

NATIONAL STRATEGY TO REDUCE CONGESTION

# CORRIDORS OF THE FUTURE PHASE II APPLICATION



INTERSTATE 70 DEDICATED TRUCK LANES  
MISSOURI : ILLINOIS : INDIANA : OHIO



## Project Overview

I – 70

Dedicated Truck Lanes

October 28, 2008

OTEC – Columbus, OH

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# I-70 Dedicated Truck Lane Project

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## This Presentation

1. Corridors of the Future Program
2. Project Overview
3. Corridor Conditions  
Congestion, safety, economic growth
4. Separation as a Solution
5. Design and Technology - Concepts
6. 4-State Coalition
7. Next Steps

# 1. Corridors of the Future Program (CFP)

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- CFP is an initiative under USDOT's "National Strategy to Reduce Congestion"
  - Explore innovative financing
  - Improve flow of goods
  - Enhance quality of life
- I-70 one of 6 corridors selected and funded
- \$5 million discretionary grant from FHWA
  - \$2 million to Missouri DOT
  - \$3 million for corridor feasibility study

# 1. Corridors of the Future Program (cont.)

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Selection means USDOT / FHWA will help:

- Facilitate and accelerate development of the corridor
  - Through expedited review and approvals
  - By breaking through institutional and regulatory obstacles
  - By promoting efficient environmental review
- Assist in identifying alternative private sector financing approaches and discretionary funding
- Provide access to DOT experts

<http://www.fightgridlocknow.gov/corridors.htm#overview>



## 2. CFP Project Overview

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- I-70 through MO, IL, IN, OH
- Approx. 800 miles
- Dedicated Truck-Only-Lanes (TOLs)
  - Long-haul focus
  - Reduce congestion
  - Improve safety for trucks and passenger vehicles
- Four state coalition
  - INDOT serves as lead state

# Goal: An Efficient, Reliable and Sustainable World Class Transportation System

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- Primary Objectives:
  - Reduce Congestion
    - Improve Quality of Life
    - Incorporate existing and future ITS
  - Enhance Mobility & Improve Reliability
    - Strengthen and Sustain national and global supply chains.
    - Incorporate information management solutions
  - Improve Safety
    - Minimize crashes
    - Reduce fatalities and injuries

# Goal: An Efficient, Reliable and Sustainable World Class Transportation System

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- Secondary Objectives:
  - Enhance Economic Development
    - Improve Quality of Life
    - Motor carrier productivity
  - Reduce impacts to environment, communities and public health
  - Improve Security
    - Freight/Cargo security
    - National Security: Economics and Military
  - Facilitate Multimodal Integration – all modes
    - Improve access and interchangeability
    - Provide seamless connectivity

# Project Area



Source: Wilbur Smith generated map using National Transportation Atlas Databases (NTAD) 2006 - Bureau of Transportation Statistics

# I-70 Corridor project area connects to:

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## 9 North/South Interstates:

- I-29 and I-35 in the Kansas City, Missouri area
- I-55 in the St. Louis, Missouri area
- I-57 in south central Illinois
- I-65 and I-69 in the Indianapolis, Indiana area
- I-75 north of Dayton, Ohio area
- I-71 in the Columbus, Ohio area
- I-77 near Cambridge, Ohio

## 2 East/West Interstate Connections:

- I-44 and I-64 in the St. Louis, Missouri area
- I-74 in Indianapolis



# I-70 Corridor project area connects to:

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- 17 passenger and air cargo airports
- All 7 class 1 U.S. Railroads (cross or parallel I-70)
- Water ports on the Missouri, Mississippi, and Ohio Rivers

# Intermodal Facilities



Source: Wilbur Smith Generated Map

# 3. Corridor Conditions - Congestion

I-70 faces congestion due to capacity deficiencies

**Table 1-1: Capacity of the I-70 Corridor**

Measure	I-70 Project Area		All US Interstates	
	Urban	Rural	Urban	Rural
Centerline Miles	297 (35%)	550 (65%)	15,373 (32%)	31,474 (68%)
Lane Miles	1416 (38%)	2242 (62%)	84,023 (40%)	128,012 (60%)
MVMT	21,936 (55%)	17,763 (45%)	459,768 (63%)	267,395 (37%)

*Source: WSA Generated Table from HPMS and State Level Data*

# 3. Corridor Conditions - Truck Flows 2035



Source: FHWA FAF 2

# 3. Corridor Conditions - 2030 Urban Area Congestion



Kansas City



Saint Louis



	Urban	Rural
2004 MVMT	55,379	18,527
% of VMT Deficient in 2004	21.55%	0.00%
2030 MVMT	98,173	35,651
% of VMT Deficient in 2030	73.05%	43.90%
Growth	77.27%	92.43%



Indianapolis



Dayton



Columbus

Source: Wilbur Smith Associates, 2007

### 3. Corridor Conditions - Congestion through Major Cities

Table 1-2: I-70 Congestion through Major Cities (2003)

Metropolitan Area	Travel Delay (1,000 Hours)	Excess Fuel Consumed (1,000 Gallons)	Overall Congestion Cost in Million \$
Kansas City, KS/MO	13,874	9,095	\$ 235
St. Louis, MO/IL	39,936	26,362	\$ 675
Indianapolis, IN	21,358	14,032	\$ 362
Dayton, OH	4,438	2,836	\$ 75
Columbus, OH	18,550	11,507	\$ 314

Source: TTI Urban Mobility Report, 2004 & 2005

### 3. Corridor Conditions - North and Eastbound Speeds on I-70 lag behind other Midwest corridors

Figure 1-4: 30-Day Average Travel Speeds for 7 Corridors: Northbound and Eastbound



Source: American Transportation Research Institute (ATRI), June, 2006

### 3. Corridor Conditions - South and Westbound Speeds on I-70 lag behind other Midwest corridors

Figure 1-5: 30-Day Average Travel Speeds for 7 Corridors: Southbound and Westbound



Source: ATRI, June 2006

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**Lower travel speeds on I-70 impacts its utilization and “attractiveness” to the trucking industry as a cross-county route.**

Figure 1-14: Estimated National Daily Truck Traffic (2035)



Source: FHWA Freight Analysis Framework (FAF<sup>2</sup>)

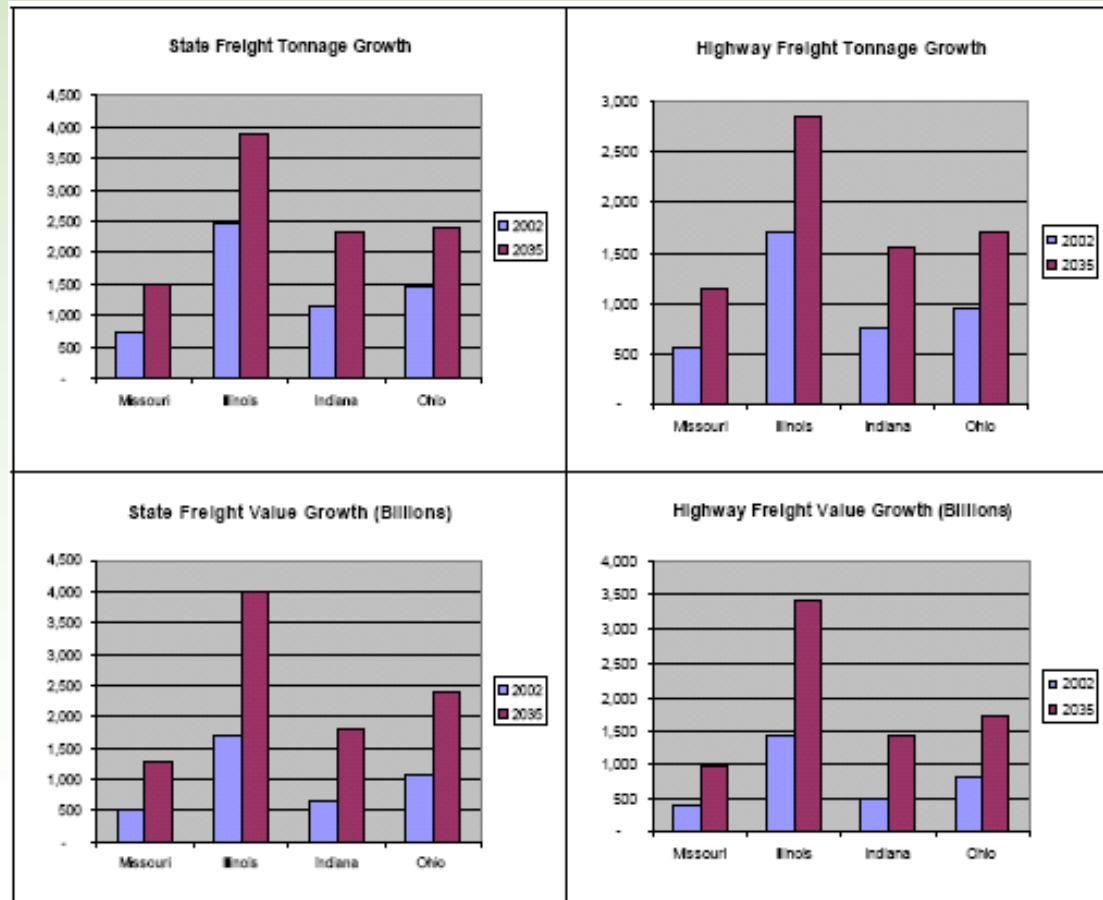
## 3. Corridor Conditions - Safety

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In 2004 – the I-70 project area had:

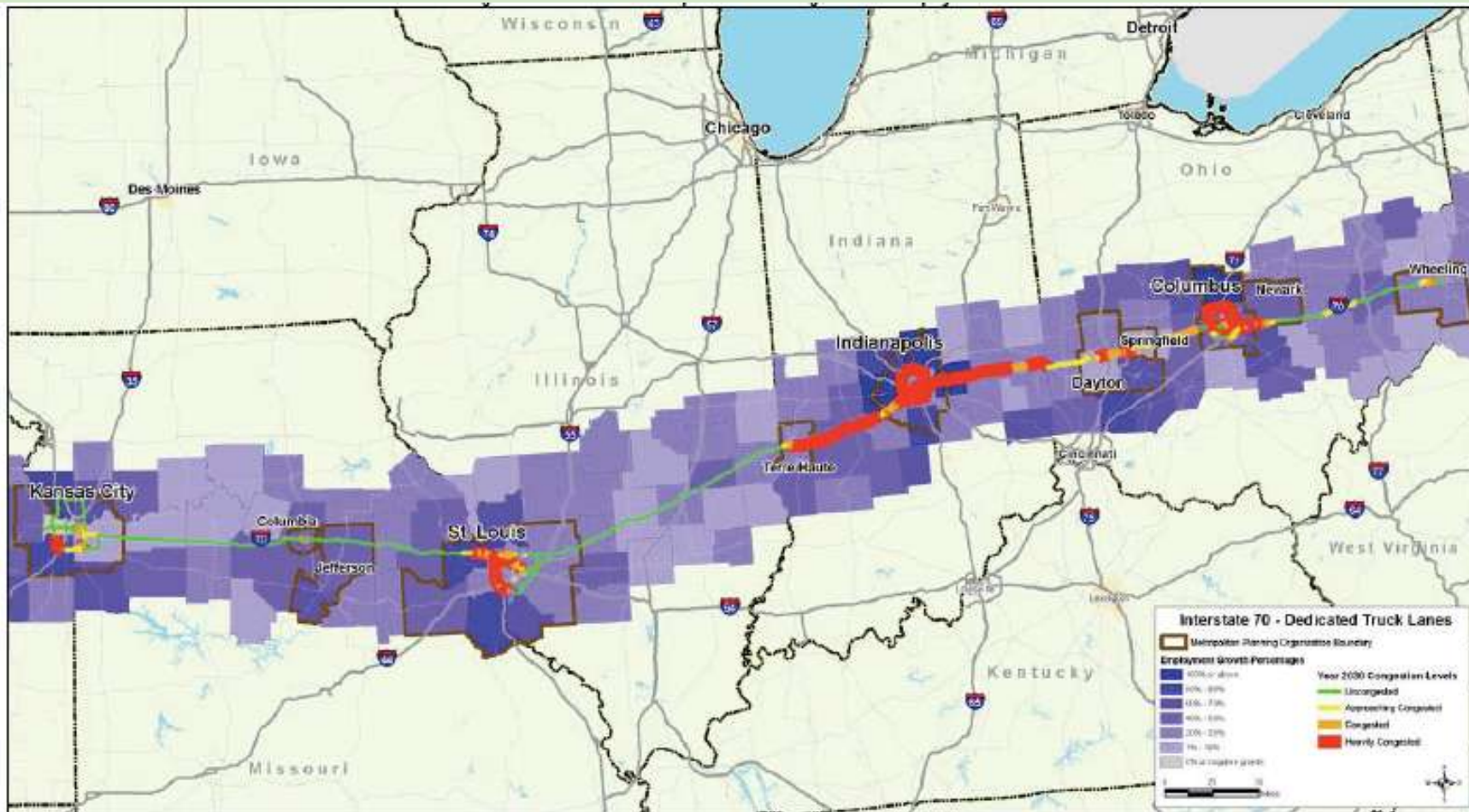
- More than 10,000 crashes
- 18 % were truck involved crashes
  - 36% of the truck involved crashes involved fatalities mainly to passenger car drivers and occupants
- 2.3 million vehicle hours of incident-induced delay

# 3. Corridor Conditions – Economic Growth



Source: FHWA Freight Analysis Framework (FAF<sup>2</sup>)

# 3. Corridor Conditions - 2030 Anticipated Congestion and Employment Growth



Source: Wilbur Smith Generated Map Utilizing 2004 HRMS and Woods and Poole 2006 CEEDS Data

## 4. Separation as a Solution

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Separating trucks from passenger cars

- Improves safety
  - Ex. Conflicts and fatalities will be reduced
- Reduces congestion
  - Ex. vehicles accelerate and decelerate at different speeds

# 5. Design and Technology - Concepts

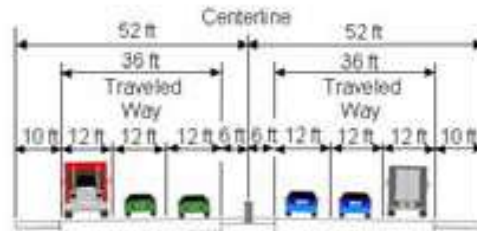


## 5. Design and Technology – Concepts Technology Integration

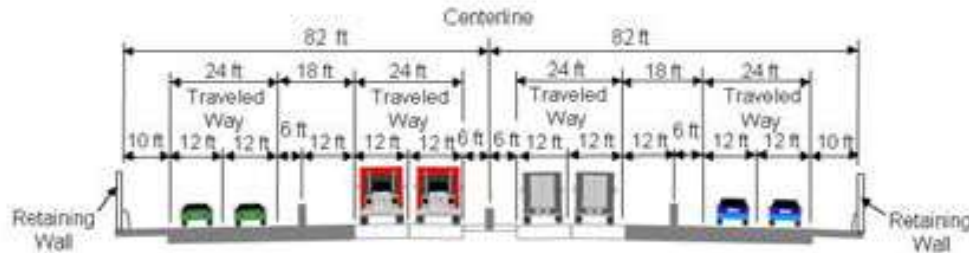
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- ITS
- Advanced Traffic Management Systems
- Traveler Information
- Emergency Management
- Weigh-in-Motion / Virtual Weigh-in-Motion
- Vehicle Infrastructure Integration (VII)
- Electronic Tolling / Congestion Pricing
- Roadside Parking
- Virtual/wireless vehicle & operator inspections

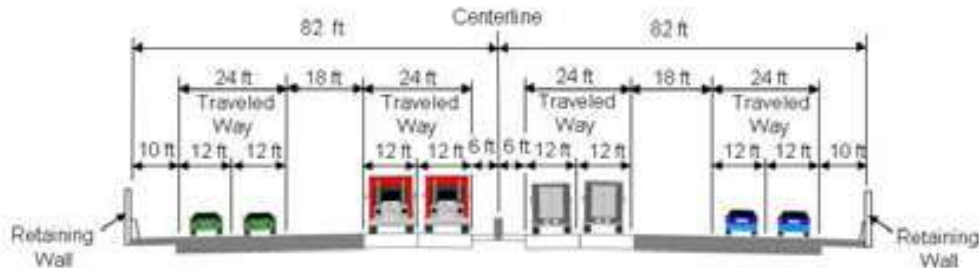
# Urban Typical Section



EXISTING I-70 TYPICAL SECTION THROUGH URBAN SEGMENTS



I-70 TRUCK ONLY CONCEPT TYPICAL SECTION MEDIAN BARRIER SEPERATION

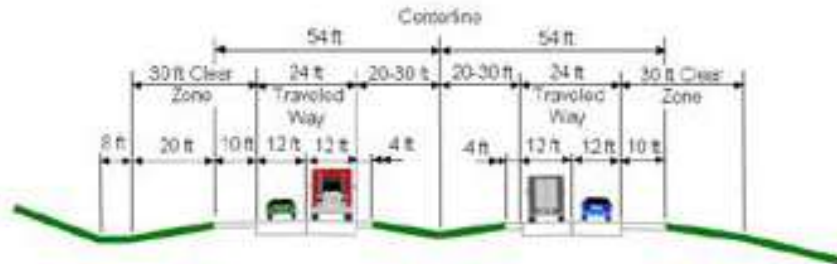


I-70 TRUCK ONLY CONCEPT TYPICAL SECTION 18 FT PAVED SEPERATION

**LEGEND**

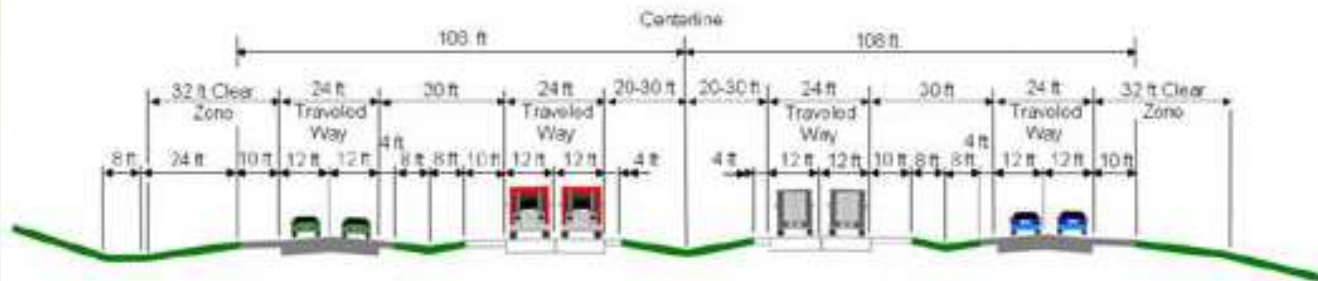
	New Driving Lane		Existing Driving Lane
	New Shoulder		Existing Shoulder

Source: Wilbur Smith concept



EXISTING I-70 TYPICAL SECTION THROUGH RURAL SEGMENTS

Rural Typical Section



I-70 TRUCK ONLY CONCEPT TYPICAL SECTION  
20 TO 30 FT GRASS MEDIAN SEPERATION

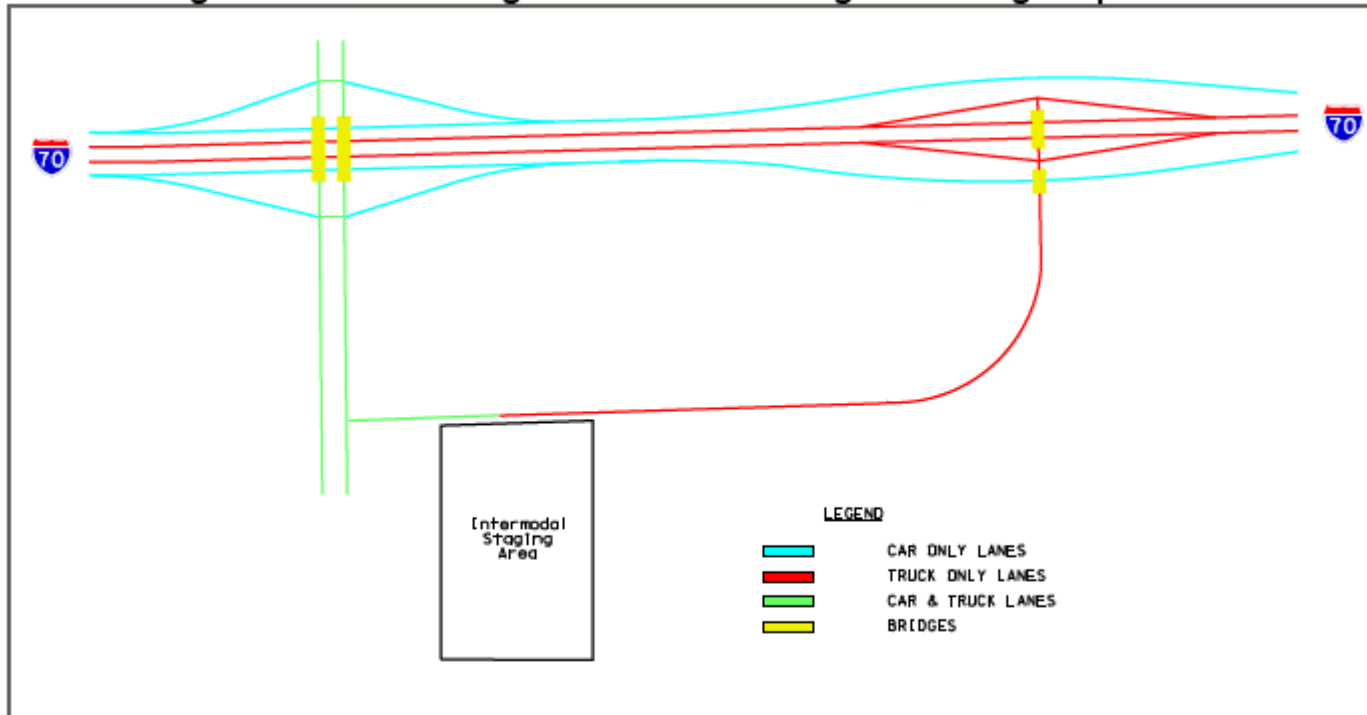
LEGEND

-  Side Slope/Ditch
-  New Driving Lane
-  Existing Driving Lane
-  New Shoulder
-  Existing Shoulder

Source: Wilbur Smith concept

# Interchange Concepts

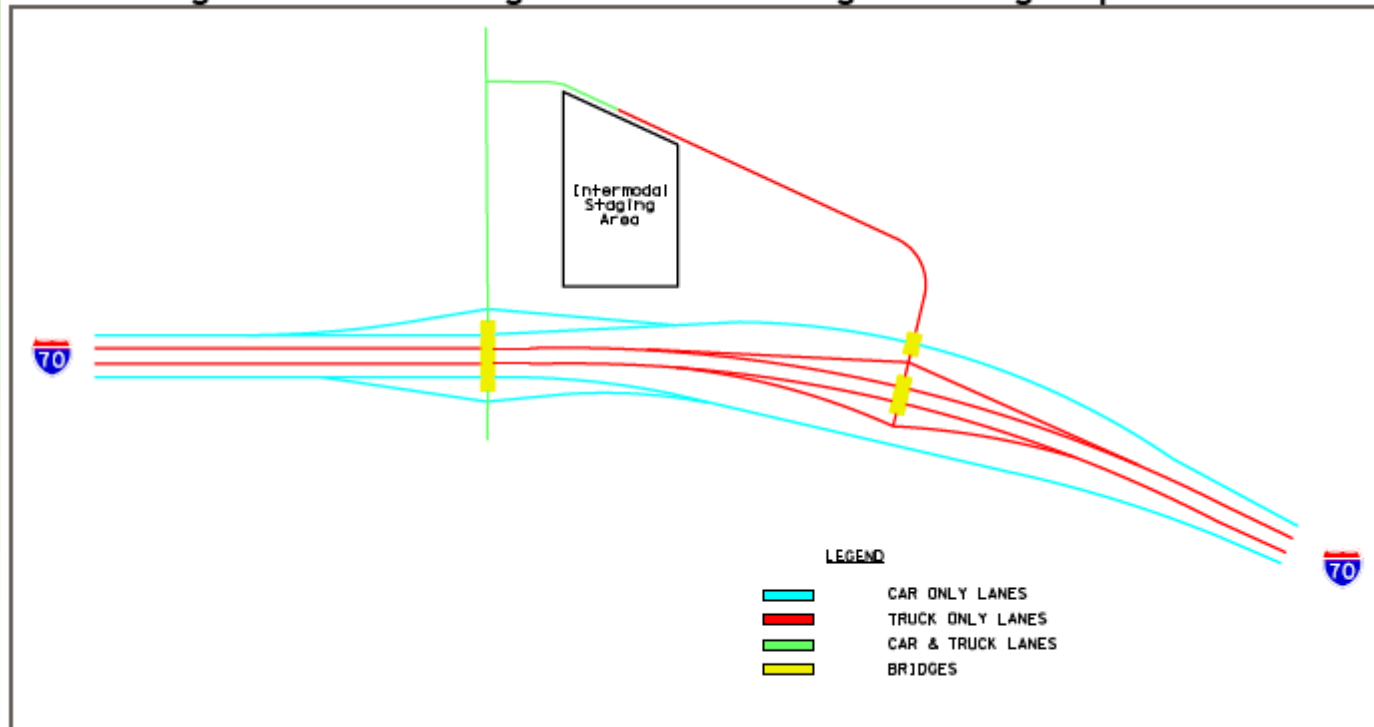
Figure 2-5: Interchange Schematic Showing Interchange Separation



Source: Wilbur Smith concept

# Interchange Concepts

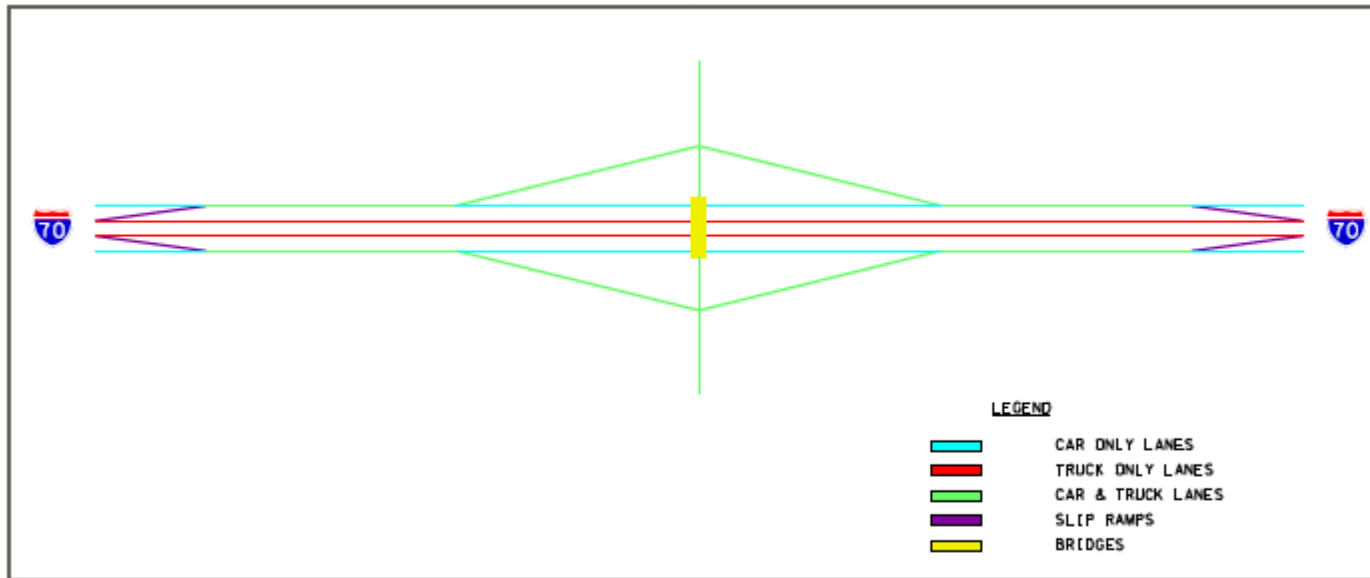
Figure 2-6: Interchange Schematic Showing Interchange Separation



Source: Wilbur Smith concept

# Interchange Concepts

Figure 2-7: Interchange Schematic Showing Slip Ramp



Source: Wilbur Smith concept

## 6. MO, IL, IN, OH-State DOT Coalition

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- DOTs were partners in submission of CFP Phase 2 Application
- Now need to:
  - Create / formalize I-70 Corridor Coalition
  - Develop Corridor of the Future Program Development Agreement (CFPDA) with all states and FHWA (similar to a MOU)
  - Agree to next steps and schedule

# 7. Next Steps

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- Establish Corridor Coalition via CDA & MOU
- Identify Key Players:
  - Oversight Council (State DOT CEOs)
  - Steering Committee (State DOT “key” group)
  - Stakeholders
    - Elected officials and MPO leaders along corridor, major businesses, trucking industry, transportation leaders, etc.
  - Staffing – “Technical Advisory Committee”
    - Representatives from DOTs, MPOs, Major cities
  - Consulting help needed
    - Determine need / role (management, coordination, technical)

## 7. Next Steps (continued)

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- Agree on goals and needed actions
- Agree and sign the CDA – September 2008
- Agree and sign the MOU – September 2008
- Agree on use of funding
  - Feasibility study – what it includes:
    - Purpose and need document
    - Initial environmental analysis
    - Conceptual design – cost estimates
    - Technology integration
    - Financing options
    - Legislative changes needed
    - Public information and involvement
  - Coordination with MODOT project



# Political Issues

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- Financing & Funding Source(s)
  - Public-private Partnership?
  - Public Toll Road?
  - Free access roadway?
- Routing *through or around* metro areas
- Standardization: Size & Weight limits for LPVs
- Limited CMV access on/off facility
- No commodity and/or industry restrictions
  - Full commercial use.
- Significant land acquisition for r/w expansion

# Internal Issues

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- Maintaining cohesive multi-state coalition
- Consistent user assessment plan:
  - IF tolled, then single fee for use
- Standardized:
  - Weights & Lengths for LPVs
  - CMV speed limits
- Truck parking:
  - Staging & breakdown facilities
  - Public – private – shared responsibility?
  - CMV parking facilities

# I-70 Coalition Team

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- Kathy Harvey, Missouri
- Dick Smith, Illinois
- Keith Bucklew, Indiana
- Howard Wood, Ohio
- Tony Furst, FHWA



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## THANK YOU

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