

I-435/I-35/K-10 Interchange Study

Advisory Group Presentation

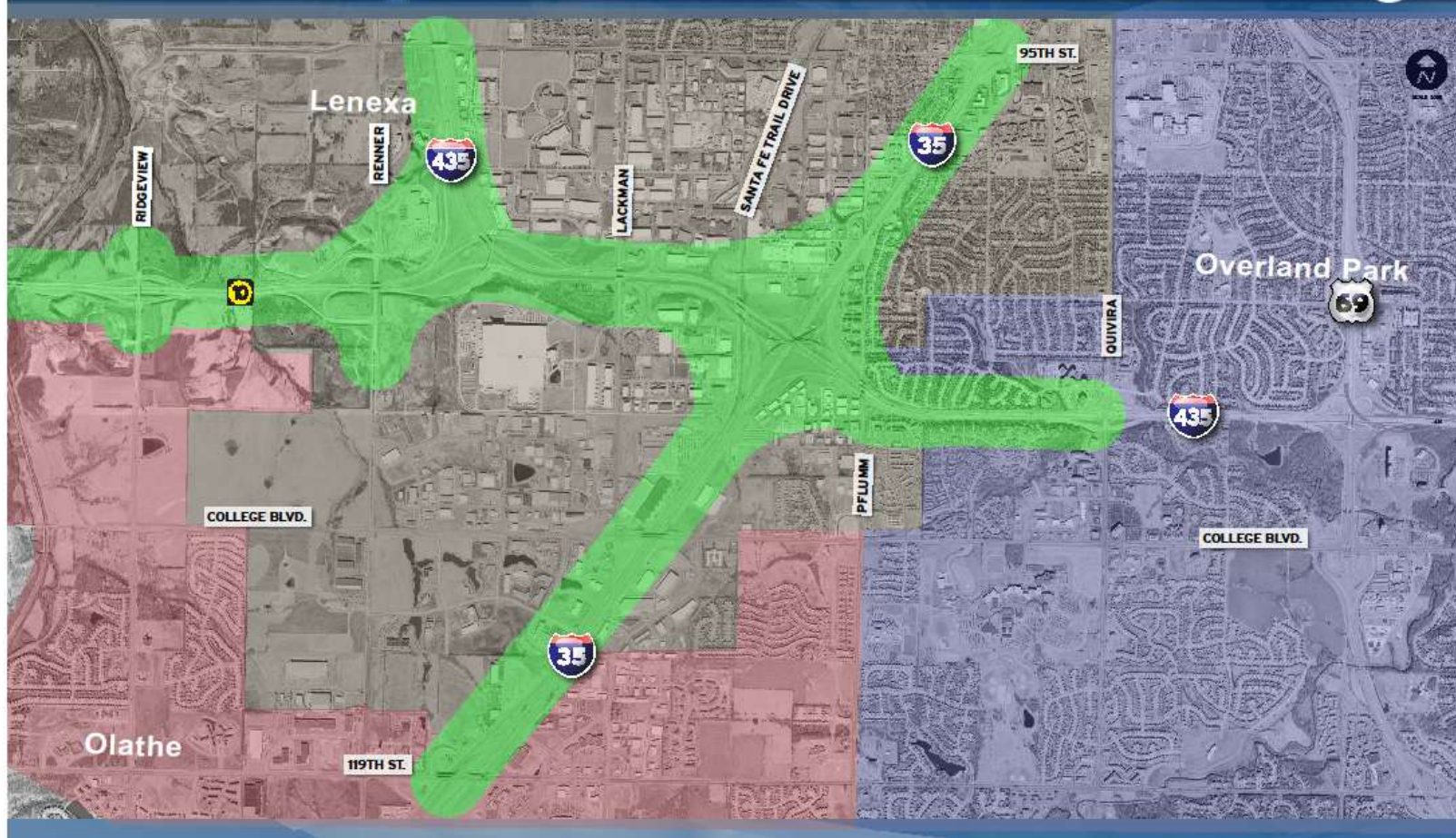
April 28, 2010

Topics



- Recap Regional Study
- Concept Alternatives
- Preferred Concept
- Preliminary Phasing Plan
- Next Steps

I-435/I-35/K-10 Interchange



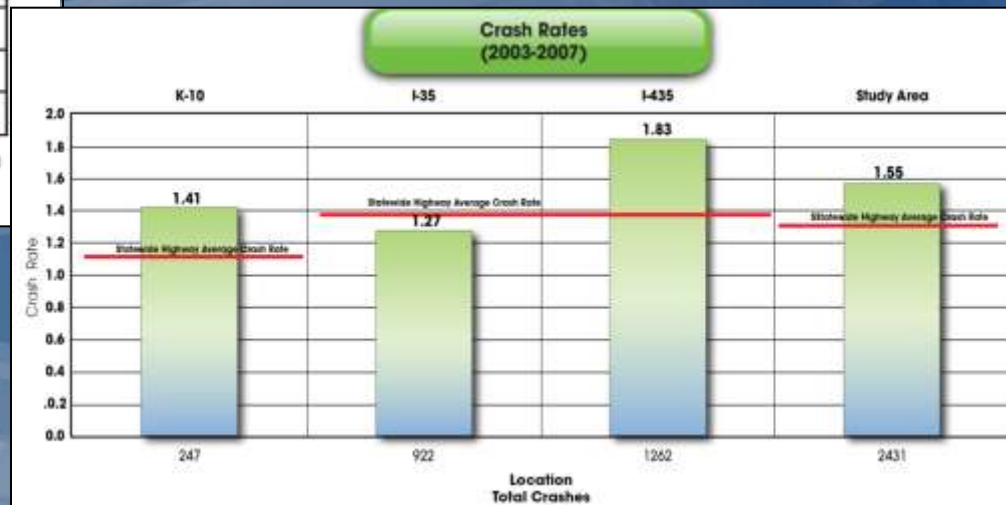
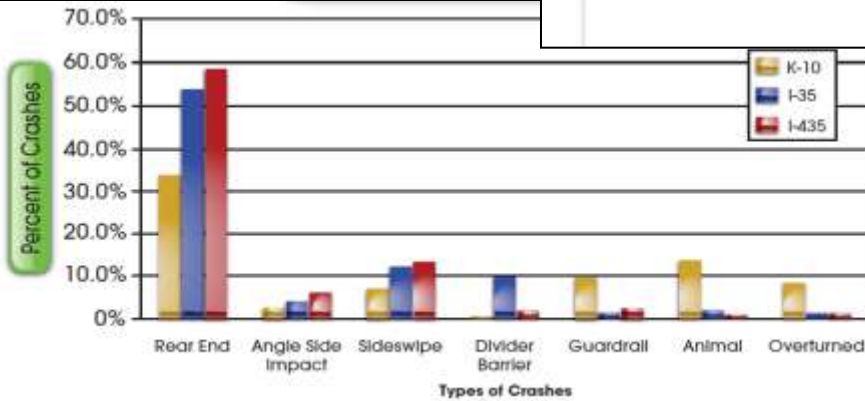
Regional Study

Condition of Existing Infrastructure

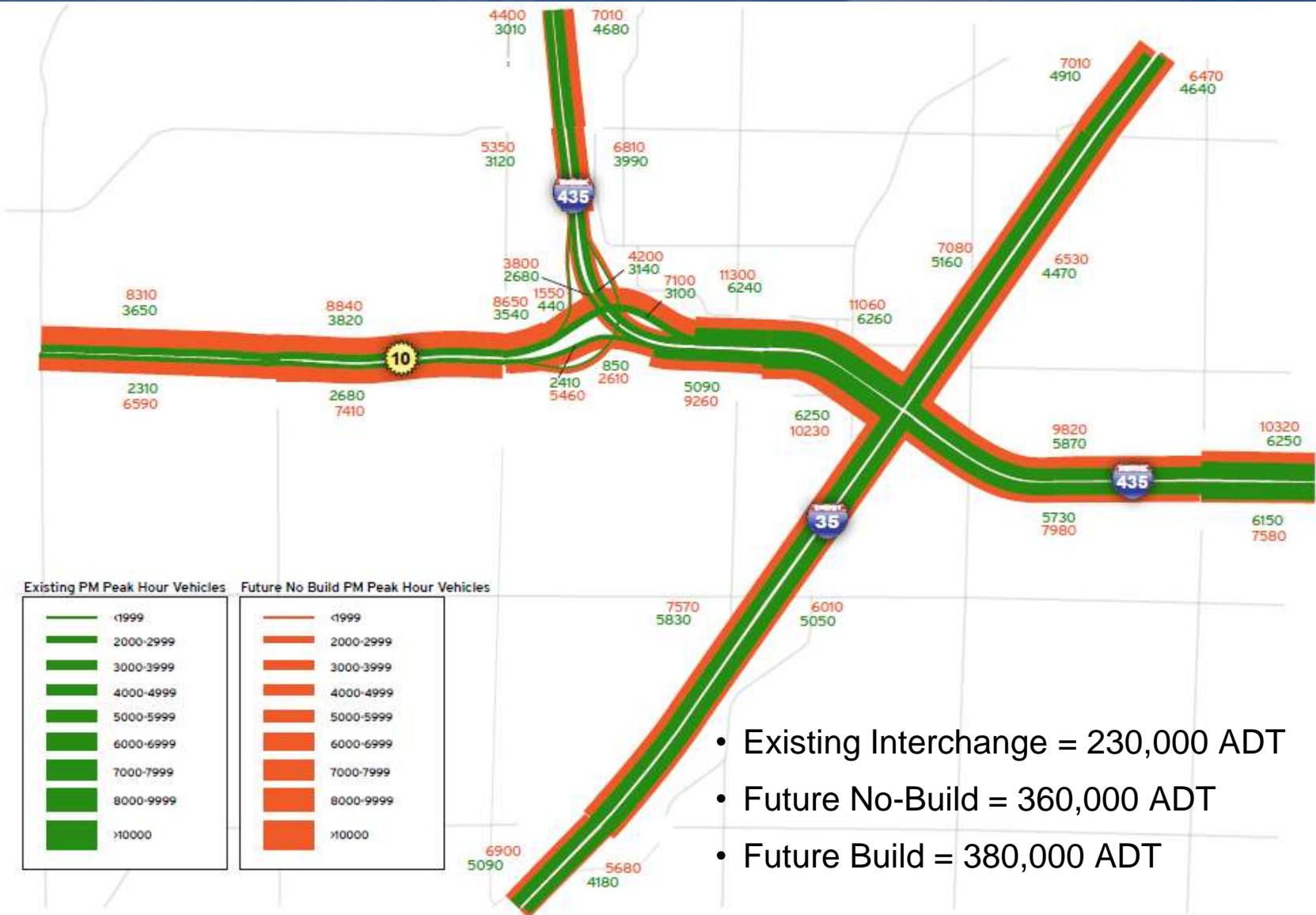
- Pavement and bridge conditions
- Geometrics - curves and hills
- Length of ramps and lanes



Regional Study Accidents



Regional Study Existing and Future Traffic



Regional Study Online Survey Top Areas of Concern



Regional Study Future No-Build (PM LOS)



Regional Study

Multimodal Considerations



- Ramp Metering
- Managed Lanes
- Transit Options
- Freight and Truck Movement
- Bicycle/Pedestrian

Evolution of Concepts



- ~~Concept 1~~ – Additional Mainline Capacity
- ~~Concept 2~~ – Additional Mainline Capacity & CD Roads with Traditional Weaves & Consolidated Access
- ~~Concept 3~~ – Additional Mainline Capacity & CD Roads with Braided Ramps & Consolidated Access
- Concept 4 – Additional Mainline Capacity & CD Roads with Braided Ramps & Non-Consolidated Access



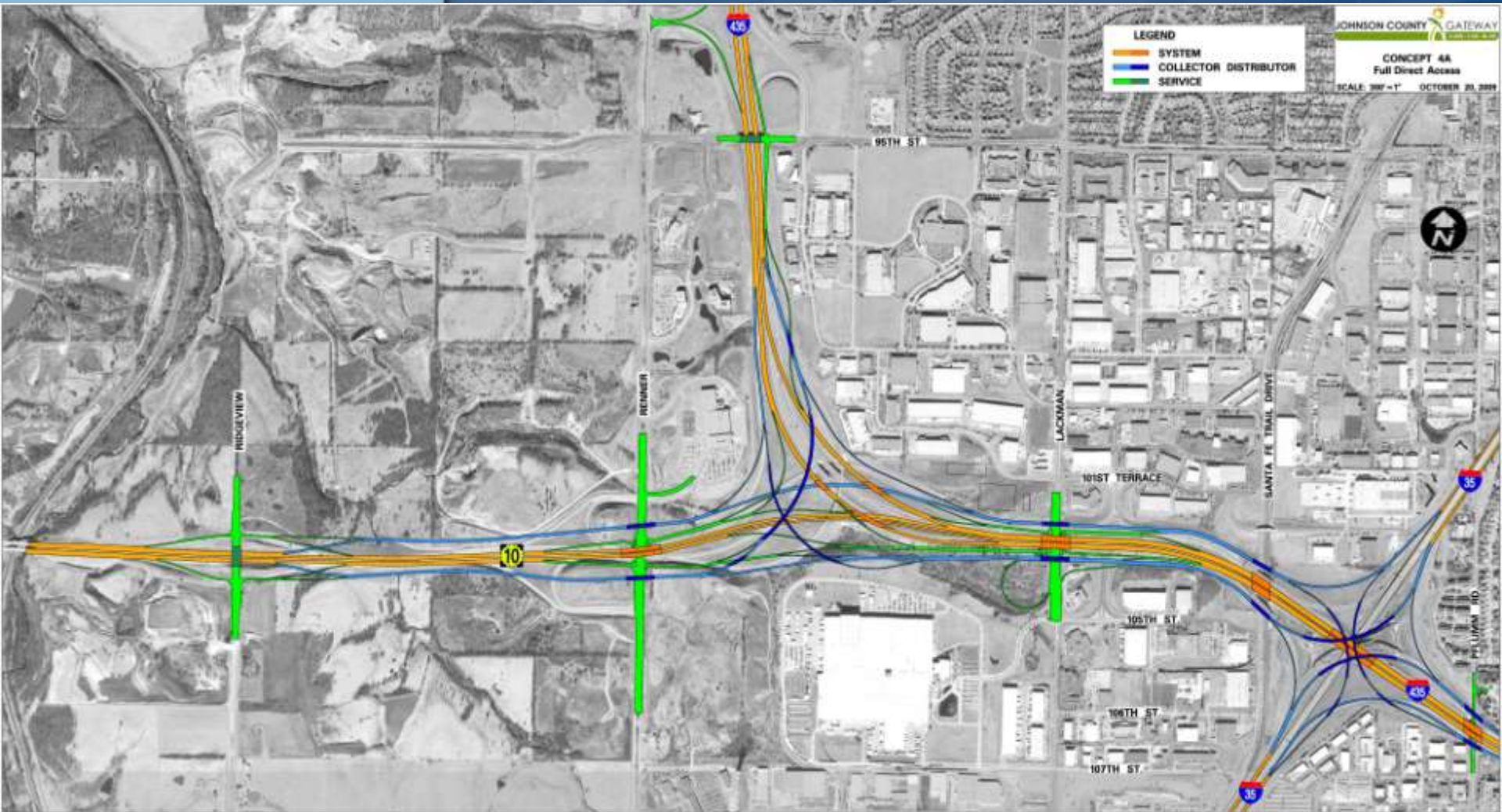
Through Mainline (Orange)



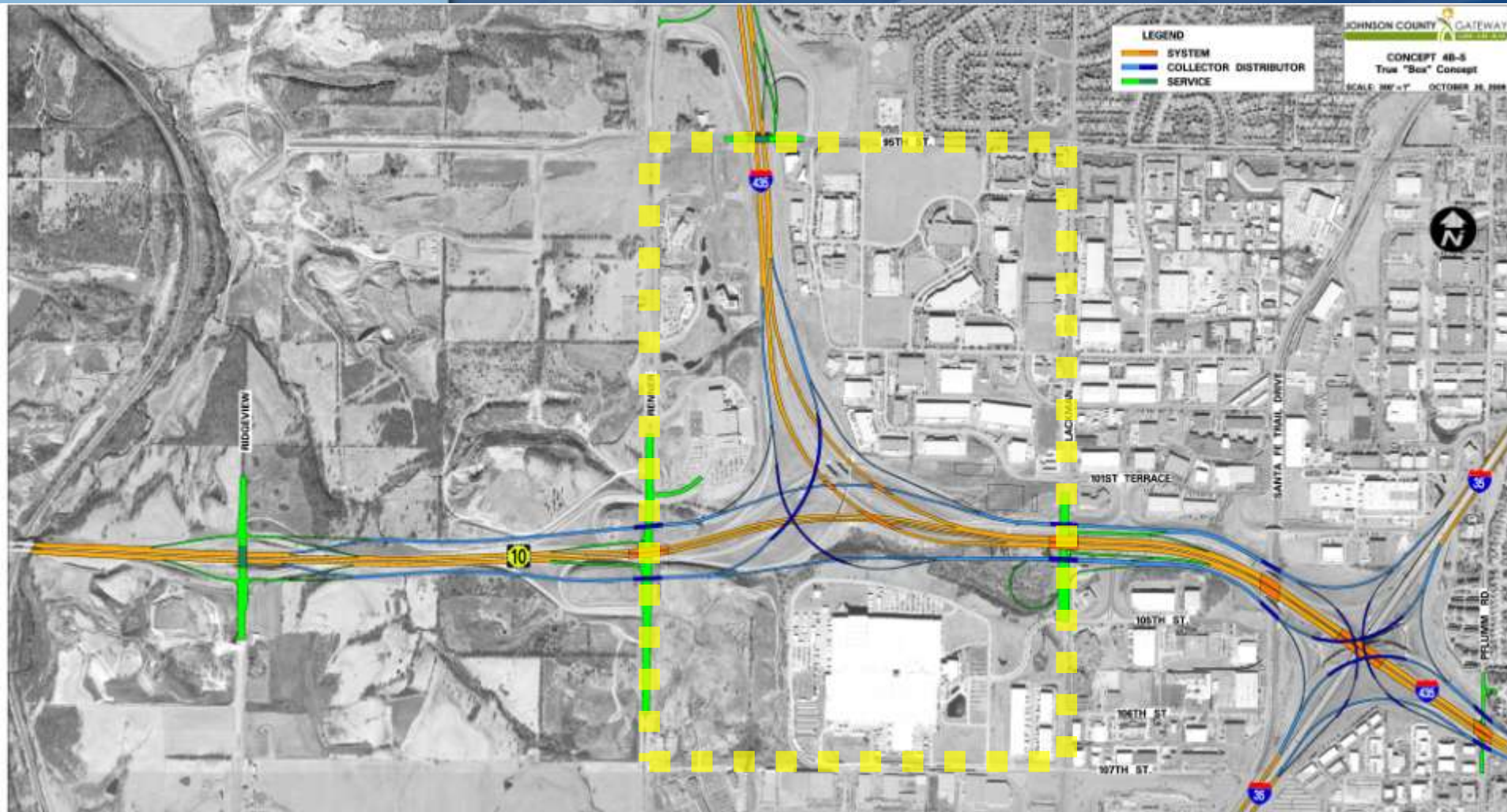
CD Roads (Blue)



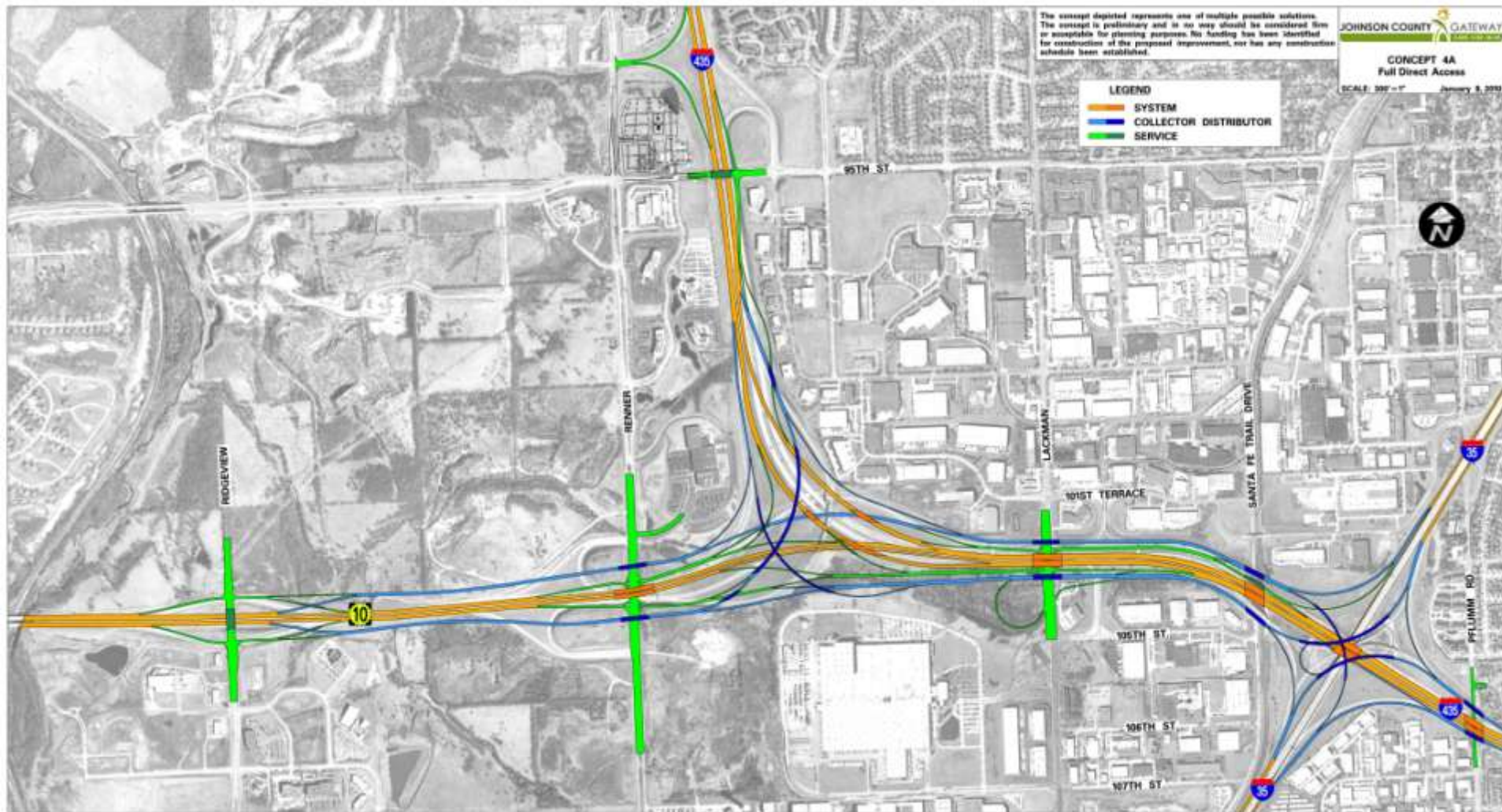
Local Service Ramps (Green)



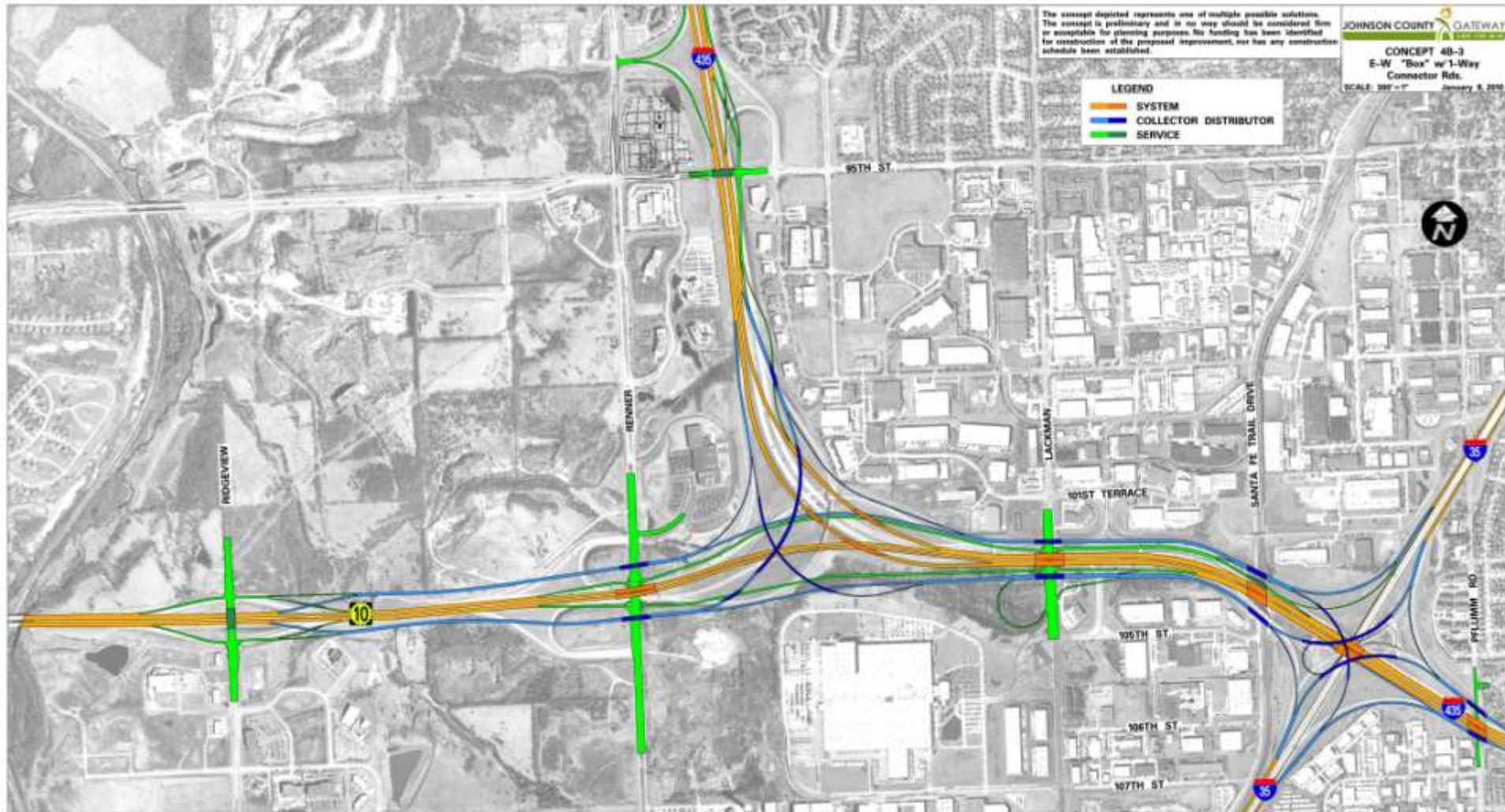
The "Box" Concept



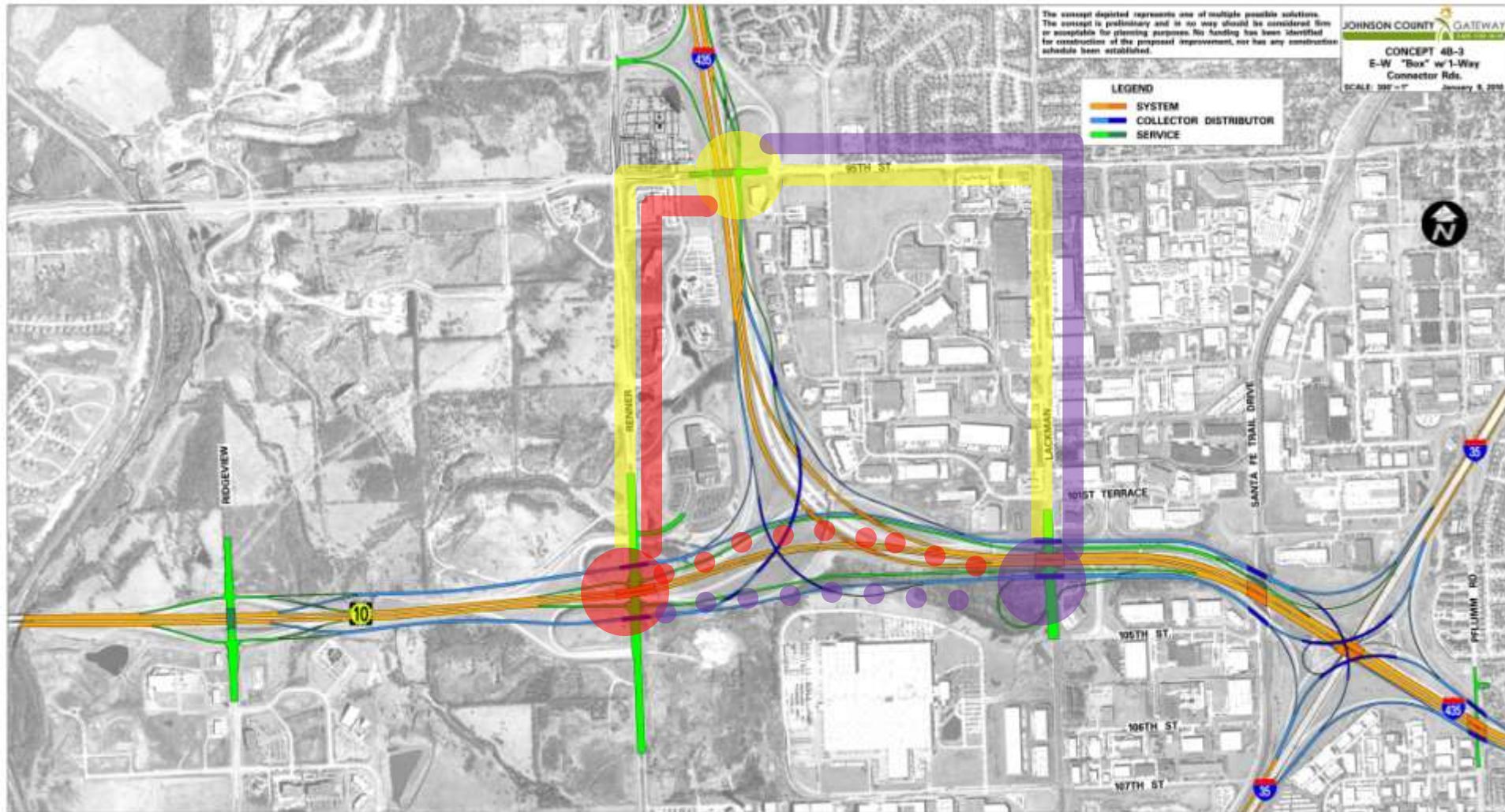
Concept 4A Full Direct Access



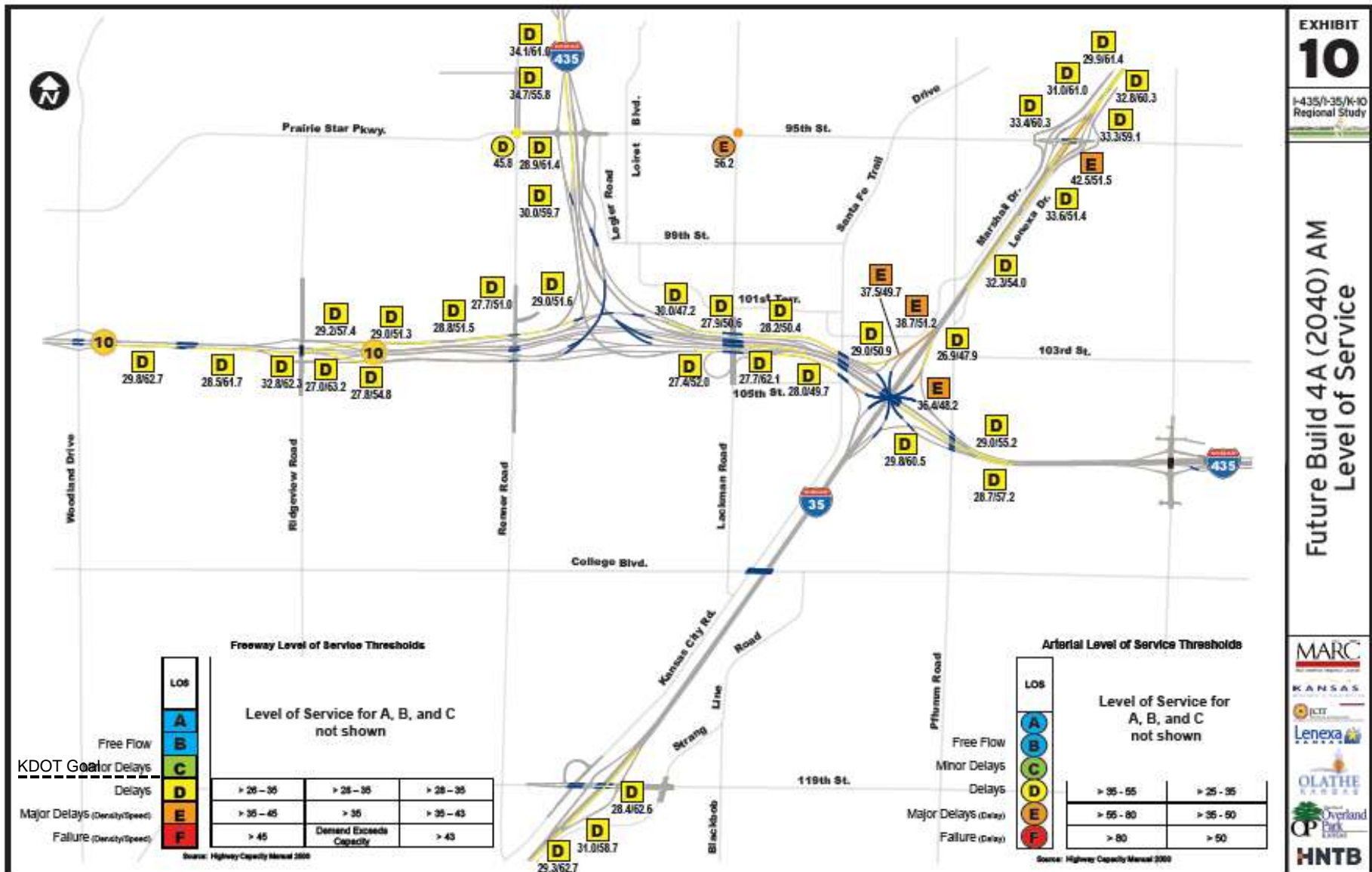
Concept 4B-3 Modified Access



Concept 4B-3 Modified Travel



Freeway and Intersection Level of Service (Concept 4A)



Freeway and Intersection Level of Service (Concept 4B-3)

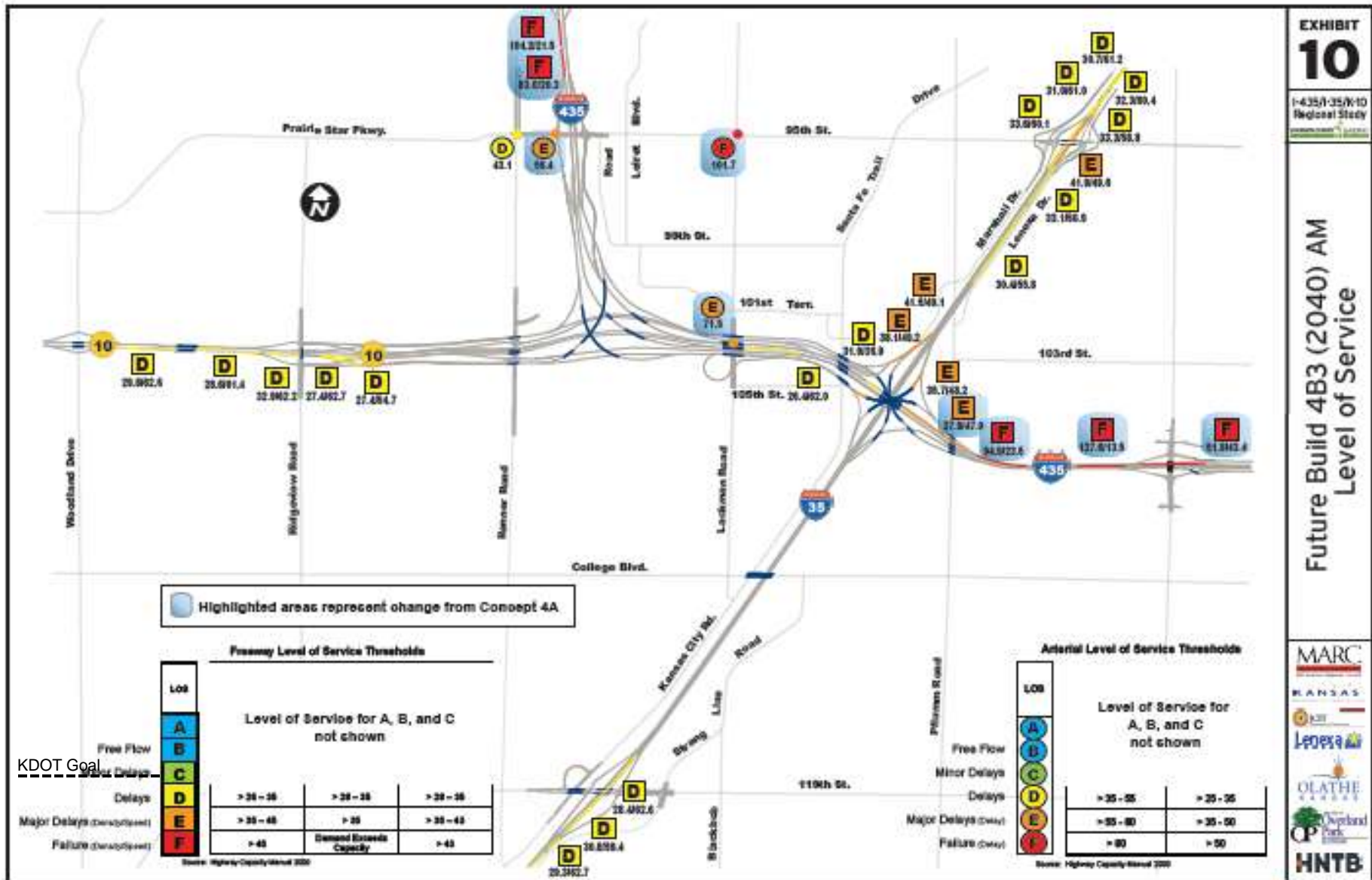
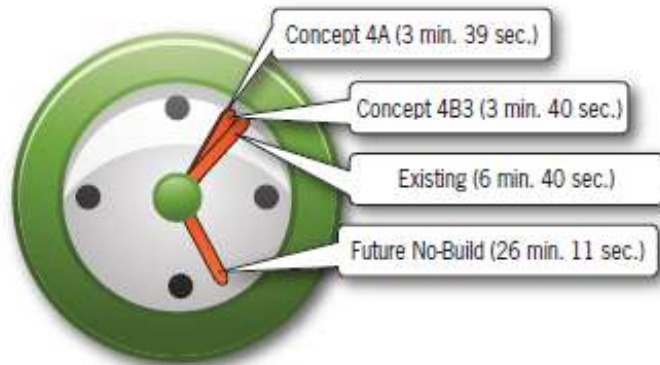


EXHIBIT 10
I-435/I-35/W-10
Regional Study

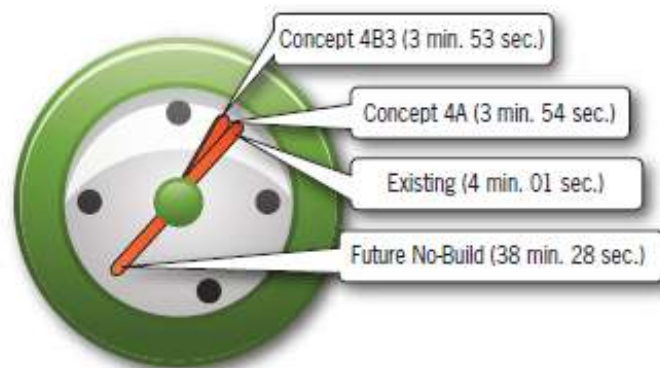
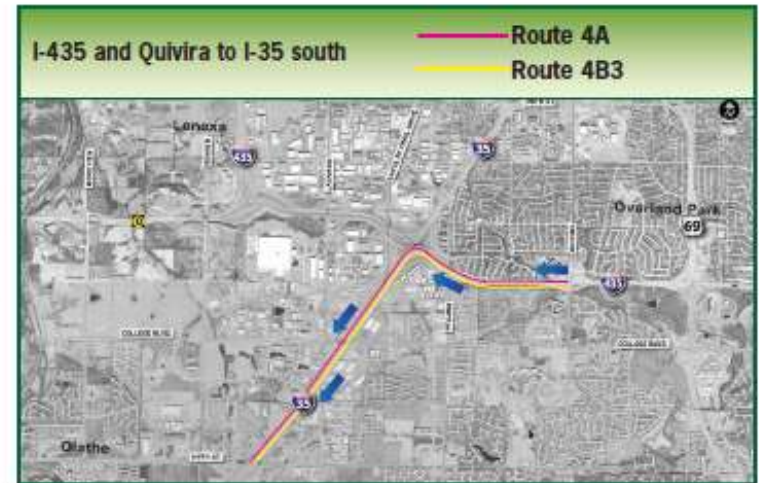
Future Build 4B3 (2040) AM
Level of Service

KDOT Goal

PM Peak Hour Travel Time



I-435 and Quivira to I-35 south

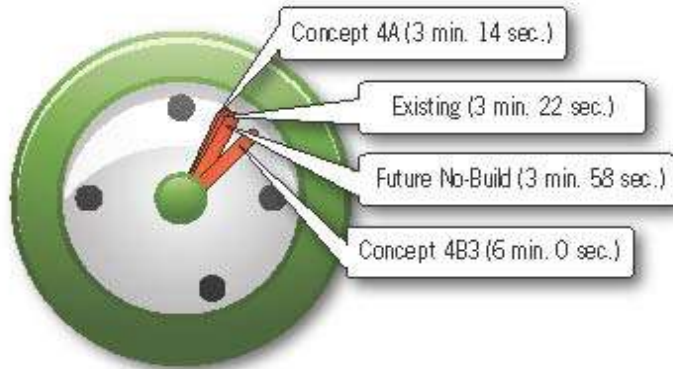


K-10 and Ridgeview to I-435 east

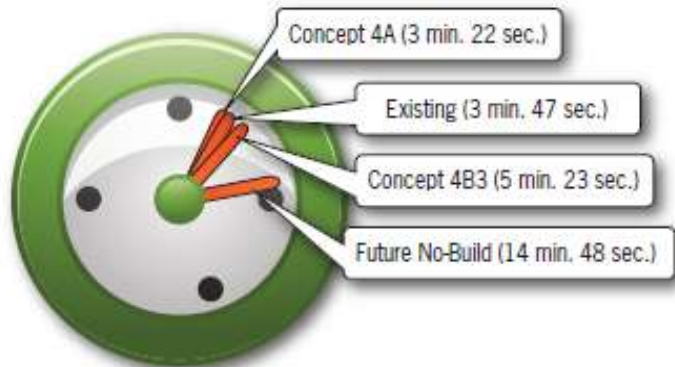
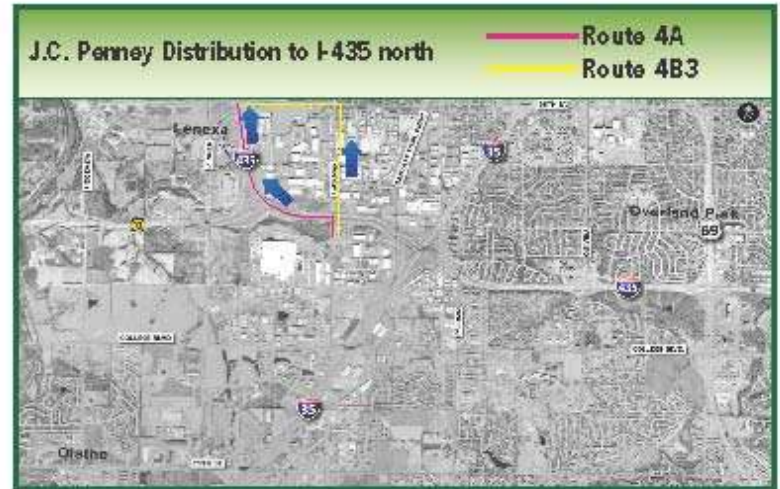


Note: Off-peak travel times would be less than peak hour travel times.

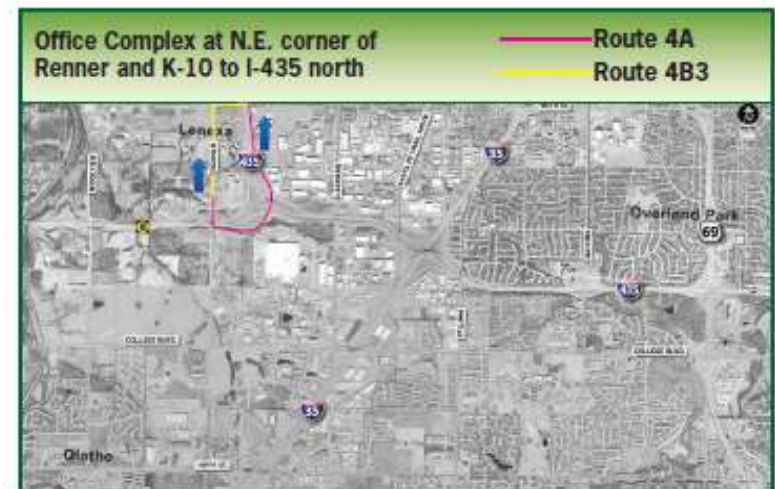
PM Peak Hour Travel Time



J.C. Penney Distribution to I-435 north



Office Complex at N.E. corner of Renner and K-10 to I-435 north



Note: Off-peak travel times would be less than peak hour travel times.

Operational Conclusions

- Concept 4A
 - performs better operationally
 - lower travel times and user costs

- Concept 4B3
 - concentrates traffic at fewer access points
 - creates additional congestion on the freeway and arterials

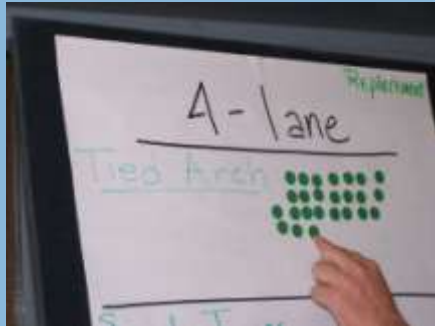
Public Feedback

- **Issues Workshop**
- **Focus Groups**
- **Online Surveys**
- **Web site**
- **Facebook**



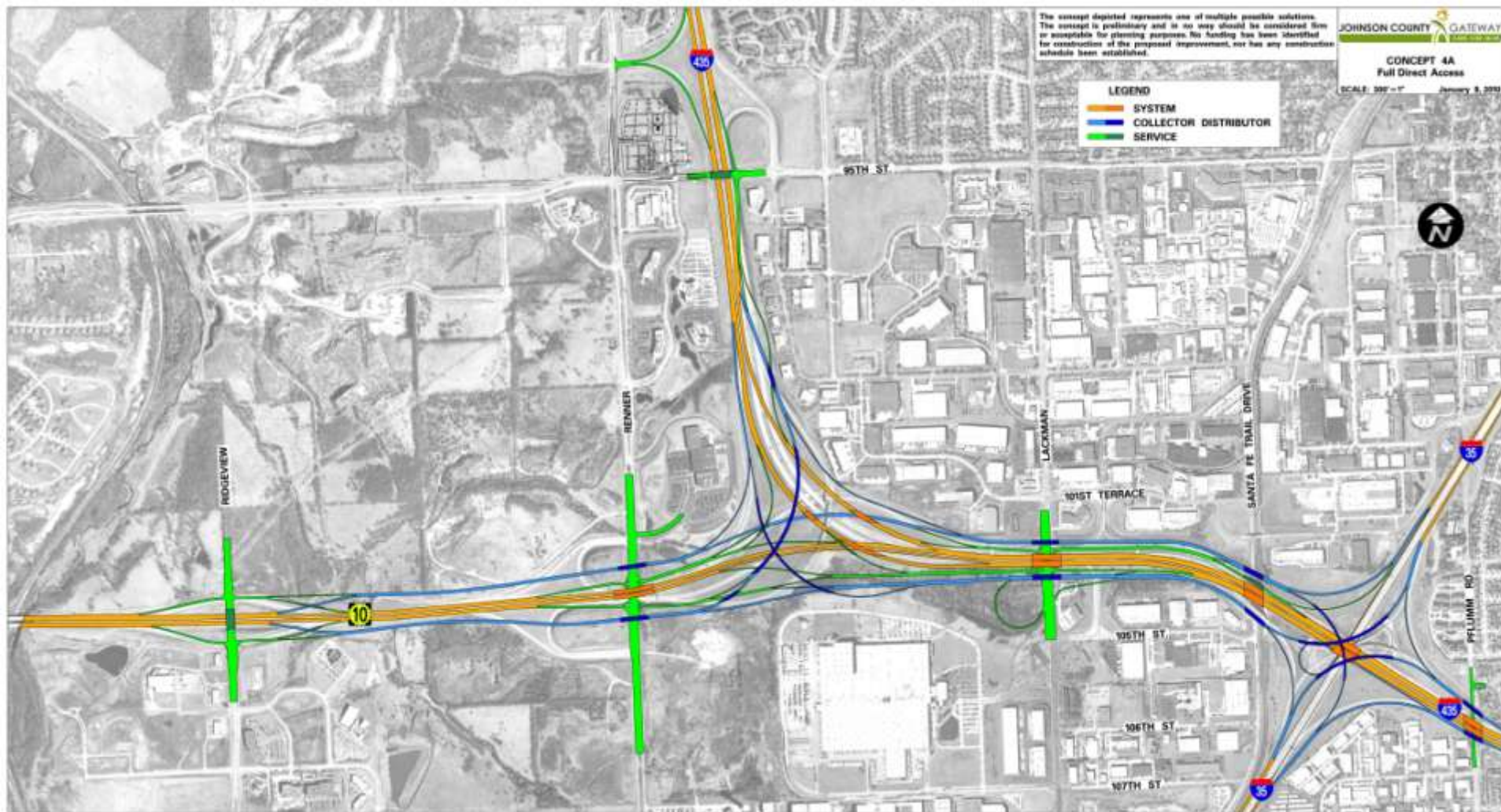
- **Regional traffic more important but maintain access for local businesses**
Regional (40%), Local (25%), Both (35%)
- **Existing access adequate (92%);
Current access should remain (65%)**
- **100% supported Concept 4A**
(signage will be important)
- **Overall support for multimodal options**

Public Feedback



- **97% willing to pay for improvements**
- **Who should pay:**
 - 87% users of facility
 - 52% all Kansans
 - 40% local residents/bus. in area
- **How to pay:**
 - Dedicated sales tax up to 1 cent (54%)
 - Surcharge to vehicle registration (54%)
 - Tolling the entire interchange (49%)
 - Increasing gas tax or adding a local gas tax (30%)
 - Vehicle miles traveled (20%)

Preferred Concept 4A



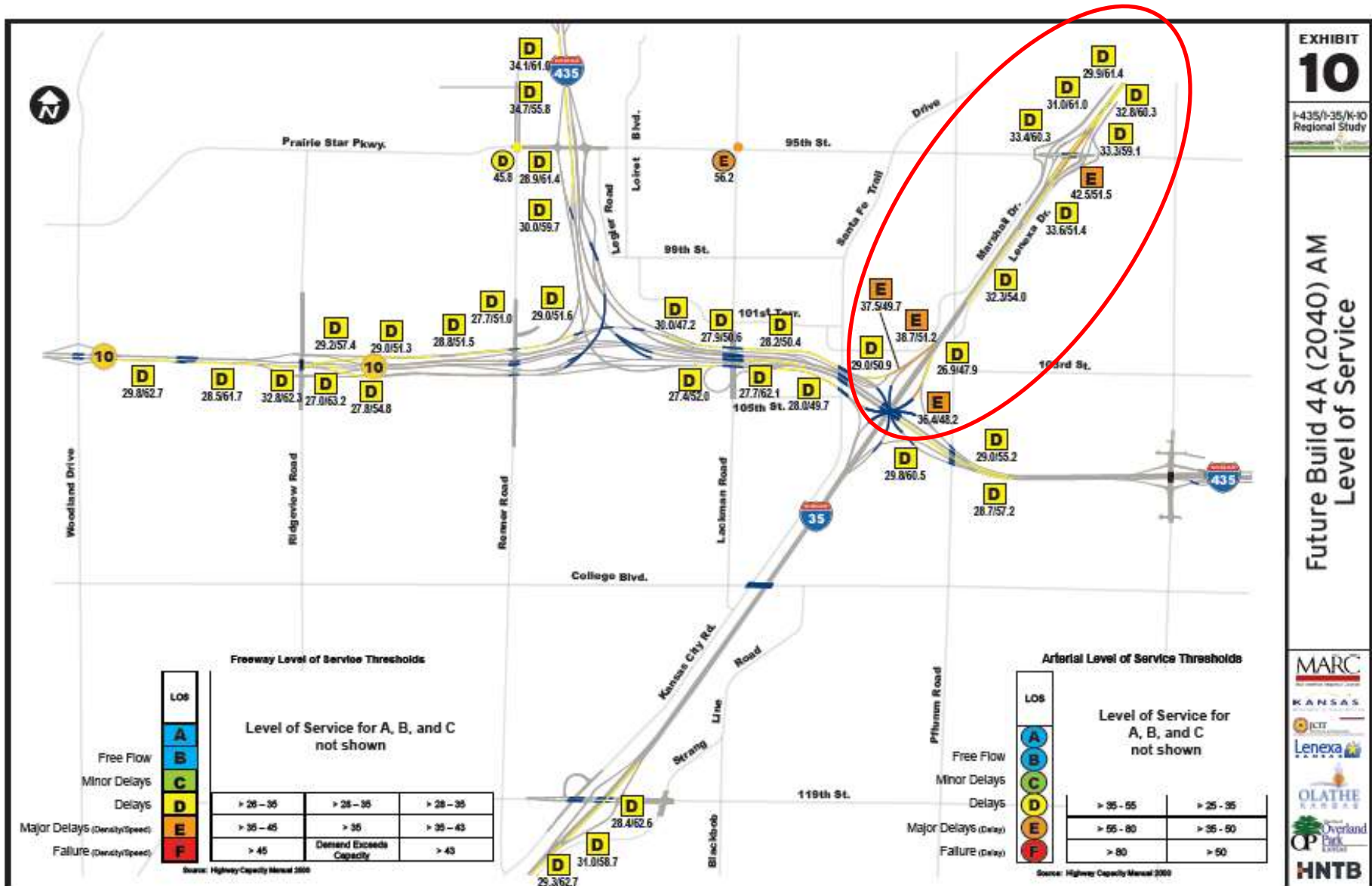
Reserve Capacity

How long beyond 2040 will the interchange operate before experiencing Level of Service F?

What additional improvements can be made beyond 2040 to extend the service life of the interchange?

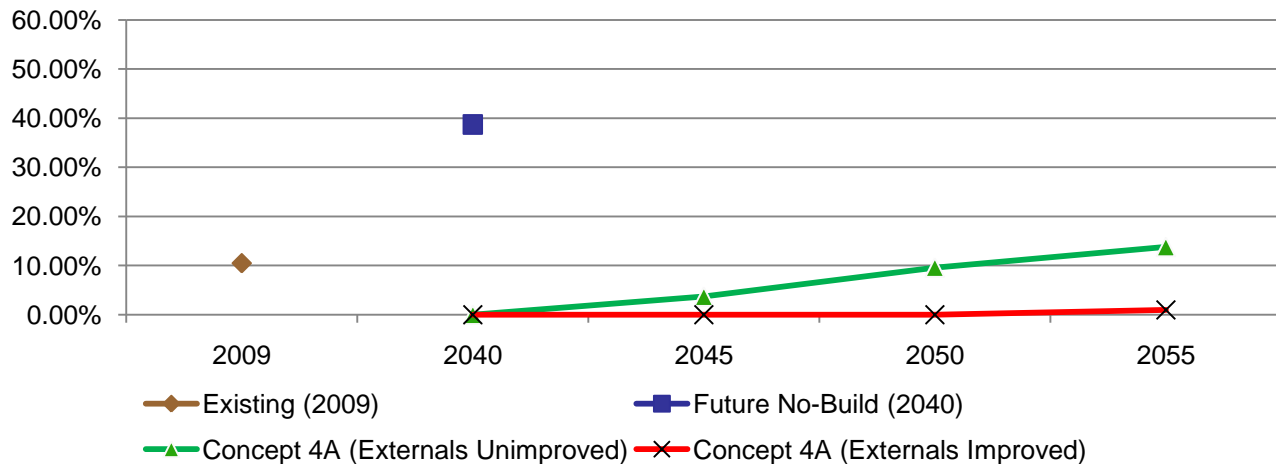
Shouldn't we preserve the ROW for these future improvements today?

2040 Issues

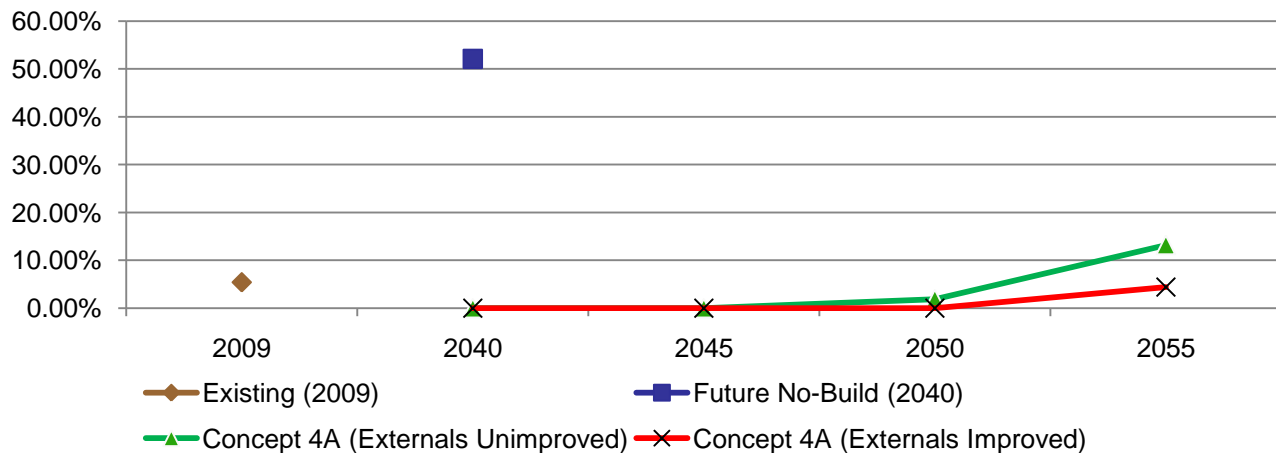


Reserve Capacity

**Percent of I-35/I-435/K-10 Freeway Miles at LOS F
By Year (AM Peak)**



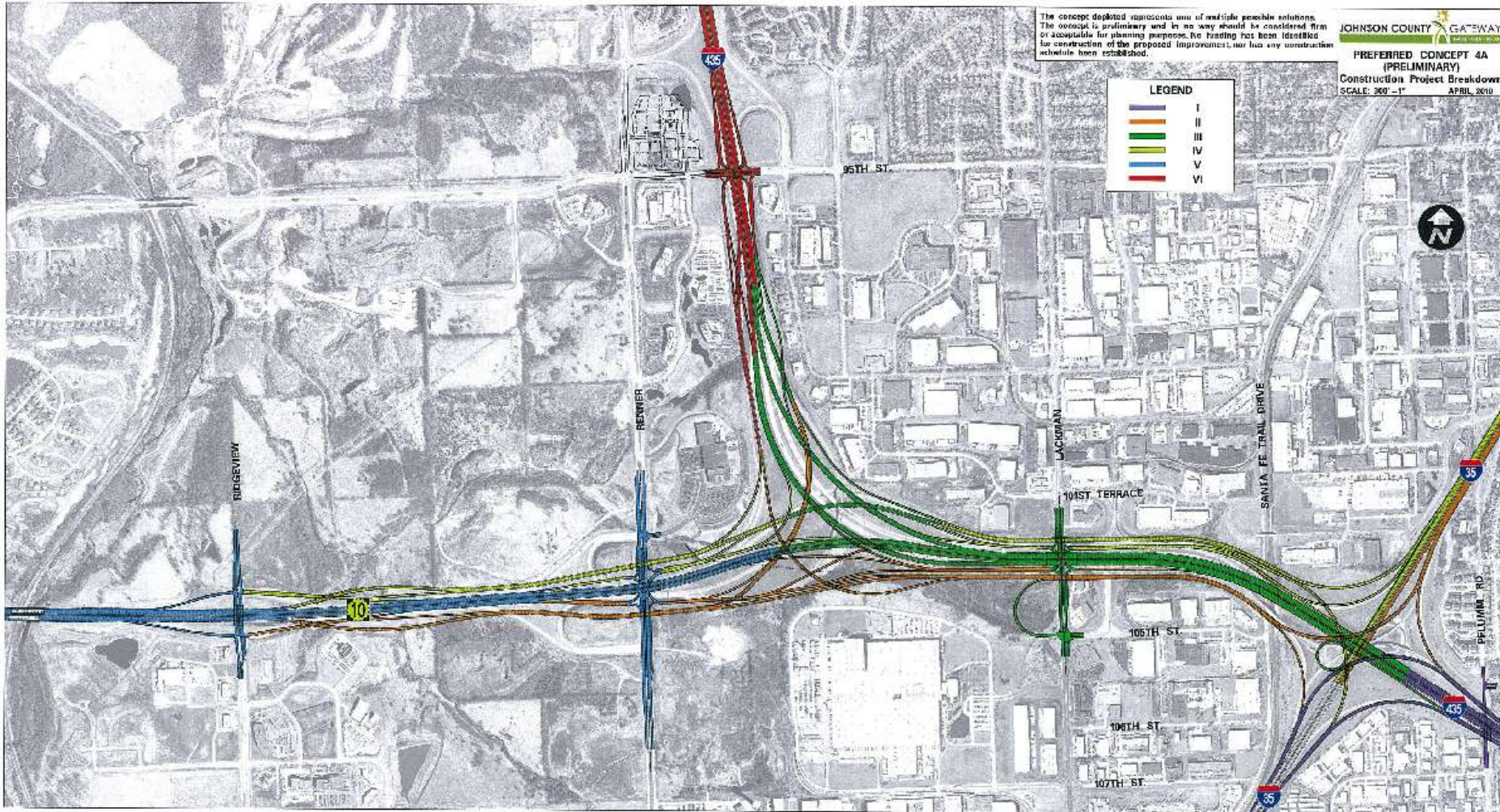
**Percent of I-35/I-435/K-10 Freeway Miles at LOS F
By Year (PM Peak)**



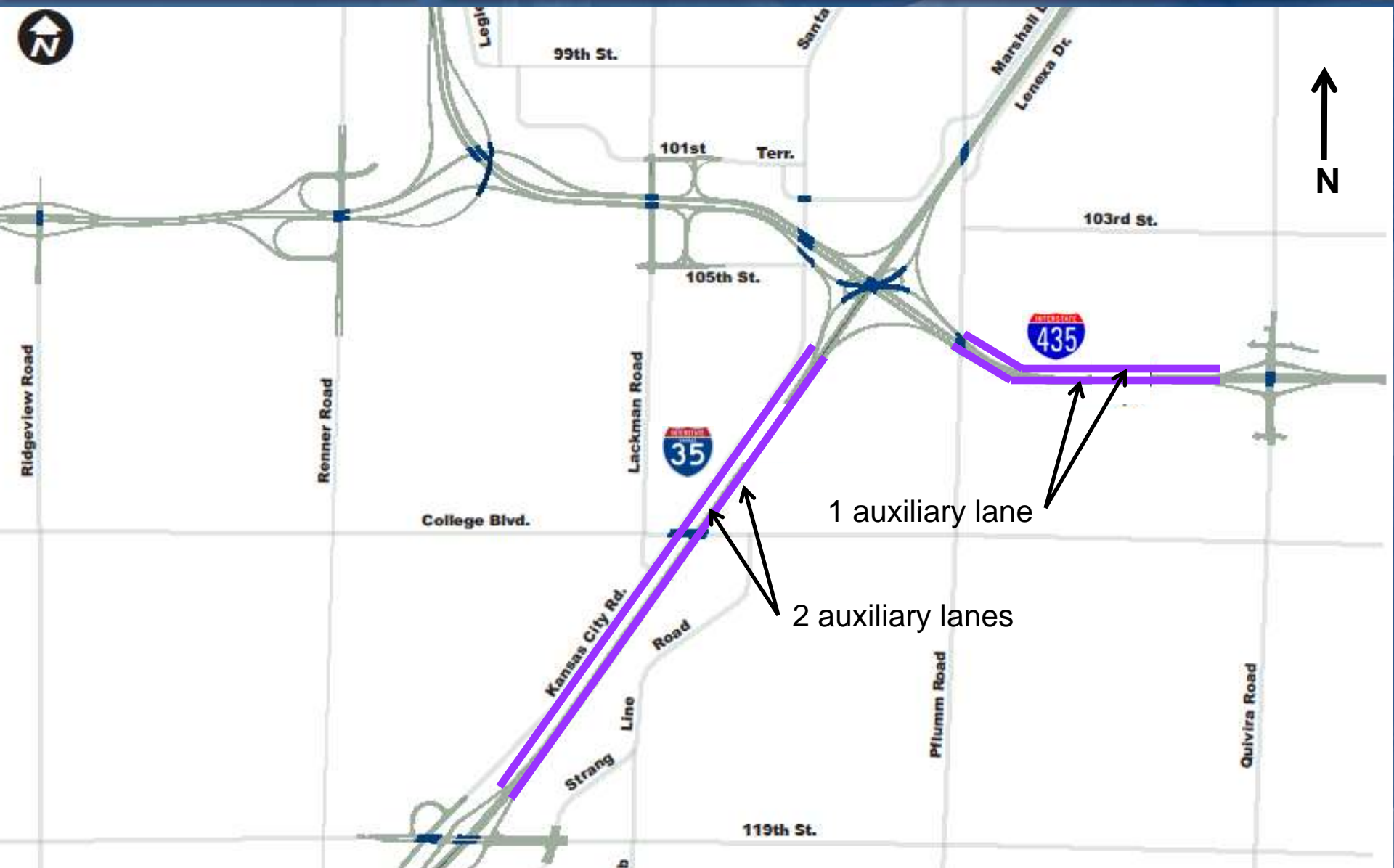
Reserve Capacity Recommendations

- Concept 4A will serve traffic through at least 2055 with the addition of a future fourth lane on I-35 north of I-435
- Continue to identify improvements beyond 2040 and preserve the ROW today.

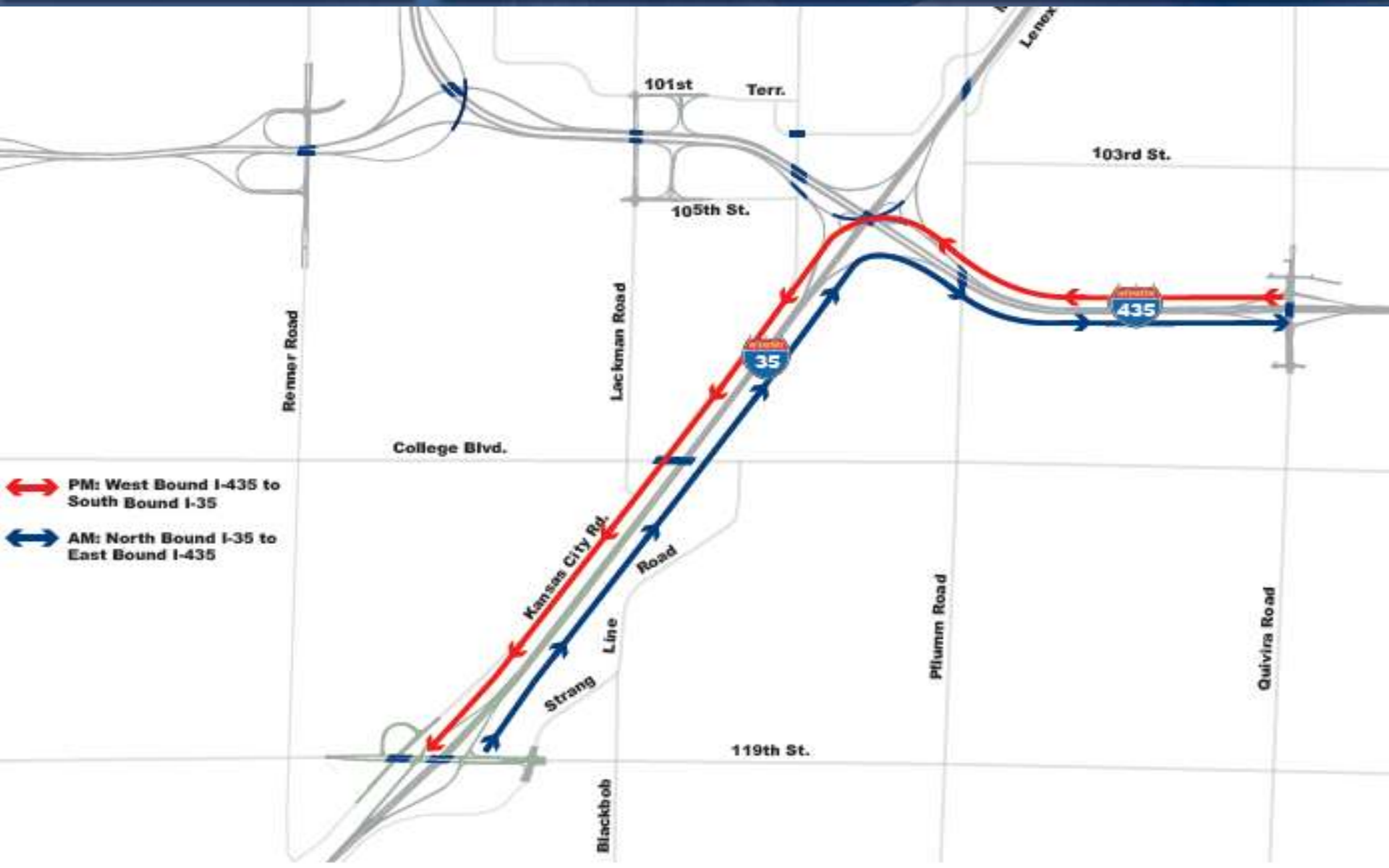
Preliminary Phasing Plan



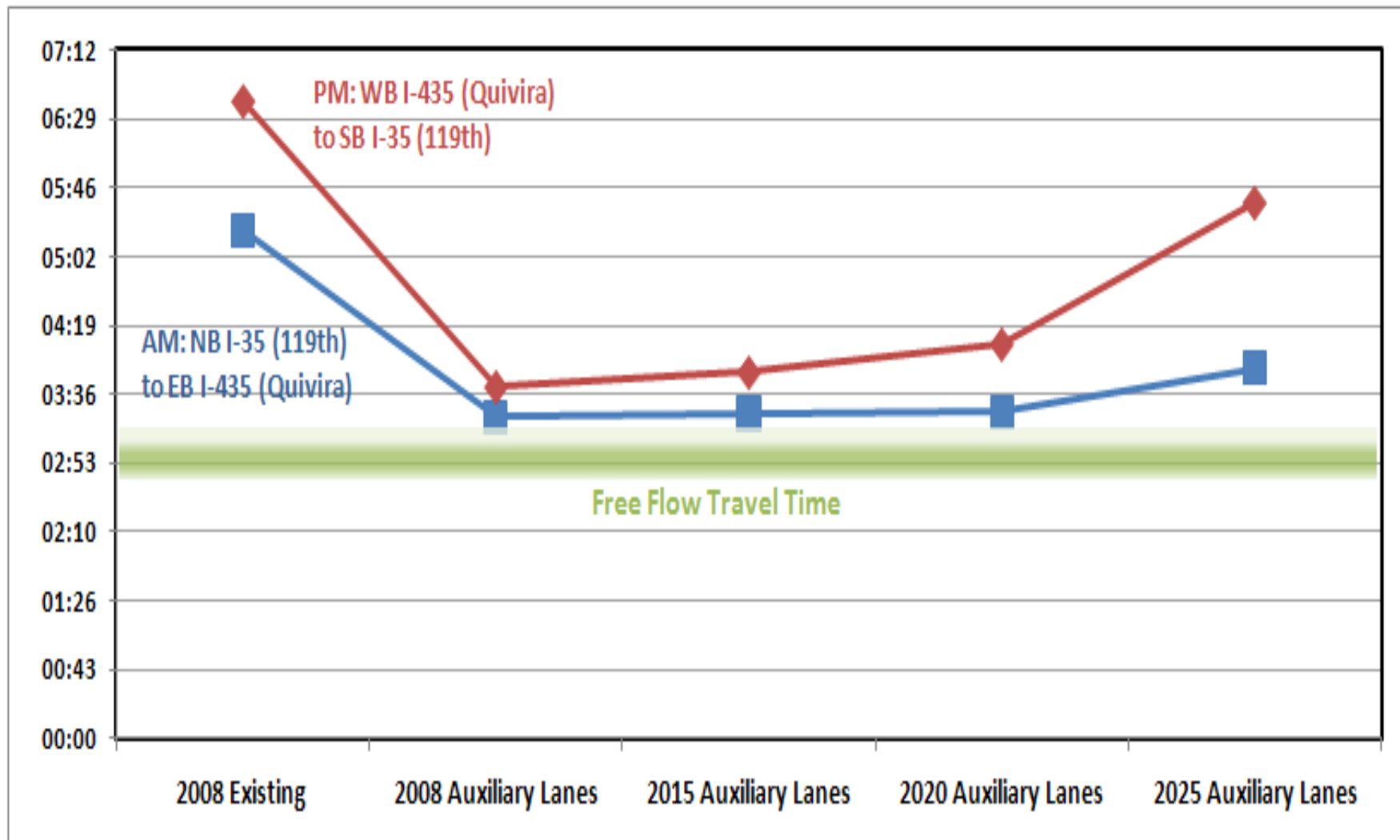
Interim Improvement Project



Interim Improvement Project



Interim Improvement Project



Next Steps

Johnson County Gateway Study Schedule

