

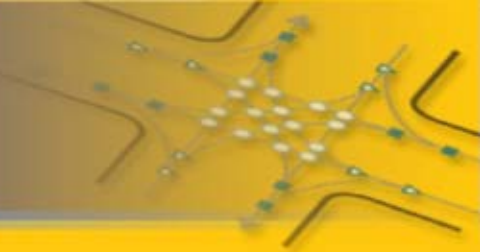
Innovative Analysis of Access



Access Management Conference
September 1, 2004

The logo features a stylized road with a dashed center line and a solid edge line, curving through a blue and yellow circular background.

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A diagram showing a network of roads or paths with small green circles at the intersections, set against a light brown background.

Agenda

- ❖ **Traffic Access Management Applications**
Presented by Kip Strauss, AICP
HNTB Corporation
- ❖ **Land Use and Access Management**
Presented by Brian Comer, AICP
HNTB Corporation
- ❖ **Public Involvement and Access Management**
Presented by Eric Saggars, PE
HNTB Corporation
- ❖ **Right Turns: The K-7 State & Local Planning Exercise**
Presented by Michael DeMent, APR
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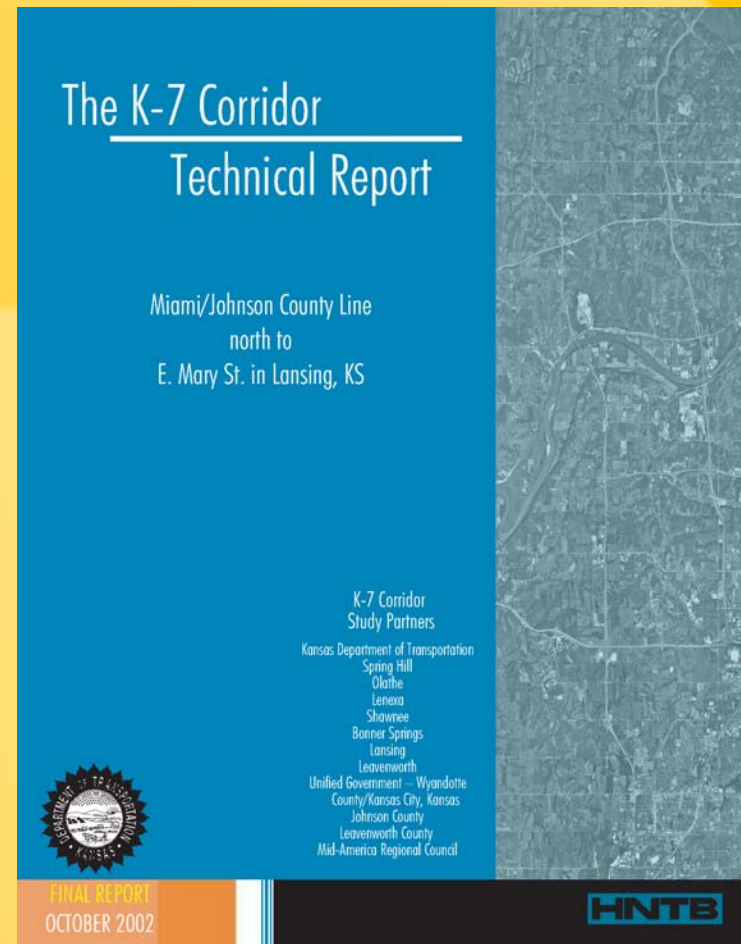
Traffic Access Management Applications

Corridor Management and Preservation for
Kansas Route 7

Kip Strauss, AICP
HNTB Corporation

K-7 Corridor Technical Report, 2002

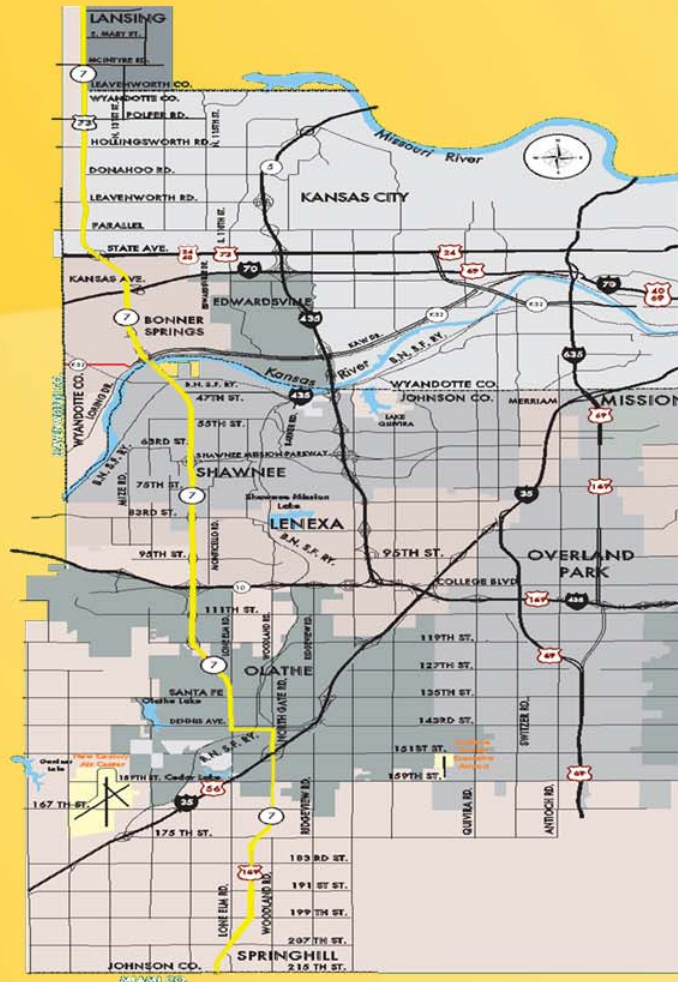
1. Background
2. Study Approach
3. **Technical Analysis**
4. Public Involvement
5. Engineering
6. Next Steps





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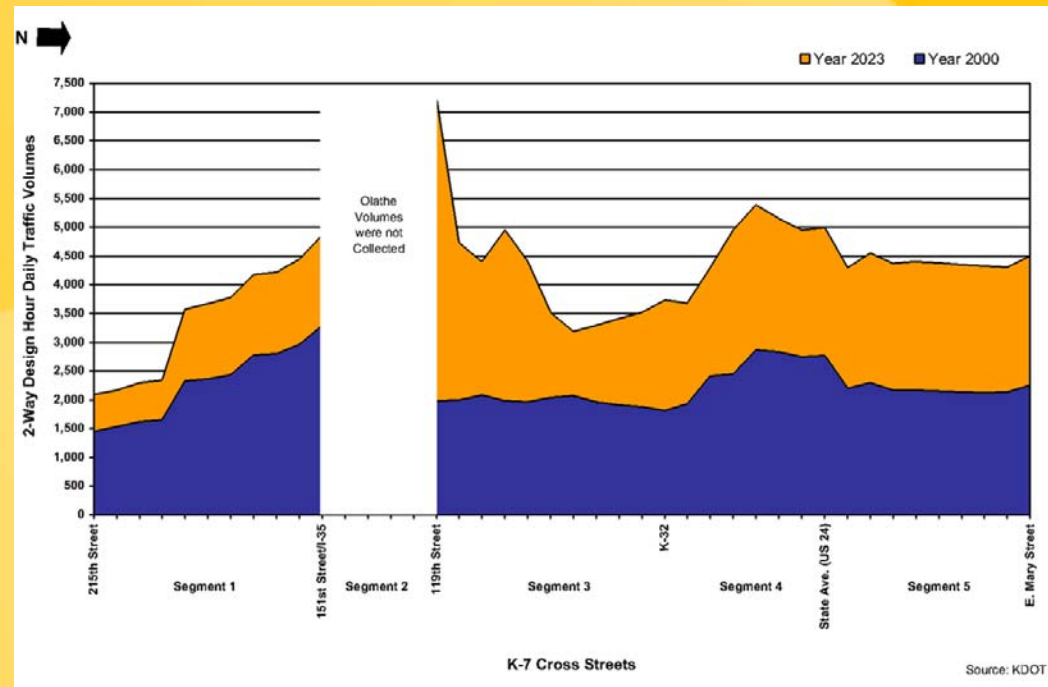
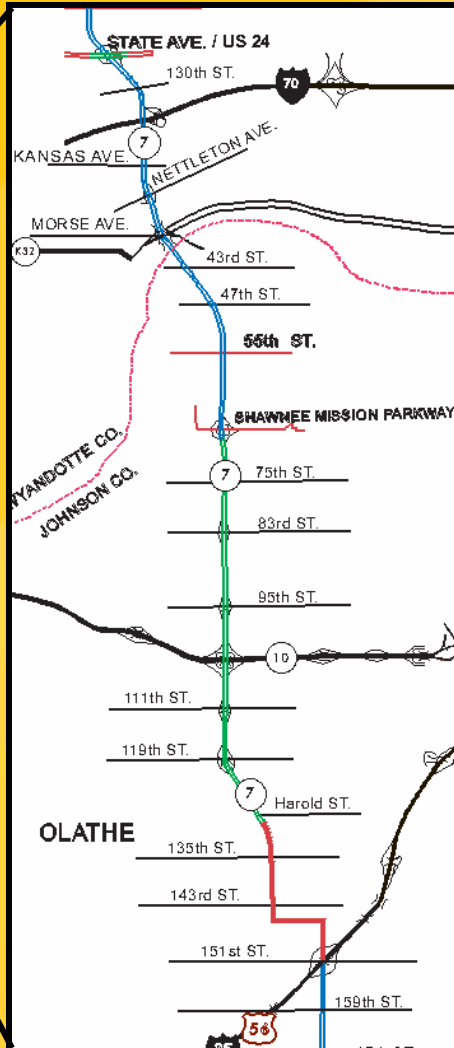
K-7 Corridor Technical Report





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K-7 Corridor Technical Report



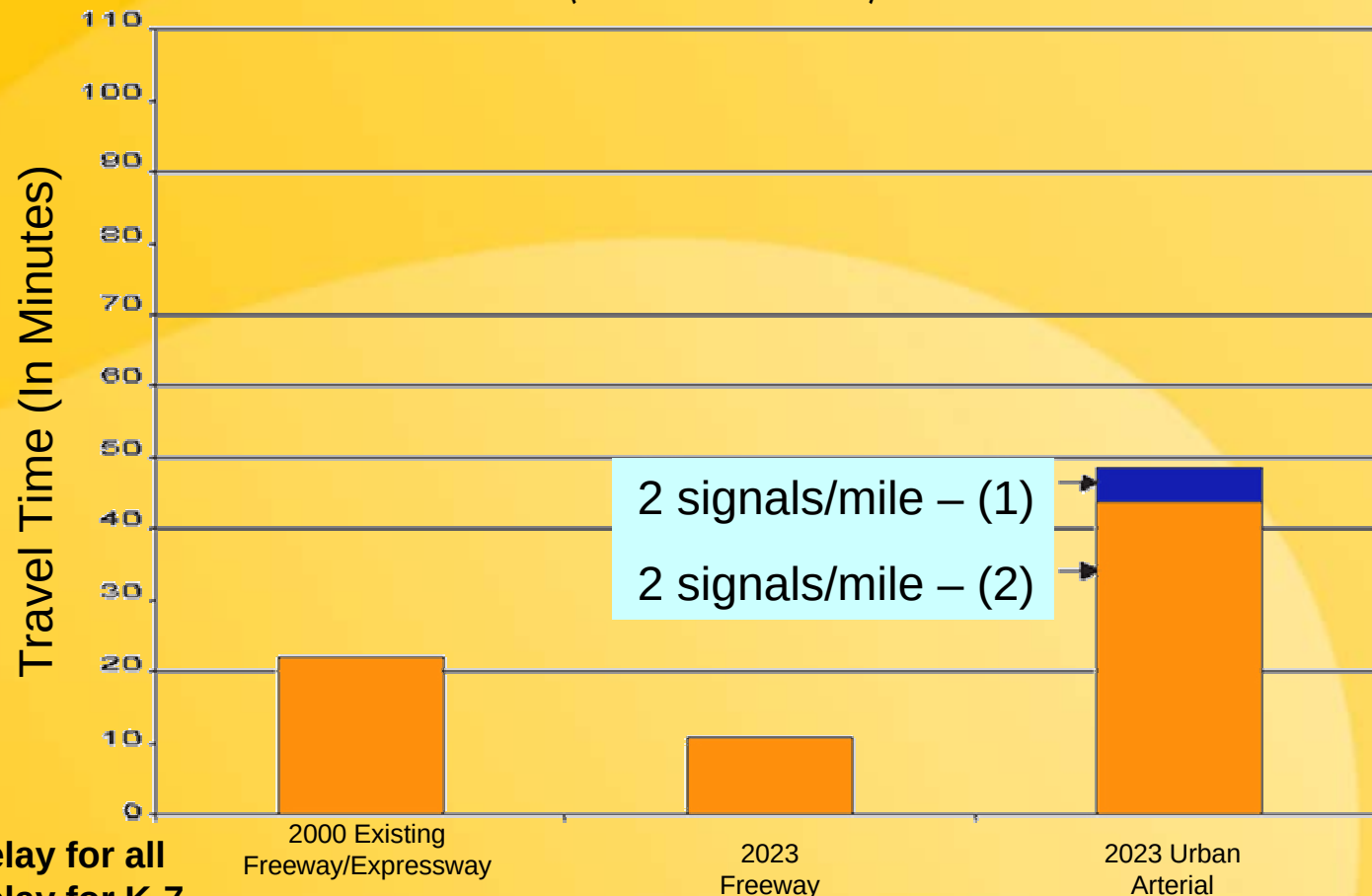
Source: KDOT

K-7 Corridor Technical Report

K-7 Travel Times

K-10 to I-70
(Northbound Direction)

11 Miles

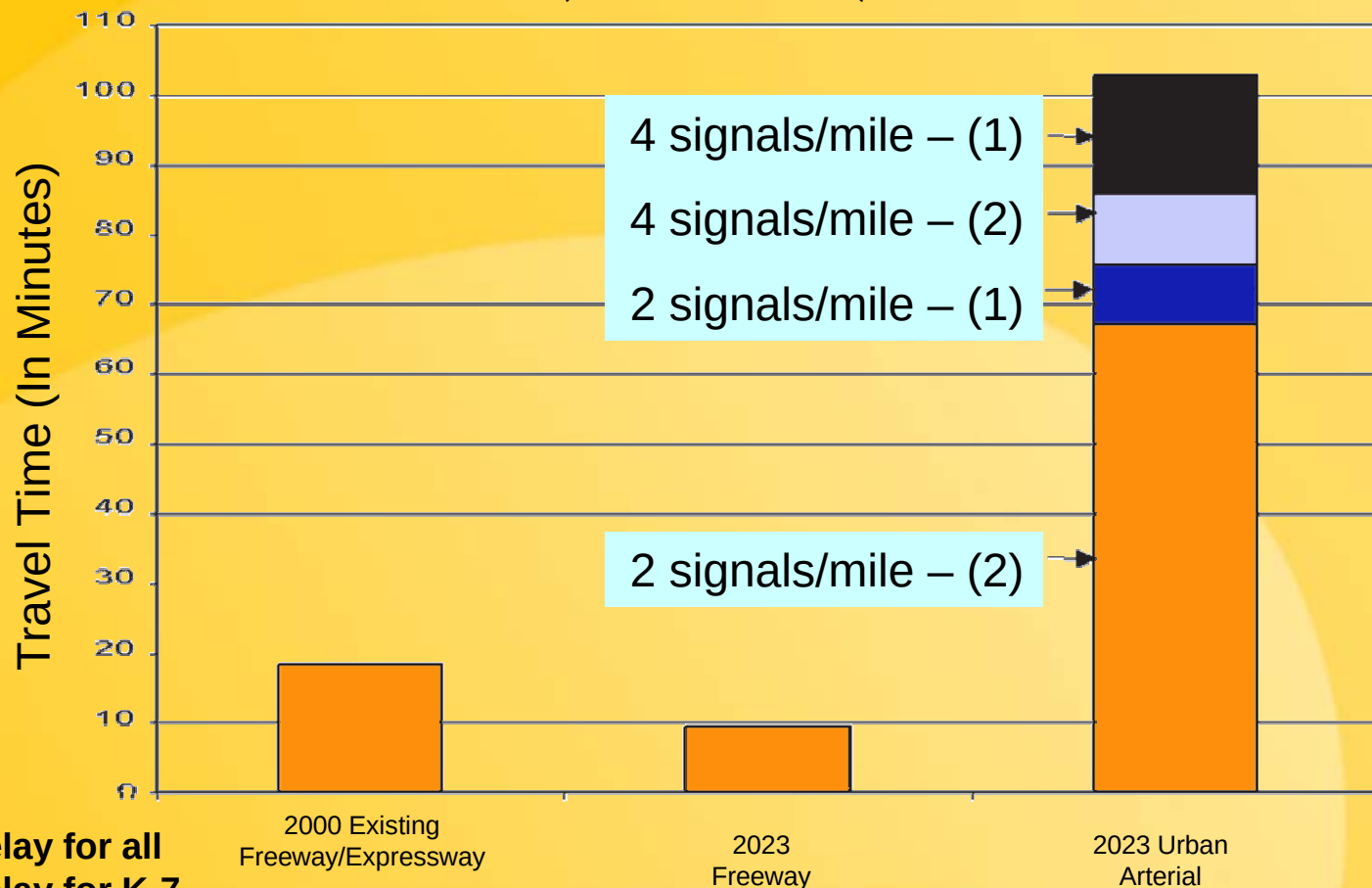


K-7 Corridor Technical Report

K-7 Travel Times

I-70 to Mary Street
(Northbound Direction)

12 Miles





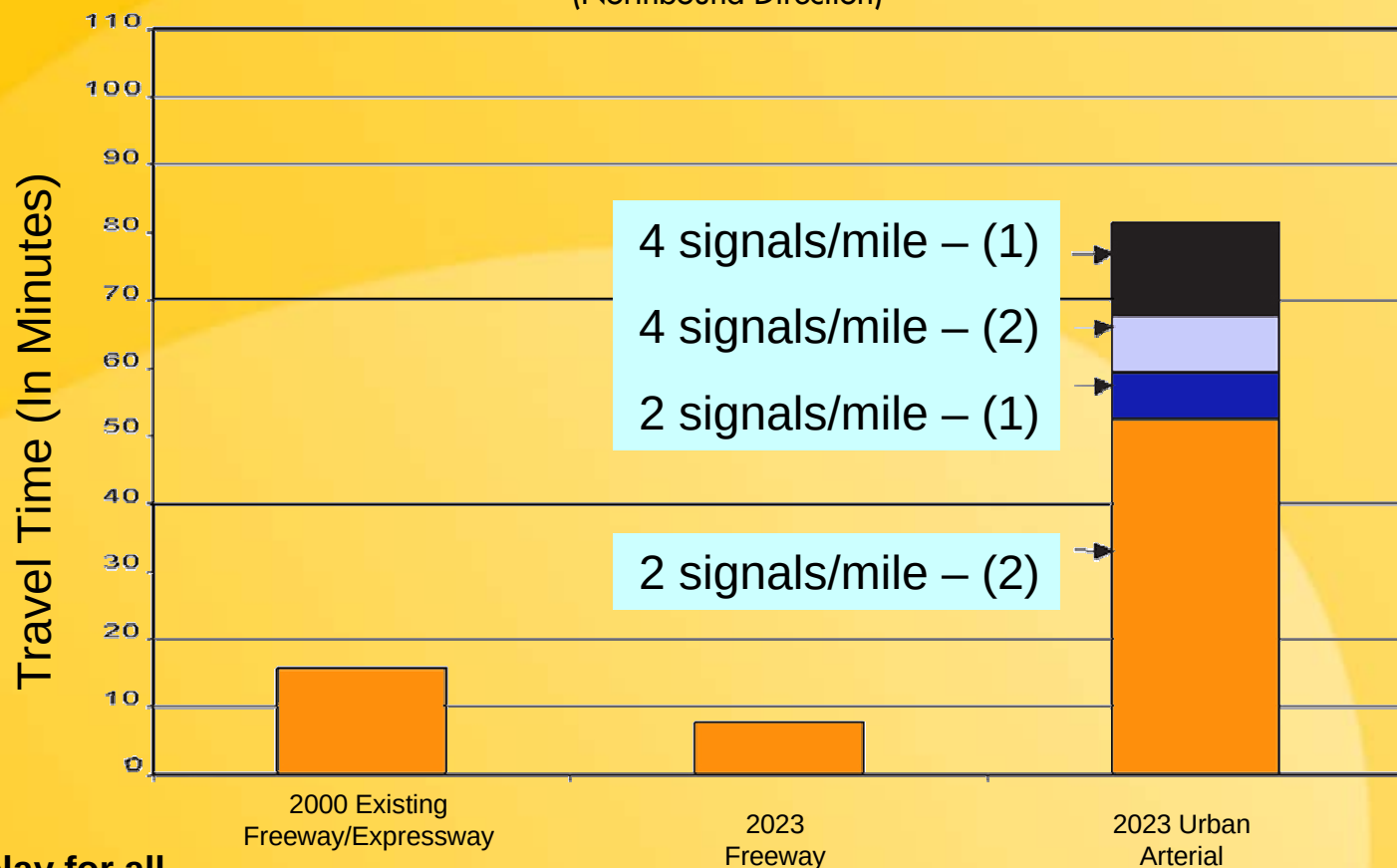
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K-7 Corridor Technical Report

K-7 Travel Times

215th St. to I-35
(Northbound Direction)

8 Miles

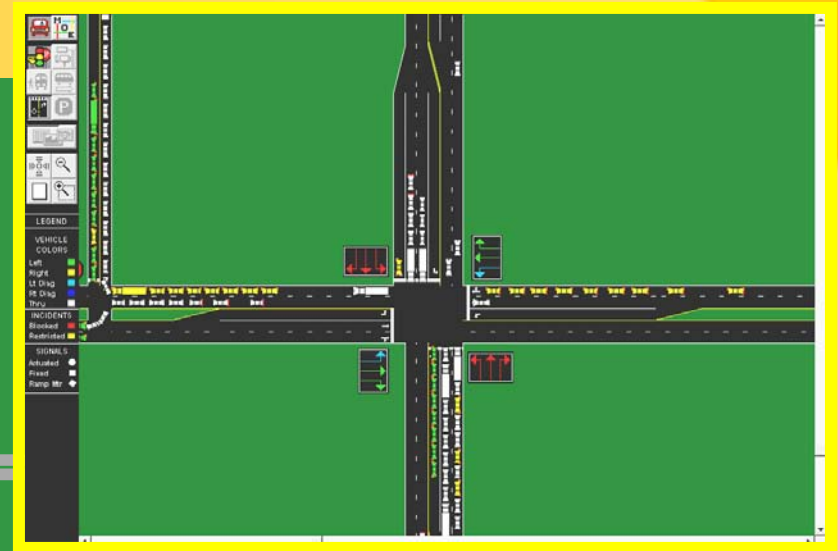
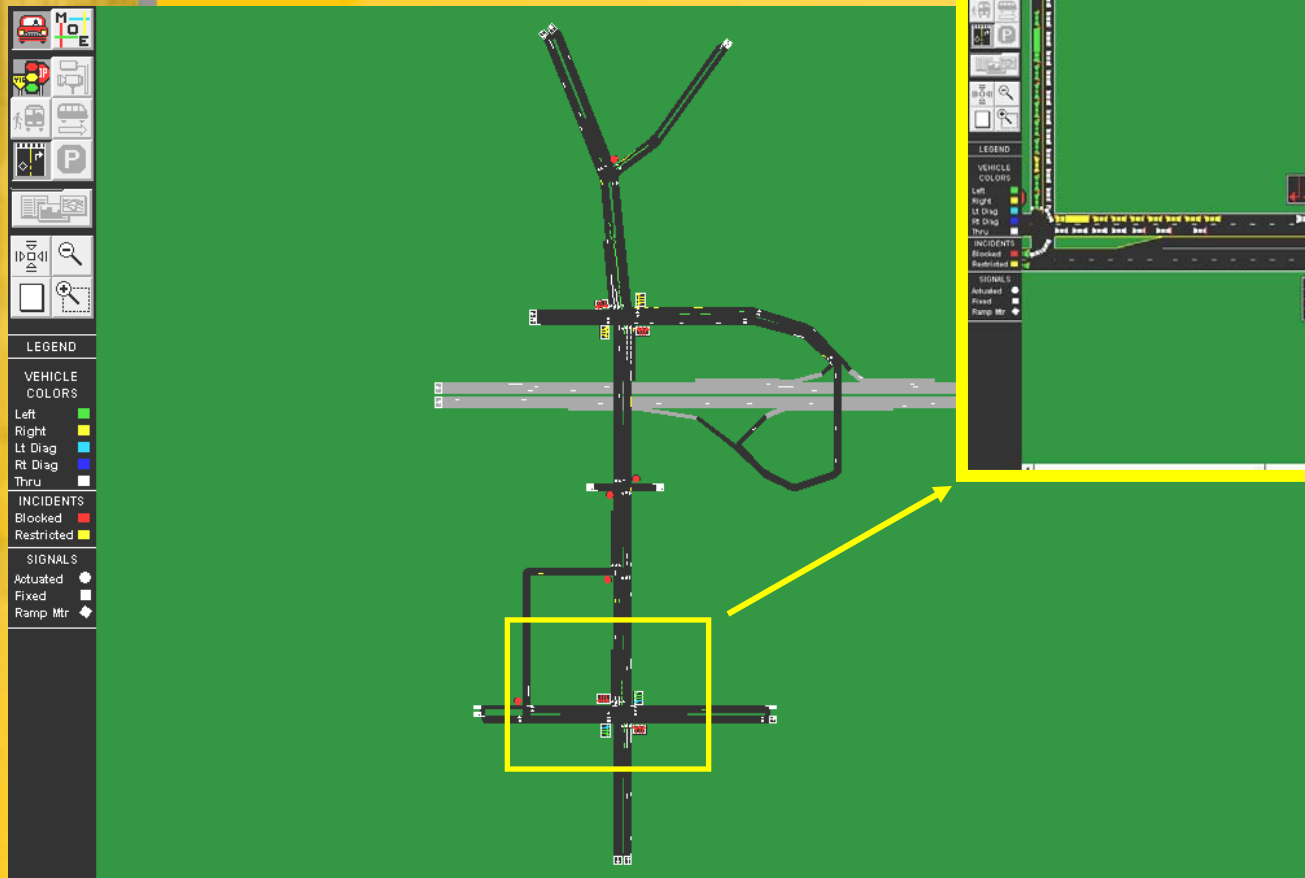


- 1 - Minimize Delay for all
- 2 - Minimize Delay for K-7

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K-7 Corridor Technical Report

K-7 Simulation Model



K-7 Corridor Management Study, 2005

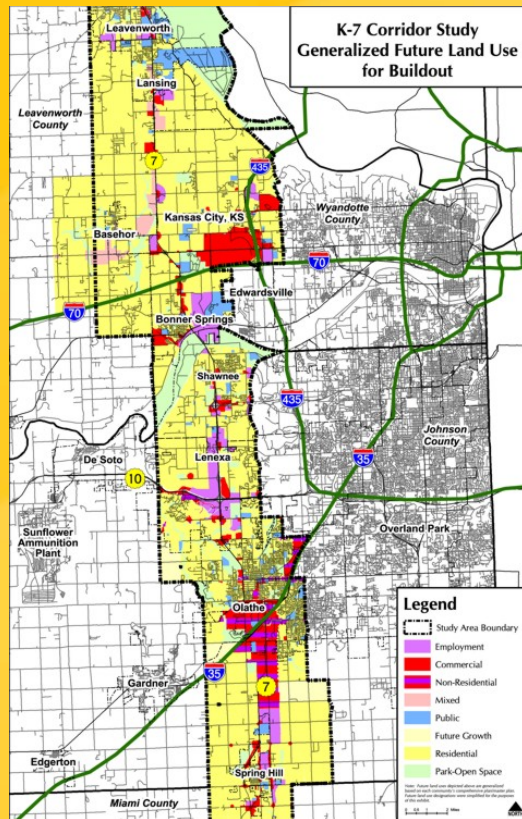
❖ Study Objectives

- Community Involvement
- **Facility Type on Mainline and Local Street Network**
- Access Requirements / Street Network System
- Right-of-Way Preservation Needs
- Phased Implementation Plan
- Memos of Understanding

K-7 Corridor Management Study

- ❖ Technical Analysis Approach
 - Travel Model Development
 - Land Use and Network Planning
 - Freeway vs. Arterial
 - Access Plan
 - Implementation Plan

K-7 Corridor Management Study



Phase 1 - Macro-Level Analysis

- Planning level tool
- Detailed traffic analysis zone structure 2 miles either side of K-7
- Detailed roadway network 2 miles either side of K-7
- Model measures of effectiveness
- Animation model of 1 selected location

Phase 2 - Micro-Level Analysis

- HCM methodology operational analysis
- Detailed operational analysis of K-7 and local street network within ½ mile of K-7
- Cursory operational analysis of local street network ½ mile to 1 mile from K-7
- Simulation model in Segment 2

K-7 Model Measures of Effectiveness

Accessibility is the ability to reach desired goods, services and destinations

Accessibility

- Average Travel Time
- Average Travel Distance

Mobility

Mobility is the movement of goods and people

- Select Link/Zone
- Travel Time Isochrones

Traffic

- Travel Demand
- Average Speed
- Volume/ Capacity
- Difference Plots

Traffic is vehicle movement

Lessons Learned

- ❖ Develop information that is easy for people to understand
- ❖ Show people the issues
- ❖ Develop tools that are flexible

Land Use and Access Management

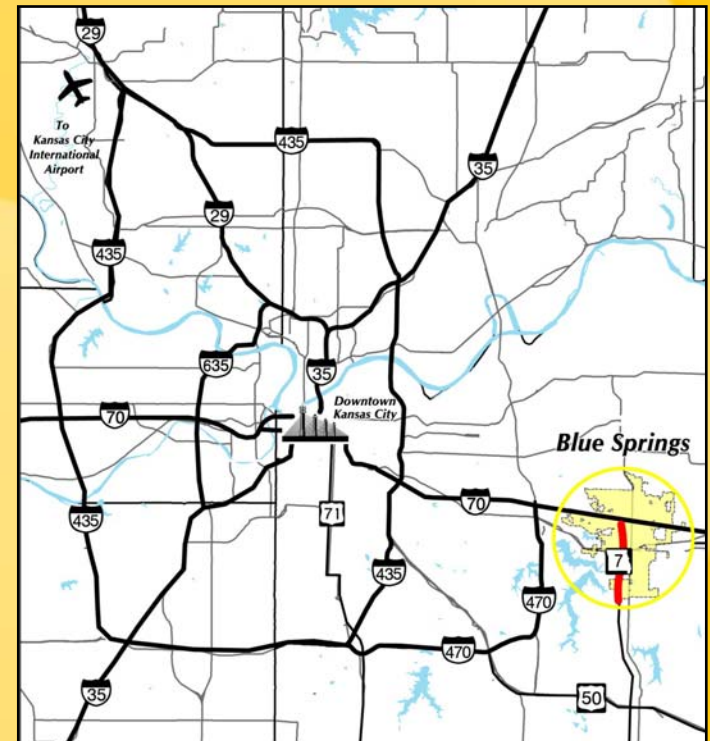
Brian Comer, AICP
HNTB Corporation

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Land Use and Access Management

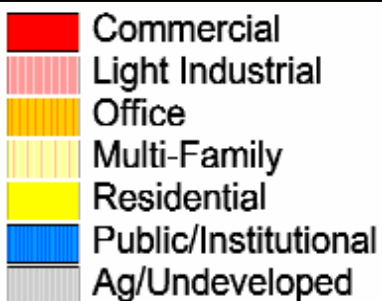
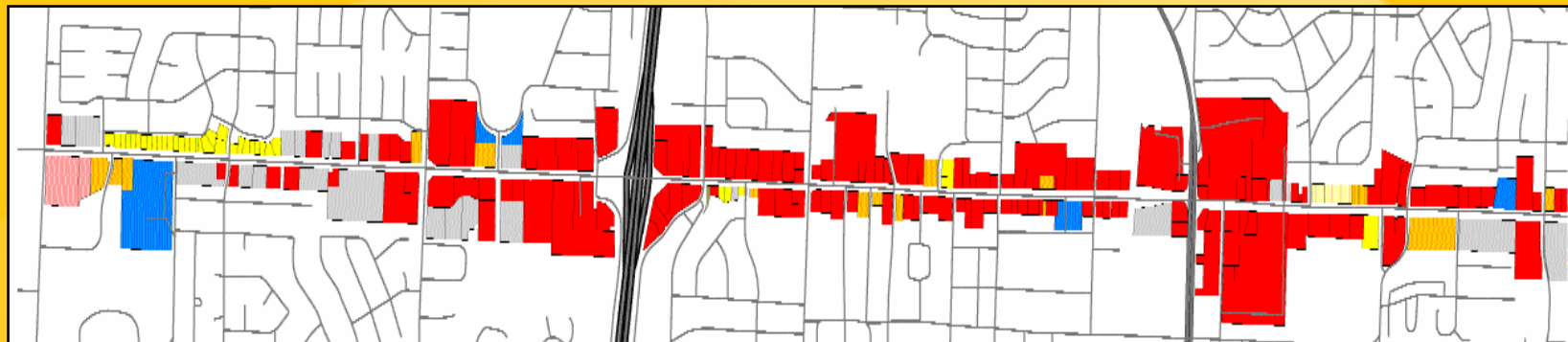
❖ Highway 7—Blue Springs, Missouri

- Older Suburban Corridor
- Two-Way Left Turn Lanes
- Multiple Driveways



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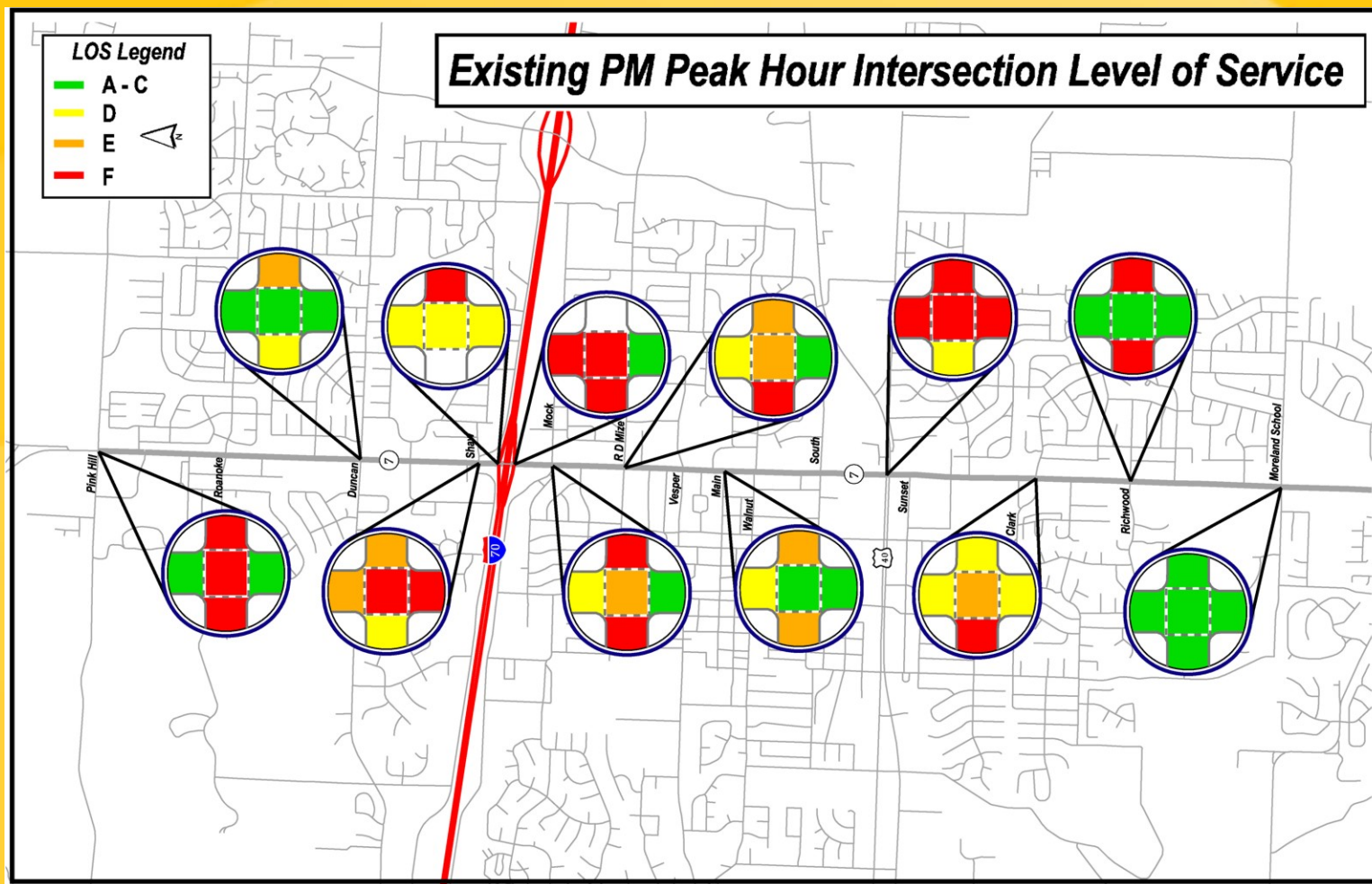
Existing Linear Development Pattern





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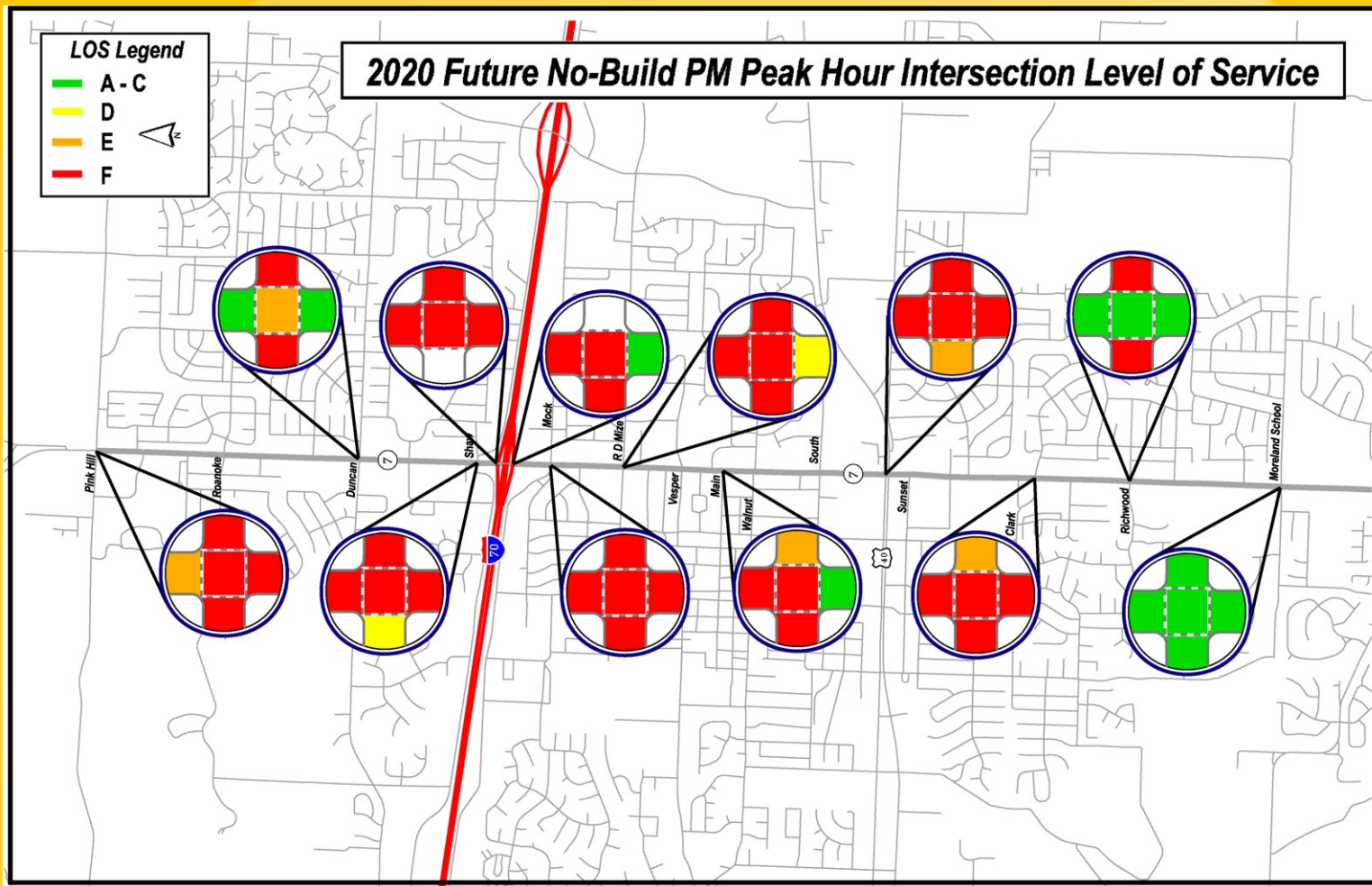
Existing LOS





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2020 No Build LOS



Guiding Principles

- ❖ Promote Cluster Development Pattern
- ❖ Provide Cross Access
- ❖ Connect Parking Lots and Relocate Driveways
- ❖ Regulate the Location and Spacing of Driveways.
- ❖ Protect Interchange Areas
- ❖ Integrate Medians

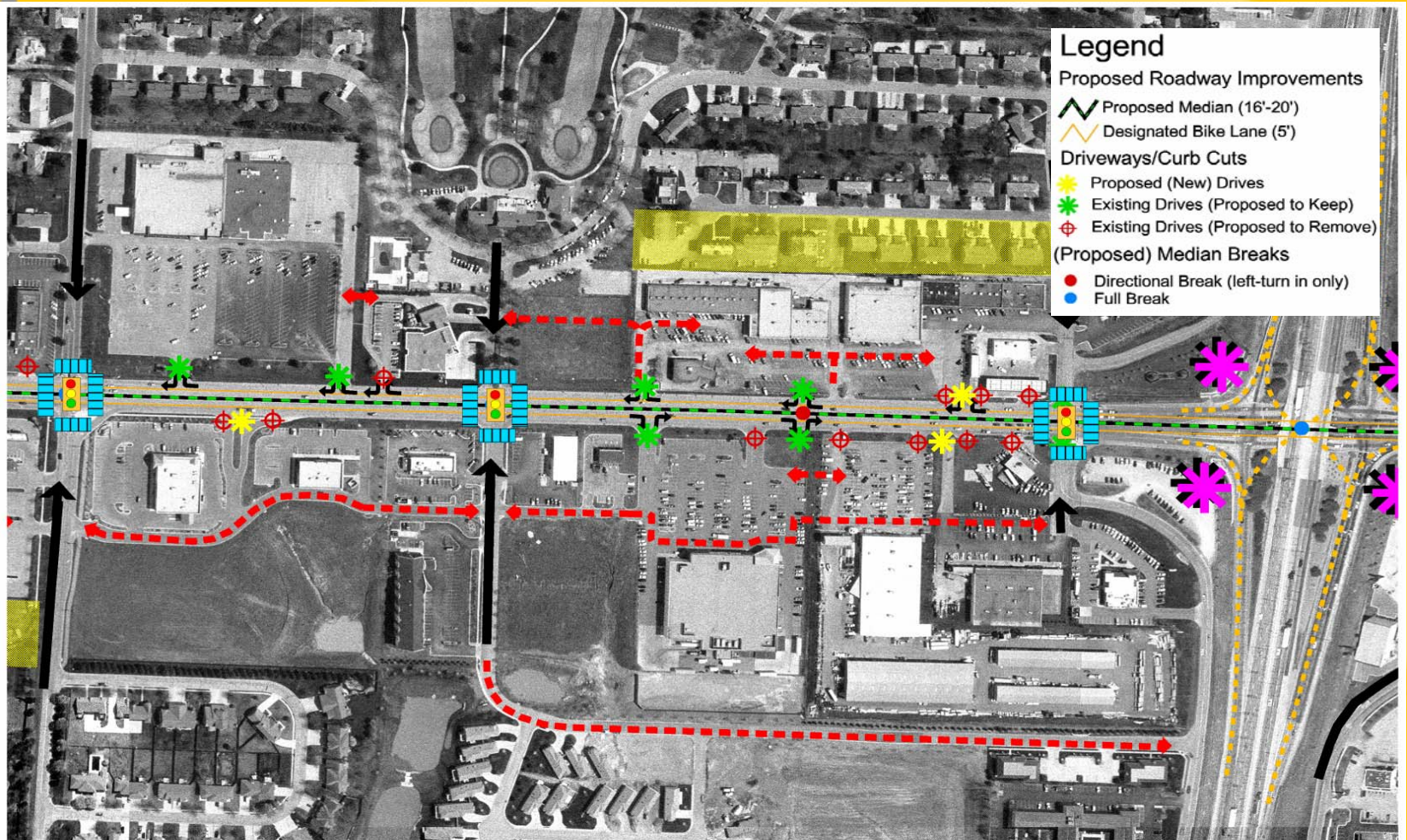
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Cluster Development



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Corridor Master Plan



Implementation Strategies

Reactive

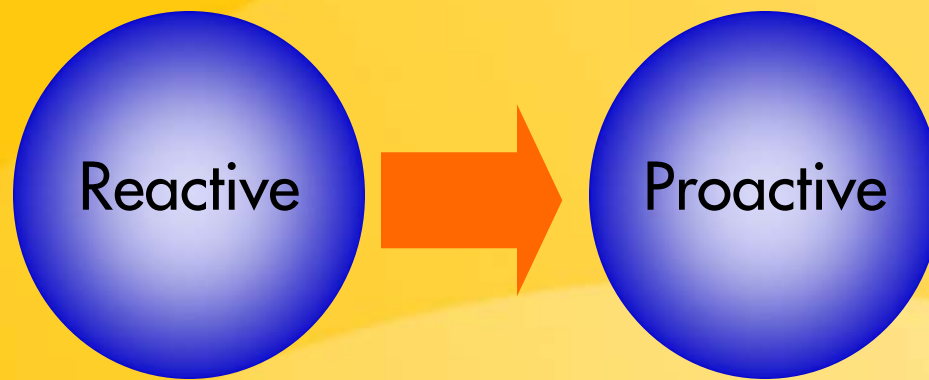
- ❖ Improvements triggered by change of use
- ❖ Improvements triggered by redevelopment of property



Proactive

- ❖ City initiates improvements

Implementation Strategies



- ❖ Utilized a Combination of Both Strategies
 - Integrated Access Management Principles into Comprehensive Plan and Development Code
 - Identified Median and Intersection Improvements

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Public Outreach



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Public Outreach



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Public Outreach



Lessons Learned

- ❖ Integrate Access Management into Land Use Planning from the Beginning
- ❖ Educate the Public on the Benefits of Access Management
- ❖ Follow through with Implementation of Policies and Physical Improvements

Public Involvement and Access Management



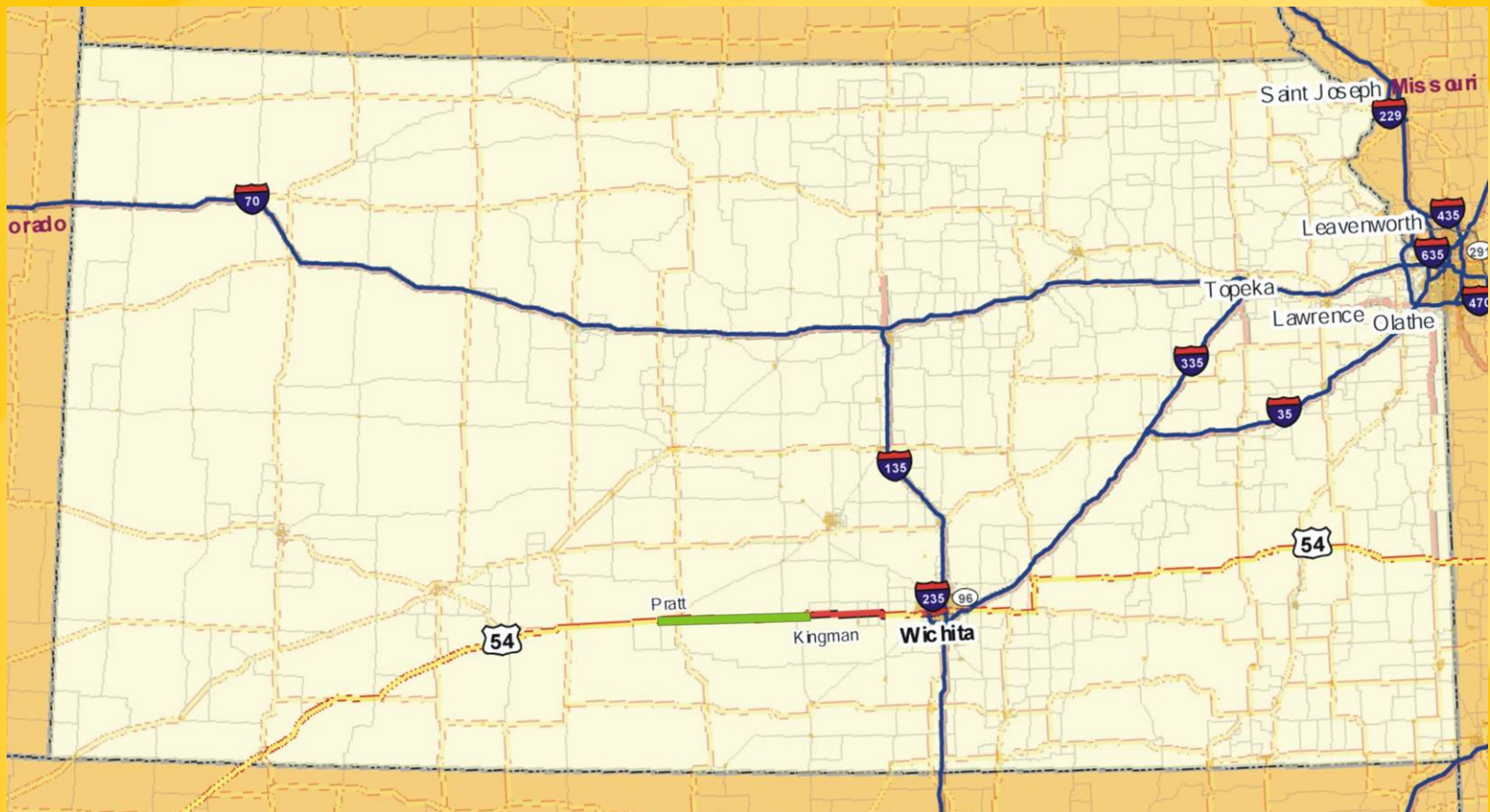
Experiences on the US-54 Project:
Pratt and Kingman Counties, Kansas

Eric Saggars, PE
HNTB Corporation

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US-54: Project Location



Project Background

- ❖ Currently a two-lane rural highway
 - Located in South-Central Kansas
 - 44-mile-long corridor
- ❖ Convert to fully access-controlled expressway and freeway
- ❖ Preservation of the project corridor is a high priority
- ❖ Access is an important issue!

GIS-based Website

- ❖ Provides detailed alignment information
- ❖ Updated at milestones
- ❖ Also provides other project news and contact information



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US 54 - Forward 54 GIS Interactive Map - Microsoft Internet Explorer provided by HNTB Corporation

GIS
Interactive
Map

SEARCH

LEGEND

LAYERS

PRINT
MAP

PREVIOUS
VIEW

PAN

INTRO

HELP

RELOAD
SITE

ZOOM
IN

ZOOM
OUT

FULL
EXTENT

INFORMATION

MAP TOOLS

Forward
54

US - 54 CORRIDOR

Map Introduction

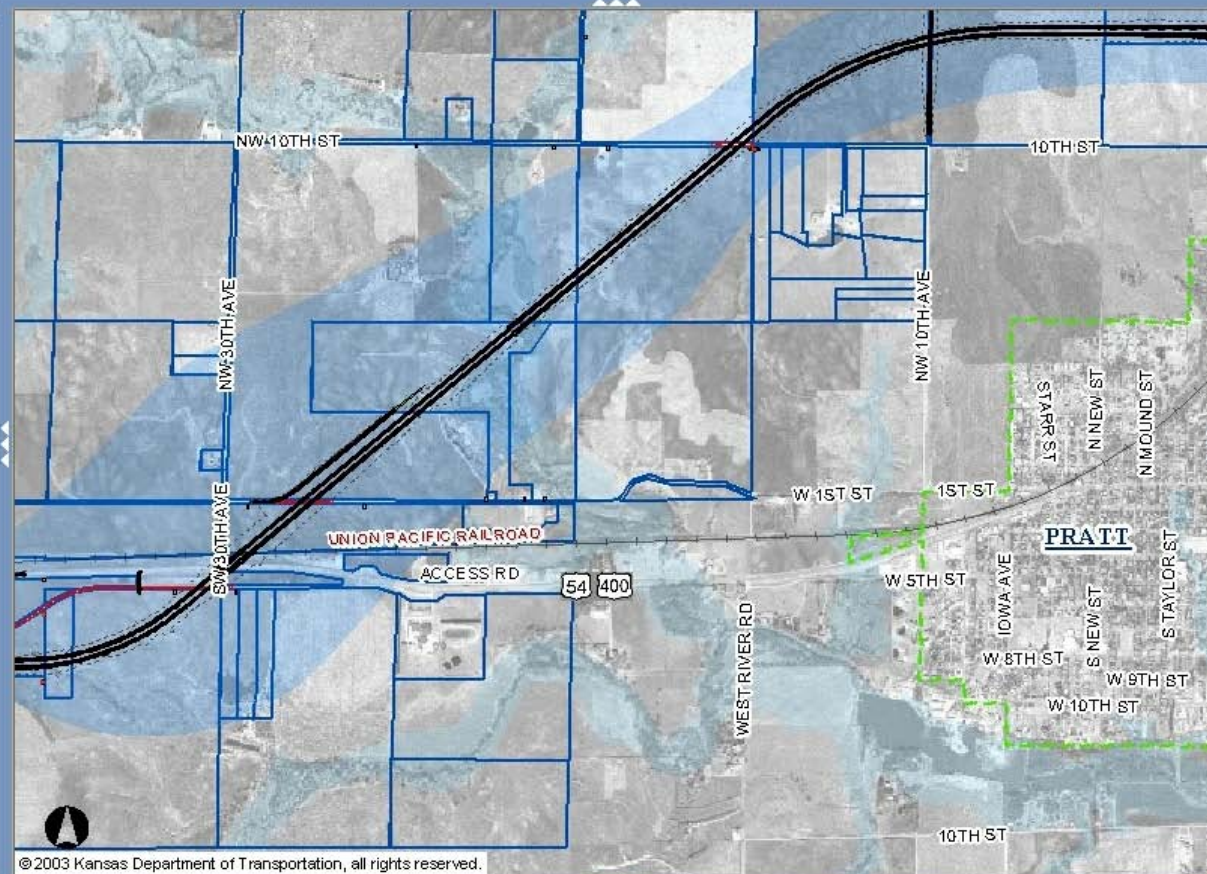
Welcome to the Forward 54 GIS Interactive Map, which has been specially created for this design project. The main purpose of this application is to provide a means of viewing current design recommendations for the project via a dynamic interactive map.

You may begin by either clicking on the map to zoom into a specific location within the project area, or use one of the **Search** methods provided. Using these methods will allow you to search for your property, zoom to a city or area and more.

By using this web site, the user is acknowledging his/her understanding of, and agreement with, the **disclaimers and copyright restrictions** on this data.

Contact Information:

Forward 54
7450 West 130th Street
Suite 400
Overland Park, Kansas 66213
888-947-7233
Comments@Forward54.org



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Corridor Management Plan

- ❖ A preliminary Access Control and Property Management strategy was developed as a working paper
- ❖ Focused on the ideal solution
 - Advance acquisition of R/W
 - Immediate relocations
 - Reducing number of access points
 - Constructing frontage roads
 - Long-term management with GIS

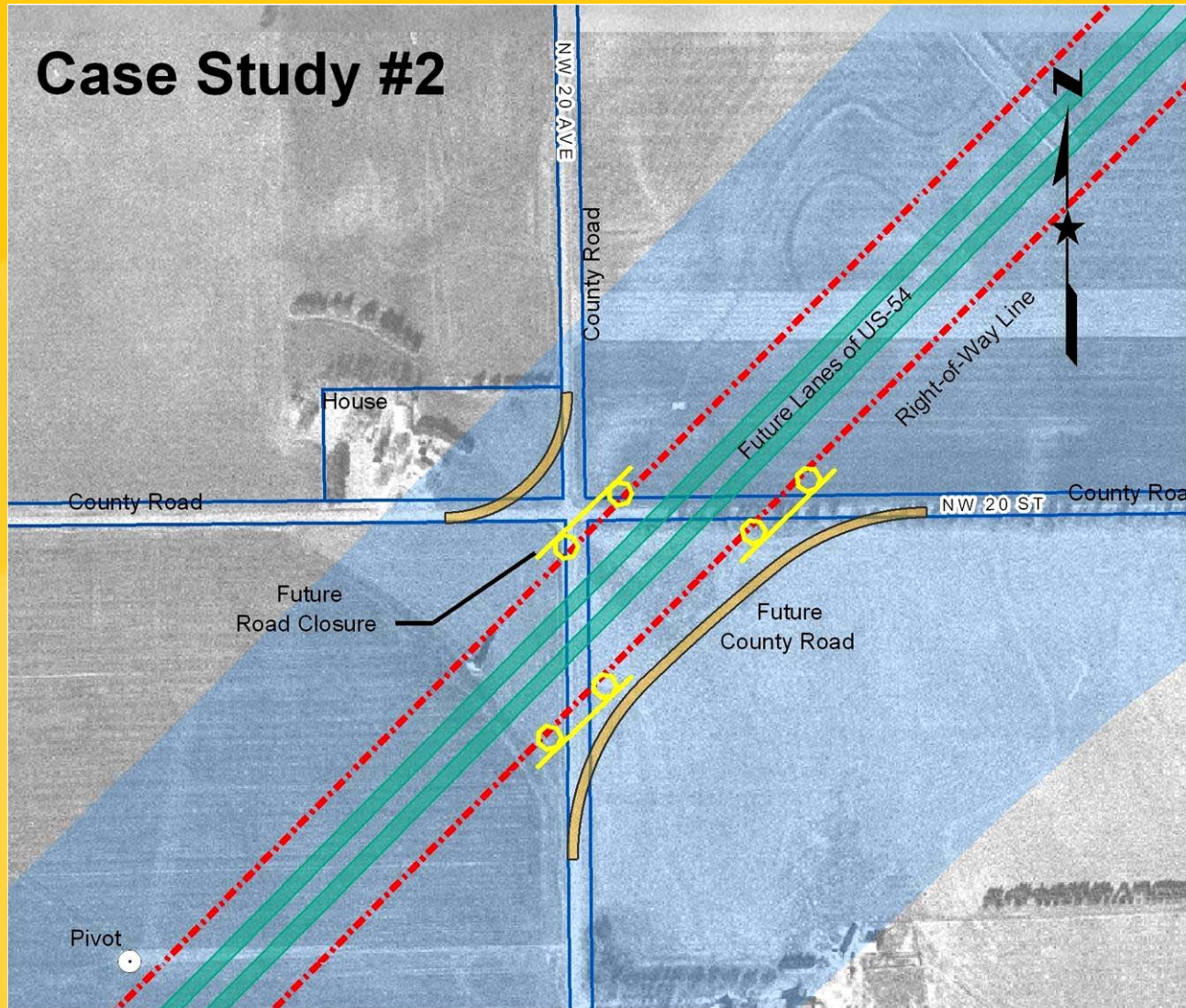
Access Management Workshops

- ❖ Two workshops were held
- ❖ Discussed the Corridor Mgmt. Plan
- ❖ Informed attendees on the Process
 - Formal presentation
 - Case studies in small groups
 - Open discussion



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Case Study #2



NOTE: This illustration depicts concepts for discussion purposes only as part of the Corridor Management Workshop with public officials as part of the US-54 Pratt to Kingman project. The exact location, design, and right-of-way for completed improvements cannot be determined from this drawing and could be different from those shown. Details of right-of-way and individual access will be determined during design activities that will occur later. Date of illustration July 24, 2003.

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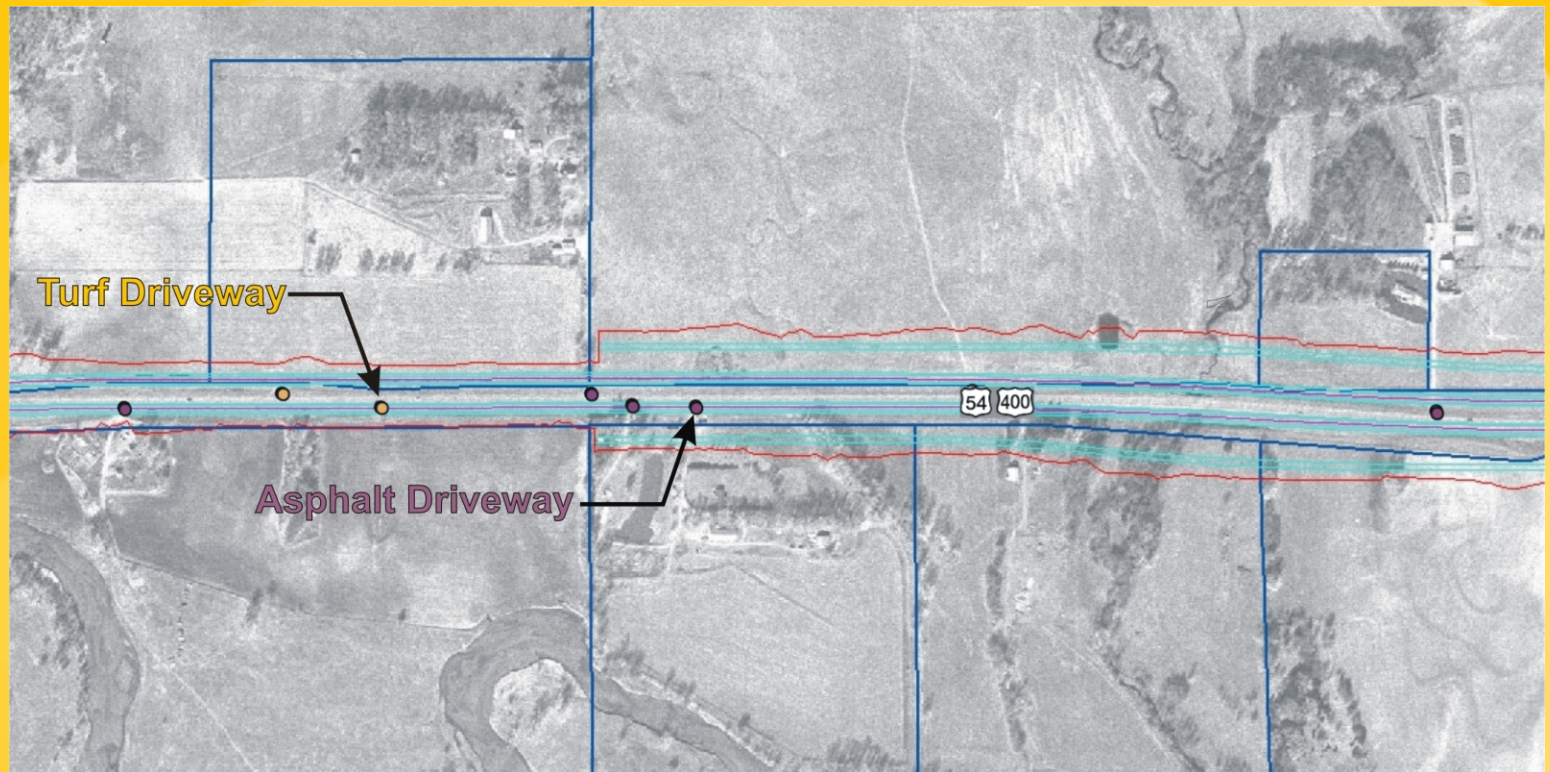
Determine “Categories” of R/W and Access Changes

Increasing Impacts
↓

- ❖ Access not affected
- ❖ Field entrance adjustment
- ❖ Residence/Driveway adjustment
- ❖ Frontage road required
- ❖ Parcel to be landlocked
- ❖ Total acquisition

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Permitted Driveways located via GIS



“Kitchen Table” Meetings

- ❖ Decide what to do with each property owner's access points
- ❖ Get input on how they use their property
- ❖ Get initial indications of the owner's disposition
- ❖ Provide an opportunity to express opinions

Property Management Plan

- ❖ Project is 44 miles long with approximately 253 parcels
- ❖ Preservation is a long-term issue for KDOT (land, fencing, mowing)
- ❖ Our next steps:
 - Develop a policy for R/W acquisition
 - Develop a GIS-based Access Control and Property Management Application

Lessons Learned

- ❖ Communicate early and often with local governments and the impacted residents
- ❖ Be responsive and flexible to local needs
- ❖ Capture and preserve information for later use

Right Turns:

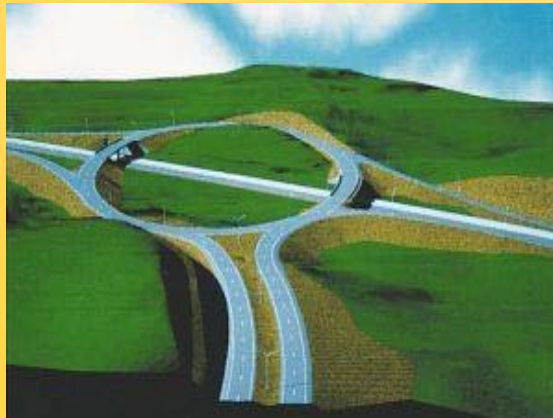
The K-7 State and Local Planning Exercise

Michael DeMent, APR
doc COMMUNICATIONS

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“Right Turns” Interactive Exercise

- ❖ Education and input “game”
- ❖ Simplified transportation/planning rules
- ❖ Scale-model components based on rules
- ❖ Facilitated assembly by stakeholders teams
- ❖ Adaptable/transportable for future projects



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❖ Attributes

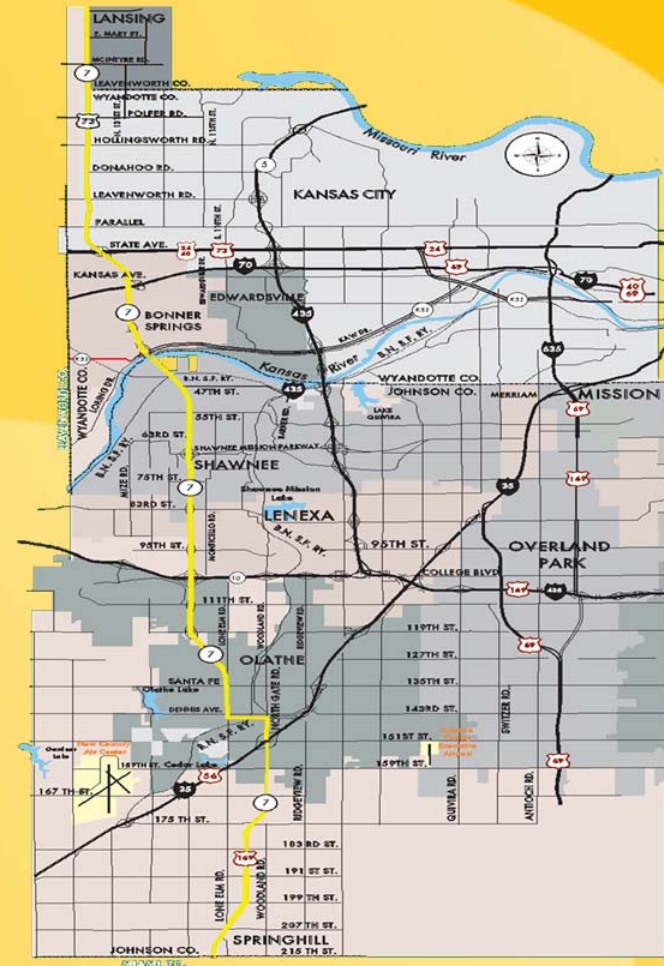
- Length
- Diversity

❖ Attitudes

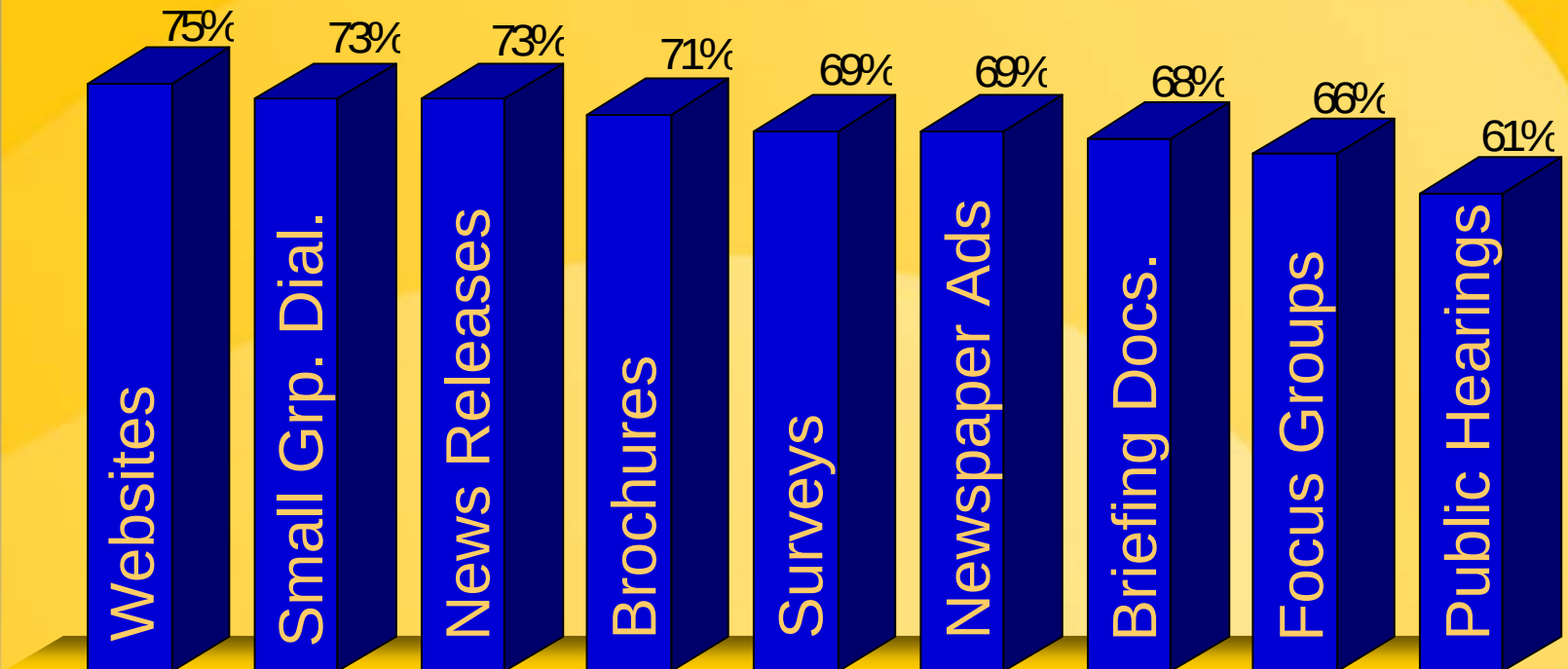
- Development
- Politics

❖ Actions

- Time horizon
- Funding realities
- Coordinated response



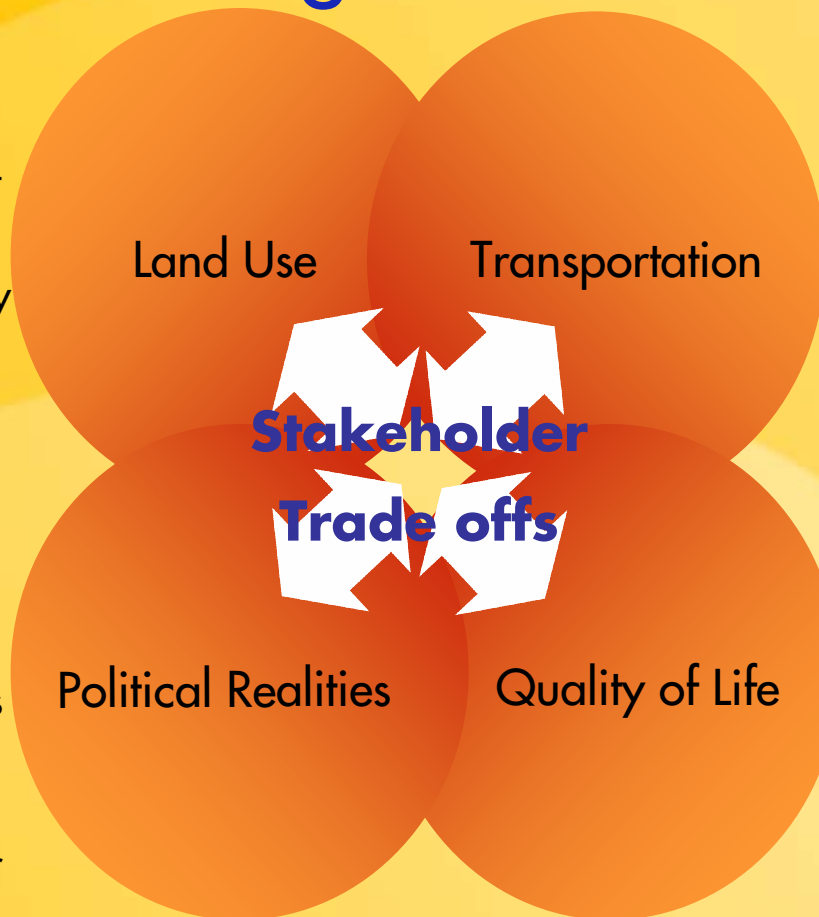
Communication Isn't The Issue



The Key is Facing Trade-offs

- Accessibility
- Local impacts
- Econ. development
- Property rights
- Dev. type & density
- Development desires vs. reality

- Funding
- Timing
- Decision influences
- State local partnership
- Our needs vs. your needs

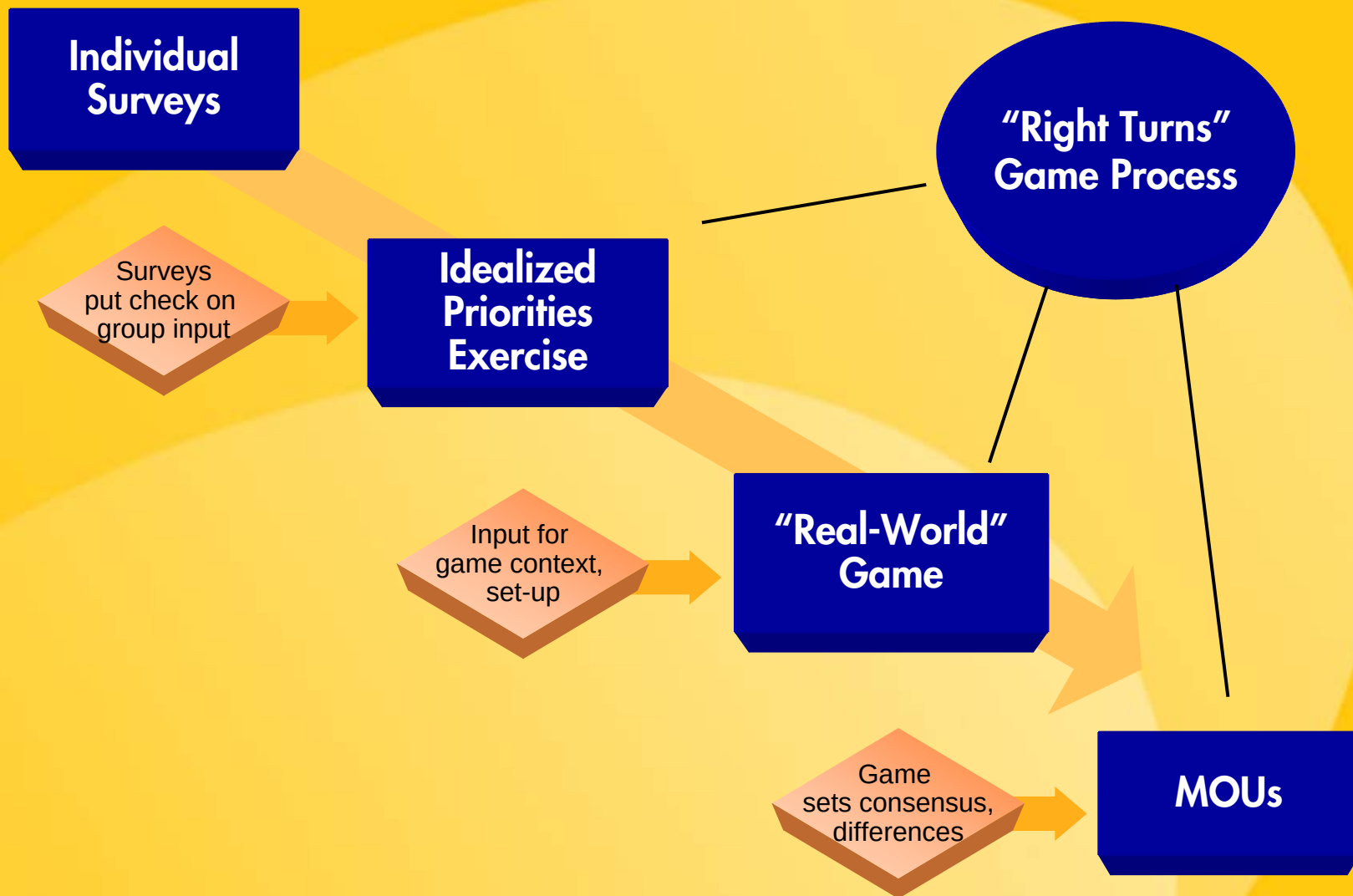


- Mobility
- Regional impacts
- Funding needs vs. realities
- User types
- Ideal vs. realistic facilities

- Safety
- Economic opportunity
- Environmental concerns
- Noise
- Traffic
- Community identity



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Game Attributes

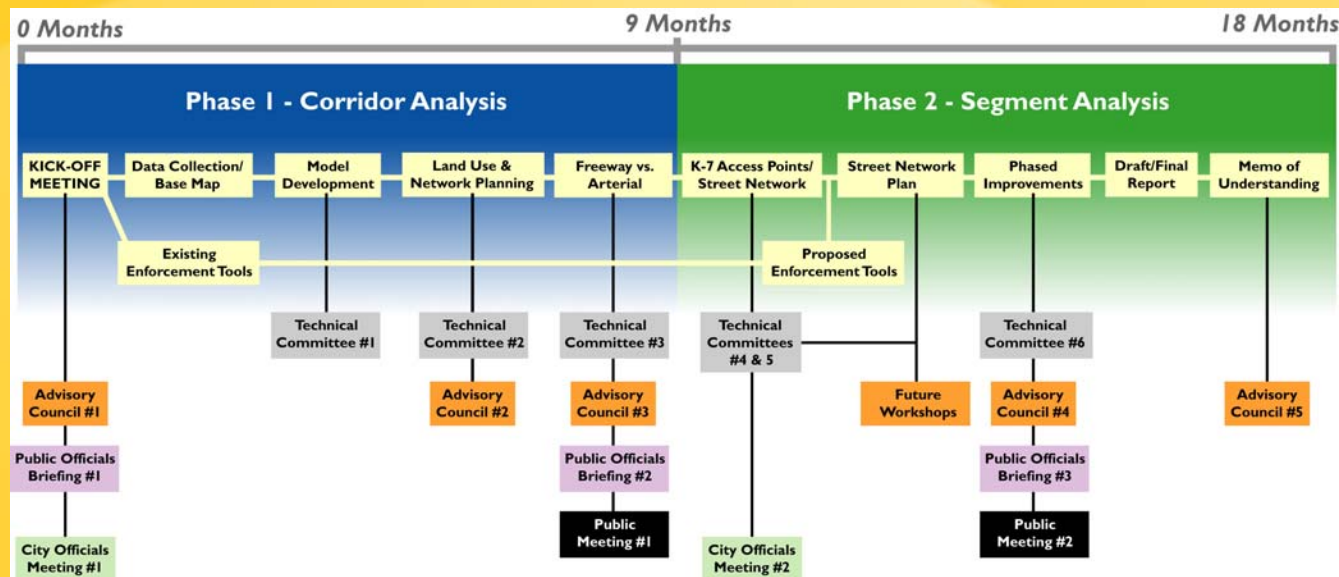
- ❖ Aerial maps/plexiglass holders/markers
- ❖ “Garden marker” flags for specific traits/issues
- ❖ Consultant “referees” and impact flags
- ❖ Facilitated segment discussion
- ❖ Electronic documentation



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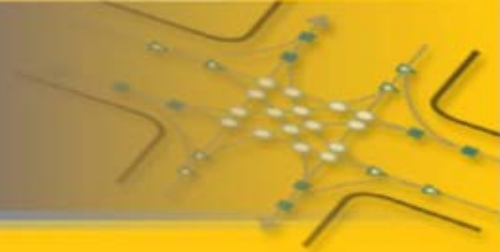
Project Schedule

- ❖ Complex project
- ❖ Extensive public involvement
- ❖ Collaborative process
- ❖ Multiple feedback streams
- ❖ Boundaries of political will/community vision
- ❖ Memos of understanding/lasting partnerships



The logo features a stylized road with a dashed center line and a solid edge line, curving through a blue and yellow circular background.

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A small inset image in the top right corner shows an aerial view of a complex road interchange with multiple lanes and overpasses.

Results

Determination

- Areas of differences
- Opportunities for consensus
- MOUs & political will

Visualization

- Personal, community values
- Actionable feedback
- Facility, land use and transportation trade-offs

Futures Workshops

Education

- KDOT planning process
- Land use & transportation concepts
- Realistic expectations

Demonstration

- Links between facilities, traffic and development
- Impact on K7 design
- Interplay with local roads

Lessons Learned

- ❖ Multiple feedback streams needed to get full picture
- ❖ Stakeholders want even greater consultation
- ❖ Visible, actionable feedback is key to good results for all parties

Innovative Analysis of Access

Questions?