What, Why, and How

KYTC Planning Symposium

Stephen De Witte, P.E.

Frankfort, Kentucky | May 6, 2025

TEAM KENTUCKY®
TRANSPORTATION CABINET

Vision

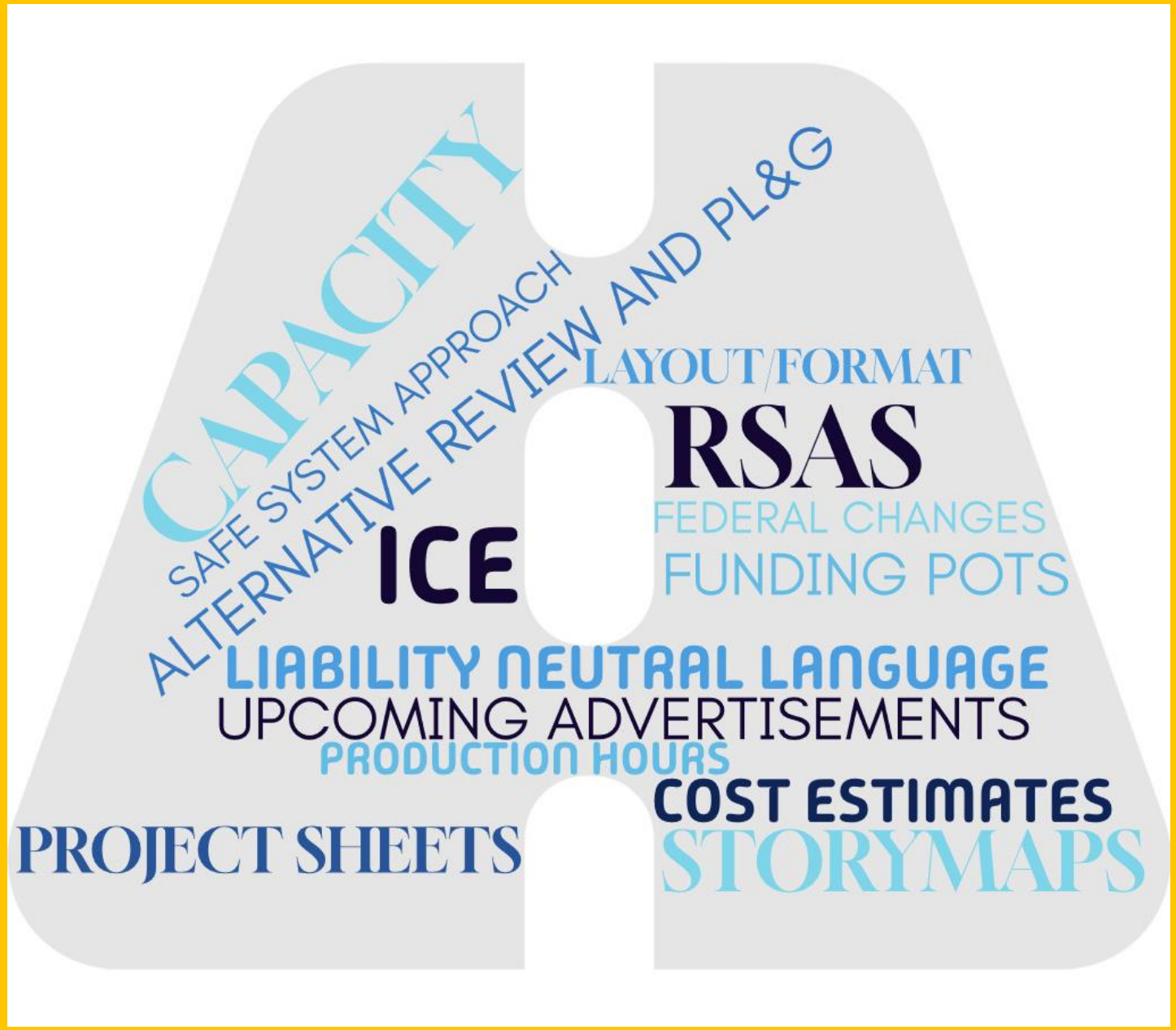
Striving to be national leaders in transportation who provide transportation infrastructure and services for the 21st century that deliver new economic opportunities for all Kentuckians.

Mission

To provide a safe, efficient, environmentally sound and fiscally responsible transportation system that delivers economic opportunity and enhances the quality of life in Kentucky.

Agenda

- Opening Remarks
- Division of Planning Overview
- What, Why, and How
  - Break at 10:15
- Staff Q&A



Opening Remarks

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Strategic Highway Safety Plan

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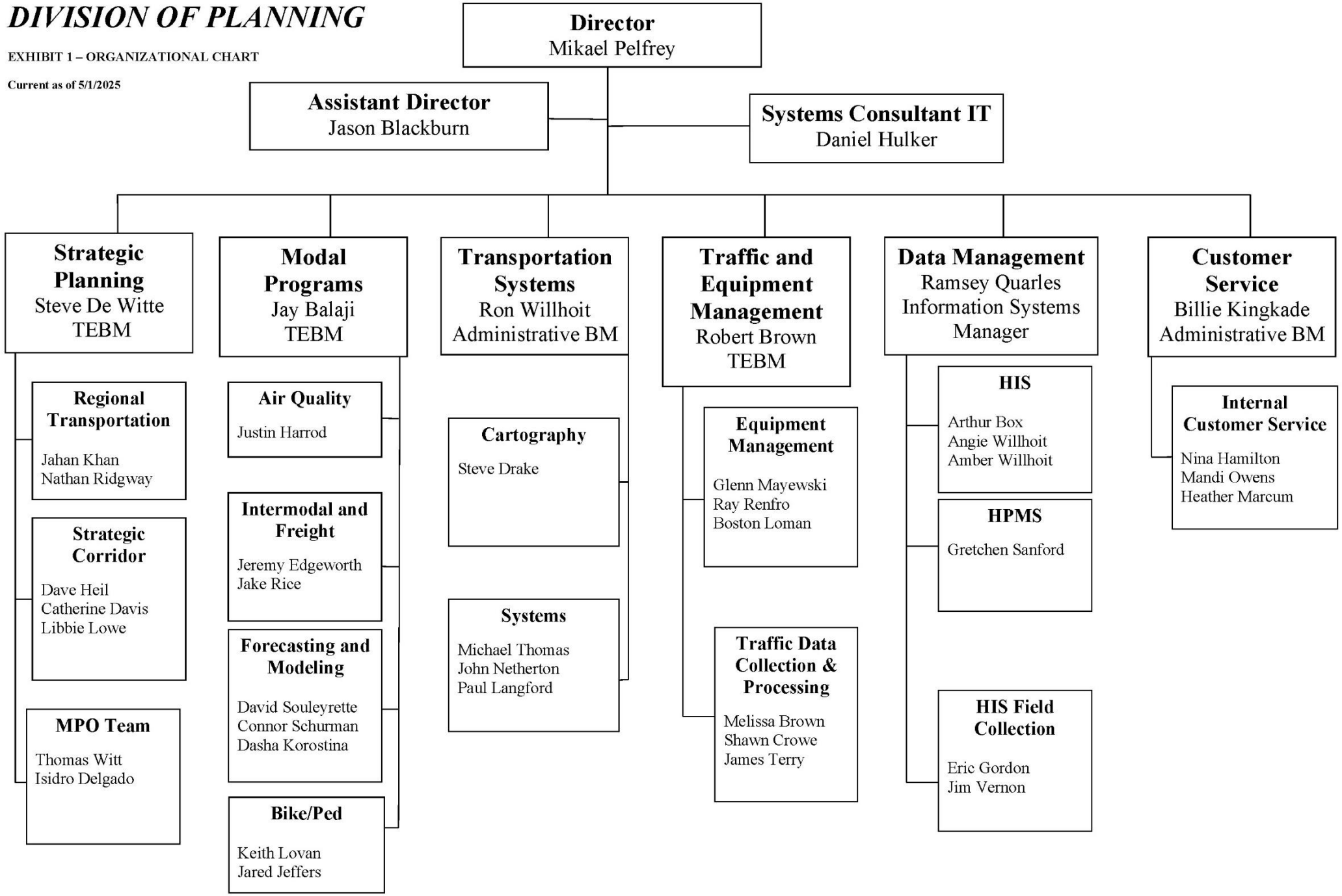
Division of Planning Overview

DIVISION OF PLANNING

EXHIBIT 1 – ORGANIZATIONAL CHART

Current as of 5/1/2025



Planning Study Liaisons

- Catherine Davis: D1, D6, D9, D11
- Dave Heil: D4, D5, D8, D12
- Libbie Lowe: D2, D3, D10
- Steve De Witte: D7

- Always looking to grow!

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Work Program

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
DIVISION OF PLANNING

KENTUCKY TRANSPORTATION CABINET

FY 2025 STATEWIDE PLANNING AND RESEARCH
(SPR) WORK PROGRAM - SUBPART A
SP 0020 (042)

JUNE 16, 2024, THROUGH JUNE 15, 2025

PART I
PLANNING

PREPARED IN COOPERATION
WITH
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

1

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1

WHY?

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FY 2024 Accomplishments Report

- 16 completed studies, totaling approx. $4.65 million

- 26 ongoing studies, totaling approx. $7.55 million

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Planning Study Resource Page

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Roadway Safety Assessments & Safe System Approach

WHAT IS THE SAFE SYSTEM APPROACH?

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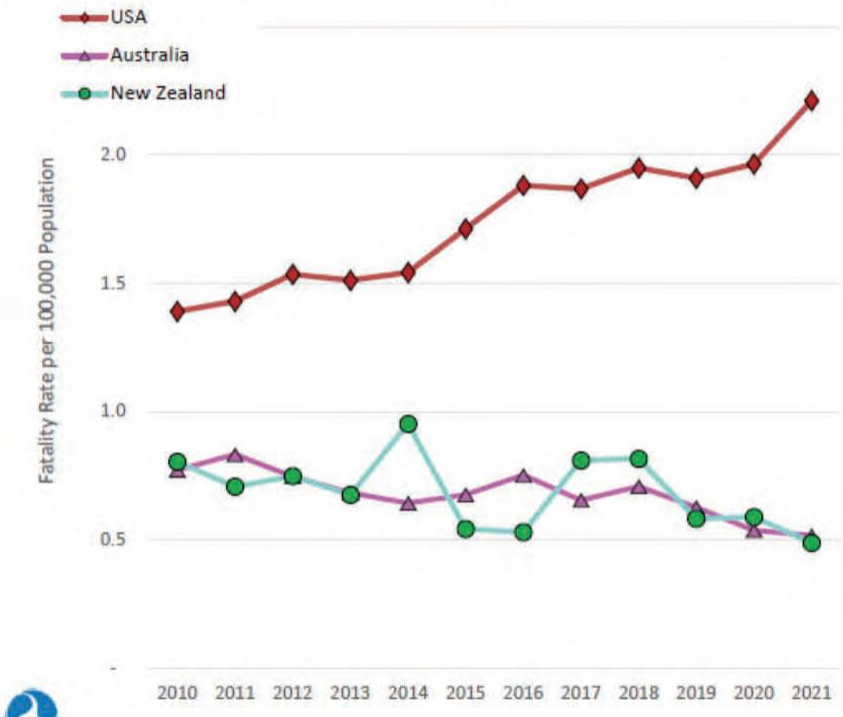
AUSTRALASIA



U.S. Department of Transportation
Federal Highway Administration

Office of International Programs

Data Source: ITF and FARS

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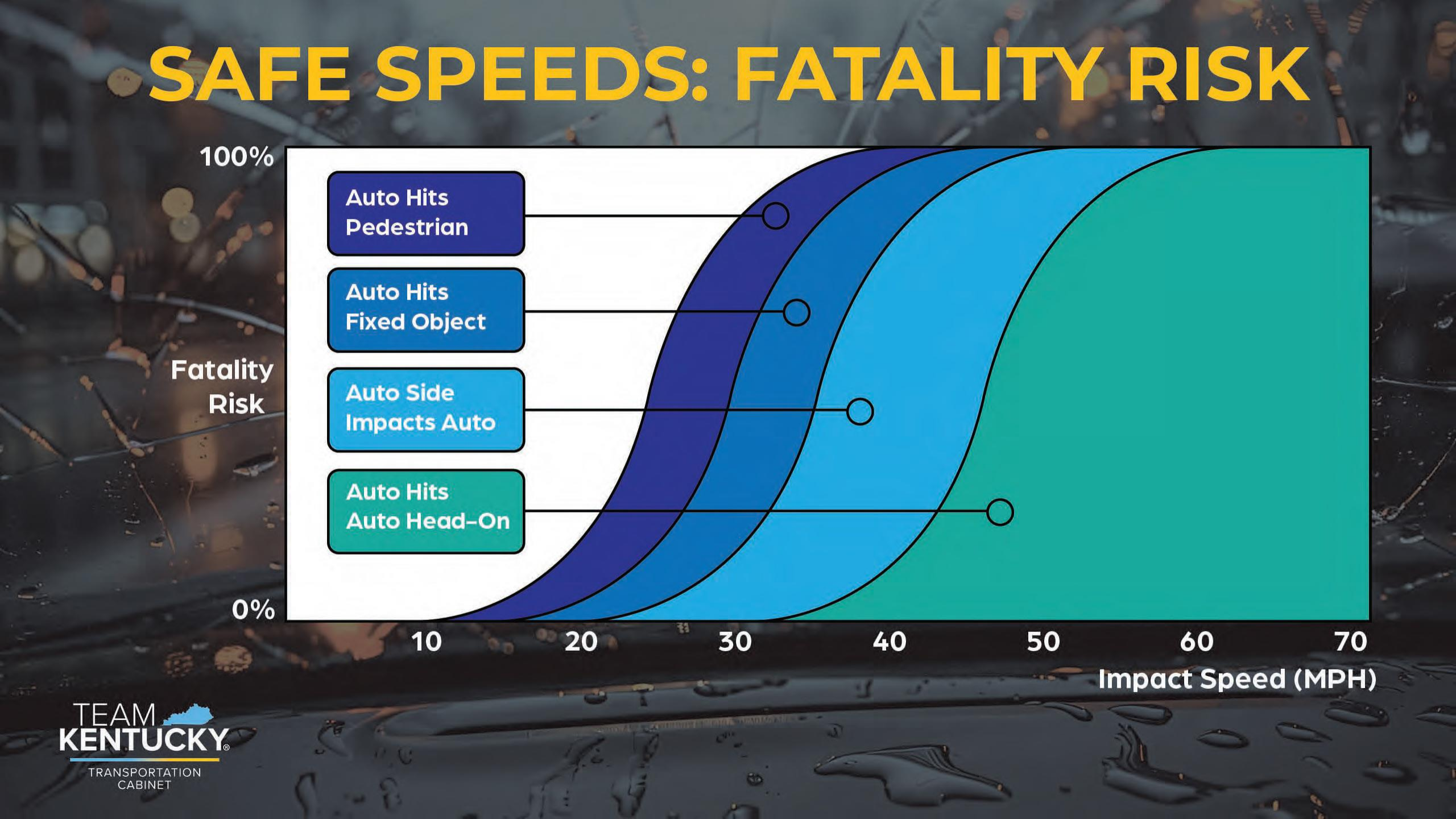
SAFE SPEEDS: FATALITY RISK



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SAFER ROADS: AVOIDING CRASHES

SEPARATING USERS

MINIMIZING CONFLICT POINTS

INCREASING ATTENTIVENESS/ AWARENESS

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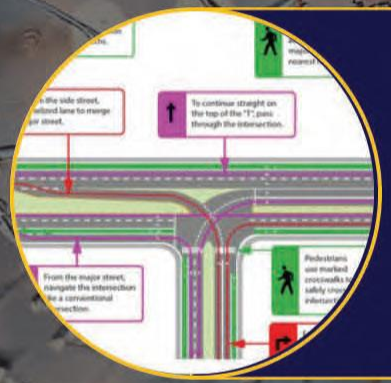
SAFER ROADS: MINIMIZING CRASH SEVERITY

CHANGING THE CROSS-SECTION



INNOVATIVE INTERSECTION DESIGN

OTHER DESIGN STRATEGIES TO LOWER SPEEDS

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HOW IS THIS DIFFERENT?

TRADITIONAL	SAFE SYSTEM
Prevents crashes	Prevents deaths & serious injuries
Improve human behaviour	Designed for human mistakes/limitations
Control speeding	Reduce system kinetic energy
Individuals are responsible	Share Responsibility
React based on crash history	Proactively identify & address risks

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KYTC INITIATIVES

Implementation of Complete Streets

Intersection Control Evaluation (ICE)

Consideration of the Roadway Context

Work Zone Traffic Management Plan Training

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KYTC INITIATIVES

Standard Drawing Updates

Safety Performance Evaluation Program

Road Safety Assessments in Project Development

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Planning Implementation Priorities

- Broader Application of KYTC ICE Process
- Buffered Bike Lanes – High Speed Roadway
- Designing for Target Speed
- Geometric Design Guidance – Context Applications
- Implementation of RSAs in Project Development
- Project Prioritization – Consideration of Context

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Roadway Safety Assessment (RSA) Implementation

- Piloting on 3 planning studies
- Took a different look than we originally thought
- Using data-informed processes from FHWA and AustRoads

Alignment Framework – Final Scoring Matrix

Project Location: 0

Category	Vulnerable Road Users (VRU)	VRU Score	Motor Vehicles	Motor Vehicles Score
Exposure Score:	Vulnerable Road Users Subtotal	***0***	Motor Vehicles Subtotal	***0***
Likelihood Score:	Vulnerable Road Users Subtotal	***Select Location Type***	Motor Vehicles Subtotal	***Select Location Type***
Severity Score:	Vulnerable Road Users Subtotal	***0***	Motor Vehicles Subtotal	***0***
Mode Subtotal:	Vulnerable Road Users	***0***	Motor Vehicles	***0***

Total Score:
0

	Run-off-road	Head-on	Intersection	Other	Pedestrian	Cyclist	Motorcyclist	
Exposure	/4	/4	/4	/4	/4	/4	/4	
Likelihood	/4	/4	/4	/4	/4	/4	/4	
Severity	/4	/4	/4	/4	/4	/4	/4	
Product	/64	/64	/64	/64	/64	/64	/64	/448

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HSIP Road Safety Assessment

Exposure – The number of road users

Likelihood – The probability that a crash occurs

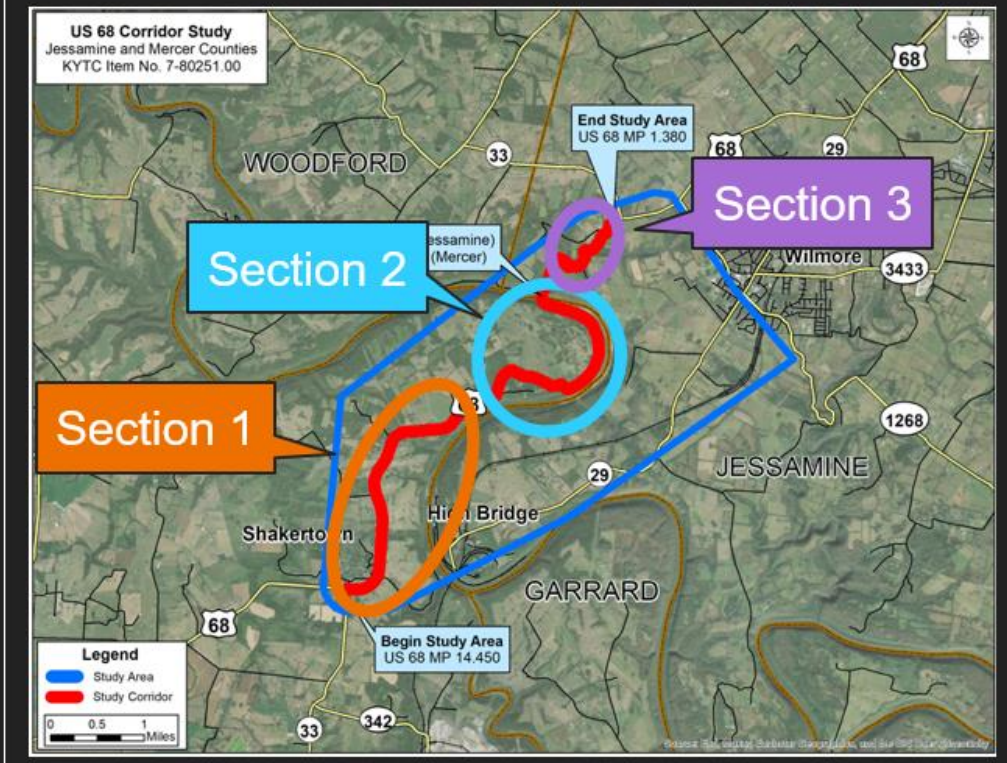
Severity – The probability that a fatality or severe injury will occur

HSIP Road Safety Assessment

	County	BMP	EMP	Length
Section 1	Mercer	14.45	17.5	3.05
Section 2	Mercer	17.5	20.058	2.558
Section 3	Jessamine	0	1.38	1.38

Lower score = more closely aligned with Safe System principles

Scoring from 0 – 8,000 for each section & 0 – 24,000 Total



Concept	No-Build	Concept 1	Concept 2	Concept 3	Concept 4
Length (mi.)	6.988	7.36	6.16	1.37	5.61
Cost	$0	$137,500,000	$142,000,000	$20,900,000	$5,600,000
Cost per mi.	$0	$18,682,000	$23,052,000	$15,255,000	$998,000
SS Score (Section 1)	1,276	948	946	1,276	992
SS Score (Section 2)	1,998	712	844	1,466	1,454
SS Score (Section 3)	2,050	848	1,004	2,050	2,050
SS Score (Total)	5,324	2,508	2,794	4,792	4,496
% Reduction	0.0%	52.9%	47.5%	10.0%	15.6%
Normalized Score	0.222	0.105	0.116	0.2	0.187
SS Alignment Index	0.778	0.896	0.884	0.8	0.813
Cost per point reduced		$48,828	$56,126	$39,286	$6,763
Cost per mi. per % Reduction		$353,000	$485,000	$1,526,000	$64,000

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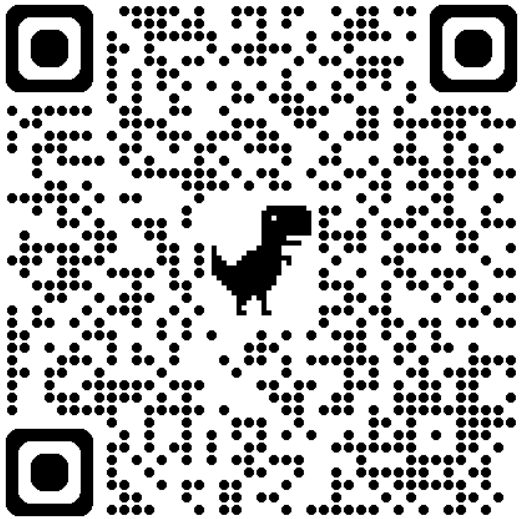
Intersection Control Evaluation (ICE)

KYTC ICE Guidance

- Conducted on all intersections (including newly created) on a project on state-maintained system, unless:
  - No substantial changes (e.g. mill and fill project)
  - **ALL** of the following:
    - EEC KAB < 0 and EEC CO < 0
    - No notable crash patterns
    - Minor road AADT < 400
    - No known operational issues
- Stage I Screening in Planning



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KYTC ICE Guidance

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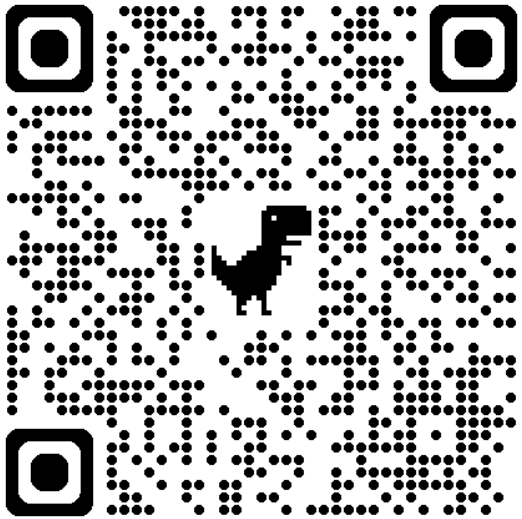

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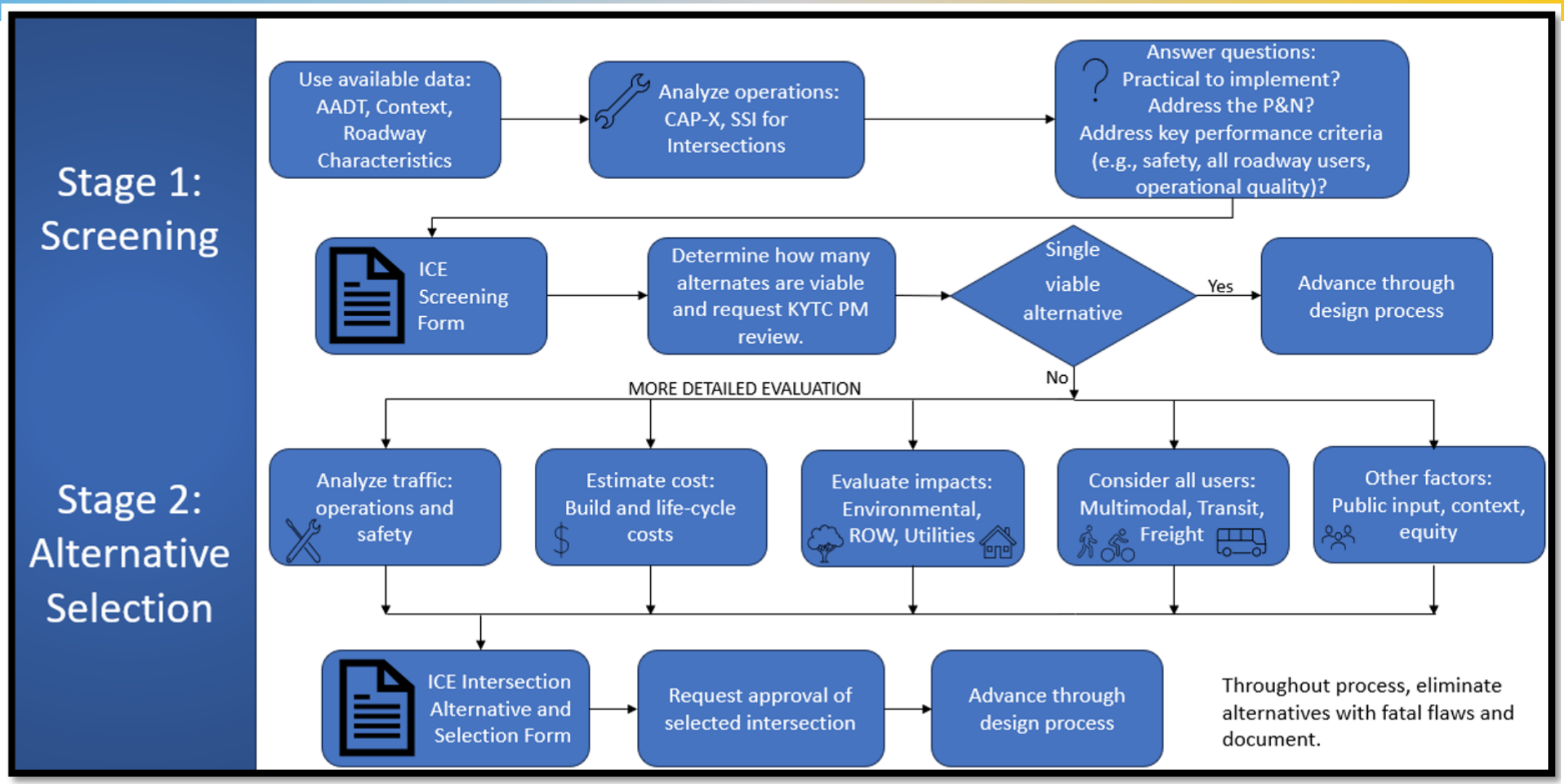
ICE Process


Stage 1: Screening
Stage 2: Alternative Selection
Use available data: AADT, Context, Roadway Characteristics
Analyze operations: CAP-X, SSI for Intersections
Answer questions: Practical to implement? Address the P&N? Address key performance criteria (e.g., safety, all roadway users, operational quality)?
ICE Screening Form
Determine how many alternates are viable and request KYTC PM review.
Single viable alternative
Yes
Advance through design process
No
MORE DETAILED EVALUATION
Analyze traffic: operations and safety
Estimate cost: Build and life-cycle costs
Evaluate impacts: Environmental, ROW, Utilities
Consider all users: Multimodal, Transit, Freight
Other factors: Public input, context, equity
ICE Intersection Alternative and Selection Form
Request approval of selected intersection
Advance through design process
Throughout process, eliminate alternatives with fatal flaws and document.

Intersection Control Evaluation (ICE)

US 68 at KY 33 (Jessamine County)

Intersection Control Alternative Screening									
Intersection or Interchange Alternative	a.) CAP-X v/c ratio *	b.) CAP-X Pedestrian Accommodation Score	c.) CAP-X Bicycle Accommodation Score	d.) SSI Score **	e.) **Impractical** to implement (considering cost, potential r/w and environmental impacts)?	f.) Meets the transportation purpose and need?	g.) Addresses the key system performance criteria (safety, all roadway users, operations, etc.)?	h.) Alternative is selected to advance to Stage 2 for further evaluation.	Justification:
Signalized Control	0.27	3.34	4.42	96	No	No	No	No	Not warranted; Does not fit within context of road
Two-Way Stop-Controlled	0.24	2.23	3.67	96	No	Yes	Yes	Yes	
All-Way Stop-Controlled	0.55	3.58	4.42	100	No	No	No	No	Does not fit within context of road
RCUT (Unsignalized)	0.07	2.19	3.35	99	No	Yes	Yes	No	Does not fit within context of road
Roundabout (1-lane)	0.33	5.51	4.58	100	No	Yes	Yes	Yes	

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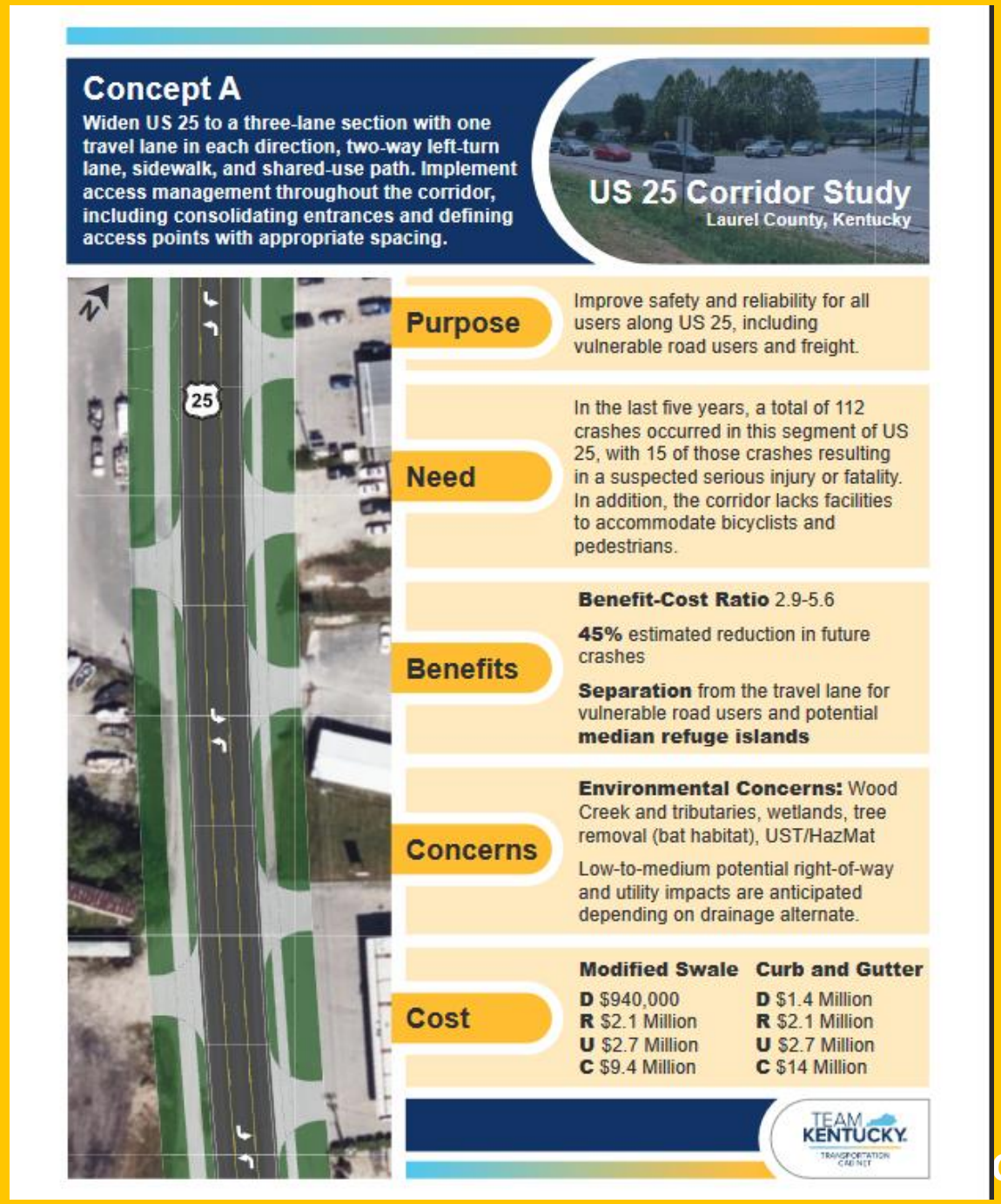
Project Sheets/Funding Pots

Project Sheets

- Begun exclusively for SUAs
- District Planners found useful
- Now used for most concepts



Funding Pots

Planning Study Name	Function	Name	Description	Opportunities for Ancillary Improvements	Approximate Annual Budget	KYTC Oversight	Contact
FE01 (District) FE01 (CO)	FE01	Maintenance	Roadway and roadside maintenance. CDEs have some flexibility on how FE01 funds are used but payroll, material, and equipment costs essentially limit these funds to maintaining existing conditions.	Limited due to budget constraints. Potential for changes to striping or control of access using low-cost measures. Improving shoulders.	$400M	Division of Maintenance	CDE/Josh Rogers
FE02	FE02	Bridge Maintenance	Covers projects to repair existing structures. Projects may be let through Construction Procurement or as a Master Agreement.	Limited. Some upgrades may be included to meet new standards.	$30-$50M	Division of Maintenance	Dora Alexander
FE04 (District) FE04 (CO)	FE04	Traffic Operations	Central Office and District budgets used primarily to cover electrical maintenance (signals, signal systems, lighting, etc.) and traffic engineering analysis and oversight.	Improvements to signal system timing.	$48M	Division of Traffic Operations	
SPP	FD04	Statewide Construction Funds	Limited to projects in Six-Year Highway Plan, but ZVARIOUS projects are available for specified purposes.	Extensive - if a specific or ZVARIOUS project is available. However, ZVARIOUS funds are typically administered through a program of prioritized needs. Additional work beyond the scope of the project or program intent should be limited.	$1B+	Division of Program Management*	Ron Rigney/SHE

Funding Pots

WHY?

Planning Study Name	Function	Name	Description	Opportunities for Ancillary Improvements	Approximate Annual Budget	KYTC Oversight	Contact
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FE02	FE02	Bridge Maintenance	Covers projects to repair existing structures. Projects may be let through Construction Procurement or as a Master Agreement.	Limited. Some upgrades may be included to meet new standards.	$30-$50M	Division of Maintenance	Dora Alexander
FE04 (District) FE04 (CO)	FE04	Traffic Operations	Central Office and District budgets used primarily to cover electrical maintenance (signals, signal systems, lighting, etc.) and traffic engineering analysis and oversight.	Improvements to signal system timing.	$48M	Division of Traffic Operations	
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Thinking About Capacity

Why is Capacity important?

Need	# of Enacted SYP Mentions
Safety	1049
Capacity	118
Mobility	360
Congestion	421
Traffic Flow	28
Speed	11
Geometry/Geometrics	380

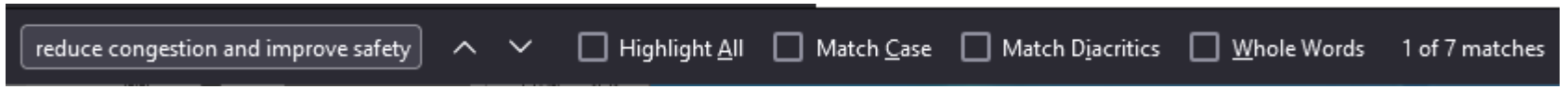
*some double counting due to multiple phases

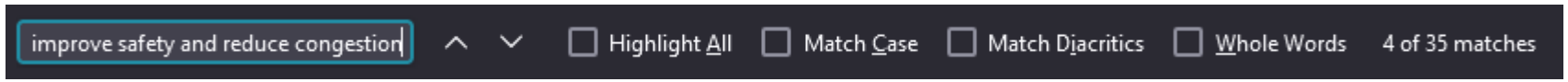
Capacity?

REDUCE CONGESTION, IMPROVE SAFETY AND ENHANCE MOBILITY ON KY 146 IN BUCKNER FROM KY 1817 (NEW CUT ROAD) (MP 6.81) TO KY 393 (MP 7.42). (2024CCN)

IMPROVE CONGESTION, ACCESS AND MOBILITY AT THE KY 693/KY 1488 INTERSECTION BY CONSTRUCTING A TRAFFIC SIGNAL (MP 3.384 KY 693) (2024CCN)

IMPROVE CAPACITY AND ACCESS ON KY 2906 FROM US 460 TO US 62 (2020CCN) (2022CCR) (2024CCR)





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Thinking About Capacity in a New Way

WHY?

- Intersection Capacity Problem
- Stopped Vehicle Problem
- Throughput Capacity Problem

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Intersection Capacity Problem

- ICE
- Intersection Reconfiguration / Restriping
- Signal Timing
- Turn Lanes

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Stopped/Slow Vehicle Problem

- TWLTL
- Minor (Shoulder) Widening
- Truck Climbing Lanes

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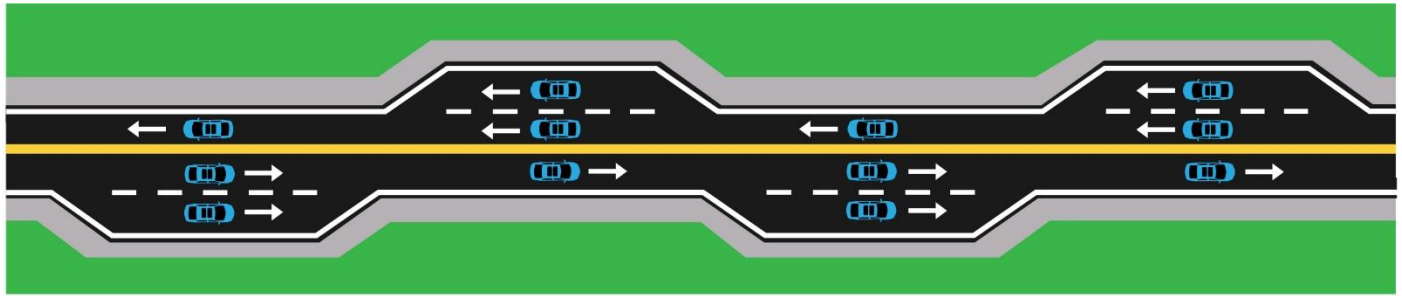
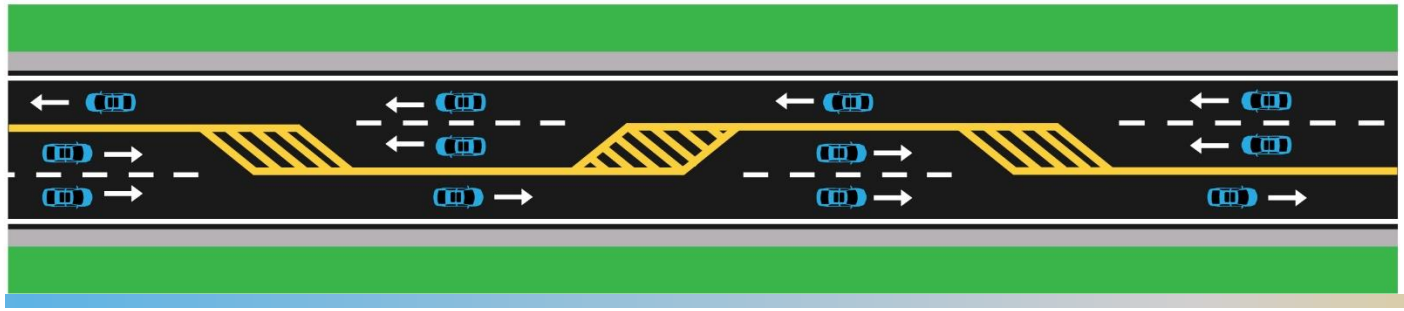
Throughput Capacity Problem





- 2+1
- Major Widening

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Production Hours/Process

Production Hours

Advertised Studies

- Inside the Portal (usually)
- SME < 500 hours directly (PM/Liaison)
  - Forecasting/Modeling
  - Environmental
  - Geotech
  - PM/Liaison puts in Portal

Statewide Studies

- Outside the Portal (Excel)
- SME < 500 hours directly
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  - Geotech
  - CC PM/Liaison

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Statewide Studies

- Outside the Portal (Excel)
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Production Hour Process

Standard Tasks

- In Portal and Excel
- Updated to include ICE and RSA tasks
- Will have copies on Guidance Page and available on request

Planning - PRODUCTION-HOUR WORKSHEET

1 - Corridor Study

1.1	Project Management				
Task #	**Item**	**Unit**	**Quantity**	**Hours/Unit**	**Production Hours**
1.1.1	Project Management	Mo.			0
1.1.2	Purpose & Need/Project Goals	LS			0
				Sub-total	**0**

1.2	Evaluate Existing Conditions				
No.	**Item**	**Unit**	**Quantity**	**Hours/Unit**	**Production Hours**
1.2.1	Base Mapping	LS			0
1.2.2	Roadway Systems & Characteristics	EA			0
1.2.3	Field Reviews & Supplementary Data Collection	LS			0
1.2.4	Identification and Review of Other Transportation Projects and Reports	LS			0
1.2.5	Crash Analysis - Mapping	LS			0
1.2.6	Crash Analysis - Trend Analysis	LS			0
1.2.7	Crash Analysis - CDAT	LS			0
1.2.8	Miscellaneous Task	LS			0
				Sub-total	**0**

1.3	Forecasts and Model inputs				
No.	**Item**	**Unit**	**Quantity**	**Hours/Unit**	**Production Hours**
1.3.1	Counts (Class, Turning, Base Origin/Destination matrix, etc)	EA			0
1.3.2	Existing Traffic - Miovision Count setup/tear down	EA			0
1.3.3	Existing Traffic - Peak Drone imagery capture	LS			0
1.3.4	Travel Time Runs (AM & PM peak)	EA			0
1.3.5	Comparative Travel Time Data	LS			0
1.3.6	Establish growth rates (using sketch planning or models)	LS			0
1.3.7	Develop future volumes, SE data, & origin/destination matrices	LS			0
1.3.8	Document Forecast inputs, assumptions & results as an Appendix	LS			0
1.3.9	Review Updates to Travel Demand Model	LS			0
1.3.10	Document model updates	LS			0
1.3.11	Miscellaneous Task	LS			0

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Standard Tasks

WHY?

- In Portal and Excel
- Updated to include ICE and RSA tasks
- Will have copies on Guidance Page and available on request

Planning - PRODUCTION-HOUR WORKSHEET

1 - Corridor Study

1.1 Project Management

Task #	Item	Unit	Quantity	Hours/Unit	Production Hours
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1.1.2	Purpose & Need/Project Goals	LS			0
				Sub-total	**0**

1.2 Evaluate Existing Conditions

No.	Item	Unit	Quantity	Hours/Unit	Production Hours
1.2.1	Base Mapping	LS			0
1.2.2	Roadway Systems & Characteristics	EA			0
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1.2.6	Crash Analysis - Trend Analysis	LS			0
1.2.7	Crash Analysis - CDAT	LS			0
1.2.8	Miscellaneous Task	LS			0
				Sub-total	**0**

1.3 Forecasts and Model inputs

No.	Item	Unit	Quantity	Hours/Unit	Production Hours
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1.3.2	Existing Traffic - Miovision Count setup/tear down	EA			0
1.3.3	Existing Traffic - Peak Drone imagery capture	LS			0
1.3.4	Travel Time Runs (AM & PM peak)	EA			0
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1.3.9	Review Updates to Travel Demand Model	LS			0
1.3.10	Document model updates	LS			0
1.3.11	Miscellaneous Task	LS			0

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Cost Estimates

Cost Estimates

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Project Development Phase	Project Maturity (% project definition completed)	Project Estimate Designations	Purpose of the Estimate	Estimating Methodology	Estimate Range	
Planning	0 to 5%	Project Identification Estimate	Conceptual Estimating Screening & Feasibility. Estimate Potential Funds Needed (20-year plan)	Parametric	-50% to +200%	Project Cost Planning
	3% to 15%	Conceptual Project Estimate	Conceptual Estimating Prioritize Needs for Long Range Plans (10-year plan)	Historical Bid-Based with some Parametric	-40% to +100%	
Scoping	10% to 30%	Preliminary Line and Grade Estimate	Scope Estimating Establish a Baseline Cost for Project and Program Projects (SYP and STIP)	Historical Bid-Based or Cost-Based	-30% to +50%	

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Project Identification Estimates

Project Maturity	Estimating Methodology	Estimate Range	Level of Effort
0 to 5%	Parametric	-50% to +200%	Low

Examples:
SWCP/SWIPP
“YUM Center”
Initial CHAF Estimate

Sources of Risk:
Lack of Project Definition

<u>Contingency</u>
Gigantic

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Improvements Categories	Unit Cost	D6, D8, D10 Average			
New Roadways		D	R	U	C
New Urban Freeway (4 Lane, Divided)	Per Mile	$1,920,000	$4,650,000	$1,630,000	$16,670,000
New Rural Freeway (4 Lane, Divided)	Per Mile	$1,340,000	$1,650,000	$700,000	$12,340,000
New 4 Lane Expressway	Per Mile	$1,240,000	$1,490,000	$700,000	$11,000,000
New Super 2 Highway	Per Mile	$890,000	$1,310,000	$600,000	$7,340,000
New 2 Lane Highway	Per Mile	$760,000	$1,110,000	$560,000	$5,840,000
Widening (Major)					
Freeway, Added Lanes (in median) with Functional Overlay	Per Mile	$1,440,000	$110,000	$210,000	$6,800,000
4 Lane to 6 Lane Divided - Rural	Per Mile	$1,170,000	$1,100,000	$470,000	$8,840,000
4 Lane to 6 Lane Divided - Urban	Per Mile	$1,600,000	$3,740,000	$1,270,000	$14,070,000
2 Lane to 4 Lane Divided - Rural	Per Mile	$1,040,000	$1,100,000	$470,000	$8,840,000
2 Lane to 4 Lane Divided - Urban	Per Mile	$1,600,000	$3,740,000	$1,270,000	$14,070,000
Widening (Minor)					
2 Lane to 4 Lane Undivided - Rural	Per Mile	$970,000	$880,000	$340,000	$6,500,000
2 Lane to 4 Lane Undivided - Urban	Per Mile	$1,500,000	$3,270,000	$1,040,000	$10,740,000
Upgrade					
Expressway Upgrade to Freeway with Pavement Reconstruction	Per Mile	$1,600,000	$2,350,000	$1,150,000	$9,500,000
Arterial Upgrade to Parkway/Expressway with Pavement Reconstruction	Per Mile	$1,250,000	$1,850,000	$800,000	$8,000,000
Grade Separation / New Interchange Access					
New System Interchange	Per Interchange	$5,000,000	$15,000,000	$4,000,000	$50,000,000
New Service Interchange - Rural	Per Interchange	$1,390,000	$1,670,000	$590,000	$12,000,000
New Service Interchange - Urban	Per Interchange	$2,000,000	$4,290,000	$1,500,000	$15,840,000
Interchange Modification	Per Interchange	$1,710,000	$1,210,000	$1,130,000	$12,790,000
Grade Separation Only (Under or Overpass)	Per Grade Separation	$480,000	$600,000	$310,000	$3,920,000
Major Intersection Improvement					
>= 4 lanes in both directions	Per Intersection	$350,000	$970,000	$390,000	$2,640,000
< 4 lanes in both directions	Per Intersection	$250,000	$610,000	$230,000	$1,570,000

Conceptual Project Estimates

Project Maturity	Estimating Methodology	Estimate Range	Level of Effort
3% to 15%	Historical Bid-Based with some Parametric	-40% to +100%	Medium

<u>Bid-Based</u>
Excavation/Embankment
Asphalt Base/Surface
DGA
Concrete
Curb & Cutter
Sidewalk

<u>Parametric</u>
Structures
Mob/Demob
MOT

<u>Contingency</u>
Depends on Complexity

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Cost Estimate								
Concept 3B								
Assumes two 12' lanes with 8' paved shoulders	40	LF						
Total Length	6,408	LF						
Pavement Costs								
Total Length	6,408	LF						
2 Lanes	22	LF				Total Length		
Area	140,986	SF				6,408		
	15,665	SY						
Cost	$140							
Shoulder Pavement								
Total Length	6,408	LF						
4' wide	8	LF						
	51,268	SF						
	5,696	SY						
Cost	$140							
				$2,990,619	Total Paving			
Miscellaneous Items	Qty.	Units	$ per Unit					
Clearing & Grubbing	1.2	mi.	$250,000	$303,431				
Excavation	397,861	CY	$25	$9,946,532	$8,195,043.07			
Pavement Striping	6,408	LF	$5	$32,042				
Signs	1.2	mi.	$250,000	$303,431				
Misc. drainage, erosion control, etc.			50% paving	$1,495,310				
Maintenance of Traffic		LS		$500,000				
			Subtotal	**$15,571,366**				
			Contingency (30%)	$4,671,410				
			Mobilization (3%)	$467,141				
			Demobilization (1.5%)	$233,570				
		TOTAL CONSTRUCTION COST		**$20,900,000**				

Conceptual Project Estimates

Project Maturity	Estimating Methodology	Estimate Range	Level of Effort
3% to 15%	Historical Bid-Based with some Parametric	-40% to +100%	Medium

Examples:
Most Planning Studies

Sources of Risk:

<u>Known Unknowns</u>
Environmental
ROW/Utilities
Geotech
Structures
Drainage

<u>Unknown Unknowns</u>
Inflation of bid items
Availability of Materials
Labor Cost

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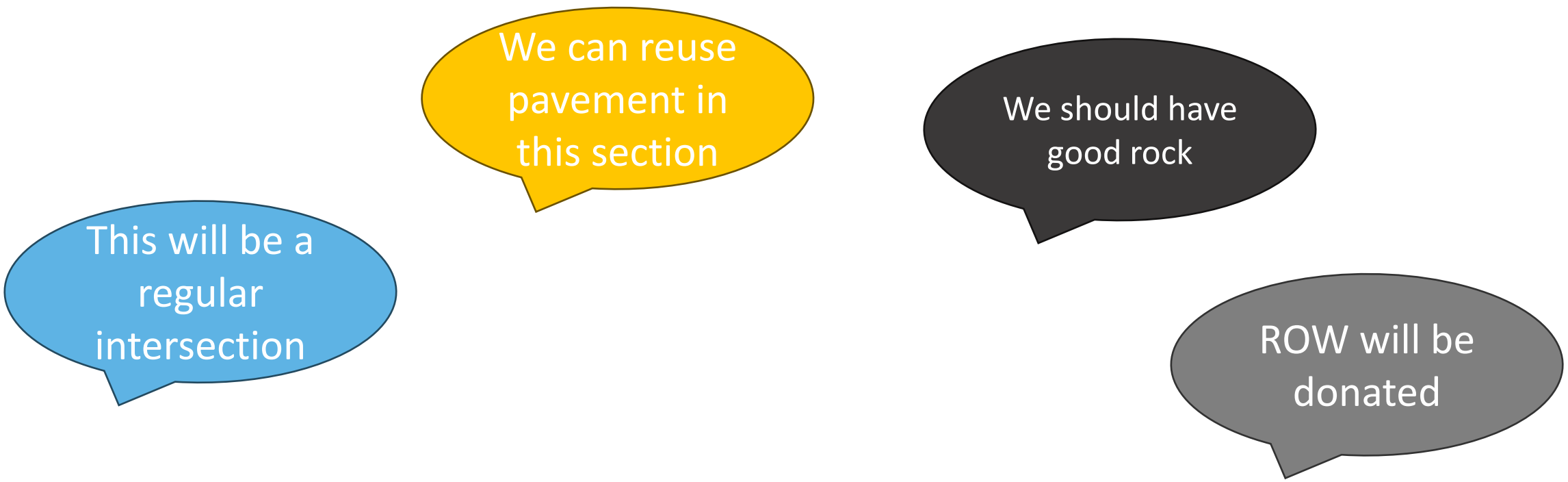
Get Off the 'Rosy' Path



Ok to assume absolutely nothing is going to go as you think!

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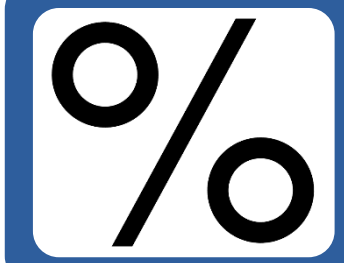
Building an Estimate

Bid Items

- Pavement
- Excavation
- Curb/Gutter/Sidewalk



Parametric

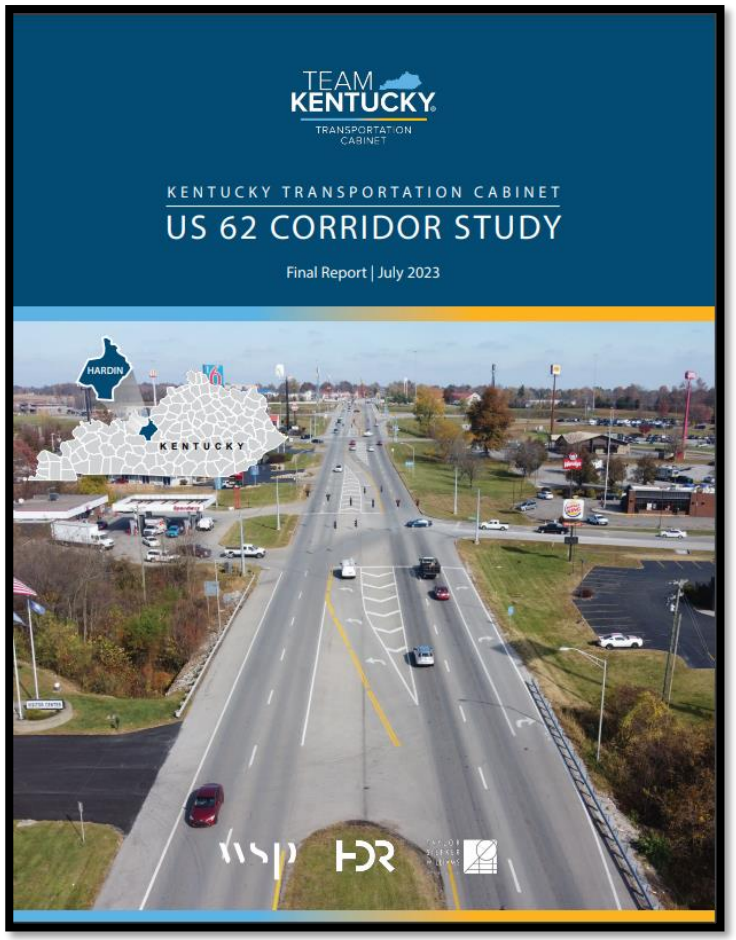
- Other Phases
- Drainage/MOT/Mobilization
- Miscellaneous

Contingencies

- Remember all those risks? Account for them

Preliminary Line & Grade Estimate

Turn This:



Into This:

Preliminary Line & Grade Estimate

Project Maturity	Estimating Methodology	Estimate Range	Level of Effort
10% to 30%	Historical Bid-Based or Cost-Based	-30% to +50%	High

Examples:
Fully scoped projects (“Design” projects)

Sources of Risk:

ROW/Utilities
Lighting

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Time Contingency

- Also called a “management contingency.”
- How do we account for “we just started this planning study today – and that means – best case – 6 years until construction.”
- Things change over that many years, not just material cost!

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Time Contingency Example

- If we started a Planning study today, we're well into the next biennium for Design
  - **+10%**
- Design and Environmental will take 2 years
  - **+20%**
- Right-of-Way and Utilities will take 2 years
  - **+20%**

- Total: **+50%**

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Project Development Phase	Project Maturity (% project definition completed)	Project Estimate Designations	Purpose of the Estimate	Estimating Methodology	Estimate Range	
Planning	0 to 5%	Project Identification Estimate	Conceptual Estimating Screening & Feasibility. Estimate Potential Funds Needed (20-year plan)	Parametric	-50% to +200%	Project Cost Planning
	3% to 15%	Conceptual Project Estimate	Conceptual Estimating Prioritize Needs for Long Range Plans (10-year plan)	Historical Bid-Based with some Parametric	-40% to +100%	
Scoping	10% to 30%	Preliminary Line and Grade Estimate	Scope Estimating Establish a Baseline Cost for Project and Program Projects (SYP and STIP)	Historical Bid-Based or Cost-Based	-30% to +50%	

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Bid Items

- Pavement
- Excavation
- Curb/Gutter/Sidewalk

Parametric

- Other Phases
- Drainage/MOT/Mobilization
- Miscellaneous

Contingencies

- See all those risks? Account for them

Escalation

- Time Risk

Document all of This

Revision:

6/1/2021 - Current - Stuart Kearns - $ 24,980,000

Created Date: 06/01/2021

Created By: Stuart Kearns

Improvement Assumption:

Construct Road in New Location

Estimate Source:

Requires Further Study

Secondary Improvement Assumption:

Bike/Ped Facility

Eligible Funding: NH, STPF, STP2

Default Year: 2030

	Fund Source	Stage	Estimate	Fiscal Year Estimated	Escalated	Prop Year	Duration (Months)
P	NH	UNK	0	2022	0		
D	NH	UNK	1,880,000	2022	1,880,000	2022	
R	NH	UNK	9,800,000	2022	9,800,000	2022	
U	NH	UNK	600,000	2022	600,000	2022	
C	NH	UNK	12,700,000	2022	12,700,000	2022	

Total Escalated: $ 24,980,000

***Estimate Remarks:**

Planning level estimate for cost per Hamburg I-75 Crossing Feasibility Study. 5/26/21 Adjusted Prop year to 2022

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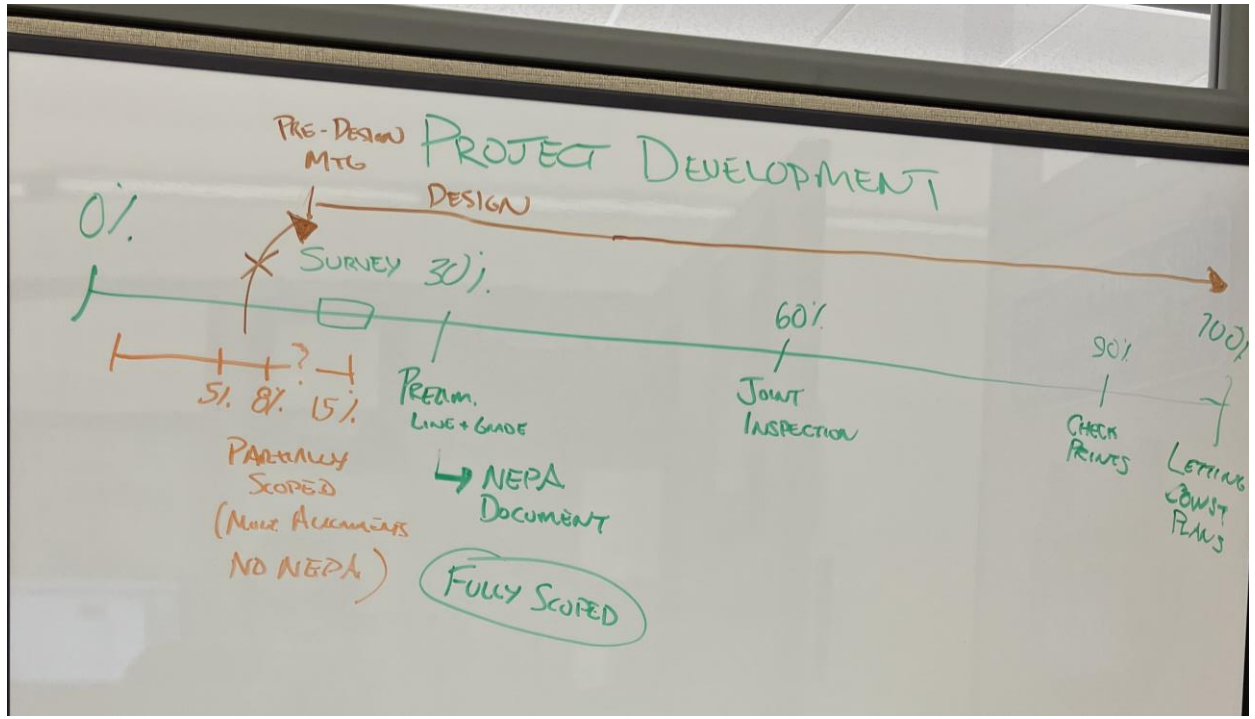
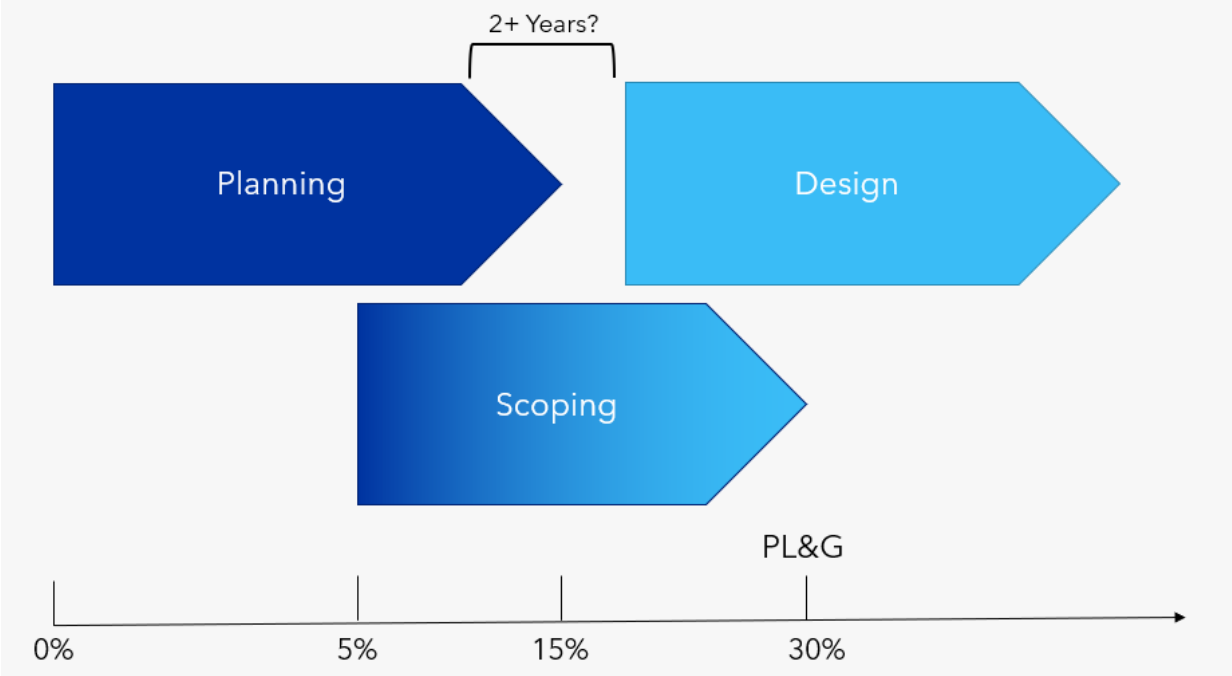
Staff Involvement Through PL&G

Staff Involvement Through PL&G





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Staff Involvement Through PL&G

- Planning (District & Central Office) to stay involved until “Scoping” is complete at PL&G
  - Understanding Planning’s thought process to meet Purpose & Need
  - Various points where “handoff” occurs
- Better estimates = better for everybody

- Shared responsibility on invites – let invitees say ‘No.’

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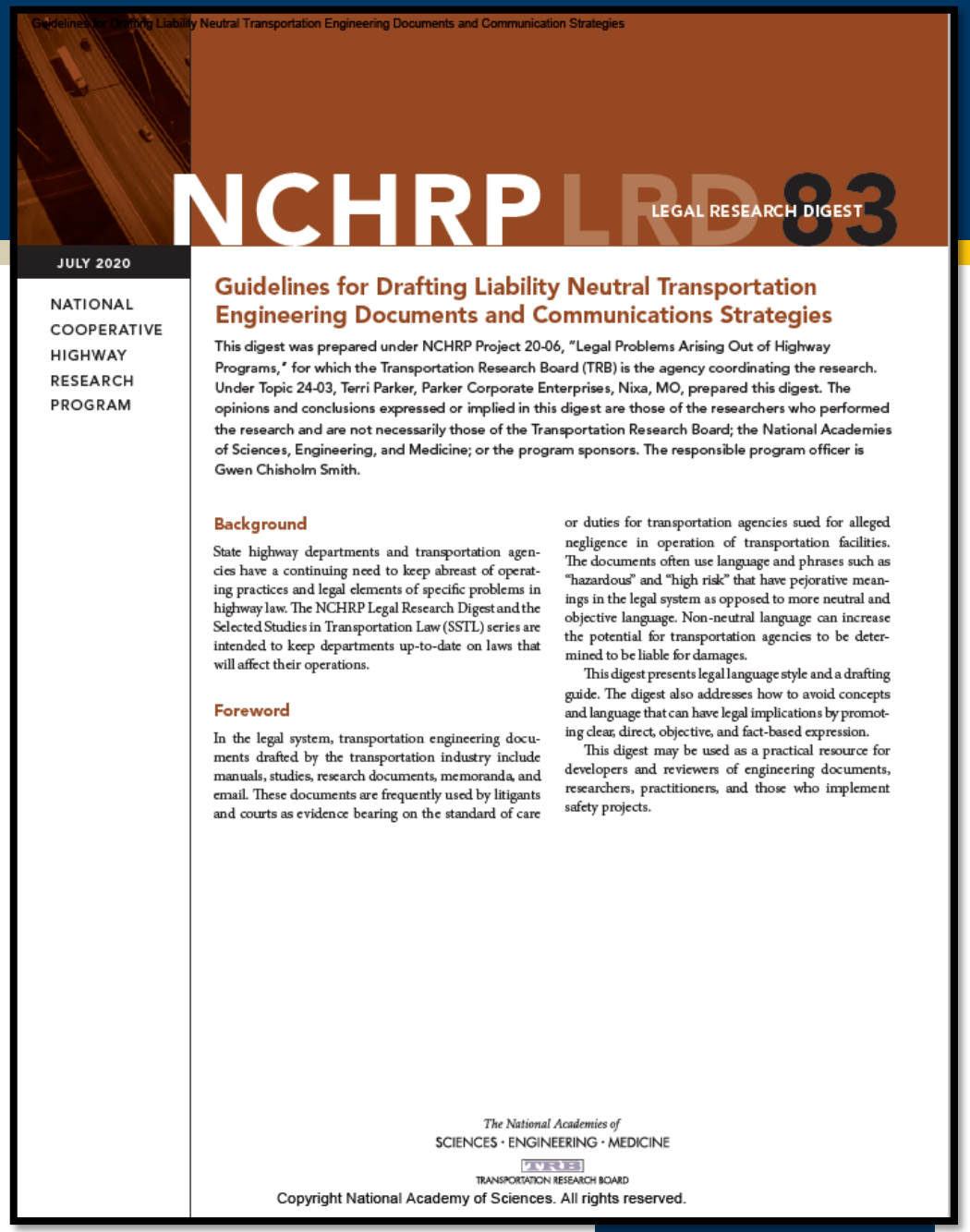
Liability Neutral Language

Liability Neutral Language

- In tort law, the standard of care that must be taken by an individual, agency, or business is determined by the generally accepted practices of the industry.



Unintended Liability or Responsibility

- Transportation Agencies are frequently sued over perceived negligence, and the language in internal and public-facing documents can become central to these claims

Better	Insufficient
Clearly	Is Needed
Concern	Mandatory
Danger/Dangerous	Obstacle
Deficient	Poor
Edge/Shoulder Drop Off	Problem
Ensure	Require
Essential	Risk/Risky
Excessive	Shall
Hazard	Should
Hot Spot	Trap
Imperative	Unsafe
Inadequate	Worse

Liability Neutral Language

- Choose each word carefully
- Match Field Conditions with Language in Guidance
- Avoid Surplus Language

Application of engineering judgement	Guideline
As soon as practicable	May
Can	Normal
Candidates for shielding	Potentially contributing factors
Consider	Roadside “feature” or “condition” or “object” or “device” rather than “hazard” or “risk”
Criteria/factors that may be considered	Strategy
Could	Toolbox
Difference in elevation rather than edge or shoulder drop off	When/Where feasible
Factors that can contribute to the probablitiy	

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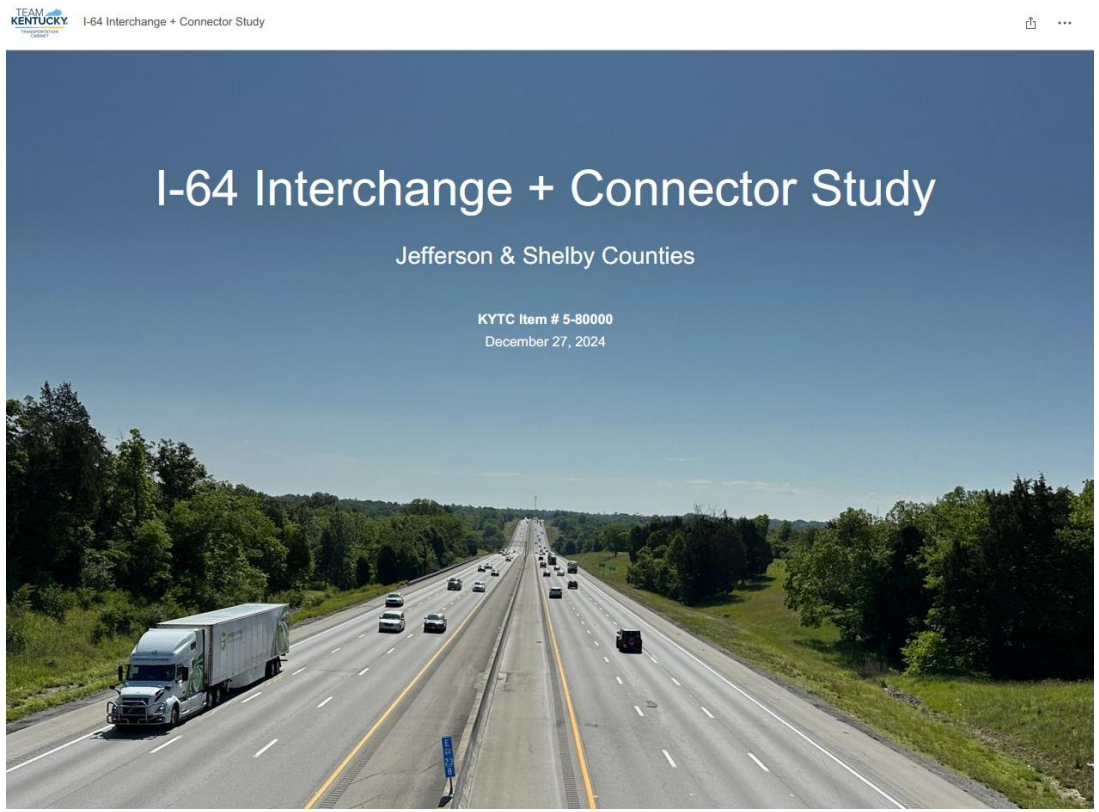
Hosted StoryMaps & Project Continuity

Hosted StoryMaps and Project Continuity

- Consultants encouraged to work within KYTC ESRI Workspace to ensure StoryMap data can endure following study completion

- Contact CO liaison, they will contact Will Holmes



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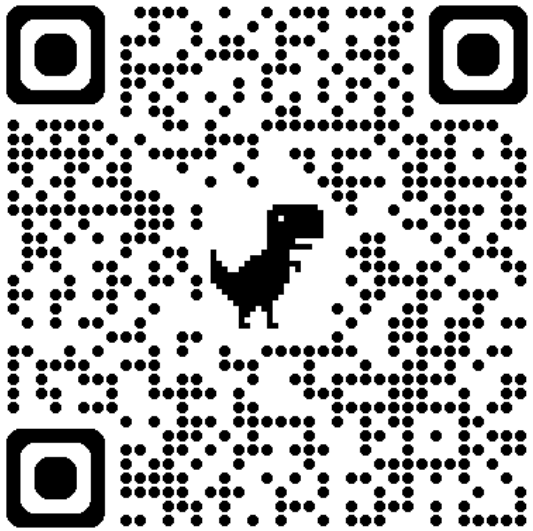
Planning Environmental Linkage (PEL)

Why PEL?

WHY?



- Exactly what it sounds like, linking Planning and Environmental
- Preserve the option to use planning products and decisions in the environmental review process
- “NEPA Clock” doesn’t start for EAs and EISs

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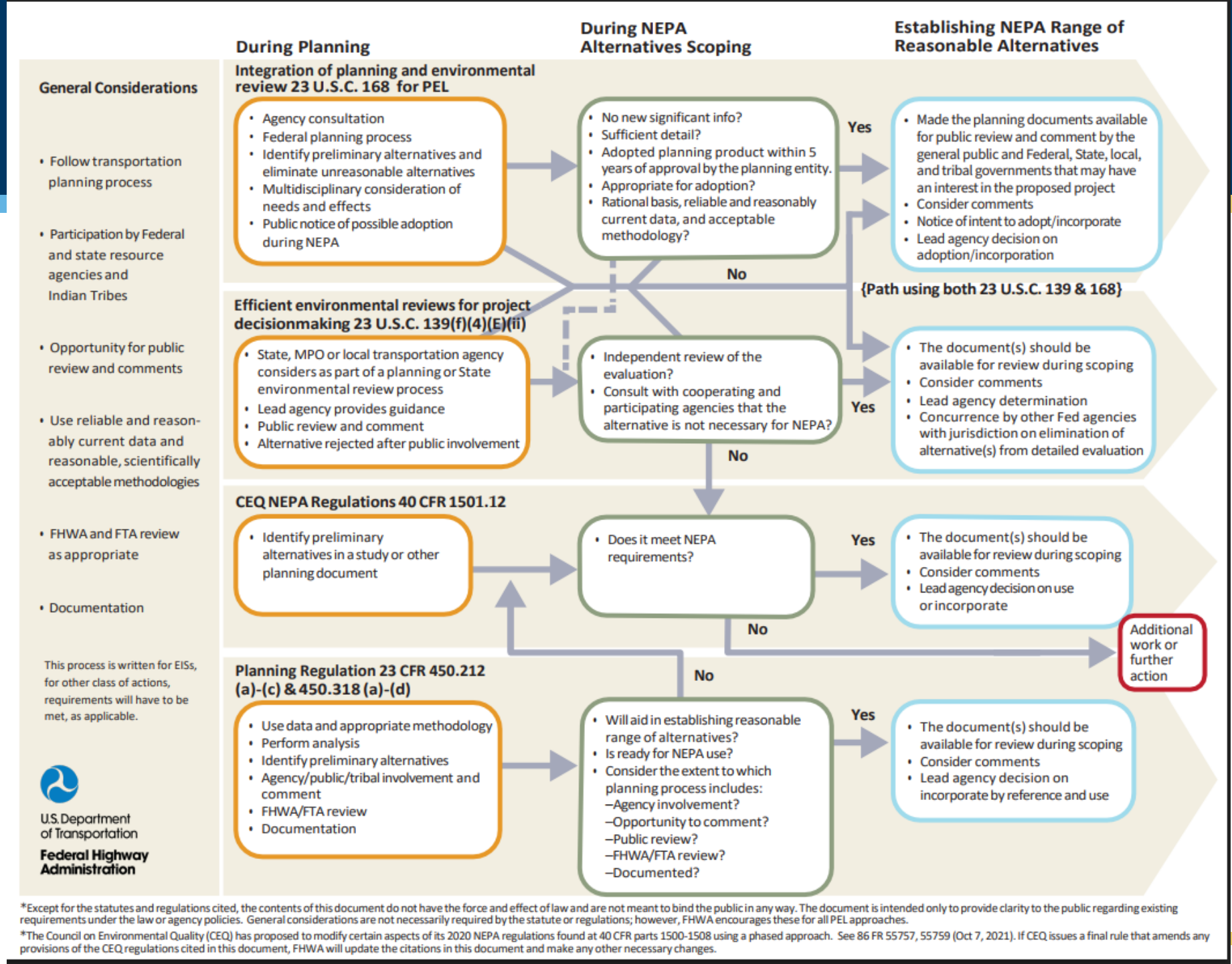

*Except for the statutes and regulations cited, the contents of this document do not have the force and effect of law and are not meant to bind the public in any way. The document is intended only to provide clarity to the public regarding existing requirements under the law or agency policies. General considerations are not necessarily required by the statute or regulations; however, FHWA encourages these for all PEL approaches.

*The Council on Environmental Quality (CEQ) has proposed to modify certain aspects of its 2020 NEPA regulations found at 40 CFR parts 1500-1508 using a phased approach. See 86 FR 55757, 55759 (Oct 7, 2021). If CEQ issues a final rule that amends any provisions of the CEQ regulations cited in this document, FHWA will update the citations in this document and make any other necessary changes.

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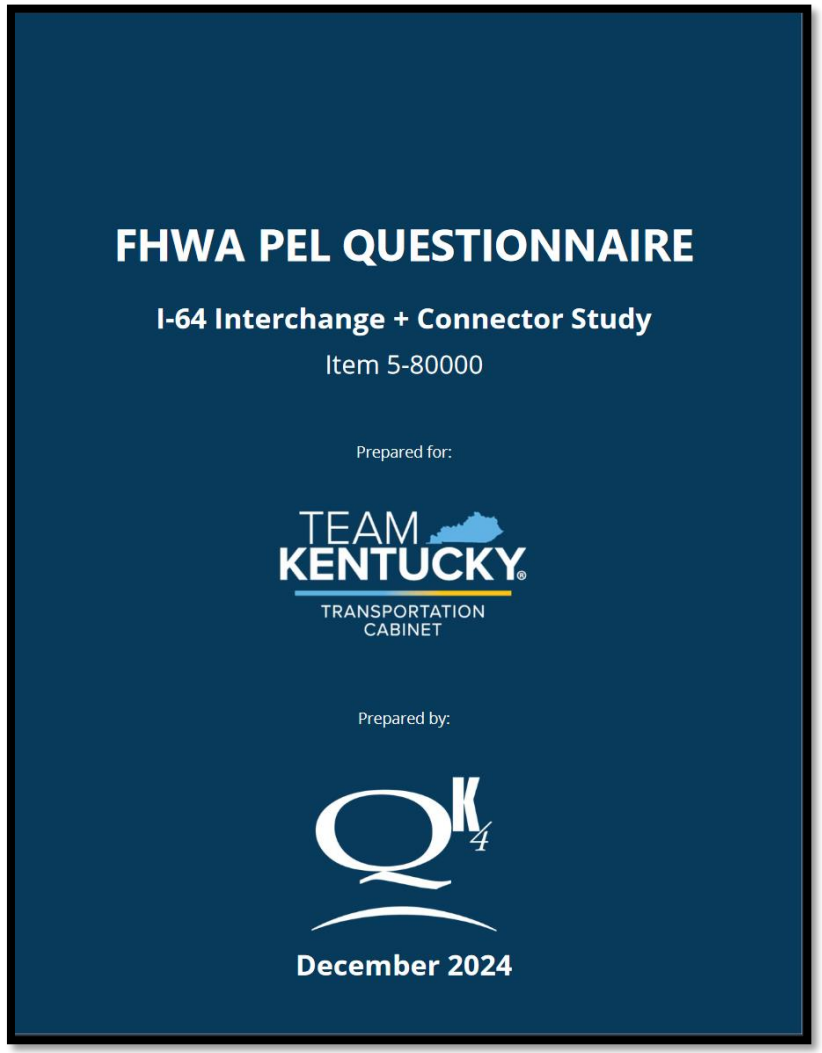
Planning/Environmental Linkage (PEL)



- PELs and traditional KYTC studies have many of the same items, just with more…intention
  - Existing Conditions
  - Land Use & Current/Future Traffic
  - Goals & Objectives
  - Draft Purpose & Need
  - Stage I ICE
  - Enviro. Red Flag & Geotech Overview
  - CR Lit Review & Arch. Overview
  - Socioeconomic Study
  - Initial and Refined Concepts

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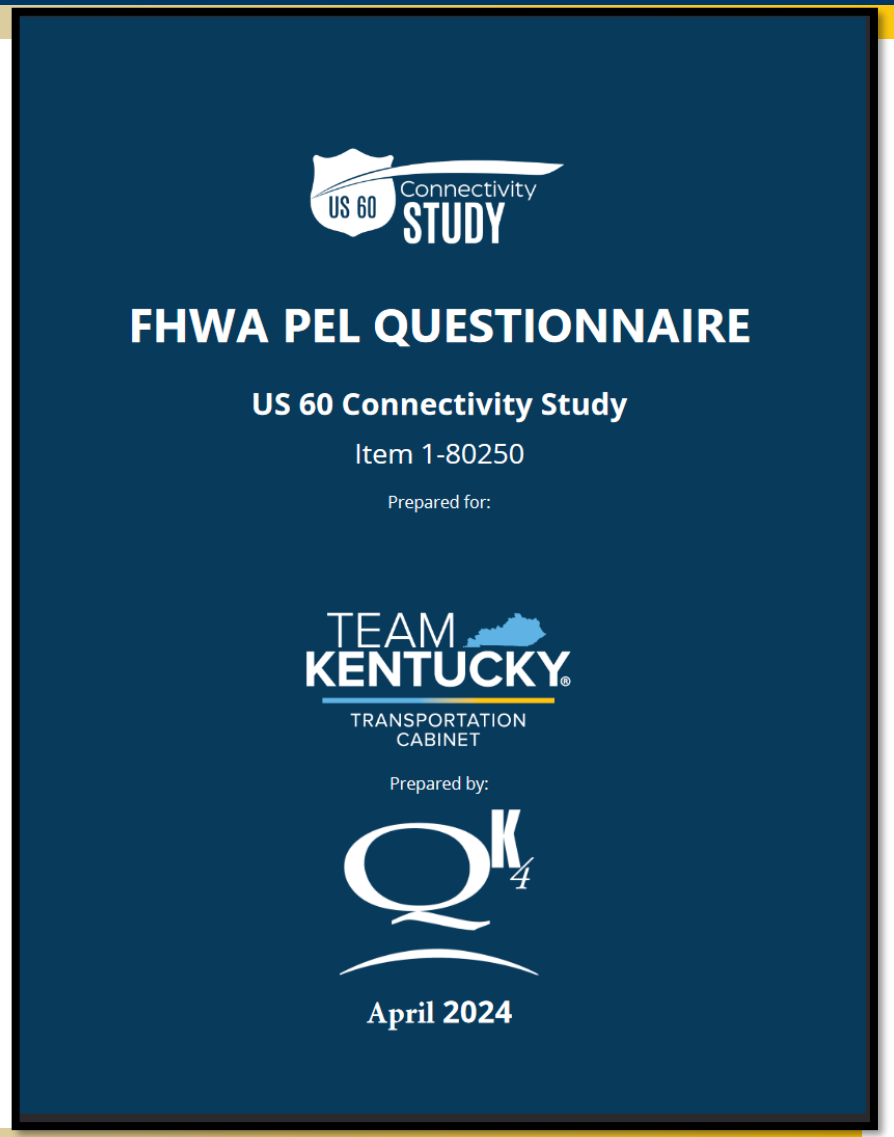
Planning/Environmental Linkage

- Additional Items by doing a PEL:
  - Survey (if needed, sometimes use LiDAR)
  - Agency Coordination
  - Refined Concepts -> Alternatives
  - Stage II ICE
  - Alternative Screening & Dismissal
  - Phase I Environmental Site Assessment
  - Socioeconomic Analysis
  - Ecological Report
  - Mitigation Measures
  - Anticipated NEPA Document Definition



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Federal Changes & Updates

Federal Personnel Updates

- Keith Damron -> HMB
- John Ballantyne -> Retired
- Nick Vail -> Louisville Metro

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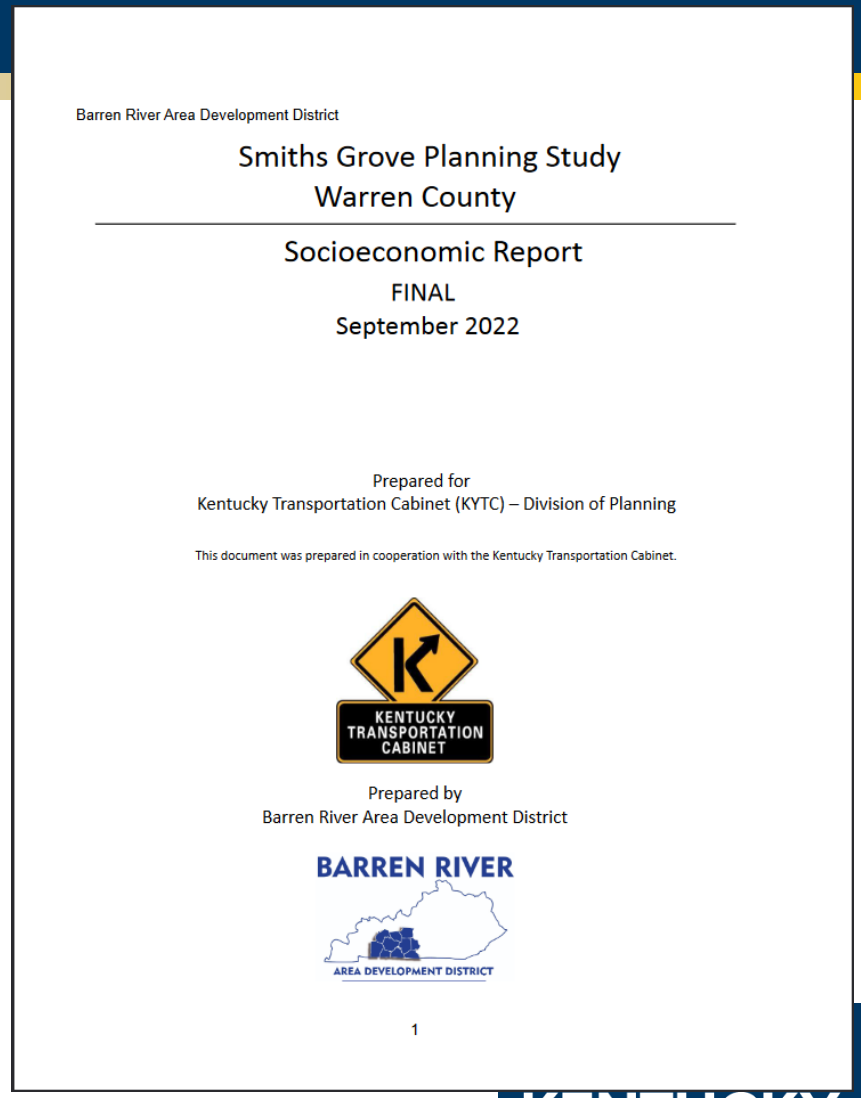
Socioec Studies

- Any mention of Environmental Justice (stemming from Executive order 12898) must be removed, including in Socioeconomic Studies



Barren River Area Development District

Smiths Grove Planning Study
Warren County

Socioeconomic Report
FINAL
September 2022

Prepared for
Kentucky Transportation Cabinet (KYTC) – Division of Planning

This document was prepared in cooperation with the Kentucky Transportation Cabinet.

KENTUCKY TRANSPORTATION CABINET

Prepared by
Barren River Area Development District

BARREN RIVER AREA DEVELOPMENT DISTRICT

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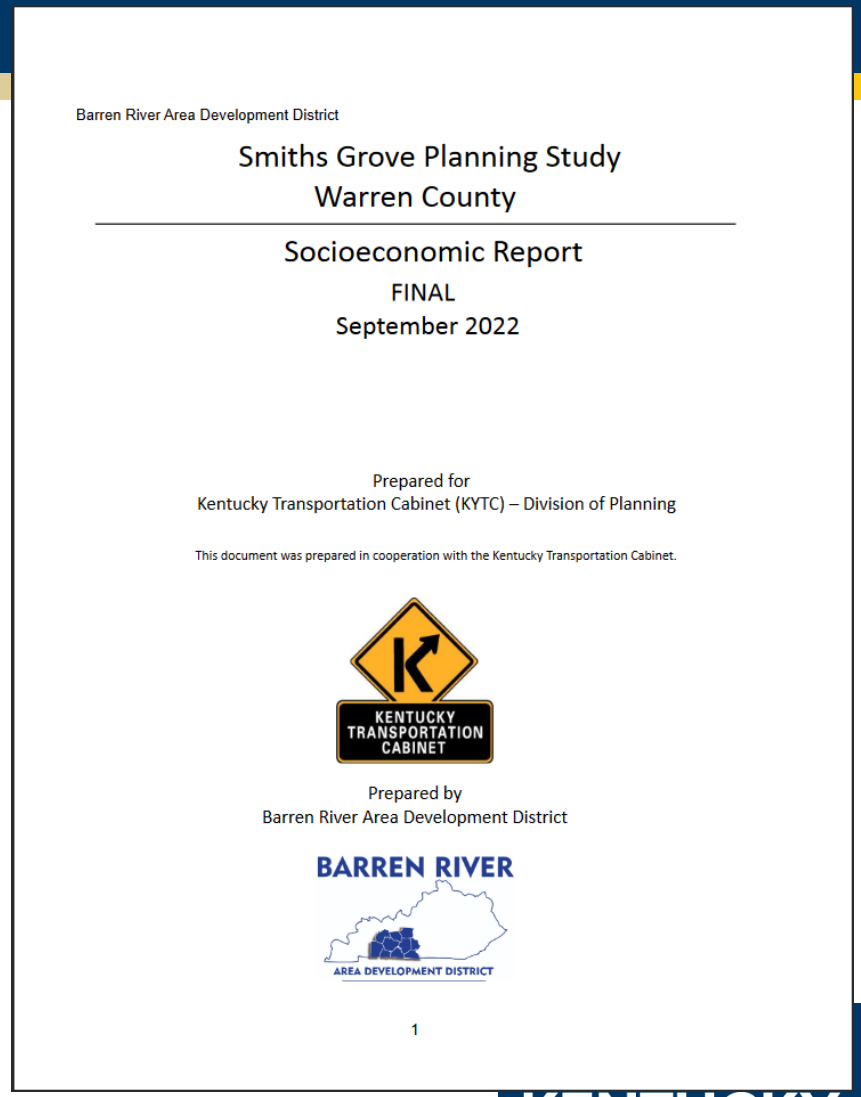
Socioec Studies

- KYTC/ADDs will continue to produce SE Studies by summarizing race/color/national origin (Title VI) as well as elderly, disability status, poverty level, and LEP (without reference to EJ) using traditional data sources.
- Will ensure project teams can plan for appropriate public involvement and engagement opportunities.



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Language/Process Changes

- Do not use the following terms moving forward:
  - Environmental Justice (EJ)
  - Racial equity
  - Climate Change
  - Energy Impacts
  - Greenhouse Gas Emissions
  - Justice 40
- Add to your QA/QC process

Language/Process Changes

- Do not use the following terms moving forward:
  - Environmental Justice (EJ)
  - Racial equity
  - Climate Change
  - Energy Impacts
  - Greenhouse Gas Emissions
  - Justice 40
- Add to your QA/QC process

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Planning Study Format & Layout

Planning Study Layout & Format

- Two Types of Executive Summaries
  - Two-pager for Leadership & Legislature
  - Longer (< 10 pages) for District
- Project Sheets Easy to Find and Digest
- Appendix
  - Crash History (no MFN)
  - Cost Estimate Spreadsheets
  - Stage I ICE Screening

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Upcoming Advertisements & Other Studies

Upcoming Advertisements (subject to change)

- MAY: 11-80300 US 119 Bell County
  - Keenan Jones, Catherine Davis
- JUNE: 3-80300 LN 9008 Barren County PEL
  - Brett Duncan, Kenny Carrico
- JUNE: Roadside Barrier Study
  - Steve De Witte, Chad Shive
  - Webinar held 4/25; No Individual Meetings
- ~~JUNE: 5-80201 US 127 Franklin County~~
  - ~~Steve De Witte, TBD~~

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Upcoming Advertisements (subject to change)

- JULY: 5-80210 KY 146 Oldham County
  - Steve De Witte, TBD
- JULY: 12-5020 D12 Rockfall Study
  - Nathan Ridgway, Charlie Dale
- OCTOBER: 8-80202 KY 300 Lincoln County Rockfall
  - TBD
- 1 or more additional studies in D5, elsewhere

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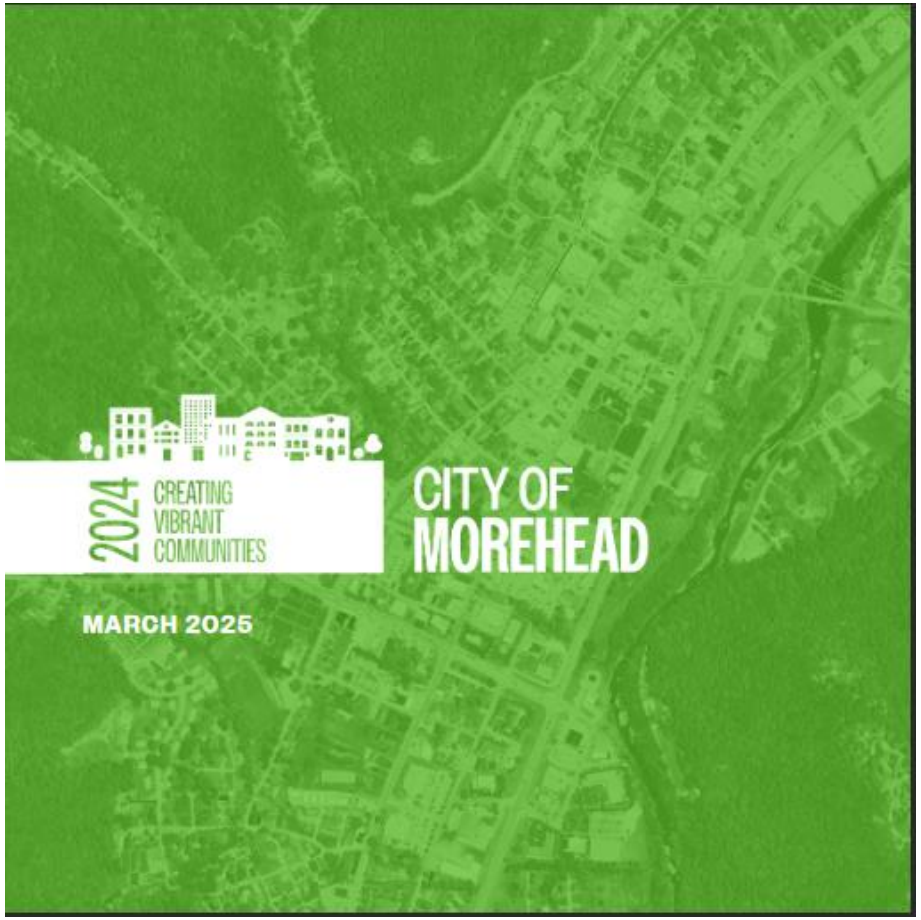
Creating Vibrant Communities



- Pilot of 4 technical assistance reports wrapping up
- Jtown, Glendale, Etown, Morehead
- Lessons Learned
- Potential Future

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Q&A

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How can we make your job easier?

Items to avoid in the planning process (communication flaws, nomenclature)

KA/KAB/KABCO/K-ABC-O Preference for Crash Analysis?

Trends in work type & volume, evolution of transportation planning industry. Digital formats/StoryMaps (less physical printed)?

Increasing number of slots for SW Planning in 2026?

Cross Training between HSIP and Planning to get studies more aligned?

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