

Bridging the Gap between Problems and Solutions: KYOVA's Regional Planning Process

2040 Metropolitan Transportation Plan and Downtown Huntington Access Study



Presented to:



Presented by:



Kimley-Horn and Associates, Inc.

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WHY ARE WE HERE?



Need for Multimodal Planning

- ❑ Growth in certain economic sectors have the potential to significantly impact the region
 - ❑ Intermodal terminal development
 - ❑ Airport improvements
 - ❑ Healthcare/education sector enhancements
- ❑ Transportation mobility is at the heart of the KYOVA region's past and future success



Metropolitan Transportation Plan Update

- ❑ Funding constraints
- ❑ Regional focus
- ❑ Transportation, land use, and demographic analysis
- ❑ GIS system development
- ❑ Modal analysis
 - ❑ Freight (truck, rail, water)
 - ❑ Transit
 - ❑ Bicycle
 - ❑ Pedestrian
 - ❑ Aviation
 - ❑ Roadway



Travel Demand Model

- ❑ Conversion to new model platform
- ❑ Outdated travel assumptions
 - ❑ 1980 travel surveys
- ❑ Census 2010 – new socioeconomic data available



Downtown Huntington Needs

- ❑ Improvements already underway
 - ❑ Signal timing
 - ❑ Streetscaping
 - ❑ Employment growth
- ❑ Desire for cohesive downtown vision
- ❑ Unique transportation needs not fully captured in the MTP



Air Quality

- ❑ New ozone and PM2.5 standards
 - ❑ 2008 8-hour ozone standard
 - ❑ Reassessment of PM2.5 budgets
- ❑ MOVES air quality software



What is a Successful Transportation Plan?

- ❑ **Prioritized** list of projects
- ❑ Anticipates **performance-based planning**
 - ❑ **SAFETEA-LU extension/MAP-21 provisions**
 - ❑ Data requirements/collection
 - ❑ Traffic volume counts
 - ❑ Vehicle class counts
 - ❑ Turning movement counts
 - ❑ Traffic signal data
 - ❑ Reflects **regional and community values**



What is a Successful Transportation Plan?

- ❑ Product of careful **revenue forecast**
 - ❑ Revenue sources
 - ❑ Project costs
 - ❑ Inflation
 - ❑ Forecast – future expectations
- ❑ Product of defensible **transportation analysis**
 - ❑ Land use and transportation
 - ❑ Traffic safety
 - ❑ Capacity analysis
 - ❑ Access management
 - ❑ Short and long-term needs assessment

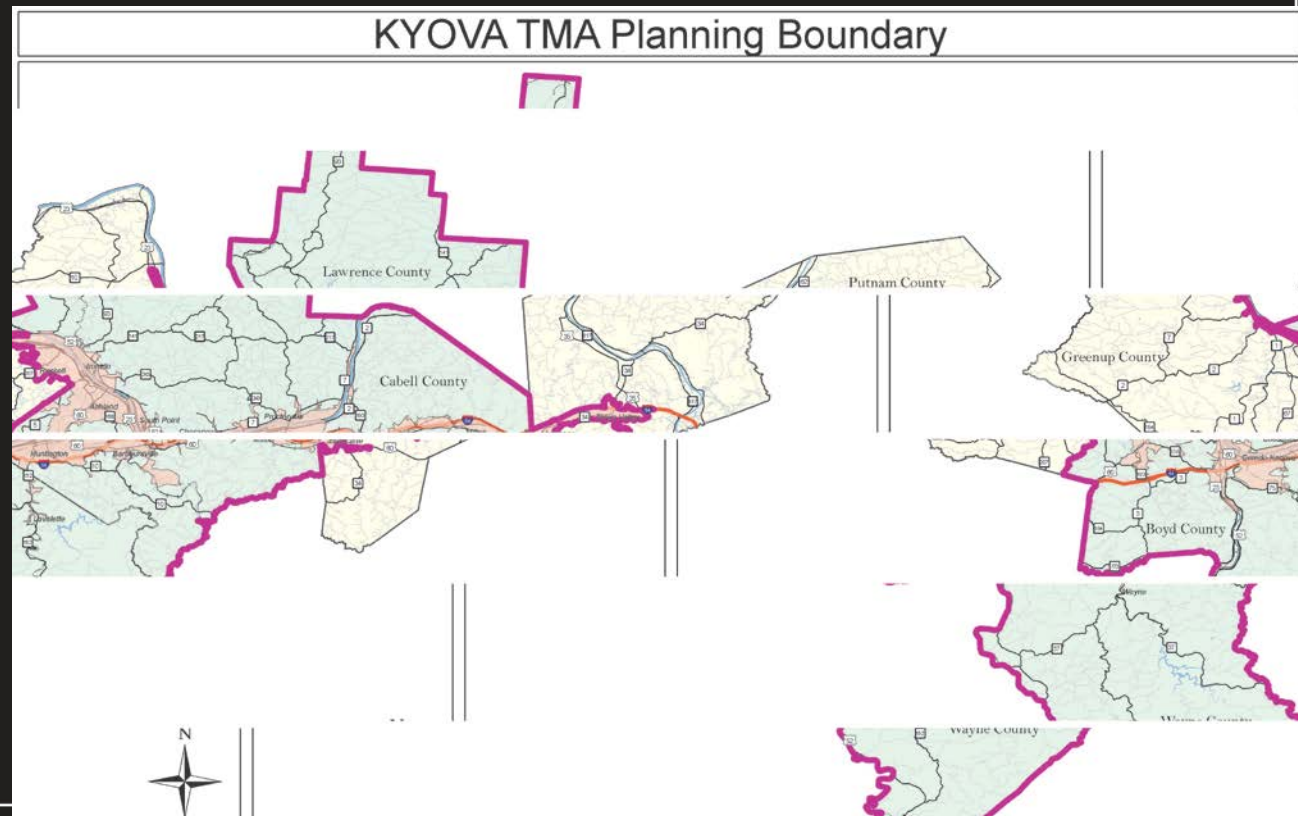


How Will We Get There?

- ❑ Plans and projects
 - ❑ Transportation investments
 - ❑ Local policies
 - ❑ Economic initiatives
 - ❑ Community investments
- ❑ Partners
 - ❑ Local governments
 - ❑ MPO, DOTs
 - ❑ Agencies
 - ❑ Developers

Current Related Transportation Planning Issues!

- ❑ TMA designation – July 6, 2012
- ❑ Congestion Management Plan
- ❑ Changing boundaries
- ❑ Agreements
- ❑ Transit
- ❑ Funding





Performance Measure Assessment

- ❑ Conditions of the nation's roads and bridges
- ❑ Progress toward achieving a significant reduction in traffic fatalities
- ❑ Progress toward achieving traffic congestion reductions and emission reductions
- ❑ National freight movement
- ❑ Need to prioritize investments in the nation's public transit systems
- ❑ Transit safety



The Right Team for KYOVA



Kimley-Horn
and Associates, Inc.





2040 Metropolitan Transportation Plan and Downtown Huntington Access Study

Allison Fluitt

Project Manager, Kimley-Horn and Associates

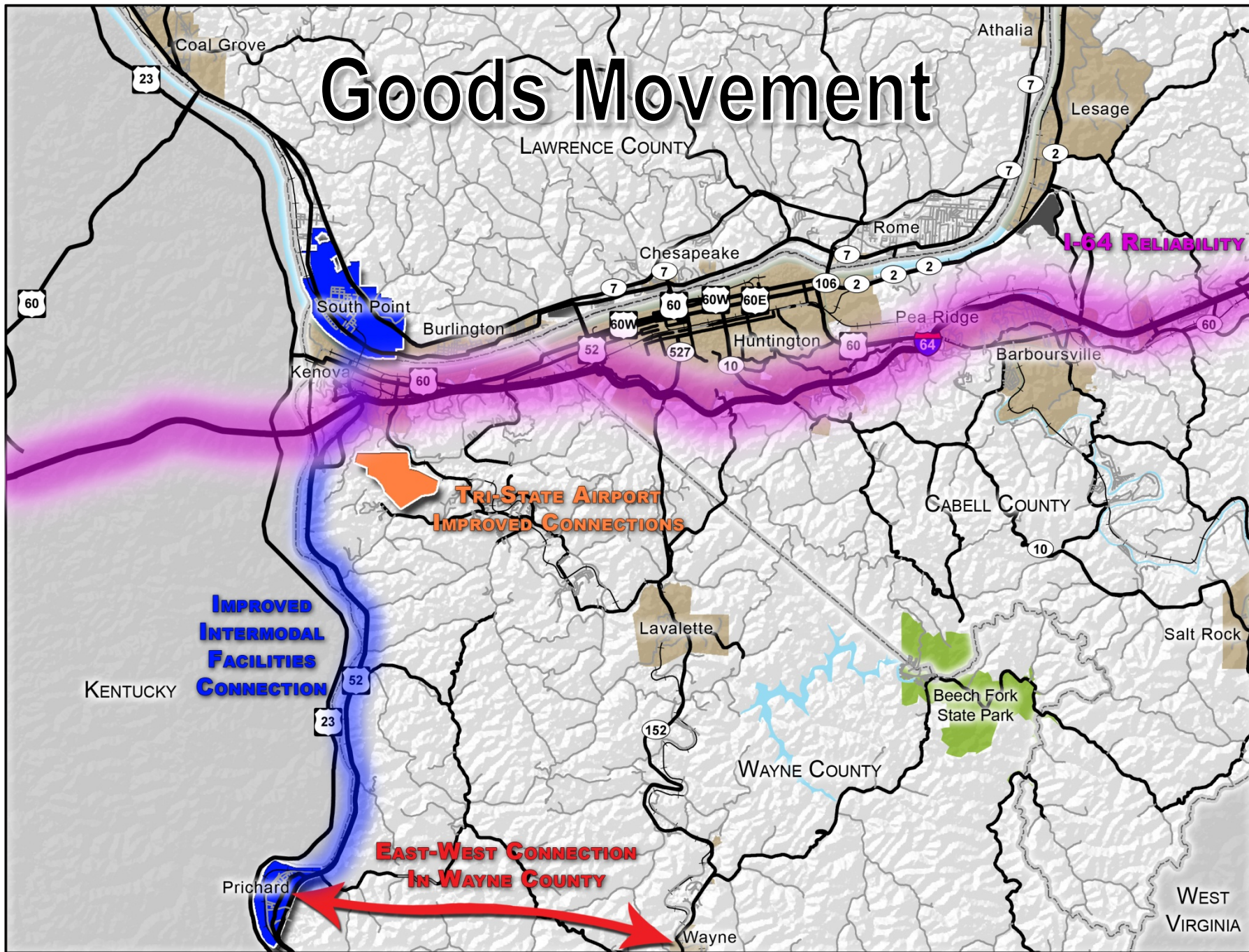
2040 KYOVA MTP



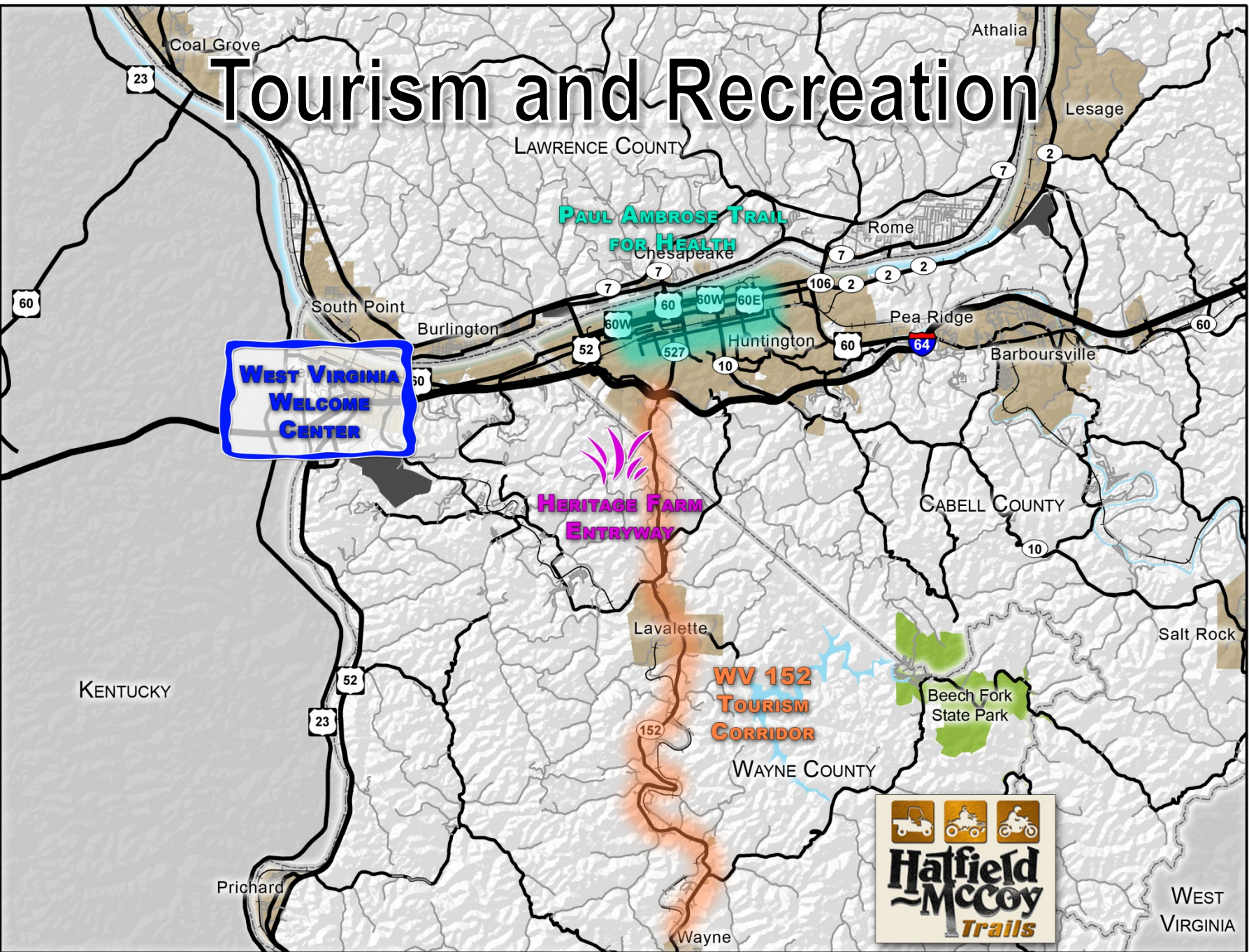
Transportation Strategies for Regional Growth

- ❑ Six major focus areas for transportation priorities
 - ❑ Goods movement
 - ❑ Tourism and recreation
 - ❑ Barriers to mobility
 - ❑ Congestion mitigation
 - ❑ Livability and complete streets
 - ❑ Multimodal integration

Goods Movement



Tourism and Recreation



**WEST VIRGINIA
WELCOME
CENTER**

**PAUL AMBROSE TRAIL
FOR HEALTH**

**HERITAGE FARM
ENTRYWAY**

**WV 152
TOURISM
CORRIDOR**



KENTUCKY

WEST
VIRGINIA

Barriers to Mobility



Wayne

WEST
SINIA

Congestion Mitigation



Wayne

EST
GINIA

Livability and Complete Streets



Wayne

WEST VIRGINIA

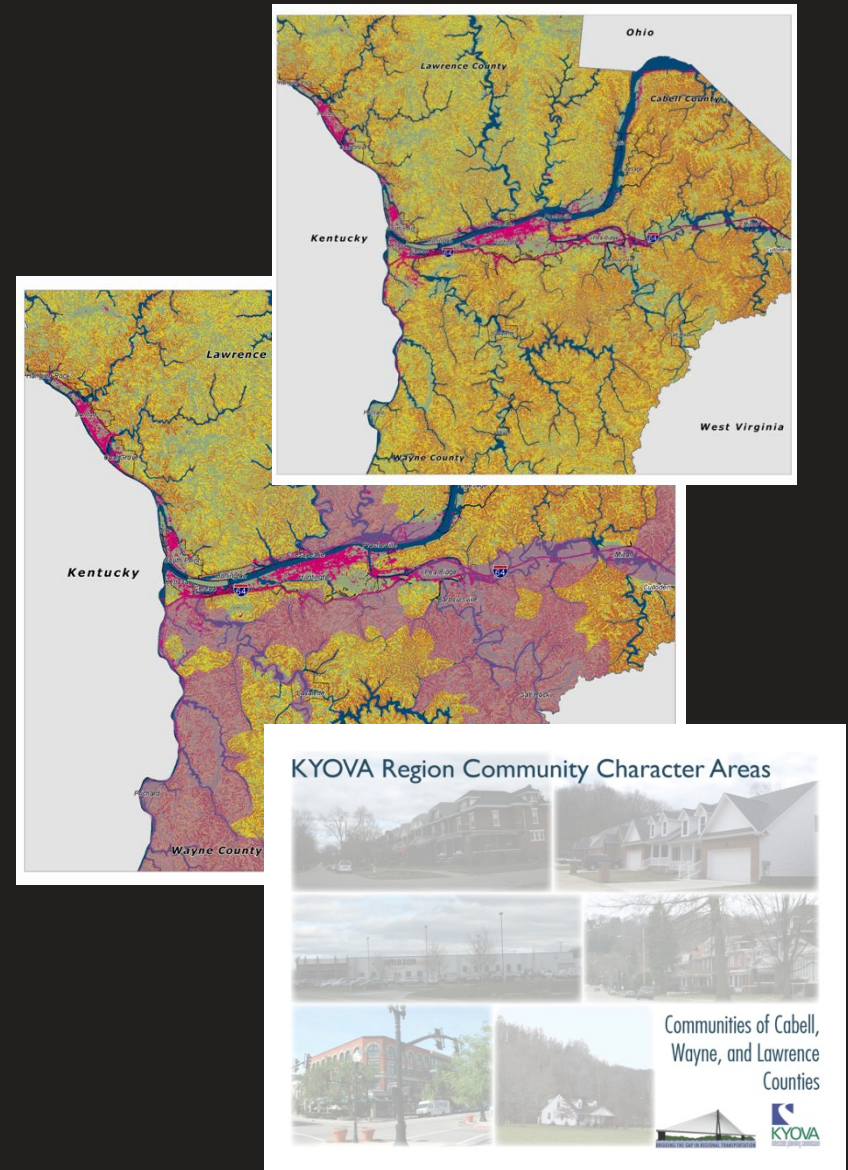
Multimodal Integration

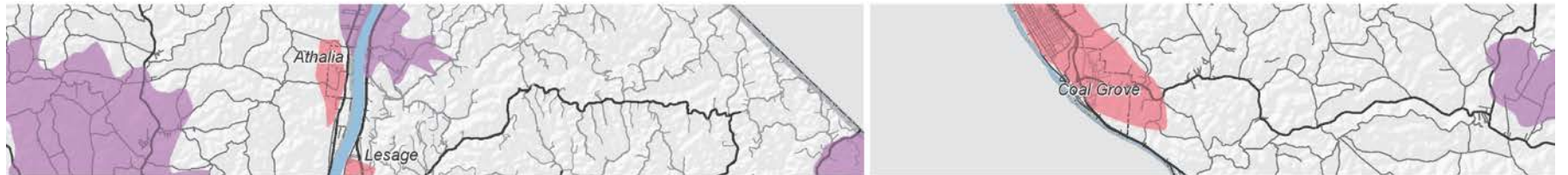


Wayne

Land Use Integration

- Land Suitability
- Potential Growth Areas
- Character Area Typology
- Future Growth Classification
- *Future Year Socioeconomic Conditions*







Recommendations Development

- ❑ There is a need to clearly communicate our recommendations and priorities
- ❑ Solution: project sheets
 - ❑ Used primarily for roadway projects
 - ❑ One page reference tool
 - ❑ Existing conditions
 - ❑ Potential recommendations
 - ❑ Purpose and need
 - ❑ Technical data
 - ❑ Visually appealing and easy to understand

Project Sheets

Safety Improvements, Burlington, OH





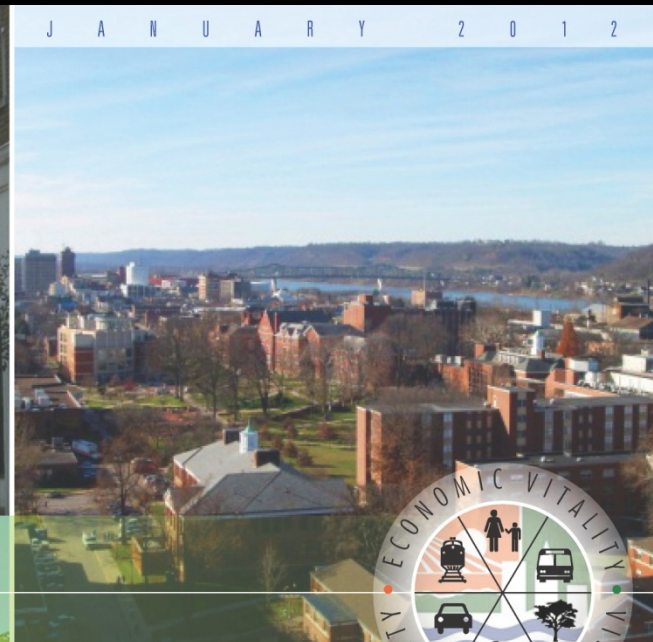
Continuing Efforts

- ❑ Project prioritization
 - ❑ Incorporating state criteria with local needs
 - ❑ Consistency across modal elements
- ❑ MAP-21 criteria
- ❑ Preparing for TMA designation
- ❑ Financial planning and implementation
- ❑ Air quality conformity



Downtown Huntington

WEST VIRGINIA
ACCESS STUDY

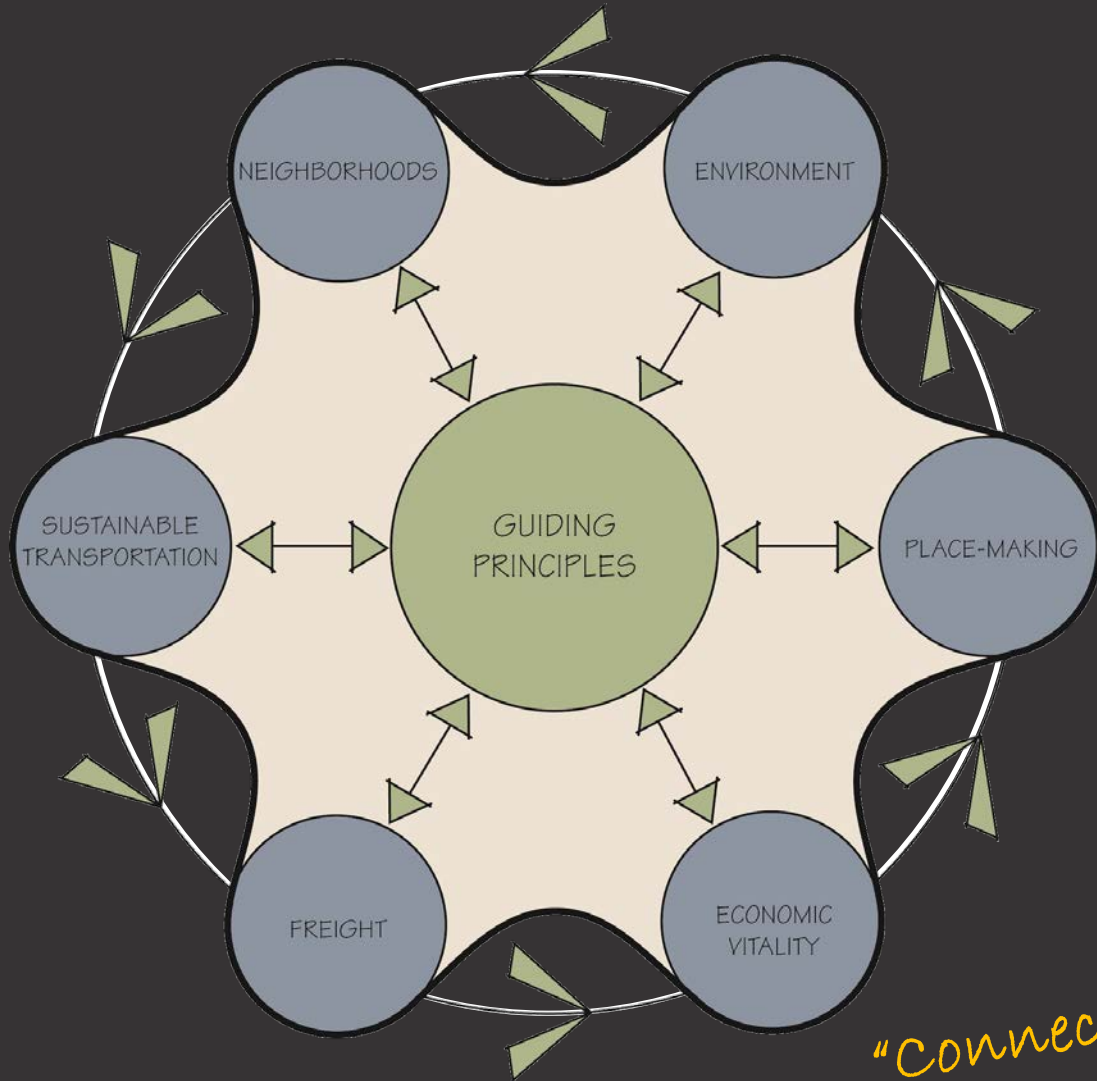


PREPARED BY:
 Kimley-Horn
and Associates, Inc.

IN COORDINATION
WITH:
 KYOVA
West Virginia Planning Commission



Guiding Principles For Downtown Planning



- Three Tiers
 - Community Values
 - Vision Statement
 - Project Objectives
- Influenced by Core Team, Stakeholder and Agency Interviews, Public Input

"Connecting People With Places"

Local Context & Issues

- ❑ **Community Connection**
- ❑ Linkage between Marshall & Downtown
- ❑ Economic vitality & land use initiatives
- ❑ **Access into Downtown**
- ❑ Safety and mobility
- ❑ Modal accommodations
- ❑ **Aesthetics & attractiveness**
- ❑ Human scale development
- ❑ Neighborhood preservation
- ❑ Gateways/ Viaducts



Design Charrette

- ❑ Core Team
- ❑ Walking Tour
- ❑ **Open & Transparent Process**
- ❑ Project Website
- ❑ Stakeholder Interviews
- ❑ Interactive Work Sessions
- ❑ **Group Sessions – “Topics”**
- ❑ *Outcome:* Informed consent



Charrette - The Big Idea

1

Discovery Phase



2

Generate Ideas

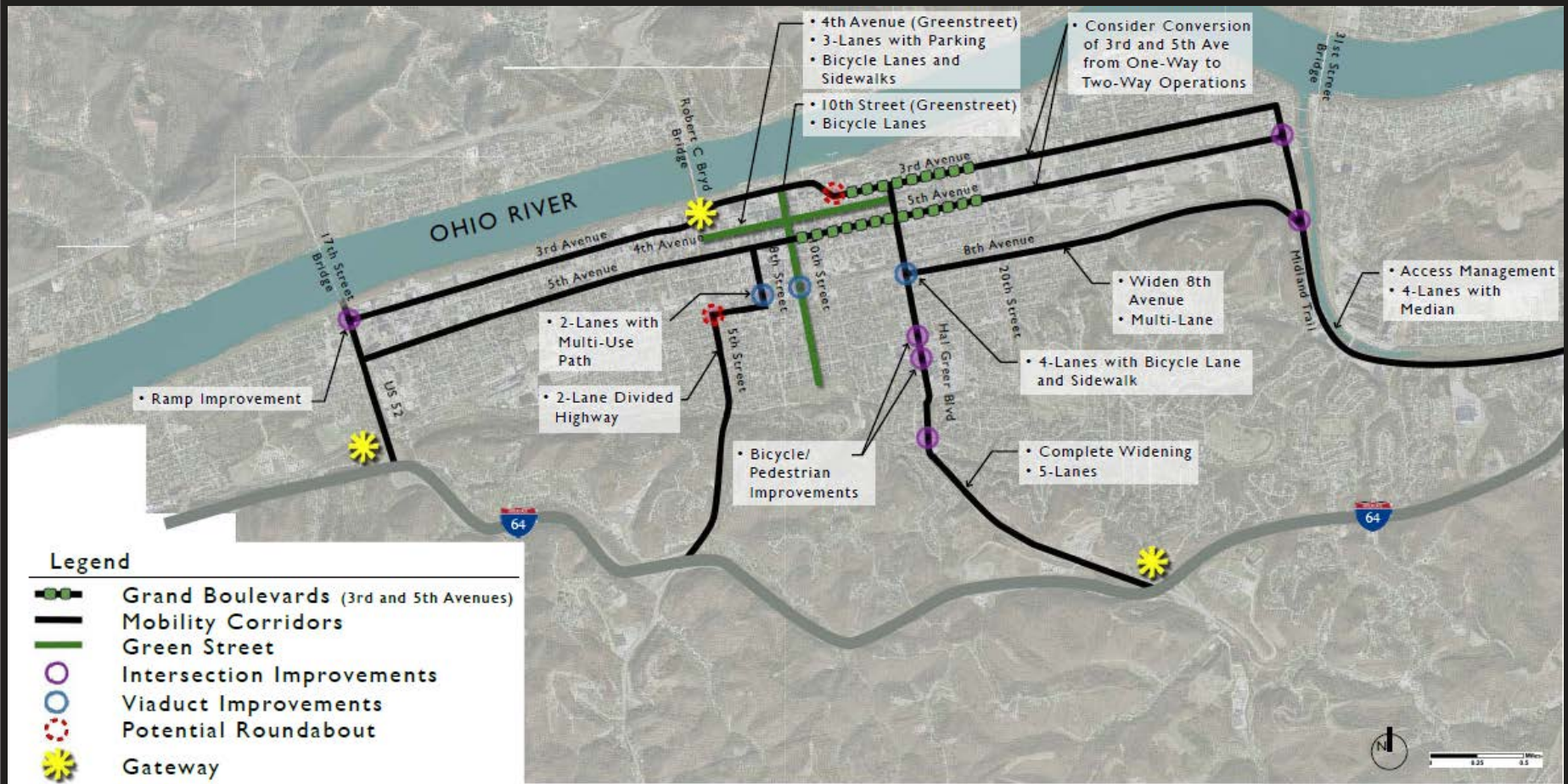


3

Position for Success

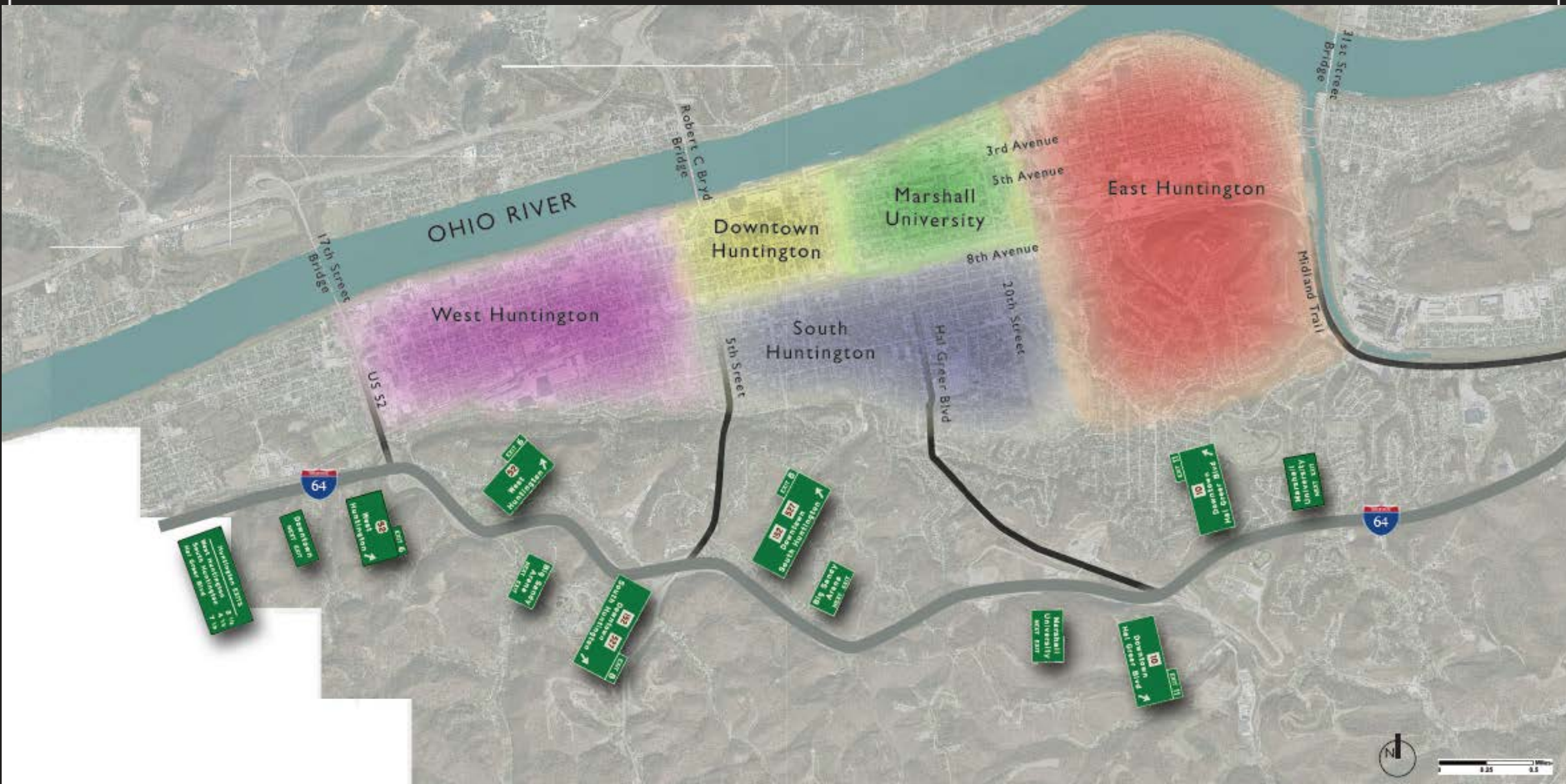


Preferred Access Plan

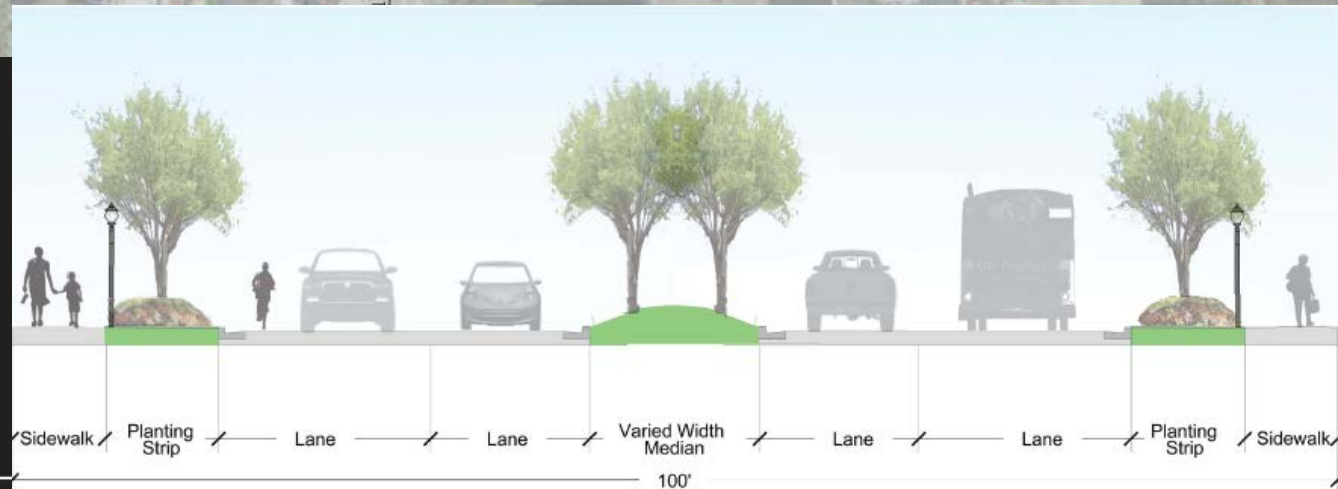
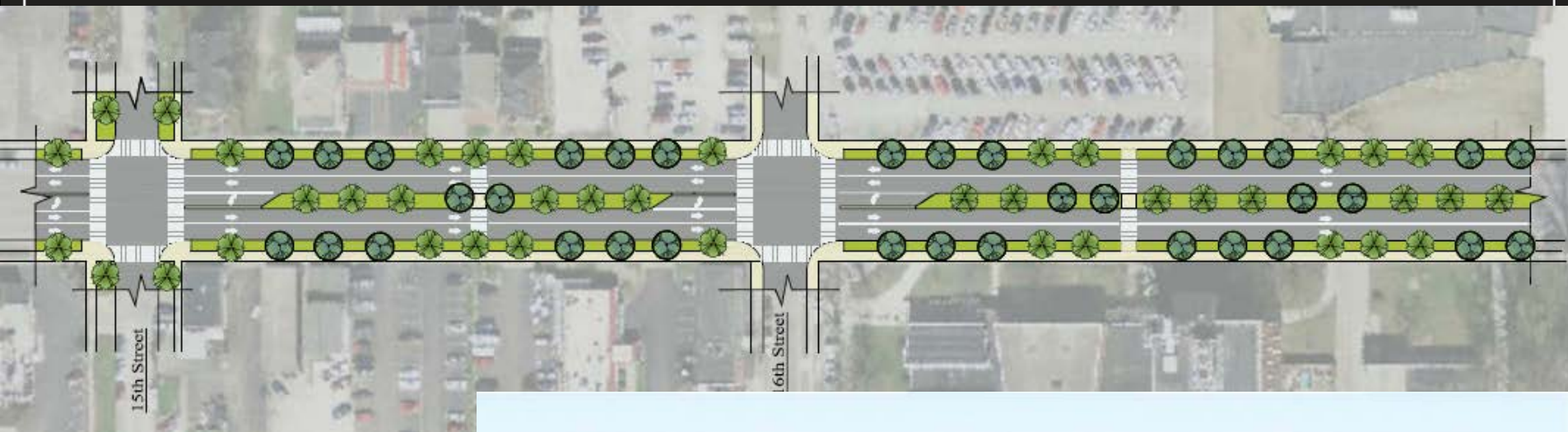




Wayfinding



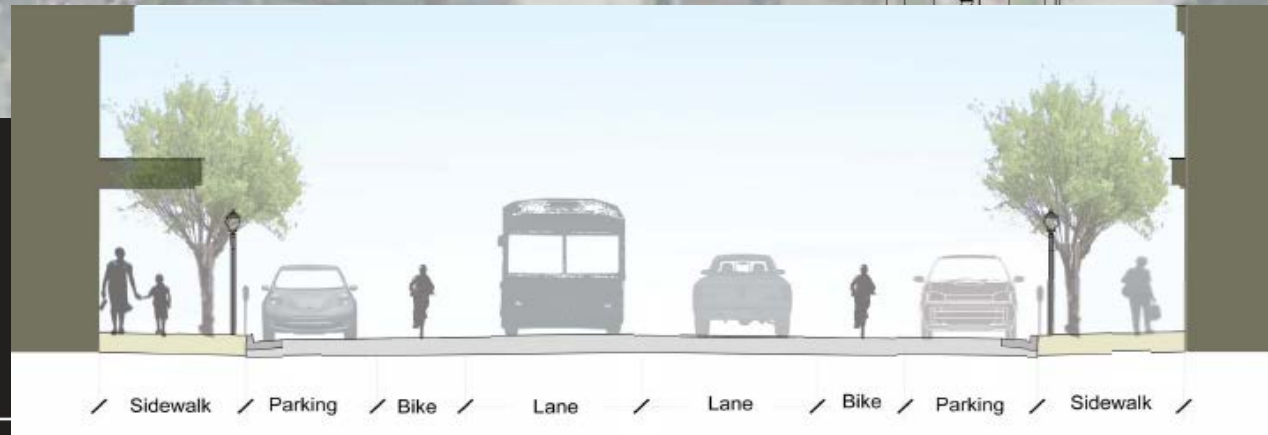
3rd Avenue Transformation... *Grand Boulevard*



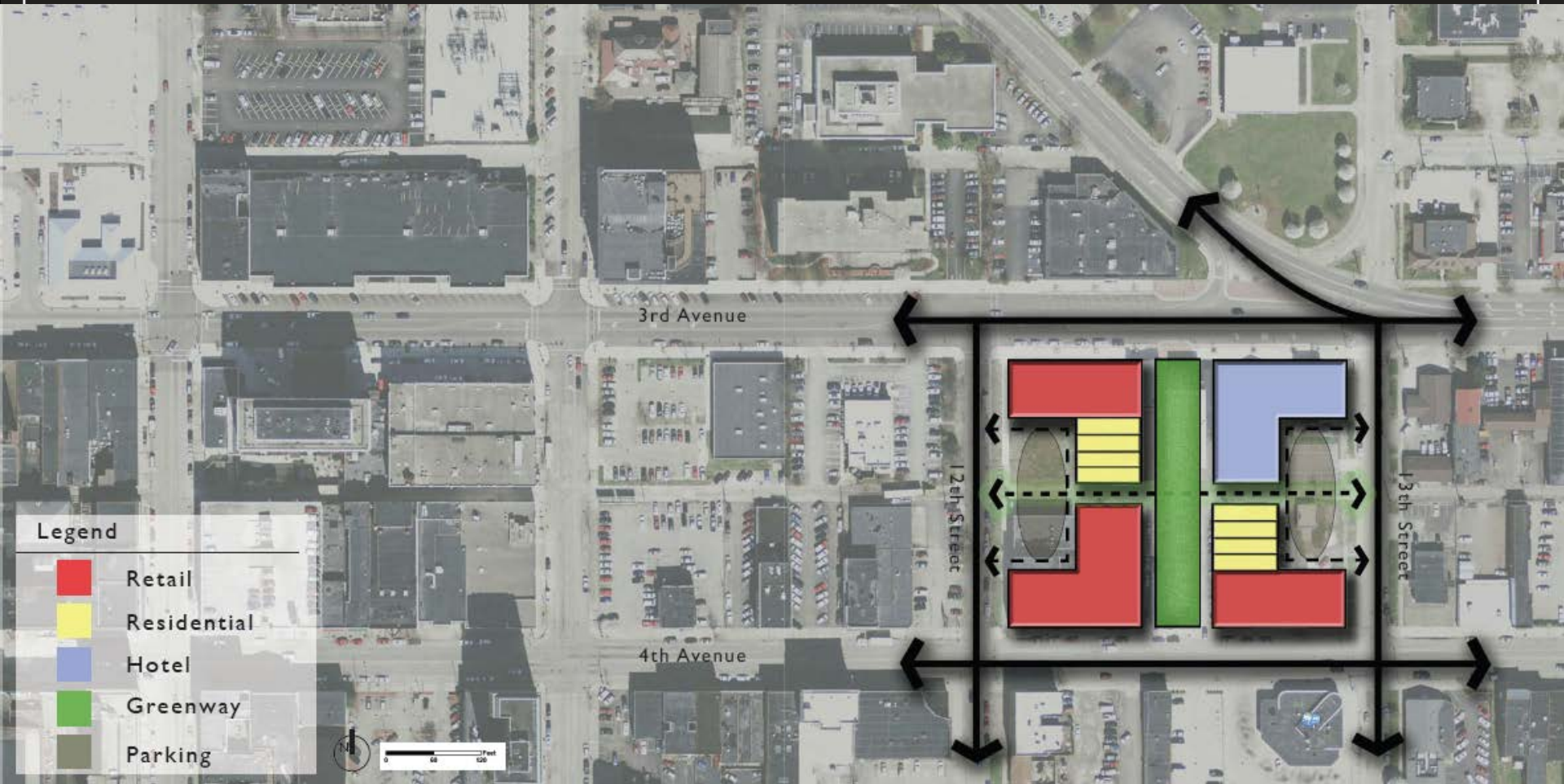
3rd Avenue Transformation... *Grand Boulevard*



4th Avenue Transformation... *Green Street*

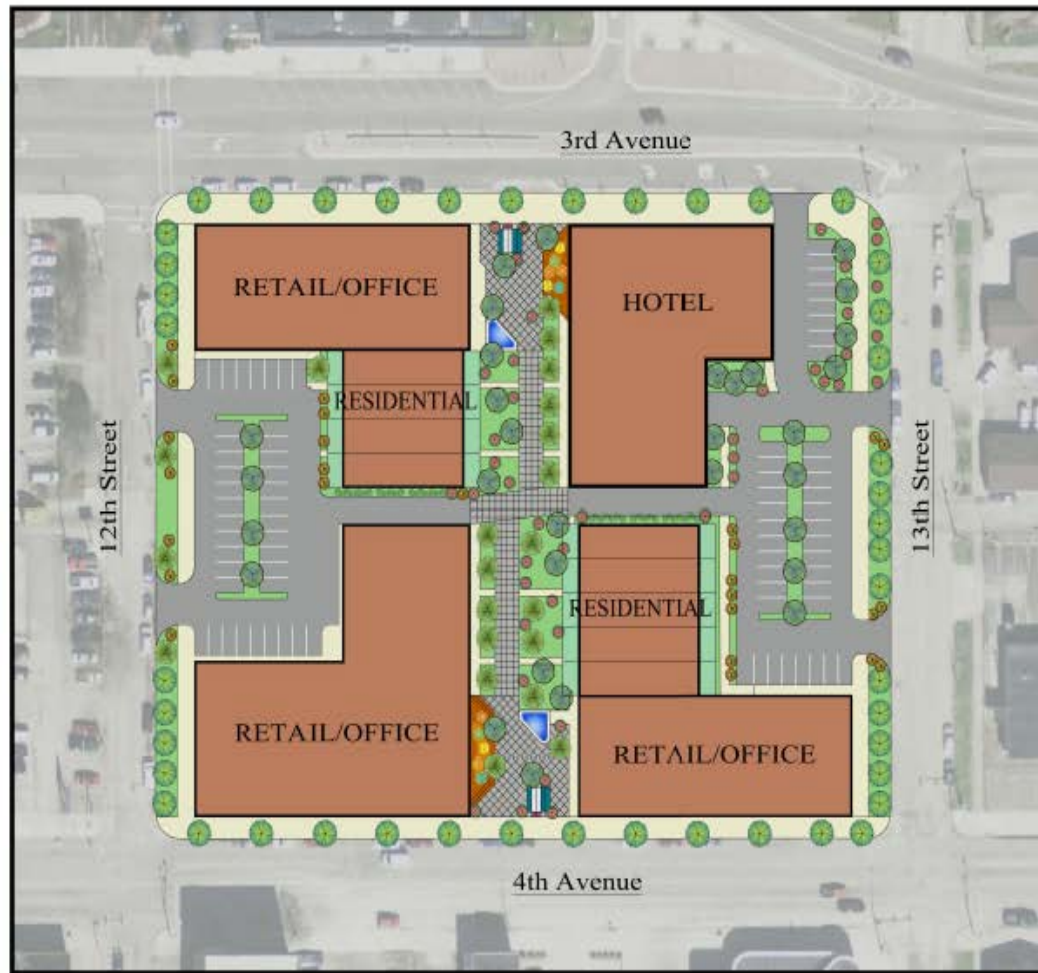


3rd Avenue Infill Development



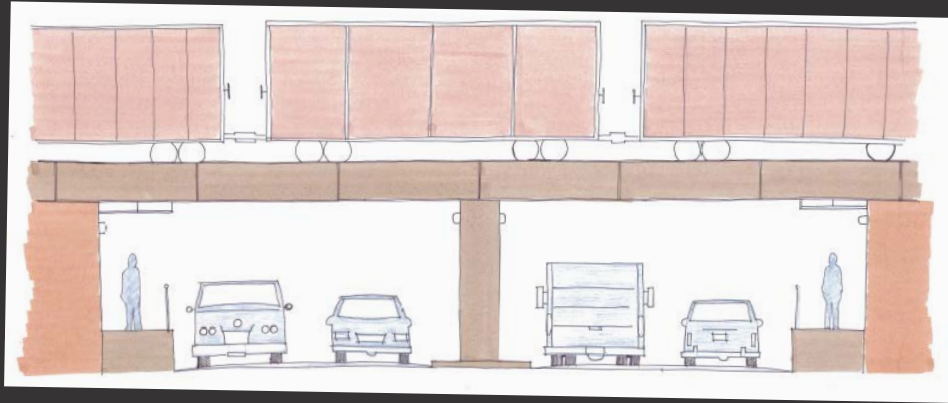


3rd Avenue Infill Development



Viaducts

Hal Greer Boulevard

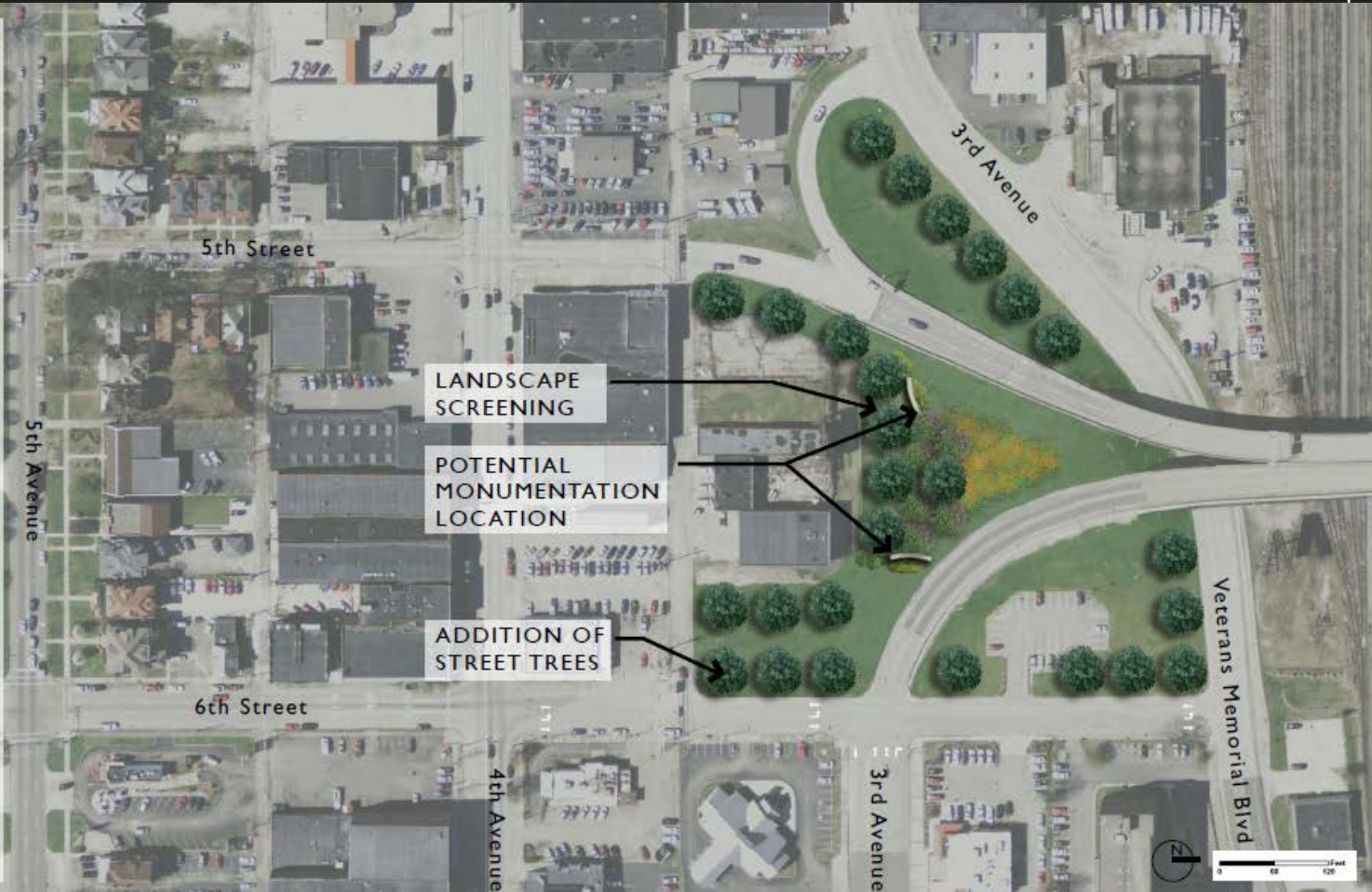


10th Street



Robert C Byrd Bridge Gateway

PRECEDENT MONUMENTATION IMAGES





Where do we go from here?

- ❑ Infuse recommendations into MTP
- ❑ Follow up on priority action items

Planning Initiatives – Transportation Mobility (See Chapter 4 for Project Details)

| | Cost Estimate (thousands) ^A | Responsible Party |
|---|---|-------------------------------------|
| 3 rd Avenue and 5 th Avenue – One-way to two-way street conversion ** | \$3,000 to \$5,000 [^] | WVDOH/ KYOVA/ City of Huntington |
| 3 rd Avenue and 5 th Avenue – Following two-way conversion, adapt corridors into Grand Boulevards** | \$5,000 to \$7,000 [^] | City of Huntington/ KYOVA/ WVDOH |
| 3 rd Avenue at Veterans Memorial Boulevard roundabout** | \$1,000 | City of Huntington/ KYOVA/ WVDOH |
| Hal Greer Boulevard – Replace viaduct with new bridge** | \$11,000 | WVDOH/ KYOVA/ City of Huntington |
| Hal Greer Boulevard – Construct pump station and separate stormwater retention facility | \$4,000 | City of Huntington/ WVDOH |
| Hal Greer Boulevard – Implement pedestrian improvements at Washington Boulevard, Charleston Avenue, and 13 th Avenue intersections | \$150 [^] | City of Huntington/ KYOVA |
| US 60/Midland Trail – Construct access management features between I-64 and Roby Road** | \$1,200 | KYOVA/ WVDOH/ City of Huntington |
| US 60/Midland Trail – Construct access management features between Roby Road and 3 rd Avenue** | \$500 | KYOVA/ WVDOH/ City of Huntington |
| US 60/Midland Trail – Construct merge lane at Midland Trail and 31 st Street | \$50 | WVDOH/ KYOVA/ City of Huntington |
| US 60/Midland Trail – Implement laneage and signal improvements at US 60 and 5 th Avenue | \$50 | City of Huntington/ KYOVA/ WVDOH |



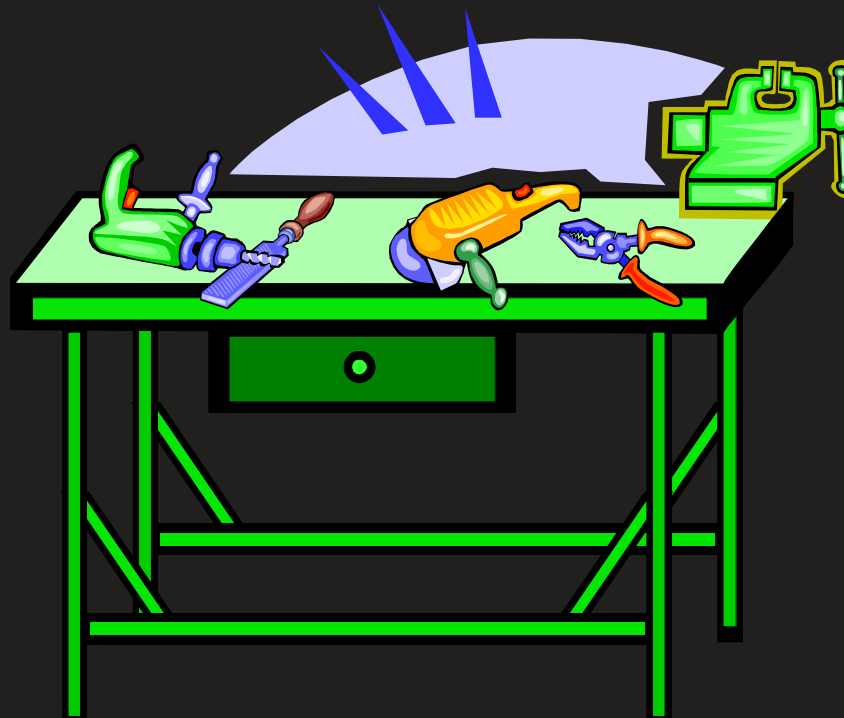
Tim Padgett

Technical Team Manager, Kimley-Horn and Associates

TRAVEL DEMAND MODEL

A Brief Aside...

- ❑ Let's do some work around our house!
- ❑ We'll need a solid workbench for all our projects



First Question – What Kind of Workbench?



Basic



Advanced

Second Question – How Will We Build It?

Prefabricated Kit



Stick-Built





What Does This Have to Do with Modeling??

- ❑ Moving from QRSII to TransCAD
- ❑ Innovative approaches to trip generation
- ❑ Blending with surrounding regions
- ❑ Model outcome and new features
- ❑ Model application

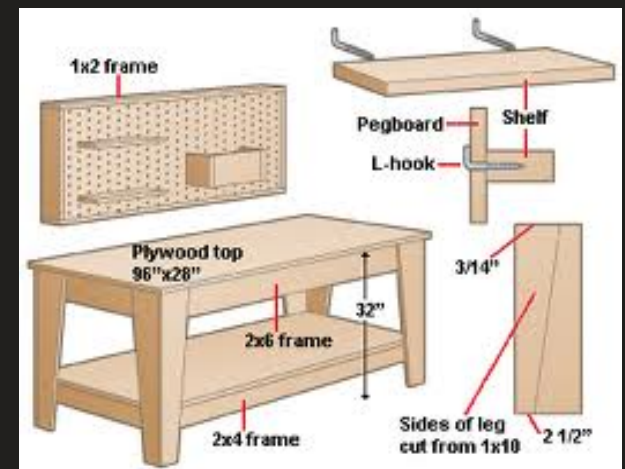
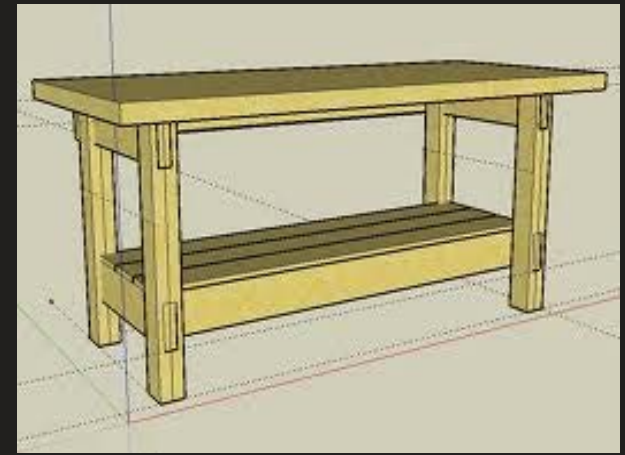


Moving from QRSII to TransCAD

- ❑ Previous “workbench” was old and outdated
 - ❑ QRSII model based on 30-year-old data
 - ❑ WV moving to TransCAD platform
- ❑ Caliper performed model conversion
 - ❑ Node vs. link-based modeling
 - ❑ GUI, practical ease of use
- ❑ Our job was to upfit converted model with new data and features

Innovative Approaches to Trip Generation

- ❑ Background: old data used in previous model, area did not have funds to collect new data
- ❑ Examine transferability of trip generation rates from other areas
- ❑ No replacement for recent representative travel survey – BUT – we can get close without breaking the bank

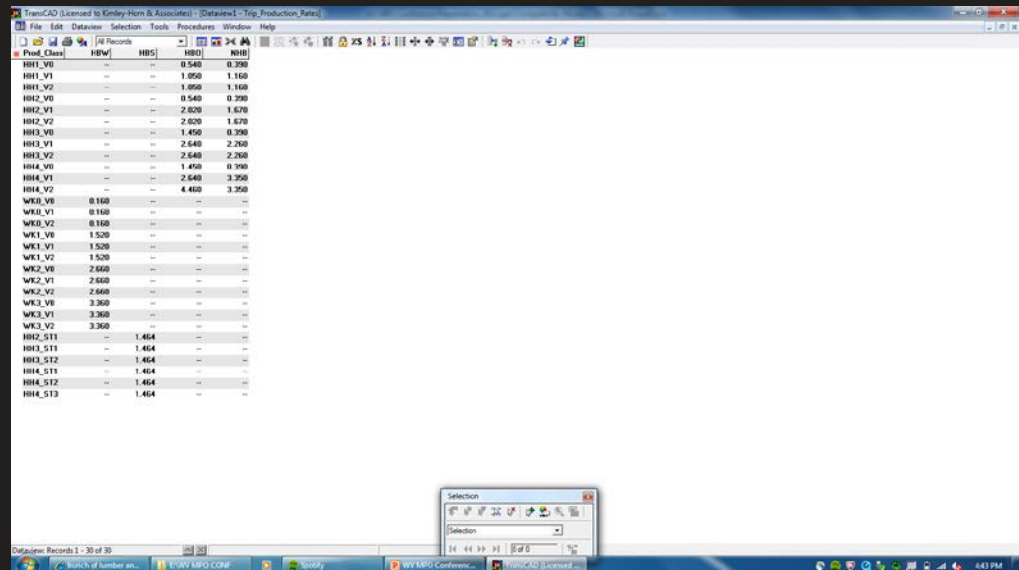


Trip Rate Comparison

- ❑ Used national sample set and identified areas with similar demographic characteristics
- ❑ Even if demographics matched, had to go beyond that to trip making characteristics
- ❑ We also built upon data from recent travel demand models and surveys in the Carolinas
- ❑ Don't forget trip rates for surrounding models – RIC, Ashland, and old KYOVA model

Trip Generation Results

- Variation in trip rates between locations, even with similar demographic or geographic characteristics
- Our end product was compilation of trip rates from different sources



TransCAD (Licensed to Kimberly-Horn & Associates) - [Database1 - Trip_Production_Rates]

| at Prod Class | HWS | HBS | 1800 | 4000 |
|---------------|-------|-------|-------|-------|
| HH1_V0 | -- | -- | 0.540 | 0.390 |
| HH1_V1 | -- | -- | 1.050 | 1.160 |
| HH1_V2 | -- | -- | 1.050 | 1.160 |
| HH2_V0 | -- | -- | 0.540 | 0.390 |
| HH2_V1 | -- | -- | 2.020 | 1.670 |
| HH2_V2 | -- | -- | 2.020 | 1.670 |
| HH3_V0 | -- | -- | 1.450 | 0.790 |
| HH3_V1 | -- | -- | 2.640 | 2.260 |
| HH3_V2 | -- | -- | 2.640 | 2.260 |
| HH4_V0 | -- | -- | 1.450 | 0.790 |
| HH4_V1 | -- | -- | 2.640 | 3.350 |
| HH4_V2 | -- | -- | 4.400 | 3.350 |
| WK0_V0 | 0.160 | -- | -- | -- |
| WK0_V1 | 0.160 | -- | -- | -- |
| WK0_V2 | 0.160 | -- | -- | -- |
| WK1_V0 | 1.520 | -- | -- | -- |
| WK1_V1 | 1.520 | -- | -- | -- |
| WK1_V2 | 1.520 | -- | -- | -- |
| WK2_V0 | 2.660 | -- | -- | -- |
| WK2_V1 | 2.660 | -- | -- | -- |
| WK2_V2 | 2.660 | -- | -- | -- |
| WK3_V0 | 3.360 | -- | -- | -- |
| WK3_V1 | 3.360 | -- | -- | -- |
| WK3_V2 | 3.360 | -- | -- | -- |
| HH2_ST1 | -- | 1.464 | -- | -- |
| HH3_ST1 | -- | 1.464 | -- | -- |
| HH3_ST2 | -- | 1.464 | -- | -- |
| HH4_ST1 | -- | 1.464 | -- | -- |
| HH4_ST2 | -- | 1.464 | -- | -- |
| HH4_ST3 | -- | 1.464 | -- | -- |

Selection

Selection

Database Records: 1 - 30 of 38

6:43 PM

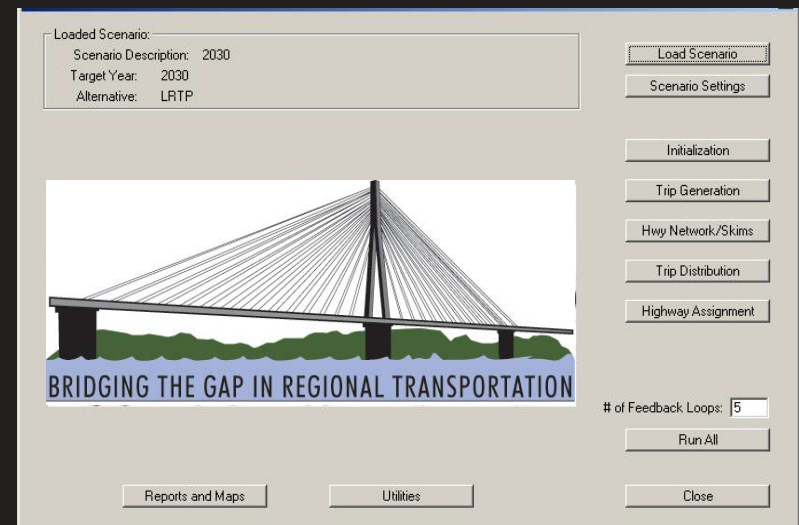
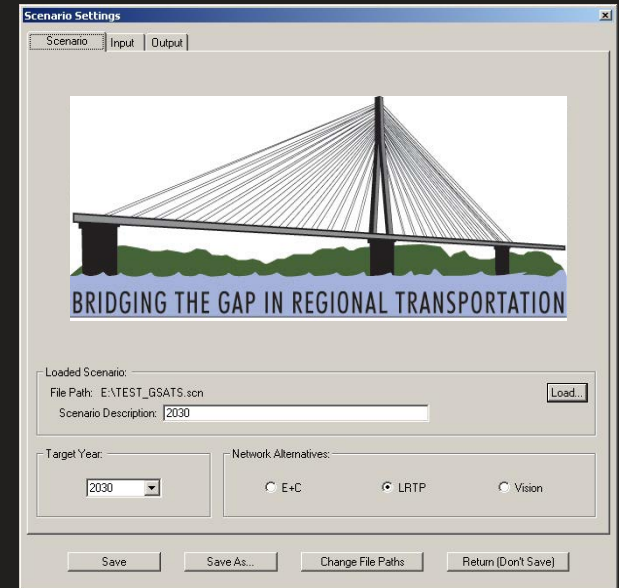


Blending with Surrounding Regions

- ❑ KYOVA, RIC, and Ashland function as a large region in many of their trip-making characteristics
 - ❑ Geographic boundaries blur between the areas
 - ❑ Experiencing growth that actually makes them more connected, interrelated
- ❑ Conclusion: we may be moving toward an overall regional model
- ❑ Aligning the KYOVA, RIC, and Ashland models now will reduce work later

Here's our Workbench!

- Easy to operate
- Functional for KYOVA's needs
 - MTP project evaluation
 - Air quality
 - Future uses (corridor studies, etc.)
- New features
 - Interface
 - Time of day





Project Webpages

- ❑ 2040 Metropolitan Transportation Plan
www.wvs.state.wv.us/kyova/2040MTP
- ❑ Downtown Huntington Access Study
www.wvs.state.wv.us/kyova/HuntingtonDT
- ❑ 2040 MTP Project Questionnaire
www.surveymonkey.com/s/2040MTP