What Moves You Arizona

let's talk. let's listen. let's decide.

A Transportation Plan for 2035

Technical Advisory Committee II

July 14, 2010

Needs Assessment

- Don Vary

Purpose

- Key technical input to the Plan
- Estimate "full" engineering needs
- Input to Alternative Investment Choices

Approach

- Definitions:
  - Attain "State of Good Repair" for transportation assets (Preservation)
  - Improve functionality/safety (Modernization)
  - Grow the system to serve anticipated growth (Expansion)
- Focus on ADOT's system
- Expressed in base 2009 dollars

Inputs

- Minimum tolerable conditions
- Improvement standards
- Improvement costs
- ADOT data

25-Year Needs - Sources

- Data sources
  - ADOT HPMS (highway) database
  - ADOT NBI (bridge) file
- Highways
  - Expansion (new) – current studies (bqAZ)
  - Preservation, Modernization, Widening HERS-ST (FHWA)
- Bridges – NBIAS (FHWA)

25-Year Needs - Sources

- Other Modes
  - Freight study
  - Aviation study
  - Intercity rail passenger study

Needs Summary

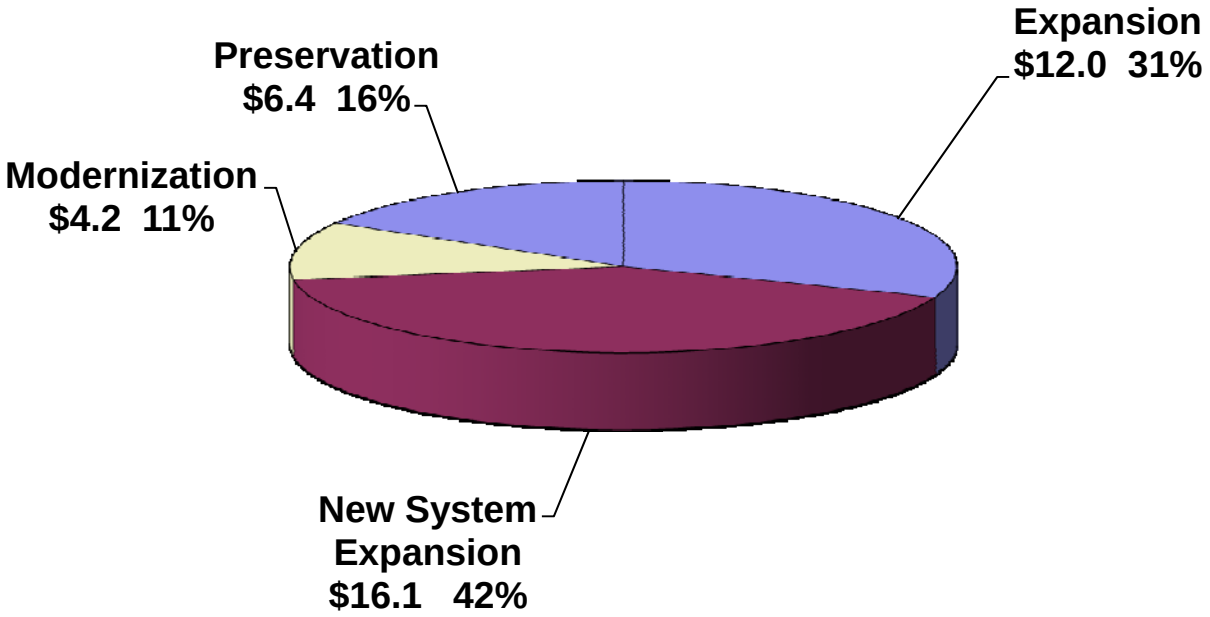
- Highways -- $40.1 B
  - Existing roadways -- $22.6 B
  - New roadways -- $16.1 B
  - Bridges -- $1.4 B
- Passenger Rail -- $1.4 B
- Freight Rail -- $0.5 B
- Aviation -- $9.7 B
- Total -- $51.7 B

Highway Needs – $38.7 B

Total Expansion	$ 28.1
Expansion of Existing System	$ 12.0
New System Expansion	$ 16.1
Modernization	$ 4.2
Preservation	$ 6.4
Total	$ 38.7

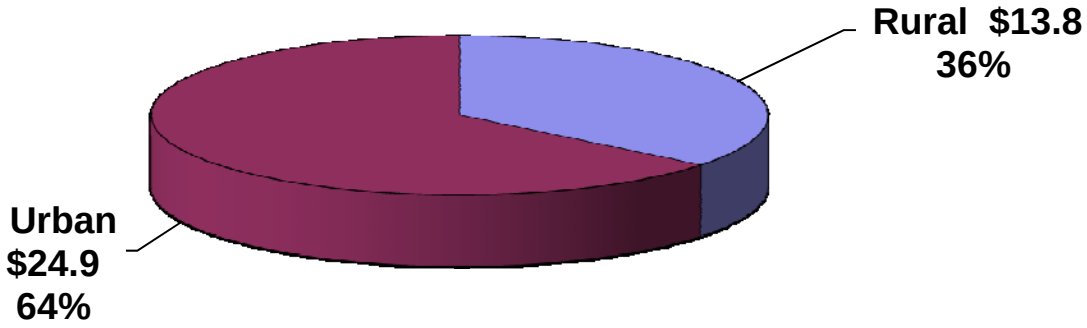
Existing / Future Highway Needs

Highway Needs by Type of Improvement (by Cost)
TOTAL NEEDS = $38.7 billion

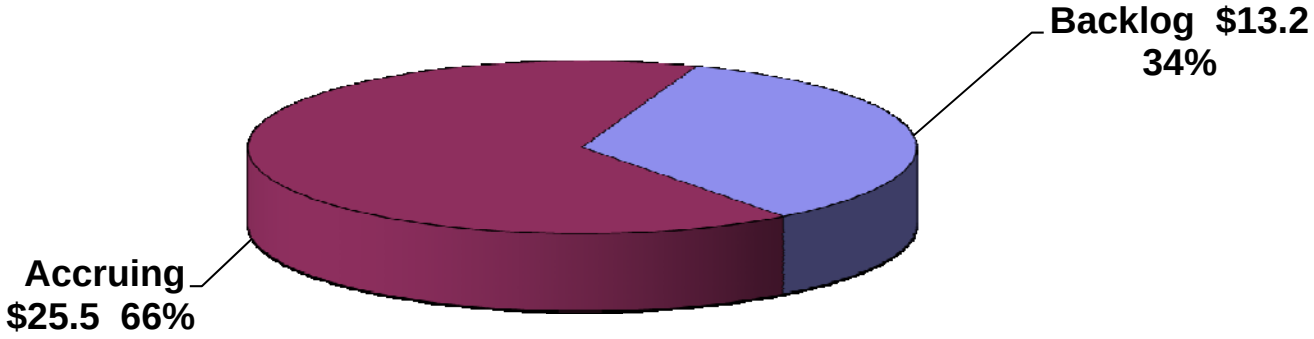


Highway Needs

Highway Needs by Area Type (by Cost)
TOTAL NEEDS = $38.7 billion



Highway Needs by Backlog/Accruing (by Cost)
TOTAL NEEDS = $38.7 billion



Extensive, Recurring System Improvement

Initial Mileage	6,953
Initial Lane-Miles	19,952
Center Line Miles Improved	8,139
% of CL Miles Improved	117%
Lane-Miles Improved	28,668
% of LM Improved	144%
Lane-Miles Added	1,967
% LM Added	10%

Extensive, Recurring System Improvement

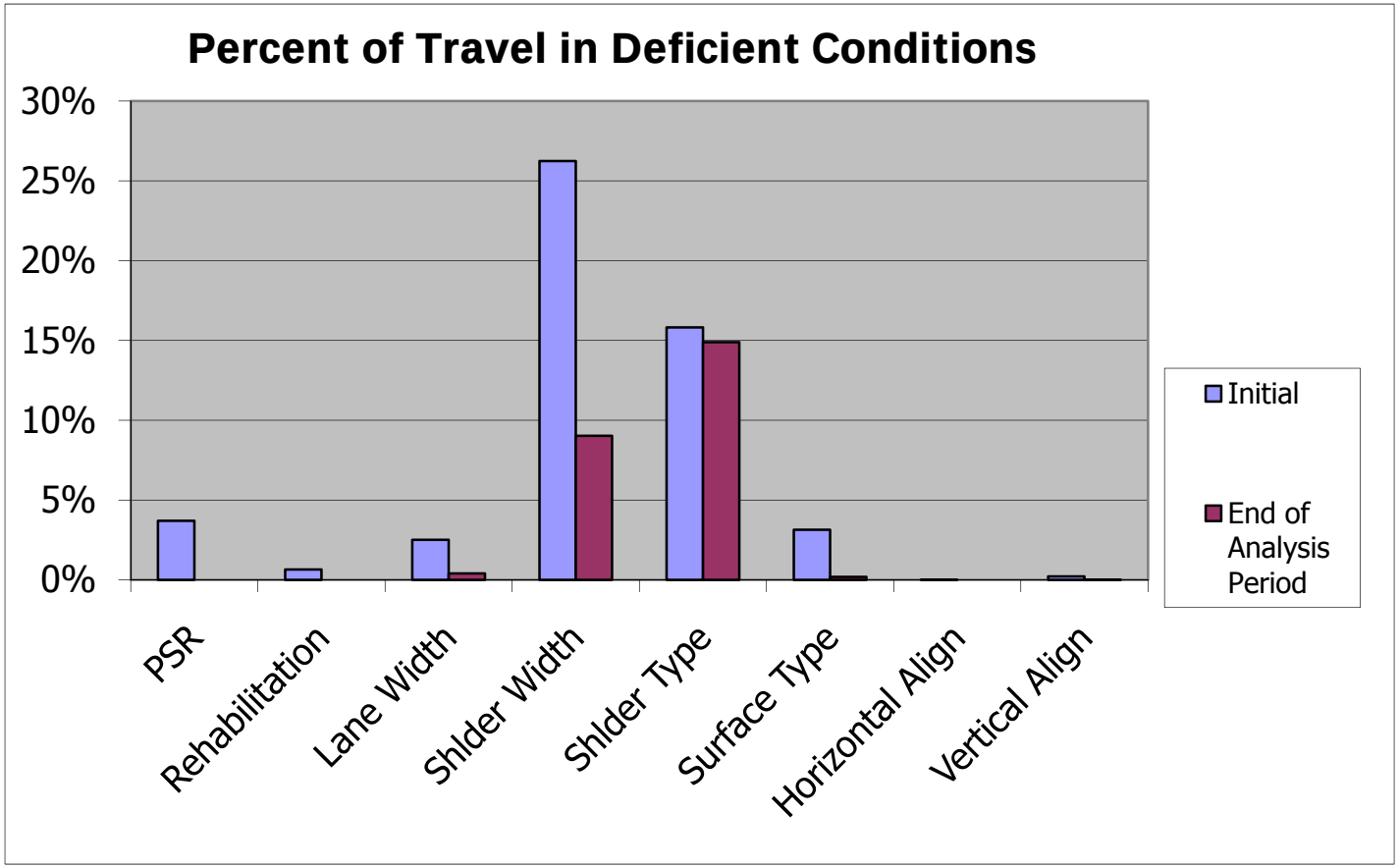
Number of times centerline miles are improved over 25 years

1.52 Interstates and Expressways
1.04 Principal Arterials
1.08 Minor Arterials
1.12 Collectors

New Highway Expansion - $16.1 B

- Sources
  - bqAZ
  - Framework studies
  - ADOT Strategic Plan
  - STIP
  - Critical needs studies
  - MPO LRTPs
- Criteria
  - Within 25-year timeframe
  - A "fundamental" need

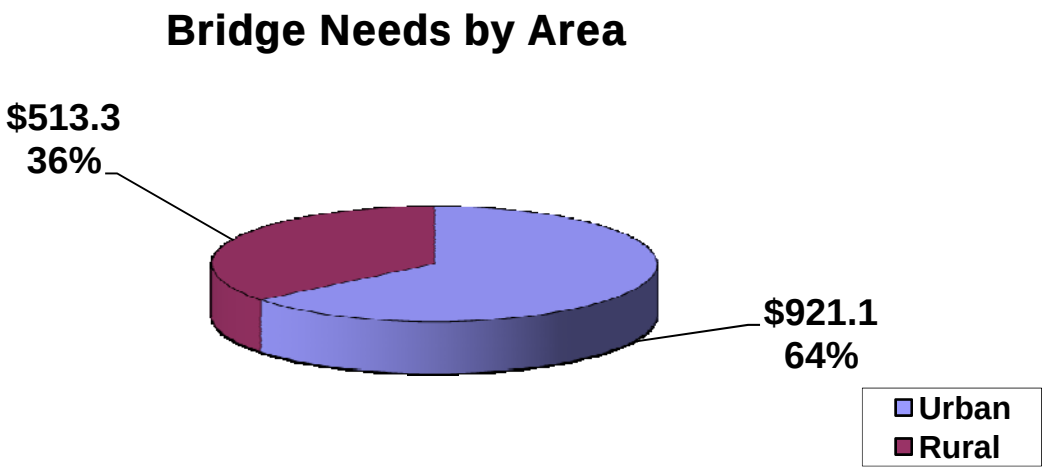
Highway Investment Outcomes

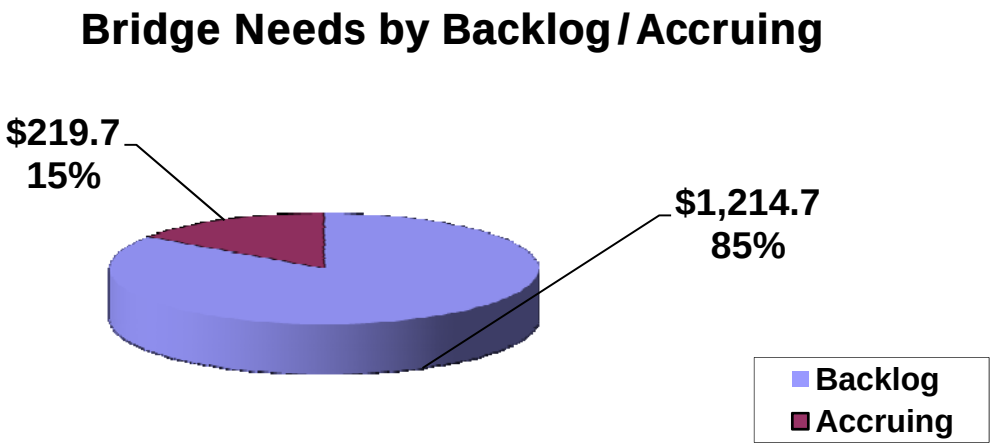


Bridge Needs - $1.4 B

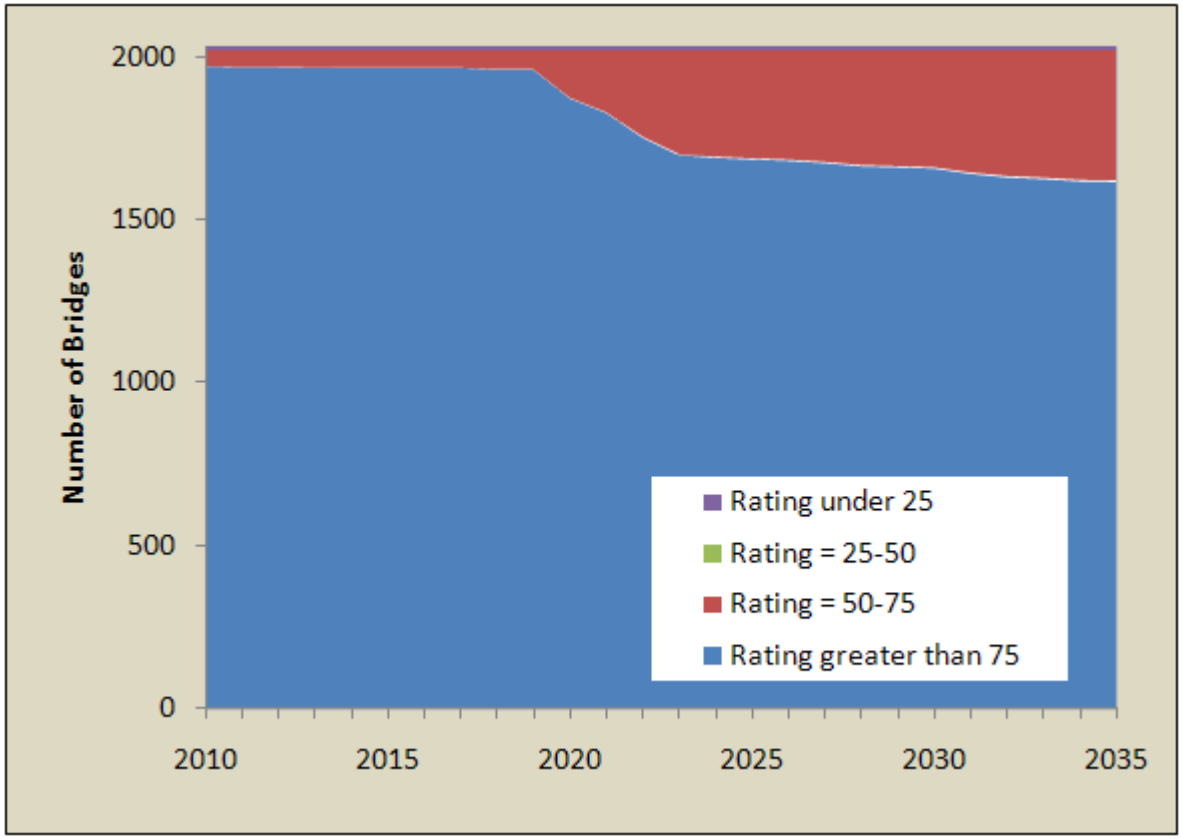
	Backlog	Accruing	Total
Replacement	$1,123.4	$104.0	$1,227.4
Modernization	$82.7	$20.5	$103.2
Maintenance & Rehab	$8.6	$95.2	$103.8
Total	$1,214.7	$219.7	$1,434.4

Bridge Needs





Bridge Sufficiency Ratings



Rating of 50 or Below = Replacement Eligibility

System End State is in Very Good Condition

Other Intercity Modes

- Intercity Passenger
  - Phoenix-Tucson: $800 M - $1.0 B
  - Commuter Rail: $50-$400 M
  - AMTRAK: $12.5 M
- Freight Rail - $200-$500 M
- Aviation - $9.7 B

Baseline Revenue Forecast

- Michelle Maggiore

Baseline Forecast

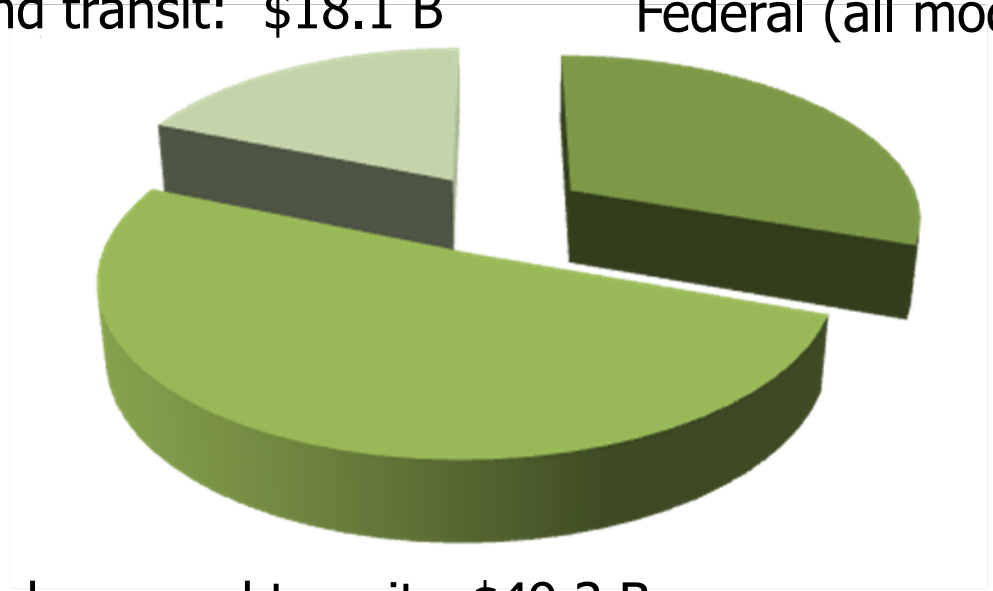
- Estimates Arizona's future "potential" transportation revenues based on historic trends
- Applies conservative growth rates
- Assumes current state revenue-generating structure
- Considers implications of 80-20 federal to state match

25-Year Revenues

Total baseline revenues: $96.9 B
(current dollars)

Local highway and transit: $18.1 B

Federal (all modes): $29.5 B



State highway and transit: $49.3 B

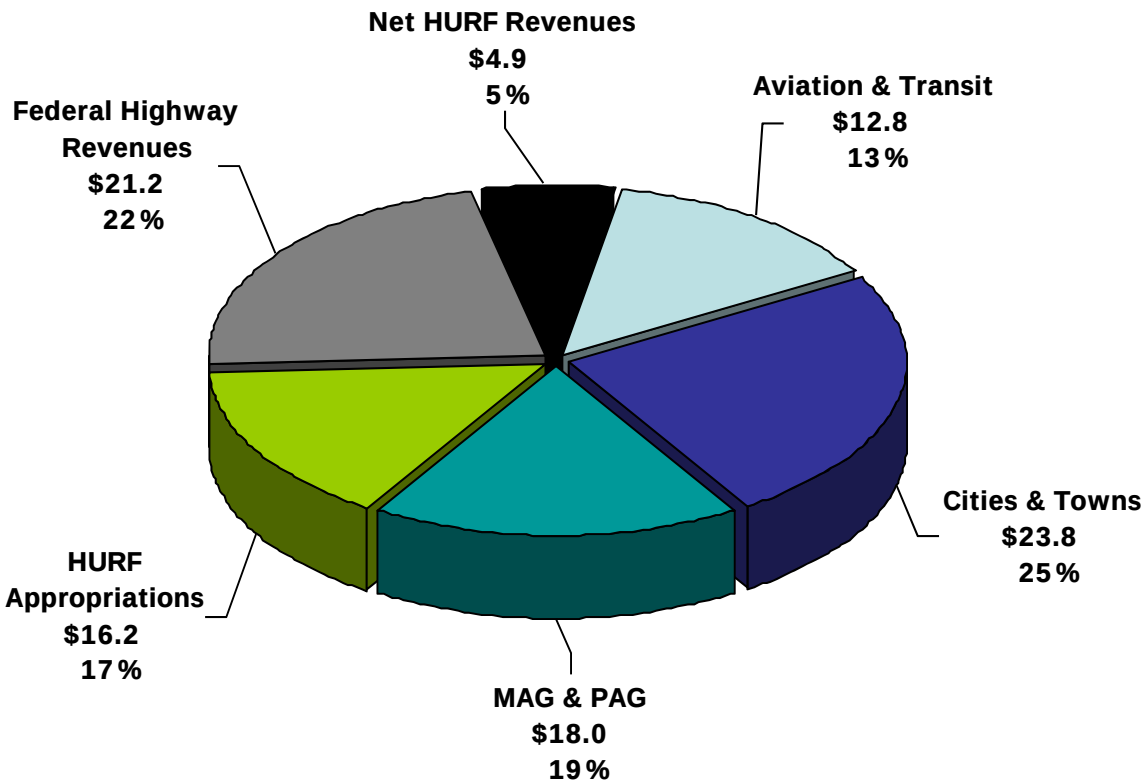
Where it all goes …

Baseline Funding, FY 2010-2035 and Projected Disbursements, Current Dollars, Billions

Source	Federal Highway, Transit, Aviation	State Highway Revenues (HURF)	State Transit LTAFII	State Aviation	Local Highway and Transit (RARF)	TOTAL
Revenue Baseline	29.5	48.5	0.01	0.8	18.1	$96.9
MAG/ PAG	(2.4)	(3.6)				
HURF Statutory		(40.0)				
Transit and Aviation	(5.9)		(.01)	(.8)	(18.1)	
ADOT Discretionary	**21.2**	**4.9**				**$26.1**

Transportation Funding Distribution FY 2010 – FY 2035

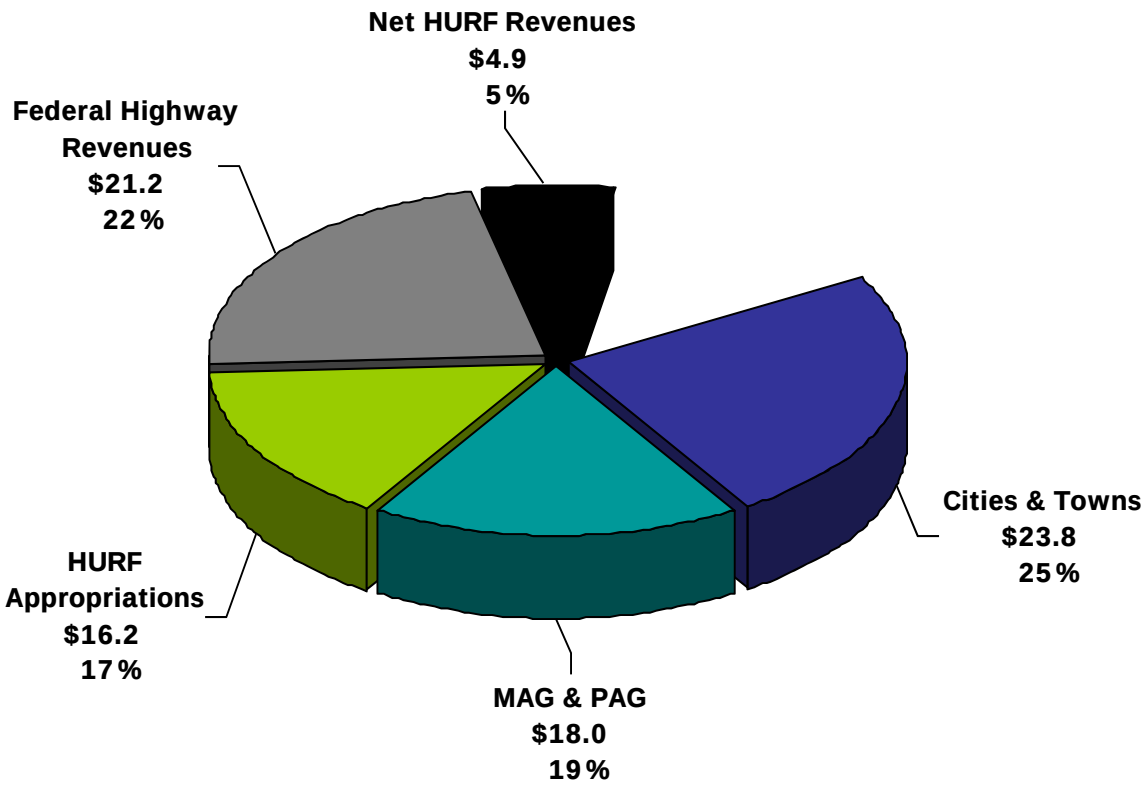
Total = $96.9 B



Forecast Net ADOT Discretionary Funding: $26.1 Billion

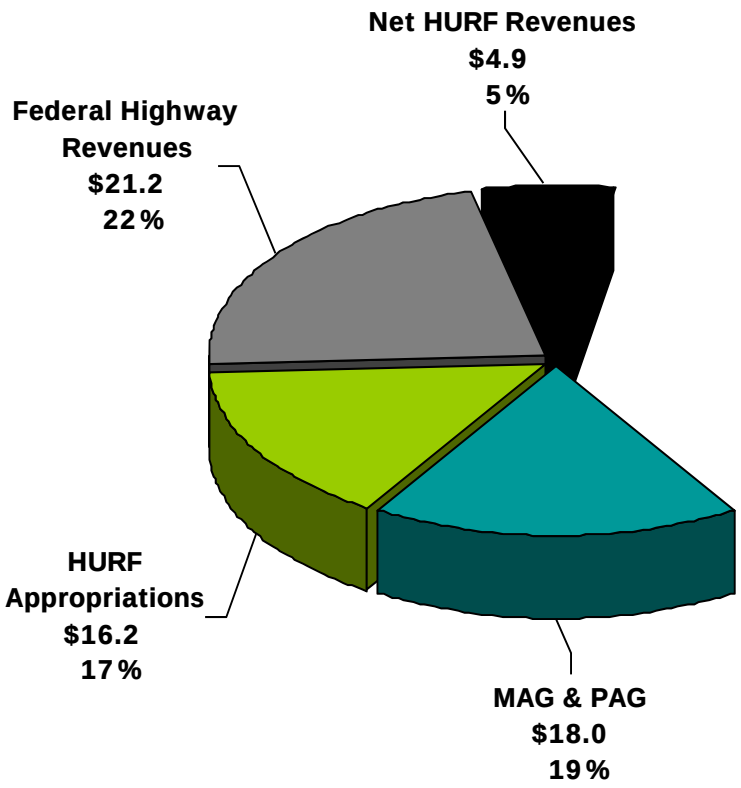
Transportation Funding Distribution FY 2010 – FY 2035

Total = $96.9 B



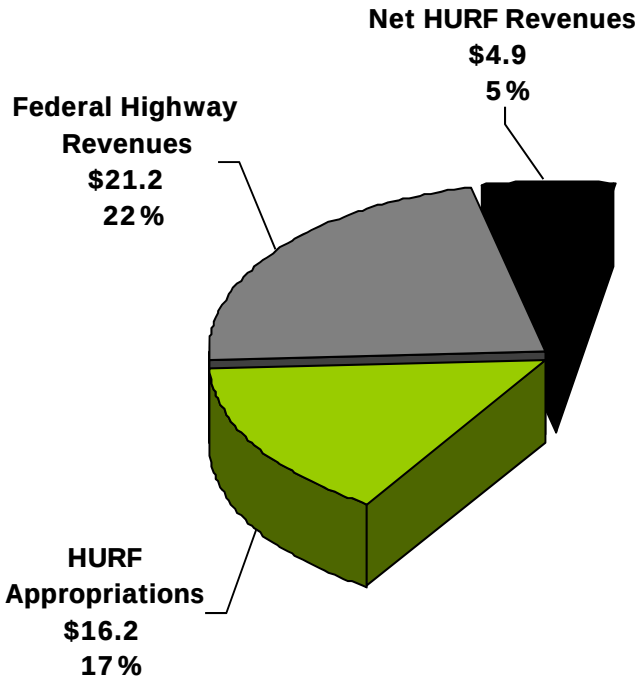
Transportation Funding Distribution FY 2010 – FY 2035

Total = $96.9 B



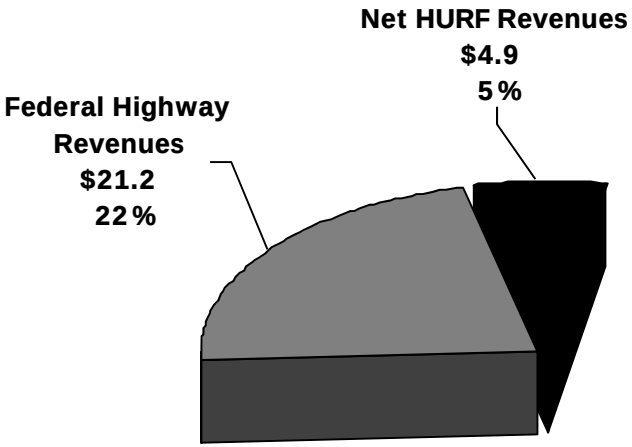
Transportation Funding Distribution FY 2010 – FY 2035

Total = $96.9 B



Transportation Funding Distribution FY 2010 – FY 2035

Total = $96.9 B



Forecast Net ADOT Discretionary Funding: $26.1 Billion

But HURF falls short …

- Arizona's transportation program requires 80-20 federal to state share
- "Potential" federal-aid highway revenues available to ADOT total $21.2 B
- $5.3 B from HURF would be needed to match the $21.2 B in federal funds
- HURF revenues are estimated at $4.9 B
- An additional $400 M in HURF is needed to leverage $21.2 B in federal funds

What can HURF "buy"?

- At $4.9 B, HURF supports a $24.5 B program, with $19.6 B federal revenues
- The HURF shortfall means that Arizona will be unable to match more than $1.6 B in federal funds
- Loss of buying power is also a critical factor, estimated at -28.1%

The Bottom Line:

- Total matched 25-year ADOT program = $24.5 B
  - $4.9 HURF
  - $19.6 federal
- 25-year matched program in base year dollars = $17.6 B
- Arizona will leave $1.6 B in federal funds on the table
- Arizona's revenue gap is very large!

25-Year Revenue Gap

Revenue = $17.6 Billion

Highway Needs = $40.1 Billion

Revenue Elements

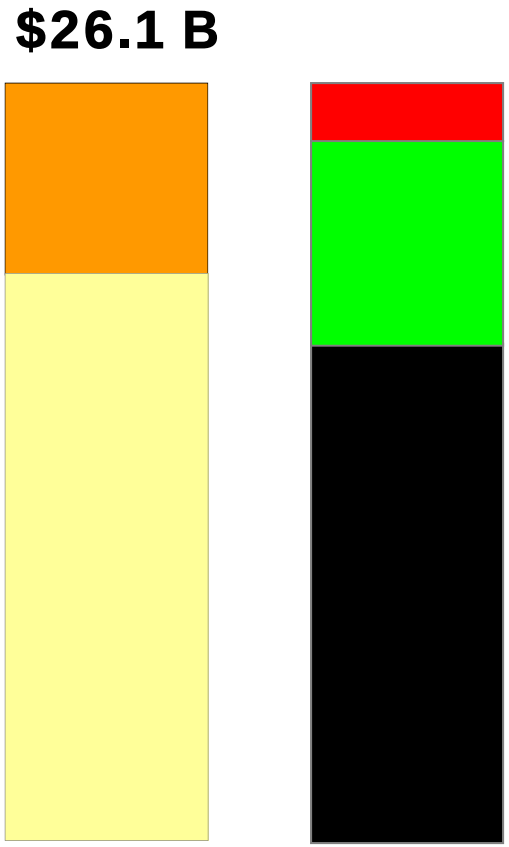
Federal = $21.2 B

State (HURF) = $4.9 B

Lost Federal aid = $1.6 B

Lost Buying Power = $6.9 B

Net Program = $17.6 Billion



Public Participation

Teresa Welborn

- Background
- Status

www.whatmovesyouarizona.gov