this does not mean that communities cannot creatively incorporate building permit requirements into their governing code provisions. For example, it is common for the issuance of a building permit to be conditional upon the payment of a legislatively imposed fee, such as an impact fee.

In cities or counties that have not adopted zoning or subdivision regulations, local regulations governing the issuance of building permits may not only be the last step, but also the first step in the development approval process, thus markedly increasing the importance of this tool in the arsenal of techniques a community may employ to effectively manage land development. Even in communities that have adopted one or both regulatory tools, the procedure for the issuance of building permits still may play a very a critical role. See subsection B.3 above, of this Chapter, on Site Plans for a description of how that technique can be used to more

effectively manage the development of land in jurisdictions where either zoning or subdivision regulations have not been enacted. K.S.A. 12-751 authorizes cities to adopt and enforce building codes outside that city's limits and allows compliance with subdivision regulations to be a condition of the issuance of a building permit. Jurisdiction: Local.

g. Transfer of Development Rights and Density Transfers - Some locations along the Corridor, for a variety of reasons, including availability of access, are best developed with more intense and/or dense uses. Other locations along the Corridor, for other reasons, including the lack of direct access, are best suited for less intense or dense development. One way communities along the Corridor can help ensure that property owners are afforded the maximum opportunity to develop their property to its most reasonable and economic potential is to establish a system of density incentives and transfers to encourage more intense development in areas designated on the Plan for that type of development. This system provides those landowners whose land is designated for less intense development the ability to transfer some or all of their development rights to locations where more intense development is planned, through a sale of those rights to landowners at those intense locations. These systems involve the transfer of all or a part of the permitted density on one parcel to another parcel or to another portion of that same parcel, thus allowing higher density at that location than would be allowed under the existing zoning regulations. The transfer or removal of the right to develop or build is expressed in units per acre or floor area ratio. This transfer generally occurs in accordance with a legislative established program that allows the shifting of development potential from areas where more intense land uses are considered undesirable (the donor site or sending zone), such as at locations which are a distance from the location where mainline interchanges are to be constructed, to other areas (receiving zones) chosen on the basis of its ability to accommodate development that is more dense or intense, such as areas adjacent to proposed interchanges. For example, developers can buy development rights from properties targeted for public open space and transfer the additional density to the base number of units permitted in the zone in which they propose to develop. Jurisdiction: Local

h. Density Incentives – This technique is an additional method of increasing density at locations designated by the Plan, and thereby maximizing the economic potential of the Corridor without sacrificing the functionality of the mainline highway and the adjacent local street network. It involves identifying areas, such as areas near interchanges or other access points, which are shown on the Management Plan as more appropriate for dense or intense development than other areas within the Corridor and providing incentives that will encourage developers to propose a form of development at those locations that conform to the density or intensity levels contemplated by the Plan. The most common incentive is to allow for a streamlined development approval process for applications that propose developments which exceed the density thresholds established by the local community through the restrictions of the underlying zoning district regulations. This is generally achieved by allowing for administrative, rather than legislative, approvals during the application review process. To be legally valid, the legislation establishing the program must include specific standards to guide the administrative official in decisions on when an application qualifies for streamlined review and when the application approval criteria are met. There are few limits to the innovation that can be used in creating incentives to lure more dense development. The Management Plan should serve as a good source of inspiration on potential incentives. Jurisdiction: Local.

i. Cluster Development - This technique is yet another tool to help achieve Plan goals of ensuring denser development at locations where the Plan calls for it, while simultaneously keeping development away from or at very minimal levels at locations where it will have an adverse impact on Plan goals. A good example would be to preserve and protect critical environment or cultural resources. This technique is generally authorized by specific district regulations, such as a cluster subdivision. It is a development design technique that concentrates buildings in specific areas on a site to allow the remaining land to be used for recreational, common open space or preservation of historically or environmentally sensitive areas. Through the employment of this technique, property owners are able to achieve an acceptable average density for the entire parcel, and both the public and private sector participants are able to effectively protect key community resources. This technique is intended to allow for significant creativity in site layout and planning, generally resulting in added value to development areas as a result of access to permanent open space and recreational opportunities. Jurisdiction: Local.

j. Setback Ordinances - One of the keys to successful implementation of the Corridor Management Plan is ensuring that development does not encroach on right-of-way that would be necessary for highway and interchange improvements as the Corridor develops. Along with the authority granted to cities and counties to zone and adopt subdivision regulation, one very effective way to achieve this objective is through the adoption of a building or setback line. This tool preserves projected rights-of-way and reduces acquisition costs: both over-riding goals of the Management Plan. K.S.A. 12 765 authorizes cities or counties, which have adopted a plan for a major street or highway system (which would include the Corridor Management Plan), as a part of its comprehensive plan, to adopt building setback lines. After consultation with the Secretary of Transportation, the county engineer and any planning commission of a county or counties within which that highway system lies, the governing body may establish, by ordinance or resolution, a building or setback line along proposed major streets or highways. This enactment, much like building and set back lines established in zoning district regulations and subdivision regulations, includes a prohibition on the location of buildings in front of that setback line. The enacting ordinance or resolution may incorporate by reference an official map showing with survey accuracy the location and width of existing or proposed major streets or highways and any setback or building line. A building or setback line cannot be enforced until a certified copy of the map and any adopting ordinance or resolution is filed with the register of deeds of each county. The key to the enforceability of the setback line is a careful evaluation of the impact of the line, and its attendant prohibition on adjacent landowners. The restriction on development must leave these owners with viable economic uses for their commonly owned contiguous parcels of land. As a safety valve, the local board of zoning appeals is vested by statute with the power to modify any building restrictions to address unwarranted hardships that constitute a complete deprivation of use. Building setback lines, like build-to lines, can also be established as a part of zoning district restrictions, subdivision regulations and as a design guideline in an overlay district. Although this is an additional tool available to communities along the Corridor to implement the Management Plan, it may well be that cities and counties can as effectively accomplish the goals of this tool through set back and building lines established in zoning ordinances and subdivision regulations. One place where this tool may be critical is in counties that have not adopted zoning or subdivision regulations. Jurisdiction: KDOT/Local.

k. 4(f) Uses - Federal statute places significant restrictions on the authority of the United States Secretary of Transportation to approve a transportation program requiring use of publicly-owned land, a public park, recreation area or wildlife refuges or land of a historic site. Because state transportation programs or projects often involve federal funds, the Secretary's approval is commonly required. Accordingly, it is important that these uses not be located within the Corridor unless no other viable option is available. This imperative makes it critical that communities avoid locating or approving development applications seeking to establish public parks, recreation areas or wildlife refuges and historic sites, also known as 4(f) uses, in the areas shown on the Plan footprint map as right-of-way for the mainline or of any portion of the local street network. The moniker 4(f) comes from the United States Code provision that limits the Secretary's authority. Jurisdiction: KDOT/Local.

l. Variances - Communities in Kansas have authority to grant variances from the specific terms of the zoning restriction whenever doing so is not contrary to the public interest and where, due to special conditions, local enforcement of the provisions of the regulations in an individual case results in unnecessary hardship. K.S.A. 12-759. The board of zoning appeals has the authority to grant a variance to area and setback regulations applicable to that property. The grant of a variance from district restrictions, such as parking requirements and impervious cover requirements, may be an effective way to allow an important development proposal to proceed with minor modifications that keep it out of necessary rights-of-way and behind setback lines. At the same time, the grant of some variances could adversely impact the recommendations of the Plan. Therefore, it is recommended that the board of zoning appeals consult the Corridor Management Plan, as incorporated into its comprehensive plan, when considering any request for a variance to ensure that the variance decision supports the recommendations of the Plan. In addition, if the variance proposed is determined to have the potential of adversely impacting the Corridor, copies of the application, along with the staff report, should be provided to KDOT for input, at the same time any other affected party is provided notice of the hearing on the application. Jurisdiction: Local.

C. Administrative Tools

1. Accessibility of the Comprehensive Plan - The goal of a comprehensive plan is not only to serve as a guide to development for the planning commission and the governing body but also to owners and potential owners of property within the community's jurisdictional boundaries. That being the case, it is recommended that the amended comprehensive plan be posted on the city's website and at all other appropriate locations to assist in assuring that all interested parties are informed of the recommendations of the Corridor Management Plan for areas included in its footprint map. Jurisdiction: Local.

2. Notice of Applicability of Plan - One tool to help ensure that individuals who own property within the Corridor and who are considering purchase and/or development of that property are aware that the land is included in the area covered by the Corridor Management Plan is for all counties and cities that are partners in the development of a Corridor Management Plan to require that all plats approved by them contain a statement, similar to the following, placed in the dedication section of each approved plat.

"The property shown on and described in this plat is and shall hereinafter perpetually be subject to that certain [INSERT CORRIDOR NAME] Corridor Management Plan, adopted by the Kansas Department of Transportation on _____ , the City of _____, Kansas on _____, ____and _____County, Kansas on _____, ____, recorded in the Register of Deeds for _____ County, Kansas, in Book _____, at Page _____."

Another way to help ensure that those interested in developing areas of land covered by the Management Plan are aware of the Plan, is for communities within the Corridor to amend all their development applications to highlight the existence of special planning areas in the city or county, including the areas covered by the Corridor Management Plan. This could be handled informally through an internal process established wherein all individuals who request a development application are routinely asked by staff the location of the property that will be the subject of the application to allow the staff member to inform the potential applicant when the area to be developed is included in an area covered by a special area plan. Alternately, it could be handled more formally by inserting a line on all applications with a space to be filled in identifying parcels covered by special plan areas. The latter is the recommended approach, as it avoids reliance on, what could be, revolving staff to ensure that knowledge of the relevance of areas plans is consistently imparted to applicants. That being said, development application forms cannot always be changed immediately, so the informal process may be employed until the opportunity arises to make the formal change.

Entities or persons interested in developing at locations within the Corridor may also become informed of the existence of the Plan as a result of the requisite filing of the Interlocal Cooperation Agreement (entered into among all parties to the Study that resulted in the Corridor Management Plan) in the register of deeds office in the county where that property is located. It should be noted that upon its filing the Interlocal Agreement will not be filed in the grantor/grantee index, so it would typically not show up on a title search. The agreement is filed under the names of the parties to the agreement See Section IV of this Chapter for details on filing of the interlocal agreements. Jurisdiction: Local.

3. Notice and Opportunity to Provide Input - Since the Corridor Management Plan is a joint cooperative effort between the Kansas Department of Transportation and communities along the corridor to create a vision for development of that Corridor and provide a guide to development decisions made by each community within that Corridor, all parties with an interest in potential development along the Corridor should be afforded an opportunity to provide input on that decision-making process during the requisite application and consideration procedures utilized by that community. Accordingly, each community should provide KDOT with appropriate notice of any development application (including rezoning and associated preliminary development plan applications, special or conditional use applications, site plan applications and preliminary plat applications, variances and hearings on an amendment to that community's comprehensive plan), that could reasonably be expected to have the potential to adversely impact the Corridor. In addition, each community should provide KDOT with advance copies of all such proposed plan amendments or development applications and any related staff reports. Jurisdiction: KDOT/Local.

4. Notice of Land Marketed for Sale - Success in being able to acquire property necessary for right-of-way for the mainline highway at the earliest time possible is critical to the successful implementation of the Corridor Management Plan. The ability to act quickly when an opportunity arises is key to this success. If KDOT has prompt notice of properties that become available for purchase within areas shown as future right-of-way in the Corridor Management Plan, it will be in a better position to timely

coordinate with local governments on the acquisition of necessary rights-of-way. Cities and counties within the Corridor should employ whatever means are available and identify additional means by which they can keep apprised of land purchase opportunities as they arise within the Corridor. Jurisdiction: KDOT/Local.

5. Economic Incentive Policy – As discussed below, city and county economic incentives can effectively be focused to increase the amount of revenues they generate to pay for the cost of acquisition of land needed for transportation facilities and for the actual construction of the facilities shown on the Plan, as well as to encourage dedications of land for facility rights-of way. Many cities and counties have adopted policies to guide governing body decisions on when to grant incentives and the level of incentives that will be available. If a community along the Corridor has adopted or is considering the adoption of an economic incentive policy, that policy should be revised or adopted to encourage the use of economic incentives to implement the recommendations of the Corridor Management Plan. Jurisdiction: Local.

D. Acquisition Tools

1. Land Acquisition - Public sector entities have the authority to acquire land for public improvements, including state highways and local roads and streets by gift, purchase, or condemnation. (K.S.A. 19-101 et seq., Article 12, Section 5 of the Kansas Constitution, K.S.A. 68-404). Sufficient land may be acquired to accommodate immediate construction needs, as well as for future needs. In appropriate circumstances, public sector entities can acquire interests in land for public improvements in advance of the date of the start of construction. Timely acquisition of necessary rights-of-way preserves opportunities to fully implement the goals of the Corridor Plan and helps reduce the cost of full implementation. The primary objective of all the partners in implementing the Plan must be to continually coordinate with one another to identify opportunities to acquire the interests in land necessary to construct the transportation improvements envisioned by the Plan. Continuing coordination is critical, but it means nothing if the partners are not equally devoted to cooperation with one another in the identification of traditional and innovative new sources of revenue and in creative partnering on acquisition strategies. Jurisdiction: KDOT/Local.

2. Access Acquisition – As discussed in Section II. A below, existing access points that are not consistent with the Corridor Management Plan can often be eliminated though the KDOT's, city's or county's exercise of their police power. For that exercise to be appropriate however, adjacent landowners must be left with "reasonable" access after the inconsistent access point is removed. A private property owner does not have a legal right to direct access to the highway or to a particular local street. It is only required that a reasonable access is available to a property owner through some alternative means, such as access to a frontage or reverse frontage road, in the case of a highway or from some other adjacent street. That being said, situations will arise where this objective of reasonable access cannot be achieved solely though exercise of a public entity's police power. Situations will also exist where it is desirable to eliminate one or more existing access points to a particular parcel to achieve the access management objectives of the Plan, while still leaving that property owner with a point of direct access that is consistent with the Plan. In those, and in other instances, it may be advisable or even necessary to acquire inconsistent points of access through traditional negotiation or condemnation processes. The authority to acquire land referenced in Section I.D.1 above is also the source of KDOT's, cities' and counties' authority to acquire access. Acquisition of access rights can be applied to:

- limit access to designated locations or side streets;
- control access and sight distance at intersections or interchanges;
- introduce long term or permanent access control; and/or
- control traffic and turning movements at locations where high numbers of conflicting movements occur.

Jurisdiction: KDOT/Local

3. Land Dedication and In-Lieu Fees - One of the most, if not the most, critical recommendation of the Corridor Management Plan is that both KDOT and the communities along the Corridor do everything within their power to preserve and acquire the right-of-way necessary to construct the enhancements to the highway mainline and to the adjacent and interfacing local street network. One of the goals of the plan is to maximize economic opportunities for both landowners and communities along the corridor while, at the same time, minimizing development of land at locations of a nature, and of an intensity that impedes the partners' ability to ensure that the mainline highway and the local street network function as envisioned by the Corridor Management Plan. New development that takes place within the corridor, in most instances, will create a need for new transportation network facilities to accommodate the vehicle trips it generates.

Both federal and state law authorize the communities along the corridor to require, as a condition of development approval, that the landowner dedicate rights-of-way needed for network improvements in an amount that is roughly proportionate to the need for facilities generated by that development. A carefully calculated system of fees in lieu of dedication also can be effectively utilized to ensure the timely purchase of sufficient rights-of-way. These in-lieu fees are authorized by K.S.A. 12-749. If each community along the corridor adopts a well-designed, legally defensible right-of-way dedication and/or in-lieu fee program, the significant costs of acquiring the right-of-way contemplated by the Corridor Management Plan can be greatly minimized, thereby helping to ensure successful implementation of the Plan. Jurisdiction: Local.

II. ACCESS MANAGEMENT STRATEGIES

KDOT and local communities can undertake access management activities through its "governmental police powers," which is the authority to take action to protect the well-being, safety and health of the public, and through its authority to acquire interests in land. These management strategies can be designed to apply equally to all parts of the transportation network within the Corridor. Alternatively, access management tools and regulations can be imposed as an overlay district and don't have to be city or county-wide, but can be tailored to accomplish specific objectives in defined areas. A component of access management is known as regulation of traffic flow. Regulation of traffic flow could include several actions listed in the access management tools described below or be as simple as prohibiting left turns, prescribing one-way traffic, or restricting speed. Managing access is complicated and requires careful consideration, but it can be done while still allowing the property owner reasonable access to their property and to the surrounding street network. It is important to understand the differences between access (connection with surrounding roadways) and routing (direction of flows between properties and surrounding roadways).

The following are several action steps the Corridor partners can take in the area of access management to help assure successful implementation of this Management Plan.

A. Closing of Access

While the ultimate objective of conversion of an existing route to an access controlled facility generally may not be realized immediately, KDOT and the communities need to constantly be looking for and acting on opportunities to eliminate access at locations other than those interchanges and access locations designated in the Plan. Access management is necessary to protect safety for the motoring public and the operational efficiency of the Corridor. Effective access management also protects public investments and facilitates the continued economic vitality of the corridor. In contrast, uncontrolled access generally impedes development and produces high costs when and if retrofits are needed. Jurisdiction: KDOT/Local.

B. Approval of Access – As stated above, the authority to allow access to a state highway or city connecting links is vested in KDOT. See The Kansas Department of Transportation Corridor Management Policy, http://www.ksdot.org:9080/BurTrafficEng/cmpworking/Index.asp. A request for access is approved and controlled through issuance of a Highway Permit. The Permit is the legal document that establishes the relationship between the landowner and KDOT. All points of access to the state highway system must be the subject of a Highway Permit. This includes when access connections or local streets and intersections are installed, relocated, improved, removed, or replaced on or along state highway system right-of-way. The permit will specify such things as the location of the point of access, issues related to the construction of the access, type of use allowed at the access point and other conditions and limitations of access at that point. The KDOT District Engineer has been delegated the authority to approve Highway Permits. A request for a Highway Permit must be made with the appropriate KDOT Area Office.

With respect to access to local streets within the Corridor, the authority to approve that access is vested in either the city or county that has jurisdiction at the requested location. This authority is derived from the government's inherent police power. The actual procedure for obtaining access will vary from community to community. Some communities may have adopted an access management policy that governs the location and other aspects of access to the public streets and road. In other instances, regulations governing access points may be located in the community's zoning district regulations or its subdivision regulations. Provisions on access should be included in any overlay district created for an area within the Corridor. On City Connecting Links, a Highway Permit must be obtained for work in the right-of-way. Executed copies of the permit, approved by KDOT and the city or county will be provided to the property owner. Jurisdiction: KDOT/Local

C. Input to KDOT on Access/ Coordination of Access Management - Because of the importance of access management on the mainline highway, and on the road and street network within the Corridor, and because the authority to permit and close access to the state highway system and its connecting links is vested exclusively in KDOT, (K.S.A. 68-413 and K.S.A. 68 404(a)), it is critical that communities along the Corridor confer with KDOT respecting development applications that propose access points on the mainline highway and on portions of the local street network that are included in the Corridor Management Plan, particularly if that access is not consistent with points shown on the Corridor Management Plan as future points of access. Jurisdiction: KDOT/Local.

D. Coordination with KDOT - The Corridor Management Plan identifies existing access points on the highway that should be closed over time, as appropriate circumstances present themselves, to achieve access management objectives. Accordingly, each community along the Corridor should cooperate with KDOT in identifying existing access points along the mainline and in closing those points, where doing so, will implement the access management goals of the Corridor Management Plan. Each local government partner should establish points of contact with KDOT to facilitate the ability to quickly capitalize on opportunities as they arise. Early coordination with KDOT at the site plan and preliminary plat stages is important. Jurisdiction: KDOT/Local.

E. Shared Access - One meaningful way to help ensure that all property owners are afforded reasonable access to the mainline and to the local street network consistent with the full functionality of that network, is to encourage that joint access to that network by adjacent property owners be utilized to the maximum extent possible. Therefore, communities, when reviewing development applications. should consider, as a condition of approval of that application, the grant of a recorded easement by the applicant to adjoining property owners or such other conditions as are appropriate to further the Corridor access management objectives. Jurisdiction: Local.

F. Common Access Management Tools

A list of common access management tools is provided below. Each tool is illustrated in the Table that follows.

Access Management Tools:

1) Consolidate mainline driveways
2) Eliminate mainline driveways/side road access
3) Intersection consolidation
4) Convert major intersections to interchanges
5) Advanced right-of-way acquisition
6) Interim intersection upgrades (traffic signals, turn-lanes and acceleration lanes)

Tool	Description	Jurisdiction	Implementation and Compensation Requirements
Consolidate Private Driveways	Eliminate redundant driveway connections to mainline into single driveway connection, either within an individual tract or at property line of contiguous tracts.	KDOT/LOCAL	If "reasonable" access to the property will remain after consolidation, consolidation can potentially be accomplished by KDOT regulation of driveway permits under police power without payment of compensation to affected property owners. More typically, existing access control breaks allowing private driveways to mainline are acquired through traditional negotiation or condemnation processes. If abutting property owner submits a re-zoning or development proposal to local government, driveway locations are subject to regulation under zoning authority without payment of compensation as condition of zoning or development plan approval.
Eliminate Private Driveways/ Side-Road Access	Where property owner has frontage on both mainline and side-road, eliminate mainline driveway and restrict access to side-road.	KDOT/LOCAL	If "reasonable" access to the property will remain after consolidation, elimination can potentially be accomplished by KDOT regulation of driveway permits under police power without payment of compensation to affected property owners. More typically, existing access control breaks allowing private driveways to mainline are acquired through traditional negotiation or condemnation processes. If abutting property owner submits a re-zoning or development proposal to local government, driveway locations are subject to regulation under zoning authority without payment of compensation as condition of zoning or development plan approval.
Intersection Consolidation	Consolidate redundant, at-grade local road intersections into single intersection by establishing local road network to facilitate connection to single remaining at-grade intersection.	KDOT/LOCAL	KDOT may regulate location where public roads connect to mainline under general statutory authority to establish and maintain state system and its police power. No public "property right" in location where local roads connect to mainline. Therefore, local governments cannot enjoin closure of mainline connections nor can abutting property owners seek compensation for resulting re-routing along local roads to mainline. More typically, KDOT and local governments will jointly undertake coordinated road improvement projects pursuant to their respective general statutory powers to establish and maintain public roadways. Such a project would include consolidating redundant, at-grade local road intersections with local road network to facilitate connection to single remaining at-grade intersection. If abutting property owner submits a re-zoning or development proposal to local government, intersection location is subject to regulation under zoning authority without payment of compensation as condition of zoning or development plan approval.
Interchanges at Major Roads	Replace major road at-grade intersections with grade-separated interchanges	KDOT	KDOT may install interchanges under general statutory authority to establish and maintain state system. Acquire necessary right of way through traditional negotiation and condemnation processes.
Advance ROW Acquisition	Identify and prioritize critical parcels most vulnerable to development or other market forces.	KDOT/LOCAL	After identifying and prioritizing critical parcels most vulnerable to development or other market forces which would make acquisition at time of future project physically impossible or unnecessarily expensive. KDOT or local government may acquire necessary right of way as funding is available through traditional negotiation and condemnation processes.
Interim Intersection Upgrades	Identify at-grade intersections where traffic volumes or accident rates require interim improvement until the corridor is complete.	KDOT/LOCAL	KDOT may authorize interim intersection improvements including traffic signals, turn-lanes and acceleration/deceleration lanes under general statutory authority to establish and maintain state system. Though KDOT must ultimately authorize these upgrades, the evaluations undertaken to determine if they are warranted, their timing, their nature and the source of funding for the upgrades is often initiated by local governments. It is also common for these upgrades to be provided, in whole or in part, by private landowner as a part of an exaction negotiated during the development approval process, based on the extent to which the demand for the upgrade is generated by the proposed development.

III. FINANCING STRATEGIES

The Corridor Management Plan has been developed to maximize economic opportunity and to provide a fully functional highway and street network for property owners within the Corridor. The full costs of the improvements to the mainline highway and adjacent street network necessary to achieve these Plan objectives are significant. Monies needed to complete these enhancements may not be available from KDOT or from the local communities within the Corridor when the enhancements are needed. Therefore,

- identifying all existing financing tools, both the traditional and the alternative tools;
- creatively analyzing how these tools can best be utilized individually and in concert with one another to maximize resources;
- investigating possibilities for new options using home rule and delegated powers;
- pursuing federal and state statutory and regulatory amendments to eliminate funding obstacles and provide new approaches; and
- pursuing new legislative authority for innovative funding approaches are all critical to the successful implementation of the Management Plan.ll

To achieve this sought-after success, it is imperative that all Corridor partners carefully and constantly coordinate with one another to identify potential sources of funds and work diligently, once sources are identified, to make certain that available funds are utilized in the most effective and efficient way to the benefit of all parties to this endeavor.

That having been said, there is a wide array of financing options available to cities and counties to finance infrastructure improvements. Notably, many of these same financing options can be used as economic incentives to encourage development to occur at a certain location, in a certain form, and/or in specified densities or intensities. These financing options include the traditional mechanisms used by cities and counties to raise revenues and to pay for both the capital and operational expenses of government and other alternative financing strategies.

A. Traditional Funding

Traditional funding mechanisms include federal and state funds, real and personal property taxation (Article 12, Section 5 of the Kansas Constitution, K.S.A. 19-101 et seq. and K.S.A. 79-1801 et seq.), sales taxation (K.S.A. 12-187 et seq.), economic development tax exemptions (Article 11, Section 13, Kansas Constitution), special assessments (K.S.A. 12-6a01 et seq., and K.S.A. 12-601), and the Main Trafficway Act (K.S.A. 12-685). The latter two are both discussed in some detail immediately below.

1. K.S.A 12-6a Improvement Districts - Improvement Districts are the Kansas form or a traditional benefit district; a financing and development tool whereby cities and counties can establish a district, construct improvements and then issue general obligation bonds for construction of public improvements and assess the cost to those properties that are specifically benefited by the improvement. The bonds are then retired through payment of special assessments that are paid along with the benefited property owner's ad valorem property taxes by these benefiting properties. There is a very specific statutory process that must be followed to effectively utilize this strategy.

Improvement Districts are used by the city and county to assist in development of arterial roadways (usually associated with section line roads), water lines and sanitary sewers, among other public improvements. It is a responsible and fair method available to communities in Kansas to pay for the roads and infrastructure associated with new development, though its use is not limited to improvements to support only new development. For example it is often used as the financing mechanism for the construction of new sidewalks in existing developments. However, the method can be effectively used to ensure existing property owners do not pay for improvements from which they do not receive a special benefit.

With the number of roadway, sanitary sewers and water line improvements throughout a community, if the community did not utilize improvement districts, either the improvements would not be made or property owner's ad valorem property taxes would need to be raised to allow for the construction of these necessary improvements. Developers have the option to build the improvements in front of their land to meet city specifications, but in so doing, a hodge-podge of improvements would occur, and the improvements could be under construction at different times and cause much more disruption than the orderly process afforded by the creation and administration of Improvement Districts.

2. Main Trafficways – K.S.A. 12-685 et seq. authorizes cities to designate by ordinance any existing or proposed street, boulevard, avenue or part thereof, within its jurisdictional boundaries as a main trafficway, if the primary function of the street is the movement of traffic between areas of concentrated activity within or outside the city. Once designated a main trafficway, the city is authorized to acquire by purchase or condemnation the land necessary for that facility and to improve or reimprove that trafficway. Virtually all aspects of the construction of these trafficways is authorized, including bridges, viaducts, overpasses, underpasses, culverts and drainage, trafficway illumination, traffic control devices and pedestrian ways. The cost for these improvements, including acquisition, can be paid for from the cities general improvement fund, internal improvement fund or any other available funds or by the issuance of general obligation bonds. No vote of the public is required for issuance of bonds for these purposes. This method is often used in conjunction with the improvement district statute for street improvements.

All of these financing mechanisms are available to fund improvements contemplated by the Corridor Management Plan and their use, as the situation dictates, should not be ignored.

Because the traditional mechanisms are regularly utilized by KDOT, cities and counties to pay for capital projects, they will not be discussed in further detail in this Chapter; rather this portion of this Chapter is devoted to an explanation of several of the less-traditional mechanisms available to cities and counties to pay for improvements contemplated by the Plan and to incent Corridor development that is consistent with the Plan's recommendations.

Although not actually a source of additional revenue, the bonding authority of cities and counties is worthy of mention. Each is authorized to issue long-term debt to finance projects, with that debt to be repaid from a variety of traditional and some alternative revenue sources. Bonding authority is important for many reasons, but one key advantage of issuing bonds to finance public improvements is that it allows the issuing entity to pay for an improvement up front (before total project costs are available in hand) to get a project started or even completed in those instances where timing is critical in terms of events in the community and/or to take advantage of favorable financial markets. These improvements can then be paid for over time, generally up to 20 years, as tax revenues or other dedicated sources become

available. This can be a huge advantage and can help the partners in their efforts to acquire land for and make the improvements contemplated by the Plan when actual situations in the Corridor dictate those actions occur.

Cities and counties are authorized to issue general obligation bonds payable from a general tax levy on all taxable property within the city (K.S.A. 10-101 et seq.). These GO Bonds are backed by the full faith and credit of the issuing entity. As an alternate, the city may issue revenue bonds (K.S.A. 10-1201 et seq.). Revenue bonds are repaid from a pledge of the revenue from a specified income-generating facility or source. Revenue bonds are not guaranteed by the full faith and credit of the issuer. A city may issue special assessment bonds to be repaid, in whole or in part, from the revenues received from special assessments imposed on properties that are specially benefited by the improvement(s) constructed within an assessment district (K.S.A. 12-60015). Special assessment bonds are actually general obligations of the issuer, which, in addition to the pledge of the revenues from the special assessment, are backed by the full faith and credit of the city. The final category of traditional municipal bonds is special obligation bonds. These are bonds issued under the authority of Kansas statute, specifically, K.S.A. 12-1770 et seq. and 12-17, 160, et seq., to finance the undertaking of redevelopment projects. These bonds are payable from incremental property tax increases resulting from the redevelopment in an established redevelopment district, a pledge of a portion of the revenues received by the issuer from transient guest, sales and use taxes collected from taxpayers doing business in a redevelopment district, franchise fees, private, state or federal assistance or any combination thereof.

B. Alternative Funding Mechanisms

Most alternative funding techniques are devised by one local government to meet a local need and their use than spreads from community to community. The techniques are refined based on trial-and-error. Many of these approaches do not have specific legislative authority, but are enabled through home rule, local police powers, or a broad reading of authority from another source, such as local planning.

State highway, road and street projects required to support new development, may be constructed utilizing economic incentives, such as tax increment financing, Star Bonds, sales tax reimbursement agreements, tax abatement, special assessment districts and transportation development districts, to name only several of the options. It is important that, wherever possible, local communities along the Corridor be cognizant of their ability to require that revenues from the grant of these incentives to developers be used to offset the cost of the construction of mainline highway improvements and related improvements to the local street network, as shown on the Corridor Management Plan. But, even more importantly, they must actually make the grant of these incentives conditional on a reasonable portion of these monies being used to pay the cost of Corridor Management Plan identified improvements.

These incentives also can be effectively used to influence the location, type/uses, form, architectural quality, configuration and density/intensity of development. It is important to utilize these incentives, not only to offset traditional public costs for these facilities, but also as incentives to shape development proposals, so they further Plan recommendations and achieve quality design and sustainable development in the Corridor.

1. Impact Fees - Impact fees are one-time regulatory fees assessed against new development to cover the costs for necessary capital facilities proportionate to the demand generated by the new development. The fee is imposed by a public sector entity on development activity as a condition of granting development approval, and generally is calculated at the platting stage and collected at the time a building permit is issued. Kansas has no impact fee statutory authority. Nevertheless, cities and counties can establish a system of impact fees using their home rule authority. This system of fees requires the development of a local legislative adopted scheme that includes the calculation methodology for the fee, and a system of credits, exemptions and appeals. The system would be adopted by ordinance or resolution, as the case would require. Impact fees must be used to add capacity attributable to new development; they cannot be used to pay for improvements necessitated by existing development. An impact fee must meet three requirements:

- The new facilities are a consequence of new development;
- There must be a proportionate relationship between the fee and the infrastructure demand; and
- The funds collected must be used to provide a substantial benefit to the new development.

In Kansas, impact fees may be collected either across the entire jurisdiction or in a designated geographic area. While they may be assessed at platting, impact fees are typically collected upon building permit issuance. A detailed calculation is necessary to ensure that the system, and particularly the fee charged property owners, is proportionate to the demand for new facilities that each unit of new development generates, i.e., its impact, in terms of facility capacity consumed. In funding transportation network facility improvements, the measuring stick for each development's impacts is the number of vehicle trips it will generate. Since streets are generally designed to accommodate the PM Peak trips, that is generally the time interval used.

The Kansas Supreme Court has recognized the legitimate use of impact fees in McCarthy v. City of Leawood. In that case, the City of Leawood assessed the payment of impact fees on the issuance of building permits and plat approvals for properties within the K-150 (135th Street) Corridor. The purpose of the fee was to finance a portion of the improvements of K 150. Back when first established in 1988, the fee was calculated based upon trip generation, at a rate of $26.45 per trip. This rate was then multiplied by the average number of trips generated by a use to determine the individual fee. For example, residential uses were projected to generate 10 trips per day, multiplied by $26.45 for a fee of $264.50 per unit.
Jurisdiction: Local.

2. Excise Tax - Technically, an excise tax is a broad term that covers every type of tax, except a property tax. As with all taxes, it is a method of raising revenue. It is distinguished by the fact that rather than being based on the value of property, it is levied on a certain activity or the exercise of a privilege – more accurately described as business done, income received, or privilege enjoyed. Typical examples of excise taxes include taxes on the purchase of gasoline, alcohol or cigarettes, business license taxes and on the rental of hotel rooms. In recent past, local governments in Kansas have innovatively used an excise tax to fund transportation network improvements that are required to support development. It is structured as a tax on activity of platting lots. The rate of the tax is based on the amount of square footage proposed to be constructed or on the number of vehicle trips the proposed development will generate on the street network. The key reason for its use has been that because it is a tax and not a regulatory fee, the rate is not required to satisfy the constitutional benefit or nexus requirements of regulatory fees imposed by local governments, such as impact fees discussed above. Kansas courts had upheld this financing approach.

In 2006, however, the Kansas Legislature amended K.S.A. 12-194 to make it uniformly applicable to all cities. By doing so, this provision became no longer subject to a charter ordinance or resolution whereby cites and counties could make its provisions inapplicable to that city or county and adopt supplemental provisions on the subject. This charter approach was the one that cities and had used to eliminate the legal impediment in K.S.A. 12-194 and use their ordinary home rule power to establish an excise tax system of this type. It had become known as a "development excise tax." That amendment, in addition to precluding local governments that did not have a development excise tax in place from adopting one, also included a provision that prevented cities and counties that had levied or imposed a development excise from increasing the rate of the tax without a majority vote of the electors, after July 1, 2006. Accordingly, this technique is only available to local governments that had a development excise tax in place before that date, and those that did have one in place cannot increase the rate charged without a vote. Jurisdiction: Local.

3. Transportation Development Districts - A Transportation Development District (TDD) (K.S.A. 12-17,140 at seq.) is a form of a special district enacted specifically to facilitate the construction, maintenance and financing of a broad array of transportation projects, ranging from streets, roads, highway access roads, interchanges and bridges to light rail and mass transit facilities. Most improvements related thereto, such as streetscape, utility relocations and other necessary associated infrastructure, can also be funded using this technique. While a regular special district can be used to address transportation issues, transportation development districts allow greater funding flexibility, including authority to impose a transportation development district sales tax of up to 1% (K.S.A. 12 17,145), in addition to the authority to levy special assessments. If a transportation development district is sought to be imposed, the governing body must hold a duly noticed public hearing in advance of adopting the resolution or ordinance creating the district and approving the method of financing projects within the district. The district may issue bonds backed by the revenues received from properties in the district from the imposed sales tax or special assessment.

One significant difficulty in utilizing this mechanism for improvements covering a larger area is that the district can only be formed through a petition signed by owners of all of the land area within the proposed district. So, if the improvement is adjacent to lands owned by different owners, it may be difficult to obtain the consent of all necessary owners. It may have its greatest utility for distinct segments of the improvements proposed by the Management Plan, such as mainline highway interchanges and access roads located within one tract of land that is designated in the Plan for more dense or intense development. This technique can also be used effectively to assist in the financing of key portions of the adjacent local street network. The statutory scheme allows for a good deal of flexibility in how the boundaries of the district are established, so long as all included property owners agree. For that reason, the community partners should keep this tool on the list of the ones that should be considered for funding, particularly in those instances where a property owner or several property owners want to develop an area of land at an access point with sales tax generating properties. Jurisdiction: Local.

4. Transportation Utility Fee - A transportation utility fee is a fee collected on residences and businesses within a city's or county's corporate limits tied to the use and consumption of the transportation system. While this approach has only recently been applied to transportation services, utility charges have been used for years "to finance not only public water and wastewater systems but also such diverse facilities and services as electricity, telephone or telegraph services, gas, and a cotton gin." There are a number of benefits to TUFs:

Utility rates and fees provide a steady revenue stream that may be used for maintenance and operations costs, as well as facilities construction and are not required to meet the direct benefit test applicable to special assessments. Also, utility charges are generally not subject to voter approval, as are many taxes.

And perhaps most applicable to the current circumstances, "[t]he development of a transportation utility is a particularly attractive option in states with strong home rule powers, such as Colorado, Florida, and California."

Utility fees are collected from all development, both existing and new (as it "hooks-in" to the existing system). Charges are based on usage estimates of trips by land use and project budgets. The transportation utility fee is typically included on an existing county or utility collected tax or rate bill.

The uses to which revenues from a utility can be used are limited only by the restrictions placed on their use in the home rule authority. Generally, however, the revenues would be placed into a separate fund and earmarked or dedicated to the purposes stated in the enabling authority and to no other purpose.

There is no specific legislative authority for transportation utility fees in Kansas. Local governments will need to look to home rule to authorize this financing mechanism. The key to the successful employment of this technique is crafting an ordinary ordinance or resolution that establishes a system of charges that will not be found to be a "tax," while at the same time ensuring that the ordinance or resolution is not in conflict with existing state statutes, such as, by example, K.S.A. 12-6a01 et seq., authorizing special assessment districts.

In the leading case on transportation utility fees, Bloom v. City of Fort Collins , the Colorado Supreme Court reached the following conclusion:

We hold that a transportation utility fee is not a property tax but rather is a special fee imposed upon owners or occupants of developed lots fronting city streets and that such fee . . . is reasonably related to the expenses incurred by the city in carrying out its legitimate goal of maintaining an effective network of city streets.

The Fort Collins transportation utility fee was adopted to address maintenance issues. Nothing, however, would prohibit the utility fee from being designed to fund construction-related costs. The Fort Collins fee was calculated based on: "the amount of frontage in linear feet that each lot or parcel has on the right-of-way of an accepted street; the base rate maintenance cost of each foot of frontage; and the developed use of the property (which includes the amount of vehicular traffic generated by the property)". The fee was billed monthly. The Colorado Supreme Court found that the transportation utility fee qualified as a fee and not a direct tax. "Unlike a tax, a special fee is not designed to raise revenues to defray the general expenses of government, but rather is a charge imposed upon persons or property for the purpose of defraying the cost of a particular governmental service."

Although this technique has a lot of potential as a viable alternative funding strategy, careful coordination with legal counsel will be necessary to ensure the precise structure developed is legally defensible. Jurisdiction: Local.

5. Tax Increment Financing - Tax increment financing (K.S.A. 12-1770 et seq.) is a tool used by local governments to capture the future increases in property tax and all or a portion of the revenues received from transient guest, use, local sales taxes collected from taxpayers doing business within the district, and increased franchise fees, and to make revenues realized therefrom available as an incentive to development, by using the revenue to pay for, generally, public infrastructure necessary to implement a redevelopment project plan (K.S.A. 12-170a (o)). Project costs may not include costs related to a structure to be owned by or leased to a developer.

TIF funding can provide funds either as collected (pay-as-you-go) or through special obligation tax increment bonds repaid over twenty years.

While there is specific enabling authority for the use of TIF, it is limited to "eligible" areas that fall within one of the following categories and the boundaries of which are designated by the local government as a redevelopment district:

- blighted;
- blighted and in a 100-year flood-plain;
- intermodal transportation area;
- major commercial entertainment and tourism area Conservation (becoming blighted);
- major tourism area;
- historic theater;
- enterprise zone, or
- environmentally contaminated area.

Therefore, not all property within a local government's jurisdictional boundaries may qualify to be included in a redevelopment area.

Eligible project costs most certainly will include all transportation network public infrastructure identified in the Corridor Management Plan. Jurisdiction: Local.

6. Sales Tax and Revenue Bond Districts - This mechanism (K.S.A. 12-17, 160 et seq.) is the big brother/sister of tax increment financing. It's "Super TIF," if you will. The entire mechanism works almost exactly like tax increment financing, except the districts are called STAR bond project districts and the individual projects in the district are called STAR bond projects. Each project must be approved by the Secretary of Commerce and include at least a $50,000,000 of capital investment and evidence $50,000,000 in project gross annual sales or, if outside a MSA, met the requirements of K.S.A 12-17,162 (w). It is the heightened level of incentives authorized in these districts that is key. Once a district is established and a project plan is approved, the approving city may issue special obligation bonds. Importantly, those bonds may be repaid from the portion of the city and county sales and use tax collected from taxpayers within the city portion of the district AND the sales tax increment revenues received from any state sales taxes collected from taxpayers in that district. This is in addition to the property tax increment and local sales, use and franchise fee that can be pledged to repayment of the special obligation bonds issued in a traditional tax increment financing project. The Secretary can set a limit on the amount of bonds that may be issued to pay eligible project costs. Jurisdiction: KDOT/Local

7. Community Improvement Districts – Enacted in the 2008 Legislative Session, H.B. 2324 authorizes cities and counties to establish community improvement districts. These districts, like the other financing strategies discussed in this Section, can be used effectively to finance improvements and services contemplated by the Corridor Management Plan. The array of project that may be financed in a district is very broad. It includes:

- structures and facilities:
- streets, roads, interchanges, highway access roads, intersections, bridges, over and underpasses, traffic signs and signals, pedestrian amenities, drainage, water, storm and sewer systems and other site improvements;
- parking lots and garages;
- streetscapes and lighting;
- parks and landscape;
- art and cultural amenities;
- airports, railroad and mass transit;
- lakes, wharfs, ports and levies;
- contracts for music, news, childcare, transportation;
- security;
- promotion of tourism and cultural activities;
- promotion of business activity or economic development;
- personnel training programs; and
- impact, marketing and planning studies.

These projects may be funded with:

- installment or front-end paid special assessments (levied in accordance with Chapter 12-6a01 discussed above, except no city at large levy is allowed);
- a community improvement district retailer's sales tax in an amount not to exceed 2% (must sunset in 22 years if the project is financed with sales tax revenues as they are received [pay-as-you-go] or when the bonds are retired, if the revenues from a sales tax are pledged for that purpose);
- ad valorem taxes; and/or
- other funds appropriated by the city or county.

Special obligation and full faith and credit bonds may be issued to facilitate the financing of a project; provided that, if a petition signed by 5% of the qualified voters of the city or county is filed with the clerk within 60 days of the public hearing held on the establishment of the district, no bonds may be issued unless and until approved by a majority of the voters voting at that election. The amount of any full faith and credit bonds issued that exceeds 3% of the assessed value of the issuing city or county shall be considered to be within that community's bonded debt limit.

Costs that can be paid for with revenues generated from sources above include: preliminary reports, plans and specifications; publication and ordinance or resolution preparation costs; necessary fees of consultants; bond issuance and interest costs; plus not to exceed 5% of total project cost for administration and supervision of the project by the city or county.

The process to establish a district with respect to which project costs both will be paid for only with special assessments and which is not seeking to issue full faith and credit bonds must be initiated by the filing of a petition signed by the owners of all the land area within the proposed district. Once the petition is filed, the governing body may proceed without notice or hearing to make findings by resolution or ordinance on the nature, advisability, estimated cost of the project, its boundaries, and the amount and method of assessment. Once these findings are made, the governing body, by majority vote, may by ordinance or resolution, authorize that project. All properties that are benefitted by the project(s) need not be included in the district.

On the other hand, the process to establish a district funded in any other authorized manner, may be initiated by the filing of a petition signed by landowners owning more than 55% of the land area AND

by owners owning more than 55% of the assessed value of the land within the proposed district. In this instance, once a petition is filed, a resolution providing notice of a public hearing on the advisability of creating the district must be adopted The resolution must be published as required by this enactment and certified mail notice to all owners provided. Upon the completion of the hearing, the governing body may create the district, approve the estimated cost of the project and the legal description of the district boundaries, contain a map, levy the sales tax, approve the maximum amount and method of the assessment, if applicable and approve the method of financing, including the issuance of full faith and credit bonds, if applicable.

The contents of the petition in each of the above circumstances is also set forth in the enactment. Jurisdiction: Local

8. General Contract Authority – It is important to recognize that local governments have significant powers pursuant to the Constitutional home rule amendment and Chapter 19 of the Kansas Statutes. These powers include all powers of local legislation and administration that they deem appropriate, with really only minor exceptions. This Chapter extensively discusses state, county and city powers, such as the power to regulate through exercise of the police power, the power to zone, the power to tax, the power to charge fees, the power to impose special assessments and the power to purchase, hold, sell and convey land, including exercise of the power of eminent domain . The one power that really hasn't yet received that much analysis is the power to contract. It would be a mistake not to also highlight this power which all the parties share. In addition to finding the source of the power to contract in the home rule provisions, K.S.A.12-101 contains a specific statutory delegation of power to cities to contract. K.S.A. 19-101 contains a similar grant to counties; and, among others, K.S.A. 75-5004 vests power to contract in the KDOT's Secretary of Transportation.

The limits on the power of the participants to the preparation of this Plan to contract are minimal. The two major limitations are: (1) whether the contract is within the scope of the delegated power: and (2) whether it is entered into and executed in accordance with statutory requirements. As to the first limitation, since the delegation in each instance is along the lines of "to make contracts in relation to the property and concerns of the city and necessary to the exercise of its corporate powers, " as is readily apparent, the power to contract is quite broad. Generally, it is only limited by whether the contract is in conflict with statute or the constitution. A contract that violates the first limitation is ultra vires and void. For example, a contract that violates the Cash-Basis Law (K.S.A. 10-11-1 et seq.) because it obligated the public entity to pay monies that are not budgeted and encumbered is completely void. Legally, it is as if it never existed.

It goes without saying that monies paid pursuant to a contractual obligation, like any other payment of monies by a public entity, must be for a public purpose. Courts, however, are clear on the broad scope of what constitutes a public purpose. Courts will presume that facts declared in support of a legislative determination of public purpose to be true and adequate. A good rule is that a public entity is permitted to enter into all contracts that are reasonable and proper and which are reasonably necessary to allow it to fully perform the functions expressly conferred on it, as well as those that are essential to enable it to perform the duties of government for the benefit of its citizens.

The other main limitation on the contract power of which public entities should be wary is the prohibition on contractually bargaining away its duty to make reasonable laws and exercise their other legislative powers whenever doing so is necessary to preserve or protect the public health, safely and general welfare. As an example, a public entity could not agree by contract to approve a rezoning or impose or not impose some tax or fee at some later point in time

The beauty of the contracting power is that it is so comparatively unfettered by limitation, particularly by those of the constitutional variety, such as the 5th Amendment's constraints on exercise of the zoning and police power to require the dedication of land as a condition. As noted above, for good and valid reasons, any dedication of land required in that instance must be roughly proportionate, in its nature and in its extent, to the impacts created by development. (See Sec. I.D.3)

In situations where the public entity is exercising its contract power, the parties are negotiating their own contractual duties and obligations. Ostensively, the ultimate objective of both parties is to achieve a win-win situation, where both receive the benefit of the bargain struck. The traditional elements of a contract must exist for the agreement to be binding, of course. There must be an offer, acceptance of the offer, mutuality and delivery. As an example of use of the contract power to implement the Plan, an entity or individual contracting with a community within the Corridor may be willing to agree to convey more land than the community could legally require them to dedicate when exercising its police or zoning power. So, there may well be benefits the community can and is willing to provide to a developer that are more valuable to them than retaining that portion of the land which exceeds what "rough proportionality" would allow the community to require, as a part of the development approval process. Based on the mutual interests of both parties, a deal can be struck that helps implement the Plan , while at the same time enhancing the developer's business objectives. The fact that a contracting party voluntarily agrees to an obligation to which it could not be required to commit as a part of the development application process does not make the contractual obligation illegal.

The opportunities to utilize public entity contract powers to help implement this Plan are numerous and should not be ignored. In fact, each community along the Corridor and KDOT should be ever vigilant about identifying situations where this power can be used beneficially.

Virtually every time public incentives are provided to a developer, a contract is employed to memorialize the duties and obligations of the parties. The recipient of the incentives will expect that it will be asked to provide benefits to the community in exchange for being provided development incentives. There is no absolute right to develop land. Each party to the contract, however, must receive compensation (mutuality). Communities should be constantly watchful for opportunities to negotiate for the inclusion of provisions into agreements with developers and landowners along the Corridor that obligate them to take whichever appropriate actions they may be able to take to help implement this Corridor Management Plan. Jurisdiction: Local

IV. INTERLOCAL COOPERATION

Through the exercise of home rule, by entering into an interlocal cooperation agreement, pursuant to K.S.A. 12-2901 et seq., and by utilizing powers granted to cities and counties by Kansas statutes, significant opportunities exist for cities and counties to cooperate with each other in the creation of corridor-wide financing strategies for the mainline highway enhancements and city connectors and local road projects within the corridor. There is potential for such cooperation in the use of both the traditional and the alternative financing mechanisms described above.

K.S.A. 12-2901 et seq. authorizes all public agencies of the state (including KDOT) to jointly cooperate in the exercise of any power, or privileges, or authority exercised or capable of exercise by such agency, including economic development and public improvements, pursuant to an agreement in the form therein provided. See also, K.S.A. 75-5023.

K.S.A 12-2904 (f) dictates that each interlocal agreement, prior to it taking effect, shall be submitted to the attorney general for a determination of whether or not the agreement is in proper form and compatible with the laws of the state. The Office of the Attorney General has made this determination on other interlocal agreements related to implementation of Corridor Management Plans, so obtaining approval of interlocal agreements, which are based on the KDOT approved template Interlocal Cooperation Agreement, is not daunting.

In addition, K.S.A. 12-2905 requires that, also prior to the interlocal agreement taking effect, it be filed with the register of deeds of every county in which each political subdivision or agency of the state that is a signator to the agreement is located. The agreement also must be filed with the Office of Secretary of State.

Wherever possible, these opportunities should be investigated by KDOT and each local community to ascertain if a multi-jurisdictional approach will be beneficial to all parties, by providing better opportunities to successfully implement the goals of the Management Plan. Jurisdiction: KDOT/Local.

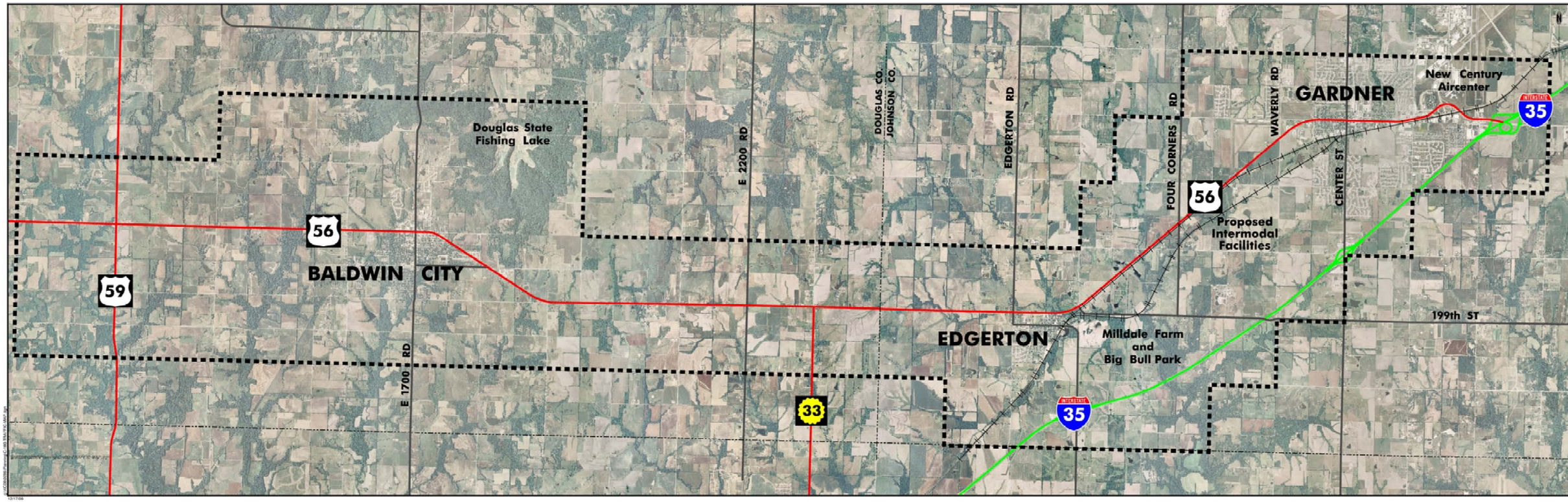


Exhibit 1

December 2009

Scale NTS

Location Map

Douglas and Johnson Counties, Kansas
KDOT Project No. 56-106 KA-1496

Trail Systems

PATTI BANKS ASSOCIATES

Meridian Group

Exhibit 2

December 2009

Scale 1" = 4000'

Existing Lane Configurations and Traffic Control

Douglas and Johnson Counties, Kansas
KDOT Project No. 56-106 KA-1496

Transystems

FETTI BANKS ASSOCIATES

Parsons Group

Exhibit 2

December 2009

Scale 1" = 4000'

Existing Traffic Volumes

Douglas and Johnson Counties, Kansas
KDOT Project No. 56-106 KA-1496

Transystems

FETTI BANKS ASSOCIATES

Parsons Group

Exhibit 4

December 2009

Scale 1" = 4000'

2040 Lane Configurations and Traffic Control

Douglas and Johnson Counties, Kansas

KDOT Project No. 56-106 KA-1496

Trans Systems

PATTI BANKS ASSOCIATES

Peridian Group

Exhibit 5

December 2009

Scale 1" = 4000'

2040 Traffic Volumes

Douglas and Johnson Counties, Kansas

KDOT Project No. 56-106 KA-1496

Trans Systems

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Memorandum

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Kansas Department of Transportation
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From: Dustin L. Elliott, P.E.

Phone: 816-329-8768

Date: December 16, 2009

CC: Jeff McKerrow
Mark Kenneally

TranSystems Project No.: P101080286

Subject: U.S. 56 Corridor Study Traffic Analysis
KDOT Project No. 56-106 KA-1496-01 CMS:006091032

At your request and authorization, TranSystems has prepared the following traffic analysis for the U.S. 56 Corridor Study. The purpose of this analysis was to assess existing and projected future design year 2040 traffic conditions at several key intersections and along three roadway segments within the 22-mile study corridor from U.S. 59 to I-35. A map illustrating the location of the study corridor is included on the attached *Exhibit 1*.

Study Area and Data Collection

The study intersections for this project include:

- U.S. 59 and U.S. 56
- 8th Street and U.S. 56
- 6th Street and U.S. 56
- 2200 Road and U.S. 56
- K-33 Highway and U.S. 56
- Edgerton Road (8th Street) and U.S. 56
- 1st Street and U.S. 56
- 4th Street and U.S. 56
- 199th Street and U.S. 56
- 191st Street and U.S. 56
- Four Corners Road and U.S. 56
- Center Street and U.S. 56
- Elm Street and U.S. 56
- Mulberry Street and U.S. 56
- Moonlight Road and U.S. 56
- Cedar Niles Road and U.S. 56

Turning-movement traffic counts were collected at each of the study intersections, with the exception of the intersections within the City of Gardner, from 6:30 to 8:30 A.M. and from 4:00 to 6:00 P.M. on a typical weekday between the dates of March 10, 2009 and April 8, 2009. Counts for the intersections within Gardner were provided by HDR, Inc.

In addition to the study intersections, the following three roadway segments were assessed:

- U.S. 56 between U.S. 59 and Baldwin City
- U.S. 56 between Baldwin City and Edgerton
- U.S. 56 between Edgerton and Gardner

Machine traffic counts were collected at each of the three locations listed above during the week of February 16, 2009 through February 20, 2009.

Future Year 2040 Traffic Projections

Future year 2040 traffic volume projections were developed for the study corridor based on a combination of historical trends and outputs from the Gardner Travel Demand Model. The model was developed by HDR, Inc. and is based on the Olathe Travel Demand Model. There are P.M. and daily models with a base year of 2004 and a design year of 2030. In the Gardner area of the project, the model was used to estimate traffic growth to 2030 then that growth was added to existing traffic volumes and factored up to the identified project design year of 2040 based on historical growth trends. Note that A.M. peak hour model growths were estimated by reversing the P.M. peak hour growths and reducing them by a factor of 0.8. For the portion of the study corridor west of 199th Street where the Gardner model ends, only historical trends were used to increase the existing traffic volumes to the 2040 design year. Below, *Table 1* briefly summarizes the general methodology used for developing 2040 projections for each segment of the study corridor.

Table 1
2040 Traffic Volume Projection Methodology

Location	Projection Method
West of Baldwin City	Existing plus 1.9% per year (2009 to 2040)
Baldwin City	Existing plus 2.1% per year (2009 to 2040)
Between Baldwin City and Edgerton	Existing plus 1.9% per year (2009 to 2040)
Edgerton	Existing plus 1.7% per year (2009 to 2040)
Between Edgerton and Gardner	Existing plus 2030 model growth plus 1.5% per year (2030 to 2040)
Gardner	Existing plus 2030 model growth plus 1.3% per year (2030 to 2040)

It should be noted that projecting traffic conditions for a 30-year design horizon may yield overly conservative estimates. The results should be viewed in this context.

Traffic Operations Assessment

Traffic operations were assessed for Existing and Future Year 2040 Conditions. The study intersections were evaluated based on the methodologies outlined in the Highway Capacity Manual (HCM), 2000 Edition, published by the Transportation Research Board. The operating conditions at an intersection are graded by the "level of service" experienced by drivers. Level of service (LOS) describes the quality of traffic operating conditions and is rated from "A" to "F". LOS A represents the most desirable condition with free-flow movement of traffic with minimal delays. LOS F generally indicates severely congested conditions with excessive delays to motorists. Intermediate grades of B, C, D, and E reflect incremental increases in the average delay per stopped vehicle. Delay is measured in seconds per vehicle. *Table 2* shows the upper limit of delay associated with each level of service for signalized and unsignalized intersections.

Table 2
Intersection Level of Service Delay Thresholds

Level of Service (LOS)	Signalized	Unsignalized
A	< 10 Seconds	< 10 Seconds
B	< 20 Seconds	< 15 Seconds
C	< 35 Seconds	< 25 Seconds
D	< 55 Seconds	< 35 Seconds
E	< 80 Seconds	< 50 Seconds
F	≥ 80 Seconds	≥ 50 Seconds

While one of the primary measurements of traffic operations, LOS, applies to both signalized and unsignalized intersections, there are significant differences between how these intersections operate and how they are evaluated. LOS for signalized intersections reflects the operation of the intersection as a whole. While the individual movements may operate with varying LOS ratings, that is largely a function of the signal timings and how the intersection is operating relative to other signals in the vicinity. As an example, in coordinated system of multiple signalized intersections, some minor side-street approaches may have LOS ratings of D, E or even F. This can be the result of the length of time provided to the major movements and do not reflect a condition where the intersection is operating over capacity or is judged to be operating poorly.

Unsignalized intersections, in contrast, are evaluated based on the movement grouping which are required to yield to other traffic. Typically, this is the left-turns off of the major street and the side-street approaches for two-way stop-controlled intersections. Lower LOS ratings (D, E and F) alone do not indicate significant difficulties or the need for additional improvements. Many times there are convenient alternative paths to avoid the longer delays. Other times, the volumes on the unsignalized approaches are relative minor when compared to the major street traffic.

The decision to install a traffic signal, which is often considered when lower LOS ratings are projected, should be based on engineering studies and the warrants for traffic signal installation as outlined in the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD). Signals are typically not recommended in locations where there are convenient alternative paths, or the installation of a traffic signal would have negative impacts on the surrounding transportation system. For instance, if the new signalized intersection is located too close to existing traffic signals it may not be recommended despite meeting the minimum warrants.

In addition to delay and the corresponding Level of Service, a secondary means of evaluation is often utilized to assess the overall capacity of the intersection or unsignalized movement. This evaluation is a ratio of volume to capacity (*v/c*) that reflects, regardless of delay, the ability to accommodate the existing or projected traffic volumes over the course of a peak hour. A *v/c* ratio of 1.00 indicates that the intersection or movement is operating at capacity, while v/c ratios less than or greater than 1.0 indicate under capacity and over capacity conditions, respectively.

The LOS rating deemed acceptable varies by community, facility type and traffic control device. LOS D is commonly considered to be the minimum desirable standard for signalized intersections. However, at unsignalized intersections LOS D, E and above are often accepted for low to moderate traffic volumes where the installation of a traffic signal is not warranted by the conditions at the intersection or the location has been deemed undesirable for signalization for other reasons, e.g. the close proximity of an existing traffic signal or the presence of a convenient alternative path.

The Synchro software package was used to evaluate intersection traffic operations and the HiCAP software package was used to evaluate roadway segment traffic operations.

Existing Conditions Analysis

The results of the Existing Conditions intersection analyses are summarized below in *Table 3*. The study intersections were evaluated with the lane configurations, traffic volumes, and traffic control devices shown on the attached *Exhibits 2* and *3*. The Synchro output worksheets have also been attached for reference.

Table 3
Intersection Operations
Existing Conditions

Intersection		A.M. Peak Hour			P.M. Peak Hour		
	Movement	LOS[1]	Delay[2]	v/c[3]	LOS[1]	Delay[2]	v/c[3]
Douglas County	U.S. 59 and U.S. 56						
	Multi-way Stop Control (All Movements)	*B*	*14.3*	---	*C*	*16.5*	---
Baldwin City	8th Street and U.S. 56						
	Eastbound Left-turn	*A*	*8.0*	*0.03*	*A*	*8.1*	*0.04*
	Westbound Left-turn	*A*	*8.4*	*0.02*	*A*	*7.9*	*0.04*
	Northbound Left-turn	*C*	*24.3*	*0.11*	*C*	*21.0*	*0.12*
	Northbound Shared Through / Right-turn	*B*	*15.0*	*0.22*	*B*	*13.1*	*0.18*
	Southbound Left-turn	*D*	*26.6*	*0.13*	*C*	*22.9*	*0.19*
	Southbound Shared Through / Right-turn	*B*	*11.9*	*0.12*	*B*	*13.3*	*0.17*
	6th Street and U.S. 56						
	Signalized Intersection (All Movements)	*A*	*8.7*	*0.41*	*A*	*9.0*	*0.46*
Douglas County	2200 Road and U.S. 56						
	Eastbound Left-turn	*A*	*1.0*	*0.02*	*A*	*1.6*	*0.02*
	Westbound Left-turn	*A*	*0.3*	*0.00*	*A*	*0.3*	*0.01*
	Northbound	*B*	*11.5*	*0.07*	*B*	*12.9*	*0.11*
	Southbound	*B*	*10.7*	*0.08*	*B*	*12.3*	*0.15*
	K-33 Highway and U.S. 56						
	Eastbound Left-turn	*A*	*0.1*	*0.00*	*A*	*0.1*	*0.00*
	Westbound Left-turn	*A*	*1.5*	*0.01*	*A*	*1.8*	*0.04*
	Northbound	*B*	*10.9*	*0.14*	*B*	*11.7*	*0.12*
	Southbound	*B*	*10.6*	*0.03*	*B*	*11.8*	*0.02*
Edgerton	8th Street/Edgerton Road and U.S. 56						
	Eastbound Left-turn	*A*	*0.1*	*0.00*	*A*	*0.1*	*0.00*
	Westbound Left-turn	*A*	*1.4*	*0.01*	*A*	*1.0*	*0.02*
	Northbound	*B*	*10.8*	*0.11*	*B*	*10.7*	*0.05*
	Southbound	*B*	*12.4*	*0.04*	*B*	*12.4*	*0.05*
	1st Street and U.S. 56						
	Westbound Left-turn	*A*	*1.3*	*0.02*	*A*	*1.2*	*0.03*
	Northbound	*B*	*11.1*	*0.12*	*B*	*11.0*	*0.07*
	4th Street and U.S. 56						
	Westbound Left-turn	*A*	*0.06*	*0.01*	*A*	*0.9*	*0.02*
	Northbound	*B*	*11.0*	*0.05*	*B*	*12.1*	*0.09*

1 – Level of Service
2 – Delay in seconds per vehicle
3 – Volume/Capacity Ration

Table 3 Continued Intersection Operations Existing Conditions							
Intersection		A.M. Peak Hour			P.M. Peak Hour		
	Movement	LOS[1]	Delay[2]	v/c[3]	LOS[1]	Delay[2]	v/c[3]
Johnson County	Sunflower / 199th Street and U.S. 56						
	Eastbound Left-turn	*A*	*0.2*	*0.01*	*A*	*0.1*	*0.00*
	Westbound Left-turn	*A*	*0.1*	*0.00*	*A*	*0.1*	*0.00*
	Northbound	*B*	*11.8*	*0.01*	*B*	*11.4*	*0.01*
	Southbound	*B*	*10.2*	*0.02*	*B*	*11.3*	*0.01*
	191st Street and U.S. 56						
	Eastbound	*B*	*11.5*	*0.02*	*B*	*11.9*	*0.01*
	Westbound	*B*	*11.9*	*0.02*	*B*	*11.4*	*0.01*
	Northbound Left-turn	*A*	*0.1*	*0.00*	*A*	*0.1*	*0.00*
	Southbound Left-turn	*A*	*0.2*	*0.00*	*A*	*0.0*	*0.00*
	Four Corners Road and U.S. 56						
	Eastbound Left-turn	*A*	*0.9*	*0.02*	*A*	*0.5*	*0.01*
	Westbound Left-turn	*A*	*0.1*	*0.00*	*A*	*0.1*	*0.00*
	Northbound	*B*	*12.5*	*0.07*	*B*	*12.5*	*0.07*
	Southbound	*A*	*9.8*	*0.03*	*B*	*11.4*	*0.03*
Gardner	Center Street and U.S. 56						
	Signalized Intersection (All Movements)	*B*	*17.6*	*0.61*	*B*	*15.9*	*0.68*
	Elm Street and U.S. 56						
	Signalized Intersection (All Movements)	*B*	*12.2*	*0.42*	*B*	*10.6*	*0.51*
	Mulberry Street and U.S. 56						
	Signalized Intersection (All Movements)	*A*	*9.6*	*0.48*	*A*	*5.7*	*0.50*
	Moonlight Road and U.S. 56						
	Signalized Intersection (All Movements)	*C*	*20.3*	*0.81*	*B*	*19.7*	*0.92*
	Cedar Niles Road and U.S. 56						
	Signalized Intersection (All Movements)	*C*	*24.7*	*0.80*	*C*	*30.6*	*0.76*

1 – Level of Service
2 – Delay in seconds per vehicle
3 – Volume/Capacity Ration

As shown in *Table 3*, the analysis results indicate that all study intersections currently operate within desirable levels of service during the A.M. and P.M. peak hour periods of a typical weekday.

Below in *Table 4* are the Existing Conditions capacity analysis results for the three primary rural roadway segments within the project. The HiCAP analysis worksheets for these analyses have been attached for reference.

Table 4 Roadway Segment Operations Existing Conditions				
Location	A.M. Peak Hour		P.M. Peak Hour	
	LOS[1]	v/c[2]	LOS[1]	v/c[2]
U.S. 56 between U.S. 59 and Baldwin City	C	0.170	C	0.170
U.S. 56 between Baldwin City and Edgerton	C	0.120	C	0.110
U.S. 56 between Edgerton and Gardner	D	0.119	D	0.150

1 – Level of Service
2 – Volume/Capacity Ration

Future Year 2040 Conditions Analysis

The results of the Future Year 2040 Conditions intersection analyses are summarized in *Table 5*. Listed below are the changes that have been proposed at each of the study intersections for the design year of 2040. These changes were proposed to improve both traffic operations and safety throughout the corridor. Schematic diagrams that illustrate these improvements can be found on the attached *Exhibit 4*. The projected 2040 traffic volumes used in the analyses are included on the attached *Exhibit 5*. The Synchro output worksheets for these analyses have also been attached for reference. Note that for a conservative estimate of traffic operations, trucks were considered to account for 5% of the total traffic on the street network.

U.S. 59 and U.S. 56: The existing at-grade intersection is currently being converted into a diamond interchange with ramp terminal intersections on U.S. 56. All four ramps will be single lane with stop control in place on the off-ramp approaches. Left-turn lanes will be in place on U.S. 56 between the two ramp intersections.

8th Street and U.S. 56: Peak hour traffic volumes are projected to be near the level needed to warrant the installation of a traffic signal. A traffic signal was considered to be installed in this location.

6th Street and U.S. 56: Install a northbound left-turn lane.

2200 Road and U.S. 56: Install a westbound left-turn lane and a southbound left-turn lane.

K-33 and U.S. 56: Install a northbound left-turn lane, an eastbound right-turn lane, and a westbound right-turn lane.

Edgerton Road and U.S. 56: Install a northbound left-turn lane, a southbound left-t-run lane, an eastbound right-turn lane, and a westbound right-turn lane.

1st Street and U.S. 56: No change.

4th Street and U.S. 56: No change.

199th Street and U.S. 56: Grade separate 199th/Sunflower over U.S. 56 and construct a two-lane quadrant roadway in the northeast quadrant of the existing intersection.

191st Street and U.S. 56: Remove the east leg of the intersection (191st Street) and realign the west leg to intersect U.S. 56 at a right angle. Install a southbound left-turn lane on U.S. 56 at 191st Street.

Four Corners Road and U.S. 56: Remove the south leg of the intersection (Four Corners Road) and realign the north leg to intersection U.S. 56 at a right angle. Install a westbound right-turn lane on U.S. 56 at Fur Corners Road.

Center Street and U.S. 56: Install left-turn lanes on the eastbound and westbound approaches to the intersection and install right-turn lanes on the northbound, westbound, and southbound approaches.

Elm Street and U.S. 56: Install left-turn lanes on the eastbound and westbound approaches to the intersection.

Mulberry Street and U.S. 56: Install left-turn lanes on the eastbound and westbound approaches to the intersection.

Moonlight Road and U.S. 56: Install a third through lane each direction on U.S. 56. On the southbound approach to the intersection install a second left-turn lane and a separate right-turn lane. On the westbound approach install a right-turn lane with an exclusive receiving lane on northbound Moonlight Road.

Cedar Niles Road and U.S. 56: Install a third through lane each direction on U.S. 56. Add a southbound right-turn lane and reconfigure the northbound approach to provide dual left-turn lanes, a shared through / right-turn lane, and a right-turn lane. This will require the addition of a fourth lane on the northbound approach. These changes will allow for the removal of split signal phasing for northbound and southbound, which will improve the overall efficiency of the intersection.

Table 5
Intersection Operations
Future Year 2040 Conditions

	Intersection / Movement	A.M. Peak Hour LOS[1]	A.M. Peak Hour Delay[2]	A.M. Peak Hour v/c[3]	P.M. Peak Hour LOS[1]	P.M. Peak Hour Delay[2]	P.M. Peak Hour v/c[3]
Douglas County	Southbound U.S. 59 Ramps and U.S. 56						
	Westbound Left-turn	*A*	*7.9*	*0.05*	*A*	*7.9*	*0.10*
	Southbound	*C*	*18.8*	*0.48*	*E*	*37.1*	*0.79*
	Northbound U.S. 59 Ramps and U.S. 56						
	Eastbound Left-turn	*A*	*8.4*	*0.08*	*A*	*8.4*	*0.04*
	Northbound	*C*	*15.8*	*0.38*	*C*	*16.0*	*0.33*
Baldwin City	8th Street and U.S. 56						
	Signalized Intersection (All Movements)	*B*	*12.5*	*0.69*	*B*	*14.7*	*0.48*
	6th Street and U.S. 56						
	Signalized Intersection (All Movements)	*C*	*27.3*	*0.91*	*C*	*30.1*	*0.84*
Douglas County	2200 Road and U.S. 56						
	Eastbound Left-turn	*A*	*7.9*	*0.04*	*A*	*8.5*	*0.05*
	Westbound Left-turn	*A*	*8.3*	*0.01*	*A*	*7.9*	*0.02*
	Northbound	*C*	*20.6*	*0.30*	*D*	*31.6*	*0.47*
	Southbound Left-turn	*C*	*20.7*	*0.16*	*D*	*27.1*	*0.35*
	Southbound Shared Through / Right-turn	*B*	*12.4*	*0.12*	*C*	*15.1*	*0.20*
	K-33 Highway and U.S. 56						
	Eastbound Left-turn	*A*	*7.5*	*0.01*	*A*	*8.2*	*0.01*
	Westbound Left-turn	*A*	*8.3*	*0.03*	*A*	*8.2*	*0.08*
	Northbound Left-turn	*C*	*17.9*	*0.26*	*D*	*25.8*	*0.31*
	Northbound Shared Through / Right-turn	*B*	*11.8*	*0.16*	*B*	*11.7*	*0.11*
	Southbound	*B*	*14.5*	*0.13*	*C*	*19.0*	*0.11*
Edgerton	8th Street/Edgerton Road and U.S. 56						
	Eastbound Left-turn	*A*	*7.7*	*0.01*	*A*	*8.4*	*0.01*
	Westbound Left-turn	*A*	*8.6*	*0.03*	*A*	*8.0*	*0.05*
	Northbound Left-turn	*C*	*19.0*	*0.08*	*C*	*22.7*	*0.10*
	Northbound Shared Through / Right-turn	*B*	*14.0*	*0.23*	*B*	*12.2*	*0.10*
	Southbound Left-turn	*D*	*26.8*	*0.17*	*C*	*23.3*	*0.10*
	Southbound Shared Through / Right-turn	*B*	*13.5*	*0.05*	*C*	*18.5*	*0.14*
	1st Street and U.S. 56						
	Westbound Left-turn	*A*	*1.6*	*0.03*	*A*	*1.7*	*0.06*
	Northbound	*C*	*17.2*	*0.32*	*C*	*16.5*	*0.22*
	4th Street and U.S. 56						
	Westbound Left-turn	*A*	*1.1*	*0.02*	*A*	*1.3*	*0.04*
	Northbound	*C*	*15.5*	*0.14*	*C*	*20.1*	*0.29*

1 – Level of Service
2 – Delay in seconds per vehicle
3 – Volume/Capacity Ration

Table 5 Continued Intersection Operations Future Year 2040 Conditions							
Intersection		A.M. Peak Hour			P.M. Peak Hour		
	Movement	LOS[1]	Delay[2]	v/c[3]	LOS[1]	Delay[2]	v/c[3]
Johnson County	199th Street and U.S. 56						
	Eastbound Left-turn	*A*	*0.3*	*0.01*	*A*	*1.7*	*0.01*
	Southbound Left-turn	*B*	*12.8*	*0.11*	*B*	*13.0*	*0.11*
	Southbound Right-turn	*B*	*10.7*	*0.36*	*D*	*25.4*	*0.73*
	191st Street and U.S. 56						
	Eastbound	*B*	*12.7*	*0.14*	*C*	*15.5*	*0.26*
	Northbound Left-turn	*A*	*0.5*	*0.02*	*A*	*2.3*	*0.02*
	Four Corners Road and U.S. 56						
	Eastbound Left-turn	*A*	*1.6*	*0.05*	*A*	*3.1*	*0.05*
	Southbound	*A*	*9.8*	*0.08*	*B*	*12.4*	*0.13*
Gardner	Center Street and U.S. 56						
	Signalized (All Movements) No SBRT	*F*	*93.1*	*1.07*	*F*	*95.9*	*1.26*
	Signalized (All Movements) with SBRT	*F*	*85.1*	*1.07*	*F*	*80.8*	*1.18*
	Elm Street and U.S. 56						
	Signalized Intersection (All Movements)	*A*	*9.7*	*0.64*	*B*	*14.5*	*0.84*
	Mulberry Street and U.S. 56						
	Signalized Intersection (All Movements)	*A*	*9.8*	*0.74*	*B*	*13.4*	*0.79*
	Moonlight Road and U.S. 56						
	Signalized Intersection (All Movements)	*F*	*105.2*	*1.15*	*E*	*75.3*	*1.01*
	Cedar Niles Road and U.S. 56						
	Signalized Intersection (All Movements)	*F*	*101.7*	*1.15*	*F*	*141.0*	*1.40*

1 – Level of Service
2 – Delay in seconds per vehicle
3 – Volume/Capacity Ration

As shown in *Table 5*, the analysis results indicate that most of the study intersections are expected to continue operating within desirable levels of service under the projected 2040 design year traffic conditions. However, there are a few exceptions. Note that drivers on the southbound U.S. 59 off-ramp at U.S. 56 are expected to experience undesirable delays (LOS E) during the P.M. peak hour. Additionally, the Center Street, Moonlight Road, and Cedar Niles Road intersections with U.S. 56 are all expected to operate at undesirable levels of service during both the A.M. and P.M. peak hours under the projected Future Year 2040 Conditions.

Below in *Table 6* are the Future Year 2040 Conditions capacity analysis results for the three primary rural roadway segments within the project. The HiCAP analysis worksheets for these analyses have been attached for reference.

Table 6 Roadway Segment Operations Future Year 2040 Conditions				
Location	A.M. Peak Hour		P.M. Peak Hour	
	LOS[1]	v/c[2]	LOS[1]	v/c[2]
U.S. 56 between U.S. 59 and Baldwin City	D	0.330	D	0.350
U.S. 56 between Baldwin City and Edgerton	C	0.233	C	0.265
U.S. 56 between Edgerton and Gardner	C	0.222	C	0.186

1 – Level of Service
2 – Volume/Capacity Ration

Conclusion

In conclusion, the traffic analyses preformed for this study show that existing traffic operations are within acceptable levels. Future traffic operations are expected to be similar to the existing conditions along most of the study corridor, considering the improvements proposed. However, even with significant roadway improvements considered, three of the major study intersections in Gardner (U.S. 56 intersections at Center Street, Moonlight Road, and Cedar Niles Road) are expected to operate with relatively poor levels of service during the peak hours under the projected 2040 traffic volume conditions.

Attachments

Memorandum

2400 Pershing Road
Suite 400
Kansas City, MO 64108
Tel 816 329 8600
Fax 816 329 8601

www.transystems.com

To: Mr. David Gurss
Kansas Department of Transportation
Dwight D. Eisenhower State Office Bldg.
700 SW Harrison Street
Topeka, KS 66603-3745

From: Dustin L. Elliott, P.E.

Phone: 816-329-8768

Date: February 3, 2010

CC: Jeff McKerrow
Mark Kenneally

TranSystems Project No.: P101080286

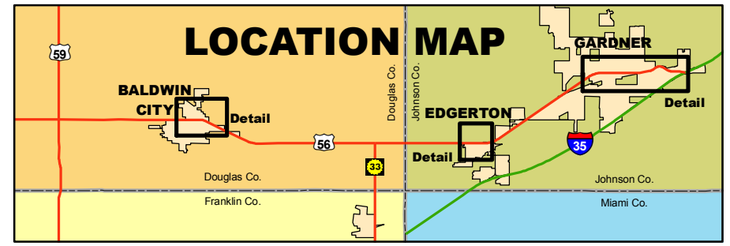
Subject: U.S. 56 Corridor Study – Truck Projections
KDOT Project No. 56-106 KA-1496-01 CMS:006091032

TranSystems has prepared an estimate of truck projections for the design year of 2040 for the U.S. 56 Corridor Study. These projections were developed using a methodology similar to the one used to estimate total future traffic volumes for the project. First, excluding the BNSF Logistics Park project, truck volumes along the entire U.S. 56 study corridor were assumed to grow from 2009 to 2040 (background growth) at the same annual rates that were derived from historical growth trends of total traffic. The annual growth rates range from 1.3% per year in the Gardner area to 2.1% per year near Baldwin City. Next, truck projections for the BNSF Logistics Park project were extracted from the Gardner Travel Demand Model that was prepared by HDR, Inc. Slight adjustments were made to the model distributions to conform to previous approved studies of the BNSF facilities. Future year 2040 truck projections were estimated by adding the background growth and model growth to existing truck volumes. These projections were rounded and summarized below in *Table 1*.

Table 1
Truck Projections

Location	Existing		Truck Growth		2040 Projections	
	ADT	Trucks	Background	BNSF	ADT	Trucks
I-35 to Moonlight	25,000	795	391	652	47,000	1,800
Moonlight to Center	17,500	270	133	681	37,500	1,100
Center to Waverly	9,000	270	158	732	30,000	1,200
Waverly to 199th	4,900	270	158	60	4,800	500
199th to Edgerton Road	4,900	270	158	417	12,000	800
Edgerton Road to K-33	4,700	270	214	417	6,500	900
K-33 to 1900 Road	4,600	260	206	417	5,500	900
1900 Road to 6th Street	7,500	280	253	417	14,000	1,000
6th Street to 1600 Road	7,500	280	253	417	14,000	1,000
1600 Road to U.S. 59	4,900	280	222	417	7,500	900

Please contact us should you have any questions.



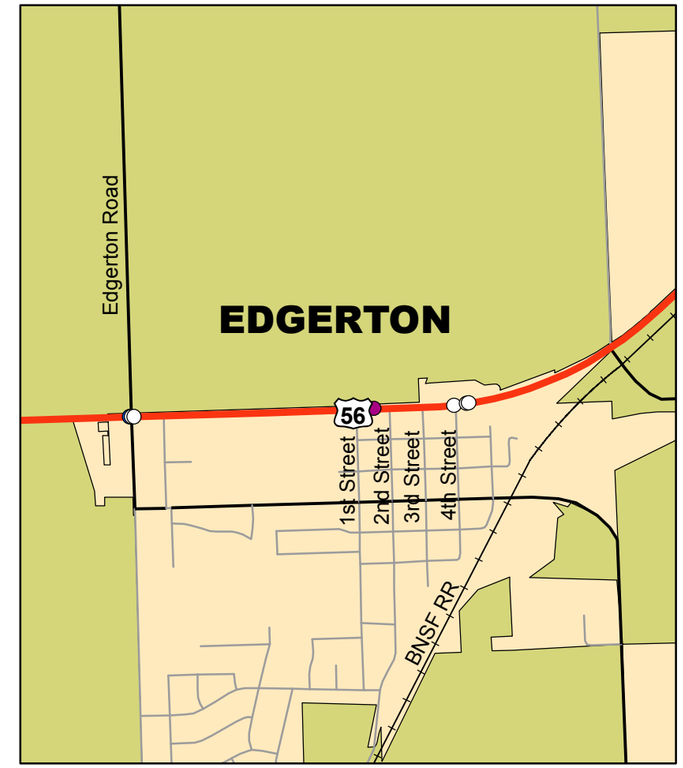
Legend

- ANGLE - SIDE IMPACT
- REAR END
- SIDESWIPE
- HEAD ON

N W E S

0 0.5 1

Miles



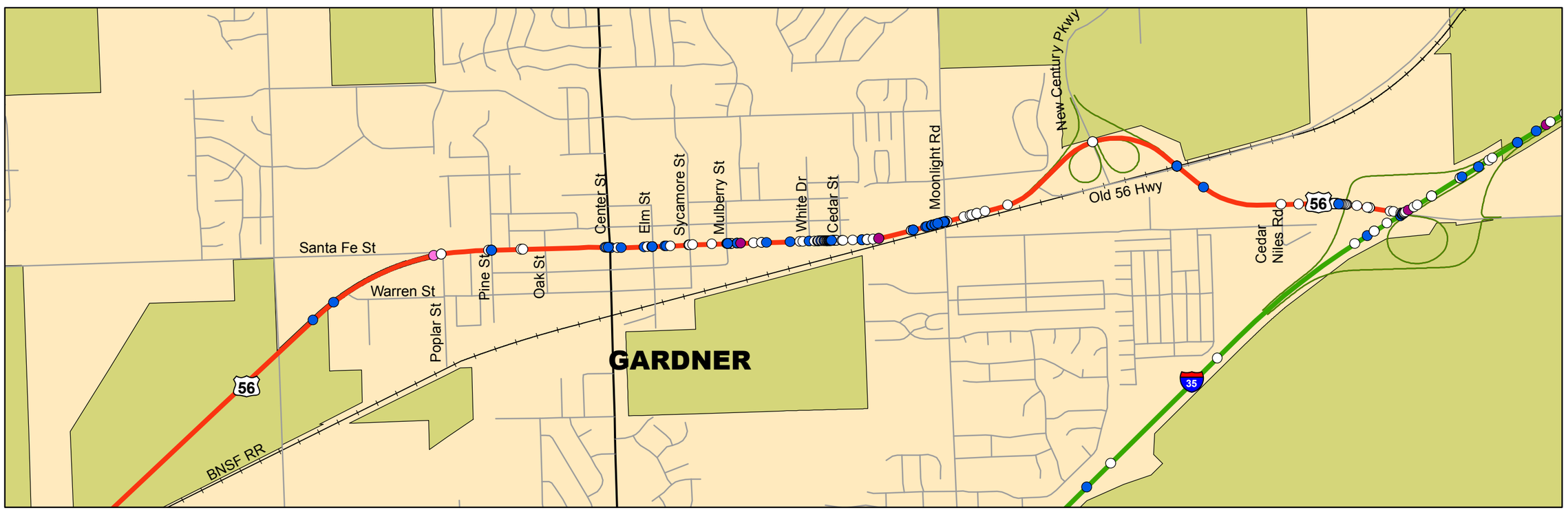


Exhibit 3a

April 2009

As Shown

ACCIDENTS

Other Motor Vehicle

Douglas and Johnson Counties, Kansas

KDOT Project No. 56-106 KA-1496

US Corridor Management Plan

TranSystems

PATTI BANKS ASSOCIATES

Peridian Group

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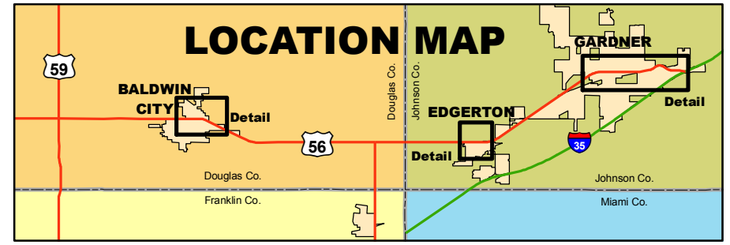
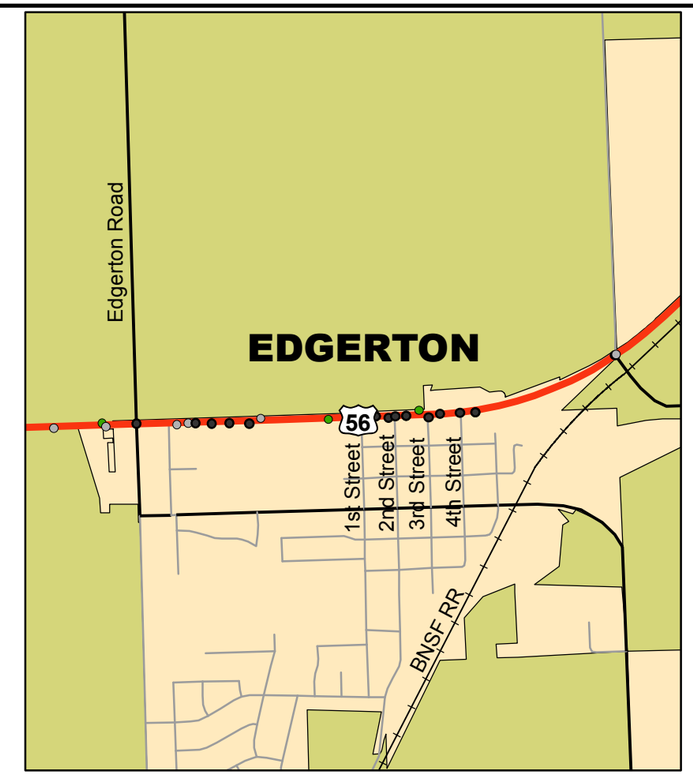


Legend

- ASPHALT
- CONCRETE
- GRAVEL
- TURF

N
W E
S

0 0.5 1
Miles



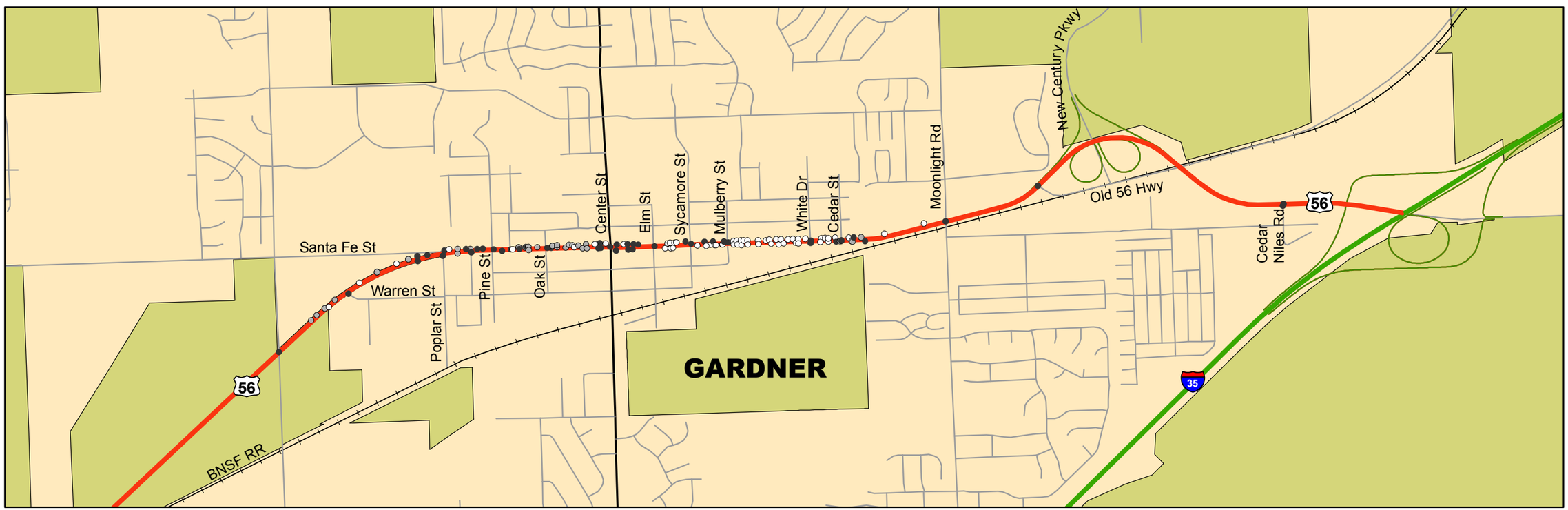


Exhibit 6a

April 2009

As Shown

ACCESS POINTS

Douglas and Johnson Counties, Kansas

KDOT Project No. 56-106 KA-1496

US 56 Corridor Management Plan

TranSystems

PATTI BANKS ASSOCIATES

Peridian Group

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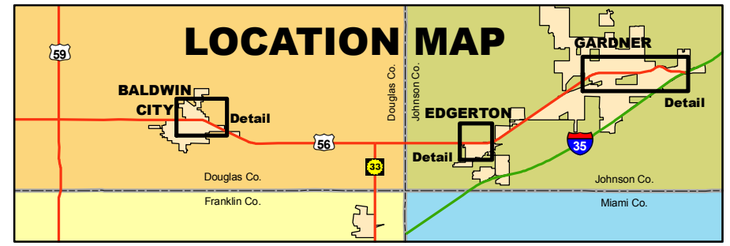
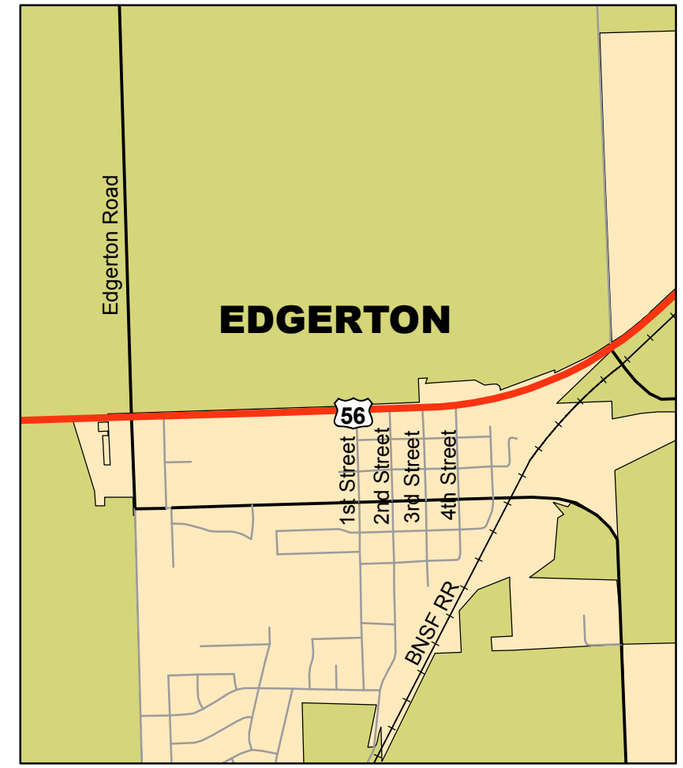


Legend

- PARKED MOTOR VEHICLE
- PEDALCYCLE
- PEDESTRIAN

N
W E
S

0 0.5 1
Miles



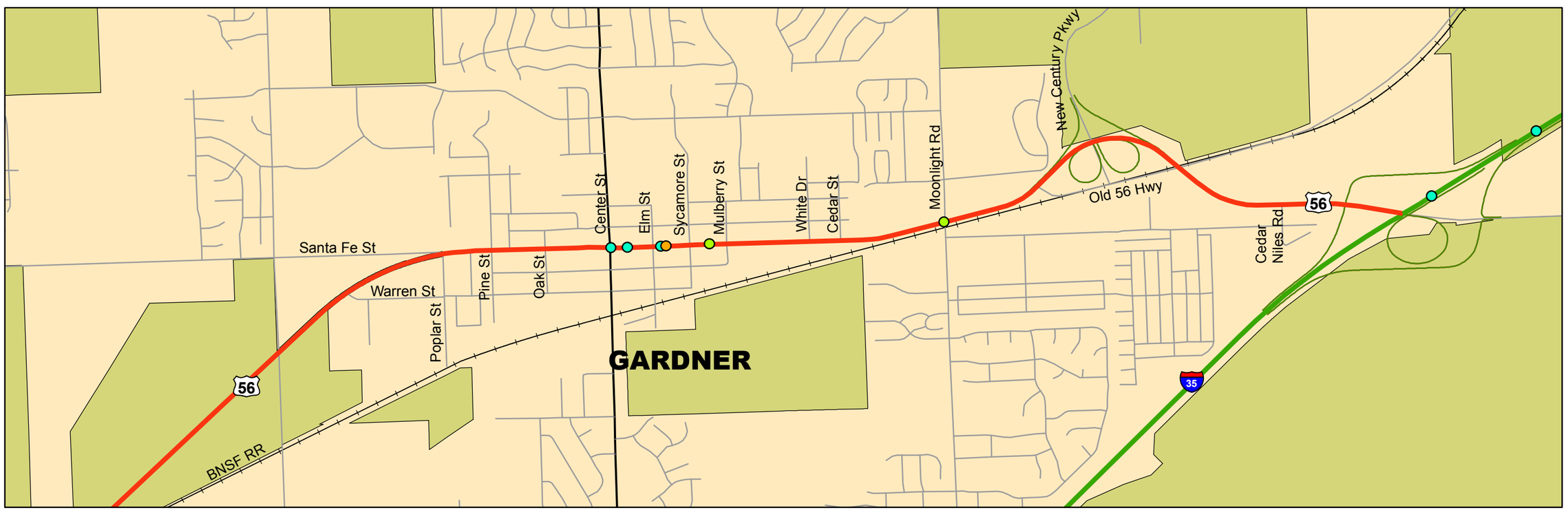


Exhibit 5

April 2009

As Shown

ACCIDENTS

Pedestrian, Pedalcycle and Parked Motor Vehicle

Douglas and Johnson Counties, Kansas

KDOT Project No. 56-106 KA-1496

US-56 Corridor Management Plan

TranSystems

PATTI BANKS ASSOCIATES

Peridian Group

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Exhibit 1

April 2009

As Shown

ACCIDENTS

Fatal/Injury

Douglas and Johnson Counties, Kansas

KDOT Project No. 56-106 KA-1496

Corridor Management Plan

TranSystems

PATTI BANKS ASSOCIATES

Peridian Group

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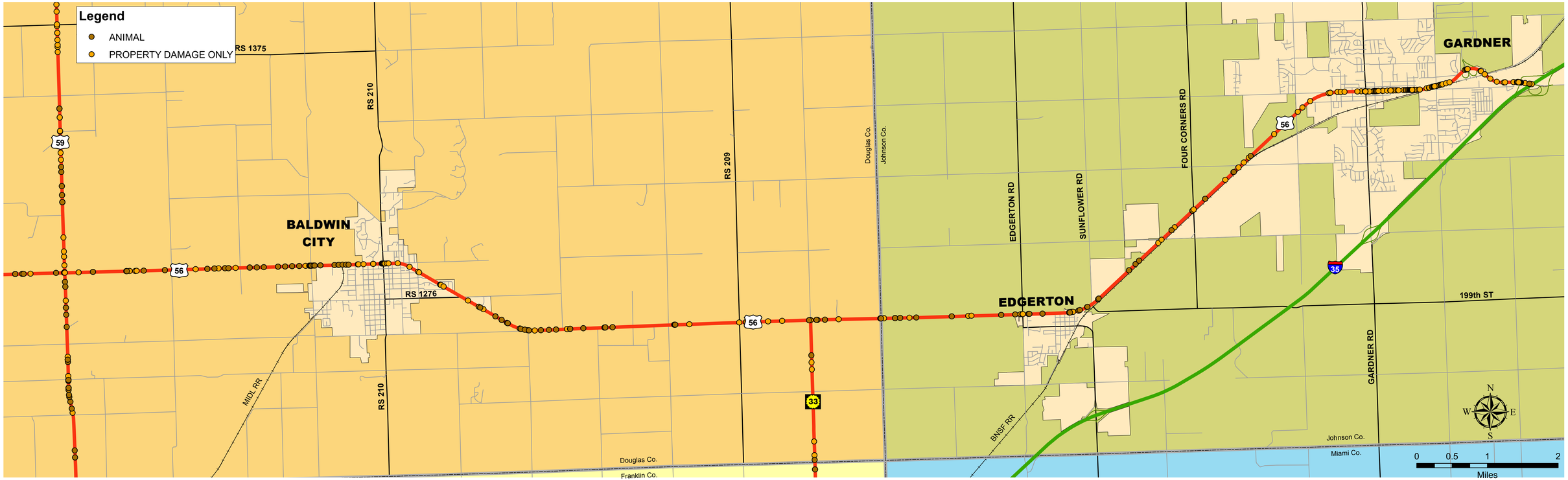

Exhibit 2

April 2009

As Shown

ACCIDENTS
Animal and Property Damage Only

Douglas and Johnson Counties, Kansas
KDOT Project No. 56-106 KA-1496

Corridor Management Plan

TranSystems
PATTI BANKS ASSOCIATES
Peridian Group

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Exhibit 3

April 2009

As Shown

ACCIDENTS

Other Motor Vehicle

Douglas and Johnson Counties, Kansas

KDOT Project No. 56-106 KA-1496

Corridor Management Plan

TranSystems

PATTI BANKS ASSOCIATES

Peridian Group

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Exhibit 4

April 2009

As Shown

ACCIDENTS

Overturned Vehicles, Other Non-Collision and Fixed Object

Douglas and Johnson Counties, Kansas

KDOT Project No. 56-106 KA-1496

Corridor Management Plan

TranSystems

PATTI BANKS ASSOCIATES

Peridian Group

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Exhibit 6

April 2009

As Shown

ACCESS POINTS

Asphalt and Concrete

Douglas and Johnson Counties, Kansas

KDOT Project No. 56-106 KA-1496

Corridor Management Plan

TranSystems

PATTI BANKS ASSOCIATES

Peridian Group

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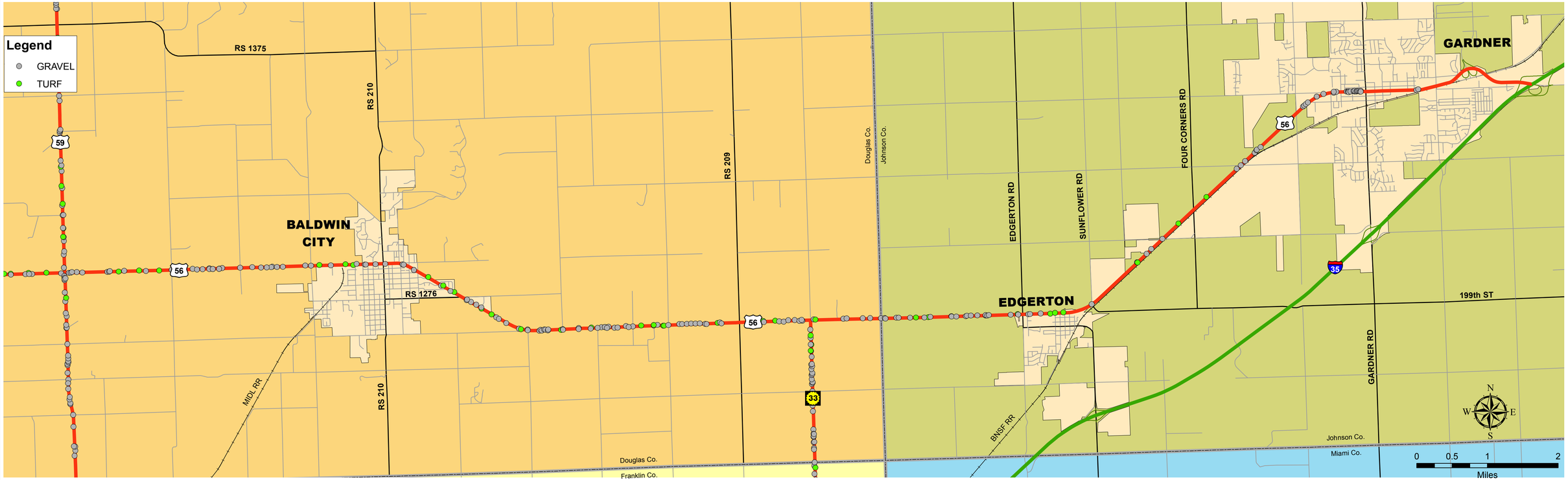

Exhibit 7

April 2009

As Shown

ACCESS POINTS

Gravel and Turf

Douglas and Johnson Counties, Kansas

KDOT Project No. 56-106 KA-1496

Corridor Management Plan

TranSystems

PATTI BANKS ASSOCIATES

Peridian Group

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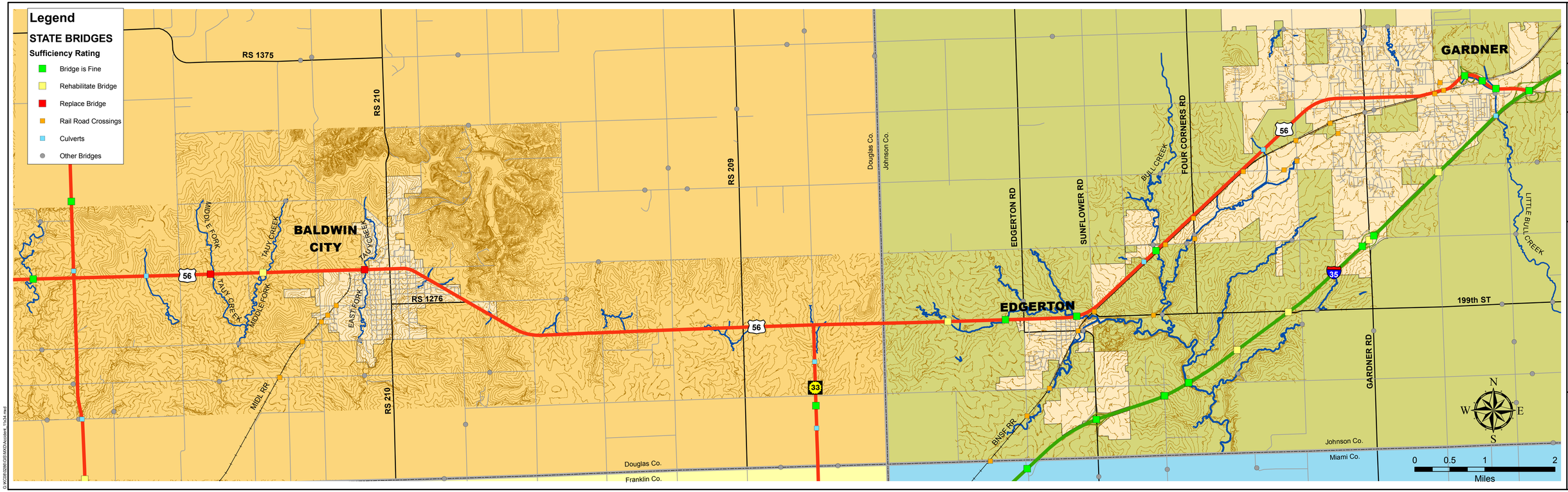

Exhibit 15

April 2009

As Shown

BRIDGES

State and Non State Structures, Culverts and RR Crossings

Douglas and Johnson Counties, Kansas

KDOT Project No. 56-106 KA-1496

Corridor Management Plan

TranSystems

PATTI BANKS ASSOCIATES

Peridian Group

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US-56 Gap Analysis

City of Baldwin City, Kansas

Chapter 16: Zoning and Planning

Article 1. CITY PLANNING COMMISSION	
16-103 Comprehensive Plan (b)	Consider adding at the end of the second sentence a provision requiring that notice of the hearing on requests for amendment of the Comprehensive Plan that have the potential to impact development in the US-56 Corridor be provided to KDOT at least 20 days prior to the date of hearing.
Article 2. ZONING REGULATIONS; BOARD OF ZONING APPEALS	
16-202 Interpretation and Scope	Consider an additional provision providing that front yard and side yard setbacks for each zoning district established in these zoning regulations, when not as deep as necessary to protect projected rights-of-way for US-56, shall be modified to conform to the number of feet that is necessary to protect that right-of-way.
Purpose	Consider adopting a new section setting out the purposes to be achieved by the zoning regulations, to include implementation of the City's comprehensive plan and any adopted area or corridor plans.
16-206 District Classifications	Consider adoption of planned districts, in addition to planned neighborhood shopping district and community unit planned district. See, Section I.B.2.c., Implementation Chapter, US-56 Corridor Management Plan. Consider adoption of overlay districts at critical location along the Corridor, particularly where the Corridor Management Plan indicates high intensity or density development will locate, to help ensure that development at those locations occurs in accordance with the recommendations of and vision established by the Plan. See, Section I.B.2.b., US-56 Corridor Management Plan.
16-220 Yard Regulations in A-1 Agriculture District (a) and (b)	Consider adding a provision referencing the new subsection of Section 16-202 relating to setbacks and the need to protect projected right-of-way for US-56.
16-228 Yard Regulations in R Single-Family Dwelling District (a) and (b)	Consider adding a provision referencing the new subsection of Section 16-202 relating to setbacks and the need to protect projected right-of-way for US-56.
16-236 Yard Regulations in R-1 Single Family Dwelling District (a) and (b)	Consider adding a provision referencing the new subsection of Section 16-202 relating to setbacks and the need to protect projected right-of-way for US-56.

16-244 Yard Regulations in R-2 Two-Family Dwelling District (a) and (b)	Consider adding a provision referencing the new subsection of Section 16-202 relating to setbacks and the need to protect projected right-of-way for US-56.
16-252 Yard Regulations in R-3 Multiple-Family Dwelling District (a) and (b)	Consider adding a provision referencing the new subsection of Section 16-202 relating to setbacks and the need to protect projected right-of-way for US-56.
16-257 General Requirements of R-P Community Unit Plan District (c)	Consider adding a new subsection after (8) requiring that the preliminary development plan show the projected right-of-way for US-56.
16-296 Yard Regulations in C-P Planned Neighborhood Shopping District (a) and (b)	Consider adding a provision referencing the new subsection of Section 16-202 relating to setbacks and the need to protect projected right-of-way for US-56.
16-2, 105 Yard Regulations in C General Commercial District (a) and (b)	Consider adding a provision referencing the new subsection of Section 16-202 relating to setbacks and the need to protect projected right-of-way for US-56.
16-2, 114 Yard Regulations in CB Central Business District (a) and (b) (a) and (b)	Consider adding a provision referencing the new subsection of Section 16-202 relating to setbacks and the need to protect projected right-of-way for US-56.
16-2, 123 Yard Regulations in I-P Industrial Park District (a) and (b)	Consider adding a provision referencing the new subsection of Section 16-202 relating to setbacks and the need to protect projected right-of-way for US-56.
16-2, 133 Yard Regulations for I-1 Light Industrial District (a) and (b)	Consider adding a provision referencing the new subsection of Section 16-202 relating to setbacks and the need to protect projected right-of-way for US-56.
16-2, 143 Yard Regulations for R-E Single Family Dwelling District (a) and (b)	Consider adding a provision referencing the new subsection of Section 16-202 relating to setbacks and the need to protect projected right-of-way for US-56.
16-2, 165 Traffic Regulations	Consider amending to allow the governing body to require changes as may be suited to ensure compliance with the City's Comprehensive Plan and any adopted area or corridor plans.
16-2, 166 Curb Cuts	Consider adding a new sentence containing a proviso that all points of ingress and egress shall conform to the points of access to US-56, as shown on the US-56 Corridor Management Plan.

16-2, 173 Building Setback Lines	Consider adding a new subsection (c) related to US-56 providing that no building or structure which fronts or sides on US-56 shall be located nearer than 50 feet (±) to the outer limit of the projected right-of-way for US-56.
16-2, 180A Site Plans (b)(1)	Consider amending this subsection to require that the necessary projected right-of-way for US-56 be shown on the composite site development plan.
SECTION XXVI	Consider revising the title to ENFORCEMENT, VIOLATION, PENALTIES AND APPEAL and adding new Section 16-2, 181A entitled "APPEALS" as follows: **Appeals.** A. Procedure for appeals from the effect of the requirements in this Chapter. 1. An appeal to the Governing Body may be taken by any applicant aggrieved by any decision of the City requiring the applicant to conform a proposed development to the requirements of this Chapter and who alleges that the final decision of the City constitutes a "taking" without just compensation under the 5th Amendment to the United States Constitution or under the Kansas Constitution. On appeal, the burden will be on the appellant to establish, by the preponderance of the evidence: a. with respect to a requirement, which is imposed as a condition of approval of the Development Application, that the applicant convey to the City an interest in land: (1) that there is not an essential nexus between the challenged requirement and the public purposes sought to be achieved by the challenged requirement, or (2) that, through an individualized determination, the challenged condition is not roughly proportionate both in nature and extent to the impact of the Development proposed in the Development Application; and b. with respect to other requirements imposed by this Chapter, that: (1) the requirements result in a denial of all beneficial economic or productive use of the property; or (2) the requirements constitute a permanent physical occupation or invasion of the applicants property; or (3) the burden that the requirement places on the applicant is greater than the benefit

	that the requirement confers on the general public, considering all of the following and any other relevant factor: (a) the temporal relationship between the effective date of the ordinance and the date the applicant (or if the applicant is not the landowner, the date the landowner) acquired the property that is the subject of the development application; (b) the degree of interference created by the challenged requirements with the applicant's reasonable investment-backed expectations that the property could be developed free of the impacts of the challenged requirements; (c) whether, and if so the extent to which, the development proposed by the applicant is prejudicial to the health, safety or general welfare of others or constitutes a nuisance or nuisance-like activity; (d) the extent to which the challenged requirements achieve important public purposes; (e) the economic impact of the challenged requirements on the applicant's (or if the applicant is not the landowner, the landowner's) entire parcel and contiguous parcels commonly owned, as determined through a comparison of the value of this ownership without application of the challenged requirements with its value with application of the challenged requirements; and (f) that applicant is not necessarily entitled to the most profitable use of the property. 2. With respect to all appeals made pursuant to this subsection, the person seeking the appeal shall file a written notice of appeal with the City Clerk within 15 days of the date of the final decision from which the appeal is being taken. The notice shall specifically identify the grounds for the appeal and include all other information required by this Section to be submitted with the notice of appeal. If notice in compliance with all requirements of this Section is not timely filed, all rights to appeal the decision are waived. 3. The City Clerk, immediately upon receipt of the notice, shall transmit to the Governing Body all the papers constituting the record concerning the action from which the appeal is taken.

	4. A properly effectuated appeal shall stay all proceedings in furtherance of the action from which the appeal is taken. 5. The Governing Body shall fix a reasonable time for the hearing of the appeal, give public notice thereof, as well as written notice to all interested parties. 6. The Governing Body, after considering all evidence presented by the applicant in support of the appeal and any evidence presented by the City in rebuttal or otherwise presented in relation to the appeal, shall render a written decision in the form of findings of fact and conclusions of law. If the Governing Body determines that applicant has not met the requisite burden of proof, it shall affirm, wholly or partly, the decision from which the appeal was taken. If the Governing Body determines that the applicant has met the requisite burden of proof, it may reverse or modify the decision from which the appeal was taken and make a decision respecting development application as it determines is appropriate and in conformity with all applicable laws. In making this new decision, the Governing Body may attach any condition it deems necessary to further the purposes of this Chapter.
16-2, 188 Public Hearing and Notice	Consider amending this section to provide that notice to KDOT of an application for a variance that has the potential of having an impact on the development in the US-56 Corridor be provided at last 30 days prior to the date fixed for the hearing.
16-2, 189 Powers and Jurisdictions	(c) Consider amending the last sentence to also provide that the granting of a variance shall be consistent with the Comprehensive Plan or any adopted area or corridor plan.
16-2, 191 Variances to the Zoning Ordinance (c)	Consider revising this subsection to provide that a variance, if granted, is in harmony with the City Comprehensive Plan and any adopted area or corridor plan.
16-2, 196 Public Hearing and Notice	Consider amending this subjection to provide that notice of any proposed or requested change to a zoning district boundary that has the potential to impact development in the US-56 Corridor be provided to KDOT at least 20 days prior to the date scheduled for the public hearing.
16-2, 197A Recommendations	Consider amending this section to specifically provide that the Planning Commission may recommend approval with conditions.
16-2, 197B Amendments to Change Zoning Districts	Consider adding a new subsection between existing subsections (10) and (11) focusing on whether utilities and points of ingress and egress from property onto US-56 are consistent with the US-56 Corridor Management Plan.
16-2, 197C Adoption of Amendments	Consider amending this section to specifically provide the authority to the governing body to approve an amendment with conditions.

16-2, 197D Special Use Permit (c)(2) (d) (d)(5)	Consider amending this section to specify that proposed curb cuts onto US-56 shall be consistent with points of access to US-56, as shown on the US-56 Corridor Management Plan. Consider amending this section to add after Comprehensive Plan of the City, "and any adopted area or corridor plan." Consider amending this subsection by including "the general functionality of the transportation network."
Article 3: SUBDIVISION REGULATIONS	
16-302 General Purpose	Consider amending this provision to state that one of the purposes of these regulations is to ensure compliance with the City's Comprehensive Plan or any adopted area or corridor plan.
16-303 Specific Purpose (f)	Consider amending this subsection to provide that public utilities shall not be located in any projected necessary right-of-way, as shown on the Comprehensive Plan of the City or any adopted area or corridor plan.
16-304 Plat Required	Consider exercising the power granted to the City pursuant to K.S.A. 12-715b to exercise extraterritorial subdivision regulatory powers. See Section I.B.2., Implementation Chapter of the US-56 Corridor Management Plan.
16-308 Exemptions	Considering amending the preparatory sentence to state that, provided that no exception shall be inconsistent with the Comprehensive Plan of the City or any adopted area or corridor plan.
16-314 Preliminary Plat; Conformance with Comprehensive Plan and Zoning Regulations	Consider amending this section to additionally provide that the proposed street pattern and land use will conform to any adopted area or corridor plan.
16-315 Preliminary Plat; Contents	Consider adding a new provision between existing subsections (f) and (g) requiring that projected right-of-way for US-56 be shown on the preliminary plat.
16-316 Same; Staff Review and Actions (c)	Consider amending this subsection to provide that a notice and a copy of any preliminary plat that is deemed to have the potential to impact development within the US-56 Corridor shall be provided to KDOT.
16-322 Same; Contents	Consider adding a new subsection (g) requiring the inclusion of a statement providing notice that the area included within the subdivision is also included in the area covered by the US-56 Corridor Management Plan. See, Section I.C.3., Implementation Chapter of the US-56 Corridor Management Plan.
16-336 Approval Guidelines	Consider a revision to include at the end of the first sentence a requirement that division of lots comply with the Comprehensive Plan of the City and any adopted area or corridor plans.
16-337 Additional Requirements	Consider amending this section to add in the second sentence after "rights-of-way easements," a statement that "including projected right-of-way for US-56, to the extent the dedication of such right-of-way is roughly proportionate to the demand for highway enhancements generated by the subdivision."

16-343 Streets; Conformance with the Comprehensive Plan	Consider amending this section by adding at the end of the first sentence a reference to any adopted area or corridor plans.
16-349 Streets; Dedication of Abutting Street Right-Of-Way	Consider adding as a new sentence after the first sentence stating that when a proposed subdivision abuts the proposed public right-of-way for US-56, the owner of the land proposed to be subdivided shall dedicate, without charge, any land within the subdivision that is necessary to provide conformity with the projected right-of-way to the extent such dedication is roughly proportionate to the demand generated by the proposed subdivision.
16-358 Utility Easements	Consider amending this section to restrict easements that are located within right-of-way for US-56.
16-359 Drainage Easements	Consider amending this section to restrict easements that are located within right-of-way for US-56.
16-360 Pedestrian-Way Easements	Consider amending this section to restrict easements that are located within right-of-way for US-56.
16-377 Water and Sanitary Sewer; Applicability	...."administered by the director of public works" <u>and consistent with any adopted area or corridor plans</u>.
16-385 Rule Exceptions	Consider adding a proviso at the end ensuring that rule exceptions which will adversely impact development in the US-56 Corridor, as shown on the US-56 Corridor Management Plan, will not be approved.
Article 5: CONDITIONAL USE PERMITS	
16-504 Same; Procedures, Hearing, Notice and Criteria (g)	Consider an amendment to this subsection to additionally include conformance with any adopted area or corridor plan.
16-505 Conditional Use Permits; Standards for Conditional Use Permits	Consider adding a new standard at this point requiring that a conditional use permit be consistent with the Comprehensive Plan of the City and any adopted area or corridor plan.
GENERAL RECOMMENDATIONS	Although not necessary to adopt an ordinance establishing a moratorium, the City's zoning and planning chapter could include specific authority to adopt moratoria in a situation where it desires to allow the City time to adopt a code or plan revision before development is allowed to proceed. <u>See</u>, Section I.B.1., Implementation Chapter of the US-56 Corridor Management Plan. Consider establishing density transfers and incentives either in the overlay districts recommended above or in other locations in the code to encourage more dense or intense development at locations indicated on the Plan, which are appropriate for such development, and to protect environmentally sensitive features, agricultural lands or protected lower density locations. <u>See</u>, Section I.B.5. and 6., Implementation Chapter of the US-56 Corridor Management Plan.

	Consider adding a provision allowing for cluster development at locations along the Corridor where less intense development on the overall tracts is appropriate to ensure open space, protect critical environmental features and ensure future development as more dense urban patterns may occur as the demand for that type of development increases. See, Section I.B.7., Implementation Chapter of the US-56 Corridor Management Plan.

US-56 Gap Analysis

Douglas County, Kansas

Article 8: Subdivision Design and Improvements

Zoning Regulations for the Unincorporated Territory of Douglas County

Article 8: SUBDIVISION DESIGN AND IMPROVEMENTS	
20-801 General (a) Purpose and Intent (a)(2)(i) (a)(2)(ix) (d)(2)(vi)	Consider amending (1)(i) to include after "continuity," "and functionality." Consider amending this section to include after "sector" ",corridor." Consider amending this section to add after "congestion" "and conflicting turning movements." Note: The County's access management standards adopted by resolution, should be reviewed to ensure that those standards are consistent with the access management recommendations of the US-56 Corridor Management Plan.
20-802 General Review and Approval Procedures	Consider adding new subsection (i) entitled "Appeals," as follows: **Appeals.** A. Procedure for appeals from the effect of the requirements in this Chapter. 1. An appeal to the County Commission may be taken by any applicant aggrieved by any decision of the County requiring the applicant to conform a proposed development to the requirements of this Article and who alleges that the final decision of the County constitutes a "taking" without just compensation under the 5th Amendment to the United States Constitution or under the Kansas Constitution. On appeal, the burden will be on the appellant to establish, by the preponderance of the evidence: a. with respect to a requirement, which is imposed as a condition of approval of the development application, that the applicant convey to the County an interest in land:

	(1) that there is not an essential nexus between the challenged requirement and the public purposes sought to be achieved by the challenged requirement, or (2) that, through an individualized determination, the challenged condition is not roughly proportionate both in nature and extent to the impact of the development proposed in the development application; and b. with respect to other requirements imposed by this Chapter, that: (1) the requirements result in a denial of all beneficial economic or productive use of the property; or (2) the requirements constitute a permanent physical occupation or invasion of the applicants property; or (3) the burden that the requirement places on the applicant is greater than the benefit that the requirement confers on the general public, considering all of the following and any other relevant factor: (a) the temporal relationship between the effective date of the ordinance and the date the applicant (or if the applicant is not the landowner, the date the landowner) acquired the property that is the subject of the development application; (b) the degree of interference created by the challenged requirements with the applicant's reasonable investment-backed expectations that the property could be developed free of the impacts of the challenged requirements; (c) whether, and if so the extent to which, the development proposed by the applicant is prejudicial to the

health, safety or general welfare of others or constitutes a nuisance or nuisance-like activity; (d) the extent to which the challenged requirements achieve important public purposes; (e) the economic impact of the challenged requirements on the applicant's (or if the applicant is not the landowner, the landowner's) entire parcel and contiguous parcels commonly owned, as determined through a comparison of the value of this ownership without application of the challenged requirements with its value with application of the challenged requirements; and (f) that applicant is not necessarily entitled to the most profitable use of the property.

2. With respect to all appeals made pursuant to this subsection, the person seeking the appeal shall file a written notice of appeal with the County Clerk within 15 days of the date of the final decision from which the appeal is being taken. The notice shall specifically identify the grounds for the appeal and include all other information required by this Section to be submitted with the notice of appeal. If notice in compliance with all requirements of this Section is not timely filed, all rights to appeal the decision are waived.

3. The County Clerk, immediately upon receipt of the notice, shall transmit to the County Commission all the papers constituting the record concerning the action from which the appeal is taken.

4. A properly effectuated appeal shall stay all proceedings in furtherance of the action from which the appeal is taken.

5. The County Commission shall fix a reasonable time for the hearing of the appeal, give public notice thereof, as well as written notice to all interested parties.

6. The County Commission, after considering all evidence presented by the applicant in support of

	the appeal and any evidence presented by the County in rebuttal or otherwise presented in relation to the appeal, shall render a written decision in the form of findings of fact and conclusions of law. If the County Commission determines that applicant has not met the requisite burden of proof, it shall affirm, wholly or partly, the decision from which the appeal was taken. If the County Commission determines that the applicant has met the requisite burden of proof, it may reverse or modify the decision from which the appeal was taken and make a decision respecting development application as it determines is appropriate and in conformity with all applicable laws. In making this new decision, the County Commission may attach any condition it deems necessary to further the purposes of this Chapter.
20-804 Cluster Developments in the Urban Growth Areas (c) (1)(x) Minimum Road Right(s)-of-Way	Consider amending this section by adding a new sentence after the first sentence that provides that cluster development located adjacent to the rights-of-way for a federal or state highway when the existing rights-of-way is not equal to the minimum projected necessary right-of-way for such highway, as shown on any adopted corridor plan, shall be subject to a condition that the subdivider dedicate, by separate instrument to the county, that portion of additional land necessary to preserve the projected necessary right-of-way, as shown on any adopted corridor plan, that is roughly proportionate to the demands generated by that cluster development on the adjacent highway.
(c)(1)(xi) Minimum Frontage and Entrance Spacing Requirements	Note: The County's access management standards adopted by resolution, should be reviewed to ensure that those standards are consistent with the access management recommendations of the US-56 Corridor Management Plan.
(d) Restrictive Covenants (5)	Consider amending subsection (5) to reference highways as well as streets/roads.
(e) Notice to Nearby Property Owners (1)	Consider amending this subsection to provide that notice of the proposed division shall be sent to KDOT at the same time that notice is sent to owners of record of property within one-quarter mile of the subject property. (g)(4) Consider this section to include a certificate of mailing for KDOT.
(g) Application (4)	Consider amending this subsection to include a certificate of mailing to KDOT.

((g)(5)(ii)	Consider amending this subsection to ensure that the spacing requirements, with respect to US-56, are consistent with the recommendations of the US-56 Corridor Management Plan.
20-805 Large Parcel Property Divisions in Urban Growth Areas (c) Immediate Development Area and Future Development Area (1) Immediate Development Area(v) Minimum Road Right(s)-of-Way	Consider amending this section by adding a new sentence after the first sentence that provides that a Large Parcel Property Division located adjacent to the rights-of-way for a federal or state highway when the existing rights-of-way is not equal to the minimum projected necessary right-of-way for such highway, as shown on any adopted corridor plan, shall be subject to a condition that the subdivider dedicate, by separate instrument to the county, that portion of additional land necessary to preserve the projected necessary right-of-way, as shown on any adopted corridor plan, that is roughly proportionate to the demands generated by that Large. Parcel Property Division on the adjacent highway.
(c)(1)(vi) Minimum Frontage and Entrance Spacing Requirements	Note: The County's access management standards adopted by resolution, should be reviewed to ensure that those standards are consistent with the access management recommendations of the US-56 Corridor Management Plan. (e)(1) add notice to KDOT
(e) Notice to Nearby Property Owners (1)	Consider amending this subsection to require notice to KDOT of proposed division if that division is deemed to have an impact on development in the US-56 Corridor. (f)(4) Consider amending this section to require a specific mailing for the letter mailed to KDOT.
(f) Application (5)(ii)	Note: The County's access management standards adopted by resolution, should be reviewed to ensure that those standards are consistent with the access management recommendations of the US-56 Corridor Management Plan.
(f)(5)	Consider adding a new build-out plan requirement specifying the plan shall show projected necessary right-of-way for any highway with respect to which the County or a city has adopted a corridor management plan.
20-806 Property Divisions in the Rural Area (Outside the UGAs) (c) Applicability (2)	Consider amending this subsection to require that the application also show the projected necessary rights-of-way of any federal or state highway, as shown on an adopted area or corridor plan.
(d Residential Development Parcel)(2)(v) Minimum Frontage and Entrance Spacing Requirements	Note: The County's access management standards adopted by resolution, should be reviewed to ensure that those standards are consistent with the access management recommendations of the US-56 Corridor Management Plan
(d)(2)(vi) Minimum Road Right(s)-	Consider amending this section by adding a new sentence after the

of-Way	first sentence that provides that a Property Division In the Rural Area located adjacent to the rights-of-way for a federal or state highway, when the existing rights-of-way are not equal to the minimum projected necessary right-of-way for such highway, as shown on any adopted corridor plan, shall be subject to a condition that the subdivider dedicate, by separate instrument to the county, that portion of additional land necessary to preserve the projected necessary right-of-way, as shown on any adopted corridor plan, that is roughly proportionate to the demands generated by that Large. Parcel Property Division on the adjacent highway.
20-807 Certificate of Survey, Administrative Review Procedures (e) Requirements and Material to be Included (f) Criteria for Review (f)(3) (i)Appeals(2)	Consider adding a new subsection between existing subsections (xvii) and (xix) indicating that the area covered by the plat is included in the US-56 Corridor Management Plan. See Section I.C.2., Implementation Chapter of the US-56 Corridor Management Plan for details. Consider amending the first sentence to say, "an application for division requiring Certificate of Survey 'may' be approved 'with or without conditions' *if and only if* it meets **all** the following criteria**;"** Consider amending this section to add after "Comprehensive Plan," "and adopted area or corridor plans." Consider amending this section to require the provision of notice of an appeal to KDOT, if the Certificate of Survey is deemed to have an impact on development in the US-56 Corridor.
20-808 Minor Subdivisions (d) Criteria for Review(3) (d)(6)	 Consider amending this section by adding a new sentence after the first sentence that provides that a minor subdivision located adjacent to the rights-of-way for a federal or state highway, when the existing rights-of-way are not equal to the minimum projected necessary right-of-way for such highway, as shown on any adopted corridor plan, shall be subject to a condition that the subdivider dedicate, by separate instrument to the county, that portion of additional land necessary to preserve the projected necessary right-of-way, as shown on any adopted corridor plan, that is roughly proportionate to the demands generated by that minor subdivision on the adjacent highway. Consider amending this section to add after "Comprehensive Land Use Plan of Lawrence and Douglas County," "or any area or corridor plan adopted by the County or any city in the County."

(d)(7)	Consider amending this subsection to add after "Land Use Plan," "or any adopted area or corridor plan."
20-809 Major Residential and Non-Residential Subdivisions (d) Criteria for Review (4) (d)(5) (d)(7) (f)Review and Action by the Planning Commission(1) (h) Effects of Approval of the Planning Commission(1) (i) Preliminary Plat – Review and Action by Governing Body(1) (k) Final Plat - Application (l)(2) (l) Final Plat – Review by Planning Director (2)(vi)	Consider amending this subsection to add after "sector," ",corridor." Consider revising this subsection to reference the US-56 Corridor Management Plan or any other adopted area or corridor plan. Note: Adopted master plans for water and wastewater systems should be reviewed to confirm that these plans are consistent with the recommendations of the US-56 Corridor Management Plan and that it does not propose the location of any utilities within the necessary projected right-of-way for US-56 as shown on the US-56 Corridor Management Plan. Consider adding a requirement in this subsection requiring notice to KDOT of the review of a preliminary plat by the Planning Commission at a time that will allow KDOT sufficient opportunity to provide input on the preliminary plat. Consider amending this subsection to include after "approval," "with or without conditions." Consider amending this subsection to include after "approval," "with or without conditions." Consider revising this subsection to require that the final plat application contain a statement that the area covered by the plat is also with the area covered by the US-56 Corridor Management Plan. See, Section I.C.2 . Implementation Chapter, US-56 Corridor Management Plan. Consider amending this subsection to also require consistency with the County Comprehensive Plan or any adopted area or corridor plan.
20-810 Subdivision Design Standards (b)Frontage and Access (2) (d (3)) Intersecting Streets (ii)	Note. Ensure that this subsection is consistent with the recommendations of the US-56 Corridor Management Plan (d)(1)(iii) ....”any adopted Major Thoroughfares Plan or corridor plan”. (“corridor plan” is underlined, regarding the arrangement of arterial and collector streets) Consider amending this section to provide but in no event shall be inconsistent with the recommendations of any adopted corridor plan.

(d)(4) Cross Sections (f) Permanent Utility Easements (1) (g) Parks, Open Space, Schools and Other Public Facilities.	Note: These subsections should be reviewed to ensure that the requirements contained herein are consistent with the recommendations of the US-56 Corridor Management Plan. Consider amending the second sentence to specify that permanent utility easements shall not be located in any area which is necessary projected right-of-way for US-56. (g) Consider amending this subsection to include a reference to any adopted corridor plan in addition to a Comprehensive Plan for Parks and Recreation. Also note that the Comprehensive Plan for Parks and Recreation should be reviewed to ensure that it does not propose the location of parks and recreation areas in areas which are projected necessary right-of-way for US-56.
20-811 Public Improvements (b)Streets (3) Rural Area (ii) 20-812 Contents of Plats (a Preliminary Plat)(1) Materials to be Included (b) Final Plat(2) Materials to be Included.	Consider amending this subsection to add a reference to any adopted corridor plan. Consider amending this subsection to add a new provision requiring that right-of-way for US-56 be shown on each preliminary plat, if applicable. Consider amending this subsection to add a requirement that the plat contain language indicating that the area covered by the plat is included within the US-56 Corridor Management Plan. See Section I.C.2., Implementation Chapter,US-56 Corridor Management Plan for details.
20-813 Administration and Enforcement (d) Building Permits in the Unincorporated Area of Douglas County (g) Variances (2)(ii)	Consider amending both subsections (1) and (2) to include that no building permits shall be issued for any new structure or any improvement to an existing residential building if that building or structure is located in the area which is projected necessary right-of-way for US-56. Considering amending this subsection) to include the requirement that the variance be consistent with the Comprehensive Plan and any adopted area or corridor plan.
20-814 Building Setbacks, Enforcement, Exceptions (a) Building or Setback Lines on Major Streets or Highways	Consider amending this section to require building setbacks lines be established that are consistent with the future projected necessary right-of-way for US-56.
ZONING REGULATIONS FOR THE UNINCORPORATED TERRITORY OF DOUGLAS COUNTY	
Article 2: Purpose	Consider amending this Article by adding to the end of the first sentence "and to implement the Comprehensive Plan and any other adopted area and corridor plan."

Article 4: General Provisions, Districts, and District Maps 4-1 Districts Established 4-6.06 General Recommendations	Consider establishing overlay districts at critical locations along the Corridor, particularly where the US-56 Corridor Management Plan indicates high density development will locate. Consider amending this provision to add after "major thoroughfare plan," "or on the US-56 Corridor Management Plan." General Provisions. Although not necessary to adopt an ordinance establishing a moratorium, the County's zoning regulations could include specific authority to adopt moratoria in situations where it desires to allow the County time to adopt code or plan revisions before development is allowed to proceed. See Section 1.B.1., Implementation Chapter of the US-56 Corridor Management Plan.
Article 5: Building Location-Relation to Established Ultimate Street Right-Of-Way 5-1.01.01	Consider revising this section to add a proviso that in any event Base Setback Lines plus the front yard requirements shall be of sufficient distance to ensure that the right-of-way for US-56 is protected.
Article 14: V-C Valley Channel District Regulations	Consider establishing overlay districts at critical locations along the Corridor, particularly where the Corridor Management Plan indicates high density development will locate.
Article 15: Reserved	Consider adoption of planned districts. See, Section I.B.2.b., Implementation Chapter, US-56 Corridor Management Plan.
Article 18: Height, Area and Bulk Requirements	Consider adding a footnote to this table referencing Section 5-1.01.01, relating to setbacks from highways.
Article 19: Supplemental Use Regulations – Conditional Uses – Temporary Uses Section 19-1.02 (g) Section 19-5 Temporary Business Uses and Temporary Business Use Permits: (2)(e)	Consider revising this section to add a reference to other adopted area and corridor plans. Consider amending this section to add a new (3) providing that if the temporary use is determined to have an impact on development and uses along the US-56 Highway, notice shall be provided to KDOT.
Article 19A: Site Plan Approval Section 19A-3 Procedure Section 10A-4. Site Plan Contents Section 19A-5. Conditions of Approval	Consider amending this section to provide that if a site plan application is determined to have an impact on development in the US-56 Corridor, KDOT shall be provided notice of the receipt of such application and the recommendation of the planning staff with ample time for input to the Board of Commissioners from KDOT. Consider adding a new requirement between existing sections 5. And 6. stating that the plan shall include the right-of-way for US-56, if applicable. Consider amending this section to add a condition of approval requiring consistency with the County Comprehensive Plan and any adopted area or corridor plans.

Section 19A-5(3)	Consider amending this subsection by adding a new condition that the development proposed by the site plan be consistent with the County's comprehensive plan and any adopted area or corridor plan.
Article 21: Supplemental Height, Area, and Bulk Requirements	Section 21-4.03.01. Consider amending this section to include federal and state highways in addition to street or major thoroughfare.
Article 22: Large-Scale Developments – The Community Unit Plan Section 22-1 Procedure	Consider amending this section to require that KDOT receive notice of any plan for use and development that has the potential to have an impact on development in the US-56 Corridor.
Article 23: The Board of Zoning Appeals Section 23-2.03 Section 23-4. Special Yard and Height Exceptions:	Consider amending second sentence in this section to require that variances not be inconsistent with the County Comprehensive Plan or any adopted area or corridor plan. Consider amending this section to add a proviso that the special yard exception proposed maintains a distance from the proposed right-of-way line of US-56 to protect that right-of-way.
Article 24: Changes and Amendment Section 24-1.03(g) Section 24-1.03 Section 24-2 Section 24-3(1)	Consider amending this section to add conformance with any adopted area or corridor plan. In addition, the third from the last paragraph should be amended to provide that KDOT shall be provided notice at least 20 days before the hearing, if it is determined that the application will impact development within the US-56 Corridor. Consider amending the first sentence to allow the planning commission to recommend approval with conditions. Considering adding at the end "with or without conditions."
Article 29:	Consider revising title to Enforcement, Violations, Penalties and Appeals and adding new Section 29-5 entitled "Appeals," as follows: **Appeals.** A. Procedure for appeals from the effect of the requirements in this Chapter. 1. An appeal to the County Commission may be taken by any applicant aggrieved by any decision of the County requiring the applicant to conform a proposed development to the requirements of this Article and who alleges that the final decision of the County constitutes a "taking" without just

	compensation under the 5th Amendment to the United States Constitution or under the Kansas Constitution. On appeal, the burden will be on the appellant to establish, by the preponderance of the evidence: a. with respect to a requirement, which is imposed as a condition of approval of the development application, that the applicant convey to the County an interest in land: (1) that there is not an essential nexus between the challenged requirement and the public purposes sought to be achieved by the challenged requirement, or (2) that, through an individualized determination, the challenged condition is not roughly proportionate both in nature and extent to the impact of the development proposed in the development application; and b. with respect to other requirements imposed by this Chapter, that: (1) the requirements result in a denial of all beneficial economic or productive use of the property; or (2) the requirements constitute a permanent physical occupation or invasion of the applicants property; or (3) the burden that the requirement places on the applicant is greater than the benefit that the requirement confers on the general public, considering all of the following and any other relevant factor: (a) the temporal relationship between the effective date of the ordinance and the date the applicant (or if the applicant is not the landowner, the date the landowner) acquired the property that is the subject of the development application; (b) the degree of interference created by

	the challenged requirements with the applicant's reasonable investment-backed expectations that the property could be developed free of the impacts of the challenged requirements; (c) whether, and if so the extent to which, the development proposed by the applicant is prejudicial to the health, safety or general welfare of others or constitutes a nuisance or nuisance-like activity; (d) the extent to which the challenged requirements achieve important public purposes; (e) the economic impact of the challenged requirements on the applicant's (or if the applicant is not the landowner, the landowner's) entire parcel and contiguous parcels commonly owned, as determined through a comparison of the value of this ownership without application of the challenged requirements with its value with application of the challenged requirements; and (f) that applicant is not necessarily entitled to the most profitable use of the property. 2. With respect to all appeals made pursuant to this subsection, the person seeking the appeal shall file a written notice of appeal with the County Clerk within 15 days of the date of the final decision from which the appeal is being taken. The notice shall specifically identify the grounds for the appeal and include all other information required by this Section to be submitted with the notice of appeal. If notice in compliance with all requirements of this Section is not timely filed, all rights to appeal the decision are waived. 3. The County Clerk, immediately upon receipt of the notice, shall transmit to the County Commission all the papers constituting the record concerning the action from which the appeal is taken. 4. A properly effectuated appeal shall stay all

	proceedings in furtherance of the action from which the appeal is taken. 5. The County Commission shall fix a reasonable time for the hearing of the appeal, give public notice thereof, as well as written notice to all interested parties. 6. The County Commission, after considering all evidence presented by the applicant in support of the appeal and any evidence presented by the County in rebuttal or otherwise presented in relation to the appeal, shall render a written decision in the form of findings of fact and conclusions of law. If the County Commission determines that applicant has not met the requisite burden of proof, it shall affirm, wholly or partly, the decision from which the appeal was taken. If the County Commission determines that the applicant has met the requisite burden of proof, it may reverse or modify the decision from which the appeal was taken and make a decision respecting development application as it determines is appropriate and in conformity with all applicable laws. In making this new decision, the County Commission may attach any condition it deems necessary to further the purposes of this Chapter.
GENERAL RECOMMENDATIONS	Consider establishing density transfers and incentives either in the overlay districts recommended above or in other locations in the code to encourage more dense or intense development at locations indicated on the Plan, which are appropriate for such development, and to protect environmentally sensitive features, agricultural lands or protected lower density locations. See Section 1.B.5. and 6., Implementation Chapter of the US-56 Corridor Management Plan.

US-56 Gap Analysis

City of Edgerton, Kansas

Zoning Regulations: Article 1-Authority, Adoption and Application Regulations; Article 2-Creation of Zoning Districts and Official Map; Article 3-Agricultural and Residence Zoning Districts; Article 4-Commercial Zoning Districts; Article 5-Industrial Zoning Districts; Article 6-Planned Unit Development; Article 7-Conditional Uses; Article 8-Administrative Authorities, Duties and Procedures; Article 9-Land Use Determination Procedures; Article 10-Site Plans and Design Standards

Subdivision Regulations: Article 13-Subdivision Approval Procedures; Article 14-Improvements and Standards of Design; Organization and Bylaws of the Board of Zoning Appeals

Section 1.2 PURPOSE AND GOALS	Consider amending subsection A. to include as the purposes of the zoning regulations implementation of the goals of the Comprehensive Plan and any adopted area or corridor plans.
Section 1.4 JURISDICTION AND APPLICATION OF THESE REGULATIONS	Might want to consider the exercise of extraterritorial zoning jurisdiction pursuant to the authority granted by K.S.A. 12-715b. See Section I.B.2, Implementation Chapter of the US-56 Corridor Management Plan.
Section 1.5 RULES FOR INTERPRETATION	Consider adding a new section providing that the depth of the projected right-of-way for US-56 should control over yard regulations when a greater setback is necessary to protect right-of-way for US-56. See K.S.A. 12-755 and Section I.B.2, Implementation Chapter of the US-56 Corridor Management Plan.
Section 1.7	Consider revising the title to ENFORCEMENT, PENALTIES AND APPEALS and adding new subsection I entitled "APPEALS," as follows: **Appeals.** A. Procedure for appeals from the effect of the requirements in this Chapter. 1. An appeal to the Governing Body may be taken by any applicant aggrieved by any decision of the City requiring the applicant to conform a proposed development to the requirements of this Chapter and who alleges that the final decision of the City constitutes a "taking" without just compensation under the 5th Amendment to the United States Constitution or under the Kansas Constitution. On appeal, the burden will be on the appellant to establish, by the preponderance of the evidence: a. with respect to a requirement, which is imposed as a condition of approval of the Development Application, that the

	applicant convey to the City an interest in land: (1) that there is not an essential nexus between the challenged requirement and the public purposes sought to be achieved by the challenged requirement, or (2) that, through an individualized determination, the challenged condition is not roughly proportionate both in nature and extent to the impact of the Development proposed in the Development Application; and b. with respect to other requirements imposed by this Chapter, that: (1) the requirements result in a denial of all beneficial economic or productive use of the property; or (2) the requirements constitute a permanent physical occupation or invasion of the applicants property; or (3) the burden that the requirement places on the applicant is greater than the benefit that the requirement confers on the general public, considering all of the following and any other relevant factor: (a) the temporal relationship between the effective date of the ordinance and the date the applicant (or if the applicant is not the landowner, the date the landowner) acquired the property that is the subject of the development application; (b) the degree of interference created by the challenged requirements with the applicant's reasonable investment-backed expectations that the property could be developed free of the impacts of

	the challenged requirements; (c) whether, and if so the extent to which, the development proposed by the applicant is prejudicial to the health, safety or general welfare of others or constitutes a nuisance or nuisance-like activity; (d) the extent to which the challenged requirements achieve important public purposes; (e) the economic impact of the challenged requirements on the applicant's (or if the applicant is not the landowner, the landowner's) entire parcel and contiguous parcels commonly owned, as determined through a comparison of the value of this ownership without application of the challenged requirements with its value with application of the challenged requirements; and (f) that applicant is not necessarily entitled to the most profitable use of the property. 2. With respect to all appeals made pursuant to this subsection, the person seeking the appeal shall file a written notice of appeal with the City Clerk within 15 days of the date of the final decision from which the appeal is being taken. The notice shall specifically identify the grounds for the appeal and include all other information required by this Section to be submitted with the notice of appeal. If notice in compliance with all requirements of this Section is not timely filed, all rights to appeal the decision are waived. 3. The City Clerk, immediately upon receipt of the notice, shall transmit to the Governing Body all the papers constituting the record concerning the action from which the appeal is taken. 4. A properly effectuated appeal shall stay all proceedings in furtherance of the action from which the appeal is taken. 5. The Governing Body shall fix a reasonable time for the hearing of the appeal, give public notice

	thereof, as well as written notice to all interested parties. 6. The Governing Body, after considering all evidence presented by the applicant in support of the appeal and any evidence presented by the City in rebuttal or otherwise presented in relation to the appeal, shall render a written decision in the form of findings of fact and conclusions of law. If the Governing Body determines that applicant has not met the requisite burden of proof, it shall affirm, wholly or partly, the decision from which the appeal was taken. If the Governing Body determines that the applicant has met the requisite burden of proof, it may reverse or modify the decision from which the appeal was taken and make a decision respecting development application as it determines is appropriate and in conformity with all applicable laws. In making this new decision, the Governing Body may attach any condition it deems necessary to further the purposes of this Chapter.
Section 1.8 RESERVED FOR FUTURE AMENDMENTS	Although not necessary in order to adopt an ordinance establishing a moratorium, the City's zoning regulations could include specific authority to adopt moratoria in situations where it is desirable to allow the City time to adopt code or plan revisions before development is allowed to proceed. See Section I.B.1., Implementation Chapter of the US-56 Corridor Management Plan. Consider establishing density transfers and incentives either in the overlay district recommended below or at other locations in the code to encourage more dense or intense development at locations indicated on the Plan, which are appropriate for such development, and to protect environmentally sensitive features, agricultural lands or projected lower density locations. See Section I.B.5. and 6., Implementation Chapter of the US-56 Corridor Management Plan. Consider adding a provision allowing for cluster development at locations along the Corridor for less intense development on the overall tract is appropriate to ensure open space, protect critical environment features and to ensure that future development at more dense urban patterns may occur as the demand for that kind of development increases. See Section I.B.7., Implementation Chapter of the US-56 Corridor Management Plan.
Section 1.9 ZONING OF ANNEXED LANDS	If the authority to exercise extraterritorial zoning power is established, revisions would need to be made to this section to reflect that exercise.

Section 2.1 CREATION OF ZONING DISTRICTS	
E. Planned Development Districts	2. Consider adoption of planned zoning districts, particularly for areas within the US-56 Corridor. See Section I.B.2.c., Implementation Chapter of the US-56 Corridor Management Plan. In addition, consider establishment of overlay districts, particularly at locations within the corridor where more dense or intense development is proposed by the US-56 Corridor Management Plan, such as proposed or existing intersections and interchanges on US-56. See Section I.B.2.b., Implementation Chapter of the US-56 Corridor Management Plan.
F	Add Overlay Districts to the list.
Section 3.1 A-G AGRICULTURAL DISTRICT	
E. Setbacks, Yards and Area Regulations	Consider adding a note to Table of Setbacks providing that setback lines, front yard and side yard, shall not be less than setbacks required to protect right-of-way for US-56.
Section 3.2 R-1 SINGLE FAMILY RESIDENCE DISTRICTS	
E. Setbacks, Yards and Area Regulations	Consider adding a note to Table of Setbacks providing that setback lines, front yard and side yard, shall not be less than setbacks required to protect right-of-way for US-56.
Section 3.4 R-2 TWO FAMILY RESIDENCE DISTRICT	
E. Setbacks, Yards, and Area Regulations	Consider adding a note to Table of Setbacks providing that setback lines, front yard and side yard, shall not be less than setbacks required to protect right-of-way for US-56.
Section 3.5 R-3 MULTI-FAMILY ZONING DISTRICT	
E. Setbacks, Yards, and Area Regulations	Consider adding a note to Table of Setbacks providing that setback lines, front yard and side yard, shall not be less than setbacks required to protect right-of-way for US-56.
Section 4.1 C-D DOWNTOWN COMMERCIAL DISTRICT	
F. Setbacks, Yards, and Area Regulations	Consider adding a note to Table of Setbacks providing that setback lines, front yard and side yard, shall not be less than setbacks required to protect right-of-way for US-56.
Section 4.2 C-1 GENERAL COMMERCIAL DISTRICT	
E. Setbacks, Yards, and Area Regulations	Consider adding a note to Table of Setbacks providing that setback lines, front yard and side yard, shall not be less than setbacks required to protect right-of-way for US-56.
Section 4.3 C-2 HEAVY SERVICE COMMERCIAL	
E. Setbacks, Yards, and Area Regulations	Consider adding a note to Table of Setbacks providing that setback lines, front yard and side yard, shall not be less than setbacks required to protect right-of-way for US-56.

Section 5.1 B-P BUSINESS PARK DISTRICT	
E. Setbacks, Yards, and Area Regulations, 1.	Consider amending this section to provide that setback required to protect right-of-way for US-56.
Section 5.2 I-G GENERAL INDUSTRIAL DISTRICT	
E. Property Development Regulations	Consider amending this section to provide that setback required to protect right-of-way for US-56.
Section 5.3 I-H HEAVY INDUSTRY DISTRICT	
D. Setbacks, Yards, and Area Regulations	Consider amending this section to provide that setback required to protect right-of-way for US-56.
Section 6.1 PUD PLANNED UNIT DEVELOPMENT	
C. Standards for Planned Unit Developments 1. 6. Yards 8. Traffic	 Consider amending this subsection to provide that development shall also conform with any adopted area or corridor plan. Consider amending this section to require that front yard setbacks be consistent with setbacks shown on any area or corridor plan. Consider amending this subsection to provide that in any event points of ingress and egress shall be consistent with points of access shown on the US-56 Corridor Management Plan.
Section 6.3 CONCEPTUAL PLAN AND PRELIMINARY PLAT SUBMISSION DATA	8.(g) Consider amending this subsection to add that the planned unit development corresponds to and complies with any adopted area or corridor plan.
10. Utilities	Consider revising this section to prohibit the placement of utilities within the necessary right-of-way for US-56.
Section 6.4 FINAL PLAN AND FINAL PLAT SUBMISSION DATA	
A. Final Plan and Final Plat Submission Requirements	Considering adding a new subsection between existing subsections (6) and (7), requiring the inclusion of a statement providing notice that the area included within the planned unit development is also included in the area covered by the US-56 Corridor Management Plan. See Section I.C.2., Implementation Chapter of the US-56 Corridor Management Plan.
Section 7.1 ISSUANCE OF CONDITIONAL USES	

B. Standards C. Criteria C.g. C.i.	Consider revising the first sentence to require that the location is also consistent with any adopted area and corridor plan. Consider amending the first sentence to specifically authorize approval with conditions. Consider amending this subsection to provide that ingress and egress shall be in conformance with the US-56 points of access as shown on the US-56 Corridor Management Plan. Consider amending this subsection to provide that consideration shall be given to the extent to which the proposed use would adversely affect the road network as shown on the US-56 Corridor Management Plan.
Section 8.1 CREATION OF THE PLANNING COMMISSION	
C. Duties of the Planning Commission The Conduct of Hearings 4.m)	Consider amending this subsection to specifically authorize approval with conditions. Consider amending this subsection to set forth consistency with other adopted area and corridor plans as an appropriate consideration.
Section 8.3 POWERS AND RESPONSIBILITIES C. Variances 1.d)	Consider amending this subsection to provide that in addition a variance shall be consistent with the Comprehensive Plan and any other adopted area and corridor plan.
Section 9.1 ZONING AMENDMENT APPLICATIONS	
B. Materials and Reviews 5.	Consider amending this section to provide that notice equal to that provided to the adjacent property owners shall be provided to KDOT of any rezoning application that is deemed to have the potential to have an impact on development within the US-56 Corridor.
Section 9.6 DETERMINATION OF ACCESSORY USES GENERALLY	
D. Exceptions	Consider amending this section to provide in addition that the use would be consistent with the recommendations of the Comprehensive Plan and any adopted area or corridor plan.
Section 10.1 SITE PLANS	Consider adding a new subsection C. providing that site plans shall be required in all instances where the provisions of the Unified Development Ordinance do not require that a development application be accompanied by a plan showing the development proposed prior to the issuance of a building permit.

Section 10.3 STREETS AND ACCESS	
A. General Design and Layout Criteria 2.	Consider amending the first sentence of this subsection to include a reference to US-56. In addition, that sentence should specifically mention the Comprehensive Plan or any adopted corridor plan.
Section 13.3 REGULAR LAND DEVELOPMENT PROCESS	
B. Preliminary Plat 3. 4. 5. 6.	Considering amending this section to include any adopted area or corridor plan after the City Comprehensive Plan. Consider adding a new sentence containing a proviso that the authority to vary yard size shall not result in setbacks being of a distance that is less than is necessary to protect right-of-way for US-56. Consider amending this section to provide that the dedication or reservation of property shall compel dedication or reservation of as much of the right-of-way for US-56 as is roughly proportionate to the demands for highway improvements generated by the applicant. Consider amending this section to provide that notice of the hearing for preliminary plats that have the potential to impact the recommendations of the US-56 Corridor Management Plan be provided to KDOT at least 20 days prior to the date of the hearing.
D. General Design Standards 1. F. Final Plat and Construction Plans 1. G. Final Plat. Required Contents	Consider amending the first sentence by adding prior to the first semicolon, "and to ensure that protected necessary right-of-way for US-56 is protected." Consider amending this subsection to provide that no final plat shall be approved which shows storm water, sewers, water mains or other utilities as being located within projected necessary right-of-way for US-56. Consider adding between subsections G.16 and 17, a new subsection requiring the inclusion of notice that the area included within the subdivision is also included within the area covered by the US-56 Corridor Management Plan. See Section 1.C.2., Implementation Chapter of the US-56 Corridor Management Plan.
Section 13.7 ASSURANCES	
B. Exceptions	Considering amending this section to add a proviso that no lot shall have direct access to US-56, except in accordance with the points of access to US-56, as shown on the US-56 Corridor Management Plan.

Section 14.1 STREETS, SANITARY SEWERS, AND STORM DRAINS A.	Consider amending this section to add a restriction on the location of utilities in projected necessary right-of-way for US-56.
Section 14.10 LOTS AND EASEMENTS	
B. Easements	Consider amending this provision by adding at the end of the second sentence "or in right-of-way shown on the City Comprehensive Plan or any adopted area or corridor plan."
Section 14.16 GAS, WIRE, AND CABLE UTILITIES A.	Consider amending this section to ensure that utilities are not located in future projected right-of-way for US-56.

US-56 Gap Analysis

City of Gardner, Kansas

Title 17: Subdivision Regulations & Title 18. Zoning

17.05.010 Statement of intent.	Consider amending this section to specify that these subdivision requirements are intended to assist in implementation of the City's Comprehensive Plan and any adopted area or corridor plan.
17.10.010 Submission for recommendation and approval.	Consider exercising the extraterritorial subdivision jurisdiction authorized by K.S.A. 750. See Section I.A.3._., Implementation Chapter of the US-56 Corridor Management Plan.
17.10.030 Preliminary plat. A. B.	Consider amending this section to provide that the Commission shall satisfy itself that the proposed street pattern and land use will also conform to the City's Comprehensive Plan and any adopted area or corridor plan. Consider amending this section to also require that the preliminary plat show the projected necessary right-of-way for US-56.
17.10.040 Final plat.	Consider amending this subsection to require the inclusion of a statement providing notice that the area included within the subdivision is also included in the area covered by the US-56 Corridor Management Plan. See Section I.C.3., Implementation Chapter of the US-56 Corridor Management Plan.
17.10.090 Lot splits.	Consider amending the third sentence to also require that lot splits shall conform to the City's Comprehensive Plan and any adopted area or corridor plan.
Chapter 12.10 STREET IMPROVEMENTS AND MINIMUM STANDARDS	
12.10.010 General. C. Street Design Standards.	Consider amending the first section to also require that the street improvements conform to the pattern established in the City's Comprehensive Plan or any adopted area or corridor plan. Consider amending this section to specify that the minimum right-of-way width for US-56 and any adjacent streets shall be of a width necessary to protect the projected right-of-way.
Chapter 17.15 PLANNING STANDARDS	
17.15.020 Major Street Plan Map.	NOTE: Confirm that the major street map is consistent with the US-56 Corridor Management Plan, including the location of existing and proposed streets and the projected necessary right-of-way for streets and for US-56.
17.15.100 Thoroughfares and streets.	Confirm that this section is consistent with the recommendations of the US-56 Corridor Management Plan.

17.25.050 Sanitary sewers and other utilities.	Consider amending this section to additionally require that no utilities or easements for utilities will be located in projected future right-of-way for US-56 or any other adjacent street shown in the US-56 Corridor Management Plan.
Chapter 17.40 RULE EXCEPTIONS	
17.40.010 When made.	Consider amending the last sentence in this section to require that a rule exception may not result in any inconsistency between the subdivision and the City's Comprehensive Plan and any other adopted area or corridor plan.
Chapter 18.05 GENERAL PROVISIONS	
18.05.030 Jurisdictional area.	Consider exercise of the extraterritorial zoning authority authorized by K.S.A. 12-715b. See Section I.B.2., Implementation Chapter of the US-56 Corridor Management Plan.
18.05.040 Establishment of districts.	Consider establishing overlay districts at critical locations along the Corridor, particularly where the Corridor Management Plan indicates high density development will locate. See Section I.B.2.b., Implementation Chapter of the US-56 Corridor Management Plan
Chapter 18.15 A – AGRICULTURAL DISTRICT	
18.15.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.20 RE – RESIDENTIAL ESTATES DISTRICT	
18.20.050 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.25 R-1 – SINGLE-FAMILY RESIDENTIAL DISTRICT	
18.25.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.30 R-2 – TWO-FAMILY DISTRICT	
18.30.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.35 R-3 – GARDEN APARTMENT DISTRICT	
18.35.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.40 R-4 – CONDOMINIUM DWELLING HOUSE DISTRICT	

18.40.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.45 R-5 – APARTMENT HOUSE DISTRICT	
18.45.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.50 PLANNED RESIDENTIAL DISTRICTS	
18.50.040 Procedure for rezoning property to a planned residential district.	Consider amending subsection C. to require that the plan show the right-of-way for US-56. Consider amending subsection E. to provide that KDOT shall be provided with notice of any public hearing on a development plan which has the potential to impact development upon the US-56 Corridor.
Chapter 18.55 M-P – MOBILE HOME PARK RESIDENTIAL DISTRICT	
18.55.140 Utilities.	Consider amending this section to specify that service lines shall not be located in any future rights-of-way for US-56, as shown in the Comprehensive Plan or any adopted area or corridor plan.
Chapter 18.60 M-S – MOBILE HOME SUBDIVISION DISTRICT	
18.60.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.65 C-O – OFFICE BUILDING DISTRICT	
18.65.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.70 CO-A – NEIGHBORHOOD BUSINESS DISTRICT	
18.70.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.75 C-1 – CENTRAL BUSINESS DISTRICT	
18.75.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.80 C-2 – GENERAL BUSINESS DISTRICT	

18.80.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.85 C-3 – COMMERCIAL DISTRICT	
18.85.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.95 M-1 – RESTRICTED INDUSTRIAL DISTRICT	
18.95.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.100 M-2 – GENERAL INDUSTRIAL DISTRICT	
18.100.060 Yard regulations.	Consider amendments to A. and B. to provide that front and side yard setbacks, where applicable, shall not be less than the distance necessary to protect right-of-way for US-56.
Chapter 18.110 REC – RECREATIONAL DISTRICT	
18.110.030 Plan approval.	Consider amending the third paragraph to require that KDOT be provided timely notice of a hearing on a plan that has the potential to impact development along the US-56 Corridor.
Chapter 18.115 PUD –PLANNED UNIT DEVELOPMENT DISTRICT	
18.115.030 General provisions.	Consider amending A. to specify that the Planning Commission may make a recommendation for approval with conditions. Also consider amending A.1. to require that the planned unit development would be in general conformity with the provisions of any adopted area or corridor plan, in addition to the Comprehensive Plan.
18.115.040 Standards and conditions for the Planned Unit Development.	Consider amending L. to clearly specify that additional setbacks may be required from any state or federal highway.
18.115.050 Application of preliminary plan.	Consider amending B.2. to also include the requirement that the plan show the location of projected right-of-way for US-56. Consider amending B.5. to also include the requirement that the plan show the location of projected right-of-way for US-56. Consider amending C. to require that KDOT be provided notice of the hearing on any preliminary development for a planned unit development that has the potential to impact development on the US-56 Corridor.
18.115.060 Final plan approval.	Consider amending subsection A. to include a requirement that the final plan include a statement that the area covered by the final

	plan for the planned unit development covers an area that is also included within the area covered by the US-56 Corridor Management Plan.
Chapter 18.155 HEIGHT AND AREA EXCEPTIONS	
18.155.010 Height and area exceptions. B. Yard exceptions. 3.	Consider amending this section to also include an official line for future widening of a state highway.
Chapter 18.175 LAND USE PERMITS	
18.1 75.070 Right-of-way required.	Consider amending this section to include state and federal highways and limiting the dedication requirement to that portion of the right-of-way that can be shown to be roughly proportionate to the demand created for state or federal improvements generated by the development for which a permit is being sought.
Chapter 18.185 AMENDMENT AND REZONING APPLICATIONS AND PROCEDURES	
18.185.090 Notice to surrounding property owners.	Consider amending this section to require that KDOT receive notice of a hearing on any application that has the potential to have an impact on development in the US-56 Corridor at least 20 days prior to the hearing.
18.185.130 Consideration of text amendments, rezoning requests, special use permits and conditional use permits – process. B. Action by Planning Commission.	Consider amending the next to the last sentence in this subsection to grant authority to recommend approval with conditions.
18.185.150 Criteria for considering applications. A.	Consider amending this subsection by adding any adopted area or corridor plan to the conformance requirement.
19.185.210 Site plan approval. B.	Consider including in the definition of "significant redevelopment" any development or redevelopment in areas covered by the US-56 Corridor Management Plan.
18.185.220 Site plan approval criteria. I. J.	Consider amending this subsection to include consistency with any adopted area or corridor plan. Consider amending this subsection to include any abutting state or federal highway and limited by the requirement that dedication shall be in an amount roughly proportionate to the need for right-of-way generated by the development proposed on the site plan.
18.185.240 Site plans and final development plans – Contents and submission requirements. A.1.	Consider amending this subsection to include the projected right-of-way for US-56.
18.185-335 Appeals	Consider adding new Section as follows: **Appeals.** A. Procedure for appeals from the effect of the requirements

	in this Chapter. 1. An appeal to the Governing Body may be taken by any applicant aggrieved by any decision of the City requiring the applicant to conform a proposed development to the requirements of this Chapter and who alleges that the final decision of the City constitutes a "taking" without just compensation under the 5th Amendment to the United States Constitution or under the Kansas Constitution. On appeal, the burden will be on the appellant to establish, by the preponderance of the evidence: a. with respect to a requirement, which is imposed as a condition of approval of the Development Application, that the applicant convey to the City an interest in land: (1) that there is not an essential nexus between the challenged requirement and the public purposes sought to be achieved by the challenged requirement, or (2) that, through an individualized determination, the challenged condition is not roughly proportionate both in nature and extent to the impact of the Development proposed in the Development Application; and b. with respect to other requirements imposed by this Chapter, that: (1) the requirements result in a denial of all beneficial economic or productive use of the property; or (2) the requirements constitute a permanent physical occupation or invasion of the applicants property; or (3) the burden that the requirement places on the applicant is greater than the benefit that the requirement confers on the general public, considering all of the following and any other relevant factor: (a) the temporal

	relationship between the effective date of the ordinance and the date the applicant (or if the applicant is not the landowner, the date the landowner) acquired the property that is the subject of the development application; (b) the degree of interference created by the challenged requirements with the applicant's reasonable investment-backed expectations that the property could be developed free of the impacts of the challenged requirements; (c) whether, and if so the extent to which, the development proposed by the applicant is prejudicial to the health, safety or general welfare of others or constitutes a nuisance or nuisance-like activity; (d) the extent to which the challenged requirements achieve important public purposes; (e) the economic impact of the challenged requirements on the applicant's (or if the applicant is not the landowner, the landowner's) entire parcel and contiguous parcels commonly owned, as determined through a comparison of the value of this ownership without application of the challenged requirements with its value with application of the challenged requirements; and (f) that applicant is not necessarily entitled to the most profitable use of the property. 2. With respect to all appeals made pursuant to this subsection, the person seeking the appeal shall file a written notice of appeal with the City Clerk within 15 days of the date of the final decision from which the appeal is being taken. The notice shall specifically identify the grounds for the appeal and include all other information required by this Section to be submitted with the notice of appeal. If notice in compliance with all requirements of this

	Section is not timely filed, all rights to appeal the decision are waived. 3. The City Clerk, immediately upon receipt of the notice, shall transmit to the Governing Body all the papers constituting the record concerning the action from which the appeal is taken. 4. A properly effectuated appeal shall stay all proceedings in furtherance of the action from which the appeal is taken. 5. The Governing Body shall fix a reasonable time for the hearing of the appeal, give public notice thereof, as well as written notice to all interested parties. 6. The Governing Body, after considering all evidence presented by the applicant in support of the appeal and any evidence presented by the City in rebuttal or otherwise presented in relation to the appeal, shall render a written decision in the form of findings of fact and conclusions of law. If the Governing Body determines that applicant has not met the requisite burden of proof, it shall affirm, wholly or partly, the decision from which the appeal was taken. If the Governing Body determines that the applicant has met the requisite burden of proof, it may reverse or modify the decision from which the appeal was taken and make a decision respecting development application as it determines is appropriate and in conformity with all applicable laws. In making this new decision, the Governing Body may attach any condition it deems necessary to further the purposes of this Chapter.
Chapter 18.190 BOARD OF ZONING APPEALS	
18.190.010 Authority. C. Board of Zoning Appeals – Powers and Duties – Appeals – Variances and Exceptions. 1.e.	Consider amending this subsection to add, "or is inconsistent with the created development plan or any other adopted area or corridor plan," as a consideration for the granting of a variance.

US-56 Gap Analysis

Johnson County, Kansas

Zoning and Subdivision Regulations

ZONING AND SUBDIVISION REGULATIONS	
Article 1: General Provisions, Zoning and Subdivision Regulations Section 4. Purposes	Consider amending this section to add a new subsection stating an additional purpose of implementing the Comprehensive Plan and any adopted area or corridor plan.
Article 3: Responsible Authorities and Administrative Duties Section 5. Board of Zoning Appeals F. Authority 2.	Consider amending this section by adding at the end of the first sentence a requirement that any variance granted be consistent with the Comprehensive Plan and any adopted area or corridor plan.
Section 5. Board of Zoning Appeals F. Authority 2.	Consider amending this section to also provide that granting the variance desired will not be inconsistent with the County Comprehensive Plan or any adopted area or corridor plan.
Article 4: Application Procedures for Rezoning, Conditional Use Permits, Development Plan Approvals or Subdivision Approvals, and Amendments to the Zoning or Subdivision Regulations Section 2. Procedures for Consideration of Requests for Rezoning, Conditional Use Permit, Development Plan Approval, Subdivision Plat Approval or Amendment to the Regulations: B. Hearing and Notice Requirements 4.	Consider amending this subsection to provide that for applications that are deemed to have the potential to have an impact on development within the Corridor, KDOT will be mailed notice of the hearing on the application at least 10 days prior to the hearing.
Section 2. Procedures for Consideration of a Request for a Rezoning, Conditional Use Permit, Development Plan Approval, Subdivision Plat Approval, or Amendment to the Regulations. C. Action by the Planning Commission or Zoning Boards	Consider amending this section to specify that the recommendation of the Planning Commission may be to recommend conditional approval of the application.

Section 2. Procedures for Consideration of a Request for a Rezoning, Conditional Use Permit, Development Plan Approval, Subdivision Plat Approval, or Amendment to the Regulations. D. Action by Board of County Commissioners.1.a.	Consider amending this section to specify that the Board of County Commissioners may conditionally approve the application.
Article 5: Permits Section 2. Zoning Permit. C. Zoning Permit Review	Consider amending this section to provide that the zoning administrator may conditionally approve a zoning permit.
Article 6:	Consider revising title to Enforcement, Violations, Penalties and Appeals and adding new section 7 entitled "Appeals," as follows: **Appeals.** A. Procedure for appeals from the effect of the requirements in this Chapter. 1. An appeal to the County Commission may be taken by any applicant aggrieved by any decision of the County requiring the applicant to conform a proposed development to the requirements of this Article and who alleges that the final decision of the County constitutes a "taking" without just compensation under the 5th Amendment to the United States Constitution or under the Kansas Constitution. On appeal, the burden will be on the appellant to establish, by the preponderance of the evidence: a. with respect to a requirement, which is imposed as a condition of approval of the development application, that the applicant convey to the County an interest in land: (1) that there is not an essential nexus between the challenged requirement and the public purposes sought to be achieved by the challenged requirement, or (2) that, through an individualized determination, the challenged condition is not roughly proportionate both in nature and extent to the impact of the development proposed in the development application; and b. with respect to other requirements

	imposed by this Chapter, that: (1) the requirements result in a denial of all beneficial economic or productive use of the property; or (2) the requirements constitute a permanent physical occupation or invasion of the applicants property; or (3) the burden that the requirement places on the applicant is greater than the benefit that the requirement confers on the general public, considering all of the following and any other relevant factor: (a) the temporal relationship between the effective date of the ordinance and the date the applicant (or if the applicant is not the landowner, the date the landowner) acquired the property that is the subject of the development application; (b) the degree of interference created by the challenged requirements with the applicant's reasonable investment-backed expectations that the property could be developed free of the impacts of the challenged requirements; (c) whether, and if so the extent to which, the development proposed by the applicant is prejudicial to the health, safety or general welfare of others or constitutes a nuisance or nuisance-like activity; (d) the extent to which the challenged requirements achieve important public purposes; (e) the economic impact of the challenged requirements on the applicant's (or if the applicant is not the landowner, the landowner's) entire parcel and contiguous parcels commonly owned, as determined through a comparison of the value of this ownership without

	application of the challenged requirements with its value with application of the challenged requirements; and (f) that applicant is not necessarily entitled to the most profitable use of the property. 2. With respect to all appeals made pursuant to this subsection, the person seeking the appeal shall file a written notice of appeal with the County Clerk within 15 days of the date of the final decision from which the appeal is being taken. The notice shall specifically identify the grounds for the appeal and include all other information required by this Section to be submitted with the notice of appeal. If notice in compliance with all requirements of this Section is not timely filed, all rights to appeal the decision are waived. 3. The County Clerk, immediately upon receipt of the notice, shall transmit to the County Commission all the papers constituting the record concerning the action from which the appeal is taken. 4. A properly effectuated appeal shall stay all proceedings in furtherance of the action from which the appeal is taken. 5. The County Commission shall fix a reasonable time for the hearing of the appeal, give public notice thereof, as well as written notice to all interested parties. 6. The County Commission, after considering all evidence presented by the applicant in support of the appeal and any evidence presented by the County in rebuttal or otherwise presented in relation to the appeal, shall render a written decision in the form of findings of fact and conclusions of law. If the County Commission determines that applicant has not met the requisite burden of proof, it shall affirm, wholly or partly, the decision from which the appeal was taken. If the County Commission determines that the applicant has met the requisite burden of proof, it may reverse or modify the decision from which the appeal was taken and make a decision respecting development application as it determines is appropriate and in conformity with all applicable

	laws. In making this new decision, the County Commission may attach any condition it deems necessary to further the purposes of this Chapter.
Article 7: Establishment of Zoning Districts Section 5. Special Overlay Districts and Overlay Zones	Consider enacting overlay districts at critical locations along the Corridor, particularly where the Corridor Management Plan indicates high intensity development will locate. See Section I.B.2.b., Implementation Chapter of the US-56 Corridor Management Plan.
Article 11: Planned Zoning Districts General Requirements Section 2. Statement of Objectives	Consider adding a new K. to protect land shown as right-of-way for streets, roads and highways in the County Comprehensive Plan and any adopted area or corridor plan. Consider adding a new L. to ensure implementation of the Comprehensive Plan and any adopted area or corridor plan.
Article 12: Planned Residential Districts Section 5. Planned Residential. E. Height, Area and Bulk Regulations. 2. Yard Regulations. Section 6. Planned Residential Manufactured Home Park District. D. Height, Area and Bulk Regulations. 2.	Consider amending a. and b. specifying that side and front yard setback lines shall not be less than setbacks required to protect projected rights-of-way for US-56. Consider amending a. and b. specifying that side and front yard setback lines shall not be less than setbacks required to protect projected rights-of-way for US-56.
Article 13: Planned Retail Business Districts Section 2. Planned Limited Retail Business District. D. Height, Area and Bulk Regulations. 2. and 3. Section 2. Planned Limited Retail Business District. J. Development Standards. 3. Access Section 3. Planned Rural Retail Business District. D. Height, Area and Bulk Regulations. 2. and 3. Section 3. Planned Rural Retail Business District. J. Development Standards Section 4. Planned Residential Neighborhood Retail Business District. D. Height, Area and Bulk Regulations. 2. and 3.	Consider amending these subsections specifying that side and front yard setback lines shall not be less than setbacks required to protect projected rights-of-way for US-56. Consider amending this subsection to require that driveways onto US-56 shall be consistent with points of access, as shown on the US-56 Corridor Management Plan. Consider amending these subsections specifying that side and front yard setback lines shall not be less than setbacks required to protect projected rights-of-way for US-56. Consider amending this subsection to require that driveways onto US-56 shall be consistent with points of access, as shown on the US-56 Corridor Management Plan. Consider amending these subsections specifying that side and front yard setback lines shall not be less than setbacks required to protect projected rights-of-way for US-56.

Section 4. Planned Residential Neighborhood Retail Business District. J. Development Standards	Consider amending this subsection to require that driveways onto US-56 shall be consistent with points of access, as shown on the US-56 Corridor Management Plan.
Section 5. Planned Urban Neighborhood Retail Development District. D. Height, Area and Bulk Regulations. 2. and 3.	Consider amending these subsections specifying that side and front yard setback lines shall not be less than setbacks required to protect projected rights-of-way for US-56.
Section 5. Planned Urban Neighborhood district. J. Development Standards	Consider amending this subsection to require that driveways onto US-56 shall be consistent with points of access, as shown on the US-56 Corridor Management Plan.
Article 14: Planned Employment Center Districts Section 2. Planned Research and Development Park District. G. Development Standards. 4. Access	Consider amending this subsection to require that driveways onto US-56 shall be consistent with points of access, as shown on the US-56 Corridor Management Plan.
Section 2. Planned Research and Development Park District. G. Development Standards. 5. Height, Area and Bulk Regulations. b. and c. Front and Side Yards	Consider amending these subsections specifying that side and front yard setback lines shall not be less than setbacks required to protect projected rights-of-way for US-56.
Section 3. Planned Research, Development and Office Park District. G. Development Standards. 4. Access	Consider amending this subsection to require that driveways onto US-56 shall be consistent with points of access, as shown on the US-56 Corridor Management Plan.
Section 3. Planned Research, Development and Office Park District. G. Development Standards. 5. Height, Area and Bulk Regulations. b. and c. Front and Side Yards.	Consider amending these subsections specifying that side and front yard setback lines shall not be less than setbacks required to protect projected rights-of-way for US-56.
Section 4. Planned Research, Development and Light Industrial Park District. G. Development Standards. 4. Access	Consider amending this subsection to require that driveways onto US-56 shall be consistent with points of access, as shown on the US-56 Corridor Management Plan.

Section 4. Planned Research, Development and Light Industrial Park District. 5. Height, Area and Bulk Regulations. b. and c. Front Yard and Side Yard	Consider amending these subsections specifying that side and front yard setback lines shall not be less than setbacks required to protect projected rights-of-way for US-56.
Section 5. Planned Industrial Park District. G. Development Standards. 4. Access	Consider amending this subsection to require that driveways onto US-56 shall be consistent with points of access, as shown on the US-56 Corridor Management Plan.
Section 5. Planned Industrial Park District. G. Development Standards. 5. Height, Area and Bulk Regulations. b. and c.	Consider amending these subsections specifying that side and front yard setback lines shall not be less than setbacks required to protect projected rights-of-way for US-56.
Article 15: Development Plan Procedures Section 3. Preliminary Development Plan Application Requirements	Consider adding a subsection requiring that right-of-way for US-56 be shown on the preliminary plan, if applicable.
Section 4. Review of Preliminary Plans. B.	Consider adding a new subsection assuring consistency with the County Comprehensive Plan and any adopted area or corridor plan.
Section 4. Review of Preliminary Plans. B.	Also consider specifically providing that the zoning board may conditionally approve.
Section 6. Final Development Plan Application Requirements	Consider adding a requirement that the final plan contain language specifying that the area covered by the final development plan is part of the area covered by the US-56 Corridor Management Plan. See Section I.C.2., Implementation Chapter of the US-56 Corridor Management Plan.
Section 11. Development Plan Review Considerations	Consider amending A.7. to include a reference to any adopted area or corridor plan.
Article 17: Supplementary Height, Area, and Bulk Regulations Section 5. Front Yards	Consider amending this subsection to ensure that the right-of-way for US-56 is protected.
Section 9. Height, Area, Bulk by Zoning District Chart	Consider adding a note to this chart ensuring that right-of-way for US-56 will be protected.
Article 19: Off-Street Parking Requirements Section 3. Improvement and Design Requirements. B.	Consider amending this subsection to specify that driveways onto US-56 shall be consistent with the points of access shown for US-56 on the US-56 Corridor Management Plan.
Section 3. Improvement and Design Requirements. C.	Consider amending this subsection to specify that driveways onto US-56 shall be consistent with the points of access shown for US-56

	on the US-56 Corridor Management Plan.
Article 23: Conditional Use Permits Section 2. General Provisions Section 6. Standards for Conditional Uses. C. Guidelines for Issuance of Conditional Use Permits: (3)	Consider amending the second paragraph by adding at the end of the first sentence an additional requirement that conditions on issuance of conditional use permits may be employed to ensure compliance with any approved area or corridor plan. Consider adding a new subsection providing that the conditional use will not be inconsistent with the County Comprehensive Plan or any adopted area or corridor plan.
Article 25: General Subdivision Provisions Section 2. Purpose	Consider revising the second paragraph to add and to implement the County Comprehensive Plan and any other adopted area and corridor plan as a purpose for the subdivision regulations.
Article 26: Preliminary Plat Analysis Reports, General Guidelines and Plat Review Guidelines Section 3. Preliminary Plat Analysis Report Requirements Section 4. General Plat Review Provisions. D. Highway or Public Road Congestion	Consider adding a new subsection requiring that the report contain an analysis of the extent to which the proposed subdivision will be consistent with the County Comprehensive Plan and any adopted area or corridor plan. Consider revising the first sentence to include the impacts of the subdivision on the recommendations for US-56 contained in the US-56 Corridor Management Plan.
Article 27: Supplementary Subdivision Procedures and Requirements Section 3. Preliminary Plat. B. Preliminary Plat Contents. 2. Section 4. Final Plat. B. Final Plat Contents. 2. Section 4. Final Plat. E. Zoning Board Review and Action Section 5. Plat Exceptions	Consider adding a requirement here that the plat show the rights-of-way for US-56, if applicable. Consider adding a new additional item here providing for notice that the area covered by the final plat is also a portion of the area that is covered by the US-56 Corridor Management Plan. See Section I.C.2, Implementation Chapter of the US-56 Corridor Management Plan. Consider amending the second sentence of the first paragraph allowing the board to approve with conditions in addition to approve or deny. Consider amending the third paragraph to provide that plat exceptions shall not be recommended for approval if they would be inconsistent with the County Comprehensive Plan or any adopted area or corridor plan.
Article 29: Lot Split Provisions Section 5. Minimum Street Frontage Requirements for Lot	Consider adding a note to the list in Section B. requiring that minimum street frontage per driveway on US-56 be consistent with the points of access as shown on the US-56 Corridor Management

Splits	Plan.
Article 30: Minimum Subdivision Standards Section 2. Streets and Driveways	Consider amending 5. to add the County Comprehensive Plan or any adopted area or corridor plan as factors to be considered with respect to right-of-way requirements.
Section 2. Streets and Driveways.	Consider amending 8. to ensure that highway, street and right-of-way improvements are consistent with the recommendations for US-56 and the adjacent street network as set forth in the US-56 Corridor Management Plan.
Section 2. Streets and Driveways. B. Median Break Spacing, Street Intersection Spacing and Street Frontage Required per Business Driveway.	Consider amending 8.to ensure that median break spacing and street intersection spacing improvements are consistent with the recommendations for US-56 and the adjacent street network, as set forth in the US-56 Corridor Management Plan.
Section 2. Streets and Driveways. E. Frontage Roads	Ensure that this section is consistent with the recommendations for US-56 and the adjacent street network, as set forth in the US-56 Corridor Management Plan.
Section 5. Required Improvements. A. General Criteria. 2.	Consider revising this section to add a requirement that utilities and easements therefore shall not be located in any area shown on the US-56 Corridor Management Plan as projected rights-of-way for US-56.
Article 31: Minimum Infrastructure Requirements Section 1. Purpose	Consider amending paragraph 2 to include at the end of the third sentence a reference to implementation of the US-56 Corridor Management Plan or any other adopted area or corridor plan.

Project: US-56 Corridor Management Plan Land Use Capacity/Demand Analysis & Environmental Vulnerability Technical Memo

Date: October 1, 2009

OVERVIEW

This analysis examines Residential/Non-Residential Land Demand and how that compares to the Land Capacity for future development for the Cities of Baldwin City, Edgerton, and Gardner, Kansas. This analysis is the foundation for projections of the amount of land that will be needed to accommodate residential and commercial uses between now and the planning horizon of 2030. Although projections through 2040 are possible and somewhat plausible for low growth areas, projections for high growth areas 30 years in advance produce numbers that are so large as to be unreasonable and indefensible.

The demand analysis examines present and future projections of growth for the three cities in the Corridor, informed by the consultant team's study of regional and local economic market forces that will likely influence future land demand. The capacity analysis is an estimate of the amount of future new dwelling units and non-residential uses that could be developed based on the amount of currently undeveloped, environmentally suitable property.

This analysis also includes an environmental vulnerability analysis to determine sensitive land within the study area that should be avoided by development. When combined with the above demand/capacity analysis, this holistic model can balance environmental and economic factors.

The end result of the demand/capacity and the environmental analysis is a rough estimate of the net acres of land that may be needed for new development compared to the amount of land which is both available and appropriate for development. These factors give direction to locating areas for appropriate land uses and future development.

METHODOLOGY

The following sections show how the following were calculated over all and for each of the three cities:

- **Residential Demand** based on population projections
- **Non-Residential Demand** based on employment projections
- **Land Capacity and Developable Area** based on:
  - Determining **Sensitive Environmental Areas**
  - Determining **Developable Areas**

Residential Demand

Residential demand was projected on the basis of population growth resulting in new household growth, which in turn gives rise for a demand in new housing units. Baldwin City and Edgerton have only one set of population and employment projections, which show them not to be high growth areas. Gardner, being closer to the Johnson County growth corridor and also the current location of the BNSF Intermodal Facility, is potentially a very high growth area, and has both a lower and higher growth projection. If the Intermodal facility were to be de-annexed by Gardner and annexed by Edgerton, the employment projections would change.

To determine the amount of land needed for new residential development, the model built upon the population projections and then analyzed the types of residential development and density patterns that had been and were occurring in the three cities. The share of housing types (i.e., single family, multi-family) and household size were taken from the 2000 Census. The density of the variety of housing types was derived from the three Cities' Zoning Ordinance/Development Codes, planning standards, and pattern of growth in developing areas.

The specific sources and approaches to population growth projections for the period of 2000 through 2030 for the three cities, which is the base for residential demand, were as follows:

- **Baldwin City Population Projections Sources and Approach:**
  - Population projections are those contained in the Baldwin City Comprehensive Plan and Retail Market Study
  - Population projections were compared to the population as certified to the Secretary of State by Division of the Budget on July 1, 2008
  - Population projections were compared to the population projections as contained in Horizon 2020
- **Edgerton Population Projections Sources and Approach:**
  - Population projections are those contained in the Edgerton Comprehensive Plan, June 2000. (The 2008 Comprehensive Plan Update shows reported population growth through 2006, but does not show further out in the future).
  - Population projections were compared to the population as certified to the Secretary of State by Division of the Budget on July 1, 2008.

- Population projections were compared to Mid America Regional Council's Metrodataline projections of Population History and Forecast by Census Tract last updated February 2006.

- **Gardner Population Projections Sources and Approach for Lower Growth Scenario:**
  - Population projections through 2009 taken from City of Gardner Transportation Master Plan Land Use Assumptions presentation dated March 23, 2009
  - Projected growth based on building permit projections provided by City: average of 350 new single family homes and 150 multifamily units constructed per year and average household size of 2.8 persons per household.
  - Population projections were compared to the population as certified to the Secretary of State by Division of the Budget on July 1, 2008
  - Conferred with Gardner Community Development Director
  - Population projections were compared to Mid America Regional Council's Metrodataline projections of Population History and Forecast by Census Tract last updated February 2006.
- **Gardner Population Projections Sources and Approach for Higher Growth Scenario:**
  - Population projections through 2009 taken from City of Gardner Transportation Master Plan Land Use Assumptions presentation dated March 23, 2009.
  - Population projections are based in part on past experience of Olathe.
  - Projected growth based on scenario that Gardner's population growth rate follows the same cycle as Olathe.
  - Population projections were compared to the population as certified to the Secretary of State by Division of the Budget on July 1, 2008.
  - Conferred with Gardner Community Development Director.
  - Population projections were compared to Mid America Regional Council's Metrodataline projections of Population History and Forecast by Census Tract last updated February 2006.

Non-Residential Demand

Non-Residential Demand projections were built upon employment projections that came from a variety of sources and were compared to county, state and national trends. To determine the amount of land needed for each of the non-residential sectors, the model relied upon standards and rules of thumb contained in zoning ordinances and development codes and that are used in analyzing development proposals across the country. The factors calculating the amount of space needed

by land use include the amount of square footage needed per employee by sector and floor area ratios typically required by sector.

A major impact on employment, and therefore Non-Residential Demand, will be the proposed Intermodal Facility. The location of the facility appears to be fixed. Whether it will be within the city limits of Gardner or Edgerton or neither will affect either City's market demand figures but not total demand for non-residential acreage in the Corridor.

The specific sources and approaches to projecting Non-Residential for the three cities are as follows:

- **Baldwin City Employment Projections Sources and Approach:**
    - Employment projections are based upon the Retail Market Study Baldwin City, Kansas dated April 23, 2008. These were used based upon the strength of the population projections.
    - Projections assume that there will be no employment growth through 2009 due to current economic conditions, and after that employment will grow at a rate of 2% per year based on Sperlings Best Places website, April 16, 2009.
    - Sector employment shares are based upon 2000 Census.
    - Evaluated current trends for the county, state and nation. Given size of Baldwin City and uncertainty about employment sector trends in general, defaulted to assumptions that proportion by industry sector will remain relatively constant to that shown in 2000 Census Population projections
- **Edgerton Employment Projections Sources and Approach:**
    - Projections assume that there will be no growth through 2009 due to current economic conditions, and after that employment will grow at a rate of 30% over the next 10 years or 3% per year based on Sperlings Best Places website.
    - Sector employment shares are based upon 2000 Census.
    - Evaluated current trends for the county, state and nation. Given size of Edgerton and uncertainty about employment sector trends in general, defaulted to assumptions that proportion by industry sector will remain relatively constant to that shown in 2000 census
    - Employment projections have been compared with the Mid America Regional Council's Metrodataline projections of Employment History and Forecast by Major Industry by Census Tract.
    - Employment projections will change dramatically if Edgerton annexes the BNSF Intermodal facility.
- **Gardner Employment Projections Sources and Approach:**
    - Employment projections are based upon projections contained in the March 23, 2009 presentation regarding City of Gardner Transportation Master Plan Land Use Assumptions. The employment projections are based upon the number of building permits shown in the 2030 Data Comparison under the column entitled "Gardner Staff Version of 2030 TAZ Data".

- Assumptions were evaluated comparing ReferenceUSA employment figures, MARC projections and information regarding proposed Logistic Hub.
- Sector share is assumed to remain stable and share is based on 2000 Census information for Gardner.
- The projections were compared to information included in the BNSF Railway Presentation regarding the Logistic Park. The projections would barely accommodate projected growth for the Logistic Park.
- De-annexation of the BNSF Intermodal facility would result in lowering the employment projections for Gardner.

Land Capacity and Developable Area

The capacity of land is a measure of how much future development the undeveloped lands of the study area can accommodate. Not all of the undeveloped areas, however, are open to development due to environmental constraints and valuable natural resources. Land capacity, accounting for lands that are not already developed and are not environmentally sensitive, is the base to determine what areas of the Corridor are appropriate for different land uses. This, in turn, will in turn inform the type of transportation needed to serve the land uses.

Determining Sensitive Environmental Areas

The US-56 Corridor study area has significant streams, floodplains, wetlands and regionally and locally significant forest and grasslands. Best management practice recommends eliminating these sensitive lands from future development to minimize future development costs, protect valuable recreation areas, protect water quality, reduce flooding, and provide wildlife habitat.

To produce a map of Environmentally Sensitive Areas, key GIS data from a variety of sources was assembled and weighted, producing a graphic classification of land within the study area ranging from highly suitable for development to suitable only for passive recreation. It also highlights areas of regional and local significance and connections between them that will be important to protect in land use and transportation planning. (See US-56 Environmentally Sensitive Areas Study Map)

The factors that were included in a weighted model resulting in the US-56 Environmentally Sensitive Areas Study map of the areas follow:

- Soils: hydrological soils group (soils classified by how well they drain)
- Hydrology: Streams, wetlands, location of alluvium (where water is underneath the surface), and floodplains
- Land Cover: forest, forest edge, scrub, agriculture, dirt, roofs, paved surfaces
- Slopes: Most slopes in the corridor are less than 8% and have little impact on developability. Slopes Greater than 15% were considered as a sensitive resource.
- Land Use: Including parks and public open spaces.

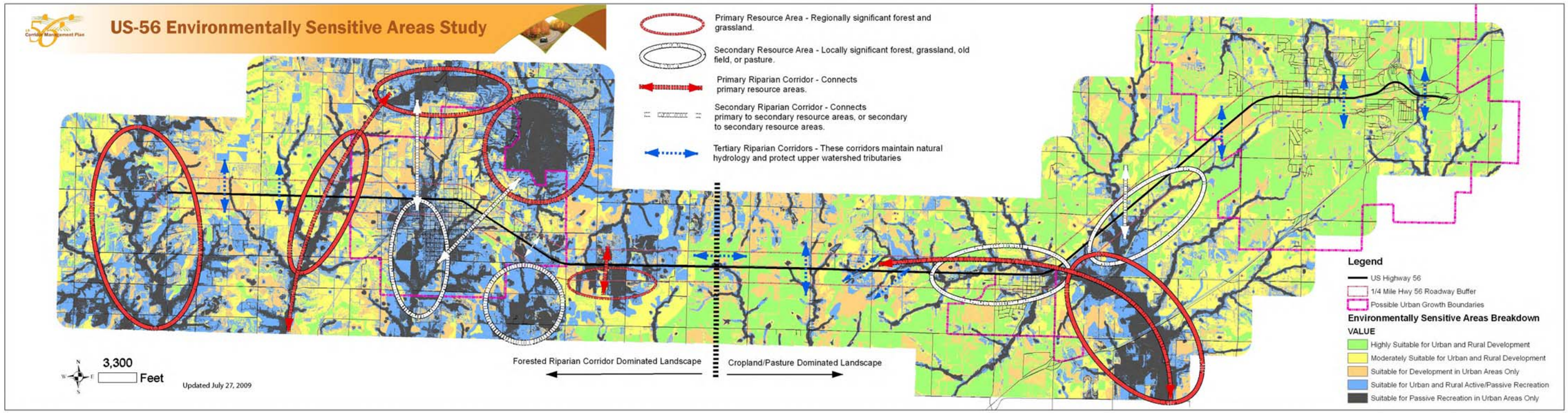
- Habitat: Includes Threatened or endangered flora and fauna habitat per Kansas Department of Wildlife and Parks, and US Fish and Wildlife Service. Most of these plant and animal habits occur in the western side of the US 56 corridor, and are located in and around the Kansas University Biological Reserve north of Baldwin City, and in the riparian corridor on the west boundary of the City of Baldwin, and the corridor running directly through the City of Baldwin.

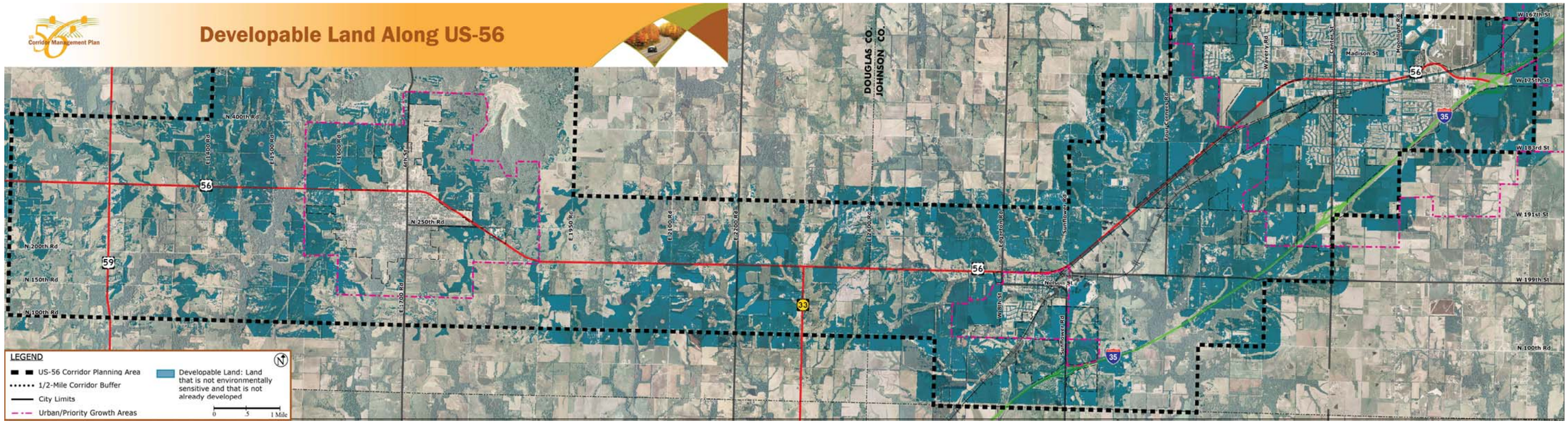
The US-56 Environmentally Sensitive Areas Study map, which resulted from the weighted factors, shows which areas are:

- Highly Suitable for Urban and Rural Development
- Moderately Suitable for Urban and Rural Development
- Suitable for Development in Urban Growth Areas Only
- Suitable for Urban and Rural Active/Passive Recreation Only
- Suitable for Passive Recreation in Urban Areas Only

The data came from the following data sources:

- Kansas Data Access and Support Center (DASC)
- Kansas Department of Wildlife and Parks
- US Fish and Wildlife Service
- Kansas Department of Transportation Environmental Services
- Cities of Baldwin City, Edgerton, and Gardner
- Douglas County
- Johnson County AIMS TranSystems
- Patti Banks Associates


US-56 Environmentally Sensitive Areas Study
Primary Resource Area - Regionally significant forest and grassland.
Secondary Resource Area - Locally significant forest, grassland, old field, or pasture.
Primary Riparian Corridor - Connects primary resource areas.
Secondary Riparian Corridor - Connects primary to secondary resource areas, or secondary to secondary resource areas.
Tertiary Riparian Corridors - These corridors maintain natural hydrology and protect upper watershed tributaries
Forested Riparian Corridor Dominated Landscape
Cropland/Pasture Dominated Landscape
3,300
Feet
Updated July 27, 2009
Legend
US Highway 56
1/4 Mile Hwy 56 Roadway Buffer
Possible Urban Growth Boundaries
Environmentally Sensitive Areas Breakdown
VALUE
Highly Suitable for Urban and Rural Development
Moderately Suitable for Urban and Rural Development
Suitable for Development in Urban Areas Only
Suitable for Urban and Rural Active/Passive Recreation
Suitable for Passive Recreation in Urban Areas Only


Corridor Management Plan
Developable Land Along US-56
DOUGLAS CO.
JOHNSON CO.
N 400th Rd
N 250th Rd
N 200th Rd
N 150th Rd
N 100th Rd
E 1400 Rd
E 1500 Rd
E 1600 Rd
E 1700 Rd
E 1950 Rd
E 2100 Rd
E 2200 Rd
E 2400 Rd
Edgerton Rd
Sunflower Rd
Four Corners Rd
Waverly Rd
Center St
Moonlight Rd
Madison St
Nelson St
W 8th St
W 167th St
W 175th St
W 183rd St
W 191st St
W 199th St
N 100th Rd
56
59
33
35
LEGEND
US-56 Corridor Planning Area
1/2-Mile Corridor Buffer
City Limits
Urban/Priority Growth Areas
Developable Land: Land that is not environmentally sensitive and that is not already developed
0
.5
1 Mile

Determining Developable Area

The Developable Land along US-56 (see facing map) is a composite area map excluding land that is already developed and all vulnerable natural resources. This represents the most progressive natural resource and conservation based strategy for defining the future land development envelope (shown in blue). The total developable land within the study area equals around 23,400 acres, or close to 37 square miles. Around 7,300 acres, over 11 square miles, are within the Urban Growth Boundaries of the three cities. The developable area within the Urban Growth Boundaries of the three cities excludes the two most sensitive categories of land on the map:

- Areas Suitable for Urban and Rural Active/Passive Recreation Only
- Areas Suitable for Passive Recreation in Urban Areas Only

Outside of the Urban Growth Boundaries of the three cities, the developable area excludes the following, which represent all but the top two categories:

- Areas Suitable for Development in Urban Growth Areas Only
- Areas Suitable for Urban and Rural Active/Passive Recreation Only
- Areas Suitable for Passive Recreation in Urban Areas Only

To calculate the capacity of land in the Corridor study area, the total amount of land was calculated and then all of the environmentally sensitive land, according to the categories above for inside/outside Growth Boundaries was subtracted. In addition, the land that is already developed, as determined by parcels identified through data provided by Partners that had a designated non-agricultural existing land use, was also subtracted. The result is that of the total 57,700 acres within the study area, after subtracting areas already developed and environmentally sensitive areas, 23,400 acres are expected to be available for future development, almost a third of which are in urban growth areas within US-56 Corridor Study Area boundaries. It should be noted that 40 to 50 percent of the land within Gardner's growth boundaries are not within the Study Area.

The Developable Land map serves as the initial development envelope for the growth of US-56 Corridor. The protection of the natural drainage ways and forested land will:

- Help protect water quality and reduce flooding,
- Provide connections for trails, animal and plant species that will help assure that the unique, irreplaceable qualities of the Corridor remain,
- Provide for quality recreational areas near urban areas,
- Provide high quality natural settings for new residential development, and
- Provide more than ample developable land for future development.

ANALYSIS RESULTS SUMMARY

Environmental Sensitivity:

Baldwin City:

- Baldwin City is built on a major local riparian (stream) resource that should be connected to other resources to provide human, animal, vegetation, and water quality/stormwater corridors. North of Baldwin City in the parks and reserves are rare species that have a much better survival rate if they are connected to other habitat areas, including those south of US-56. Riparian Corridor Viaducts or Wildlife Underpasses can provide connections under roadways that do not disrupt natural systems.
- High quality subdivisions such as Cedar Creek and The Wilderness in Johnson County are built around sensitive natural areas.

Edgerton:

- Big Bull Creek is on the north side of US-56. The Creek drains to Hillsdale Lake, which is a major recreational resource. Development in Edgerton can affect the water quality of the lake. Edgerton could take advantage of its proximity to this major recreational resource by providing camping, bait and bike shops and other supportive services for outdoor recreation in the area. Maintaining US-56 as a barrier to help preserve the sensitive Big Bull Creek floodplain and riparian could help direct development to more suitable areas to the south and southwest or to the northeast. Federal regulations make it very expensive to build in a floodplain.

Gardner:

- Gardner has minimal adjacent high quality natural resources, compared to Baldwin City or Edgerton. Because of its proximity to Johnson County development, it has already gone through the cycle of natural area to agricultural area to urbanized area. Development has caused clearing very close to the streams. Three locations are suggested for fish, wildlife and human passages in conjunction with stormwater management and riparian restoration opportunities that could in the long term improve water quality.

Developable Acres:

Within each City's growth boundaries:

- Baldwin City: 1,700 net refined developable acres remain available for development
    - Developed and Environmentally Vulnerable Acres: 3,700
- Edgerton: 800 net refined developable acres remain available for development
    - Developed and Environmentally Vulnerable Acres: 600
- Gardner: 4,900 net refined developable acres remain available for development
    - Developed and Environmentally Vulnerable Acres: 4,600

Residential Capacity

Baldwin City and Edgerton have far more residential capacity than projected demand by the year 2030. Gardner may need to build more densely or to expand their growth area to meet residential demand.

An industry rule of thumb is to multiply the demand by two to three times in projecting land use. For Baldwin City and Edgerton, even three times the demand for residential and non-residential acreage could still be accommodated within their current growth boundaries. For Gardner, accommodating two to three times the projected demand would require building at greater densities or expanding growth boundaries.

- Residential Demand for Baldwin City
  - The estimated number of residents by the Year 2030 - approximately 6,400.
  - There is an estimated demand for approximately 1,200 new dwelling units by the Year 2030 (290 acres)
- Residential Demand for Edgerton
  - The estimated number of residents by the Year 2030 - approximately 2,800.
  - There is an estimated demand for approximately 500 new dwelling units by the Year 2030 (100 acres)
- Residential Demand for Gardner
  - The estimated number of residents by the Year 2030, approximately 47,800.
  - There is an estimated demand for approximately 14,300 new dwelling units by the Year 2030 (3,600 acres)

Non-Residential Capacity

Baldwin City and Edgerton have far more non-residential capacity than projected demand by the year 2030. Gardner may need to build more densely in residential land to free up non-residential land or to expand their growth area to meet demand.

- Non-Residential Demand for Baldwin City
  - The estimated number of new employees is 600 by the Year 2030, approximately.
  - There is an estimated demand for approximately 40 acres of non-residential land by the Year 2030.
- Non-Residential Demand for Edgerton
  - The estimated number of new employees is 200 by the Year 2030, approximately.
  - There is an estimated demand for approximately 20 acres of non-residential land by the Year 2030.
- Non-Residential Demand for Gardner
  - The estimated number of new employees is 11,600 by the Year 2030, approximately, including the BNSF Intermodal facility.

- There is an estimated demand for approximately 1,300 acres of non-residential land by the Year 2030, including the BNSF Intermodal facility.

Demand Detail - Tables

The following pages provide details on residential and non-residential demand for the three cities.

RESIDENTIAL LAND USE DEMAND -- SUMMARY
CITY OF BALDWIN CITY, KANSAS - U.S. 56 CORRIDOR PROJECT
3-Jun-09

	2000	2010	2020	2030		Total
POPULATION FORECAST	3,460	5,153	5,734	6,350		
SINGLE FAMILY						
New Households		545	187	198		931
New Dwelling Units		557	191	203		952
Total Acres Consumed		159.3	54.7	57.9		271.9
100% @ 3.5 du/acre		159.3	54.7	57.9		271.9
MULTI-FAMILY						
New Households		108	37	39		184
New Dwelling Units		118	40	43		201
Total Acres Consumed		9.8	3.4	3.6		16.7
100% @ 12 du/acre		9.8	3.4	3.6		16.7
TOTAL NEW HOUSEHOLDS		653	224	238	-	1,115
TOTAL NEW DWELLING UNITS		675	232	246	-	1,153
TOTAL ACRES CONSUMED		169.1	58.0	61.5	-	288.6

NON-RESIDENTIAL LAND USE DEMAND -- SUMMARY
CITY OF BALDWIN CITY, KANSAS - U.S. 56 CORRIDOR PROJECT

	2000	2010	2020	2030		TOTAL
SERVICE/OFFICE						
Employment projections	819	794	967	1,179		
Employment Increase		(25)	174	212		360
Rate of Employment Growth		-3%	22%	22%		44%
Built Floor Area Generated (SF)		-	43,447	52,962		96,409
Land Area (SF)		-	255,573	311,542		567,114
Net Acres Consumed		0.0	5.9	7.2		13.0
RETAIL						
Employment projections	130	126	153	187		
Employment Increase		(4)	28	34		57
Rate of Employment Growth		-3%	22%	22%		43%
Built Floor Area Generated (SF)		-	13,094	15,962		29,056
Land Area (SF)		-	50,362	61,391		111,753
Net Acres Consumed		-	1.2	1.4		2.6
MANUFACTURING						
Employment projections	289	274	334	407		
Employment Increase		(15)	60	73		118
Rate of Employment Growth		-5%	22%	22%		41%
Built Floor Area Generated (SF)		-	89,891	109,577		199,468
Land Area (SF)		-	449,455	547,884		997,339
Net Acres Consumed		-	10.3	12.6		22.9
WAREHOUSING						
Employment projections	71	68	83	102		
Employment Increase		(2)	15	18		31
Rate of Employment Growth		-3%	22%	22%		43%
Built Floor Area Generated (SF)		-	11,985	14,610		26,596

	2000	2010	2020	2030		TOTAL
Land Area (SF)		-	51,002	62,171		113,173
Net Acres Consumed		-	1.2	1.4		2.6
TOTAL						
Employment projections	1,309	1,262	1,538	1,875		
Employment Increase		(48)	276	337		565
Rate of Employment Growth		-4%	22%	22%		43%
Built Floor Area Generated (SF)		-	158,418	193,111		351,529
Land Area (SF)		-	806,392	982,987		1,789,379
Net Acres Consumed		-	18.5	22.6		41.1

RESIDENTIAL LAND USE DEMAND -- SUMMARY
CITY OF EDGERTON, KANSAS - U.S. 56 CORRIDOR PROJECT
DRAFT
3-Jun-09

	2000	2010	2020	2030	TOTAL
POPULATION FORECAST	1,440	1,872	2,211	2,777	
SINGLE FAMILY					
New Households		138	108	181	427
Additional Dwelling Units		141	111	185	437
Total Acres Consumed		40.3	31.6	52.9	124.8
100% @ 3.5 du/acre		40.3	31.6	52.9	124.8
MULTI-FAMILY					
New Households		5	4	6	14
Additional Dwelling Units		5	4	6	15
Total Acres Consumed		0.4	0.3	0.5	1.2
100% @ 12 du/acre		0.4	0.3	0.5	1.2
TOTAL NEW HOUSEHOLDS		143	112	187	441
TOTAL NEW DWELLING UNITS		146	115	191	452
TOTAL ACRES CONSUMED		40.7	32.0	53.4	126.1

NON-RESIDENTIAL LAND USE DEMAND -- SUMMARY
CITY OF EDGERTON, KANSAS - U.S. 56 CORRIDOR PROJECT

	2000	2010	2020	2030		TOTAL
SERVICE/OFFICE						
Employment projections	148	136	176	229		
Employment Increase		(12)	41	53		82
Rate of Employment Growth		-8%	30%	30%		55%
Built Floor Area Generated (SF)		-	10,148	13,182		23,331
Land Area (SF)		-	59,697	77,543		137,240
Net Acres Consumed		-	1.4	1.8		3.2
RETAIL						
Employment projections	55	51	66	86		
Employment Increase		(4)	15	20		30
Rate of Employment Growth		-8%	30%	30%		55%
Built Floor Area Generated (SF)		-	7,211	9,367		16,578
Land Area (SF)		-	27,735	36,027		63,762
Net Acres Consumed		-	0.6	0.8		1.5
MANUFACTURING						
Employment projections	126	116	151	196		
Employment Increase		(10)	35	45		70
Rate of Employment Growth		-8%	30%	30%		55%
Built Floor Area Generated (SF)		-	51,980	67,519		119,499
Land Area (SF)		-	259,900	337,594		597,494
Net Acres Consumed		-	6.0	7.8		13.7
WAREHOUSING						
Employment projections	45	41	54	70		
Employment Increase		(4)	12	16		25
Rate of Employment Growth		-8%	30%	30%		55%
Built Floor Area Generated (SF)		-	9,857	12,804		22,661
Land Area (SF)		-	41,944	54,483		96,428
Net Acres Consumed		-	1.0	1.3		2.2

	2000	2010	2020	2030		TOTAL
TOTAL						
Employment projections	374	344	446	580		
Employment Increase		(30)	103	133		206
Rate of Employment Growth		-8%	30%	30%		55%
Built Floor Area Generated (SF)		-	79,196	102,872		182,068
Land Area (SF)		-	389,276	505,647		894,923
Net Acres Consumed		-	8.9	11.6		20.5

RESIDENTIAL LAND USE DEMAND -- SUMMARY
CITY OF GARDNER, KANSAS - U.S. 56 CORRIDOR PROJECT
Scenario Based on Building Permit Information Contained in Transportation Master Plan Update Land Use Assumptions, March 23, 2009
3-Jun-09

	2000	2010	2020	2030	TOTAL
POPULATION FORECAST	9,396	19,753	33,753	47,753	
SINGLE FAMILY					
New Households		3,144	4,250	4,250	11,644
Additional Dwelling Units		3,238	4,377	4,377	11,992
Total Acres Consumed		925	1,251	1,251	3,426
100% @ 3.5 du/acre		925	1,251	1,251	3,426
MULTI-FAMILY					
New Households		559	755	755	2,069
Additional Dwelling Units		615	831	831	2,278
Total Acres Consumed		36	49	49	134
100% @ 17 du/acre		36	49	49	134
TOTAL NEW HOUSEHOLDS		3,699	5,000	5,000	13,699
TOTAL NEW DWELLING UNITS		3,853	5,208	5,208	14,270
TOTAL ACRES CONSUMED		961.3	1,299.5	1,299.5	3,560.3

NON-RESIDENTIAL LAND USE DEMAND – SUMMARY
Scenario Based on Building Permit Information Contained in Transportation Master Plan Update
Land Use Assumptions, March 23, 2009
CITY OF GARDNER, KANSAS - U.S. 56 CORRIDOR PROJECT

	2000	2010	2020	2030		TOTAL
SERVICE/OFFICE						
Employment projections	2,025	2,481	3,208	3,936		
Employment Increase		456	727	727		1,911
Rate of Employment Growth		23%	29%	23%		94%
Built Floor Area Generated (SF)		114,021	181,830	181,830		477,681
Land Area (SF)		670,712	1,069,588	1,069,588		2,809,888
Net Acres Consumed		15.4	24.6	24.6		64.5
RETAIL						
Employment projections	553	1,459	2,442	3,426		
Employment Increase		906	984	984		2,873
Rate of Employment Growth		23%	29%	23%		94%
Built Floor Area Generated (SF)		430,245	467,240	467,240		1,364,725
Land Area (SF)		1,654,788	1,797,077	1,797,077		5,248,942
Net Acres Consumed		38.0	41.3	41.3		120.5
MANUFACTURING						
Employment projections	1,297	1,336	1,465	1,595		
Employment Increase		39	130	130		298
Rate of Employment Growth		3%	10%	9%		23%
Built Floor Area Generated (SF)		58,302	194,340	194,340		446,982
Land Area (SF)		291,510	971,700	971,700		2,234,910
Net Acres Consumed		7	22	22		51
WAREHOUSING						
Employment projections	533	1,478	4,269	7,059		
Employment Increase		945	2,791	2,791		6,526
Rate of Employment Growth		177%	189%	65%		1224%
Built Floor Area Generated (SF)		1,577,807	4,660,670	4,660,670		10,899,147
Land Area (SF)		6,714,072	19,832,638	19,832,638		46,379,349
Net Acres Consumed		154	455	455		1,065

	2000	2010	2020	2030		TOTAL
TOTAL						
Employment projections	4,408	6,754	11,385	16,016		
Employment Increase		2,346	4,631	4,631		11,608
Rate of Employment Growth		53%	69%	41%		263%
Built Floor Area Generated (SF)		2,180,375	5,504,080	5,504,080		13,188,535
Land Area (SF)		9,331,083	23,671,003	23,671,003		56,673,089
Net Acres Consumed		214.2	543.4	543.4		1,301.0

Public Participation Approach for the US-56 Corridor Management Plan

Douglas County
Johnson County
City of Baldwin City
City of Edgerton
City of Gardner
Lawrence/Douglas County Metropolitan Planning Organization
Mid-America Regional Council
Kansas Department of Transportation

March 2009

Introduction – Creating and Managing Great Expectations

The *US-56 Corridor Management Plan* will be a 15-month study effort between the Kansas Department of Transportation (KDOT) and its partners:

- Douglas County,
- Johnson County,
- Cities of Baldwin City, Edgerton, and Gardner,
- Lawrence/Douglas County Metropolitan Planning Organization (MPO),
- Mid-America Regional Council (MARC)

The 22- mile US-56 corridor begins just 10 miles south of Lawrence, at the US-59 intersection, heads east through Baldwin City, Edgerton and Gardner, ending at I-35 at approximately West 175th Street.

This complex corridor includes long stretches of rural and agricultural uses, major parks and natural areas. The population is centered in small cities that offer a full range of services both commercial and institutional. Because the eastern section of the corridor is well-served by highways, interstates, rail and air, it includes existing and proposed major industrial uses. The challenge of the US- 56 Corridor Management Plan is to:

- Build the relationship between community character, land use and transportation
- Identify an appropriate roadway network
- Zero in on implications for roadway design
- Identify short, interim and long range solutions

Community concerns about the US 56 corridor are likely to varied given the varied character of the corridor.

The consultant team for the *US-56 Corridor Management Plan* lead by TranSystems, with Patti Banks Associates, the Peridian Group and Stinson Morrison Hecker, LLP, will work with KDOT and Partners on a three-part study that includes
:

- Foundation of Facts: Assemble today's facts, issues and concerns regarding land use, transportation, and development factors.
- Forecast the Future: Analyze and report on land use and development, natural resources, local road and highway network, traffic volumes and patterns, and simulation modeling.

- Formulate a Fit: Integrate land use, transportation, access management, community character considerations and all modes of transportation into a preferred alternative and appropriate implementation tools.

The public involvement approach for the *US-56 Corridor Management Plan* will focus on:

- Learning from and Informing the Public: Determine issues and attitudes of the general public through a statistically valid community survey; keep the public updated and informed via a project web site, news releases, and public meetings.

- Involving Project Partners, Community Leaders and Stakeholders throughout the process to incorporate a wide range of viewpoints that reflect both the interests of a particular segment and the corridor as a whole in forging the direction of the Corridor Management Plan.

The Plan includes a statement of its goals and intent, an initial list of stakeholders, and an overview of the public involvement process, tools, and timing.

Goals and Intent

The goals for the *US-56 Corridor Management Plan* public participation process include:

- Community Representation: Design the process to reflect a wide range of community interests and leadership.
- Community Input: Design the process so that input from all sources, Advisory Committee, Stakeholders, Public Officials and the Public is timely, useful, used.
- Community Trust: Create trust that the information received is complete, timely and honest.
- Community Advocacy: Ensure that at the end of the process there will be support for the Corridor Management Plan.
- Community Understanding: Promote clear understanding of planning process and products through meetings, workshops and use of the project web site.

Stakeholders

Stakeholders representative of different interests and geographic areas are key to the US-56 public participation process.

Stakeholders are individuals and groups who are affected by or have an interest in a particular project or action. Stakeholders representative of different interests and geographic areas are key to the US-56 public participation process. They will be involved throughout the process in an advisory and interactive approach through the Advisory Committee, group interviews, and workshops. Corridor stakeholders include government, civic, and institutional representatives, interest

groups, community leadership, representatives of business groups and the development community, and interested citizens. *(See the attached draft list of U- 56 stakeholders by area and organization)*.

Process

Public participation will be integrated throughout the three phases of the planning process. Below is a summary of the phases and input to be gathered with each:

- Phase 1: Foundation of Facts: Part of the facts to be assembled in this phase will come from the Community Survey as a baseline measure of community concerns, and also from a day-long series of stakeholder interviews and the first Advisory Committee meeting. This phase will include the launching of the web site informing the public through media venues. This phase will culminate with Workshop #1: Community Issues (see below for detail)

- Phase 2: Forecast the Future: This phase will work through land use and transportation alternative scenarios to the selection of a preferred alternative with input from the second Advisory Committee Meeting, a public officials briefing and feedback, and Workshop # 2: Public Policy (see below for detail). This phase includes web site updates and distributing a press release covering the workshop from Phase 1.

- Phase 3: Formulate a Fit: This phase will integrate land use, transportation, access management, community character considerations and all modes of transportation into a preferred alternative and appropriate implementation tools. Since the success of implementation will depend on community support, there will be crucial input incorporated from the third advisory committee, the second public official's briefing and the third interactive workshop: Community Character Assessment (see below for detail). A fourth Advisory Committee meeting will be held to review results from the third workshop, the draft Corridor Management Plan, and to prepare for the Public Open House meetings (see below for detail). This phase includes web site updates and maintenance of the web site for 4 months after corridor plan deliverance. There will be a press release to highlight the corridor management plan and the public meeting.

Stakeholders work through alternative scenarios

Each meeting involving the community and stakeholders will begin with an orientation as to where the particular meeting falls in the scope of planning process, what the role of the participants is, and what decisions can and cannot be made. General project information will be included in presentations and/or boards. KDOT staff will be "the face" of the project and the consultant team will support them.

The public making choices

Tools

Advisory committee meetings, public officials' briefings, stakeholder meetings, workshops, public meetings, internet, and the media will be used to share information about and gather feedback for the master planning process. The tools are described below:

- Community Survey: A community survey will be developed and conducted early in the planning process to help identify corridor issues and to reflect in a statistically valid way the opinions of the whole corridor and individual communities. The survey will be mail-in with follow-up phone calls to assure statistical validity at a corridor level of plus or minus 4% and for each of the 3 cities at a level of plus or minus 7%.

- Advisory Committee Meetings: The committee will supplement the KDOT and Partners group, which consists of KDOT and consultant staff and two representatives of each of the partner counties, communities, and organizations. The Advisory Committee will be a representative group of government, civic, development, and interest group leaders from the two counties and three cities in the corridor. The Advisory Committee as representative of a wide range of community interests will help forge a corridor wide solution for US-56 that respects local concerns.

- Stakeholder Meetings: Early in the Foundation of Facts phase of the project, a one-day series of small group round table discussions with selected stakeholders will be held at a centralized location in the corridor. Follow-up phone interviews will be scheduled to fill in any geographic or subject gaps in the group interviews.

- Public Officials Briefings: There will be two rounds of briefings for public officials at two different times in the process. The purpose is to keep elected officials and local leaders informed on project progress and to get their responses before key workshops. The first round, at two different locations in the corridor, will be before the Public Policy Workshop. The second round, also at two different corridor locations will be before the Community Character Assessment Workshop and Public Open Houses.

- Workshops: There will be a workshop during each of the three phases of the project, Foundation of Facts, Forecast the Future, and Formulate a Fit. The workshops are as follows:

  - Workshop # 1 - Community Issues: The results of the Community Survey, stakeholder interviews, data collection and analysis and Advisory and Partners Committee review would be presented for discussion. The product of the workshop would be a refined list of issues organized in categories, to be addressed in the planning process.
  - Workshop # 2 – Public Policy: The results of project team, Partners and Advisory Committees review of existing policy direction, land capacity demand, sensitive resources assessment, traffic data and access management options would be presented. The invitees, including KDOT and Partners, Advisory Committee, public officials and stakeholders, would review and prioritize alternative policy options for the corridor in terms of land use and transportation with the result being informed consent on preferred solutions.
  - Workshop #3 – Community Character Assessment: New results of development codes gap analysis, review of existing community character, the selected development scenario and committees' reviews would be presented to workshop participants. The result should be informed consent on roadway design concepts; roadway elements needed to support the selected development scenario; key character elements to be preserved and enhanced; recommendations of potential public policy support and development code changes to support transportation, land use and design decisions.

Interactive stakeholder workshops will take discussions to a higher level to refine recommendations.

- Public Meetings: The Public Open House meeting, held at two different locations in the corridor, will be at the culmination of the planning process to present the draft corridor management plan. The open house format will encourage circulation among a series of exhibits

staffed by the project team. There will be a fact sheet to provide details specific to corridor segments. E-mail, website and media releases will encourage attendance by the project contact list and the general public.

- Internet: A project website will be developed and updated most months to include project materials, meeting results, project progress and an invitation to the Public Open House Meetings. The public will be directed to the website through the KC Metro page available at www.ksdot.org .

- Media: Distribution of Press Release will coincide with the launching of the project website. Two additional press releases will be issued, the first to cover the results of the Issues Workshop and to encourage use of the project web site, and the second to highlight the draft Corridor Management plan and encourage attendance at the public open houses at two locations in the corridor.

Timing

Steering committee meetings will be held throughout the US-56 Corridor planning process. Meetings with public officials, targeted stakeholders, and the general public will happen at key points. See attached schedule.

Meetings dates/task dates for the US-56 Corridor Master Plan								
	Foundation of Facts				Forecast the Future			
	2009							
	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Advisory Committee Meetings				Wed May 6 @ 1:30pm		Wed Jul 15 @ 1:30pm		
Workshop				Wed May 20 @ 5:00 – 7:00pm				Wed Sep 16 @ 5:00 – 7:00pm
Public Officials Briefings						Tues Jul 28; Wed Jul 29		
Stakeholder Interviews			Thurs Ap.23@ 8:30 – 5:00					
Community Survey		Q's Complete 3/16	Report Complete 4-20					
Public Open Houses								
Website			Web Launch Mon Ap 27		Thurs Jun 11	Thurs July 23	Thurs Aug 20	Tues Sep 29
Media Release (MR)			Mon Ap 27		Thurs Jun 11			
KDOT Partners		Wed Mar 11@ 1:30pm	Wed Ap 29 @ 1:30 pm		Wed Jun 24 @ 1:30pm			Wed Sep 30 @ 1:30pm
Internal Staff	Thurs Feb 19			Wed May 27			Wed Aug 26	

Meetings dates for the US-56 Corridor Master Plan								
	Formulate a Fit							
				2010				
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May
Advisory Committee Meetings	Wed Oct 14 @ 1:30pm		Wed Dec 16 @ 1:30pm					
Workshop		Wed Nov 18 @ 5:00 – 7:00pm						
Public Officials Briefings	Tues Oct 27; Wed Oct 28							
Public Open Houses - one each in Douglas & Johnson Counties, most probably from 5:00pm – 7:00pm				Tues Jan19-JoCo; Thurs Jan 21-DougCo				
Website	Thurs Oct 15	Mon Nov 30	Wed Dec 16		Tues Feb 2		Wed April 28	
Media Release (MR)				Tues Jan 5				
KDOT Partners			Wed Dec 2 @ 1:30pm		Wed Feb 10 @ 1:30pm		Wed April 7 @ 1:30pm	
Internal Staff				Wed Jan 6				

US-56 Corridor Management Plan

Welcome – What You'll See

Purpose of the Plan

The purpose of the Corridor Management Plan is to improve access management and capacity along US-56 in a way that supports the needs of the corridor and its communities.

Because of an increased potential for economic development and sensitivity to the amount of traffic new development could cause in the area, the Kansas Department of Transportation (KDOT) and its partners have been and will continue to work together during the 15-month planning process on a Corridor Management Plan for a 22-mile stretch of US-56. The study area spans from US-59 west of Baldwin City in Douglas County to I-35 on the northeast edge of the city of Gardner in Johnson County. The Partners include: the Cities of Baldwin City, Edgerton, Gardner, Douglas and Johnson Counties, the Metropolitan Planning Organizations of Lawrence-Douglas County and the Mid-America Regional Council.

Do You Have Questions?

Representatives from KDOT and the planning team are here to answer your questions. For instance....

- **What is corridor management planning?**
  Because highway projects are very complex and take several years to study, design, and build, KDOT uses a corridor management planning process to consider the variety of factors (physical, engineering, environmental, and social and economic constraints as well as plans for future land use and development, and community character) that can have an impact on a particular transportation route.

- **When can I expect to see changes taking place on US-56?**
  No funding currently exists for any of the conceptual improvements presented in the Plan. When funding does become available, the concepts must be further refined before implementation. Changes in access shown are conceptual in nature and are subject to a case-by-case review. Such access modifications may occur with a change in use of the property, when roadway improvements are constructed, and/or when a safety issues needs to be addressed.

- **How can I provide input?**
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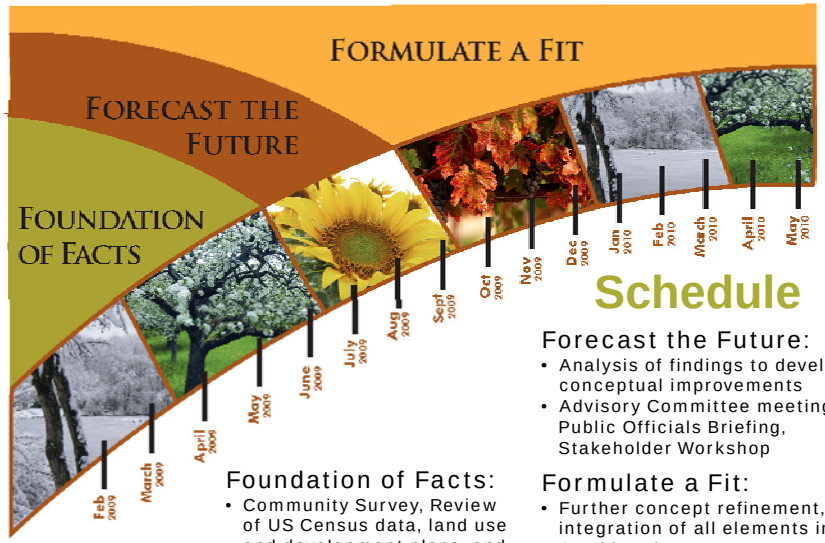

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Foundation of Facts:
- Community Survey, Review of US Census data, land use and development plans, and traffic counts
- Stakeholder interviews, Advisory Committee meeting, and Stakeholder workshop

Forecast the Future:
- Analysis of findings to develop conceptual improvements
- Advisory Committee meeting, Public Officials Briefing, Stakeholder Workshop

Formulate a Fit:
- Further concept refinement, integration of all elements into Corridor Plan
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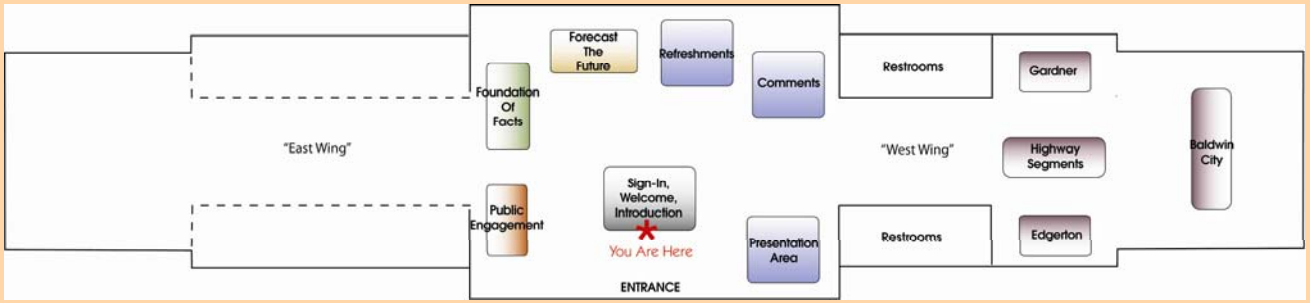

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Tonight's meeting is an informal open house for the community to learn more about the US-56 Corridor Management Plan. You can:

- Talk with team members
- View project maps
- Discuss recommendations for access management, land use, and community character, and
- Give us your input

US-56 Corridor Management Plan

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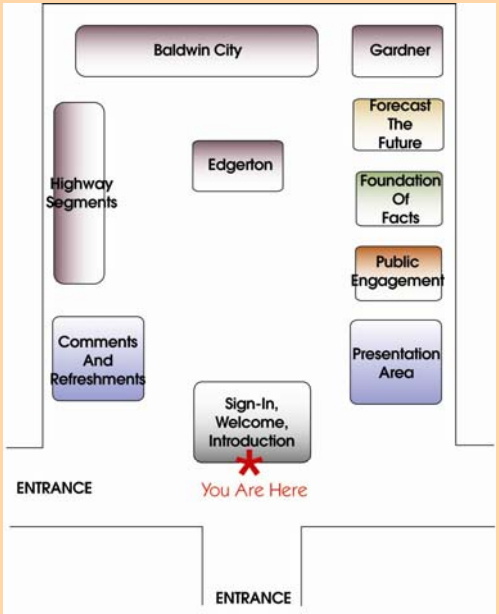

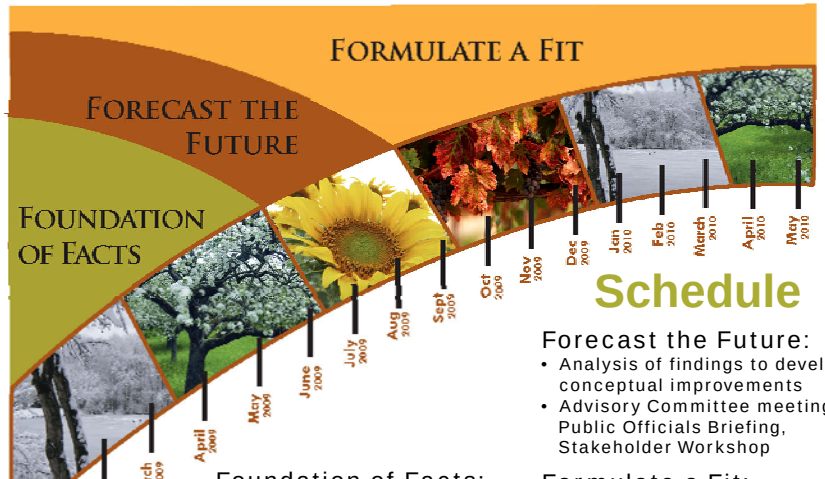

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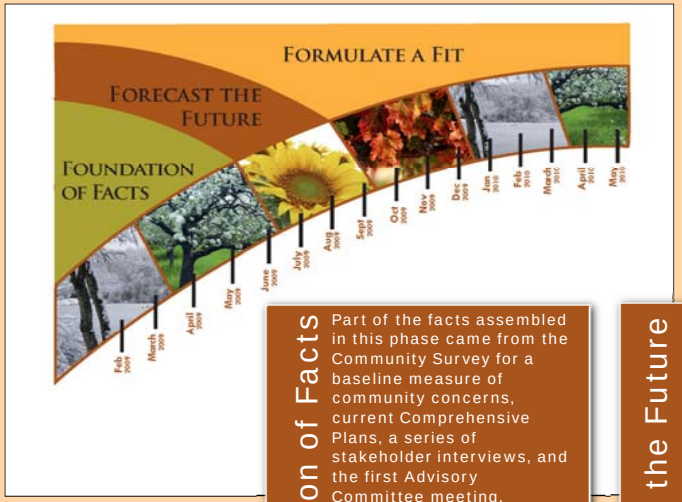
US-56 Corridor Management Plan

Public Process

Developing the Plan

KDOT, its partners, and a diverse group of stakeholders were involved in the planning process. They participated in Advisory Committee meetings, group interviews, and workshops during a 15-month planning process that will end in the spring of 2010. Their primary role has been to offer viewpoints that reflect both the interests of particular areas of the corridor and those of the corridor as a whole. The overall goal for the stakeholder groups is to collaborate with KDOT and its partners in an effort to determine what, if any, changes are necessary to respond to community needs.



One Phase at a Time

The US-56 Corridor Management Plan has been conducted in three phases: Foundation of Facts, Forecast the Future, and Formulate a Fit. With your help, the team is currently working through the third and final phase of the planning process.

Foundation of Facts

Part of the facts assembled in this phase came from the Community Survey for a baseline measure of community concerns, current Comprehensive Plans, a series of stakeholder interviews, and the first Advisory Committee meeting.

This phase concluded with the Community Issues Workshop, resulting in a list of issues that were addressed throughout the planning process.

Forecast the Future

KDOT and its partners worked though land use and transportation concepts with the goal of developing recommendations based on input from the second Advisory Committee meeting, a Public Officials Briefing, and a Land Use and Corridor Character Workshop where a consensus land use scenario and varying access management and corridor character elements were reviewed.

Formulate a Fit

This phase integrates land use, transportation, access management, and community character considerations into the Corridor Management Plan along with appropriate implementation tools.

Input will be incorporated from the final Advisory Committee meeting, a Public Officials Briefing, Corridor Assessment Workshop, and Public Open Houses on such aspects as the roadway elements and community character of US-56.

Advisory Committee

- City of Baldwin City
- City of Edgerton
- City of Gardner
- Douglas County
- Johnson County

Stakeholders

- Local Government
- Business Owners
- Transportation Specialists
- Public Officials
- Land Owners
- Chamber of Commerce
- Environmental Associations

KDOT/Partners

- KDOT
- Cities of Baldwin City, Edgerton, and Gardner
- Douglas and Johnson Counties
- Lawrence-Douglas County MPO
- MARC

US-56 Corridor Manage-ment Plan

You!

Seeking Input: What You've Said

Community Survey Summary

A survey of 742 corridor residents was conducted to gather opinions regarding US-56.

Major findings include:

- 83% of those surveyed indicated they felt either "very safe" or "somewhat safe" driving the corridor.
- Regarding the number of driveways entering onto US-56, residents felt there were "too many" driveways entering onto US-56 primarily through Gardner (38%) and Baldwin City (19%).
- There was support from those surveyed for directing future residential development inside or near the cities (86%).

Stakeholder Interview Summary

Questions were asked related to future development, character of the corridor, and recommendations for roadway improvements. Highlights of the interview include:

- The US-56 corridor is very diverse in terms of land use and character, and it is important to preserve those unique identities.
- There are concerns with truck traffic, sight distances at key locations, and narrow shoulders. Safety (including that of pedestrians) is a top priority.
- Various improvements suggested by stakeholders include: improve sight distance at key locations; add travel lanes or dedicated turn lanes at specific intersections to improve flow and alleviate congestion; and add shoulders for disabled vehicles, and emergency management needs.

US-56 Corridor Management

Low, High-Growth Scenarios

Forecast Land Use Scenarios

The US-56 Corridor Management Plan is a comprehensive analysis of both land use and transportation elements, mutually reinforcing each other and complementing the unique character zones found along the corridor.

To help guide future development along US-56, two land use scenarios were developed with the goal of framing an agreed upon or "Consensus" Land Use Scenario. The methodology and assumptions for developing the "Low Growth Development Scenario" and "High Growth Development Scenario" are presented here. The Land Demand Analysis projects the amount of land needed to accommodate residential and non-residential uses between now and the planning horizon of 2030.

Methodology Overview for Scenario Development

Assumed:

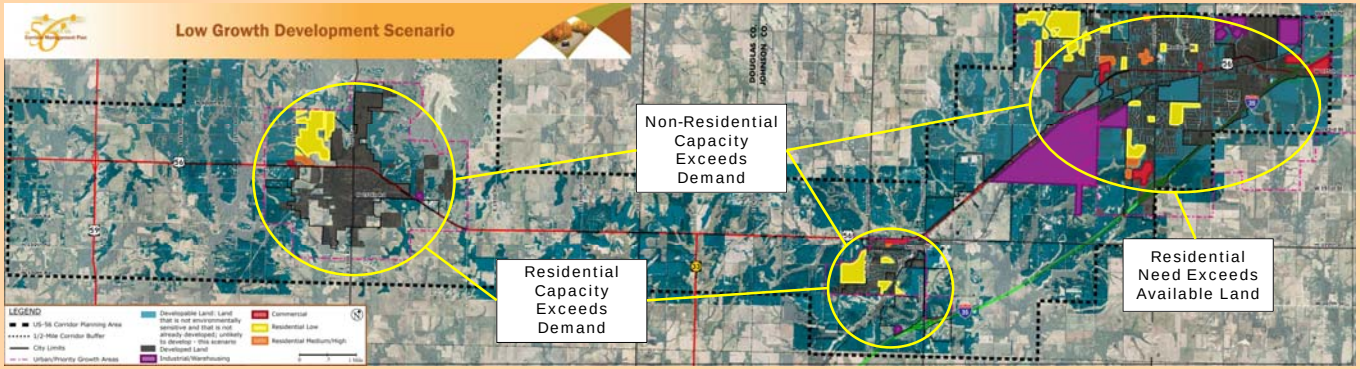
- Land use considerations were confined to the Study Area boundaries, and therefore did not include all of Gardner
- Adopted Land Use Plans from the three Cities were used as the basis for developing the scenarios
- Infrastructure constraints such as the provision of sewer and water

Avoided:

- Environmentally sensitive areas
- Developed areas within the cities' growth boundaries

Applied:

- Residential and Non-Residential market demand based on population and employment projections in growth areas utilizing US Census data, building permit trends, MARC Metrodataline Projections of Population and Employment, Secretary of State by Division of the Budget, and other sources
- Study Partners, Advisory Committee, and Stakeholder input

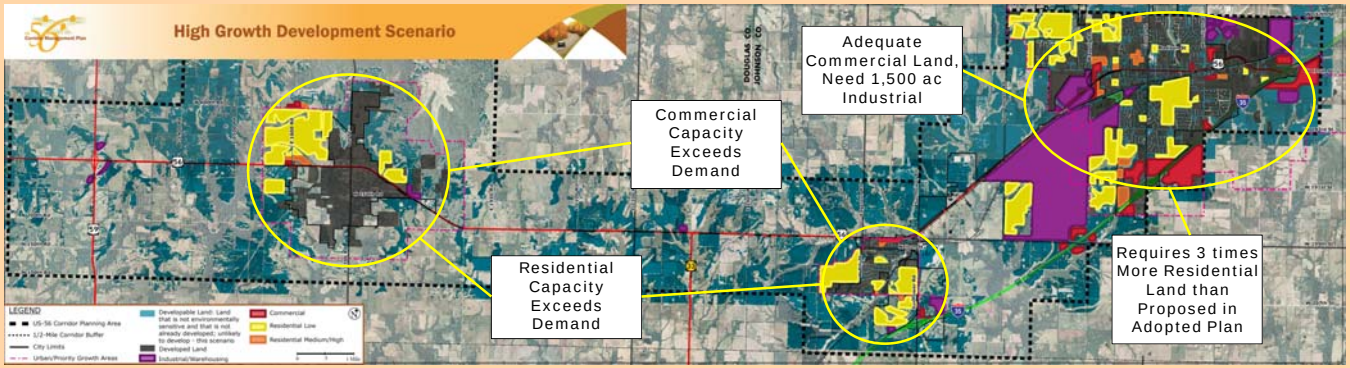


Low-Growth Scenario Highlights

- Demand was calculated to equal the market demand
- Focusing upon infill first, and then developing around key intersections
- Baldwin City and Edgerton have far more Residential and Non-Residential capacity than projected demand by the year 2030
- Gardner may need to build more densely or expand their growth area to meet future demand.

High-Growth Scenario Highlights

- Demand was calculated to be 3 times the market demand
- Avoided areas difficult to serve with sewers unless needed for market demand
- For Baldwin City and Edgerton, even 3 times the demand for Residential and Non-Residential acreage could be accommodated
- For Gardner, accommodating 3 times the projected demand would require building at greater densities or expanding growth boundaries



US-56 Corridor Management Plan

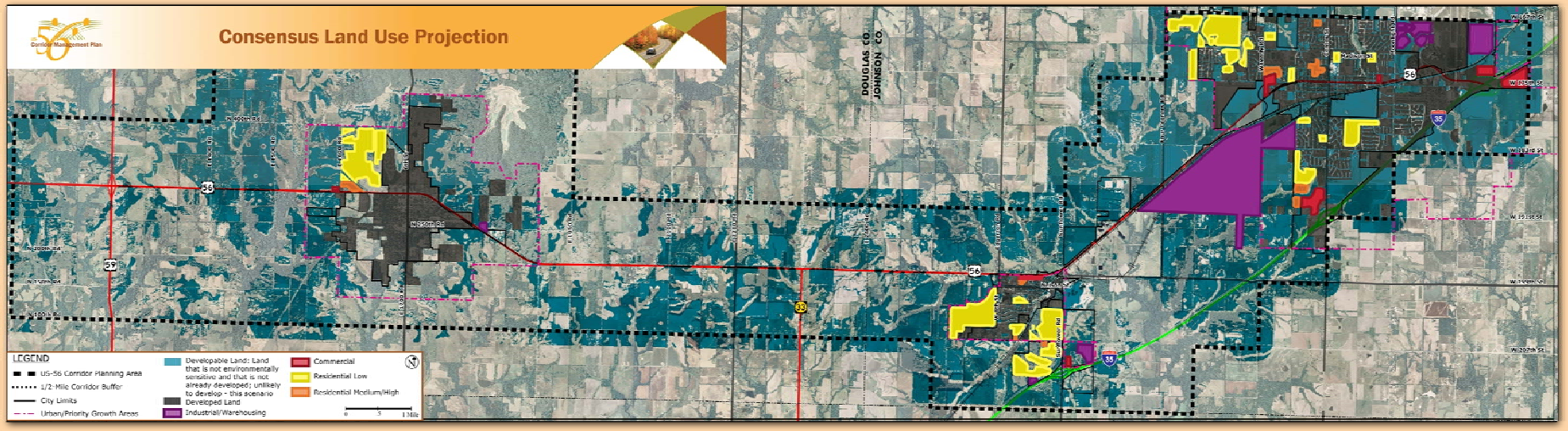
Consensus Land Use

Consensus Land Use Scenario

The Consensus Land Use Scenario is an integration of the Low Growth and High Growth Scenarios, and reflects input from Advisory Committee, Partners, and Stakeholders. It includes Low Growth Scenarios for Baldwin City and Gardner, and a High Growth Scenario for Edgerton. It was determined that no development would occur at regional intersections along rural segments of the corridor.

It is important to note that when performing the 2030 market demand analysis to determine initial land capacity and demand, the employment projections and estimated acreage assumed the proposed BNSF Intermodal Facility would be located within the Gardner city limits.

As the planning process continued, the assignment of the projections associated with the proposed Intermodal Facility to a specific municipality began to change. Consequently, the assignment of employment projections may change to the Cities. Nonetheless, the proposed Intermodal Facility is considered a committed project and its projections are included as part of the Consensus Scenario.



Baldwin City Low-Growth Scenario

POPULATION FORECAST FOR 2030
2000 Population: 3,460
2030 Population Forecast: 6,400
Estimated Number of New Dwelling Units: 1,200

EMPLOYMENT FORECAST FOR 2030
2000 Employment: 1,309
2030 Employment Forecast: 1,875

NET REFINED DEVELOPABLE LAND
1,700 acres available for development;
less 290 acres for residential and
less 40 acres for non-residential development
EQUALS 1,370 acres remaining developable

Edgerton High-Growth Scenario

RESIDENTIAL DEMAND FOR 2030
2000 Population: 1,440
2030 Population Forecast: 2,800
Estimated Number of New Dwelling Units: 500

EMPLOYMENT FORECAST FOR 2030
2000 Employment: 374
2030 Employment Forecast: 580

NET REFINED DEVELOPABLE LAND
800 acres available for development;
less 100 acres for residential and
less 20 acres for non-residential development
EQUALS 680 acres remaining developable

Gardner Low-Growth Scenario

RESIDENTIAL DEMAND FOR 2030
2000 Population: 9,396
2030 Population Forecast: 47,800
Estimated Number of New Dwelling Units: 14,300

EMPLOYMENT FORECAST FOR 2030
2000 Employment: 4,408
2030 Employment Forecast: 16,016

NET REFINED DEVELOPABLE LAND
4,900 acres available for development;
less 3,600 acres for residential and
less 1,300 acres for non-residential development
EQUALS 0 acres remaining developable

US-56 Corridor Management Plan

Forecasted Volumes

Context and Assumptions

US-56, from US-59 to I-35, serves as a local highway to the overall region. While providing important access to the communities along the corridor, it is not utilized as a significant through corridor, such as I-35, I-70 or even K-10 and US-59.

Traffic volumes were projected out to Year 2040 to evaluate a long-term scenario for the corridor that included several major assumption. Among those:

- K-7 Highway would be upgraded to a freeway, extending from the new interchange at 159th Street/Lone Elm on I-35 to I-70.
- A new southern Johnson County interchange would be construction on I-35, somewhere in the vicinity of 199th Street, Waverly Road or Homestead.
- The BNSF facility, and surrounding Logistics Park, would be developed.
- While the communities of Baldwin City, Edgerton and Gardner are anticipated to continue to grow and expand, the unincorporated areas in Douglas and Johnson Counties would remain rural in nature.

Vicinity Map

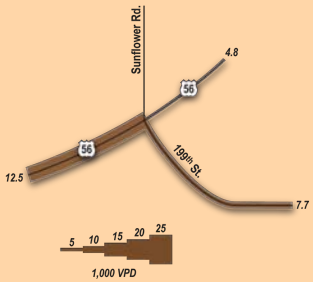
Changes in Travel Patterns

Several factors contribute to a significant change in travel patterns by year 2040.

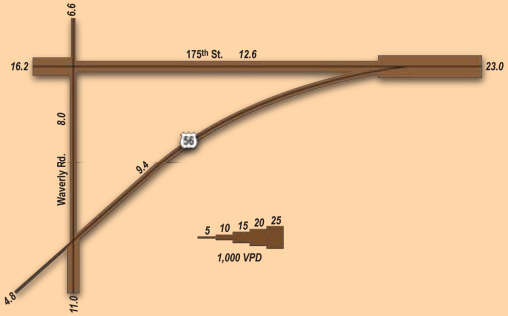
- The location of a new interchange in the vicinity of I-35 and 199th Street, Waverly Road or Homestead will create a more direct option to drivers headed to Edgerton and Baldwin City, allowing them to by-pass Gardner.
- The anticipated development in the northwest portions of Gardner results in a greater volume of traffic on Santa Fe/175th Street and Waverly Road than on US-56 in this west gateway of Gardner.

The figures below illustrate the future traffic volumes in these areas, with volumes shown in 1,0000 vehicles per day (vpd).

US-59 and 199th Street/Sunflower Road



US-59, Santa Fe/175th Street and Waverly Road



Traffic Forecasting

Forecasted traffic volumes were developed based on the City of Gardner's Transportation Forecasting Model, combined with historical growth trends and supplemental information developed as part of the proposed BNSF facility.

TRUCK TRAFFIC

While projections along the corridor were made for the total volumes of traffic, an assessment of truck traffic that takes into account the new freight-generating facilities anticipated for the corridor was also made.

The Mid-America Regional Council (MARC) has established criteria to assess the regional significance of freight corridors based on the volume of truck traffic, designating corridors as having National, Regional or Local significance.

Corridor Designation	Daily Truck Volume
National	>4,000
Regional	>1,000
Local	>500

For comparison, I-35 south of US-56 carries approximately 5,600 trucks per day and is therefore designated as a National Freight Corridor.

	Existing		2040 Projections	
Location	ADT	Trucks	ADT	Trucks
US-59 to 1600 Road	4,900	280	7,500	900
Baldwin City	7,500	280	14,000	1,000
1900 Road to K-33	4,600	260	5,500	900
K-33 to Edgerton Road	4,700	270	6,500	900
Edgerton	4,900	270	12,000	800
199th Street to Waverly	4,900	270	4,800	500
Waverly to Center	9,000	270	30,000	1,200
Center to Moonlight	17,500	270	37,500	1,100
Moonlight to I-35	25,000	800	47,000	1,800

By 2040, the majority of the US-56 corridor is anticipated to operate as a local freight corridor.

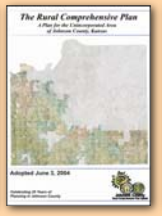
In Gardner, US-56 is projected to cross the threshold and operate as a regional freight corridor.

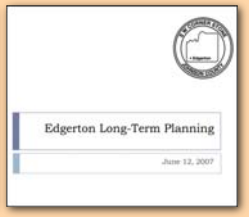
US-56 Corridor Management Plan

Area Characteristics

Study Area Plans

During the first phase of the planning process, the study team assembled and reviewed adopted comprehensive, land use and policy plans, and other development plans. These plans were used as a basis of the Foundation of Facts, and served as a baseline for calculating residential and non-residential demand.



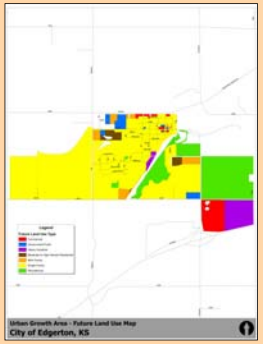


US-56 Characteristics By Zone

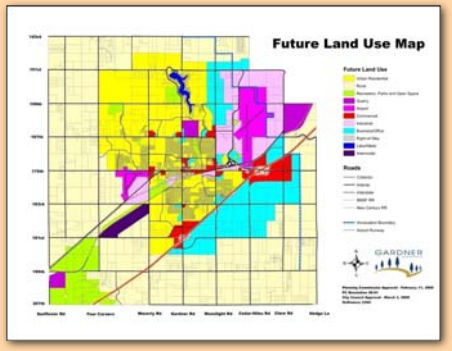
Future Land Use Maps

Baldwin City

Edgerton



Gardner



Corridor Character

The US-56 Corridor is diverse. It includes stretches of rural and agricultural uses, major parks, and natural areas. Most corridor residents live in the communities of Baldwin City, Edgerton, and Gardner where there are local shopping opportunities, services, and such significant institutions as Baker University.

Major existing and proposed industrial uses are located throughout the corridor, particularly in areas well-served by interstates, rail and air.

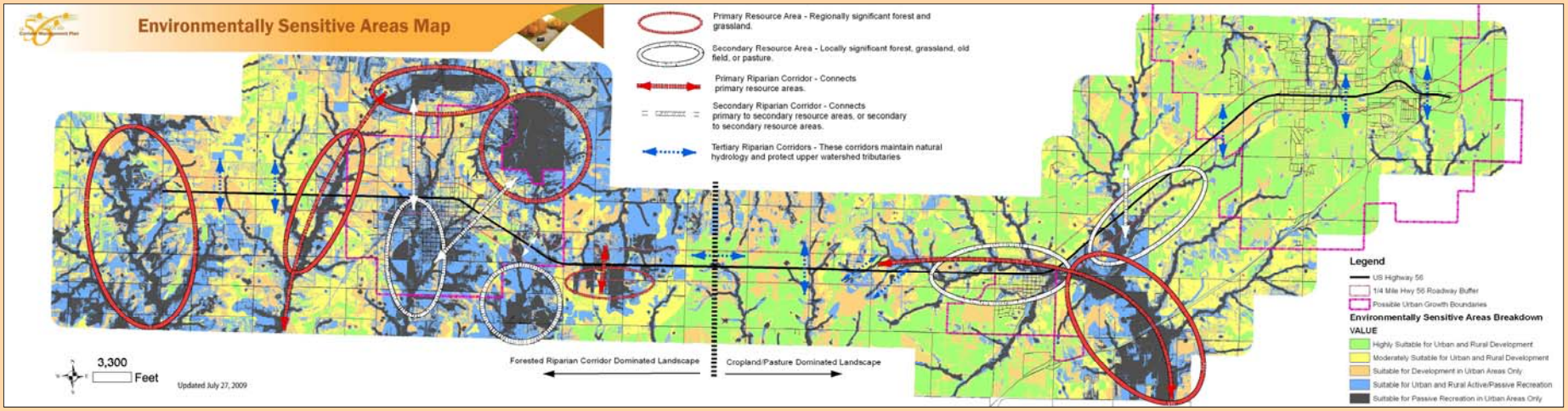
At the first Workshop, Stakeholders helped identify four major "zones" along US-56. They include:

- Rural-Agricultural Zone. Natural, agricultural, low-impact recreation uses
- Suburban Zone. Residential, civic, commercial, highway and auto-oriented uses
- Town Center Zone. Residential, office and retail uses with good walking access
- Industrial Zone. Industrial, warehousing, major office uses

Stakeholders also discussed where the different zones begin and end, based on future development as shown in the adopted Comprehensive Plans.

US-56 Corridor Management Plan

Land Assessment



Environmental Sensitivity for Land Use Forecasts

The corridor study area has significant streams, floodplains, wetlands, and regionally and locally significant forest and grasslands. Identifying these sensitive areas when reviewing potential future development helps to protect valuable recreation areas, protect water quality, reduce flooding, and provide wildlife habitat.

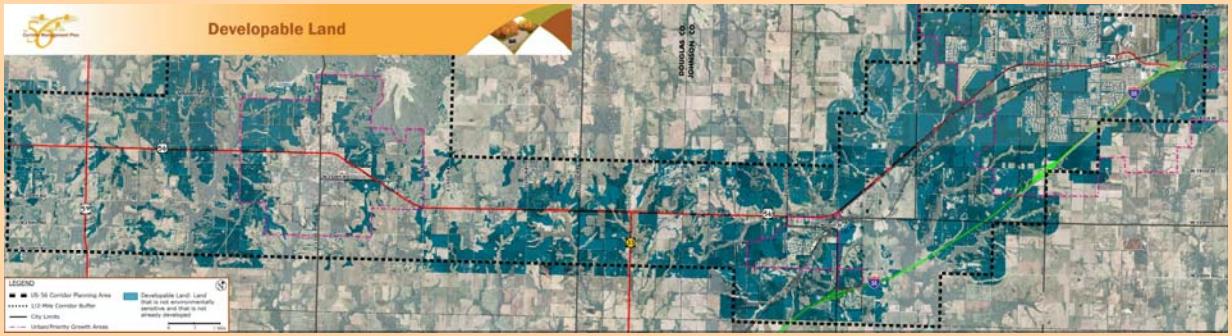
Key GIS data was assigned weights producing a graphic classification of land ranging from "Highly Suitable for Urban and Rural Development" (shown above in green) to "Suitable Only for Passive Recreation" (shown above in dark grey). Weighted data included soil classifications, hydrology, land cover, slopes, land use, and habitat.

Land Capacity vs. Developable Land

The capacity of land is a measure of how much future development the undeveloped lands can accommodate. Not all of the undeveloped areas, however, are open to development due to environmental constraints and natural resources. Accounting for land that is not already developed and not environmentally sensitive is the basis for determining what areas are deemed developable.

Developable Acreage Within Each City's Growth Boundary

Baldwin City	• 1,700 net acres of developable land remain (3,700 acres are developed/sensitive)
Edgerton	• 800 net acres of developable land remain (600 acres are developed/sensitive)
Gardner	• 4,900 net acres of developable land remain (4,600 acres are developed/sensitive) • Note: 40-50% of Gardner's growth boundary is not within the Study Area and therefore not included



US-56 Corridor Management Plan

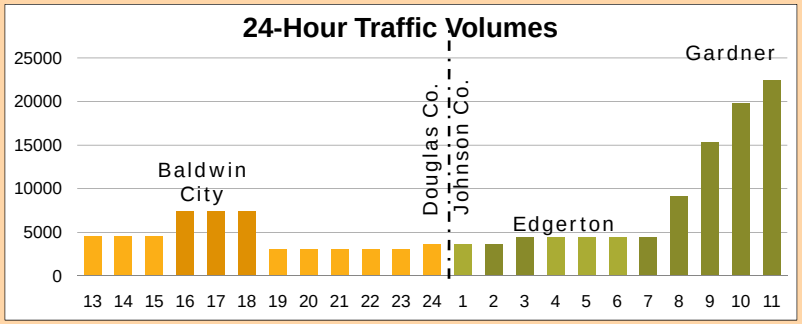
Traffic Characteristics

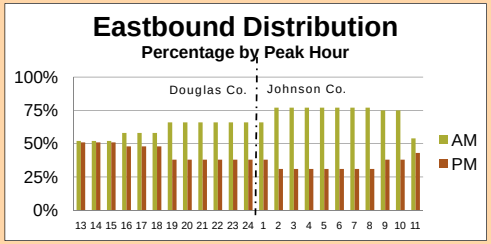
Traffic Volumes (2009)

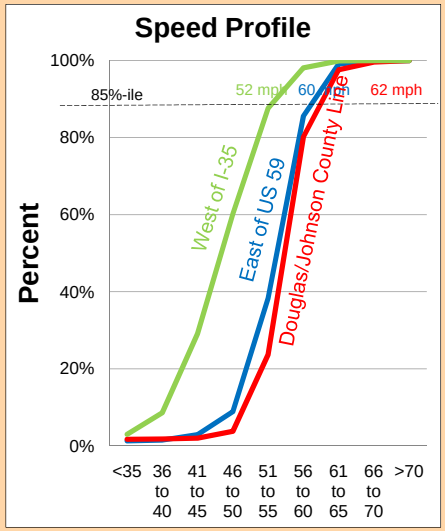
Traffic volumes have a significant spread along the corridor, ranging from a low of 3,400 vehicles per day (vpd) (between Baldwin City and Edgerton) to over 22,400 vpd in Gardner near the I-35 interchange. Peak hour traffic volumes mimic the daily pattern along the corridor including the increase of traffic volumes within city limits.

The AM and PM total volumes are nearly identical (PM is slightly higher), yet the distribution by direction along the majority of the corridor indicates an eastbound bias in the AM and the reverse direction (westbound) in the PM. However, west of Baldwin City, the directional distribution is equally split. Truck percentages range from 5% to 7% of all traffic representing between 200 and 830 truck per day.

Traffic speeds have also been collected and indicate an 85th percentile speed to be more consistent with the recent posted speed increase to 60 mph.







Traffic Safety

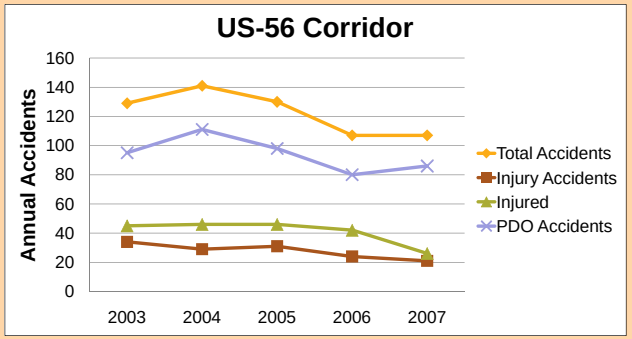
Three Locations Account for 44% of Intersection Crashes

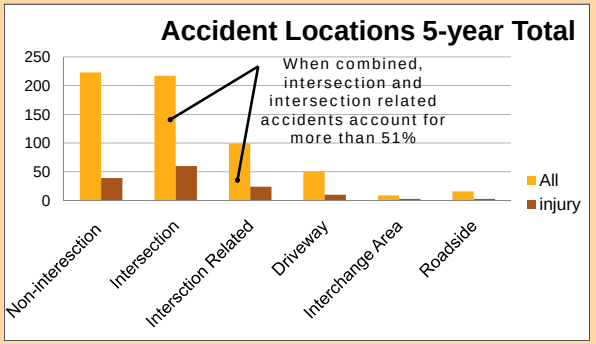
A ranking of crashes at intersections indicates a pattern of crashes at three locations along U.S. 56. The top three locations include Moonlight Road (Gardner), U.S.-59, and 6th Street (Baldwin City). Fortunately the number of crashes has been decreasing for a total of 30 crashes at these three locations in 2003 to just six (6) in 2007.

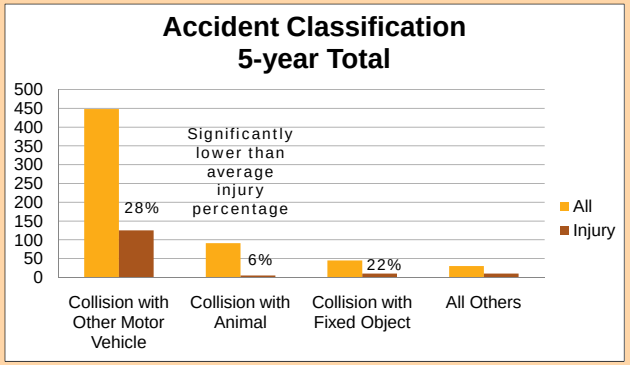
The predominant type of accident is angle accidents at 80%. The percentage of injury accidents vary by location, with the U.S. 59 junction having a high percentage of injuries, including two fatalities in 2006.

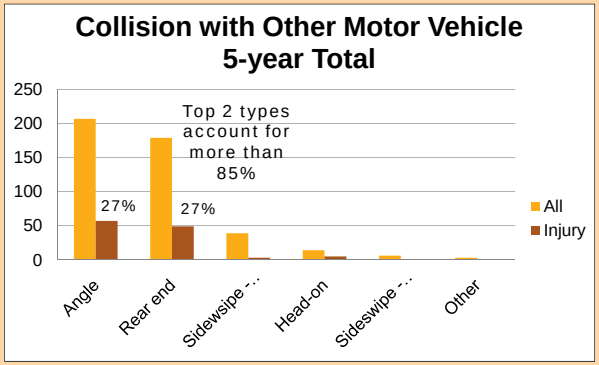
Three Fatal Crashes Occur In One Year (2006)

A total of five (5) fatal crashes occurred over the five year period. Three of the five fatal accidents occurred in 2006. Two of these occurred at the junction of US-59. Four of the fatal accidents were with "other motor vehicles" , of which three were angle accidents and the other a rear-end collision. Two of the four "other motor vehicles" occurred at intersections while the other two were classified as intersection related. Causes cited for these fatal crashes included:
"traveling too fast",
"exceeding posted speed",
"failure to yield ", and
"improper turn".









US-56 Corridor Management Plan

Roadway Conditions

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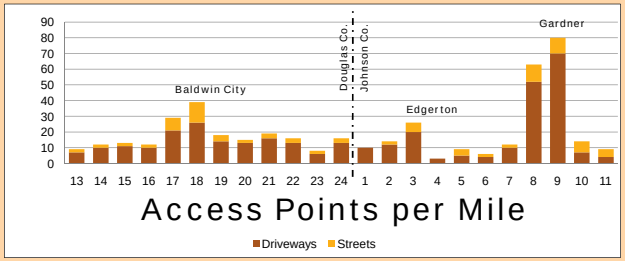
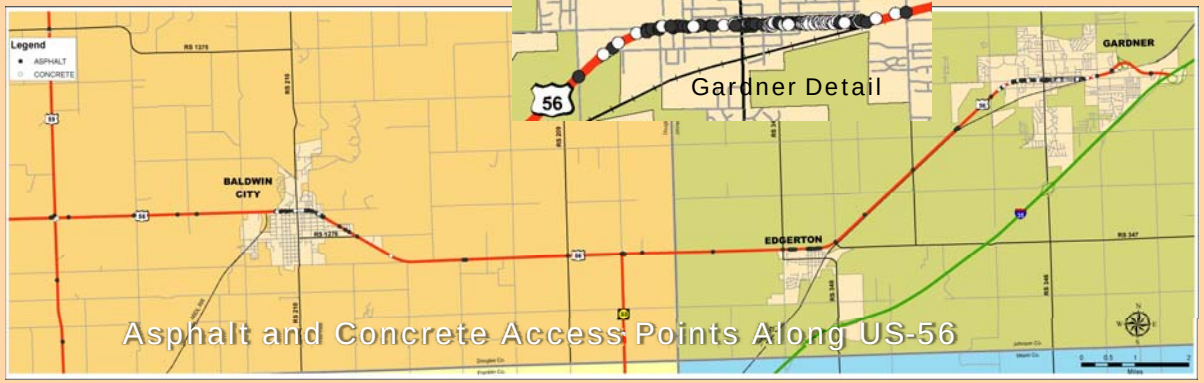


Access Management



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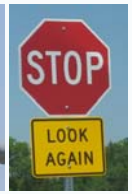
INTERSECTIONS

In communities, traffic operating conditions are measured by the amount of delay experienced by drivers at intersections. For signalized intersections an average delay is calculated for all drivers while for stop-controlled intersections delay is calculated for movements that must yield to other traffic, such as a side-street approach or a left-turn off of US-56.

With the improvements currently under construction at Moonlight and US-56, all of the intersections operate with acceptable conditions today.

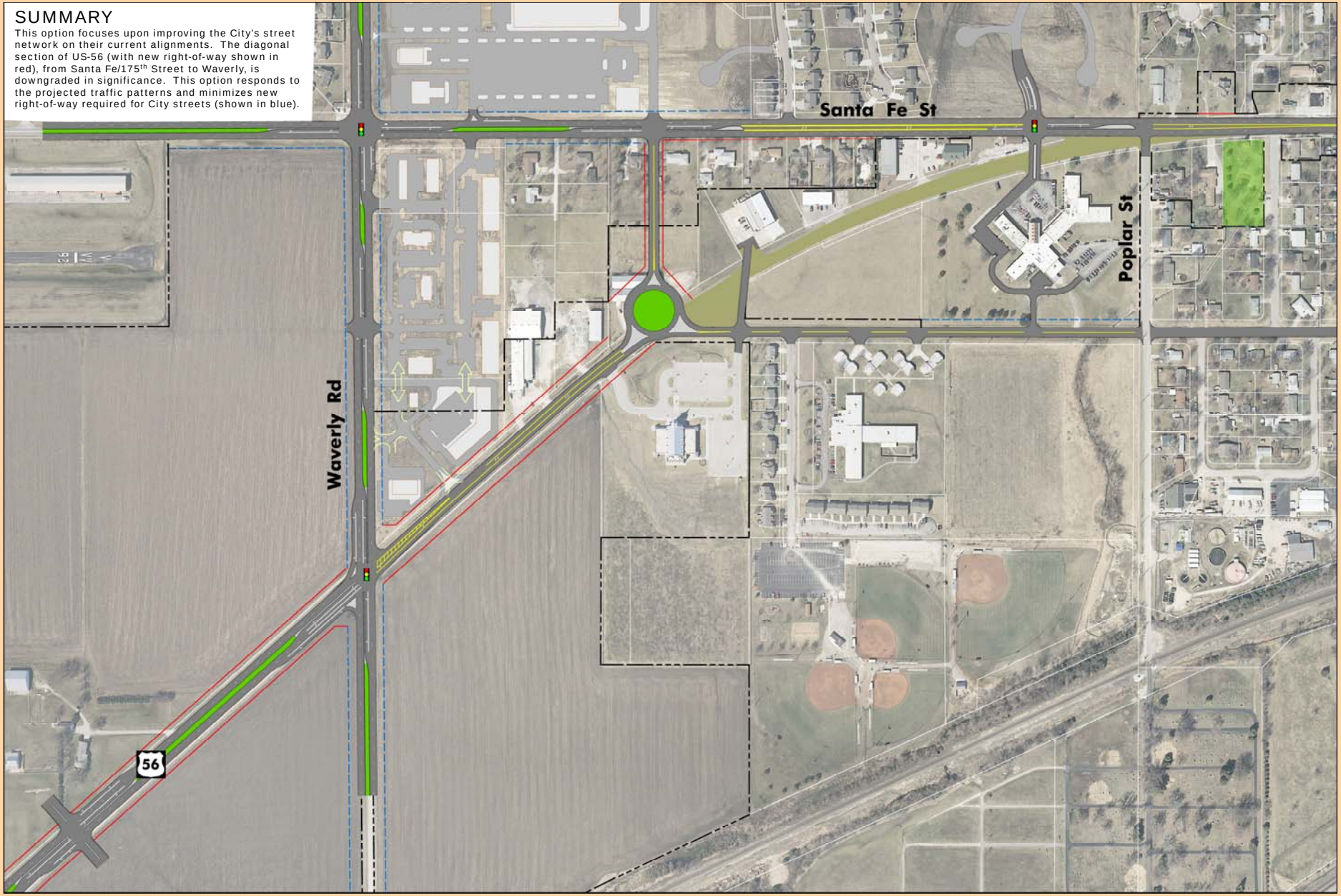


US-56 Corridor Management Plan

West Gateway – Option 1

SUMMARY

This option focuses upon improving the City's street network on their current alignments. The diagonal section of US-56 (with new right-of-way shown in red), from Santa Fe/175th Street to Waverly, is downgraded in significance. This option responds to the projected traffic patterns and minimizes new right-of-way required for City streets (shown in blue).

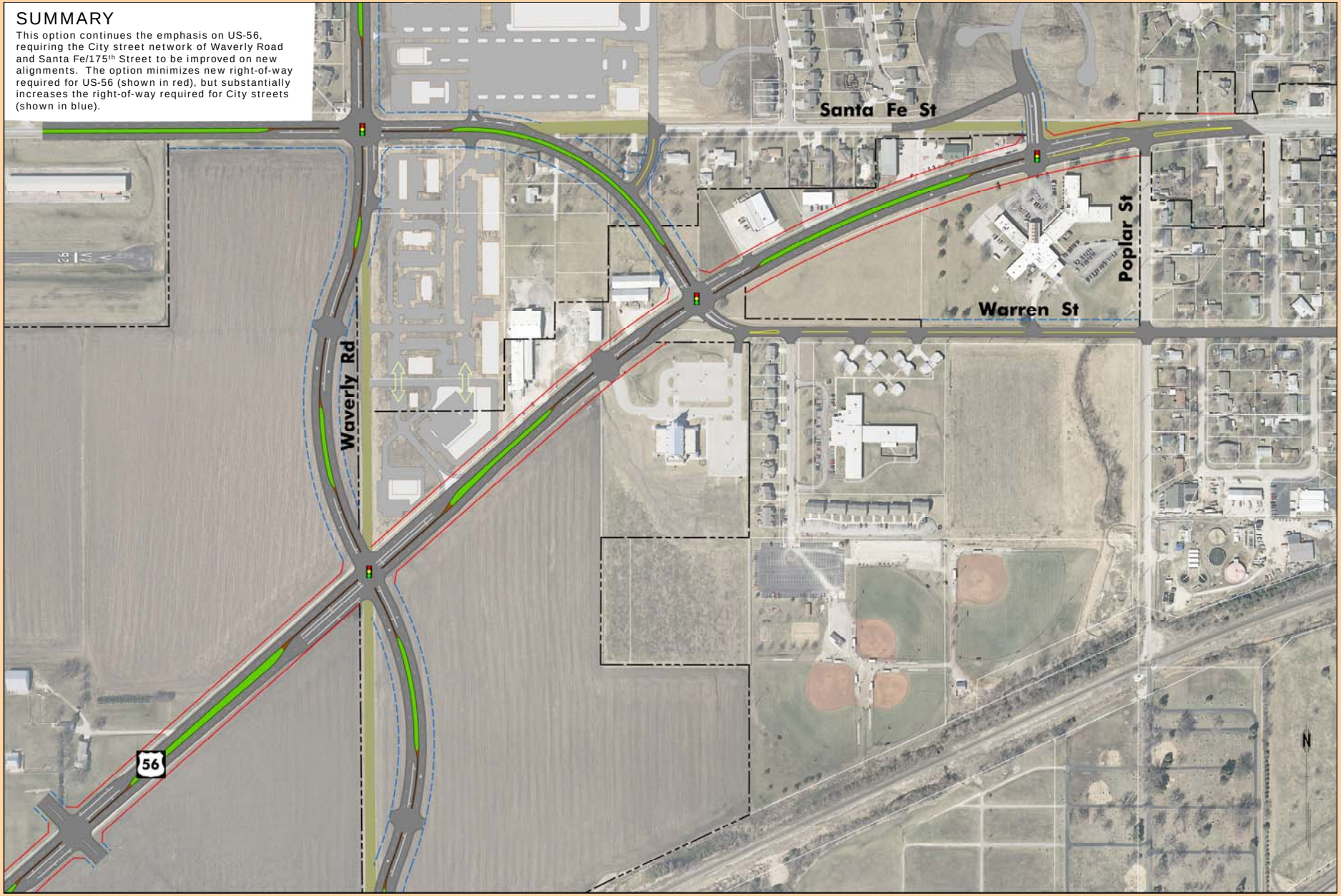


US-56 Corridor Management Plan

West Gateway – Option 2

SUMMARY

This option continues the emphasis on US-56, requiring the City street network of Waverly Road and Santa Fe/175th Street to be improved on new alignments. The option minimizes new right-of-way required for US-56 (shown in red), but substantially increases the right-of-way required for City streets (shown in blue).



US-56 Corridor Management Plan

Forecasted Volumes

Context and Assumptions

US-56, from US-59 to I-35, serves as a local highway to the overall region. While providing important access to the communities along the corridor, it is not utilized as a significant through corridor, such as I-35, I-70 or even K-10 and US-59.

Traffic volumes were projected out to Year 2040 to evaluate a long-term scenario for the corridor that included several major assumption. Among those:

- K-7 Highway would be upgraded to a freeway, extending from the new interchange at 159th Street/Lone Elm on I-35 to I-70.
- A new southern Johnson County interchange would be construction on I-35, somewhere in the vicinity of 199th Street, Waverly Road or Homestead.
- The BNSF facility, and surrounding Logistics Park, would be developed.
- While the communities of Baldwin City, Edgerton and Gardner are anticipated to continue to grow and expand, the unincorporated areas in Douglas and Johnson Counties would remain rural in nature.

Vicinity Map

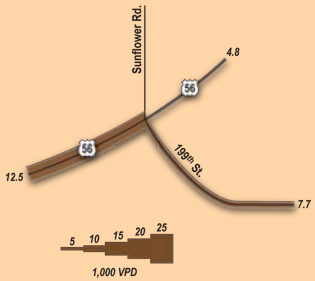
Changes in Travel Patterns

Several factors contribute to a significant change in travel patterns by year 2040.

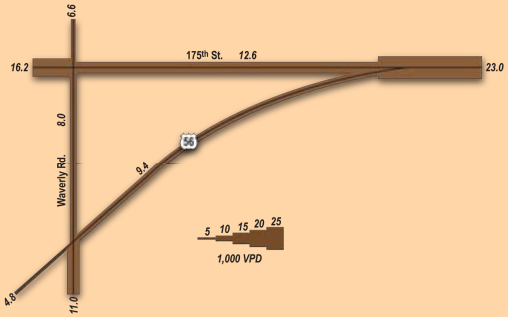
- The location of a new interchange in the vicinity of I-35 and 199th Street, Waverly Road or Homestead will create a more direct option to drivers headed to Edgerton and Baldwin City, allowing them to by-pass Gardner.
- The anticipated development in the northwest portions of Gardner results in a greater volume of traffic on Santa Fe/175th Street and Waverly Road than on US-56 in this west gateway of Gardner.

The figures below illustrate the future traffic volumes in these areas, with volumes shown in 1,0000 vehicles per day (vpd).

US-56 and 199th Street/Sunflower Road



US-56, Santa Fe/175th Street and Waverly Road



Traffic Forecasting

Forecasted traffic volumes were developed based on the City of Gardner's Transportation Forecasting Model, combined with historical growth trends and supplemental information developed as part of the proposed BNSF facility.

TRUCK TRAFFIC

While projections along the corridor were made for the total volumes of traffic, an assessment of truck traffic that takes into account the new freight-generating facilities anticipated for the corridor was also made.

The Mid-America Regional Council (MARC) has established criteria to assess the regional significance of freight corridors based on the volume of truck traffic, designating corridors as having National, Regional or Local significance.

Corridor Designation	Daily Truck Volume
National	>4,000
Regional	>1,000
Local	>500

For comparison, I-35 south of US-56 carries approximately 5,600 trucks per day and is therefore designated as a National Freight Corridor.

	Existing		2040 Projections	
Location	ADT	Trucks	ADT	Trucks
US-59 to 1600 Road	4,900	280	7,500	900
Baldwin City	7,500	280	14,000	1,000
1900 Road to K-33	4,600	260	5,500	900
K-33 to Edgerton Road	4,700	270	6,500	900
Edgerton	4,900	270	12,000	800
199th Street to Waverly	4,900	270	4,800	500
Waverly to Center	9,000	270	30,000	1,200
Center to Moonlight	17,500	270	37,500	1,100
Moonlight to I-35	25,000	800	47,000	1,800

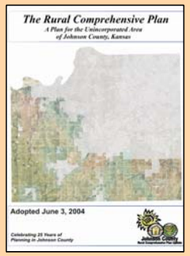
By 2040, the majority of the US-56 corridor is anticipated to operate as a local freight corridor.

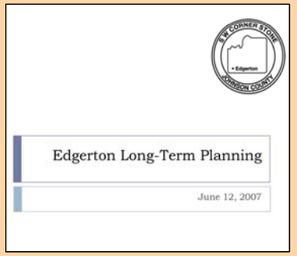
In Gardner, US-56 is projected to cross the threshold and operate as a regional freight corridor.

US-56 Corridor Management Plan
Area Characteristics

Study Area Plans

During the first phase of the planning process, the study team assembled and reviewed adopted comprehensive, land use and policy plans, and other development plans. These plans were used as a basis of the Foundation of Facts, and served as a baseline for calculating residential and non-residential demand.





US-56 Characteristics By Zone

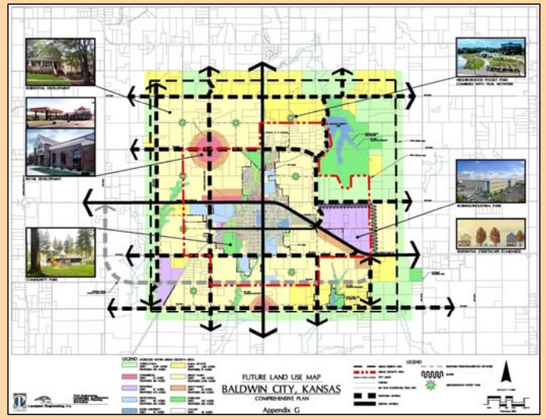
Character

The character of the US-56 Corridor varies from Rural-Agricultural to Suburban to Town Center to Industrial/Heavy Business. This poster shows how character can relate to uses, transportation and access.

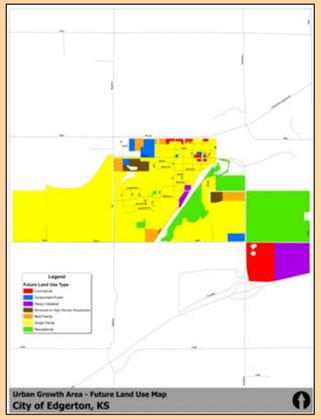
	Rural-Agricultural Zone	Suburban Zone	Town Center Zone	Industrial/Heavy Business Zone
	• Uses: Natural, agricultural, low-impact recreation, agricultural related business • Density: Very low; 1 unit per 20-40 acres • Primary Users: Private vehicles, farm-related vehicles	• Uses: Low density residential, civic and institutional uses, community commercial, and highway and auto-oriented uses • Density: low; 1 unit per 3 - 5 acres up to around 3 units per acre • Primary Users: Private vehicles	• Uses: Medium & high density residential, office and retail uses with good walking access • Density: medium to high; generally 5 units per acre or greater • Primary Users: Private vehicles, business serving vehicles, pedeestrians, bicyclists	• Uses: Intense industrial and warehousing uses • Density: 10 acres or greater • Primary Users: Trucks, private vehicles
Transportation Characteristics				
Roadway Configuration				
Multilane			✓	✓
2-lane	✓	✓		
Shoulders	✓			
On-Street Parking		✓	✓	
Drainage				
Open ditch	✓	✓		✓
Enclosed		✓	✓	✓
Speeds				
30 to 35 mph		✓	✓	
40 to 45 mph		✓		✓
55 mph or greater	✓			
Daily Traffic Volumes				
Less than 5,000	✓	✓		✓
Between 5,000 and 10,000		✓	✓	✓
Greater than 10,000		✓	✓	✓
Access points per mile				
Less than 20	✓			✓
between 20 and 40		✓	✓	✓
Greater than 40			✓	
Congestion Measure (mainline)				
Density	✓	✓		✓
Stopped Delay		✓	✓	✓
Intersection Control				
Side Street STOP	✓	✓	✓	✓
Traffic signal		✓	✓	✓
Grade separated interchange	✓			✓
Pedestrian Treatment				
None	✓	✓		✓
Sidewalks		✓	✓	✓
Ped crossing buttons			✓	

Future Land Use Maps

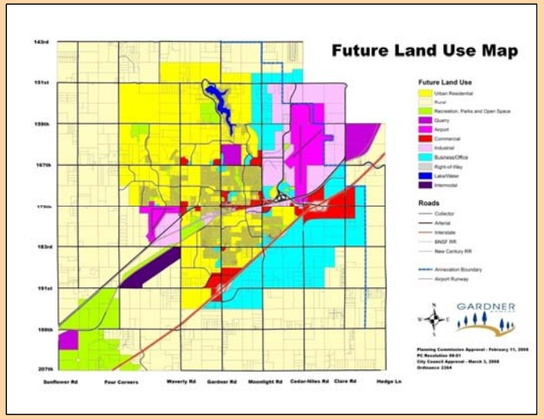
Baldwin City



Edgerton



Gardner



Corridor Character

The US-56 Corridor is diverse. It includes stretches of rural and agricultural uses, major parks, and natural areas. Most corridor residents live in the communities of Baldwin City, Edgerton, and Gardner where there are local shopping opportunities, services, and such significant institutions as Baker University.

Major existing and proposed industrial uses are located throughout the corridor, particularly in areas well-served by interstates, rail and air.

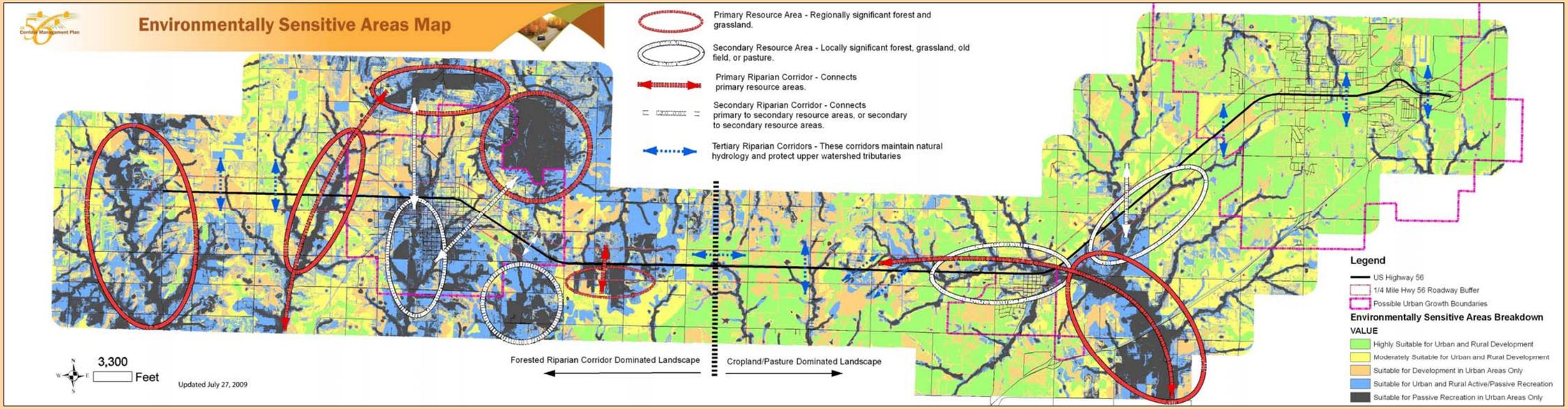
At the first Workshop, Stakeholders helped identify four major "zones" along US-56. They include:

- Rural-Agricultural Zone. Natural, agricultural, low-impact recreation uses
- Suburban Zone. Residential, civic, commercial, highway and auto-oriented uses
- Town Center Zone. Residential, office and retail uses with good walking access
- Industrial Zone. Industrial, warehousing, major office uses

Stakeholders also discussed where the different zones begin and end, based on future development as shown in the adopted Comprehensive Plans.

US-56 Corridor Management Plan

Land Assessment



Environmental Sensitivity for Land Use Forecasts

The corridor study area has significant streams, floodplains, wetlands, and regionally and locally significant forest and grasslands. Identifying these sensitive areas when reviewing potential future development helps to protect valuable recreation areas, protect water quality, reduce flooding, and provide wildlife habitat.

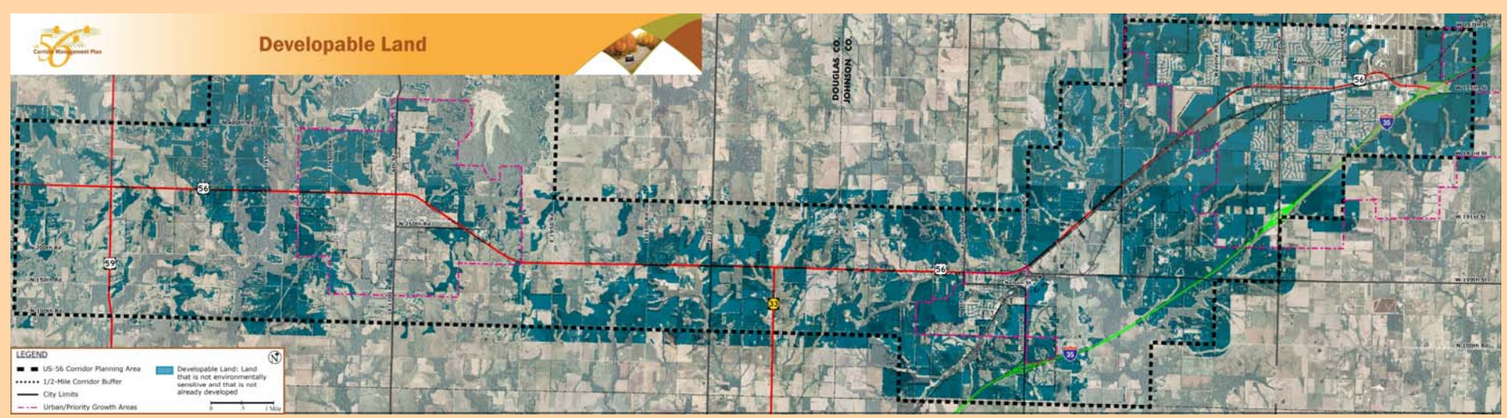
Key GIS data was assigned weights producing a graphic classification of land ranging from "Highly Suitable for Urban and Rural Development" (shown above in green) to "Suitable Only for Passive Recreation" (shown above in dark grey). Weighted data included soil classifications, hydrology, land cover, slopes, land use, and habitat.

Land Capacity vs. Developable Land

The capacity of land is a measure of how much future development the undeveloped lands can accommodate. Not all of the undeveloped areas, however, are open to development due to environmental constraints and natural resources. Accounting for land that is not already developed and not environmentally sensitive is the basis for determining what areas are deemed developable.

Developable Acreage Within Each City's Growth Boundary

Baldwin City	• 1,700 net acres of developable land remain (3,700 acres are developed/sensitive)
Edgerton	• 800 net acres of developable land remain (600 acres are developed/sensitive)
Gardner	• 4,900 net acres of developable land remain (4,600 acres are developed/sensitive) • Note: 40-50% of Gardner's growth boundary is not within the Study Area and therefore not included



US-56 Corridor Management Plan

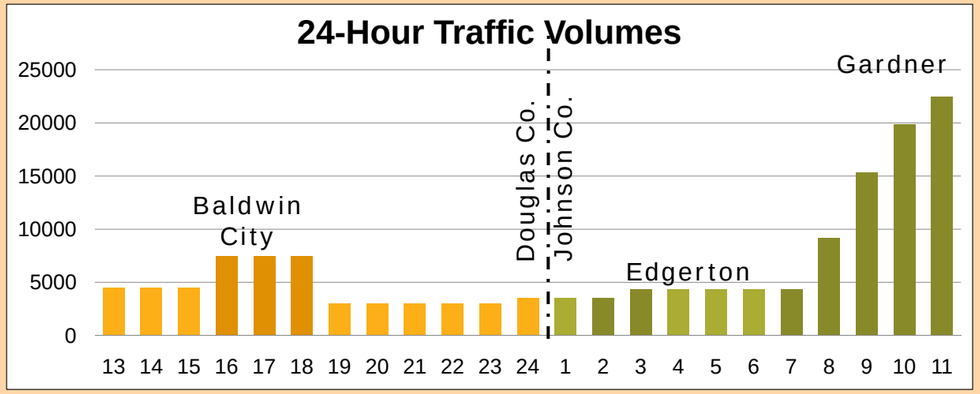
Traffic Characteristics

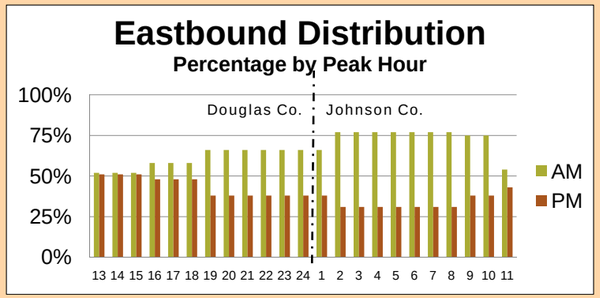
Traffic Volumes (2009)

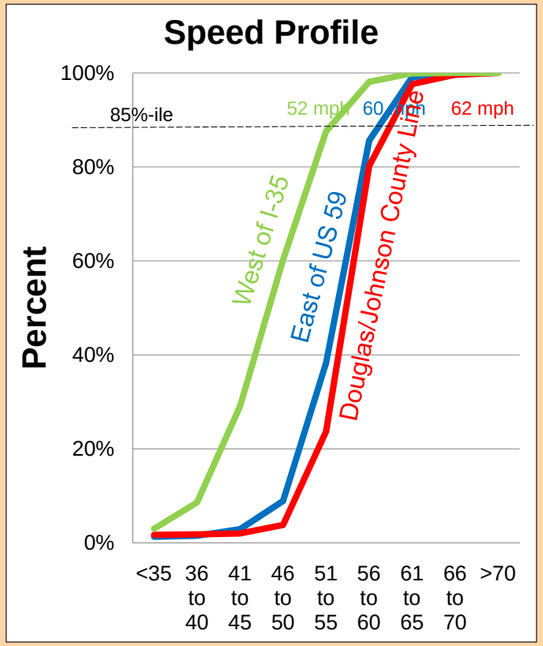
Traffic volumes have a significant spread along the corridor, ranging from a low of 3,400 vehicles per day (vpd) (between Baldwin City and Edgerton) to over 22,400 vpd in Gardner near the I-35 interchange. Peak hour traffic volumes mimic the daily pattern along the corridor including the increase of traffic volumes within city limits.

The AM and PM total volumes are nearly identical (PM is slightly higher), yet the distribution by direction along the majority of the corridor indicates an eastbound bias in the AM and the reverse direction (westbound) in the PM. However, west of Baldwin City, the directional distribution is equally split. Truck percentages range from 5% to 7% of all traffic representing between 200 and 830 truck per day.

Traffic speeds have also been collected and indicate an 85th percentile speed to be more consistent with the recent posted speed increase to 60 mph.







Traffic Safety

Three Locations Account for 44% of Intersection Crashes

A ranking of crashes at intersections indicates a pattern of crashes at three locations along U.S. 56. The top three locations include Moonlight Road (Gardner), U.S.-59, and 6th Street (Baldwin City). Fortunately the number of crashes has been decreasing for a total of 30 crashes at these three locations in 2003 to just six (6) in 2007.

The predominant type of accident is angle accidents at 80%. The percentage of injury accidents vary by location, with the U.S. 59 junction having a high percentage of injuries, including two fatalities in 2006.

Three Fatal Crashes Occur In One Year (2006)

A total of five (5) fatal crashes occurred over the five year period. Three of the five fatal accidents occurred in 2006. Two of these occurred at the junction of US-59. Four of the fatal accidents were with "other motor vehicles" , of which three were angle accidents and the other a rear-end collision. Two of the four "other motor vehicles" occurred at intersections while the other two were classified as intersection related. Causes cited for these fatal crashes included:
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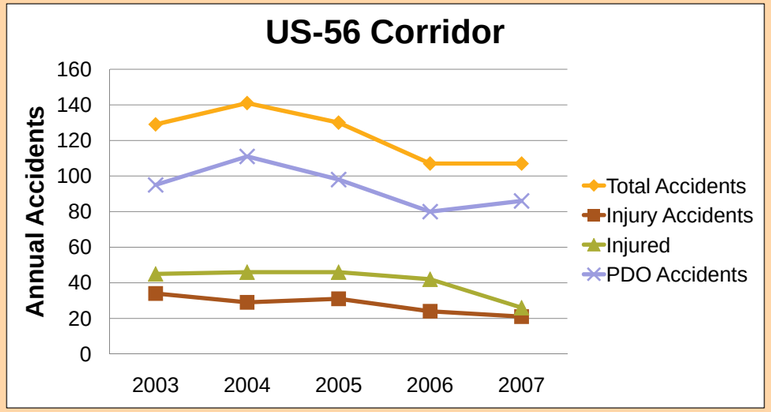

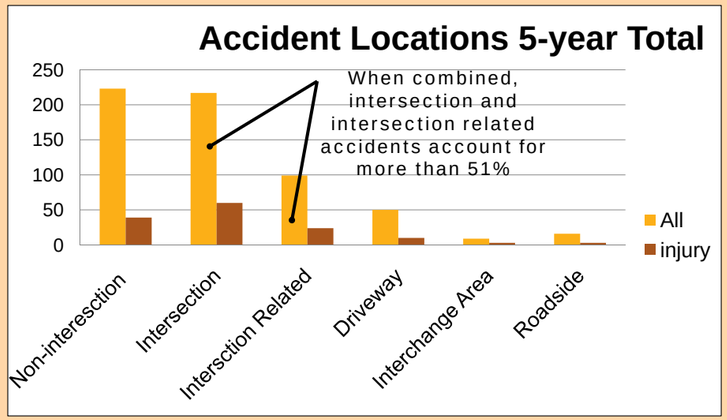

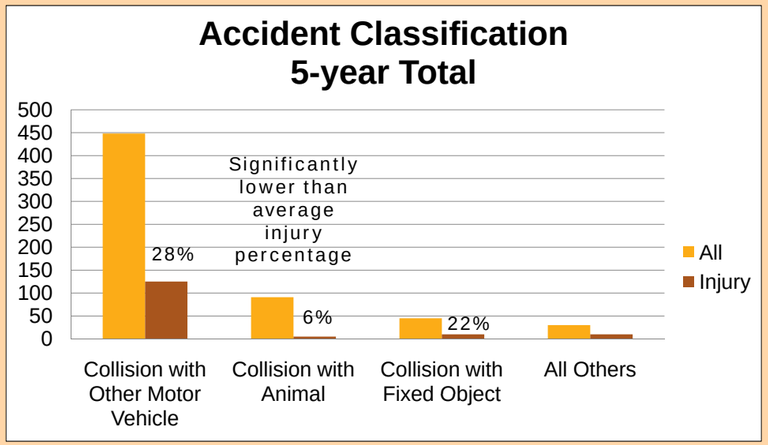

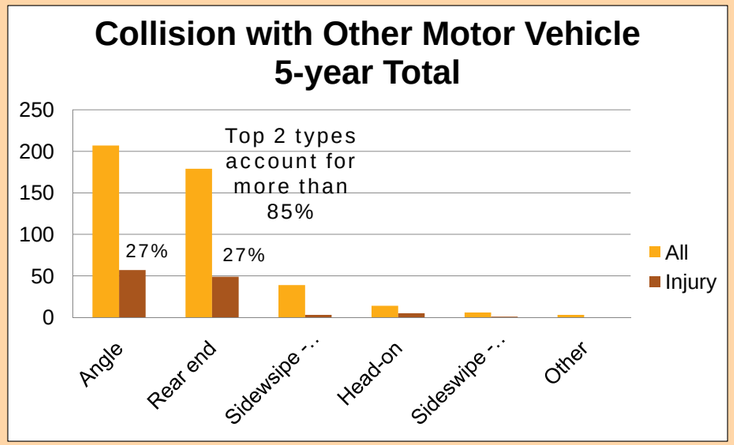

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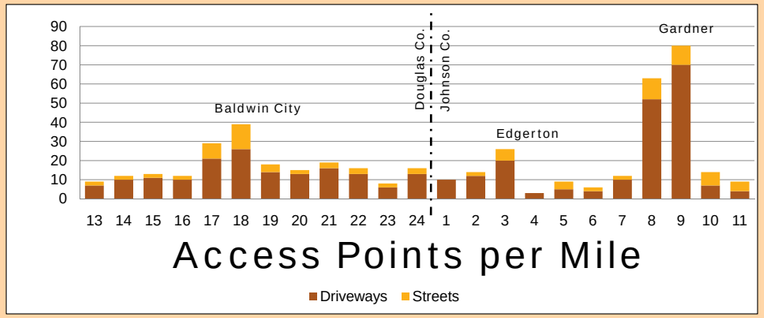

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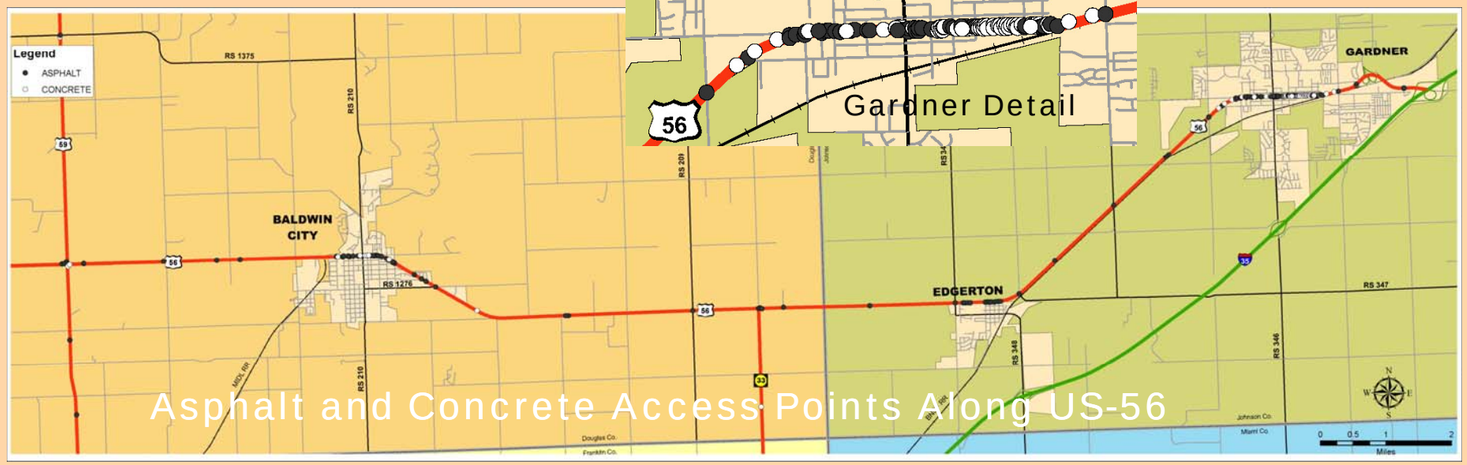

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Two-Lane Highway segments are evaluated primarily by the ability for drivers to pass and travel at their preferred speed. The rural highway segments, from US-59 to Baldwin City, from Baldwin City to Edgerton, and from Edgerton to Gardner, all operate today with acceptable conditions, albeit the segment from Edgerton to Gardner is beginning to approach the thresholds of acceptable conditions due to the heavy directional split of traffic (eastbound in the morning and westbound in the evening).

INTERSECTIONS

In communities, traffic operating conditions are measured by the amount of delay experienced by drivers at intersections. For signalized intersections an average delay is calculated for all drivers while for stop-controlled intersections delay is calculated for movements that must yield to other traffic, such as a side-street approach or a left-turn off of US-56.

With the improvements currently under construction at Moonlight and US-56, all of the intersections operate with acceptable conditions today.

US-56 Public Open House – Meeting Summary
February 9 and 11, 2010
5:00pm – 7:00pm

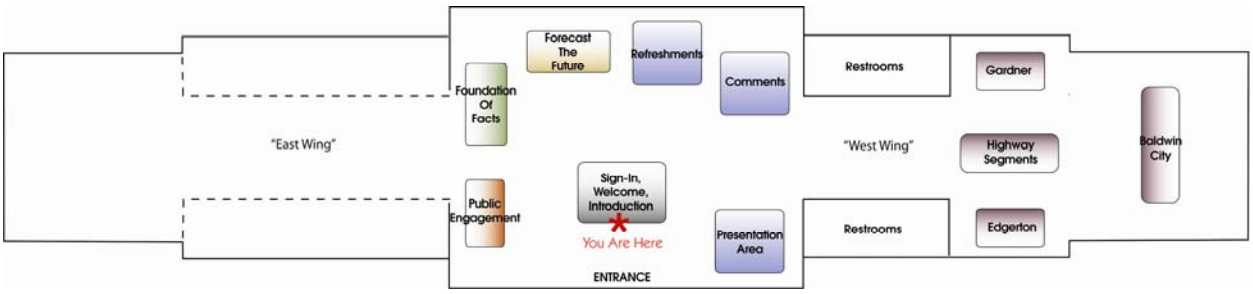
Two Public Open Houses for the US-56 Corridor Management Plan were held to allow attendees the opportunity to review project recommendations to-date and give their input on elements related to access management, land use, and corridor character. The first Open House was held from 5:00 p.m. to 7:00 p.m. on Tuesday, February 9 at the Mildale Farm Equestrian Barn (35250 W. 199th Street, Edgerton, Kansas 66021). The second was held from 5:00 p.m. to 7:00 p.m. on Thursday, February 11 at the Baldwin Elementary School-Intermediate Center Commons Area (100 Bullpup Drive, Baldwin City, Kansas 66006). There were 52 attendees at the February 9 Open House, and 118 attendees at the February 11 Open House.

Layout and Stations

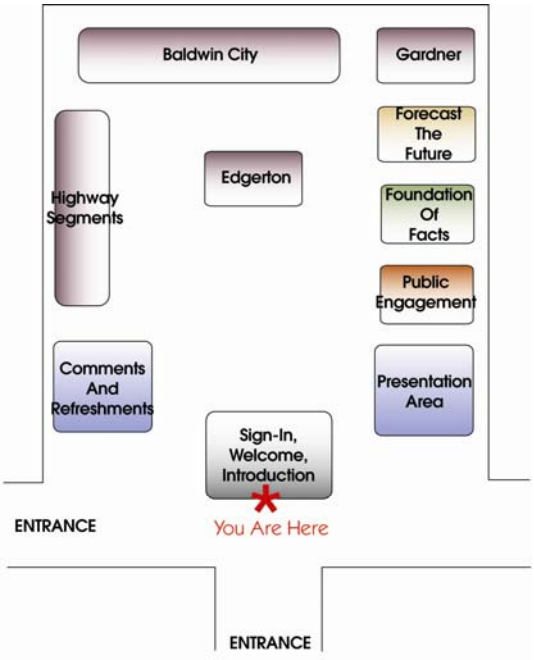
Attendees were each given a handout explaining the open house displays, a project fact sheet, and a comment card to provide input. Although a formal presentation was not given, a slideshow with an introduction to the US-56 Corridor Management Plan played throughout the duration of the Open Houses.

Four major stations were set up with exhibits, including: Planning Process, Foundation of Facts, Forecast the Future, and Formulate a Fit – Conceptual Improvements. KDOT, Partners, and the planning team were available at each station to answer questions directly related to the project, conceptual improvements, and any exhibits on display. The two layouts shown below represent the location of each of the stations.

MILDALE FARM LAYOUT



BALDWIN CITY ELEMENTARY SCHOOL INTERMEDIATE CENTER LAYOUT



Comment Cards

Comment cards were distributed to each attendee; a total of 1 comment card was returned at the February 9 Open House and a total of 5 comment cards were returned at the February 11 Open House. A verbatim summary of those responses is presented below.

Question #1: How frequently do you drive the US-56 Corridor? (please choose 1)

- Daily – 4 responses
- At least once a week – 1 response
- At least once a month – No responses given
- Rarely or never – 1 response

Question #2: Provide us your thoughts on each of the following elements presented:

Consensus Land Use

- Comment A: Mostly agree.
- Comment B: Good.
- Comment C: I don't understand the graphs and plans.

Recommended improvements

- Comment A: Agree with most, but would like to hear landowners' views of your vision.
- Comment B: Please consider installing traffic lights at US-56 and 8th Street, and US-56 and 1st Street in Baldwin. US-56, as it approaches 1st Street from the west, slowly rises and it is hard to see oncoming traffic if you want to turn onto the highway from 1st Street. Drivers tend to drive too fast as they approach this intersection anyway.

- Comment C: Possible trail with pedestrian cross-over seems like a good idea and offers a safe way for children to cross the highway.
- Comment D: I agree with them.
- Comment E: Put a traffic signal at 8th Street and US-56 in Baldwin City.

Approach to access management (i.e. no new access onto US-56 except at public streets)

- Comment A: I can't say I agree 100%. I'd look at a case-by-case basis, but understand it would be much safer.
- Comment B: Excellent. The fewer additional entries/exits, the better, considering an increase in traffic. Less potential for accidents.
- Comment C : I agree.

Question #3: Was sufficient information provided to you this evening? What additional information would you have liked to be presented?

- Comment A: Yes, to a point. Would like more info concerning timelines of proposed construction in what areas, in sequence.
- Comment B: There was good information presented and staff was helpful. It is frustrating, however, when there are so many "ifs" and so few answers when your home is on US-56.
- Comment C: Yes.

Question #4: Please share any other general comments you may have regarding the Corridor Plan or planning process.

- Comment A: More studies need to be done regarding pedestrian safety. If you do not live on or near US-56, you honestly do not have any idea how many near-misses happen every day. Cars now do not stop for the crosswalk and the 8th Street/US-56 intersection is extremely dangerous especially during higher traffic times. I'm concerned that increased large truck traffic will make this even worse as they need a longer distance to stop. Additional stoplights and/or a pedestrian crossing light are an absolute must in the future.
- Comment B: The sooner the better.
- Comment C: Do not increase the speed limits in Baldwin. We have enough accidents now; please don't make it easier for people to crash into each other. 45mph is plenty fast by the school.

Other Comments

KDOT, Partners, and the planning team were available to answer questions and address any concerns. Those are listed here.

Comment #1: Everything is presented very clearly.

Comment #2: This Plan is an attempt to be more proactive rather than reactive, but it is difficult to know what will happen in the future, especially with the intermodal facility.

Comment #3: As a taxpayer, it makes sense to me to bypass the three cities rather than using money to acquire homes and land for additional right-of-way.

Comment #4: I did not receive a survey in the mail. How were recipients chosen?

- Planning Team response: The survey was mailed to a random sample of 2,200 residents and administered to 742 households within Community Block Groups located in the study area.

Next Steps

All exhibits from the Open Houses are available to view on the project website at http://www.us56corridorplan.org with other previous meeting materials. The planning team will review input given at the Open Houses and make any final modifications to the conceptual improvements before incorporation into the US-56 Corridor Management Plan. To ask additional questions or provide further comments, please visit the "Contact Us" page of the project website at http://www.us56corridorplan.org/contactus.asp.

This summary was authored by Blair Sells and reviewed by Lisa Briscoe.
If any omissions, additions, corrections or clarifications are thought necessary by any of the participants, then comments should be sent to Patti Banks Associates by **March 2, 2010**.
If no comments are received, then this summary will be considered as the FINAL summary.

2009 US-56 Highway Corridor Management Plan Survey

Findings Report

Conducted for

Kansas Department of Transportation
Douglas County, Kansas
Johnson County, Kansas
City of Baldwin
City of Edgerton
City of Gardner
Lawrence-Douglas County MPO
Mid America Regional Council

by

ETC *Institute*
725 W. Frontier Circle
Olathe, Kansas 66061
(913) 829-1215

April 2009

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Charts and Graphs ..... Section 1

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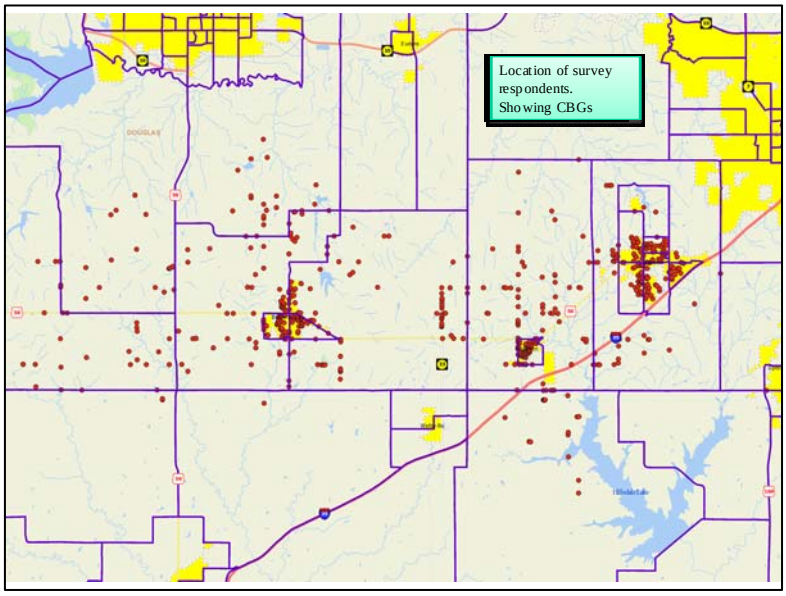
US-56 Highway Corridor Management Plan Survey Executive Summary

Overview

Purpose. ETC Institute, in association with TranSystems and Patti Banks Associates, conducted a survey of residents in and around the Cities of Baldwin, Edgerton and Gardner during April of 2009. The purpose of the survey was to gather input from the community about issues relating to improvements being considered for the US-56 Highway corridor. The Kansas Department of Transportation (KDOT), Douglas and Johnson Counties, the Cities of Baldwin City, Edgerton, and Gardner, the Lawrence-Douglas County MPO, and the Mid America Regional Council (MARC) sponsored the study. Some of the specific topics that were addressed in the survey included:

- Frequency that residents travel on US-56 Highway.
- Perceptions of driver and safety on US-56 Highway.
- Perceptions of pedestrian safety in and outside the cities along US-56 Highway.
- The preferred configuration of access entry/exit to and from of US-56 Highway.
- The level of interest in a transit system in this area.
- The prioritization of issues that influence the corridors' identity.
- The importance of land use development along the US-56 Highway corridor.
- The potential impact of the proposed intermodal facility on the economic future of the corridor.

Methodology. The survey was mailed to a random sample of over 2,200 residents and administered to 742 households during April of 2009. See scatter map at right. The original goal of 600 surveys was exceeded by 142 additional surveys. The overall results for the 742 surveys that were administered have a precision of at least +/- 3.5% at the 95% level of confidence.



Contents of the Report. This report contains:

- an executive summary of the methodology and major findings
- charts depicting the overall results to the survey
- GIS maps that show the general location of responses
- tables that show the results of the survey
- a copy of the survey instrument

Major Findings

- **Frequency of Travel.** Over half (53%) of those surveyed drive the US-56 corridor daily.

- **Perceptions of Safety.** Eighty-three percent (83%) of those surveyed indicated that they felt either "very safe" or "somewhat safe" driving the US-56 corridor. When asked about crossing US-56 on foot or on a bicycle, 52% felt safe within the cities, and 51% felt safe between the cities.

- **Issues of Access Affecting Traffic Flow.** Those surveyed were asked their opinion about the number of driveways entering on to US-56 from various locations along the corridor. It was primarily through Gardner (38%) and through Baldwin City (19%) that residents felt there were "too many" driveways entering on to US-56.

- **Perception of Travel Speeds.** Those surveyed were asked about the appropriateness of the current travel speed on US-56; 83% felt the travel speed was appropriate through Baldwin, 82% felt the travel speed was appropriate on the edge of Edgerton, and 87% felt the travel speed was appropriate through Gardner. Between the cities, 25% felt the travel speed was too slow.

- **Potential Use of Transit if Available.** Those surveyed were asked how often they might use a transit or bus system if it were available, running between the cities and on to connections in the Kansas City area. Twelve percent (12%) indicated they would use it at least once a week; 9% would use it once a month, 69% said they would rarely or never use it, and 10% did not know if they would use a transit or bus system in this area.

- **Corridor Identity and Image.** Those surveyed were in greatest agreement with these three issues: that unique natural, historical and character features of the corridor should be preserved (86%), that guidelines for new development be established by the county and the cities (75%), and that the size and type of advertising signs should be regulated along US-56 (75%).

- **Land Use.** There was support from those surveyed for directing future residential developments inside or near the cities (86%); 83% supported directing commercial developments inside or near the cities, 82% supported directing future residential developments between the cities to planned locations, leaving remaining areas for rural use, and 78% supported directing commercial development between the cities in the same way.

- **Water and Sewer Use in New Developments between the Cities.** Residents were asked if public (community) water and sewer services should be required of new developments between the cities, and 42% said "no", 32% said "yes", and 26% did not have an opinion.

- **Importance of US-56 to Economic Development along the Corridor**. Eighty-five percent (85%) felt the highway was "very important" or "important", 10% were neutral or did not have an opinion, and 5% felt US-56 was not important to the economic development along the corridor.

- **The Effect of the Proposed BNSF Intermodal Facility.** Those surveyed were asked is they were familiar with the proposed intermodal facility and 85% indicated that they were. That 85% was asked to respond to three questions regarding the effect that the proposed facility might have on various issues within the corridor;

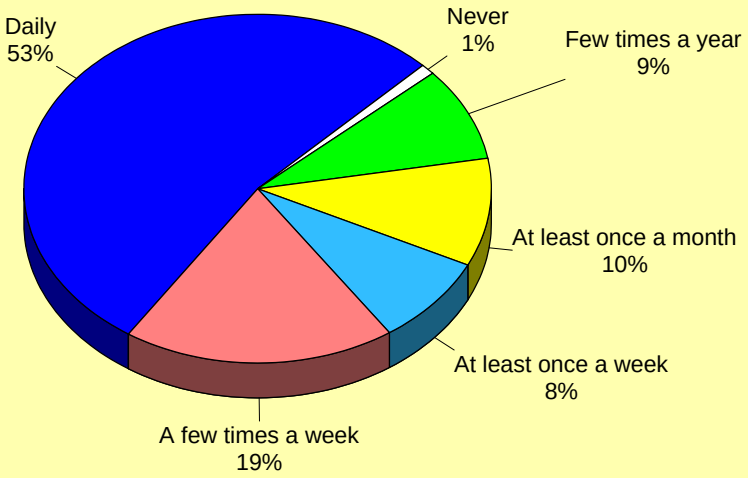
    - Those familiar with the proposed facility were asked about the likely effect of this facility on the economy of the US-56 corridor; 70% felt the effect would be positive, 18% felt it would be negative, and 11% were neutral or did not know.
    - Those familiar with the proposed facility were asked about the likely effect of truck traffic along US-56; 73% felt that there would be a major increase in truck traffic, 23% felt there would be some increase, and the remaining 4% had no opinion.
    - The cities and areas between and beyond the cities were listed and those surveyed who were familiar with the proposed facility were asked to indicate the areas most affected by the facility; Gardner was indicated by 65%, between Edgerton and Gardner was indicated by 64%, and Edgerton was indicated by 53%. All other areas were considerably lower percentages.

Section 1:

Charts and Graphs

Q1. How Frequently Do You Drive the US-56 Highway Corridor?

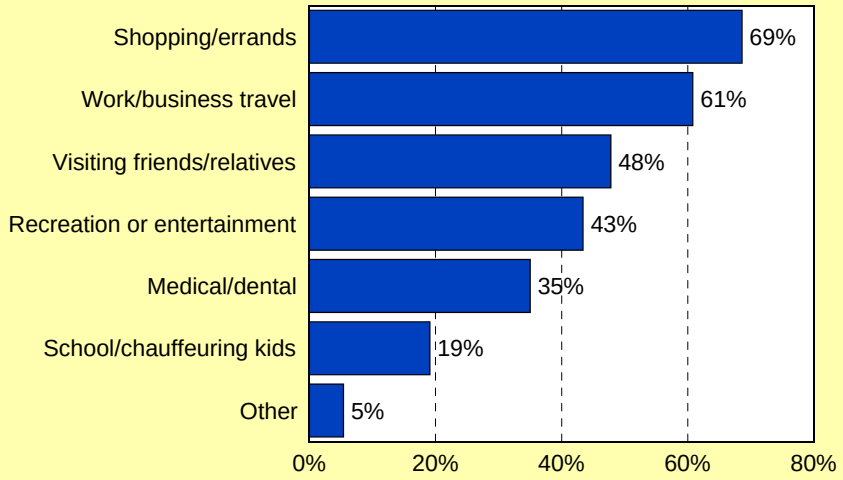
by percentage of respondents



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q2. When you Travel on US-56, Which of the Following are the Most Frequent Reasons for your Trip?

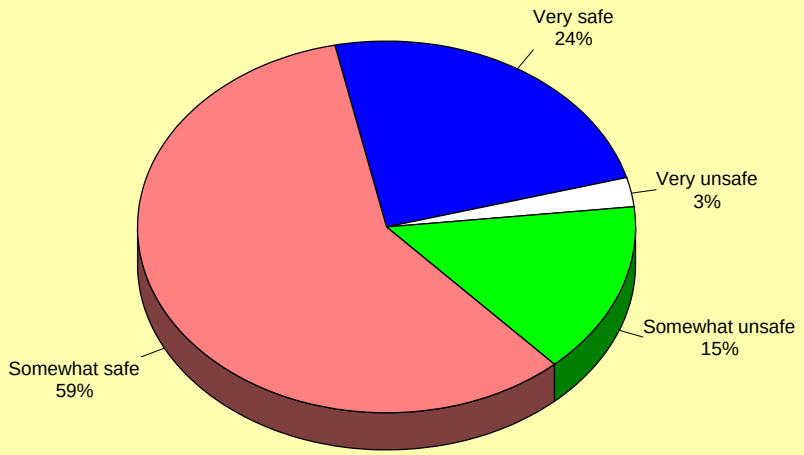
by percentage of respondents (more than one choice could be made)



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q3. How safe do you feel driving on US-56?

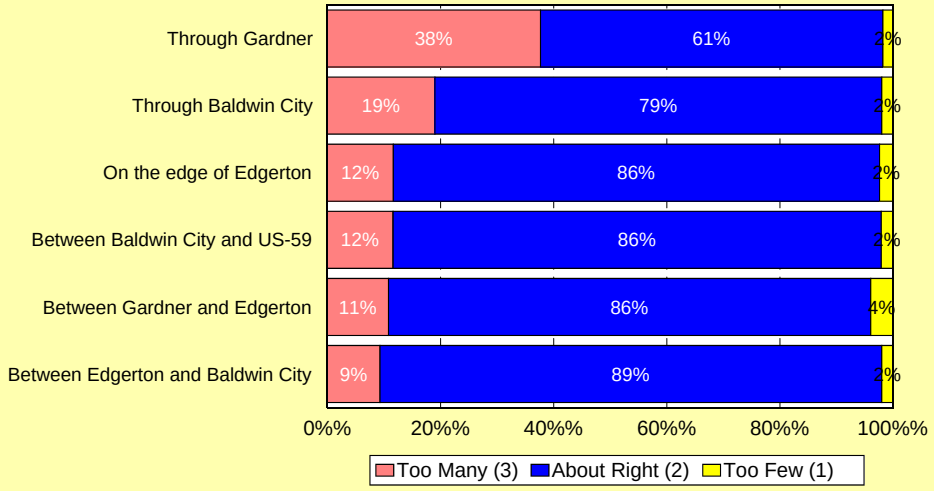
by percentage of respondents



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q4. What is your opinion about the number of driveways entering on to US-56 in the following locations?

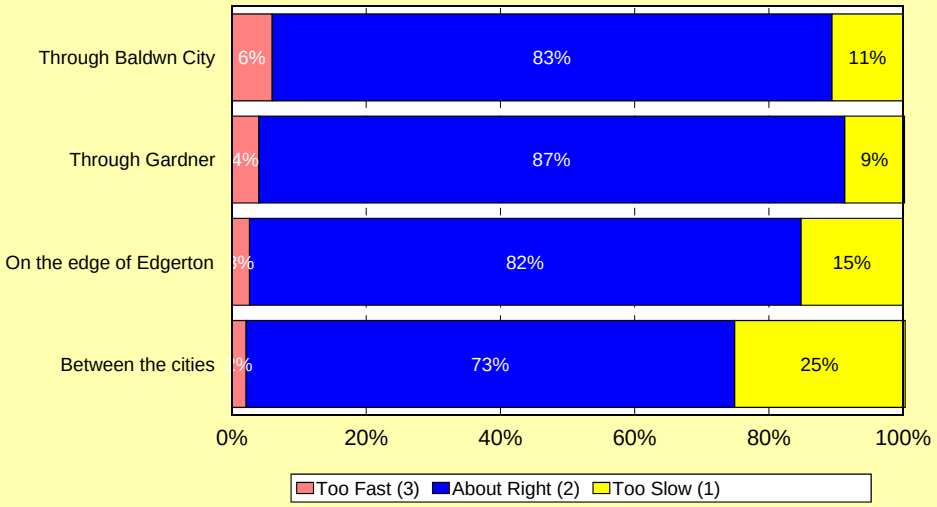
by percentage of respondents who rated the item as a 1 to 3 on a 3-point scale (excluding don't knows)



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q5. What is your opinion about the speed limits on US-56 in the following locations?

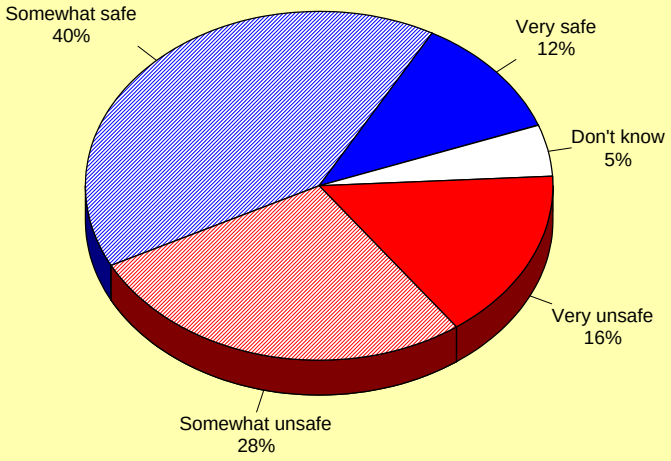
by percentage of respondents who rated the item as a 1 to 3 on a 3-point scale (excluding don't knows)



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q6. How safe would you feel crossing US-56 on foot or on a bicycle, within Baldwin City, Edgerton, and Gardner?

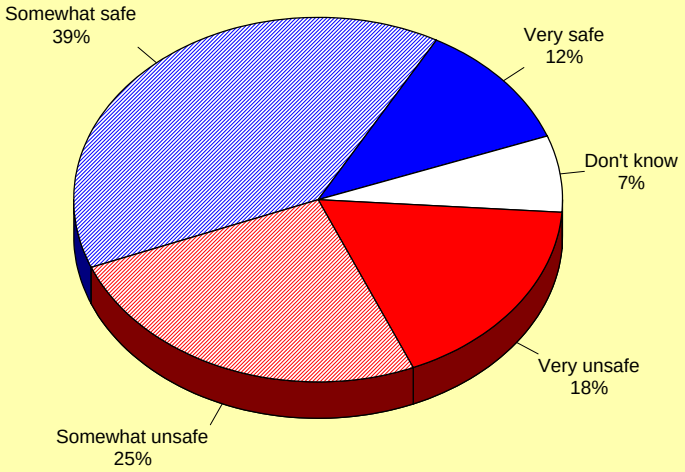
by percentage of respondents



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q7. How safe would you feel crossing US-56 on foot or on a bicycle, between Baldwin City, Edgerton, and Gardner?

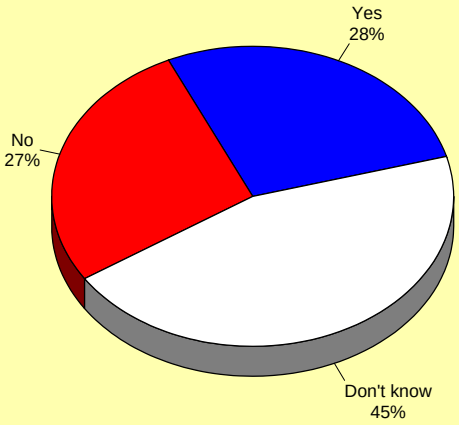
by percentage of respondents



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q8. Are there specific locations along US-56 where additional safe crossings for bicyclists and pedestrian traffic should be provided?

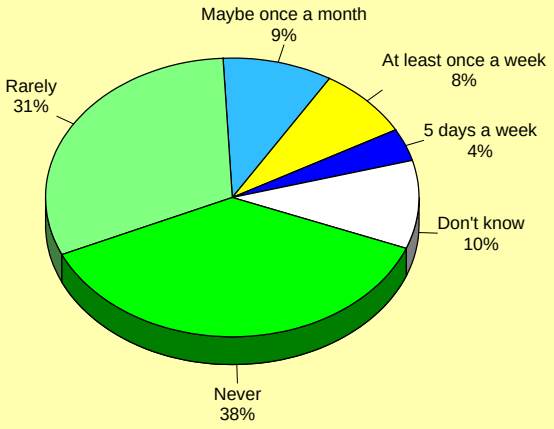
by percentage of respondents



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q9. If a transit or bus system were available between the three communities of Baldwin City, Edgerton, and Gardner with connections to the Metro Kansas City area, how often might your household use it?

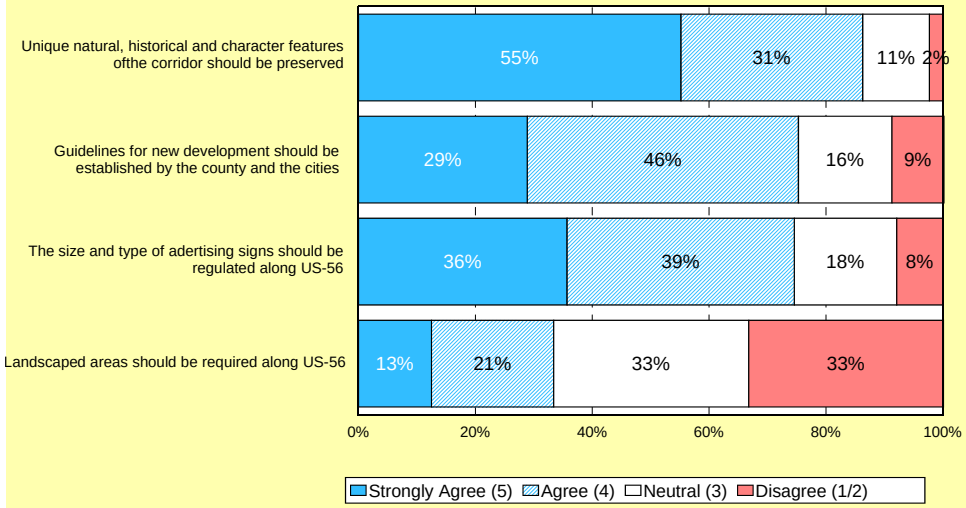
by percentage of respondents



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q10. Agreement with Each of the Following Items on the US-56 Corridor's Identity and image

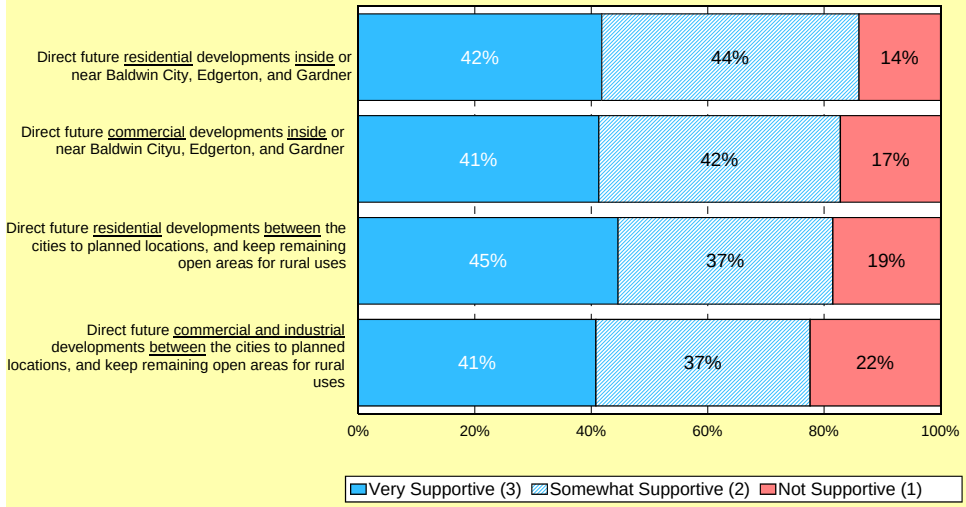
by percentage of respondents who rated the item as a 1 to 5 on a 5-point scale (excluding don't knows)



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q11. Support for Various Potential Developments Along the US-56 Highway Corridor

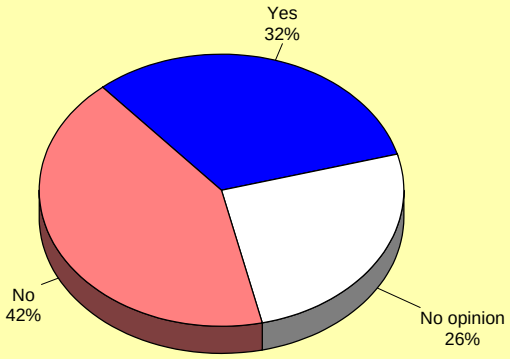
by percentage of respondents who rated the item as a 1 to 5 on a 5-point scale (excluding don't knows)



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q12. Should development outside city limits be required to be served by public (community) water and sewer services?

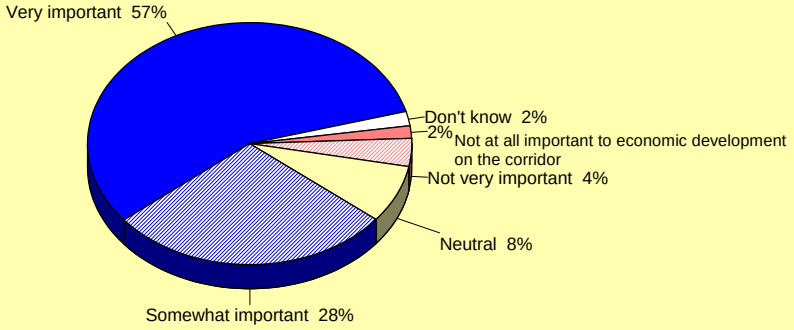
by percentage of respondents



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q13. Overall, how important do you think the highway is to economic development along the US-56 Corridor?

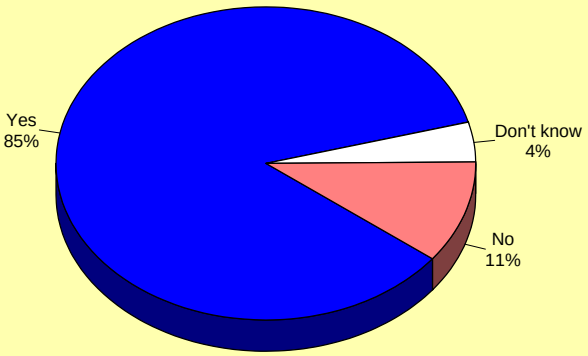
by percentage of respondents



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q14. Are you familiar withthe proposed BNSF intermodal facility adjacent to US-56?

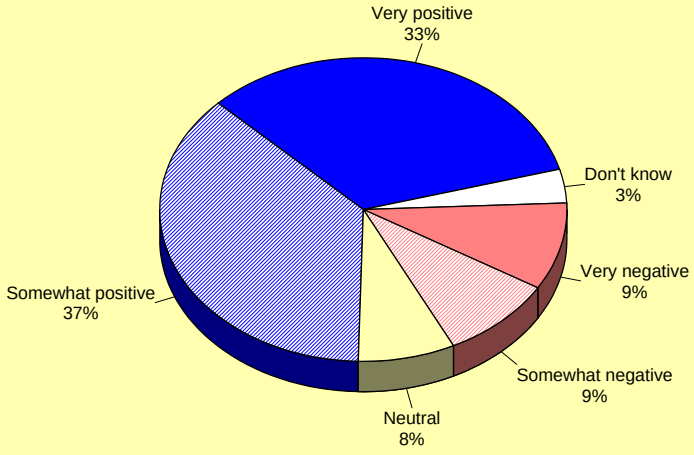
by percentage of respondents



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q14a. If familiar, what do you think would be the likely effect of this proposed facility on the economy of the US-56 Corridor?

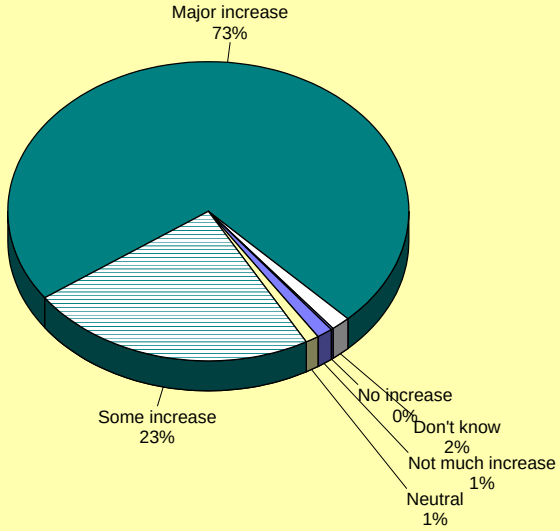
by percentage of respondents who are familiar with the BNSF Intermodal Facility



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q14b. If familiar, what do you think would be the likely effect of this proposed facility on truck traffic along the US-56 Corridor?

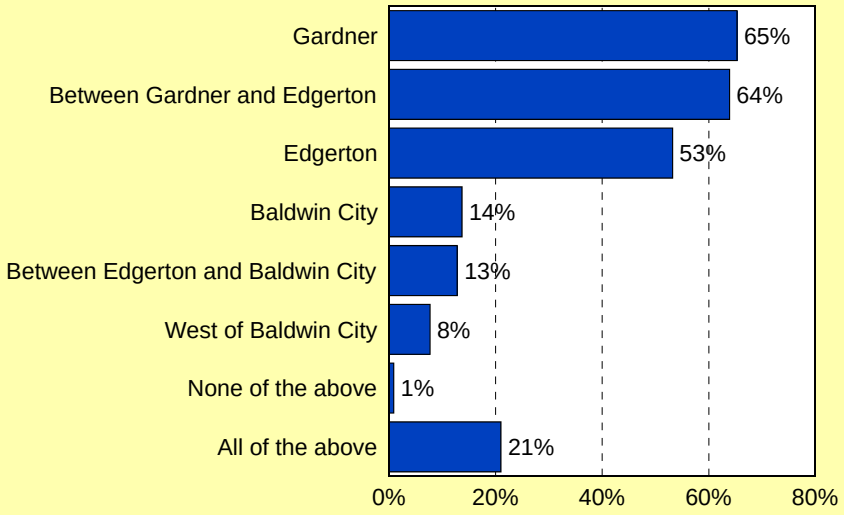
by percentage of respondents who are familiar with the BNSF Intermodal Facility



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q14c. If familiar, which of the following areas will be most effected by theBNSF intermodal facility?

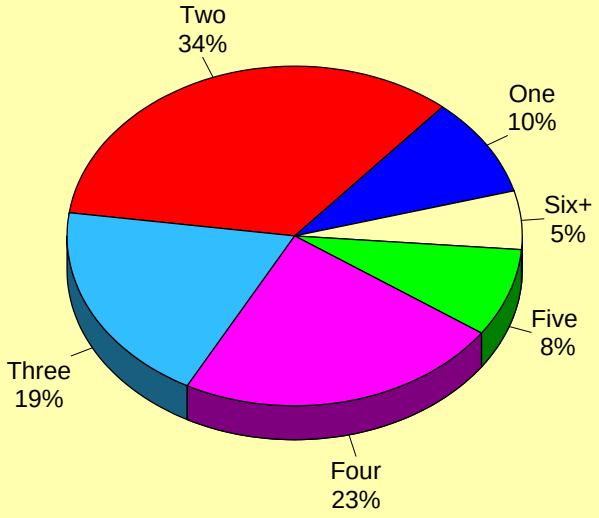
by percentage of respondents who are familiar with the BNSF Intermodal Facility
multiple responses could be made



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q15. How Many People Live In Your Household?

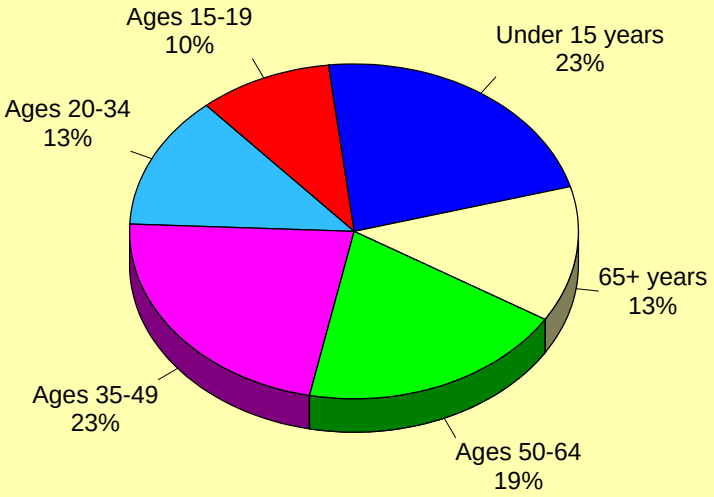
by percentage of respondents



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q16. Demographics: Ages of People in Household

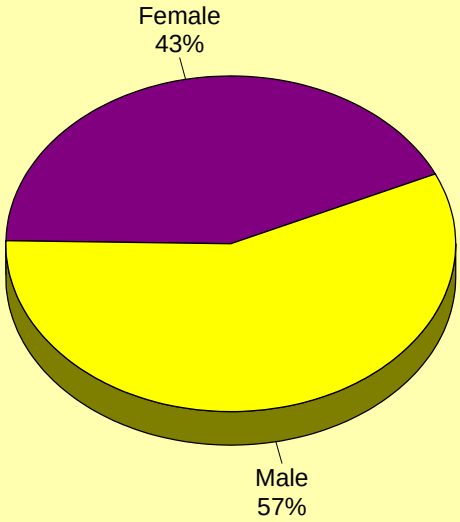
by percentage of persons in households



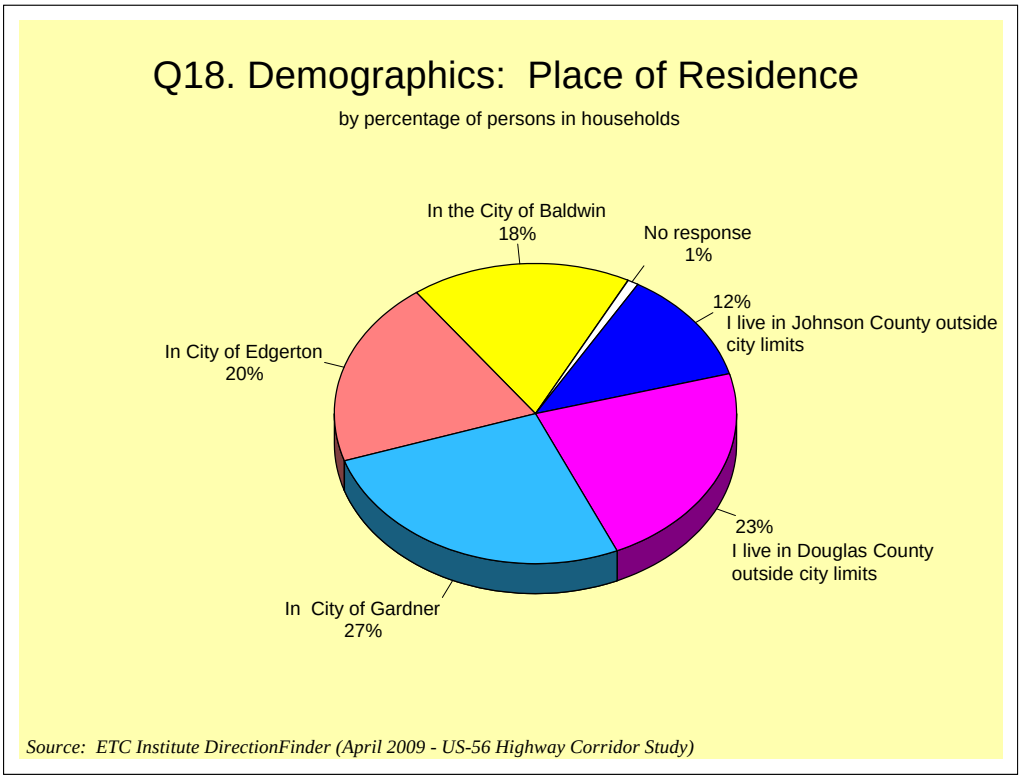
Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

Q17. Demographics: Respondents Gender

by percentage of respondents



Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)


Q18. Demographics: Place of Residence
by percentage of persons in households
In the City of Baldwin
18%
No response
1%
12%
I live in Johnson County outside city limits
In City of Edgerton
20%
23%
I live in Douglas County outside city limits
In City of Gardner
27%
Source: ETC Institute DirectionFinder (April 2009 - US-56 Highway Corridor Study)

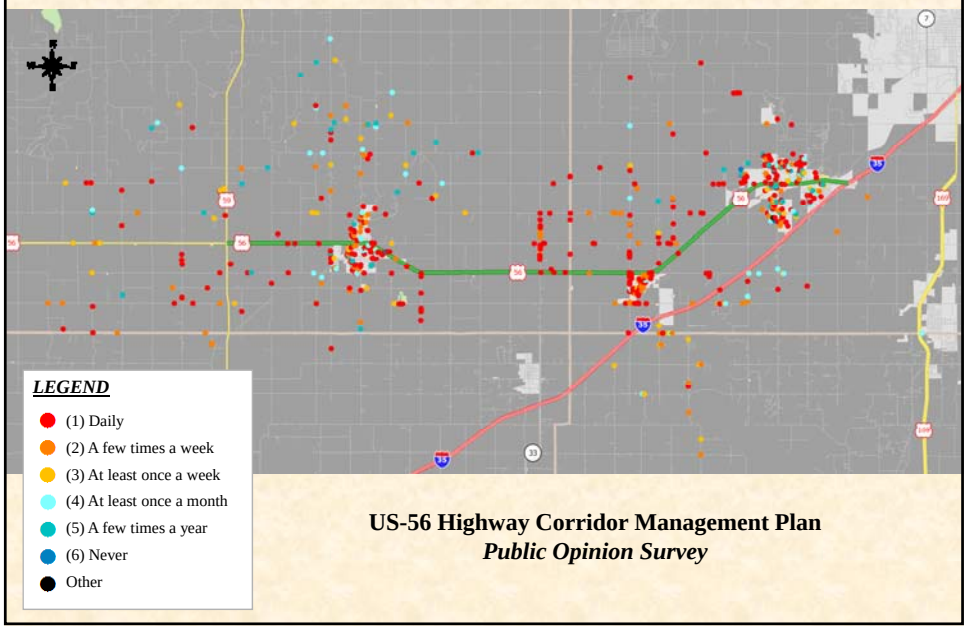
Section 2:

GIS Mapping

Interpreting the Maps

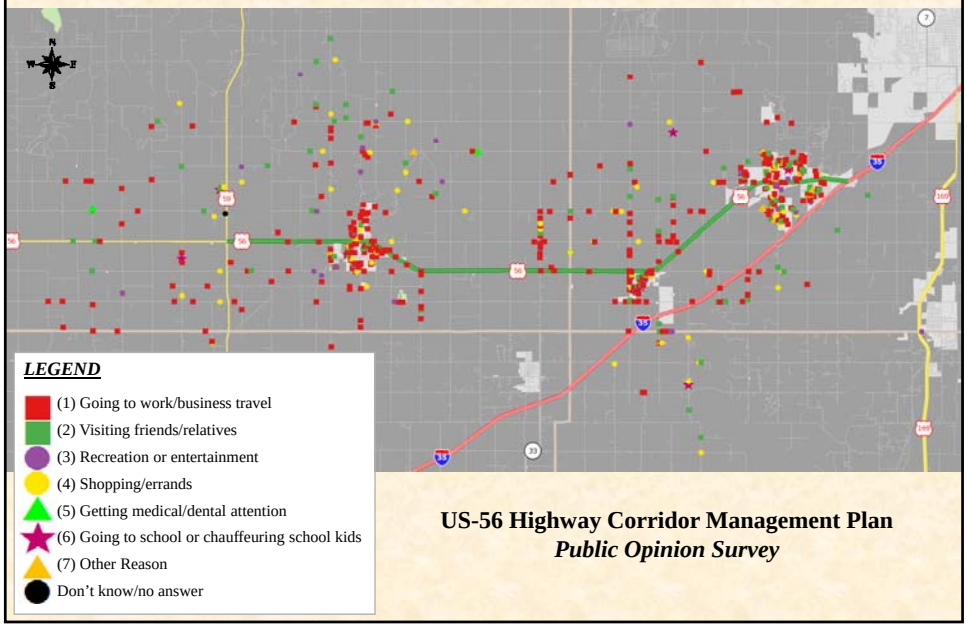
The response for the question asked is indicated by the color illustrated in the legend. The graphs and the tabular data provide the totals for each response.

Q1 How frequently do you drive this corridor?



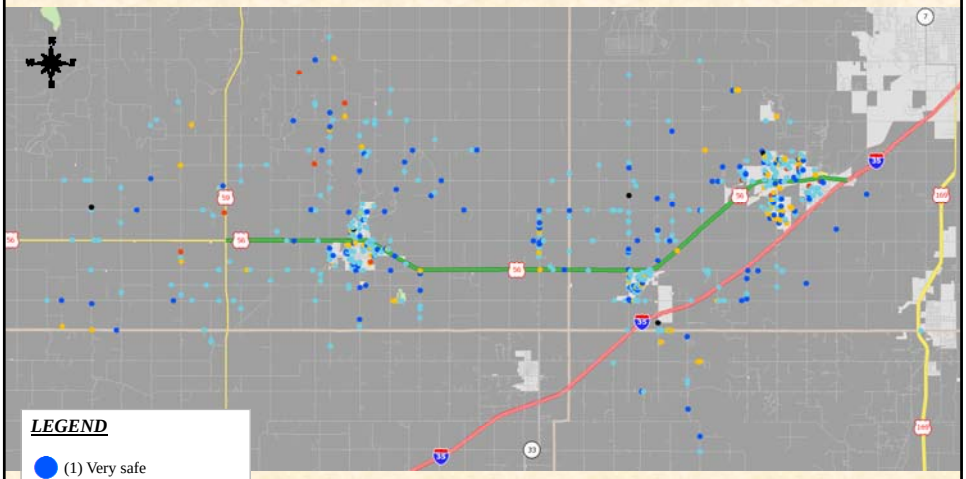
US-56 Highway Corridor Management Plan
Public Opinion Survey

Q2 When you drive on US-56, which of the following are the most frequent reasons for your trip?



US-56 Highway Corridor Management Plan
Public Opinion Survey

Q3 How safe do you feel driving on US-56?

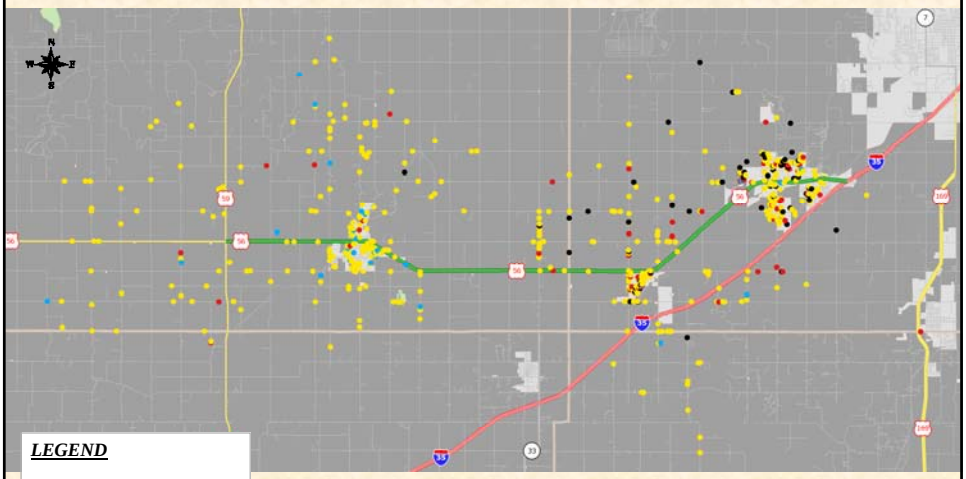


LEGEND

- (1) Very safe
- (2) Somewhat safe
- (3) Somewhat unsafe
- (4) Very unsafe
- (9) Don't know

US-56 Highway Corridor Management Plan
Public Opinion Survey

Q5a What is your opinion about the speed limits on US-56 through Baldwin City?

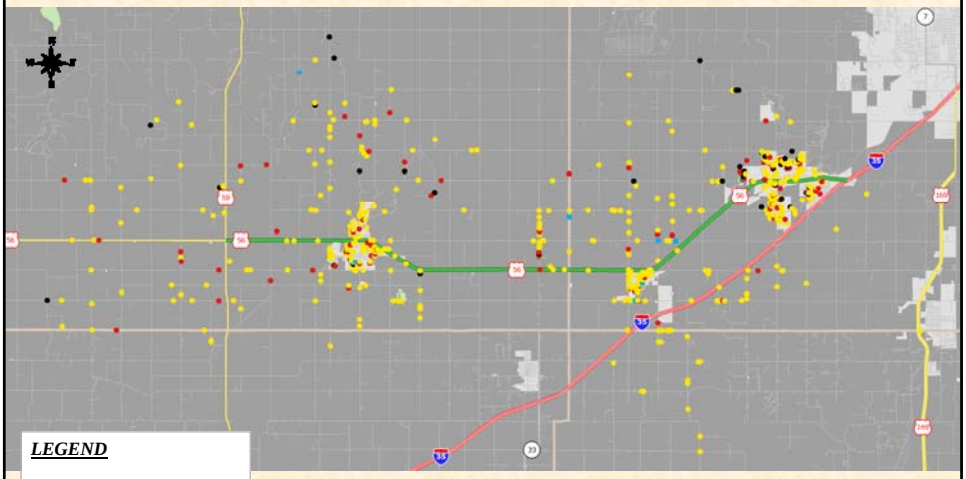


LEGEND

- (1) Too slow
- (2) About right
- (3) Too fast
- (4) Don't know

US-56 Highway Corridor Management Plan
Public Opinion Survey

Q5b What is your opinion about the speed limits on US-56 on the edge of Edgerton?

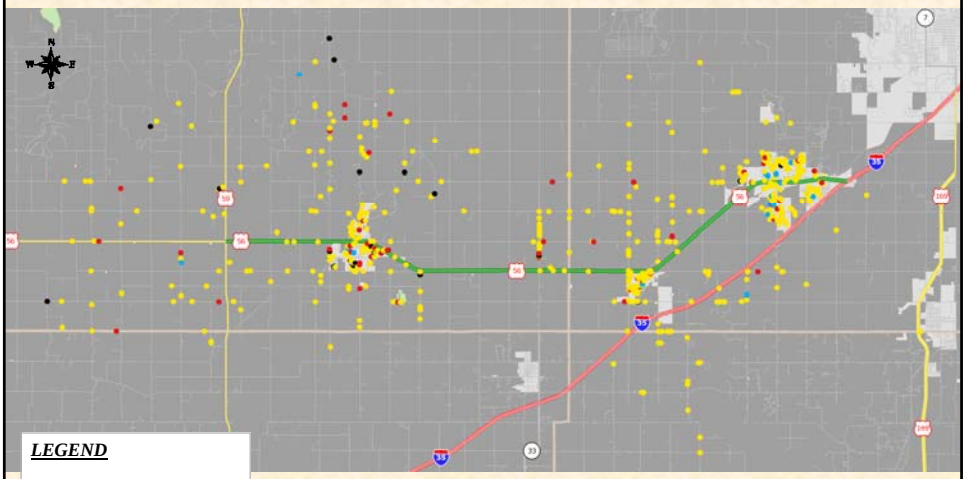


LEGEND

- (1) Too slow
- (2) About right
- (3) Too fast
- (4) Don't know

US-56 Highway Corridor Management Plan
Public Opinion Survey

Q5c What is your opinion about the speed limits on US-56 through Gardner?

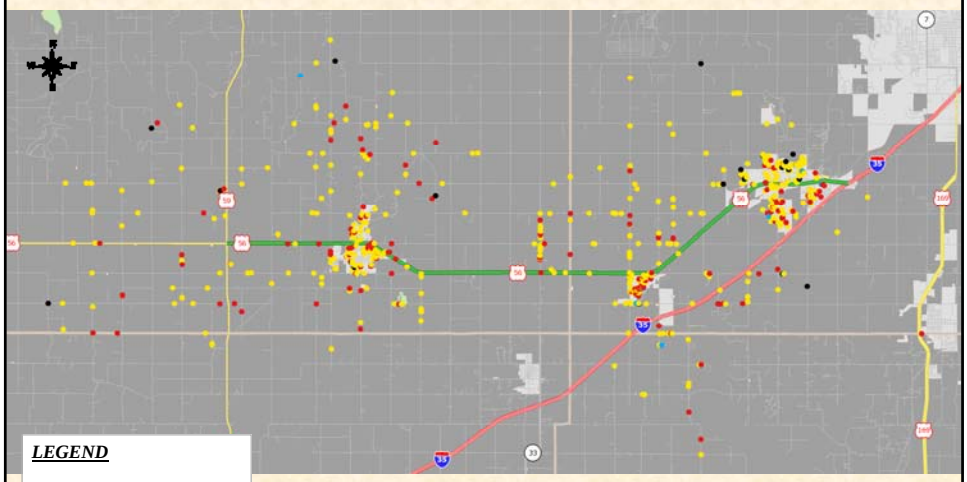


LEGEND

- (1) Too slow
- (2) About right
- (3) Too fast
- (4) Don't know

US-56 Highway Corridor Management Plan
Public Opinion Survey

Q5d What is your opinion about the speed limits on US-56 between the cities?

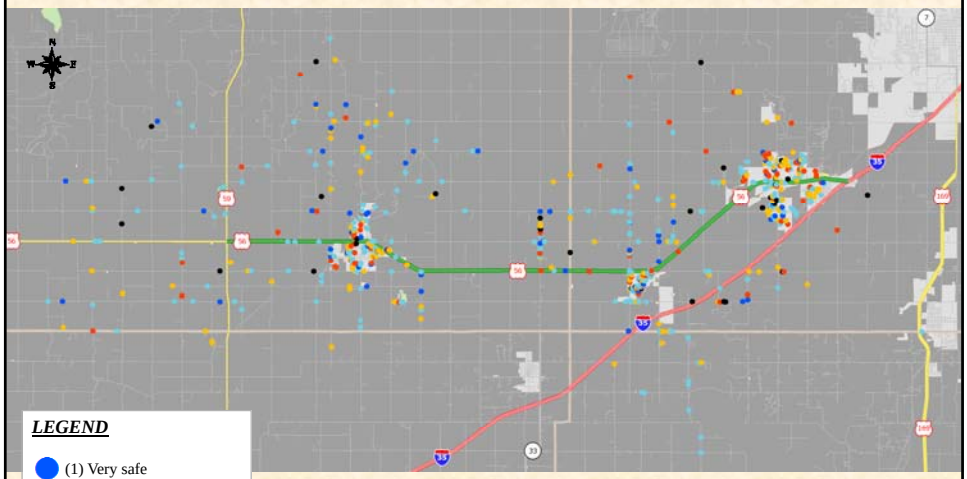


LEGEND

- (1) Too slow
- (2) About right
- (3) Too fast
- (4) Don't know

US-56 Highway Corridor Management Plan
Public Opinion Survey

Q6 How safe would you feel crossing US-56 on foot or on a bicycle, within Baldwin City, Edgerton, and Gardner?

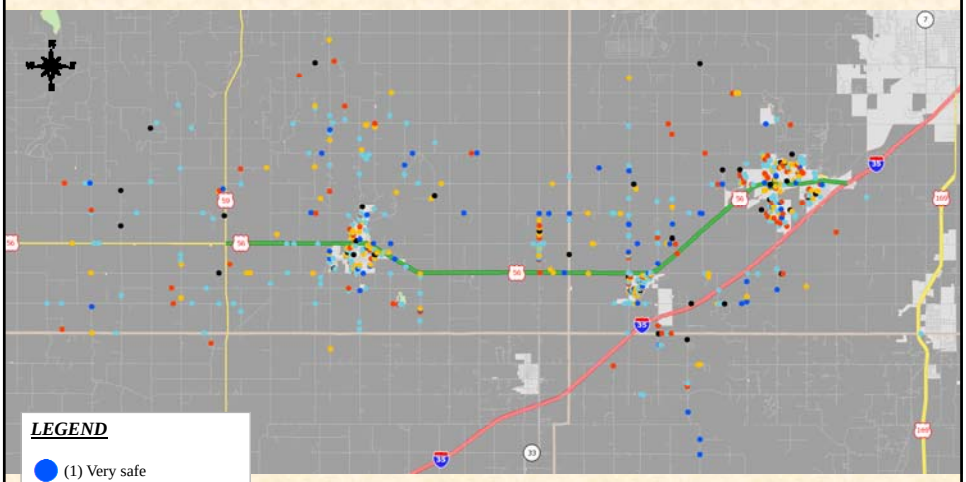


LEGEND

- (1) Very safe
- (2) Somewhat safe
- (3) Somewhat unsafe
- (4) Very unsafe
- (9) Don't know

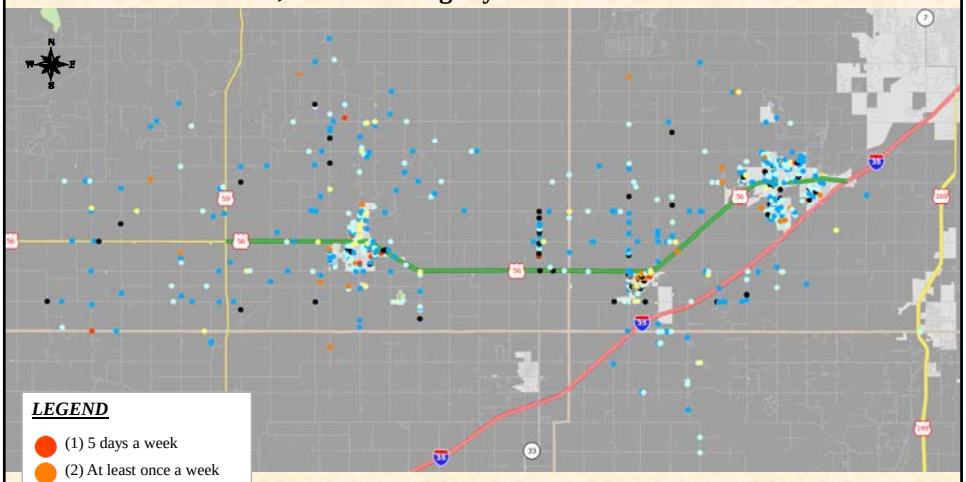
US-56 Highway Corridor Management Plan
Public Opinion Survey

Q7 How safe would you feel crossing US-56 on foot or on a bicycle between Baldwin City, Edgerton, and Gardner?



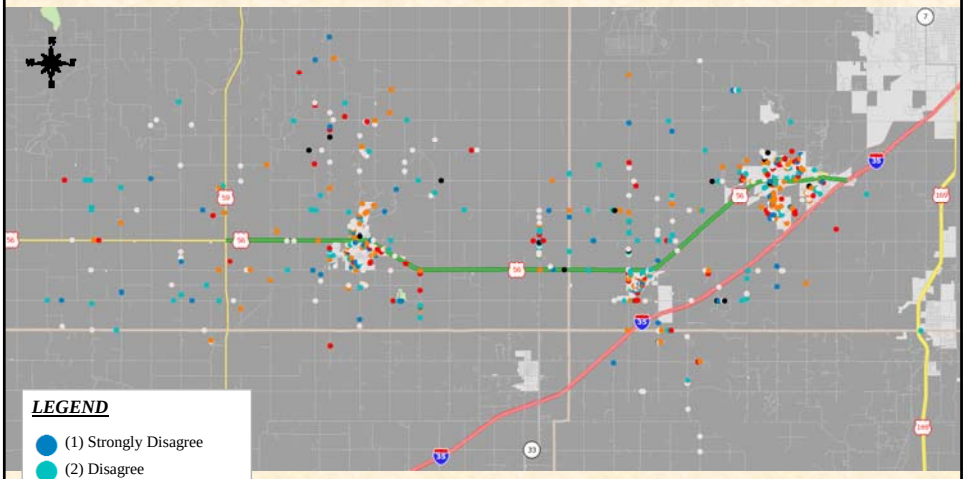
US-56 Highway Corridor Management Plan
Public Opinion Survey

Q9 If a transit or bus system were available between the three communities of Baldwin City, Edgerton, and Gardner with connections to the Metro Kansas City area, how often might your household use it?



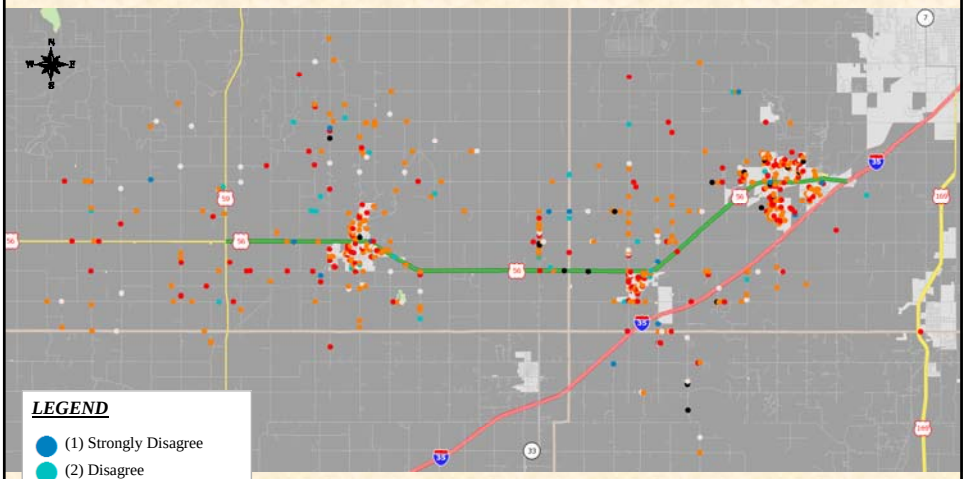
US-56 Highway Corridor Management Plan
Public Opinion Survey

Q10 Landscaped areas should be required along US-56



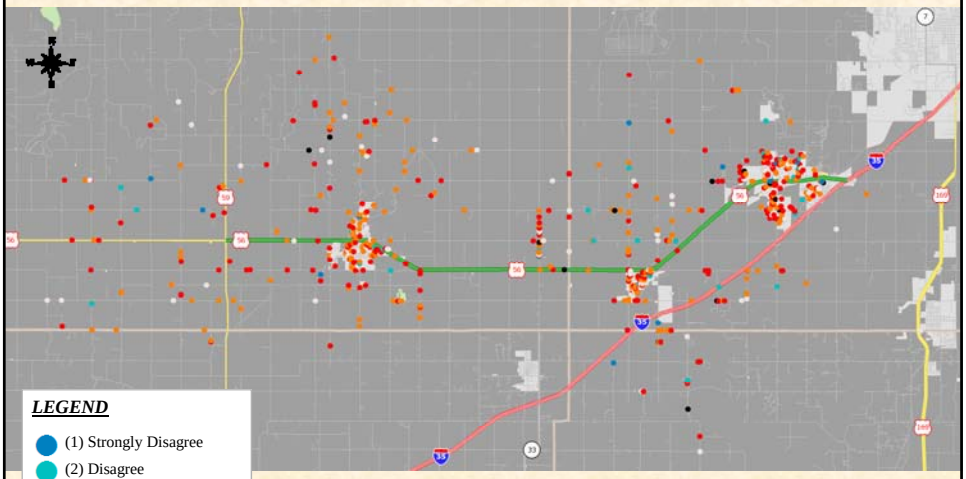
US-56 Highway Corridor Management Plan
Public Opinion Survey

Q10b Guidelines for new development should be established by the county and the cities



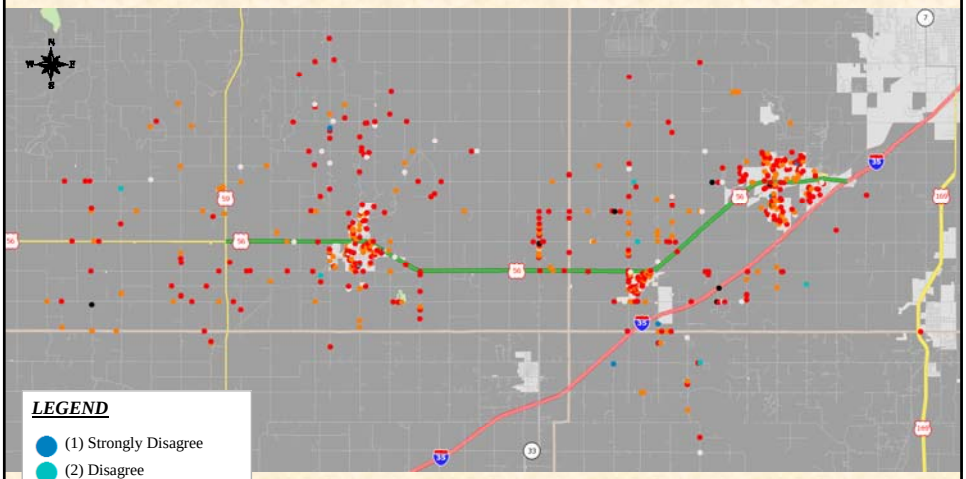
US-56 Highway Corridor Management Plan
Public Opinion Survey

Q10c The size and type of advertising signs should be regulated along US-56



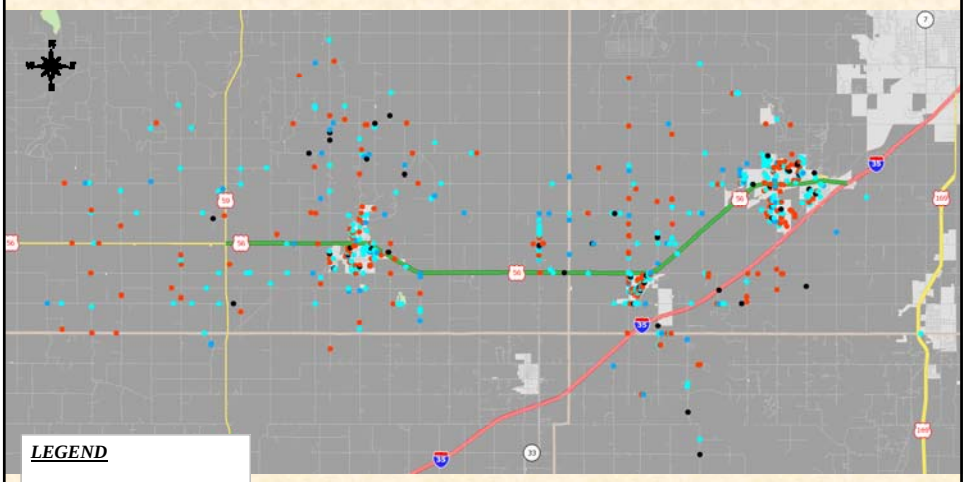
US-56 Highway Corridor Management Plan
Public Opinion Survey

Q10d Unique natural, historical and character features of the corridor should be preserved



US-56 Highway Corridor Management Plan
Public Opinion Survey

Q11a Your support for: Direct future residential developments inside or near Baldwin City, Edgerton, and Gardner

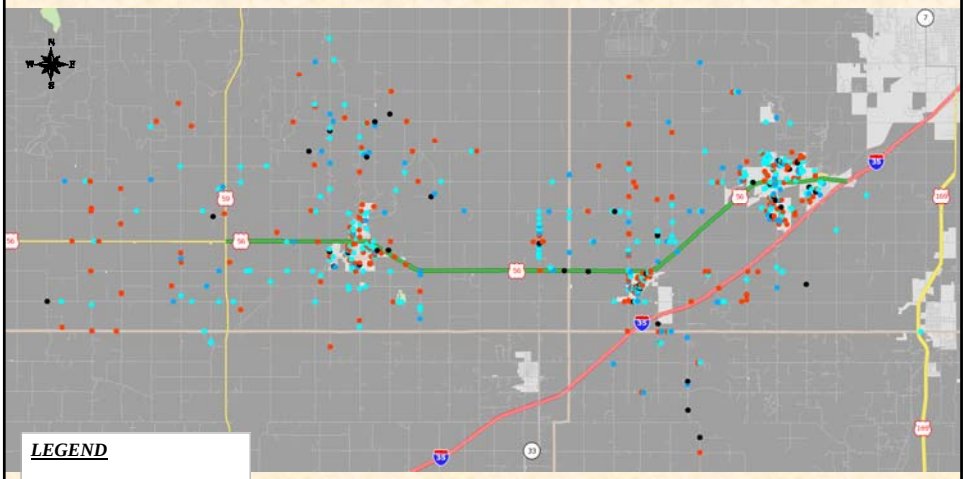


LEGEND

- (1) Not supportive
- (2) Somewhat Supportive
- (3) Very Supportive
- (9) Don't Know

US-56 Highway Corridor Management Plan
Public Opinion Survey

Q11b Your support for: Direct future commercial developments inside or near Baldwin City, Edgerton, and Gardner

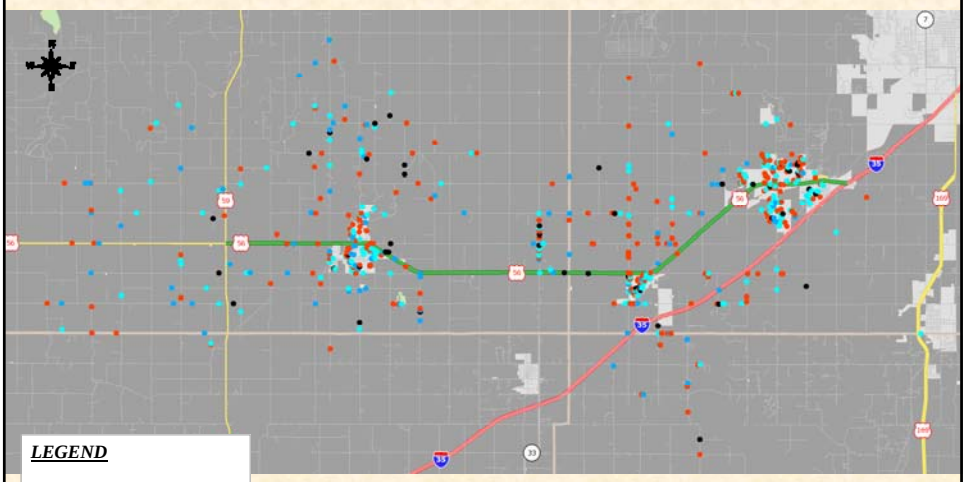


LEGEND

- (1) Not supportive
- (2) Somewhat Supportive
- (3) Very Supportive
- (9) Don't Know

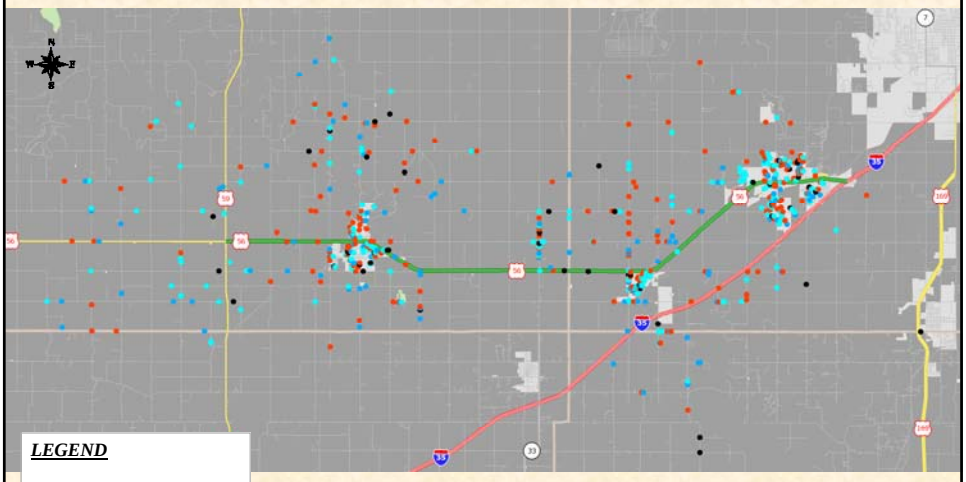
US-56 Highway Corridor Management Plan
Public Opinion Survey

Q11c Your support for: Direct future residential developments between the cities to planned locations, and keep remaining open areas for rural uses



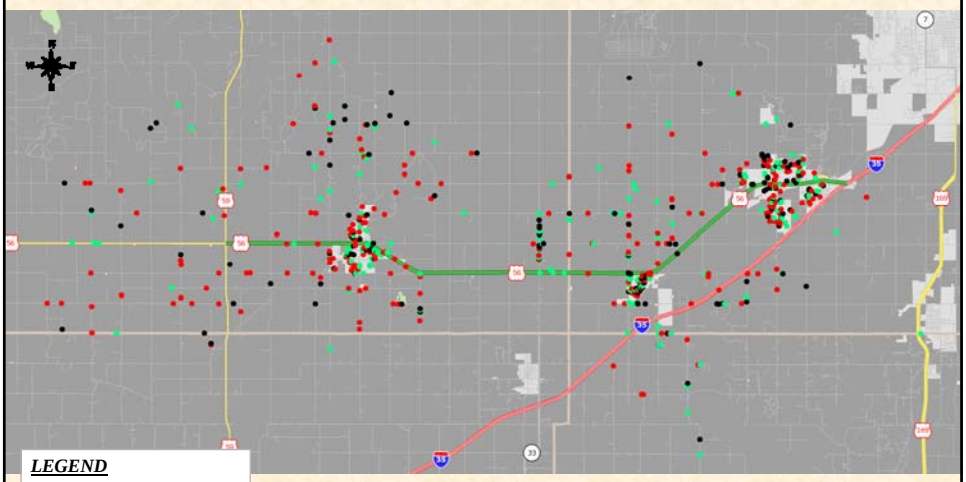
US-56 Highway Corridor Management Plan
Public Opinion Survey

Q11d Your support for: Direct future commercial and industrial developments between the cities to planned locations, and keep remaining open areas for rural uses



US-56 Highway Corridor Management Plan
Public Opinion Survey

Q12 Should development outside city limits be required to be served by public (community) water and sewer services?

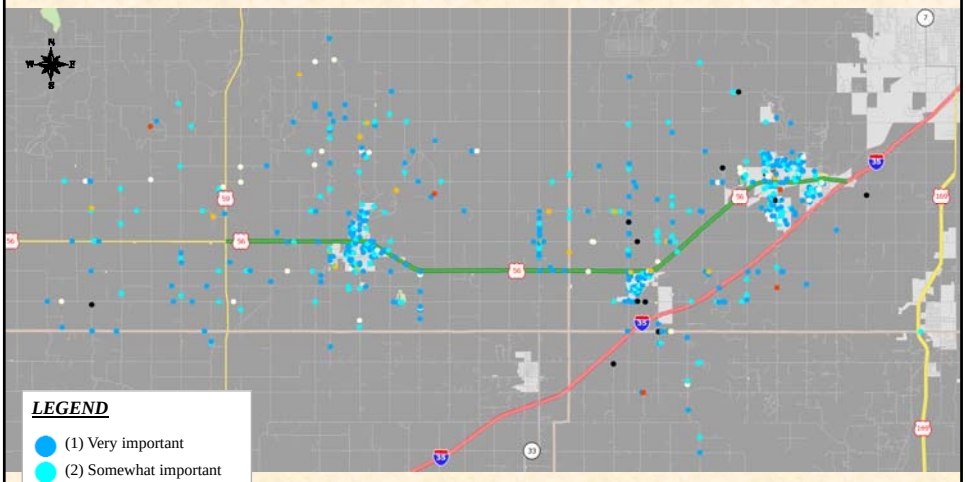


LEGEND

- (1) Yes
- (2) No
- (9) No Opinion

US-56 Highway Corridor Management Plan
Public Opinion Survey

Q13 Overall, how important do you think the highway is to economic development along the US-56 Corridor?

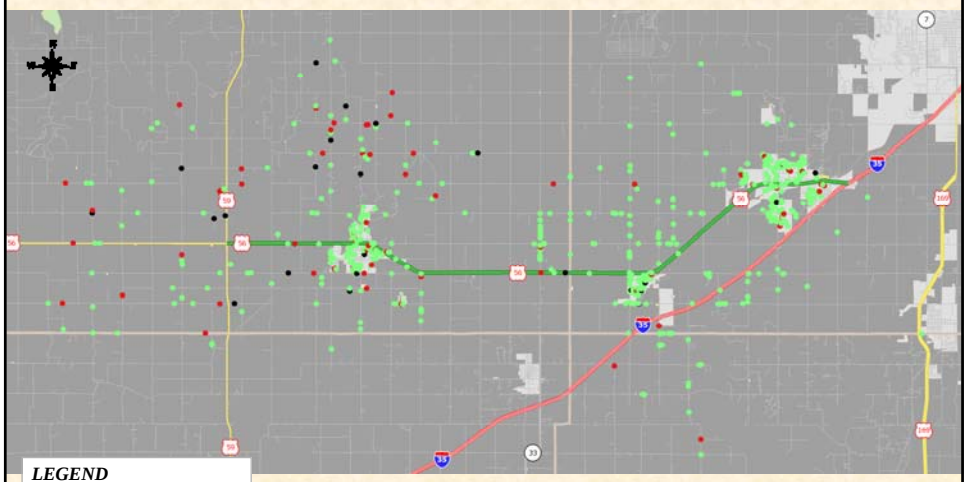


LEGEND

- (1) Very important
- (2) Somewhat important
- (3) Neutral
- (4) Not very important
- (5) Not at all important
- (9) Don't know

US-56 Highway Corridor Management Plan
Public Opinion Survey

Q14 Are you familiar with the proposed BNSF intermodal facility adjacent to US-56?

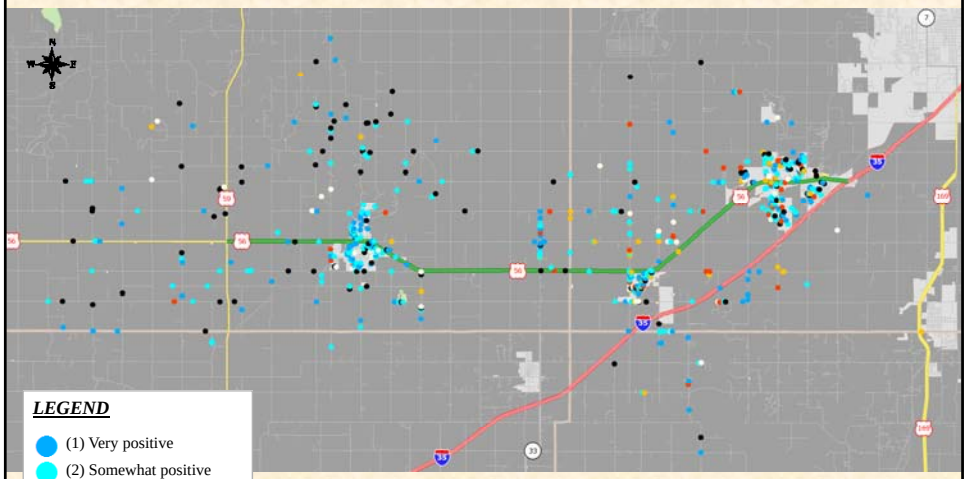


LEGEND

- (1) Yes
- (2) No
- (9) No Opinion

US-56 Highway Corridor Management Plan
Public Opinion Survey

Q14a What do you think would be the likely effect of this proposed facility on the economy of the US-56 Corridor?

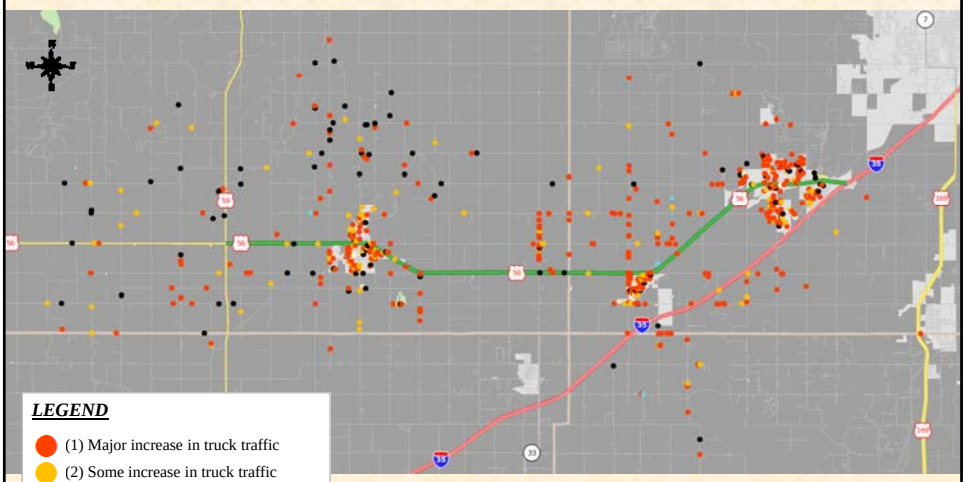


LEGEND

- (1) Very positive
- (2) Somewhat positive
- (3) Neutral
- (4) Somewhat negative
- (5) Very negative
- (9) Don't know

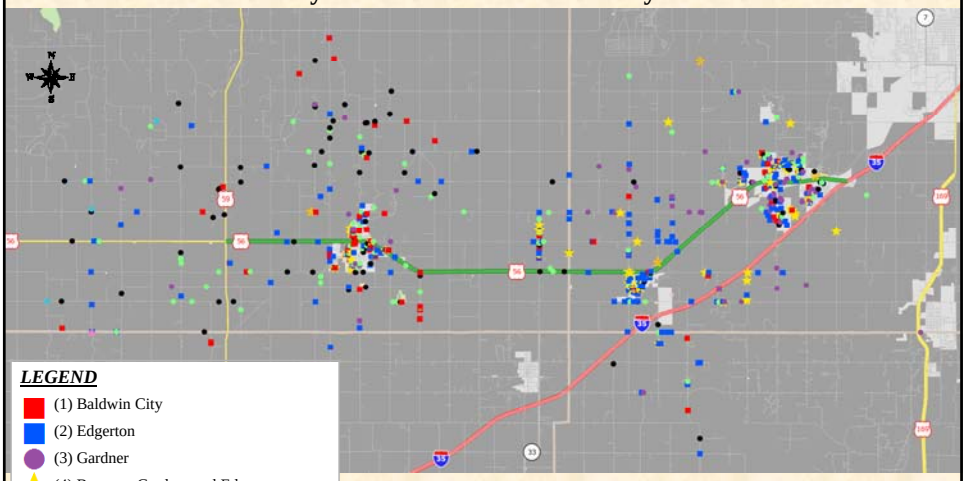
US-56 Highway Corridor Management Plan
Public Opinion Survey

Q14b What do you think would be the likely effect of this proposed facility on truck traffic along the US-56 Corridor?



US-56 Highway Corridor Management Plan
Public Opinion Survey

Q14c Which of the following areas will be most effected by the BNSF intermodal facility?



US-56 Highway Corridor Management Plan
Public Opinion Survey

Section 3:

Tabular Data

Geography

City	Number	Percent
EDGERTON	253	34.1 %
GARDNER	217	29.2 %
BALDWIN CITY	272	36.7 %
Total	742	100.0 %

Geography

Zip	Number	Percent
66021	253	34.1 %
66030	217	29.2 %
66006	272	36.7 %
Total	742	100.0 %

Q1. How frequently do you drive this corridor?

Q1. How frequently do you drive this corridor	Number	Percent
1=Daily	395	53.2 %
2=A few times a week	139	18.7 %
3=At least once a week	62	8.4 %
4=At least once a month	73	9.8 %
5=A few times a year	65	8.8 %
6=Never	4	0.5 %
9=No response	4	0.5 %
Total	742	100.0 %

Q2. When you drive on US-56, which of the following are the most frequent reasons for your trip?

Q2. Frequent reasons for your trip	Number	Percent
1 = Work/business travel	451	60.8 %
2 = Visiting friends/relatives	355	47.8 %
3 = Recreation/entertainment	322	43.4 %
4 = Shopping/errands	509	68.6 %
5 = Medical/dental	260	35.0 %
6 = School	142	19.1 %
7 = Other	40	5.4 %
9 = No response	2	0.3 %
Total	2081	

Q2. When you drive on US-56, which of the following are the most frequent reasons for your trip? (without "no response")

Q2. Frequent reasons for your trip	Number	Percent
1 = Work/business travel	451	60.8 %
2 = Visiting friends/relatives	355	47.8 %
3 = Recreation/entertainment	322	43.4 %
4 = Shopping/errands	509	68.6 %
5 = Medical/dental	260	35.0 %
6 = School	142	19.1 %
7 = Other	40	5.4 %
Total	2079	

Q2. Other

Other
ALTERNATE ROUTE TO I-70
CHURCH
CHURCH
CHURCH
CHURCH
CHURCH
CHURCH
CHURCH
CHURCH
CHURCH
CHURCH
CHURCH
CHURCH
CHURCH
CHURCH
CHURCH ACTIVITIES
CHURCH ATTENDANCE
GETTING WATER IN GARDNER
GO TO AIRPORT
GO TO SCHOOL AT BAKER UNIVERSITY
GOING TO TOPEKA
GROCERY STORES
GYM AND FOOD
HAIRCUT
HOME
PARTS FOR FARM EQUIPMENT
PLEASURE TRIPS
POST OFFICE IN EDGERTON
PRETTY MUCH EVERYTHING I DO
QUICK TO 7 TO OLATHE
RENTAL PROPERTY
SCHOOL ACTIVITIES
SPORTING EVENTS
SPORTS
STARTING ON A LONG TRIP
TAKE SON TO BABYSITTER
TO GET TO OLATHE
WORK

Q3. How safe do you feel driving on US-56?

Q3. How safe driving on US-56	Number	Percent
1=Very safe	178	24.0 %
2=Somewhat safe	429	57.8 %
3=Somewhat unsafe	109	14.7 %
4=Very unsafe	18	2.4 %
9=No response	8	1.1 %
Total	742	100.0 %

Q3. How safe do you feel driving on US-56? (without "no response")

Q3. How safe driving on US-56	Number	Percent
1=Very safe	178	24.3 %
2=Somewhat safe	429	58.4 %
3=Somewhat unsafe	109	14.9 %
4=Very unsafe	18	2.5 %
Total	734	100.0 %

Q4. What is your opinion about the number of driveways entering on to US-56 in the following locations?
(N=742)

	Too many	About right	Too few	Don't know
Q4a. Through Baldwin City	13.3%	55.4%	1.1%	30.2%
Q4b. On the edge of Edgerton	9.3%	68.7%	1.9%	20.1%
Q4c. Through Gardner	32.3%	51.9%	1.5%	14.3%
Q4d. Between Gardner and Edgerton	8.9%	70.9%	2.8%	17.4%
Q4e. Between Edgerton and Baldwin City	7.1%	67.1%	1.5%	24.3%
Q4f. Between Baldwin City and US 59	8.2%	60.8%	1.5%	29.5%

Q4. What is your opinion about the number of driveways entering on to US-56 in the following locations? (without “don’t knows”)
(N=742)

	Too many	About right	Too few
Q4a. Through Baldwin City	19.0%	79.2%	1.9%
Q4b. On the edge of Edgerton	11.7%	85.8%	2.5%
Q4c. Through Gardner	37.7%	60.6%	1.8%
Q4d. Between Gardner and Edgerton	10.7%	85.7%	4.0%
Q4e. Between Edgerton and Baldwin City	9.3%	88.6%	2.0%
Q4f. Between Baldwin City and US 59	11.6%	86.3%	2.1%

Q5. What is your opinion about the speed limits on US-56 in the following locations?

(N=742)

	Too fast	About right	Too slow	Don't know
Q5a. Through Baldwin City	5.3%	73.5%	9.3%	12.0%
Q5b. On the edge of Edgerton	2.4%	76.8%	14.2%	6.6%
Q5c. Through Gardner	3.9%	84.2%	8.5%	3.4%
Q5d. Between the cities	1.5%	70.4%	24.7%	3.5%

Q5. What is your opinion about the speed limits on US-56 in the following locations?
(excluding "don't knows")
(N=742)

	Too fast	About right	Too slow
Q5a. Through Baldwin City	5.9%	83.6%	10.6%
Q5b. On the edge of Edgerton	2.6%	82.2%	15.2%
Q5c. Through Gardner	4.0%	86.9%	8.8%
Q5d. Between the cities	2.1%	72.8%	25.4%

Q6. How safe would you feel crossing US-56 on foot or on a bicycle, within Baldwin City, Edgerton, and Gardner?

Q6. How safe would you feel crossing US-56	Number	Percent
1=Very safe	85	11.5 %
2=Somewhat safe	300	40.4 %
3=Somewhat unsafe	204	27.5 %
4=Very unsafe	118	15.9 %
9=Don't know	35	4.7 %
Total	742	100.0 %

Q7. How safe would you feel crossing US-56 on foot or on a bicycle between Baldwin City, Edgerton, and Gardner?

Q7. How safe would you feel crossing US-56	Number	Percent
1=Very safe	85	11.5 %
2=Somewhat safe	289	38.9 %
3=Somewhat unsafe	188	25.3 %
4=Very unsafe	131	17.7 %
9=Don't know	49	6.6 %
Total	742	100.0 %

Q8. Are there specific locations along US-56 where additional safe crossings for bicyclists and pedestrian traffic should be provided?

Q8. Should additional safe crossings be provided	Number	Percent
1=Yes	205	27.6 %
2=No	203	27.4 %
3=Don't know	334	45.0 %
Total	742	100.0 %

Q8a. If YES to Question #8, where are the locations?

Q8a. Where	Number	Percent
ALL INTERSECTIONS OUTSIDE CITY	1	0.5 %
GARDNER PRICE CHOPPER	1	0.5 %
EAST SIDE OF BALDWIN	2	1.0 %
3RD STREET IN BALDWIN	1	0.5 %
EAST BALDWIN	1	0.5 %
WEST BALDWIN	1	0.5 %
EAST GARDNER	1	0.5 %
WEST GARDNER	2	1.0 %
1061 AND US 56	1	0.5 %
MAJOR INTERESECTIONS	1	0.5 %
BIKE CORRIDER PARALLEL TO 56	1	0.5 %
HWY 56 AND HIGH ST BALDWIN	1	0.5 %
199TH UNSAFE FOR EVERYTHING	1	0.5 %
MOONLIGHT	1	0.5 %
56HWY MAIN AND MOONLIGHT	1	0.5 %
US 56 & EISENHOWER RD BALDWIN	1	0.5 %
MOONLIGHT AND US-56	1	0.5 %
IN GARDNER	3	1.5 %
MOONLIGHT IN GARDNER	2	1.0 %
CENTER IN GARDNER	1	0.5 %
MOONLIGHT AND 56 PRICE CHOPPER	1	0.5 %
56 AND MOONLIGHT IN GARDNER	1	0.5 %
56 AND CENTER IN GARDNER	1	0.5 %
SCHOOL ZONE IN BALDWIN	1	0.5 %
SHOPS ON HIGHWAY IN BALDWIN	1	0.5 %
EDGERTON BY THE GAS STATION	1	0.5 %
3RD AND AMES IN BALDWIN	1	0.5 %
BIKE ROUTES 33 HWY AND 56	1	0.5 %
BIKE ROUTE EDGERTON RD AND 56	1	0.5 %
BIKE ROUTE 4 CORNERS AND 56	1	0.5 %
BALDWIN ELEMENTARY	2	1.0 %
WESTSIDE OB BALDWIN BIKE TRAIL	1	0.5 %
BALDWIN CITY	2	1.0 %
EDGERTON	2	1.0 %
GARDNER	1	0.5 %
56HWY HILL BY VETRIENARIANS	1	0.5 %
1400 RD AND 56 DOUGLAS COUNTY	1	0.5 %
1600 RD AND 56	1	0.5 %
CORNER OF HWY 56 AND 8TH ST	1	0.5 %
BY GROCERY IN BALDWIN	1	0.5 %

Q8a. If YES to Question #8, where are the locations?

Q8a. Where	Number	Percent
BY PIZZA HUT IN BALDWIN	1	0.5 %
LIGHT ON 8TH AND US 56 BALDWIN	1	0.5 %
BALDWIN CROSSING SOUTH MARKET	1	0.5 %
WITHIN BALDWIN	1	0.5 %
IN CITY LIMITS GARDNER BALDWIN	1	0.5 %
EDGERTON RD 191ST	1	0.5 %
US 56 AND 8TH STREET BALDWIN	1	0.5 %
IN BALDWIN AT 56 & EISENHOWER	1	0.5 %
AT 8TH & 56 HWY IN BALDWIN	1	0.5 %
10TH ST AND HWY 56 IN BALDWIN	1	0.5 %
CENTER & US 56 IN GARDNER	1	0.5 %
MOONLIGHT & US 56 IN GARDNER	2	1.0 %
175TH & US 56 IN GARDNER	1	0.5 %
WAVERLY & US 56 IN GARDNER	1	0.5 %
US 56 & 8TH ST IN BALDWIN	5	2.4 %
MOONLIGHT & CENTER ST CROSSING	1	0.5 %
33RD AND 56 HWY	1	0.5 %
56 AND 1061ST	1	0.5 %
HERITAGE HOUSING DEVELOPMENT	1	0.5 %
BY GROCERY STORE IN BALDWIN	1	0.5 %
GROCERY STORE IN BALDWIN	1	0.5 %
8TH ST & 56 HWY IN BALDWIN	1	0.5 %
TRAFFIC LIGHT AT 8TH & US 56	1	0.5 %
CROSSWALK AT 10TH AND US 56	1	0.5 %
ANNUAL CROSSWALK PAINTING	1	0.5 %
STOP LIGHT BY GROCERY STORE	1	0.5 %
YIELD ZONES ACROSS FROM LODGE	1	0.5 %
YIELD ZONES AT 8TH ST	1	0.5 %
YIELD ZONES NEAR CALHOUN'S	1	0.5 %
AS YOU COME IN TO EACH TOWN	1	0.5 %
MOONLIGHT RD & 56 HWY	1	0.5 %
IN EDGERTON AT ELEMENTARY SCH	1	0.5 %
56 HIGHWAY AND 199TH ST	1	0.5 %
199TH & 56 HIGHWAY	1	0.5 %
EDGERTON RD & 56 HIGHWAY	1	0.5 %
EDGERTON RD	2	1.0 %
1ST ST IN EDGERTON	1	0.5 %
WAVERLY RD IN GARDNER	1	0.5 %
AREA BETWEEN 199TH & 4 CORNERS	1	0.5 %
WITHIN BALDWIN CITY	3	1.5 %

Q8a. If YES to Question #8, where are the locations?

Q8a. Where	Number	Percent
WITHIN EDGERTON	1	0.5 %
WITHIN GARDNER	2	1.0 %
BETWEEN MULBERRY & MOONLIGHT	1	0.5 %
BALDWIN CITY 6TH & 8TH ST	1	0.5 %
BY BALDWIN GROCERY STORE	1	0.5 %
BALDWIN 10TH ST & HWY 56	1	0.5 %
BALDWIN 8TH ST & HWY 56	1	0.5 %
INSIDE GARDNER CITY LIMITS	1	0.5 %
MOONLIGHT AND HWY 56	1	0.5 %
SYCAMORE & 56 HWY IN GARDNER	1	0.5 %
BALDWIN EAST OF MCDONALDS	1	0.5 %
INSIDE BALDWIN	1	0.5 %
2 ON S CENTER NO ONE STOPS AT	1	0.5 %
56 HWY & 9TH ST	1	0.5 %
56 HWY & 4TH ST	1	0.5 %
WITHIN BALDWIN CITY LIMITS	1	0.5 %
WITHIN CITY LIMITS OF CITIES	1	0.5 %
1ST & 56 HWY IN EDGERTON	1	0.5 %
BALDWIN FROM ONE SIDE TO OTHER	1	0.5 %
GARDNER FROM ONE SIDE TO OTHER	1	0.5 %
8TH ST IN BALDWIN CITY	2	1.0 %
EISENHOWER IN BALDWIN CITY	1	0.5 %
56TH & EISENHOWER IN BALDWIN	1	0.5 %
56 & 8TH ST IN BALDWIN	2	1.0 %
1ST ST & 56 IN BALDWIN	1	0.5 %
EAST & WEST GAGE IN BALDWIN	1	0.5 %
BY GARDNER BALLPARK	1	0.5 %
THROUGH ALL CITIES	1	0.5 %
6TH ST & US 56	1	0.5 %
IN BALDWIN AT 8TH ST	2	1.0 %
BALDWIN CITY NEAR SONIC	1	0.5 %
8TH ST	2	1.0 %
IN BALDWIN AT 4TH ST	1	0.5 %
WARREN ST & US 56 IN GARDNER	1	0.5 %
WHITE ST & US 56 IN GARDNER	1	0.5 %
CEDAR ST & US 56 IN GARDNER	1	0.5 %
EDGE OF GARDNER & INTO GARDNER	1	0.5 %
56 & EDNA	1	0.5 %
BALDWIN CITY MARKET	1	0.5 %
SCHOOL CROSSING AT SONIC	1	0.5 %

Q8a. If YES to Question #8, where are the locations?

Q8a. Where	Number	Percent
4TH ST & US 56 IN BALDWIN	1	0.5 %
8TH ST & US 56 IN BALDWIN	2	1.0 %
10TH ST & US 56 IN BALDWIN	1	0.5 %
ALL CROSSINGS	1	0.5 %
8TH & AMES	1	0.5 %
1600 RD WEST OF BALDWIN	2	1.0 %
BY THE SCHOOL WEST OF BALDWIN	1	0.5 %
SCHOOL CROSSINGS NEAR SONIC	1	0.5 %
EISENHOWER & US 56	1	0.5 %
1ST ST IN BALDWIN	1	0.5 %
MEADOWBROOK & 56 HWY	1	0.5 %
WHEREVER NEEDED	1	0.5 %
MOONLIGHT & MAIN ST IN GARDNER	1	0.5 %
MOONLIGHT & US 56	5	2.4 %
US 56 & 8TH ST	1	0.5 %
EAST OF BALDWIN	1	0.5 %
AT SCHOOL CROSSINGS	1	0.5 %
CENTER ST & US 56 IN GARDNER	2	1.0 %
WITHIN GARDNER'S CITY LIMITS	1	0.5 %
IN CITY LIMITS	1	0.5 %
SONIC IN GARDNER	1	0.5 %
CHINESE RESTAURANT IN GARDNER	1	0.5 %
EDGERTON RD 7 US 56	1	0.5 %
56 HIGHWAY & CEDAR	1	0.5 %
56 HIGHWAY & MOONLIGHT	1	0.5 %
US 56 & CENTER ST	1	0.5 %
BIKE PATHS ON WHOLE ROUTE	1	0.5 %
ALL INTERSECTIONS IN GARDNER	1	0.5 %
56 HWY & MOONLIGHT	1	0.5 %
56 HWY & CENTER ST	1	0.5 %
6TH ST & US 56 IN BALDWIN	1	0.5 %
MOONLIGHT RD & 56 IN GARDNER	1	0.5 %
BALDWIN	3	1.5 %
ON MAIN ST	1	0.5 %
WEST SIDE OF GARDNER	1	0.5 %
NEAR WAL MART IN GARDNER	1	0.5 %
HIGHWY 59 & BALDWIN CITY	1	0.5 %
6TH ST IN BALDWIN	1	0.5 %
BETWEEN MULBERRY & N WHITE DR	1	0.5 %
US 56 & MOONLIGHT IN GARDNER	3	1.5 %

Q8a. If YES to Question #8, where are the locations?

Q8a. Where	Number	Percent
US 56 & CEDAR NILES IN GARDNER	1	0.5 %
CORNER OF MINI MART	1	0.5 %
AT EDGERTON ELEMENTARY	1	0.5 %
ELEMENTARY SCHOOL IN EDGERTON	1	0.5 %
6TH & AMES IN BALDWIN	1	0.5 %
8TH & AMES IN BALDWIN	1	0.5 %
SONIC TO MCDONALD'S IN BALDWIN	1	0.5 %
EDGERTON ROAD	1	0.5 %
SUNFLOWER RD & 199TH ST	1	0.5 %
W GARDNER	1	0.5 %
IN CITY LIMITS BY STOPLIGHTS	1	0.5 %
8TH ST IN BALDWIN	1	0.5 %
3RD ST IN BALDWIN	1	0.5 %
BETWEEN GARDNER AND EDGERTON	1	0.5 %
NEAR SCHOOL IN EDGERTON	1	0.5 %
US 56 & SYCAMORE	1	0.5 %
EDGERTON RD & US 56	1	0.5 %
5TH ST & US 56	1	0.5 %
BETWEEN I-35 & MOONLIGHT RD	1	0.5 %
US 56 & CENTER ST IN GARDNER	1	0.5 %
IN BALDWIN CITY	1	0.5 %
8TH ST & 56 IN BALDWIN CITY	1	0.5 %
3RD ST & US 56 IN BALDWIN CITY	1	0.5 %
1055 & 56 HWY	1	0.5 %
SANTA FE CORNER & 56 HWY	1	0.5 %
INTERSECTION OF 33 & 56	1	0.5 %
SUNFLOWER RD & 56 IN EDGERTON	1	0.5 %
MOONLIGHT & 56 IN GARDNER	1	0.5 %
CENTER & 56 IN GARDNER	1	0.5 %
ALL HILLY AREAS	1	0.5 %
CENTRAL & US 56	1	0.5 %
175TH & US 56	1	0.5 %
CEDAR NILES & US 56	1	0.5 %
3RD ST	1	0.5 %
US 56 & PINE	1	0.5 %
THE CORNER EAST OF EDGERTON	1	0.5 %
BETWEEN MOONLIGHT & MULBERRY	1	0.5 %
MID AMERICA BANK IN BALDWIN	1	0.5 %
US 56 & EDGERTON RD	1	0.5 %
US 56 & MOONLIGHT	1	0.5 %

Q8a. If YES to Question #8, where are the locations?

Q8a. Where	Number	Percent
US 56 & WHITE DRIVE	1	0.5 %
US 56 & 175TH ST	2	1.0 %
8TH & CRIMSON IN BALDWIN	1	0.5 %
8TH ST & 56 HWY	1	0.5 %
US 56 & 6TH IN BALDWIN	1	0.5 %
US 56 & EISENHOWER IN BALDWIN	1	0.5 %
BY MINI MART IN EDGERTON	1	0.5 %
BY SCHOOL IN EDGERTON	1	0.5 %
BALDWIN AT 8TH ST	1	0.5 %
BALDWIN AT 6TH ST	1	0.5 %
THROUGH GARDNER	2	1.0 %
WAVERLY RD	1	0.5 %
US 56 & I-75 HIGHWAY SPLIT	1	0.5 %
175TH ST	1	0.5 %
BETWEEN GARDNER & EDGERTON	2	1.0 %
EVENING STAR	1	0.5 %
FOUR CORNERS	3	1.5 %
DOWNTOWN GARDNER	1	0.5 %
MOONLIGHT INTERSECTION	1	0.5 %
ELM STREET BY WATER TOWER	1	0.5 %
BEFORE GARDNER ELEMENTARY	1	0.5 %
CREATE BIKE LANE BY HIGHWAY	1	0.5 %
IN BALDWIN	1	0.5 %
CLOSE TO THE HIGH SCHOOL	1	0.5 %
EVERY INTERSECTION	1	0.5 %
MAIN ST & GARDNER RD	1	0.5 %
FROM GARDNER WEST AND EAST	1	0.5 %
SACRED HEART CHURCH	1	0.5 %
HILLS BETWEEN BALDWIN & US 56	1	0.5 %
BALDWIN & EDGERTON	1	0.5 %
BETWEEN GARDNER & OLATHE ON 56	1	0.5 %
MOONLIGHT & 56 HWY	1	0.5 %
WAVERLY & PINE ST	1	0.5 %
INSIDE CITY LIMITS OF GARDNER	1	0.5 %
MOONLIGHT & 56 HIGHWAY	1	0.5 %
EAST OF HWY 33	1	0.5 %
Total	273	

Q9. If a transit or bus system were available between the three communities of Baldwin City, Edgerton, and Gardner with connections to the Metro Kansas City area, how often might your household use it?

Q9. How often might your household use transit or bus system	Number	Percent
1=5 days a week	28	3.8 %
2=At least once a week	62	8.4 %
3=Maybe once a month	70	9.4 %
4=Rarely	229	30.9 %
5=Never	279	37.6 %
9=Don't know	74	10.0 %
Total	742	100.0 %

Q10. Each of the following issues could impact the US-56 Corridor's identity and image. Please indicate your level of agreement.
(N=742)

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Don't know
Q10a. Landscaped areas required along US-56	12.1%	20.2%	32.3%	20.1%	12.1%	3.1%
Q10b. Establish guidelines for new development	27.9%	44.7%	15.4%	5.1%	3.2%	3.6%
Q10c. Regulate size and type of advertising signs	34.8%	37.9%	17.1%	4.9%	2.8%	2.6%
Q10d. Preserve natural and historical features	54.2%	30.6%	11.2%	1.5%	0.7%	1.9%

Q10. Each of the following issues could impact the US-56 Corridor's identity and image. Please indicate your level of agreement. (without "don't knows"
(N=742)

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
Q10a. Landscaped areas required along US-56	12.5%	20.9%	33.4%	20.8%	12.5%
Q10b. Establish guidelines for new development	28.9%	46.4%	16.0%	5.6%	3.3%
Q10c. Regulate size and type of advertising signs	35.7%	38.9%	17.5%	5.0%	2.9%
Q10d. Preserve natural and historical features	55.2%	31.1%	11.4%	1.5%	0.7%

Q11. where do you think development should occur along the US-56 Corridor? For each item, please indicate whether you would be very supportive, somewhat supportive, or not supportive.
(N=742)

	Very supportive	Somewhat supportive	Not supportive	Don't know
Q11a. Residential development inside or near Baldwin, Edgerton and Gardner	38.1%	40.3%	12.7%	8.9%
Q11b. Commercial development inside or near Baldwin, Edgerton and Gardner	37.6%	38.0%	16.3%	8.1%
Q11c. Future residential development between the cities	40.4%	33.4%	16.8%	9.3%
Q11d. Future commercial and industrial development between the cities	37.2%	33.6%	20.4%	8.8%

Q11. where do you think development should occur along the US-56 Corridor? For each item, please indicate whether you would be very supportive, somewhat supportive, or not supportive.
(excluding "don't knows")
(N=742)

	Very supportive	Somewhat supportive	Not supportive
Q11a. Residential development inside or near Baldwin, Edgerton and Gardner	41.8%	44.2%	13.9%
Q11b. Commercial development inside or near Baldwin, Edgerton and Gardner	41.3%	41.5%	17.4%
Q11c. Future residential development between the cities	44.6%	36.9%	18.5%
Q11d. Future commercial and industrial development between the cities	40.8%	36.8%	22.4%

Q12. Should development outside city limits be required to be served by public(community) water and sewer services?

Q12. Development outside city limits served by public water and sewer services	Number	Percent
1=Yes	238	32.1 %
2=No	313	42.2 %
9=No opinion	191	25.7 %
Total	742	100.0 %

Q13. Overall, how important do you think the highway is to economic development along the US-56 Corridor?

Q13. Highway to economic development along US-56 Corridor	Number	Percent
1=Very important	420	56.6 %
2=Somewhat important	211	28.4 %
3=Neutral	58	7.8 %
4=Not very important	27	3.6 %
5=Not at all important	12	1.6 %
9=Don't know	14	1.9 %
Total	742	100.0 %

Q14. Are you familiar with the proposed BNSF inter-modal facility adjacent to US-56?

Q14. Familiar with BNSF inter-modal adjacent to US-56	Number	Percent
1=Yes	634	85.4 %
2=No	78	10.5 %
3=Don't know	30	4.0 %
Total	742	100.0 %

Q14a. If YES to Question #14, what do you think would be the likely effect of this proposed facility on the economy of the US-56 Corridor?

Q14a. Likely effect on economy of US-56 Corridor	Number	Percent
1=Very positive	212	33.5 %
2=Somewhat positive	234	37.0 %
3=neutral	48	7.6 %
4=Somewhat negative	59	9.3 %
5=Very negative	58	9.2 %
9=Don't know	22	3.5 %
Total	633	100.0 %

Q14b. If YES to Question #14, what do you think would be the likely effect of this proposed facility on truck traffic along the US-56 Corridor?

Q14b. Likely effect on truck traffic along US-56	Number	Percent
1=Major increase	459	72.6 %
2=Some increase	147	23.3 %
3=Neutral	7	1.1 %
4=Not much increase	8	1.3 %
5=No increase	1	0.2 %
9=Don't know	10	1.6 %
Total	632	100.0 %

Q14c. If YES to Question #14, which of the following areas will be most affected by the BNSF inter-modal facility?

Q14c. Areas most effected by BNSF	Number	Percent
1 = Baldwin City	87	13.7 %
2 = Edgerton	337	53.2 %
3 = Gardner	414	65.3 %
4 = Between Gardner & Edgerton	405	63.9 %
5 = Between Edgerton & Baldwin	81	12.8 %
6 = West of Baldwin	49	7.7 %
7 = None of the above	6	0.9 %
8 = All of the above	133	21.0 %
9 = No response	3	0.5 %
Total	1515	

DEMOGRAPHICS

Q15. Counting yourself, how many people live in your household?

Q15. People live in household	Number	Percent
1=1	71	9.6 %
2=2	253	34.1 %
3=3	144	19.4 %
4=4	171	23.1 %
5=5	62	8.4 %
6=6+	40	5.4 %
Total	741	100.0 %

Q16. Counting yourself, what are the ages of the persons in your household?

	Mean	Sum
number	3.0	2237
Under age 15	0.7	522
Ages 15-19	0.3	198
Ages 20-34	0.4	289
Ages 35-49	0.7	523
Ages 50-64	0.6	431
65+	0.4	283

Q17. Your gender:

Q17 Gender	Number	Percent
1=Male	422	56.9 %
2=Female	320	43.1 %
Total	742	100.0 %

Q18. Your place of residence:

Q18 Place of residence	Number	Percent
1=In Baldwin	130	17.5 %
2=In Edgerton	148	19.9 %
3=In Gardner	197	26.5 %
4=Douglas County outside city limits	168	22.6 %
5=Johnson County outside city limits	92	12.4 %
9=No response	7	0.9 %
Total	742	100.0 %

Section 4:

Survey Instrument

March, 2009

Re: US-56 Highway Corridor Management Plan—Public Opinion Survey

Dear Area Resident:

The Kansas Department of Transportation (KDOT), along with Douglas and Johnson Counties and the Cities of Baldwin City, Edgerton, and Gardner ask for your help as we design for the future of the US-56 Highway Corridor. We ask that you please take 10-15 minutes to complete the enclosed Public Opinion Survey.

The two counties and three cities, along with the Lawrence-Douglas County Metropolitan Planning Organization, KDOT, and the Mid-America Regional Council are partners in a 15-month study of US-56 from US-59 west of Baldwin City to I-35 on the northeast edge of Gardner. The study will look at transportation within the study area, land use and how the highway can best serve the corridor's residents, businesses and institutions. The results of this survey will be used to help us develop a US-56 Corridor Management Plan that meets the needs of you, the users, well into the future.

A postage-paid return envelope addressed to ETC Institute is provided for your convenience. We selected ETC Institute as our partner for the survey portion of this project. They will compile the results and present a final report to the project partners within a few weeks.

If you have questions, please call Blair Sells, Planner, Patti Banks Associates, at (816) 777-3040 or e-mail her soon at bsells@pbassociates.com. Thank you for your participation. Your input is important to us.

Sincerely,

David E. Gurss

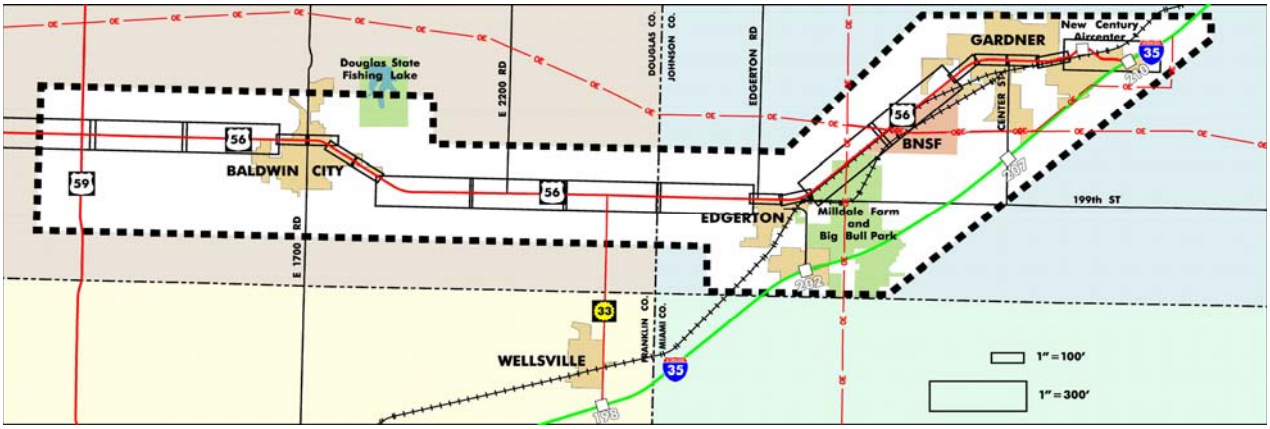
David E. Gurss, Project Manager
Kansas Department of Transportation

Lawrence-Douglas County Metropolitan Planning Organization

US-56 Highway Corridor Management Plan Survey

We are conducting a short survey with residents along the Corridor area (see map below) as we plan for ways to manage traffic and land use along US-56 Highway from US-59 west of Baldwin City to I-35 on the northeast edge of Gardner. Your input is important so that we can manage current and future traffic needs for the Corridor serving your community.

Thank you for taking time to complete this survey. Please mail the completed survey back in the enclosed envelope, to ETC Institute. If you have any questions, please call Blair Sells, Planner, at Patti Banks Associates, (816) 777-3040.



Traveling the Corridor – Transportation Questions

1. How frequently do you drive this corridor?

___(1) Daily
___(2) A few times a week
___(3) At least once a week
___(4) At least once a month
___(5) A few times a year
___(6) Never

2. When you drive on US-56, which of the following are the most frequent reasons for your trip?
[Check all that apply]

___(1) Going to work/business travel
___(2) Visiting friends/relatives
___(3) Recreation or entertainment
___(4) Shopping/errands
___(5) Getting medical/dental attention
___(6) Going to school or chauffeuring school kids
___(7) Other: _____

3. How safe do you feel driving on US-56?

___(1) Very safe
___(2) Somewhat safe
___(3) Somewhat unsafe
___(4) Very unsafe
___(9) Don't know

4. What is your opinion about the number of driveways entering on to US-56 in the following locations?

Number of Driveways		Too Many	About Right	Too Few	Don't Know
A.	Through Baldwin City	3	2	1	9
B.	On the edge of Edgerton	3	2	1	9
C.	Through Gardner	3	2	1	9
D.	Between Gardner and Edgerton	3	2	1	9
E.	Between Edgerton and Baldwin City	3	2	1	9
F.	Between Baldwin City and US 59	3	2	1	9

5. What is your opinion about the speed limits on US-56 in the following locations?

Speed Limits		Too Fast	About Right	Too Slow	Don't Know
A.	Through Baldwin City	3	2	1	9
B.	On the edge of Edgerton	3	2	1	9
C.	Through Gardner	3	2	1	9
D.	Between the cities	3	2	1	9

6. How safe would you feel crossing US-56 on foot or on a bicycle, <u>within</u> Baldwin City, Edgerton, and Gardner?

___(1) Very safe
___(2) Somewhat safe
___(3) Somewhat unsafe
___(4) Very unsafe
___(9) Don't know

7. How safe would you feel crossing US-56 on foot or on a bicycle <u>between</u> Baldwin City, Edgerton, and Gardner?

___(1) Very safe
___(2) Somewhat safe
___(3) Somewhat unsafe
___(4) Very unsafe
___(9) Don't know

8. Are there specific locations along US-56 where additional safe crossings for bicyclists and pedestrian traffic should be provided?

___(1) Yes (Go to Q8a) ___(2) No (Go to Q9) ___(3) Don't know (Go to Q9)

8a. Where are the locations?_____

_____

9. If a transit or bus system were available between the three communities of Baldwin City, Edgerton, and Gardner with connections to the Metro Kansas City area, how often might your household use it?

___(1) 5 days a week
___(2) At least once a week
___(3) Maybe once a month
___(4) Rarely
___(5) Never
___(9) Don't know

Corridor Identity and Image

10. Each of the following items could impact the US-56 Corridor's identity and image. For each issue, please indicate your level of agreement.

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know
A.	Landscaped areas should be required along US-56.	5	4	3	2	1	9
B.	Guidelines for new development should be established by the county and the cities.	5	4	3	2	1	9
C.	The size and type of advertising signs should be regulated along US-56.	5	4	3	2	1	9
D.	Unique natural, historical and character features of the corridor should be preserved.	5	4	3	2	1	9

Land Use and Development

11. Where do you think development should occur along the US-56 Corridor? For each item, please indicate whether you would be very supportive, somewhat supportive, or not supportive.

		Very supportive	Somewhat supportive	Not supportive	Don't Know
(A)	Direct future residential developments inside or near Baldwin City, Edgerton, and Gardner.	3	2	1	9
(B)	Direct future commercial developments inside or near Baldwin City, Edgerton, and Gardner	3	2	1	9
(C)	Direct future residential developments between the cities to planned locations, and keep remaining open areas for rural uses	3	2	1	9
(D)	Direct future commercial and industrial developments between the cities to planned locations, and keep remaining open areas for rural uses	3	2	1	9

12. Should development outside city limits be required to be served by public (community) water and sewer services?

___(1) Yes
___(2) No
___(9) No opinion

13. Overall, how important do you think the highway is to economic development along the US-56 Corridor?

___(1) Very important
___(2) Somewhat important
___(3) Neutral
___(4) Not very important
___(5) Not at all important to economic development on the corridor
___(9) Don't know

14. Are you familiar with the proposed BNSF intermodal facility adjacent to US-56?

___(1) Yes (Go to Q14a, b, c, d) ___(2) No (Go to Q15) ___(3) Don't know (Go to Q15)

14a. What do you think would be the likely effect of this proposed facility on the <u>economy</u> of the US-56 Corridor?

___(1) Very positive
___(2) Somewhat positive
___(3) Neutral
___(4) Somewhat negative
___(5) Very negative
___(9) Don't know

14b. What do you think would be the likely effect of this proposed facility on <u>truck traffic</u> along the US-56 Corridor?

___(1) Major increase in truck traffic
___(2) Some increase in truck traffic
___(3) Neutral
___(4) Not much increase in truck traffic
___(5) No increase in truck traffic
___(9) Don't know

14c. Which of the following areas will be most effected by the BNSF intermodal facility?
(Check all that apply)

___(1) Baldwin City
___(2) Edgerton
___(3) Gardner
___(4) Between Gardner and Edgerton
___(5) Between Edgerton and Baldwin City
___(6) West of Baldwin City
___(7) None of the above
___(8) All of the above

14d. What other transportation-related effects do you think are likely if this proposed facility is built?

_____

_____

DEMOGRAPHICS

15. Counting yourself, how many persons live in your household? _____

16. Counting yourself, what are the ages of the persons in your household? (Write the number of persons in each of the age categories listed below)

Under 15 years _____ 50 - 64 years _____

15 - 19 years _____ 65+ years _____

20 - 34 years _____

35 - 49 years _____

17. Your gender:

___(1) Male
___(2) Female

18. Your place of residence:

___(1) I live in the city of Baldwin City.
___(2) I live in the city of Edgerton.
___(3) I live in the city of Gardner.
___(4) I live in Douglas County outside city limits.
___(5) I live in Johnson County outside city limits.

19. Corridor Value

a. What do you value most about the Corridor now, either as a resident or as a driver of US-56?

_____
_____

b. What change would you most like to see along the Corridor now, either as a resident or as a driver of US-56?

_____
_____

20. Do you have any additional comments about the US-56 Corridor?

_____
_____
_____
_____
_____
_____
_____

This concludes the survey. Thank you for your time!

Please return your completed survey in the enclosed postage-paid envelope addressed to:
ETC Institute, 725 W. Frontier Circle, Olathe, KS 66061

Your responses will remain Completely Confidential. The information printed on the sticker to the right will ONLY be used to help identify which areas of the community are most affected by corridor decisions. If your address is not correct, please provide the correct information. Thank you.