

Integrated Transportation Plan

JIM Briefing 12 - 9 - 14



Meeting Objectives

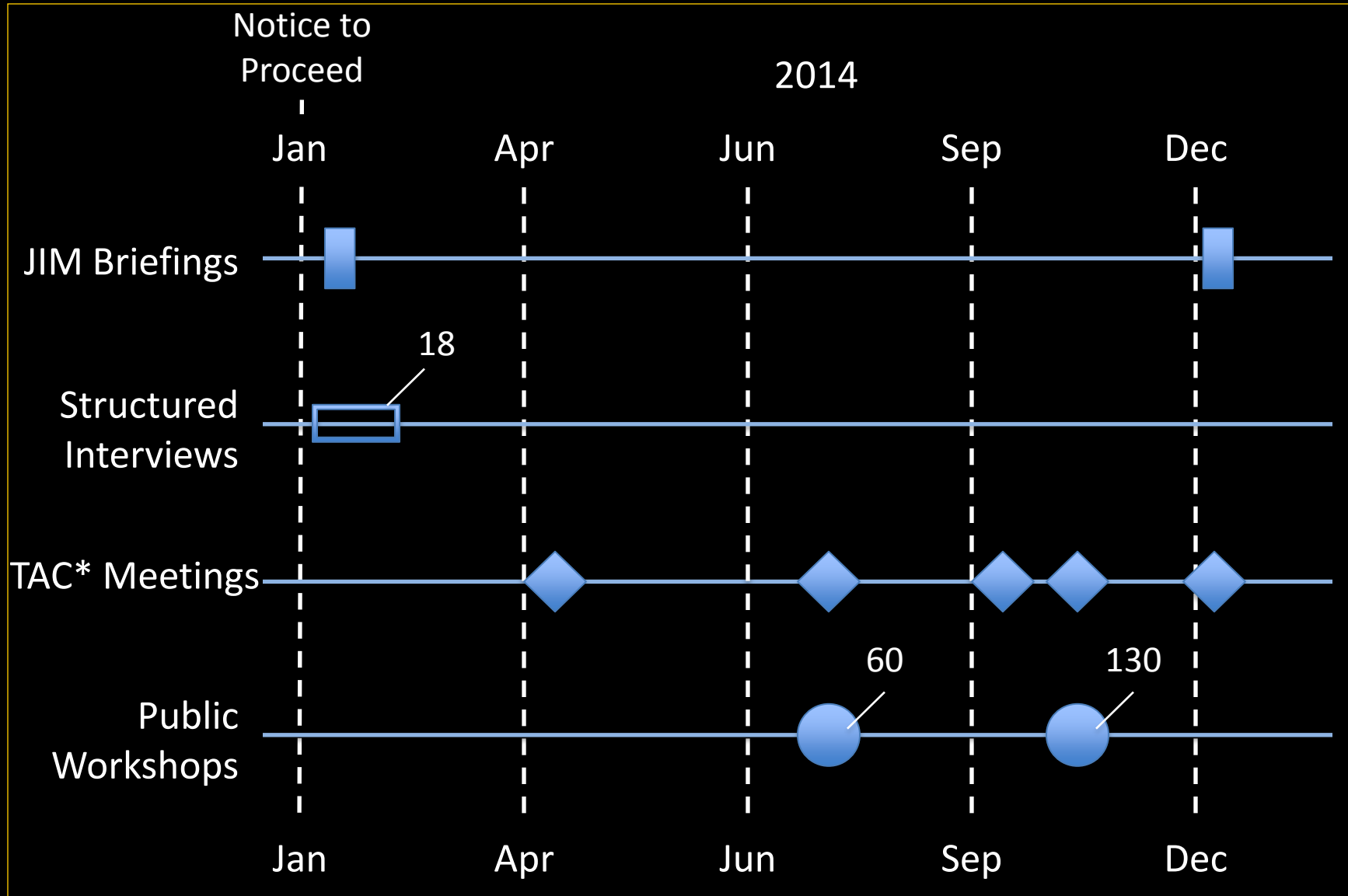
- Provide thorough briefing for elected leaders
- Preview implementation recommendations
- Discover issues, concerns, missing elements
- Set stage for adoption process

Agenda

- Plan Development Process
- Structure and Approach
- Indicators and Benchmarks
- Baseline Scenario
- Plan Scenario
- Implementation
- Revenue

Plan Development Process

Plan Development Process



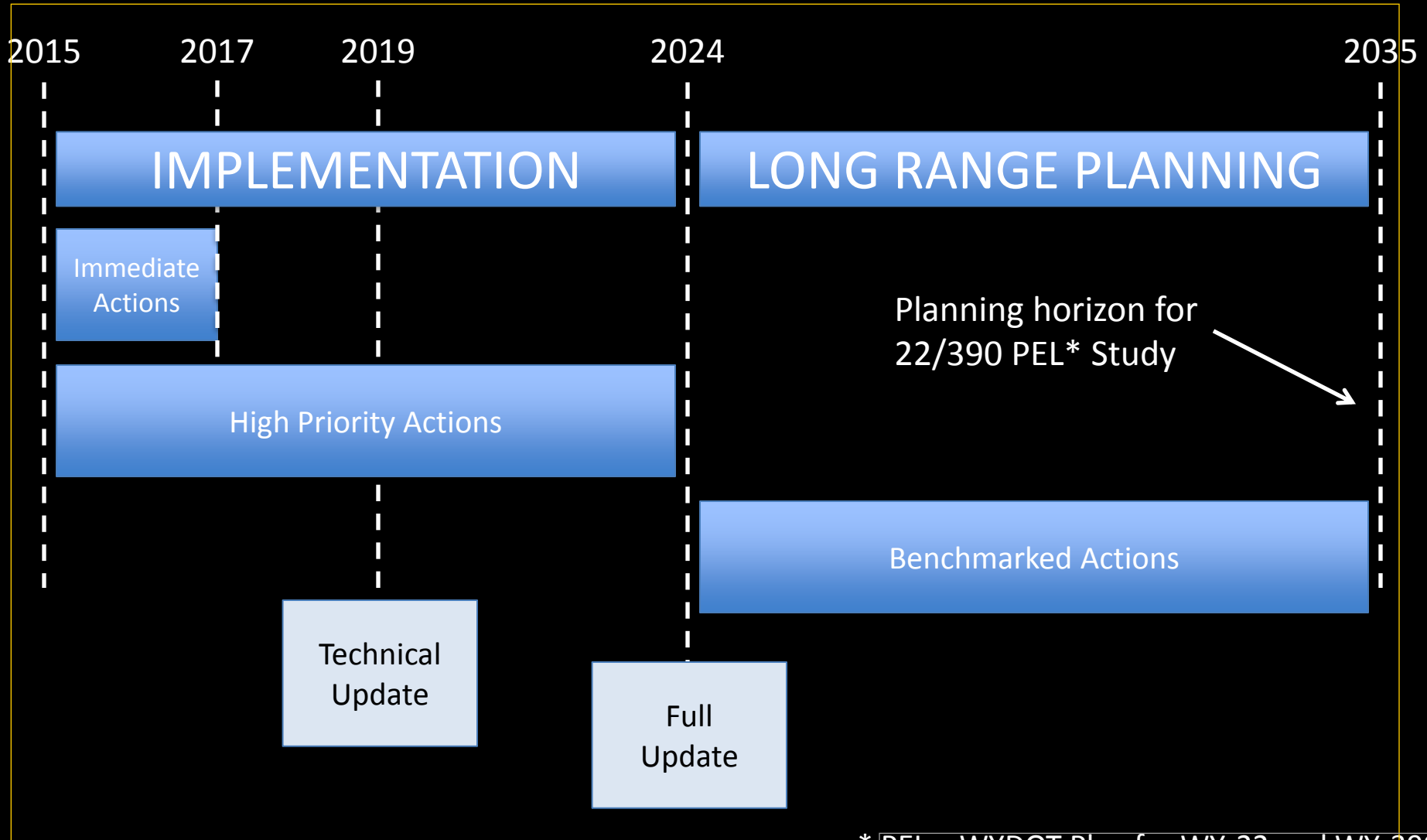
* TAC = technical advisory committee

Structure and Approach

Technical Advisory Committee (TAC) Guidance

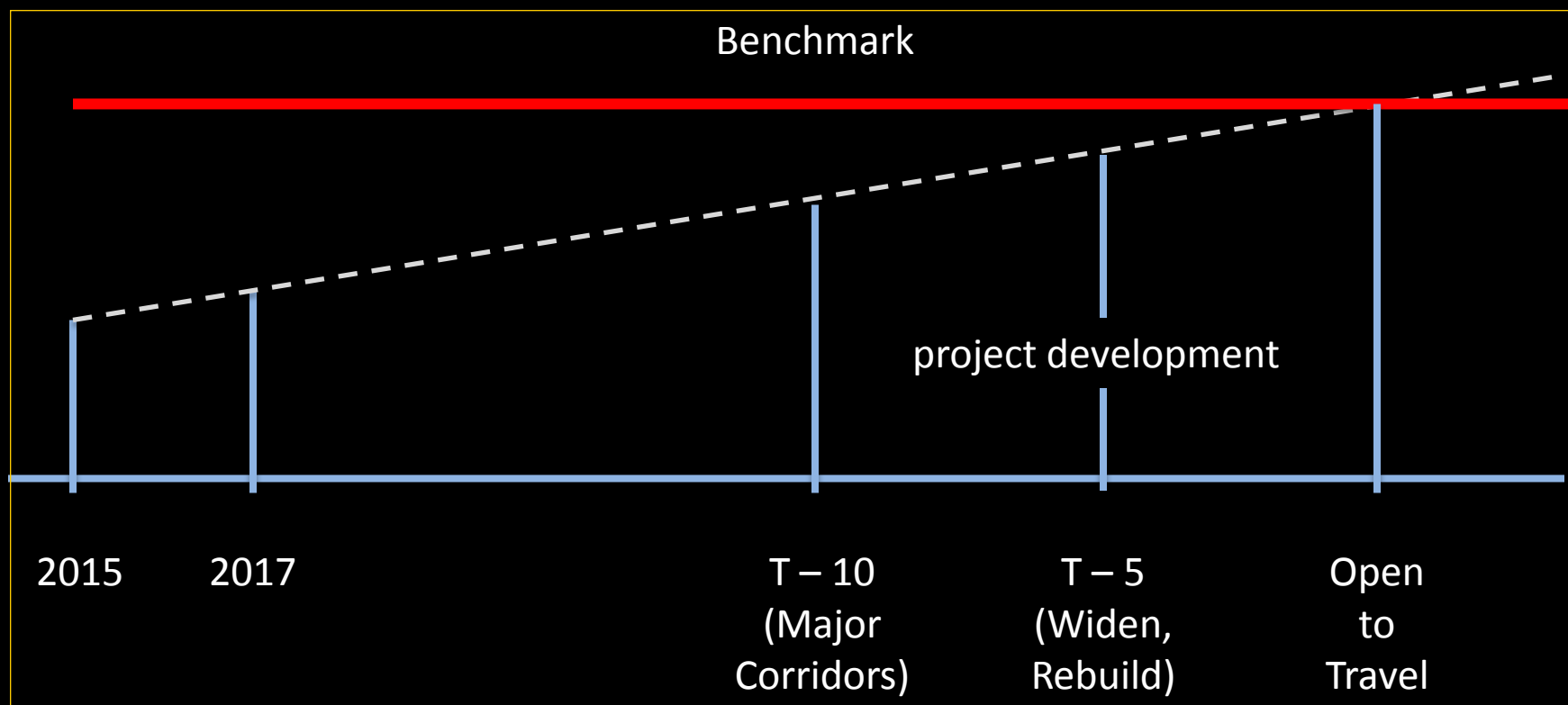
- Base the Integrated Transportation Plan on adopted Comprehensive Plan
 - Policies are already set
 - Focus on strategic implementation
- Simplify analytical process
- Make information transparent and accessible
- Rely on a lean, focused public process

Planning Horizons

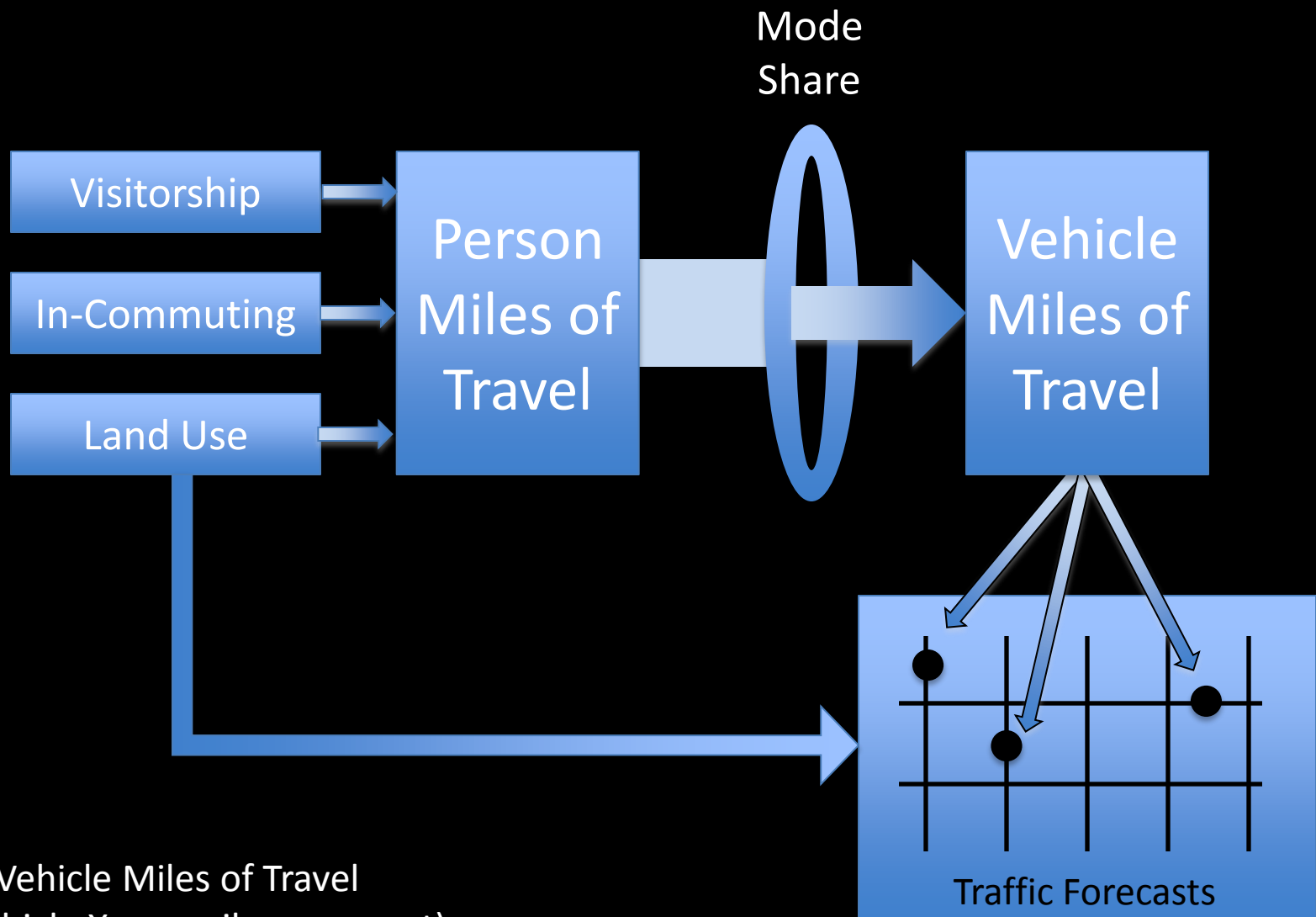


* PEL = WYDOT Plan for WY-22 and WY-390

Strategic Approach to Major Projects

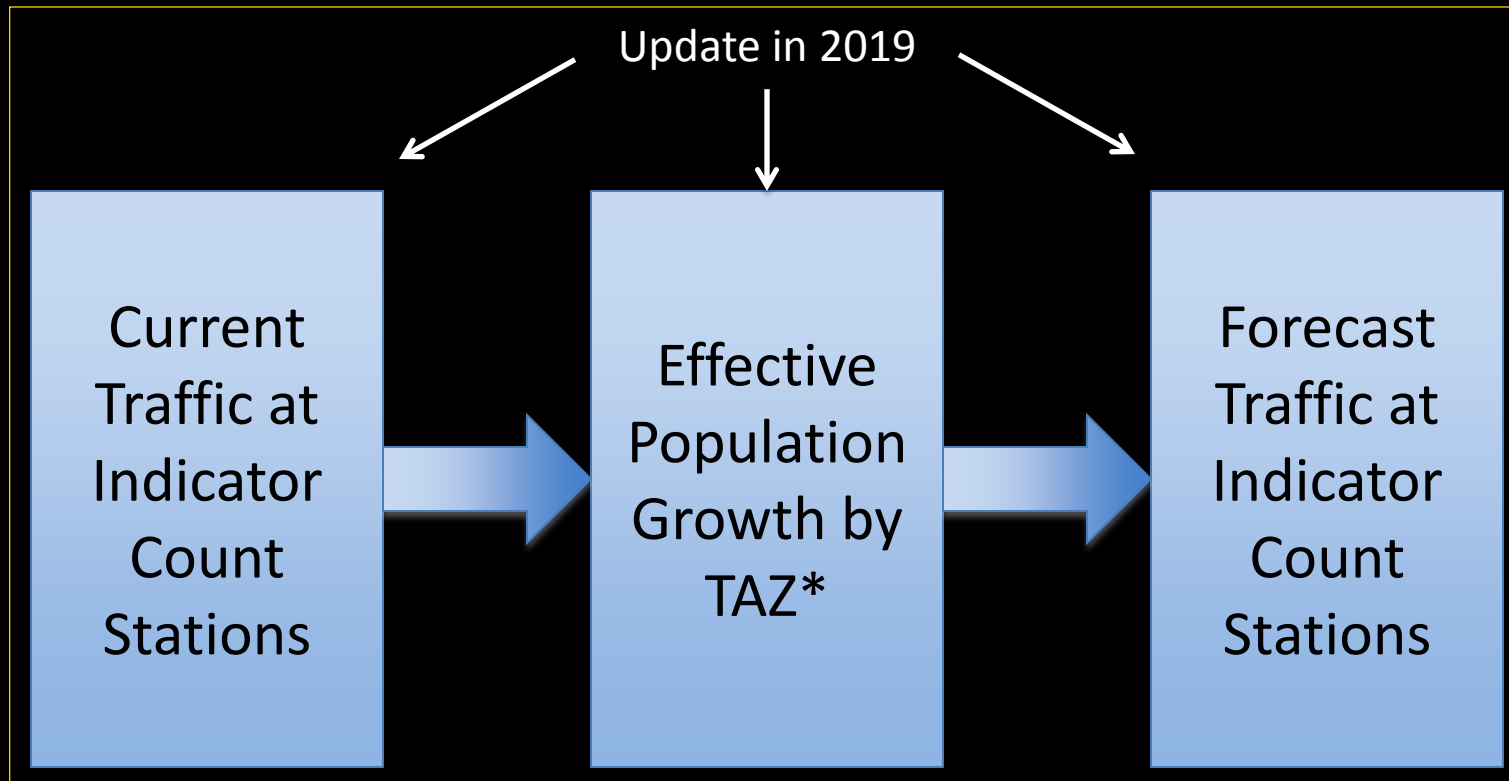


VMT Model (update in 2019)



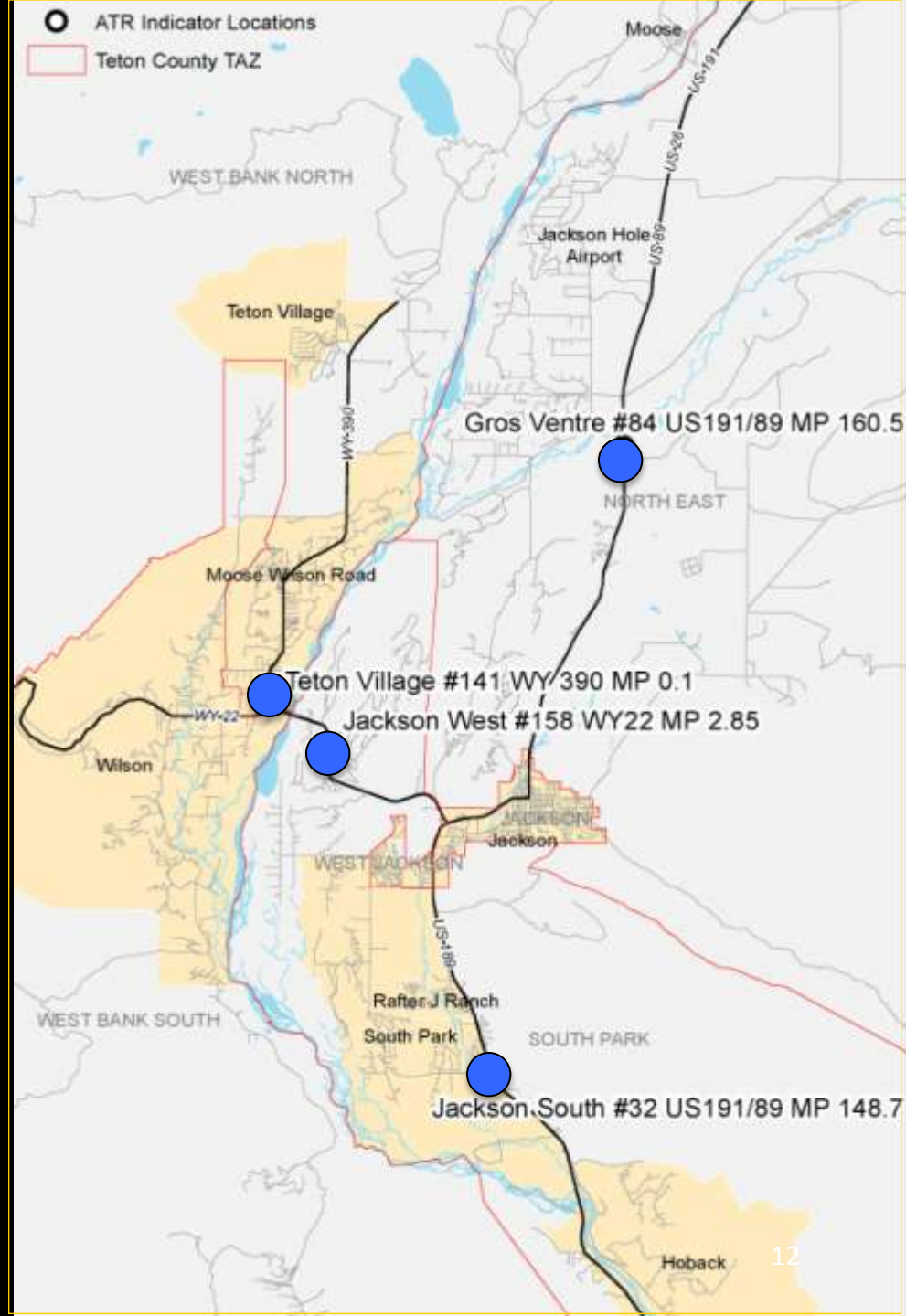
VMT = Vehicle Miles of Travel
(one vehicle X one mile = one vmt)

Traffic Benchmarks Model



Traffic Indicator County Locations

WYDOT Permanent
Traffic Recorder Locations



Indicators and Benchmarks

Month

Jackson/Teton ITP Dashboard

Year

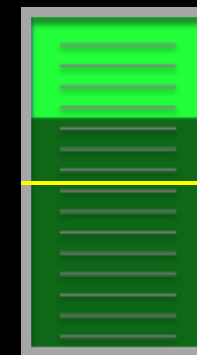


Vehicle Miles



Person Miles

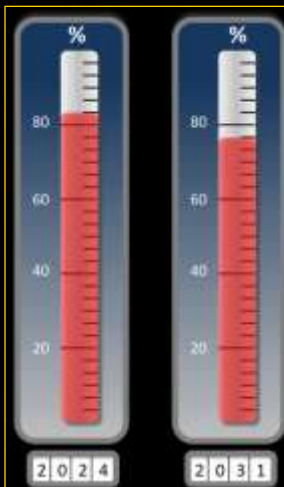
Transit Ridership



2014

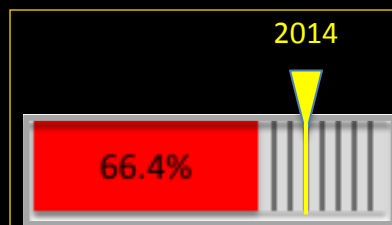
DAILY TRAVEL

CAPITAL
BENCHMARKS

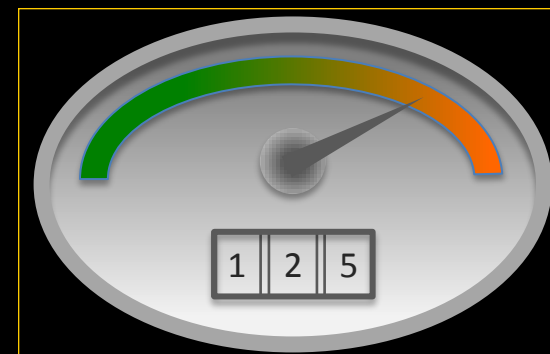


WY-390

US-26



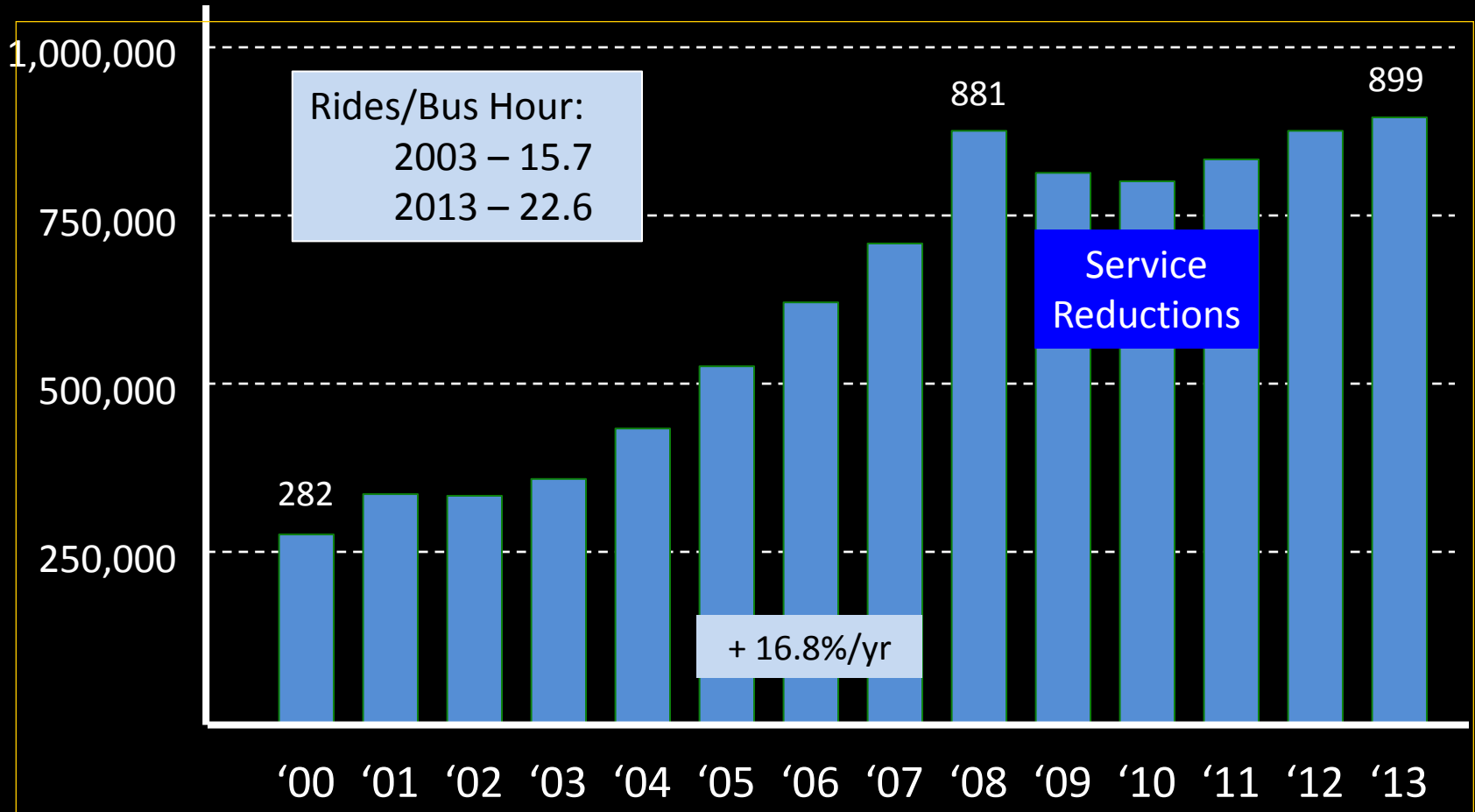
SOV MODE SHARE



WILDLIFE HIGHWAY MORTALITY

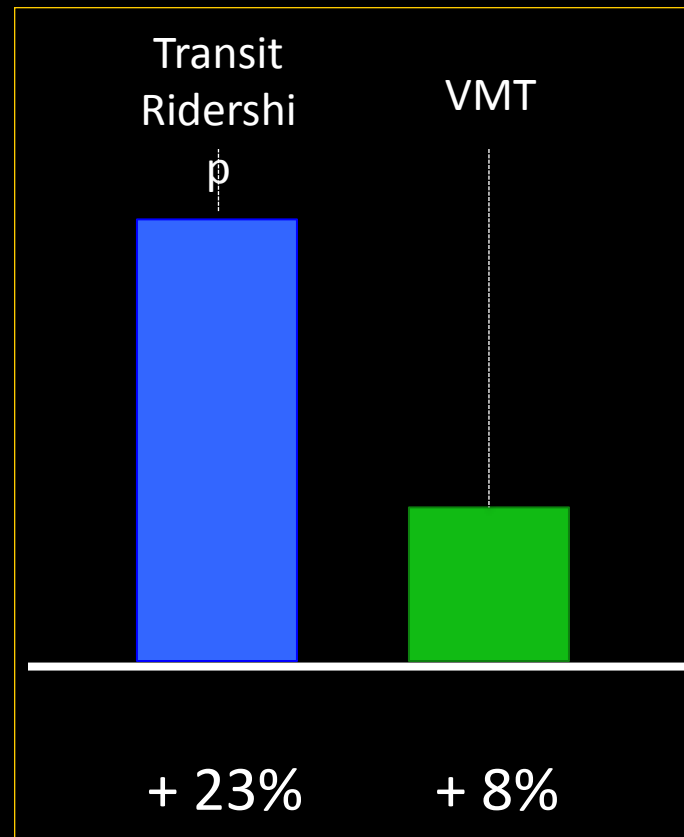
Transit Ridership Trend

(Annual Boardings)

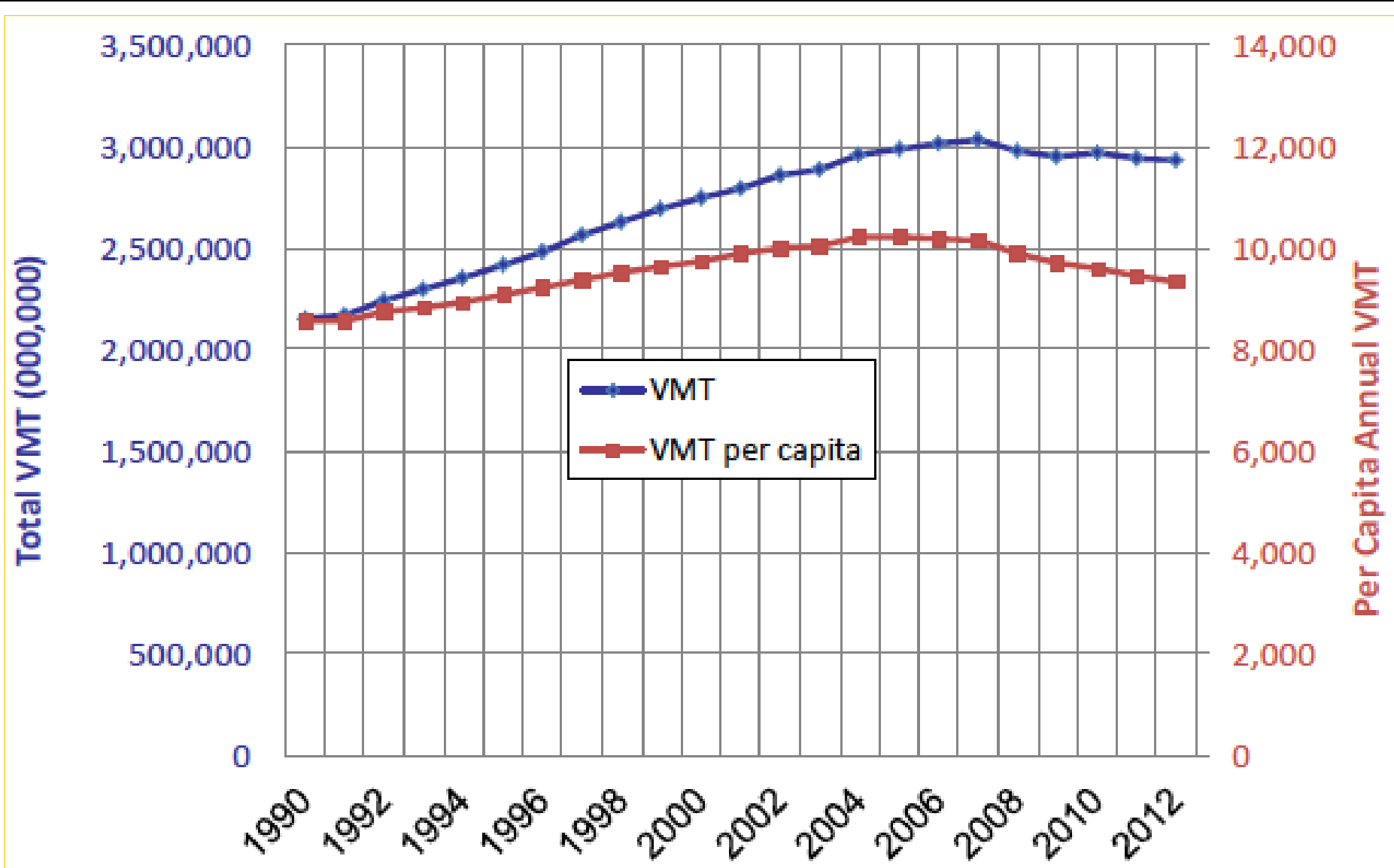


Growth in VMT & Transit Ridership

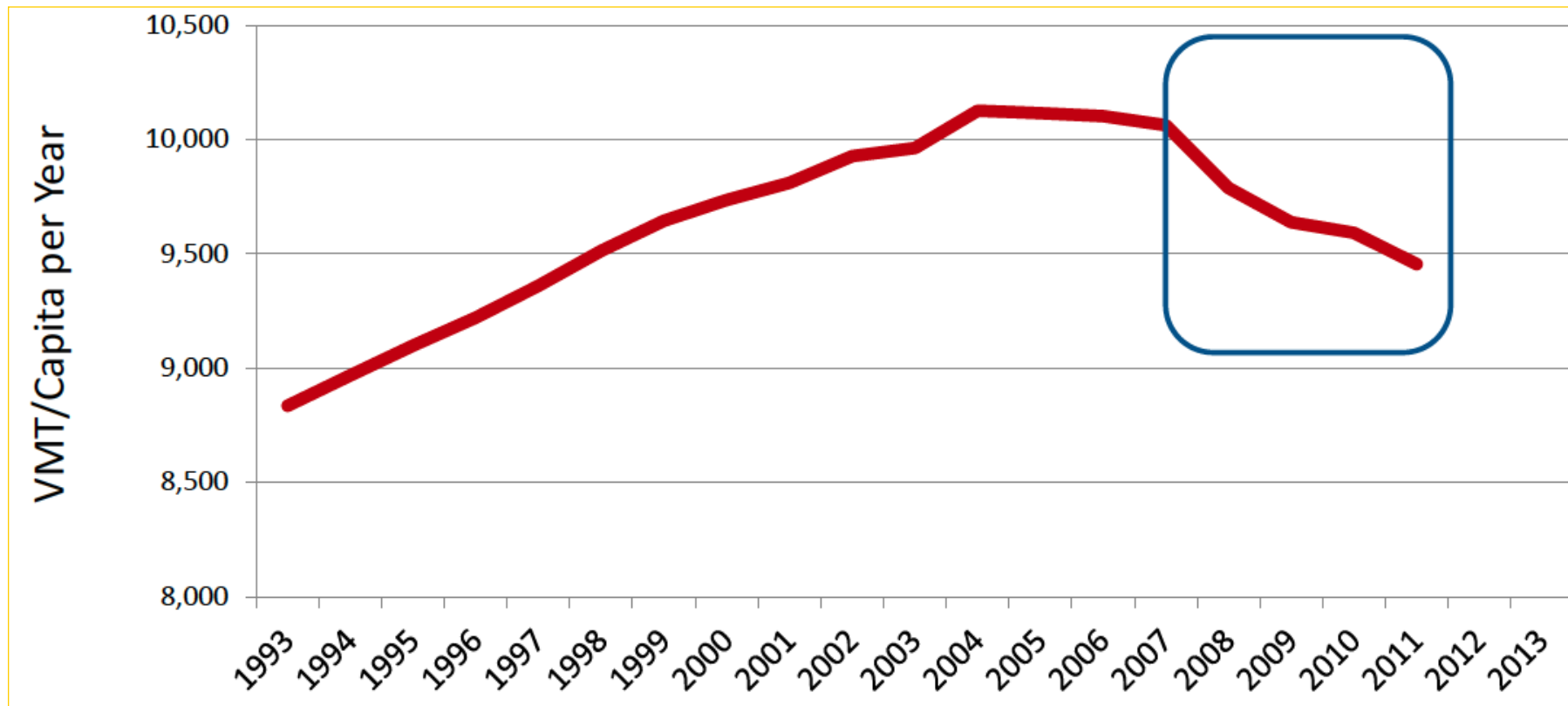
United States 2000 - 2012



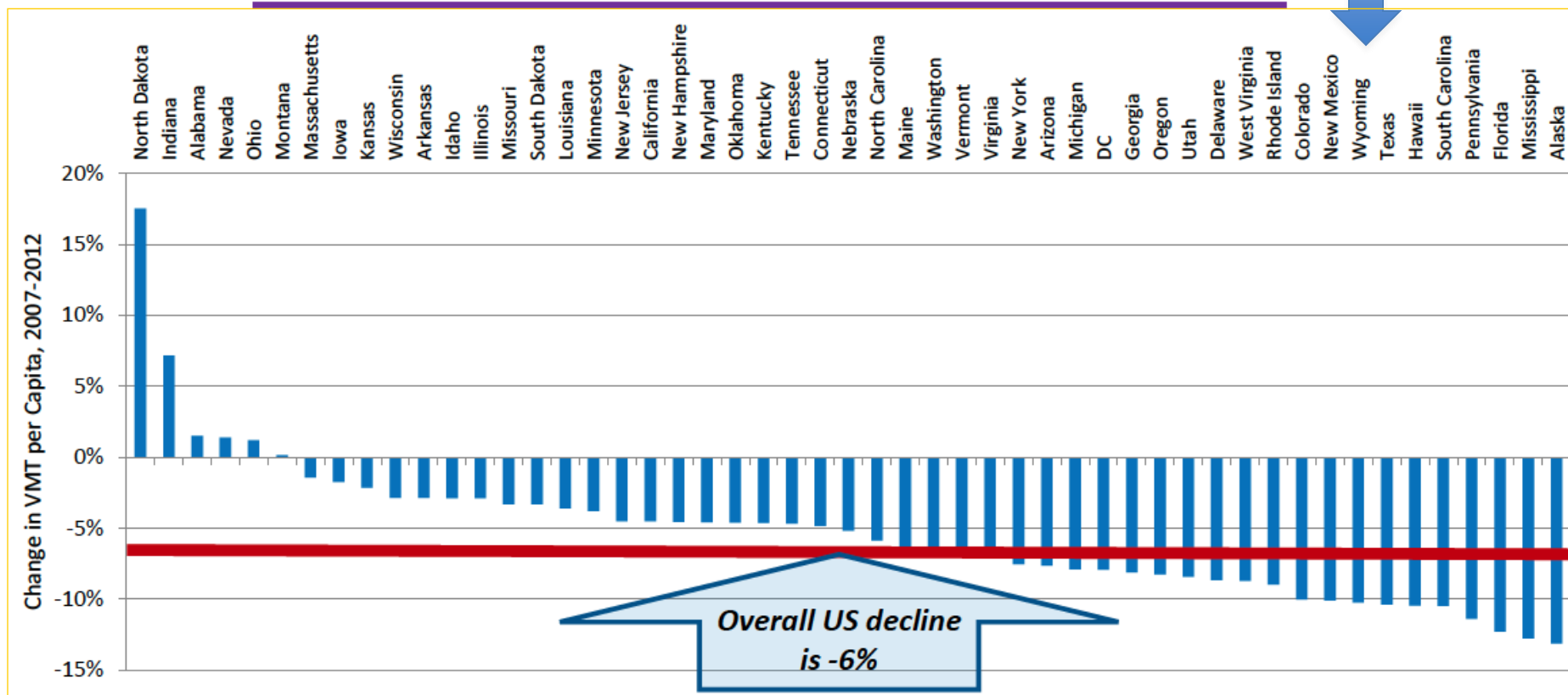
VMT Trend – United States



VMT per capita: an unprecedented change:



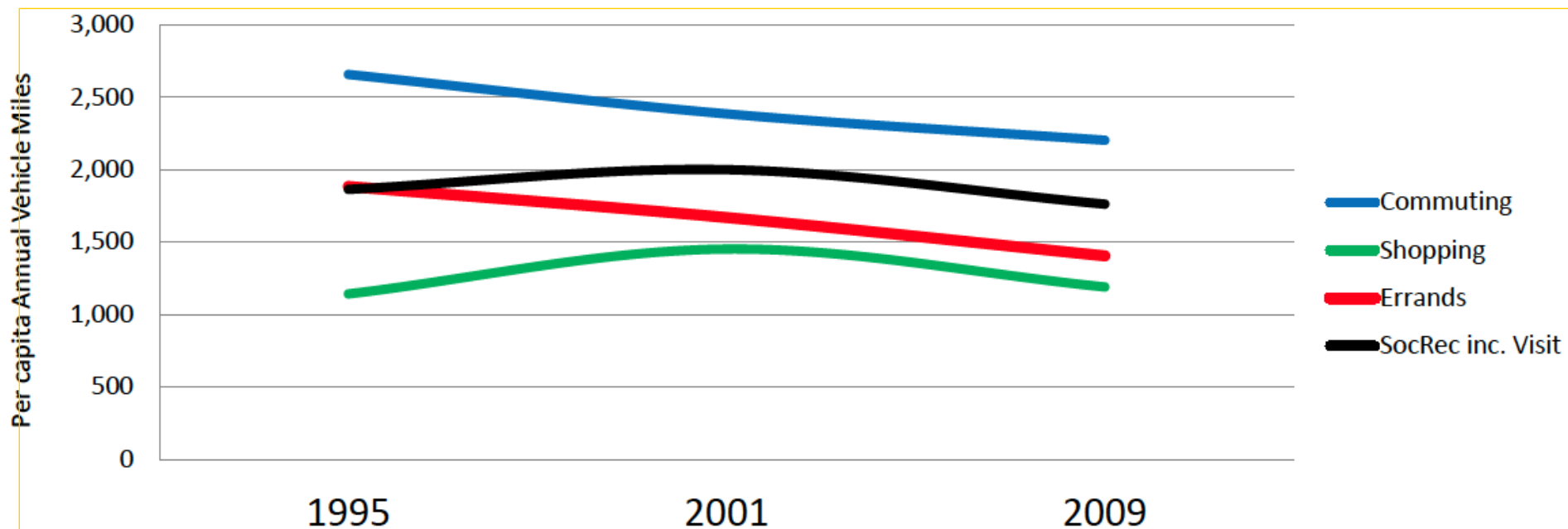
Changes in per capita VMT by State 2007-2012:



Private vehicle travel for all purposes has declined:

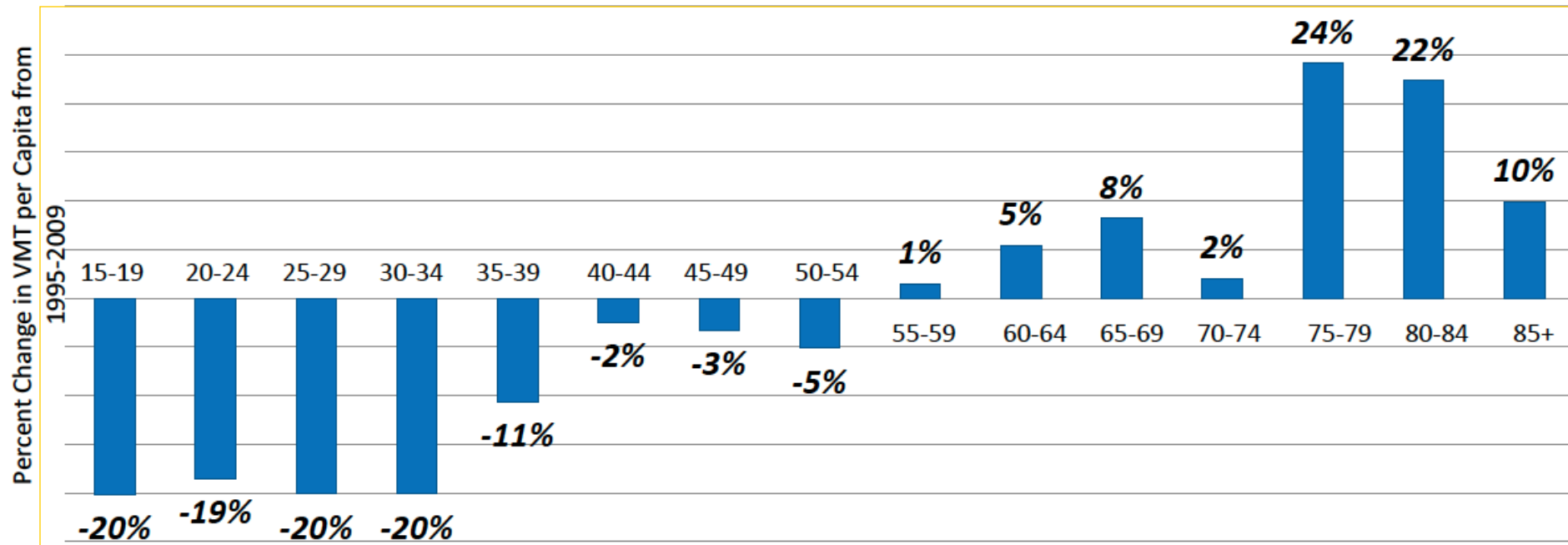
(Measured in VMT per Capita)

Trends in per Capita Annual Vehicle Miles by Major Purpose

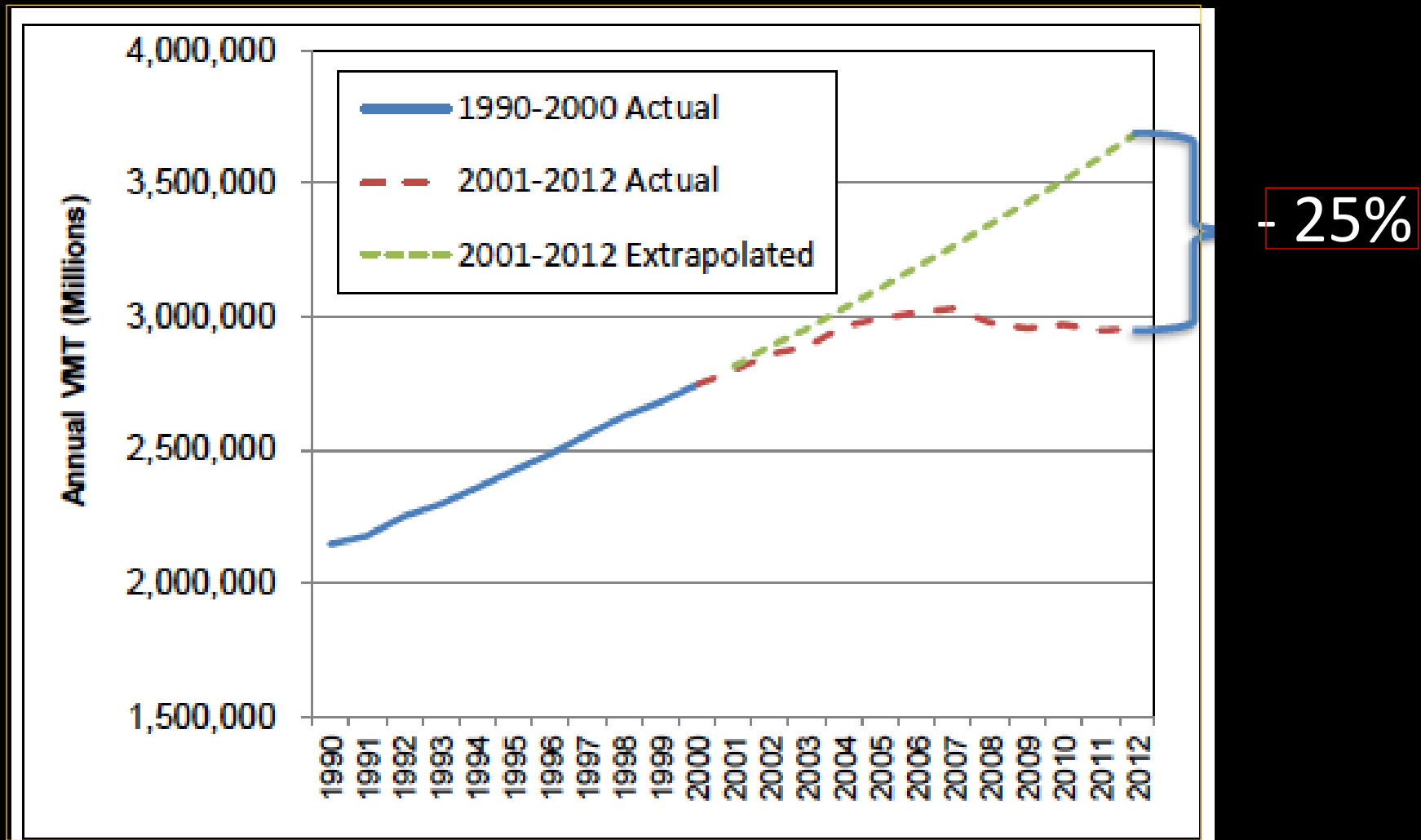


Not Just Millennials

Percent Change in VMT per Capita: 1995 to 2009



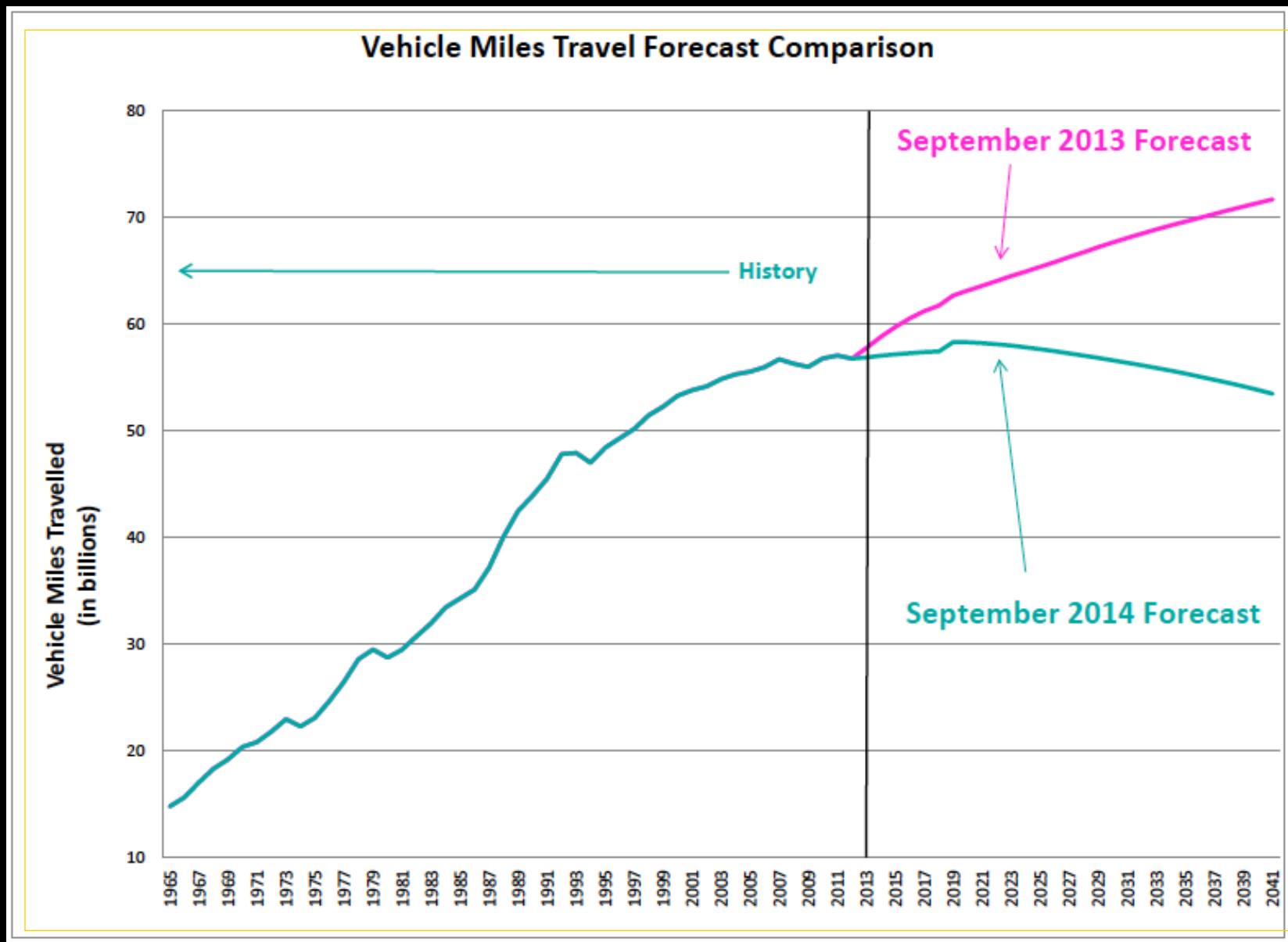
Trend-Line Forecasts Can Be Wrong



- 25%

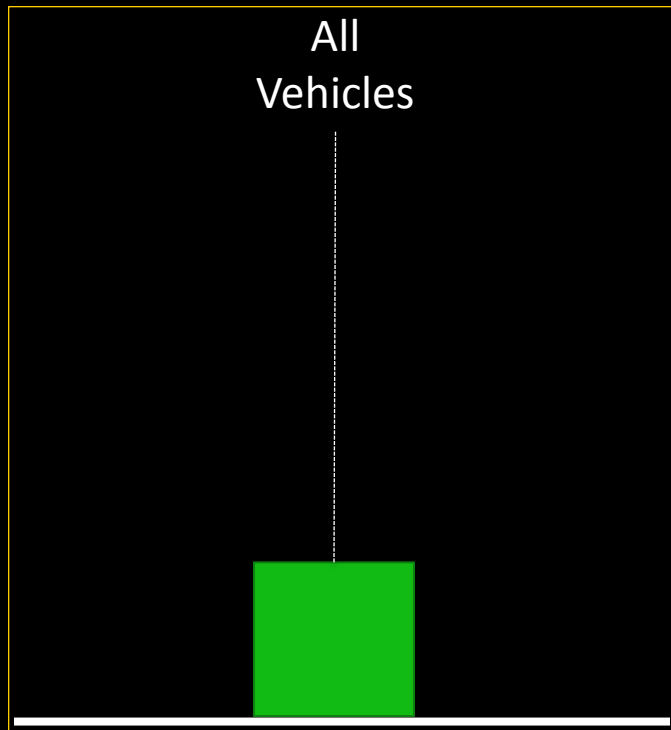
State of Washington Transportation Revenue Forecast Council

September 2014



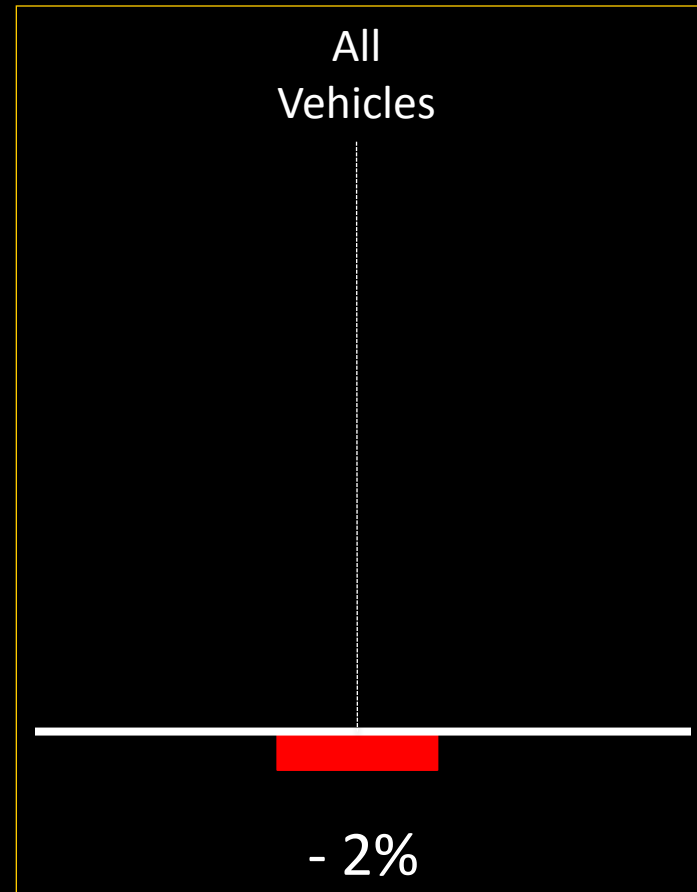
Trends in Total US VMT

2000 - 2012



+ 8%

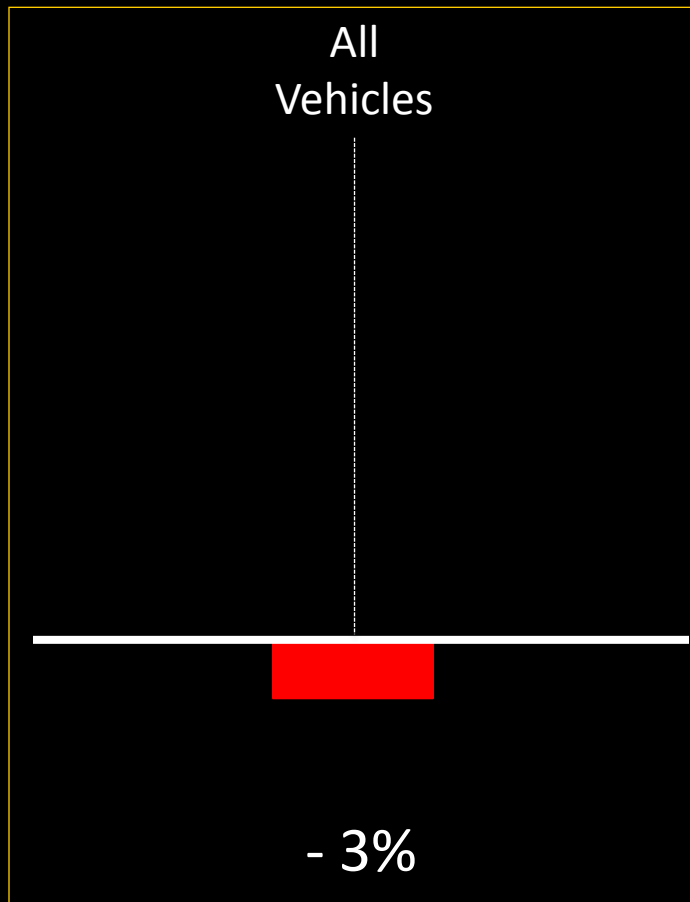
2006 - 2012



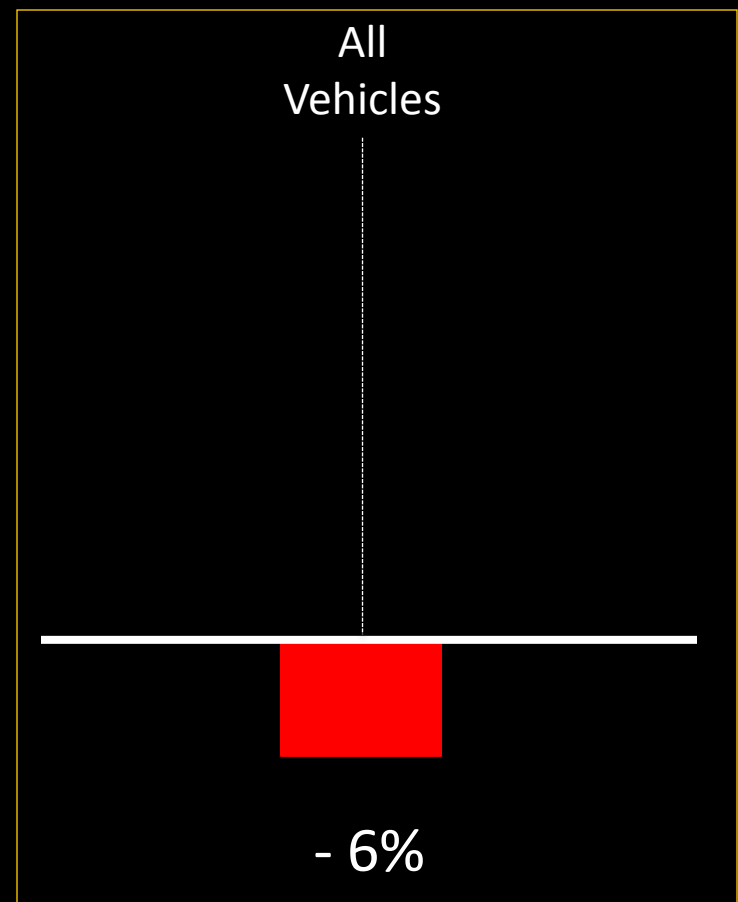
- 2%

Per Capita US VMT

2000 - 2012

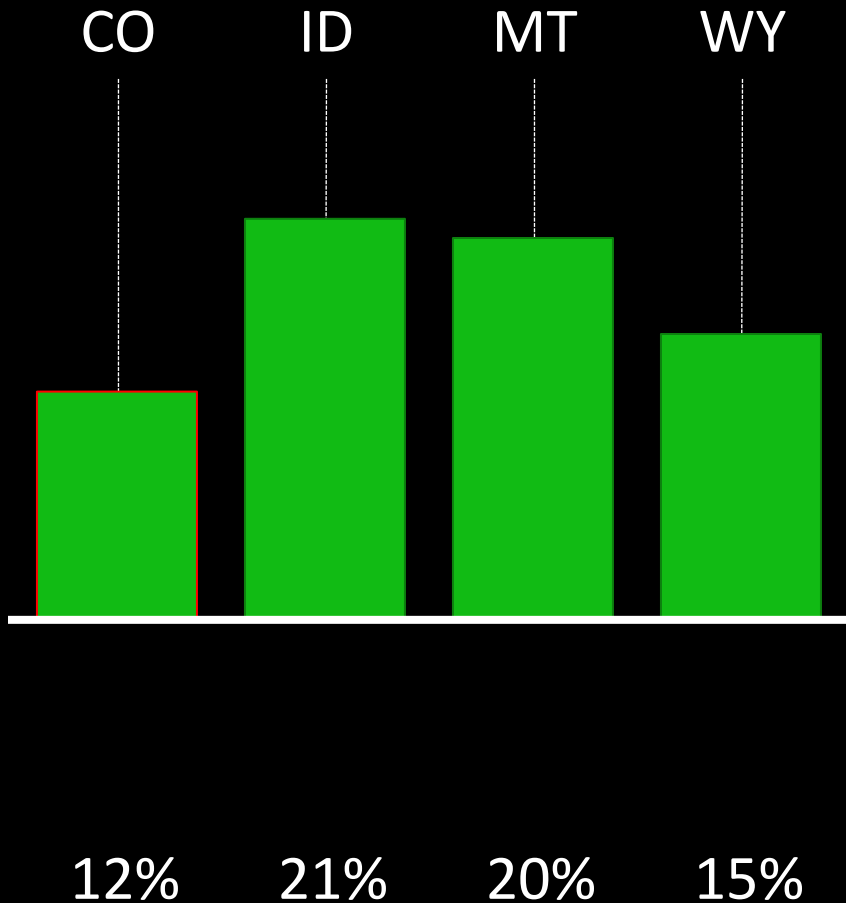


2006 - 2012

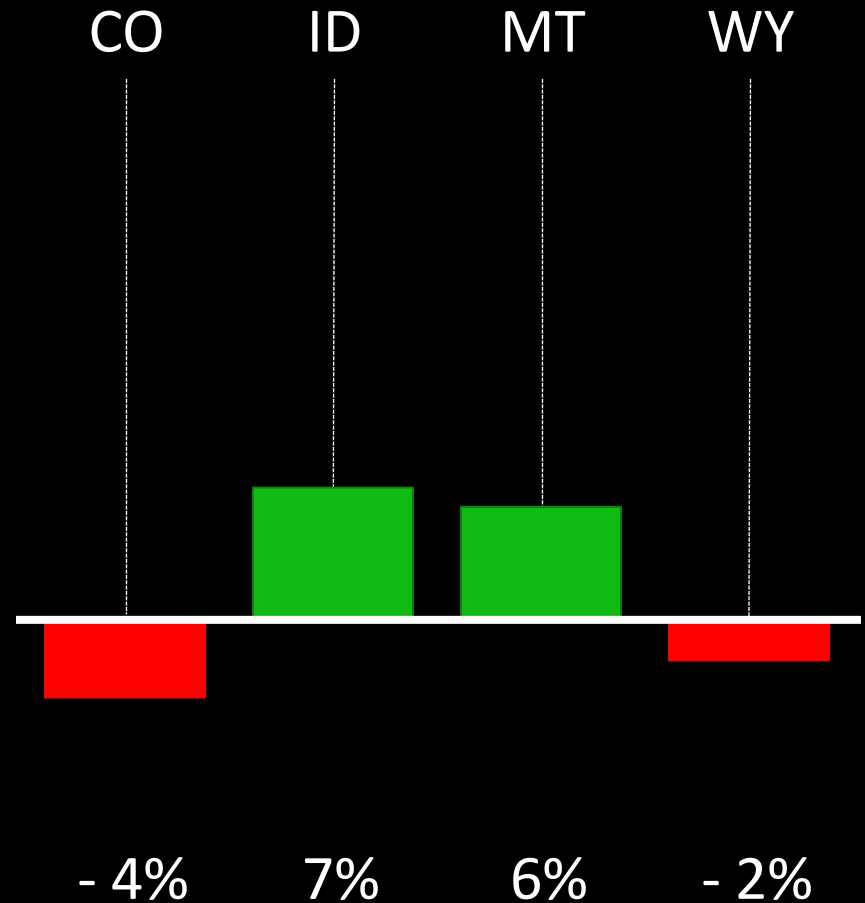


VMT Trends – Interior West States

2000 - 2012

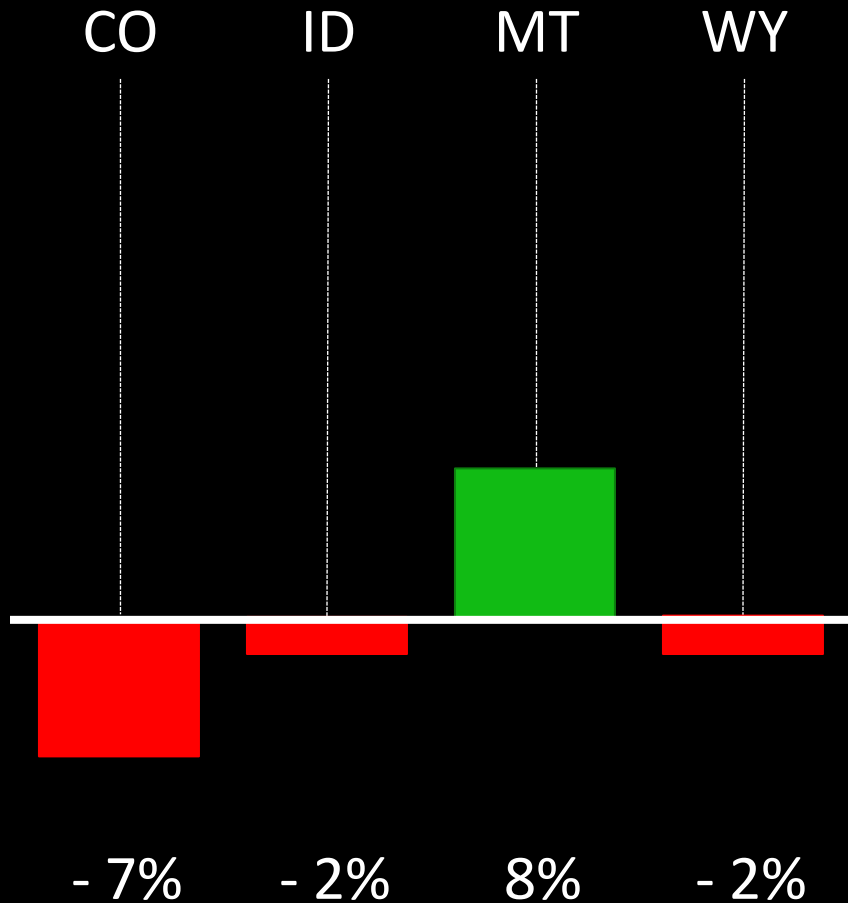


2006 - 2012

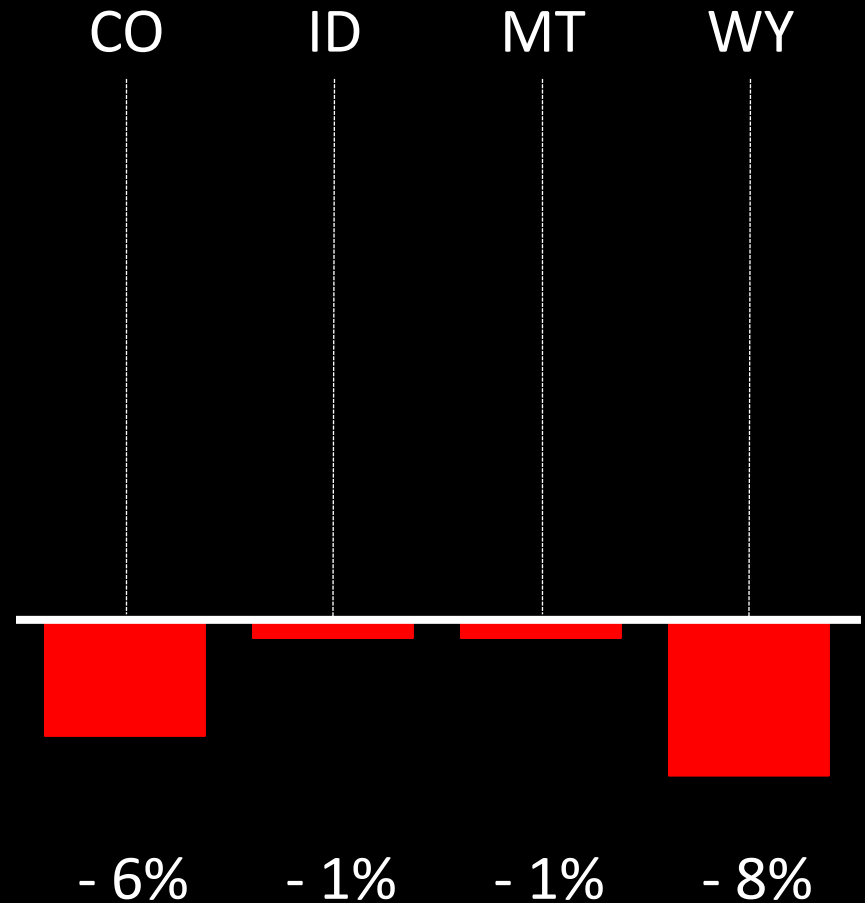


Per Capita VMT – Interior West States

2000 - 2012



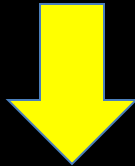
2006 - 2012



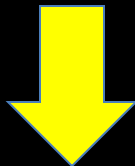
What Drives VMT and What's the Trend?

Demographics & Economics

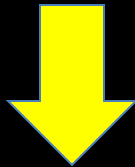
Labor Force
Participation Rate



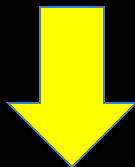
Household Income



Driver License Rate



Vehicle Ownership

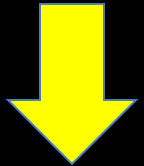


Population

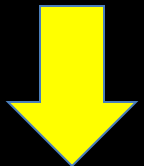


Traffic Enablers

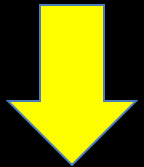
Miles of Roadways



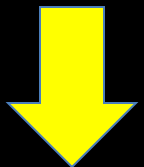
Energy Cost Subsidy



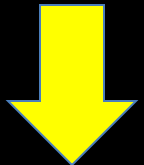
Road Subsidy



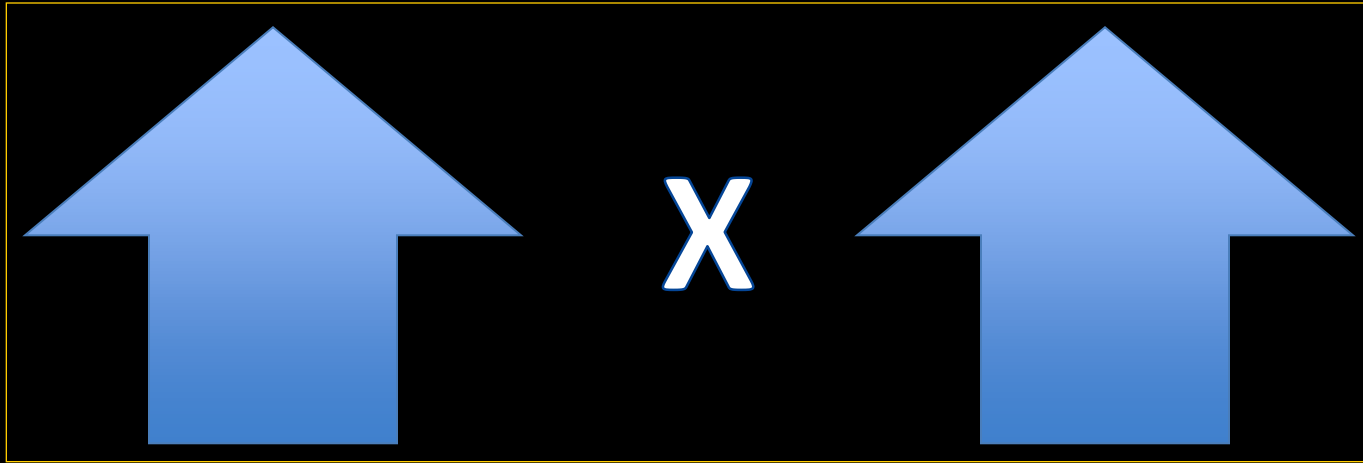
Sprawl



Auto Dependency



1984 VMT =

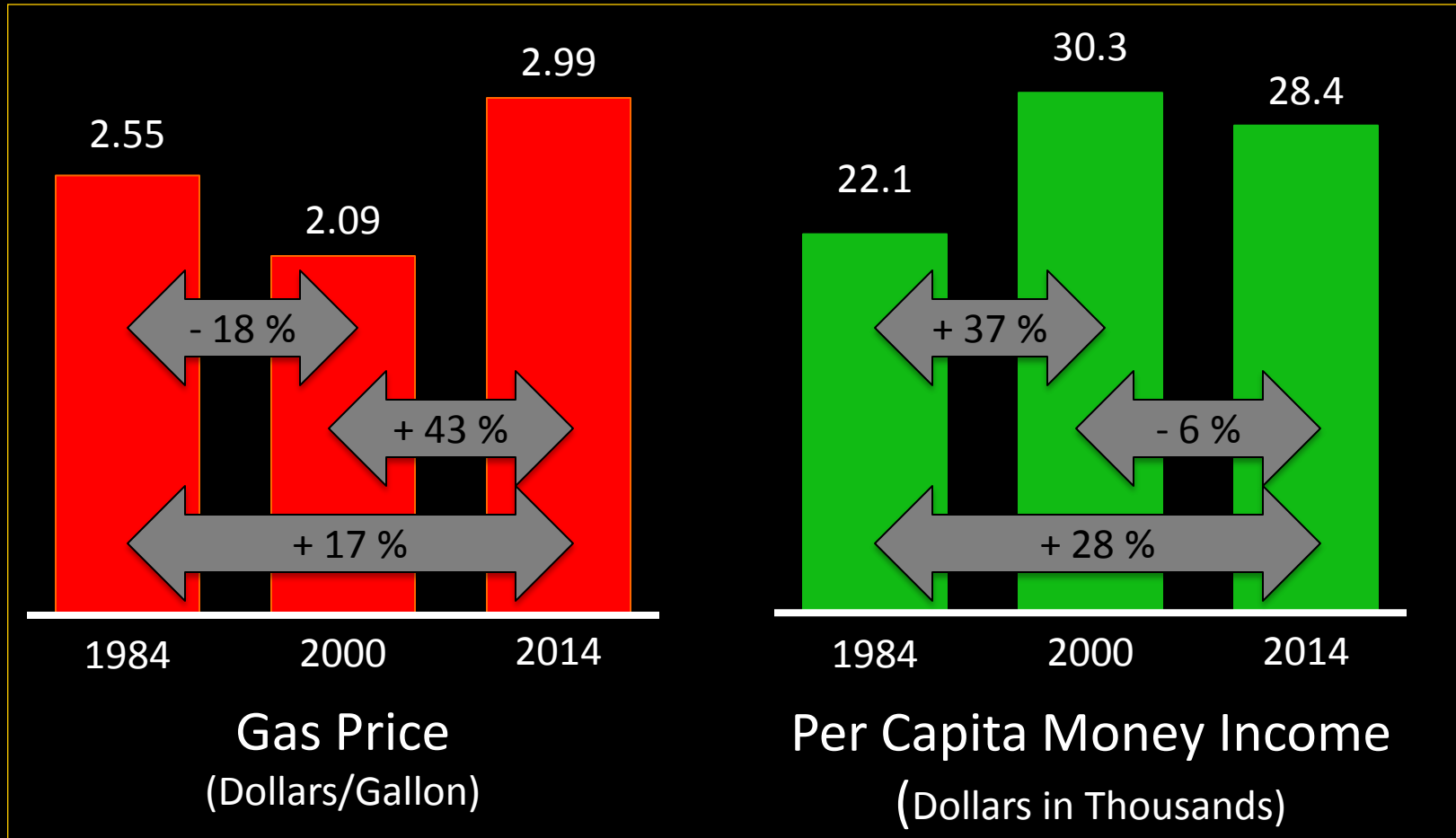


Per Capita VMT

Population

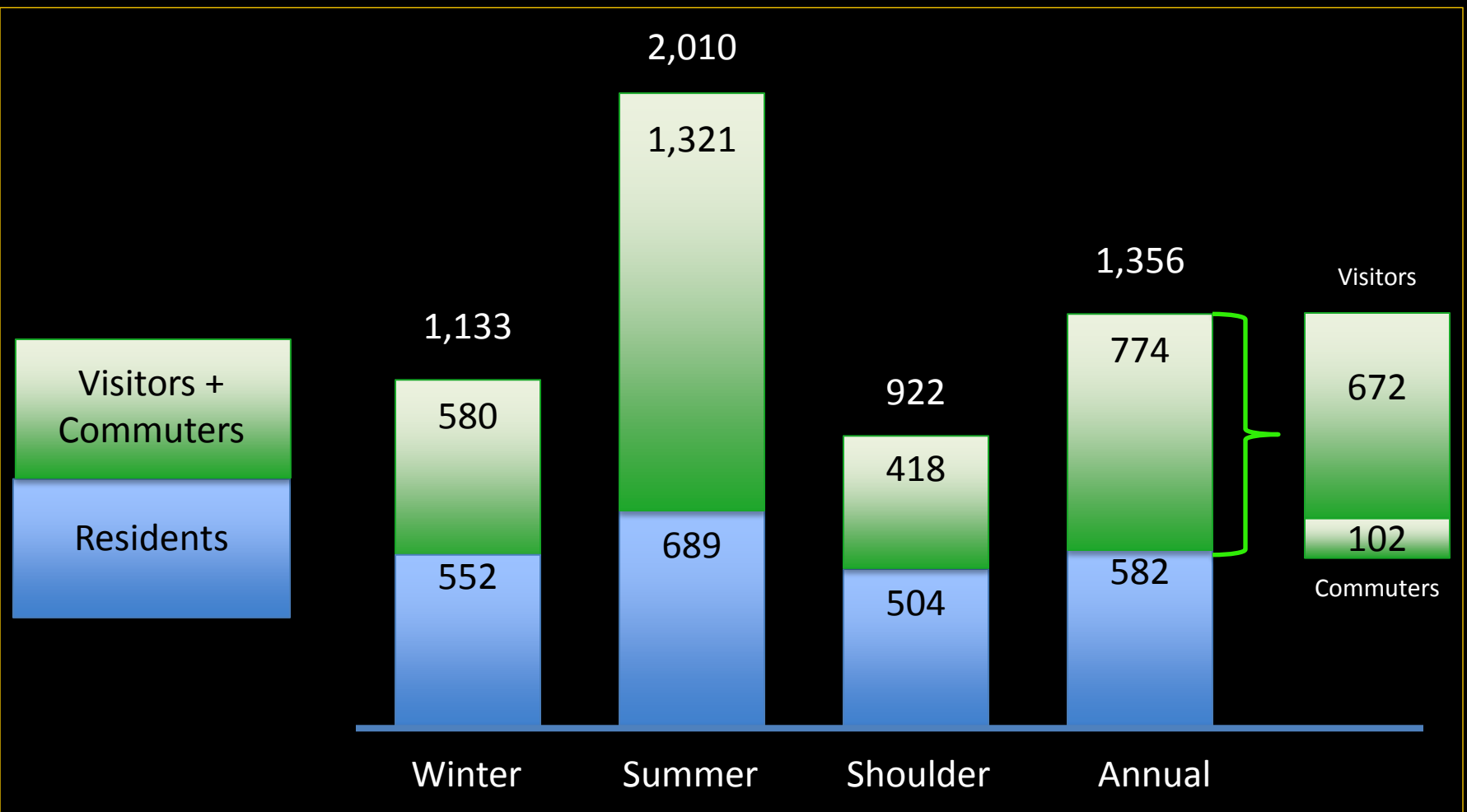
US Gas Prices & Personal Income

(2014 Dollars)



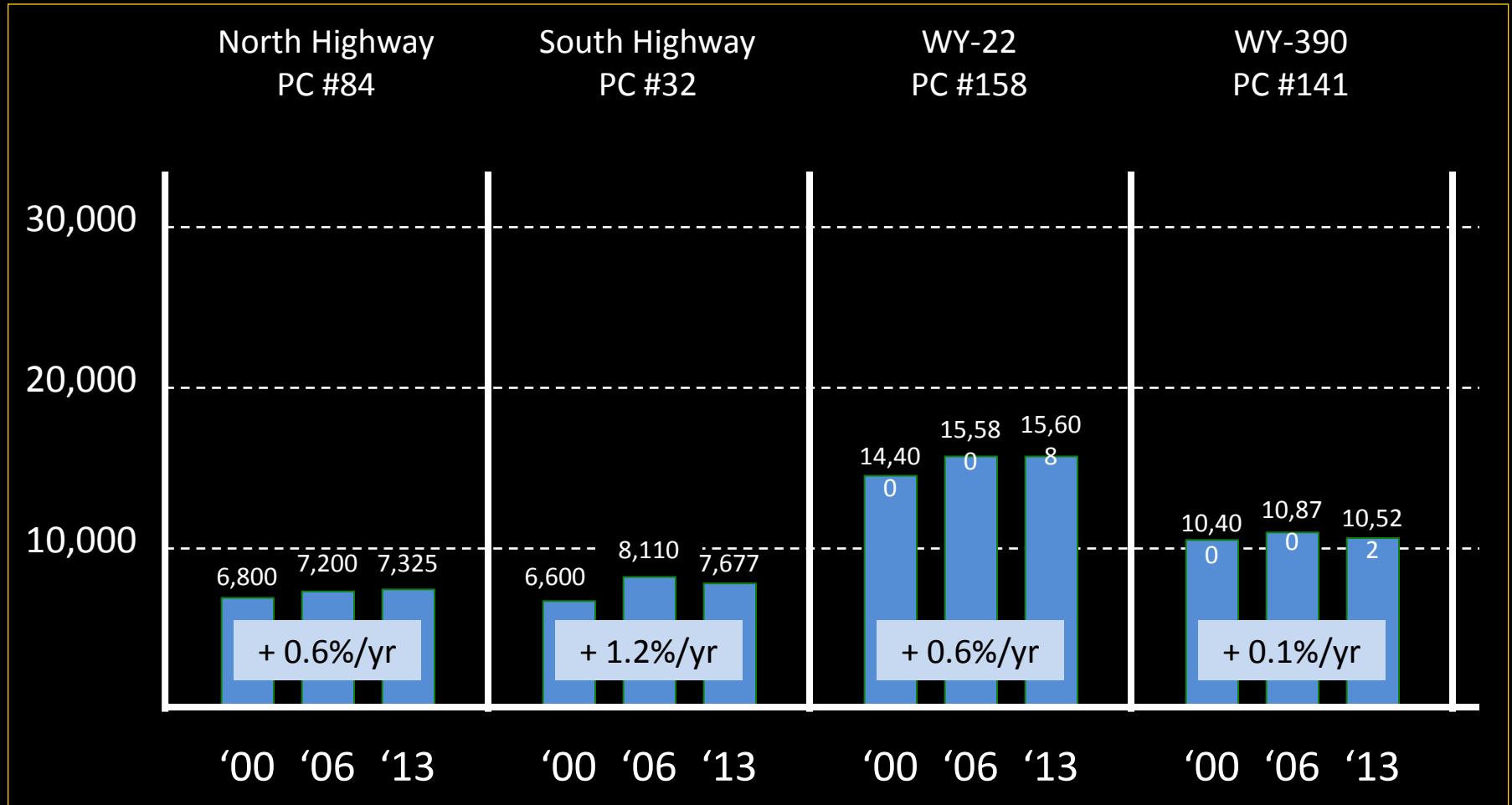
2013 Teton County VMT

Annual VMT – Thousands of Miles



Traffic Trends – Indicator Count Sites*

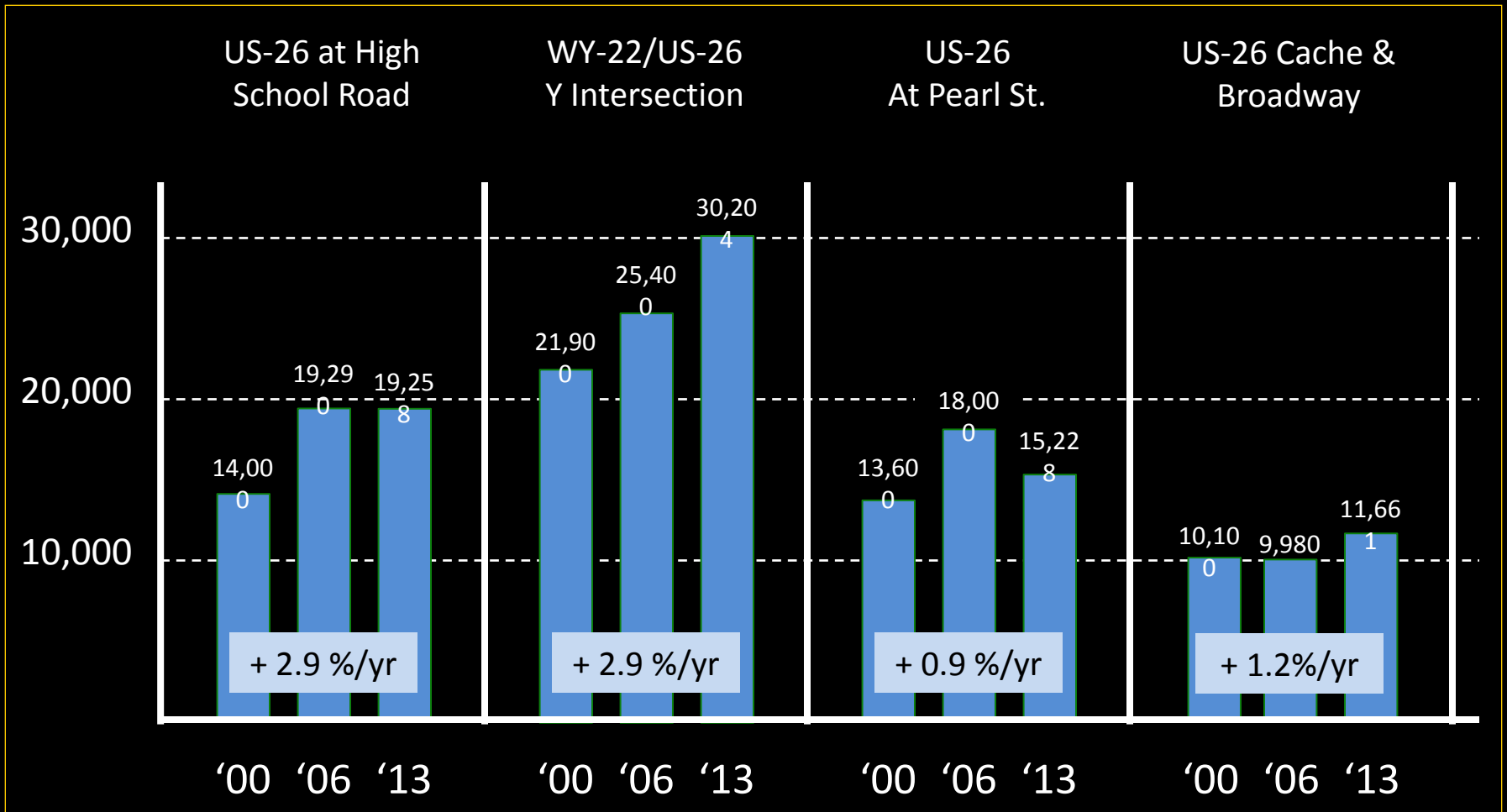
(Average Annual Daily Traffic, 2000 – 2013*)



*Permanent Count Locations

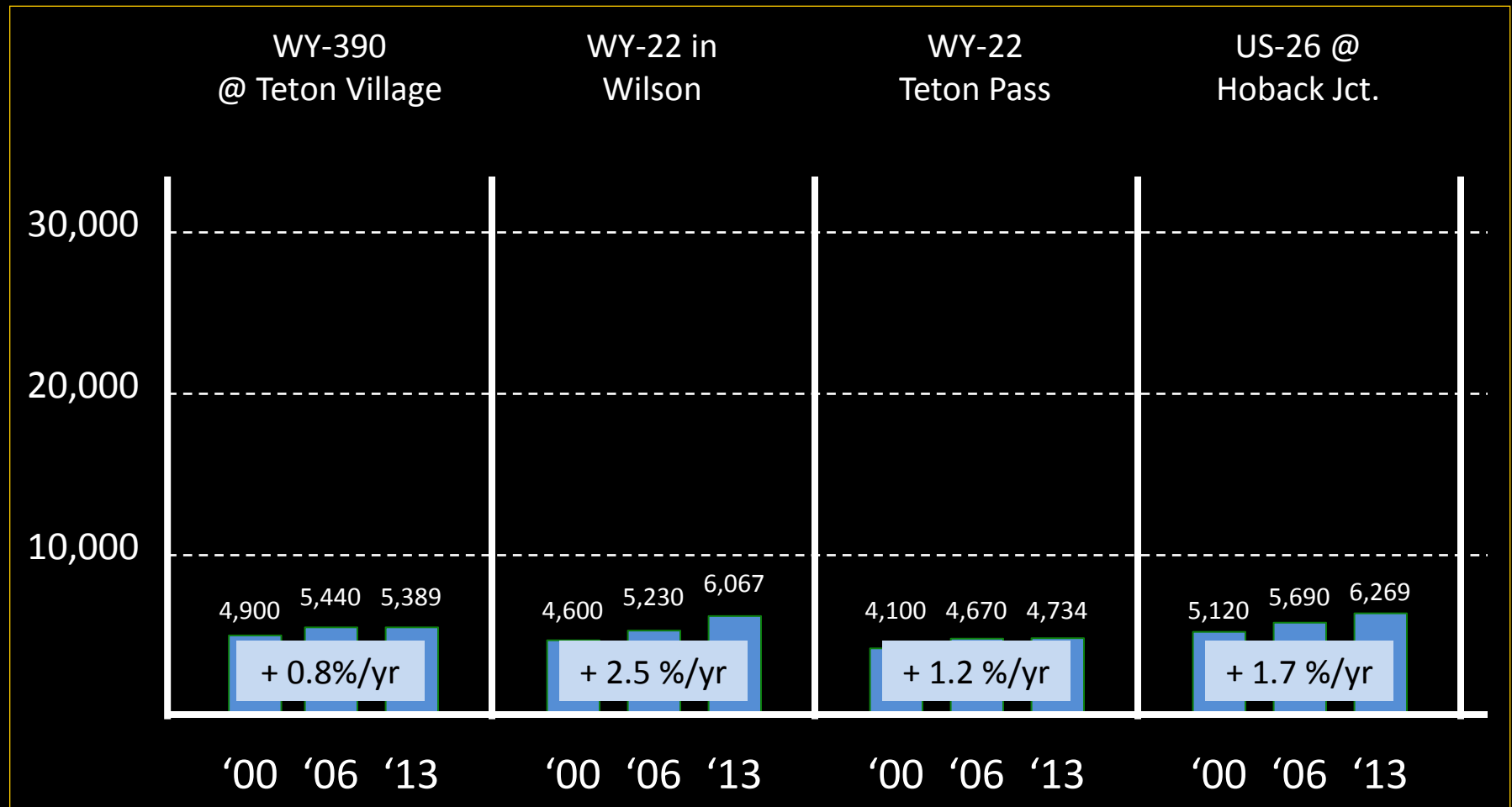
Traffic Trends – In Town

(Average Annual Daily Traffic, 2000 - 2013)



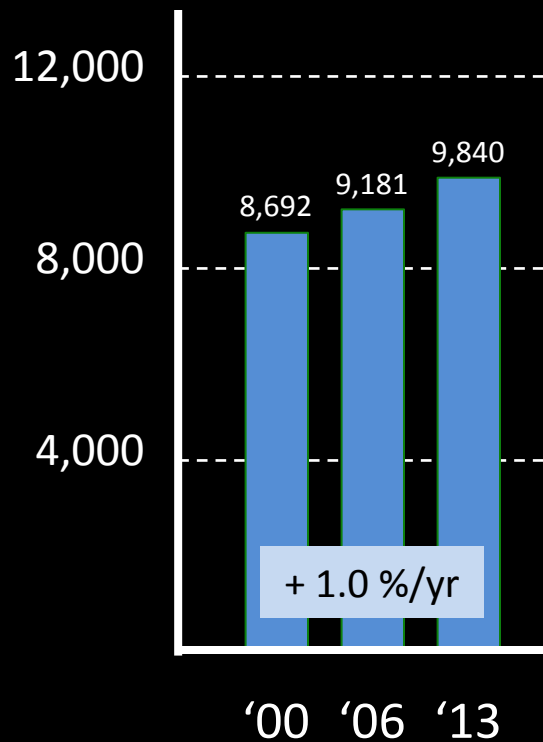
Traffic Trends – Other Locations

(Average Annual Daily Traffic)

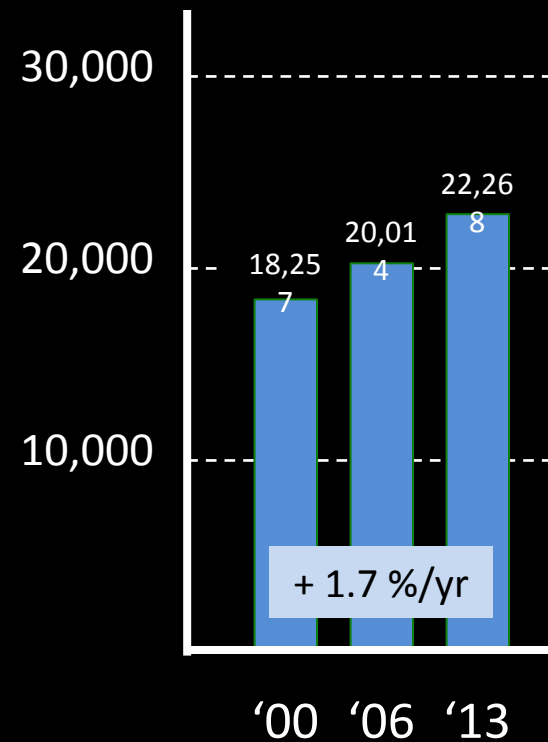


Related Trends

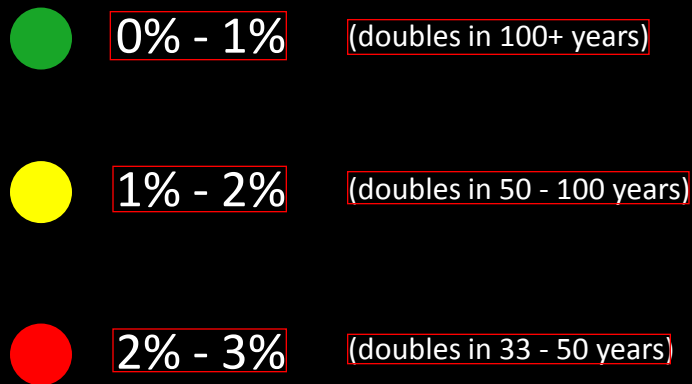
Town Population



County Population

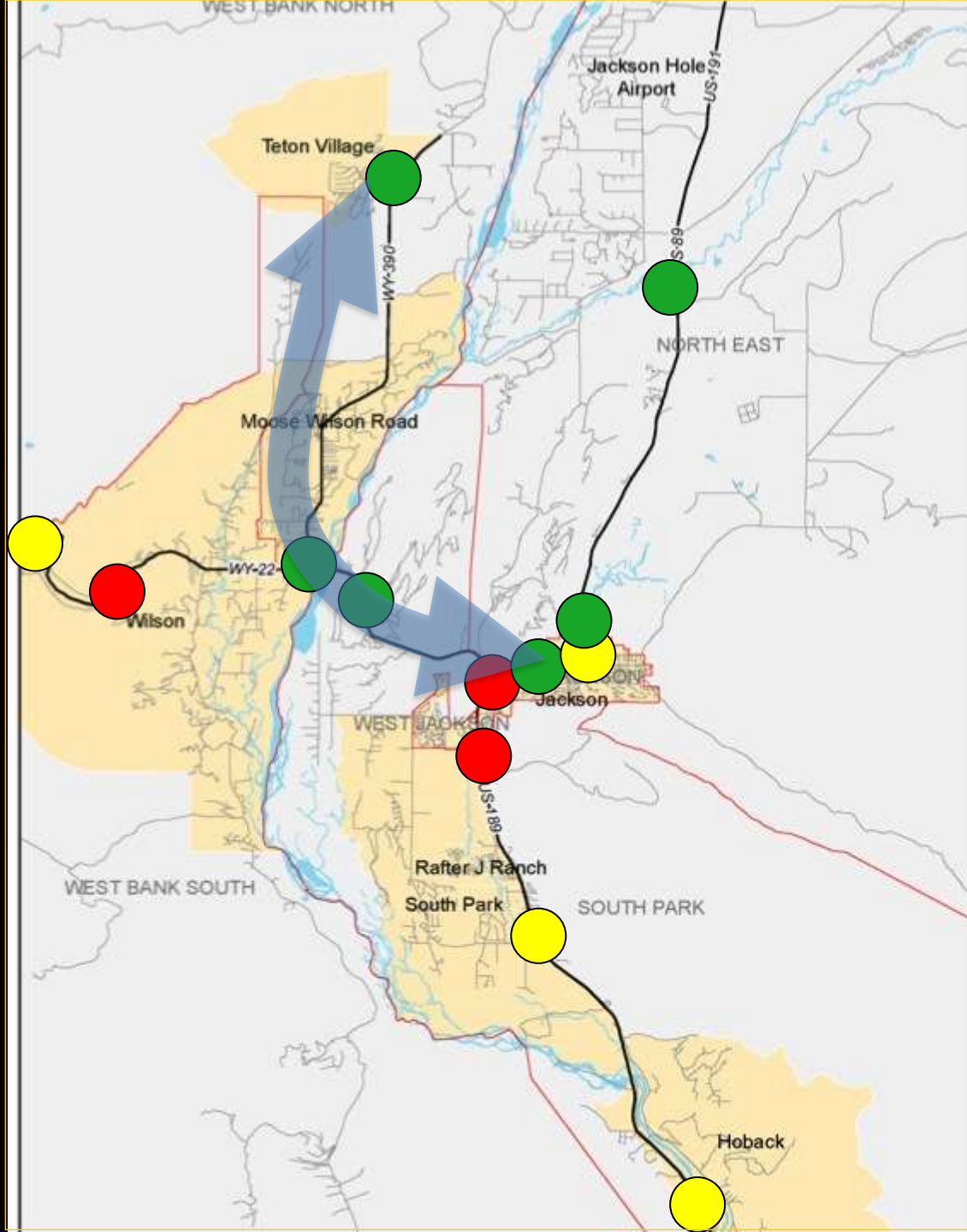


Average Annual Traffic Growth: 2000 - 2013



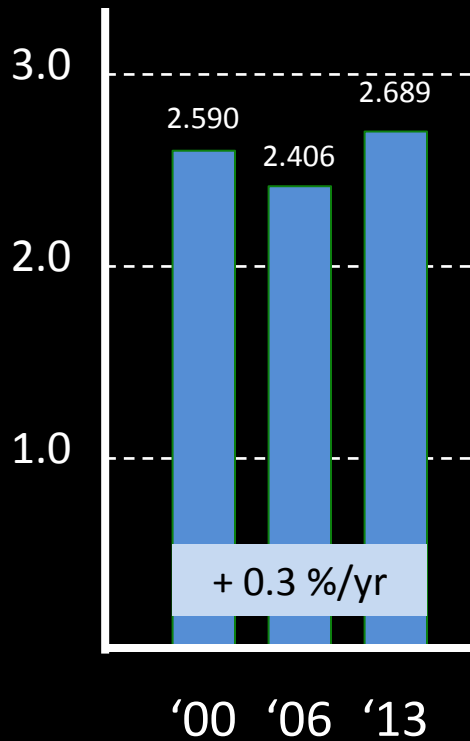
transit growth
corridor

(straight line growth rates,
not compounded)



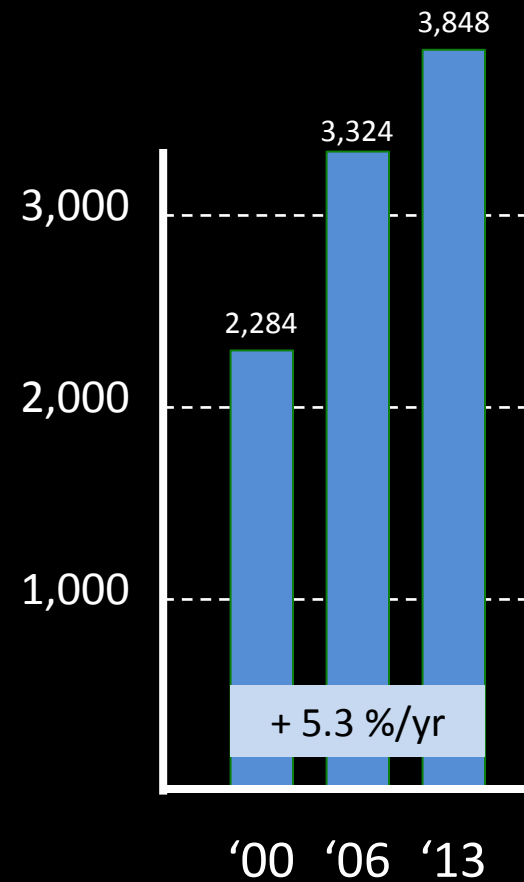
Related Trends

GTNP
Attendance
(Millions)



Source: NPS

Daily In-Commuters



Source: Census Bureau

Observations – Traffic Trends

- Where traffic growth on major roads has occurred:
 - US-26 in West Jackson (at Y intersection & High School Rd)
 - WY-22 in Wilson
- Except at the Y Intersection, little traffic growth has occurred in Teton County since 2006
- Visitor traffic has grown less than 1% annually
- START service increases & Village TDM program have reduced traffic growth in the Town to Village corridor

Conclusions

- Traffic growth has been driven by economics
 - increased commercial space + dwelling units in West Jackson
 - increased in-commuting (both Teton Pass & Snake River)
- Visitorship has not been a source of increased traffic
- Teton County population has been decentralizing
- Transit has been effective in Town – Village corridor
- Core area circulation – all modes – is an important need

Baseline Scenario

Baseline Scenario

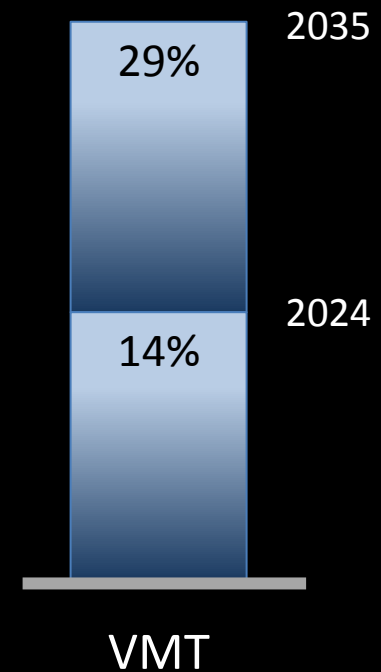
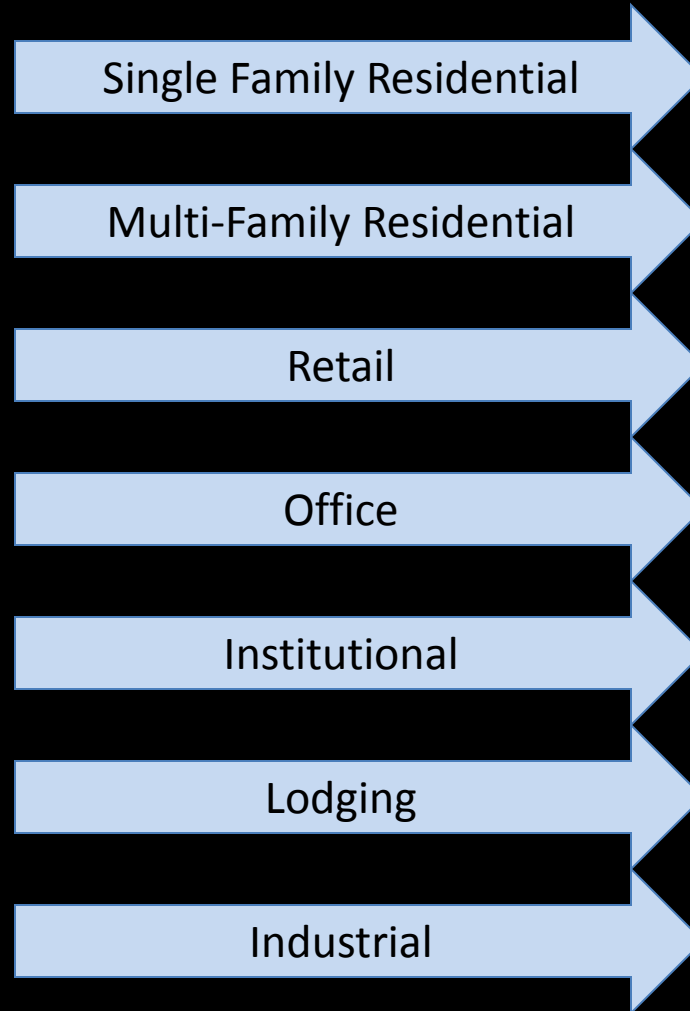
- No further change in per capita VMT
- Future land use:
 - consistent with Comprehensive Plan
 - growth rate based on past decade (2003 – 2013)
- VMT and traffic increase as:
 - population and commercial space increases
 - visitorship increases
 - in commuting increases

Teton County Baseline Scenario

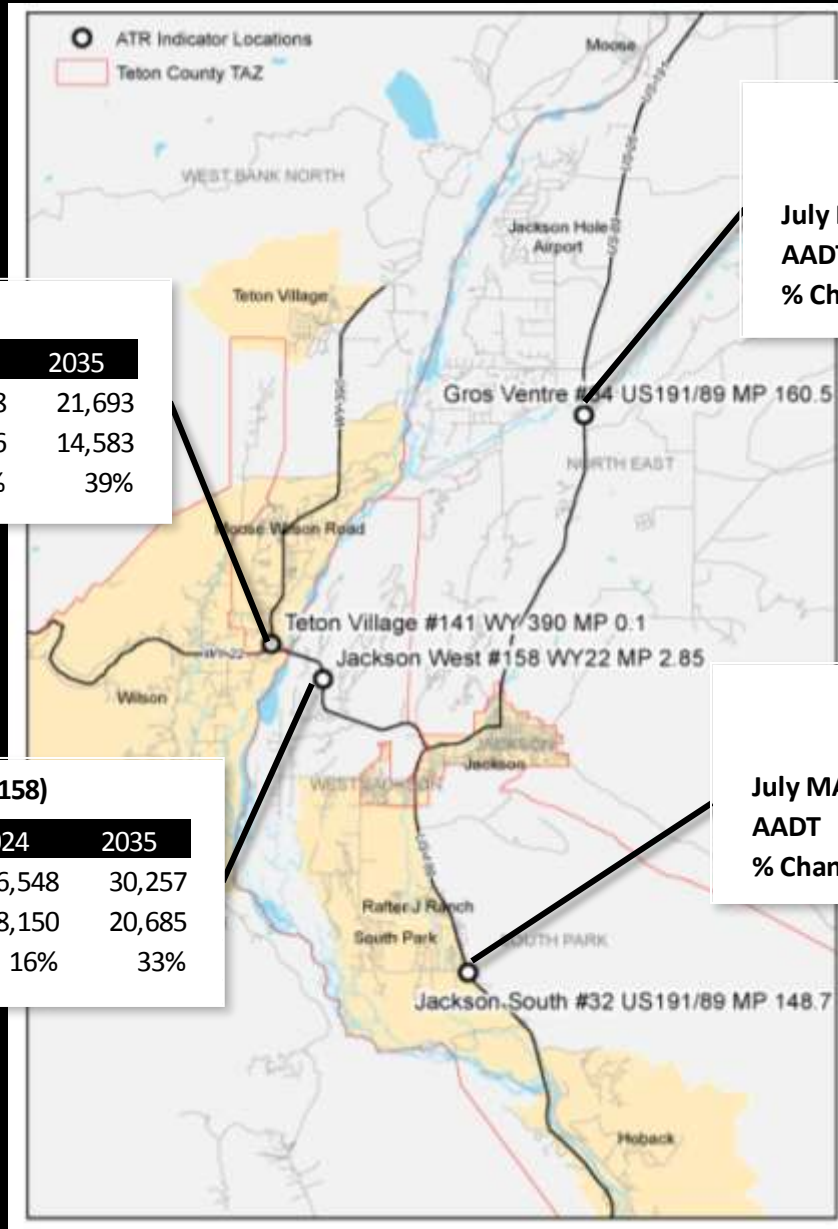
Land Uses

Basis:

- Comp Plan
- Trends



Baseline Traffic Forecast



TETON VILLAGE (#141)

	2013	2024	2035
July MAWDT	15,652	18,678	21,693
AADT	10,522	12,556	14,583
% Change		19%	39%

GROS VENTRE (#84)

	2013	2024	2035
July MAWDT	14,362	16,561	18,754
AADT	7,319	8,440	9,557
% Change		15%	31%

JACKSON WEST (#158)

	2013	2024	2035
July MAWDT	22,829	26,548	30,257
AADT	15,607	18,150	20,685
% Change		16%	33%

JACKSON SOUTH (#32)

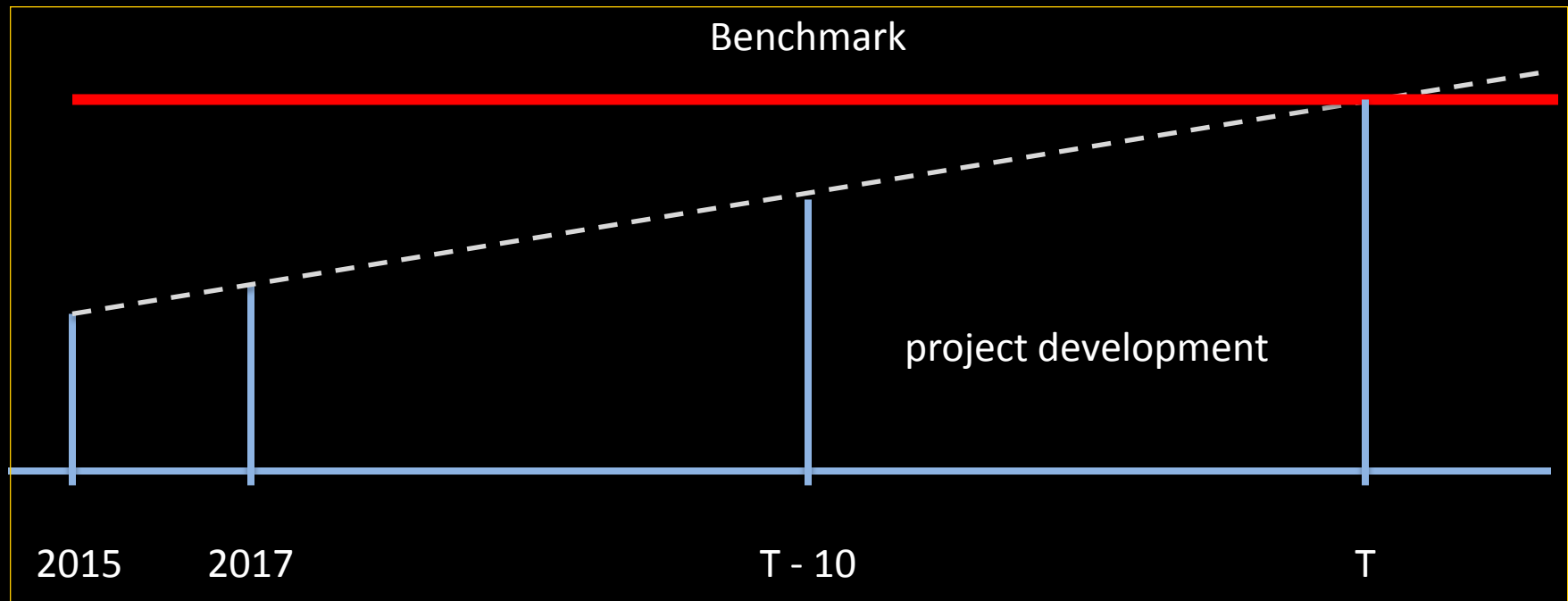
	2013	2024	2035
July MAWDT	12,192	13,992	15,788
AADT	7,676	8,809	9,940
% Change		15%	29%

AADT =
Annual Average
Daily Traffic

MAWDT =
Monthly Average
Weekday Traffic

Major Capital Projects

- Approach implementation strategically
- Use a network approach (capital project groups)
- Begin with WYDOT's PEL study (WY-22 & WY-390)
- Use benchmarks to guide project development



Policy Decision

Com Plan Policy 8.2.b: Design critical infrastructure and facilities for the peak effective population. Critical facilities, as defined by the electeds through service level planning, should be designed to provide an acceptable level of service to the peak effective population. Other facilities will be designed to accommodate average demand. Temporarily reduced service levels may occur at times of peak population; however, reductions should not produce a meaningful threat to the public safety.

Major Project Benchmarks:

- ✓ Annual average traffic?
- ✓ Average July traffic?

Capital Group 1

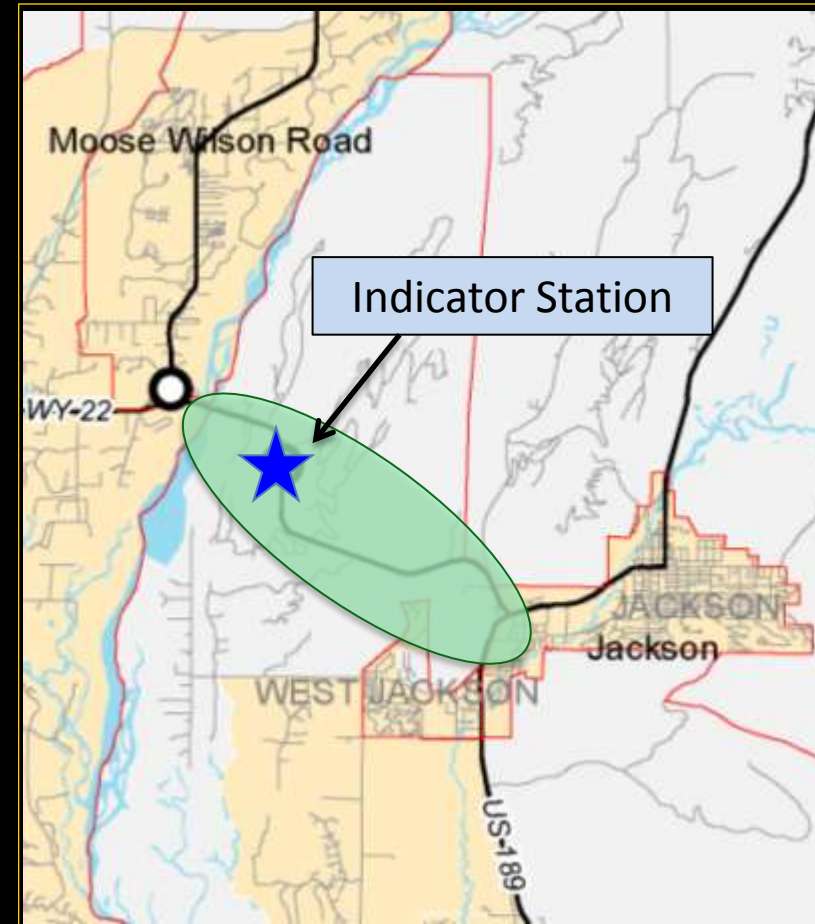
WY-22

- Y Intersection
- Tribal Trails Connector
- Wildlife permeability from PEL
- WY-22 Roadway: Jackson – WY-390
- WY-22 Pathway Wilson – Jackson
- Spring Gulch Intersection

Benchmark: 20,000 VPD

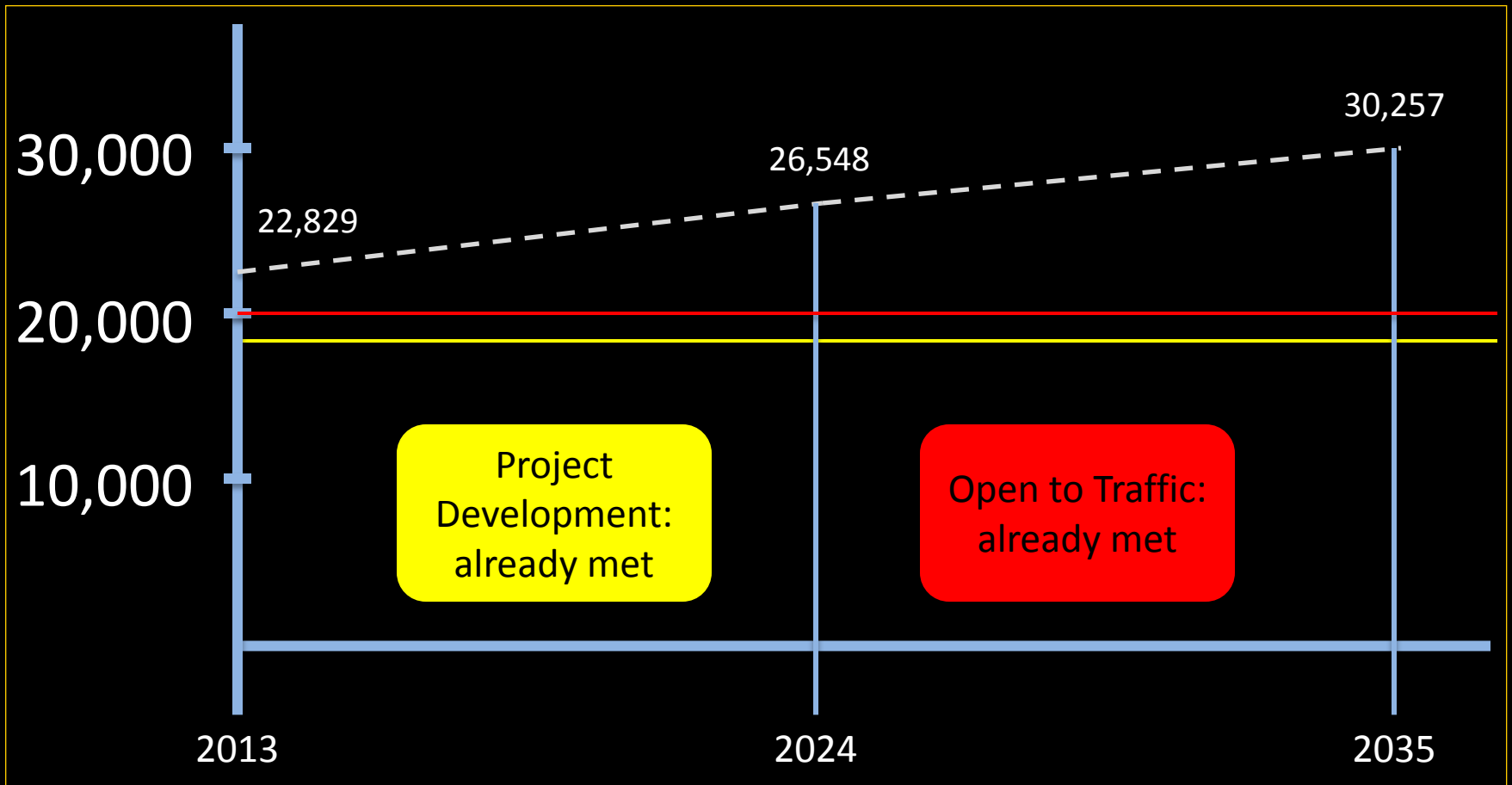
Based on average July day traffic

Start project development 5 years before



Capital Group 1 Benchmarks

(WY-22 – July)





WYDOT PEL Evaluation: Y Intersection

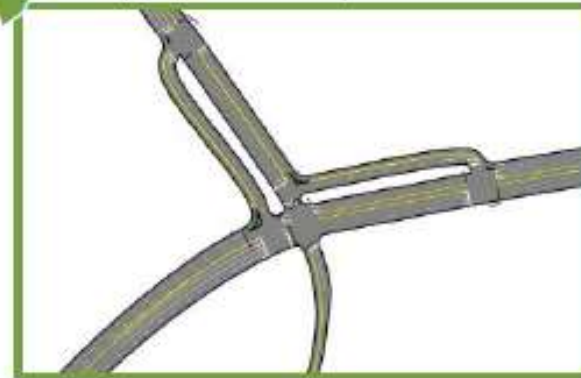


WYDOT PEL Intersection Concepts

“Acceptable Operations”

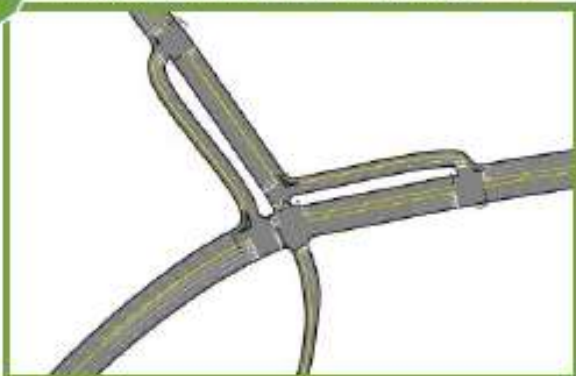
Inverted Continuous Flow Intersection

✓ Acceptable Traffic Operations? YES



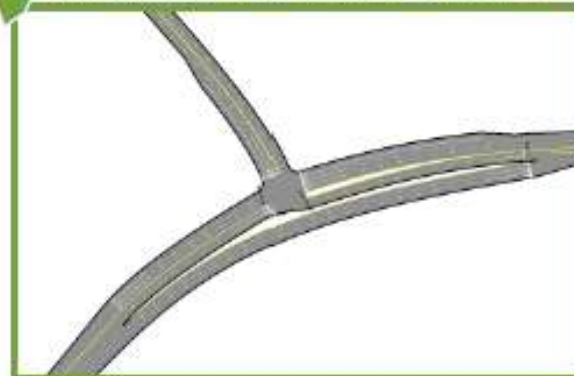
Inverted Continuous Flow Intersection with 3-lane Broadway

✓ Acceptable Traffic Operations? YES



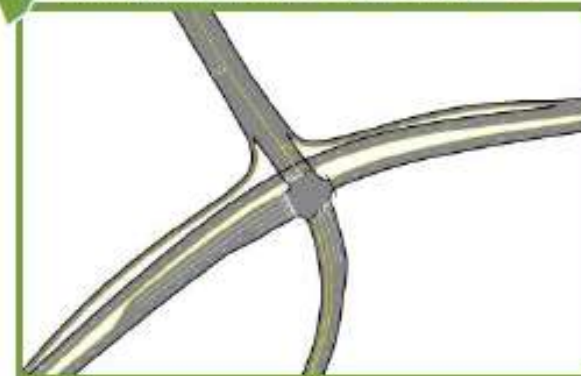
Florida-T with Signalized Merge and 3-Lane Broadway

✓ Acceptable Traffic Operations? YES



Westbound Broadway Grade Separated

✓ Acceptable Traffic Operations? YES



Y Intersection Issues & Opportunities

- Issues

- Scale of project
- Cost of project
- Visual impacts
- Walk/bike barrier
- Transit operations

- Opportunities

- Network approach
- Tribal Trails Connector
- Bus prioritization
- Longer service life
- WYDOT collaboration

- Recommended Approach

- Project development based on network
- Address multimodal design

Tribal Trails Issues & Opportunities

- Issues

- Neighborhood impacts
- Lack of County funding

- Opportunities

- Network approach
- Local connectivity
- Route redundancy
- START operations
- WYDOT collaboration

- Recommended Approach

- Request WYDOT include in project development
- Address design options to reduce impacts
 - Impacts to neighborhood
 - Impacts to South Park Loop Road and High School Road

Capital Group 2

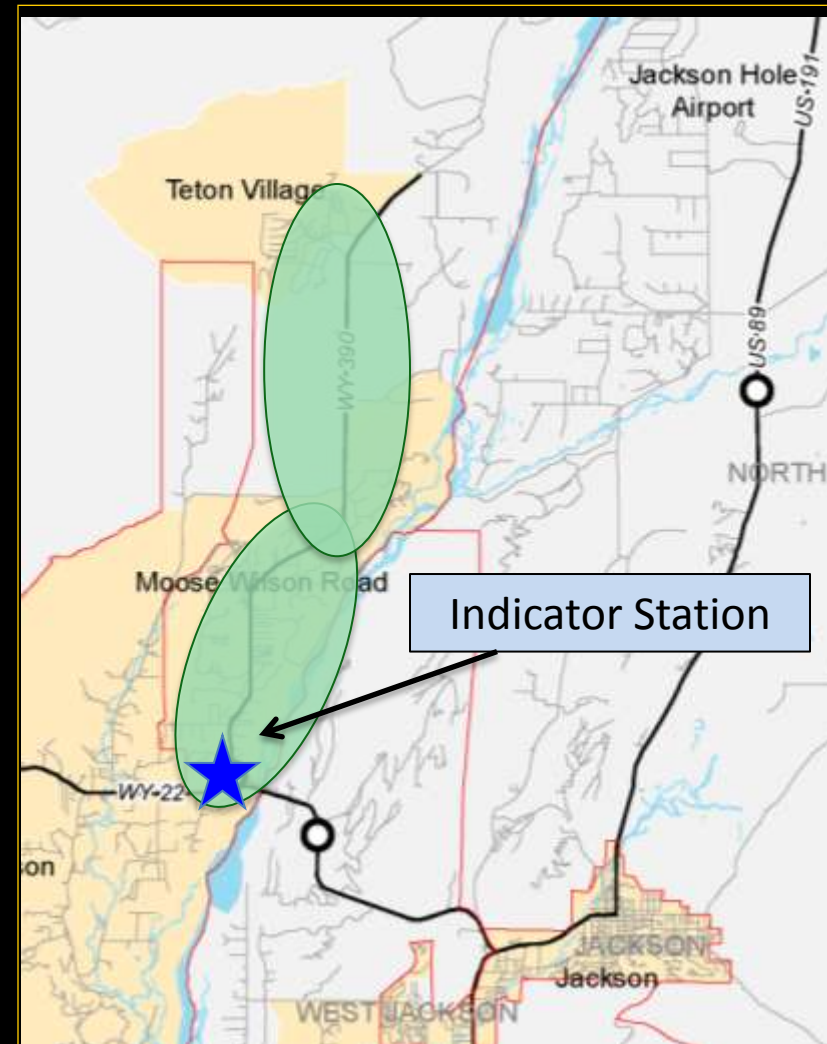
WY-390

- Intersection WY-390 & WY-22
- WY-390 PEL Segment 5
- WY-390 PEL Segment 6
- Wildlife permeability from PEL

Benchmark: 20,000 VPD

Based on average July day traffic

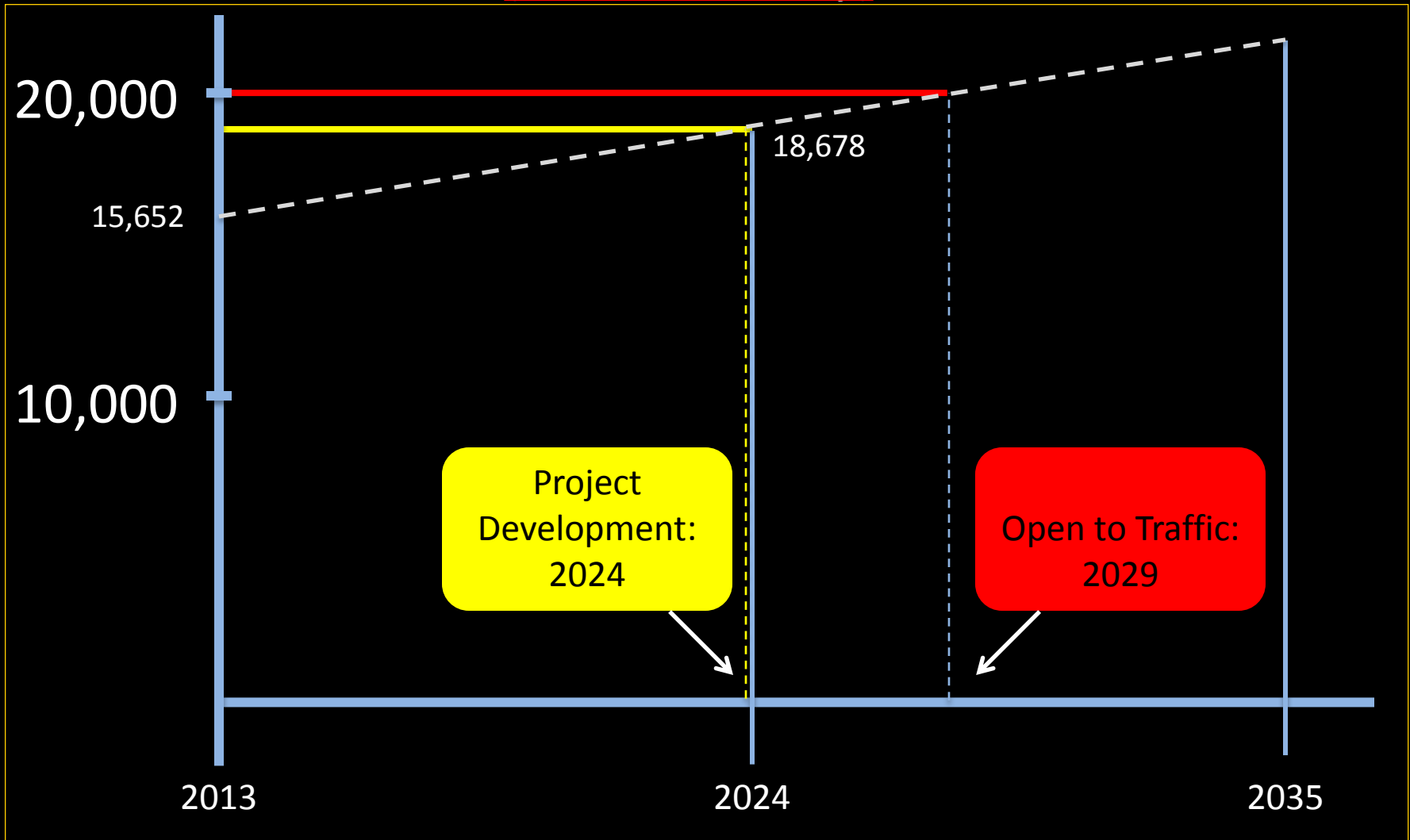
Start project development 5 years before



Capital Group 2 Benchmarks

(WY-390 – July)

21,693



Capital Group 3

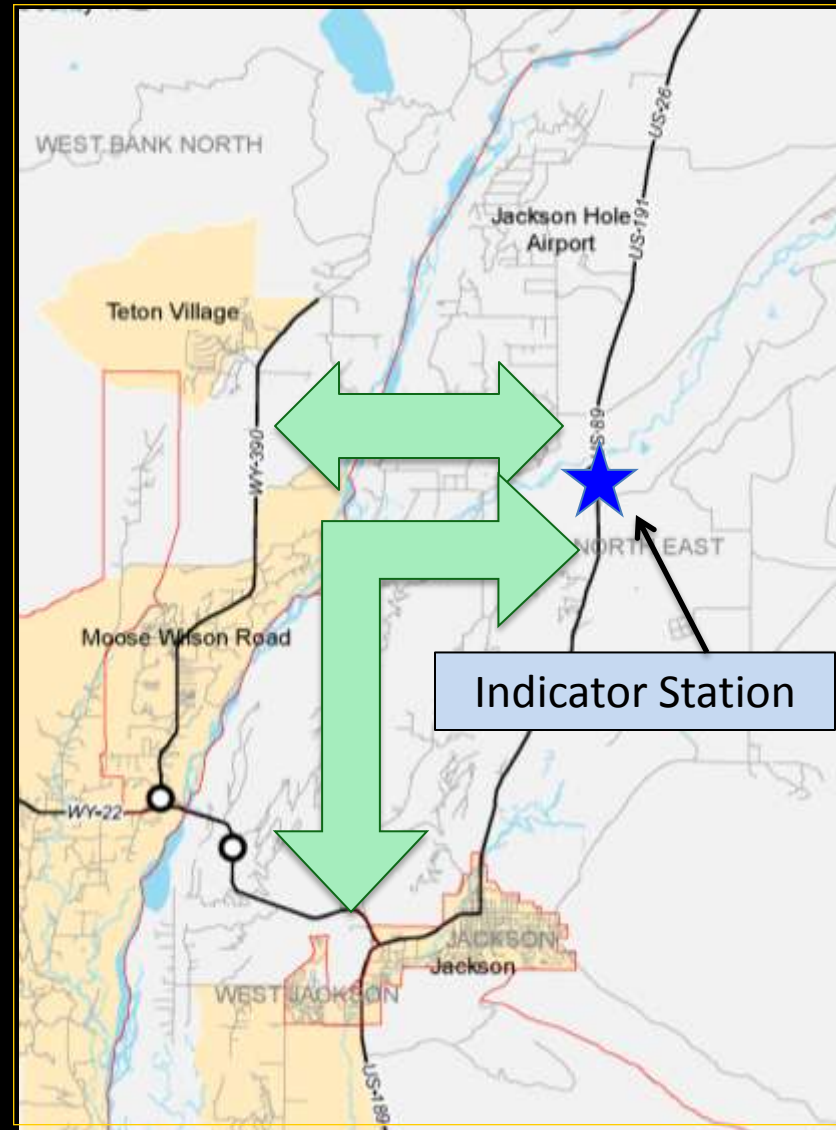
US-26 (north)

- Bypass highway concepts
 - New north bridge/corridor
 - Upgrade Spring Gulch
- High capacity transit concepts

Benchmark: 20,000 VPD

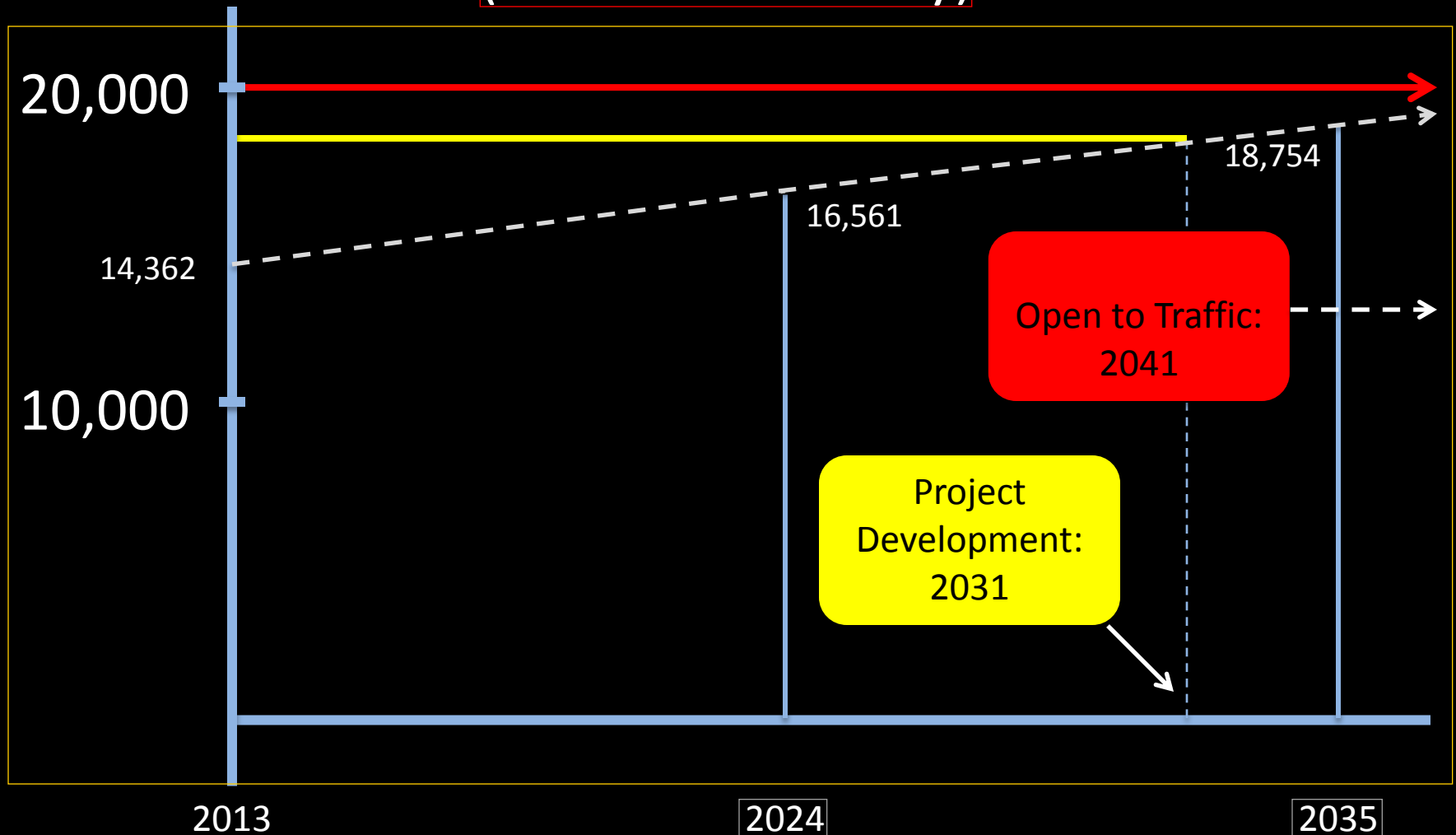
Based on average July day traffic

Start project development 10 years before



Capital Group 3 Benchmarks

(North US 26 – July)

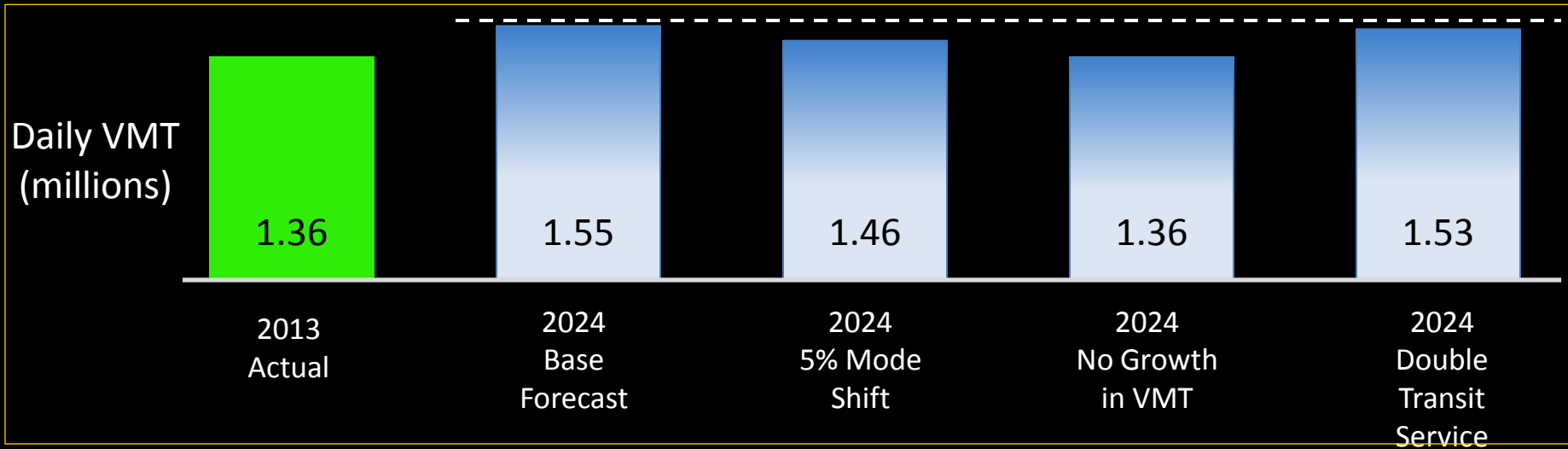


Plan Scenario

Framing a Plan Scenario

- Baseline Scenario – base forecast
- Plan Scenarios presented at public workshop
 - 5% Mode Shift (same as in 2000 plan)?
 - No growth in VMT?
 - Double Transit Ridership?

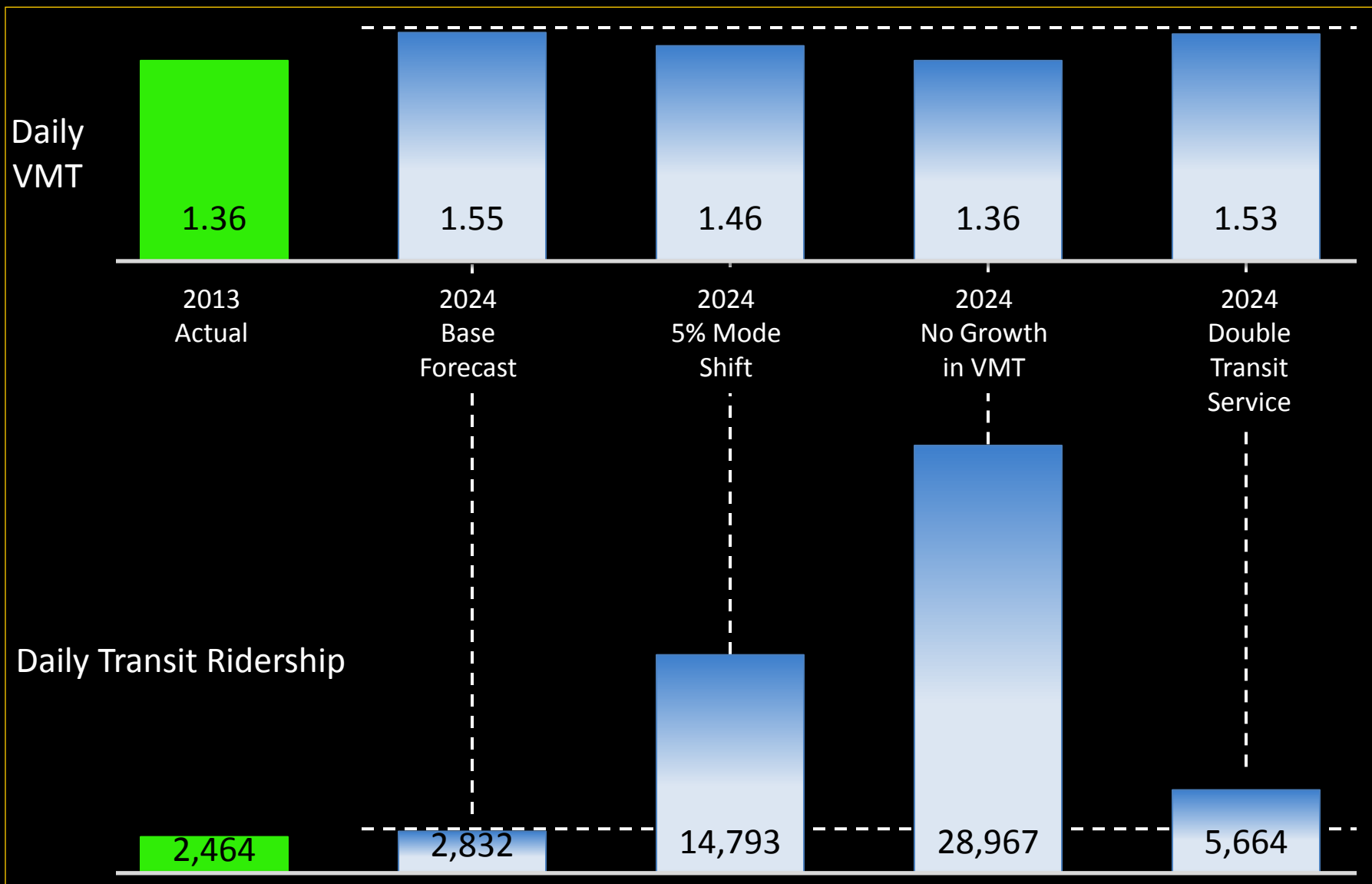
Potential Plan Scenario/Frame



2013 Person Miles of Travel: 777 million

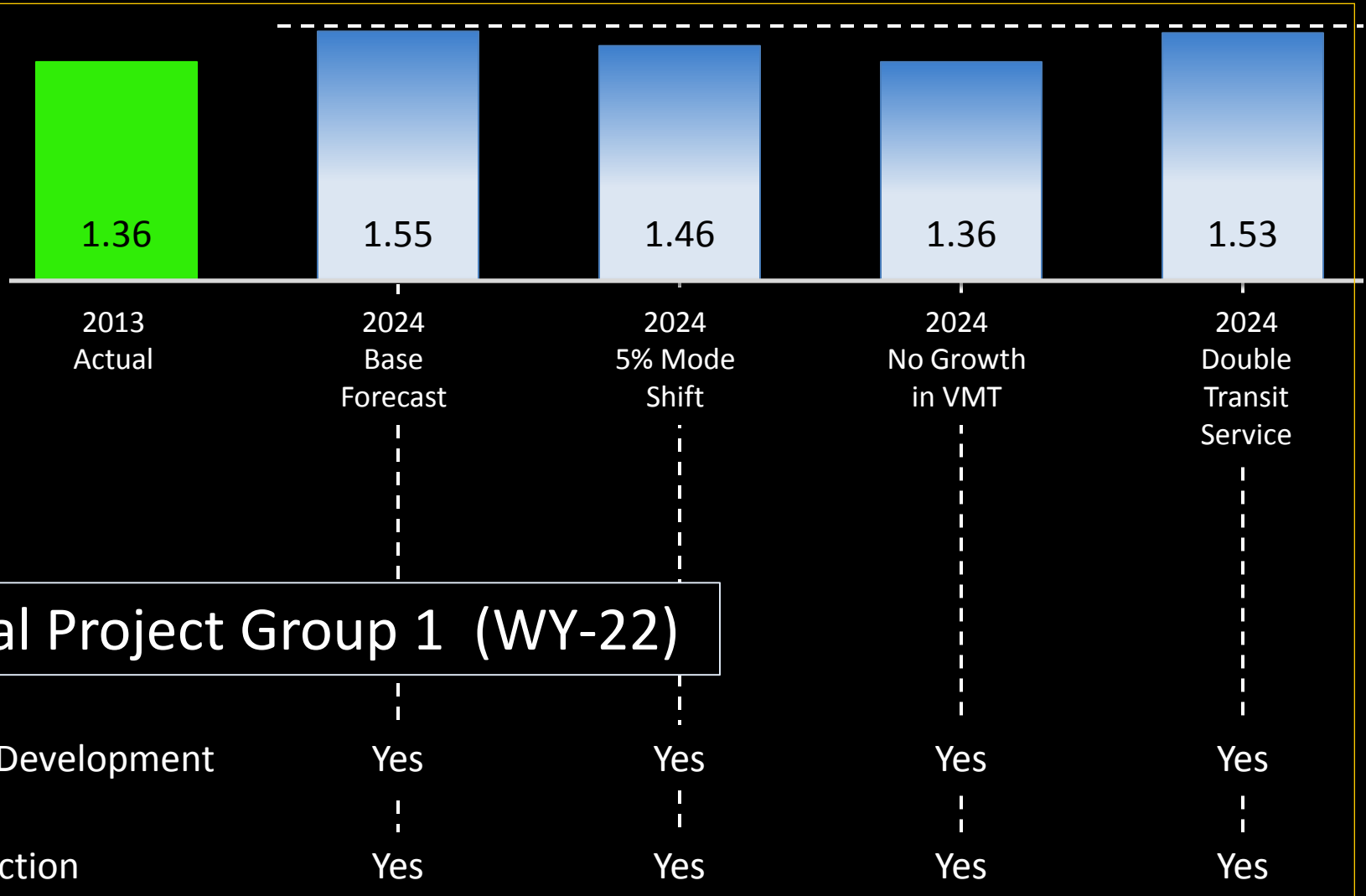
2024 Person Miles of Travel: 888 million

Potential Plan Scenario/Frame



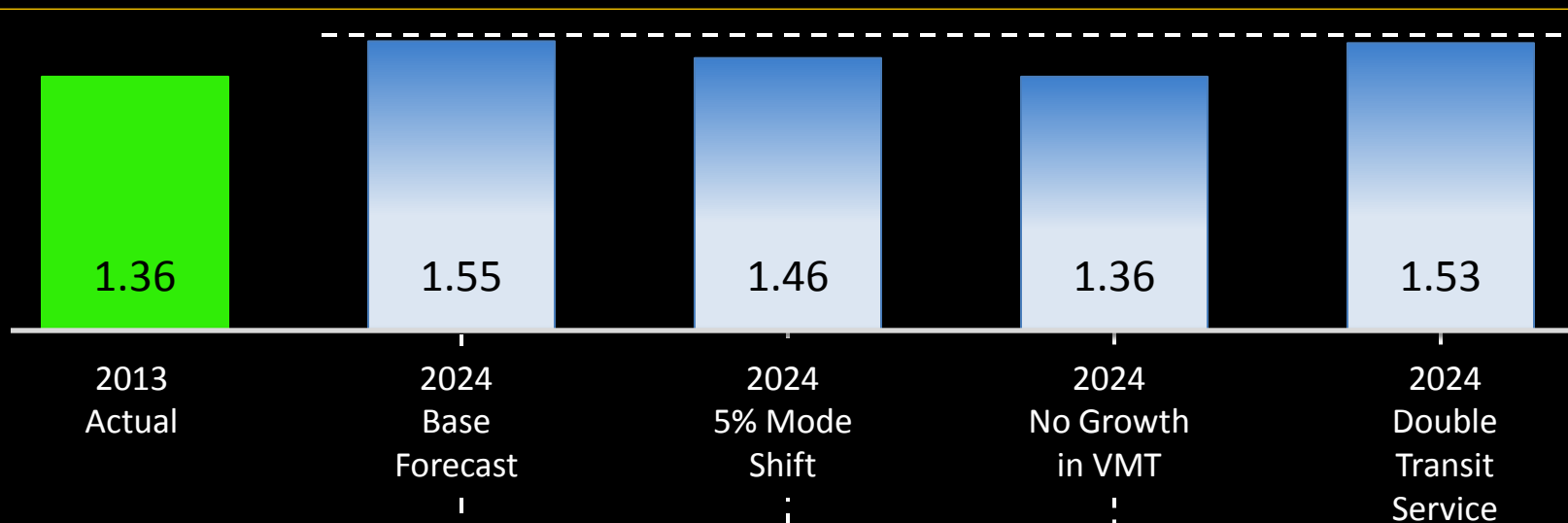
Potential Plan Scenario/Frame

Daily
VMT



Potential Plan Scenario/Frame

Daily
VMT



Capital Project Group 2 (WY-390)

Project Development

Yes

No

No

No

Construction

No

No

No

No

Potential Plan Scenario/Frame

Daily
VMT

1.36

1.55

1.46

1.36

1.53

2013
Actual

2024
Base
Forecast

2024
5% Mode
Shift

2024
No Growth
in VMT

2024
Double
Transit
Service

Capital Project Group 3 (US-26 Bypass)

NEPA

No

No

No

No

Construction

No

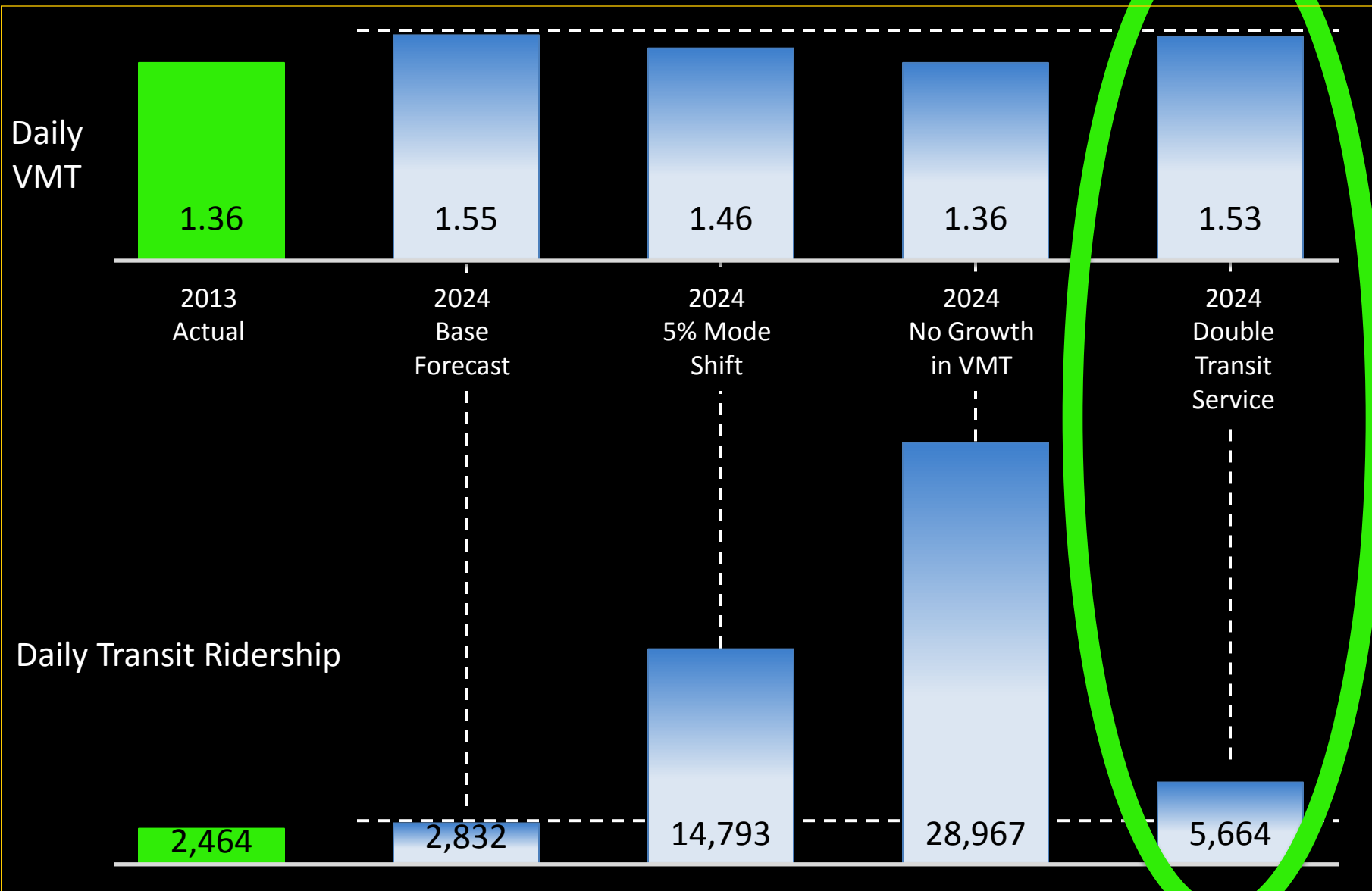
No

No

No

Recommended Plan Scenario

Recommended Plan Scenario



Basis for Recommendation

- Feasible transit program (transit demand is already exceeding supply)
- Helps avoid/postpone major highway projects that detract from local character
- Supports other local objectives

Implementation

Implementation

1. Double transit service by 2024
2. Implement a TDM* program
3. Apply benchmarking system to major projects
4. Improve internal connectivity in town & villages
5. Establish an RTA**

* TDM = transportation demand management

** RTA = regional transportation authority

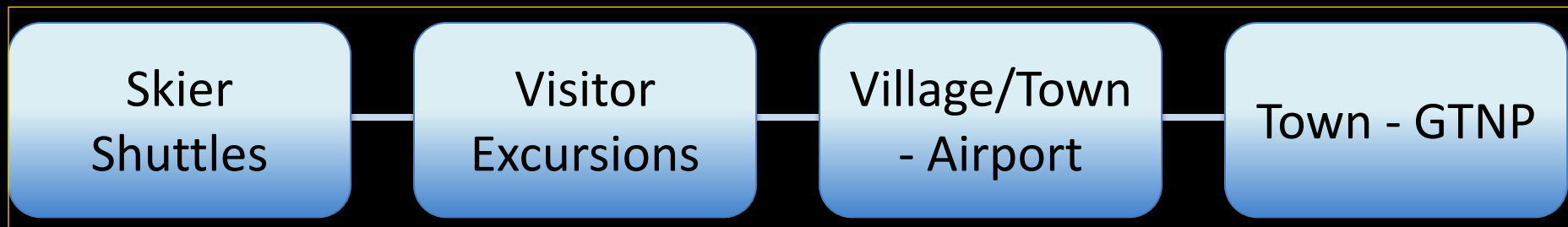
IMPLEMENTATION

1. Significant Increase in Transit Service Levels

Existing START Services



Existing Private Sector Services



Circulator



TOWN SHUTTLE HEADING WEST

FREE

FALL 2014

Corridor

QUESTIONS?
call 307.733.4521
www.startbus.com



JACKSON → TETON VILLAGE \$3

FALL 2014

Commuter



Transit – Strategic Options

1. Fares and Passes

- Fare-free Valley services (\$1 million/year)
- Implement bulk-rate discount commuter pass

2. Commuter Services

- Increase service levels (# of runs/day)
- Implement express runs + local runs

Transit – Strategic Options

3. Corridor Services

- Further increases in level of service (runs/day)
- New service to airport
- New service to Grant Teton National Park

4. Circulator Services

- Split Town Shuttle into linear routes

Tentative 2024 Transit Plan

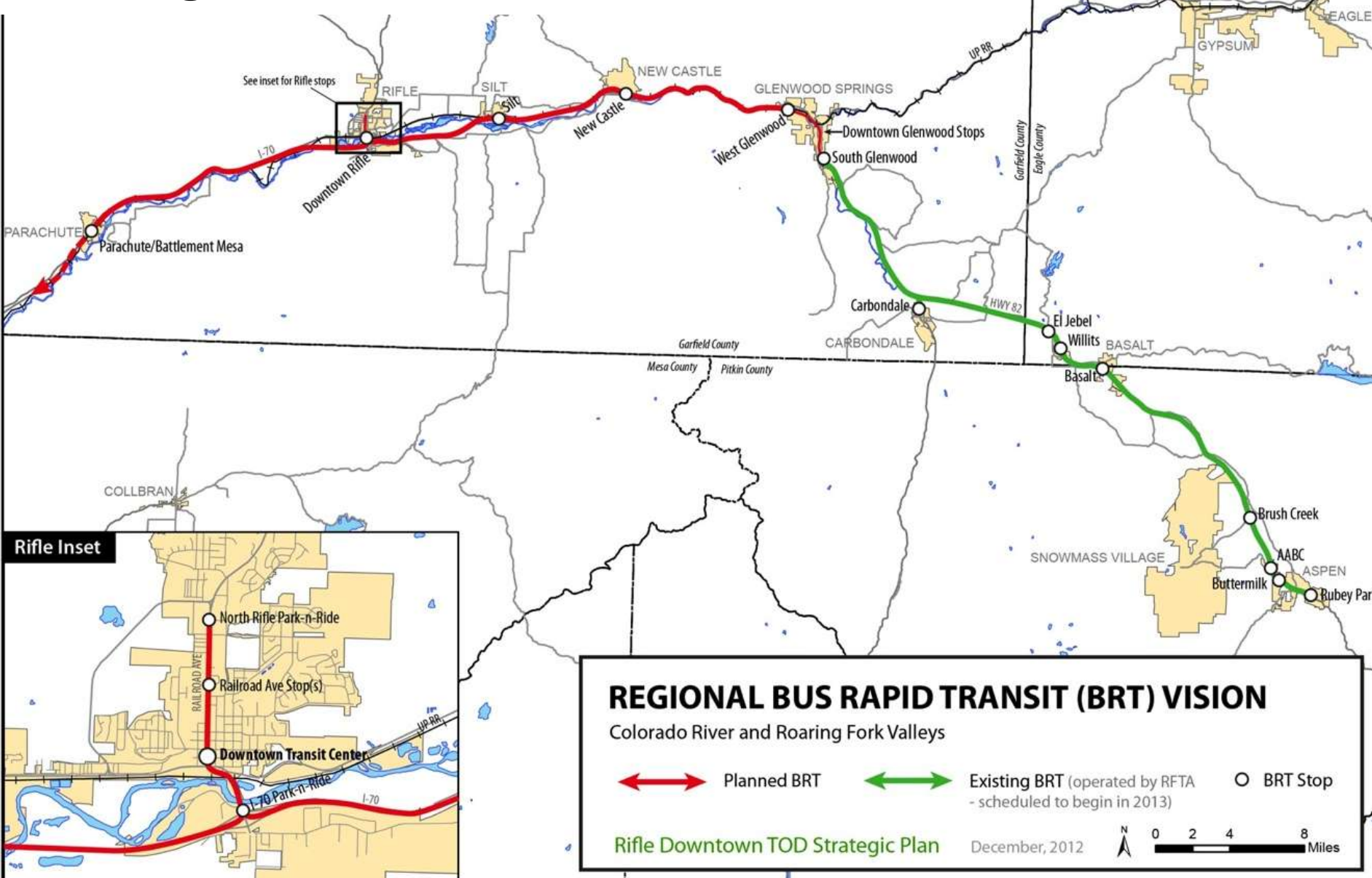
- Add runs to both commuter routes
- Increase summer service to Teton Village
- Break Town Shuttle up into linear routes
- Update pass and fare options
- Initiate a three-year pilot
 - Jackson to Grand Teton Park (Jenny Lake)
 - June 15 – September 15
 - Half-hour frequency each direction
 - Adjust and tweak each season
 - Look for partnerships

Potential 2035 Transit Plan

- Convert Town Village service to BRT (Bus Rapid Transit)
- Add remote “light” maintenance facilities at other end of commuter routes
- Include possible high capacity transit corridors in any environmental process to evaluate bypass alternatives

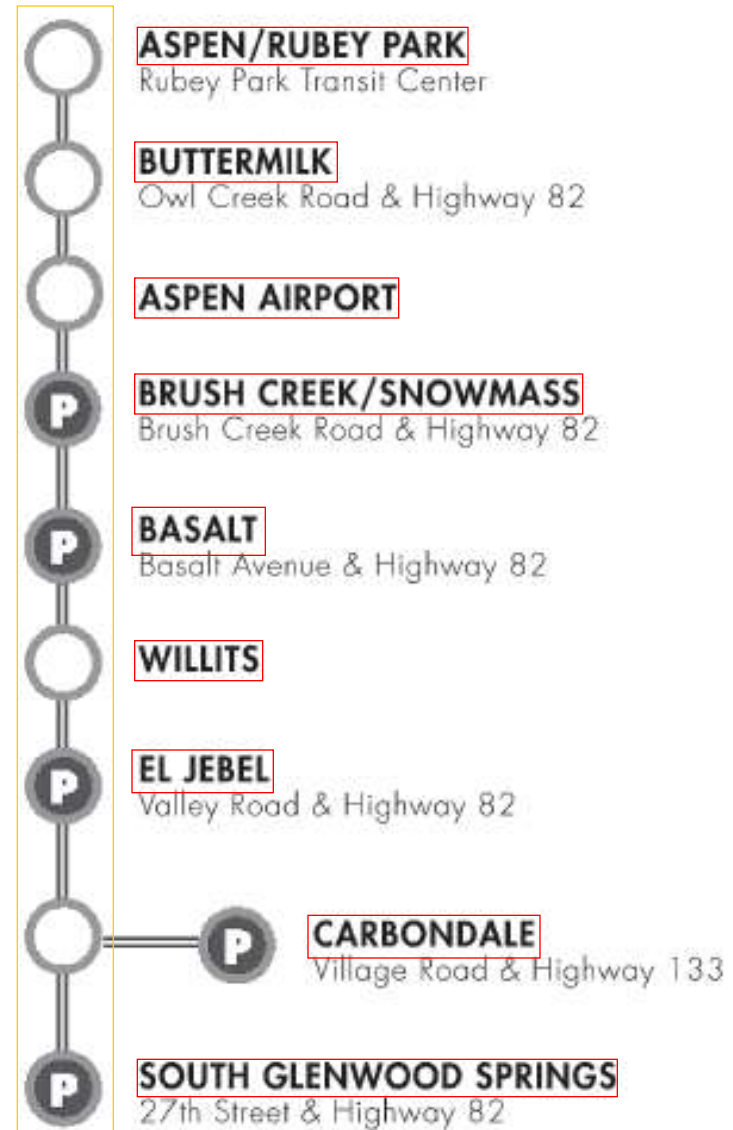
Bus Rapid Transit (BRT) Example

Roaring Fork, Colorado





- Express service
- Proof of payment
- Highly visible vehicles
- Rail-type stations
- Selected park 'ride lots



IMPLEMENTATION

2. Implement a cooperative*
“transportation demand
management” (TDM) program

* Town, county, WYDOT, Park Service, major employers

TDM Program Elements

- Employer coordination
- Transit passes – commuter and visitor
- Guaranteed ride home for commuters
- Events, promotions
- Information clearinghouse – esp. transit
- Tourist and visitor outreach
- Bikeshare and car share
- Monitoring and reporting for ITP

IMPLEMENTATION

3. Use a benchmarking system to guide decisions about major corridor projects

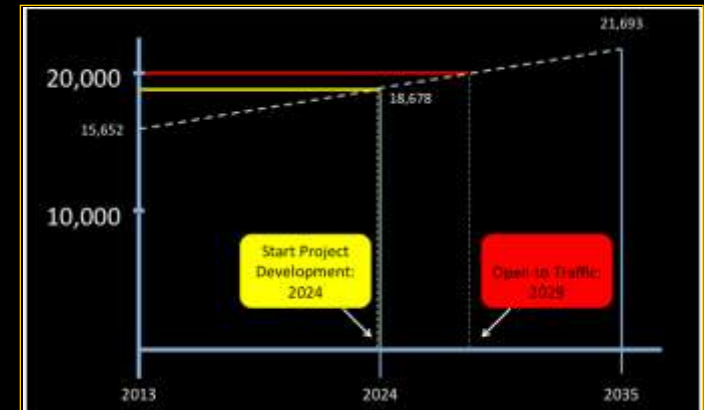
Benchmarks

- Strategic timing
- Systematic project development
- Public involvement

Capital Group 1



Capital Group 2

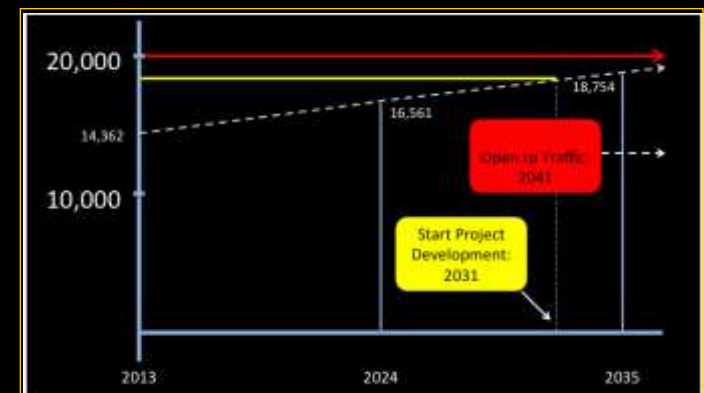


Annual traffic?

or

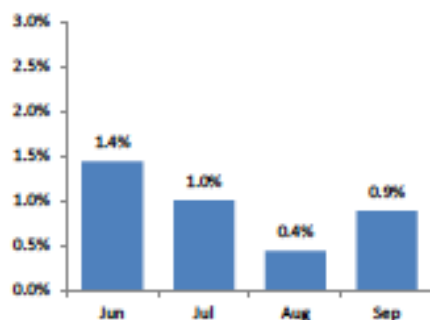
Peak monthly traffic?

Capital Group 3

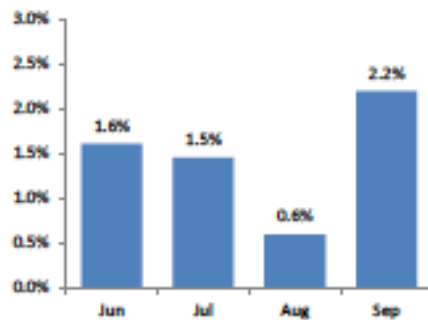


Seasonal Traffic Growth

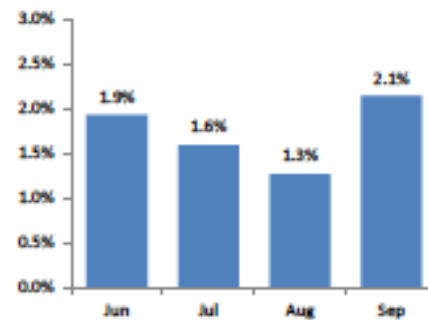
US 26 at South Park
(^{'10-'14} annual rate of traffic growth)



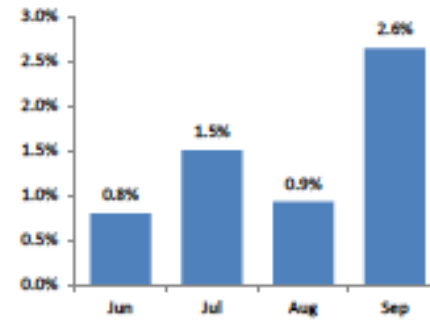
WY 22 @ Snake River
(^{'10-'14} annual rate of traffic growth)



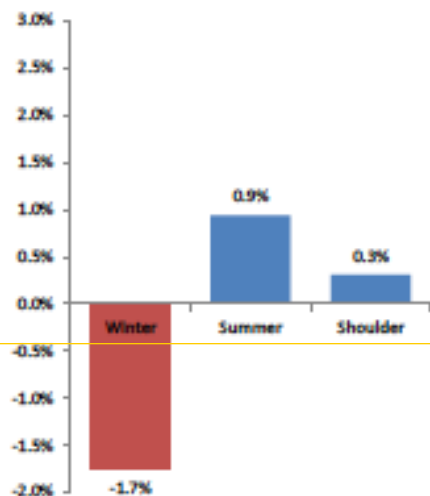
WY 22 w/o WY 390
(^{'10-'14} annual rate of traffic growth)



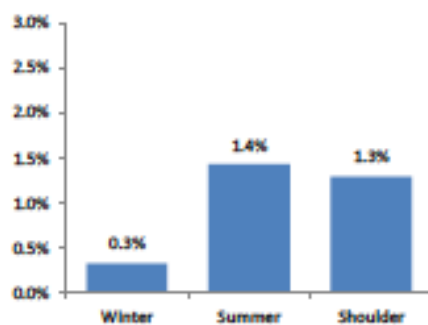
WY 390 @ WY 22
(^{'10-'14} annual rate of traffic growth)



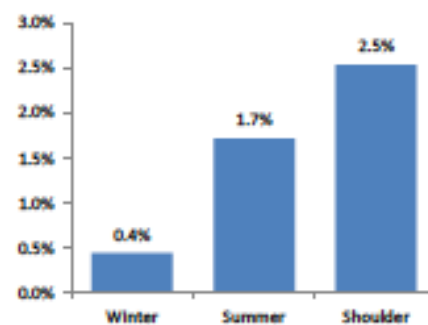
US 26 at South Park
(^{'10-'14} annual rate of traffic growth)



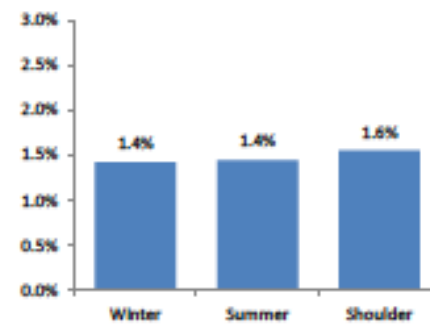
WY 22 @ Snake River
(^{'10-'14} annual rate of traffic growth)



WY 22 w/o WY 390
(^{'10-'14} annual rate of traffic growth)

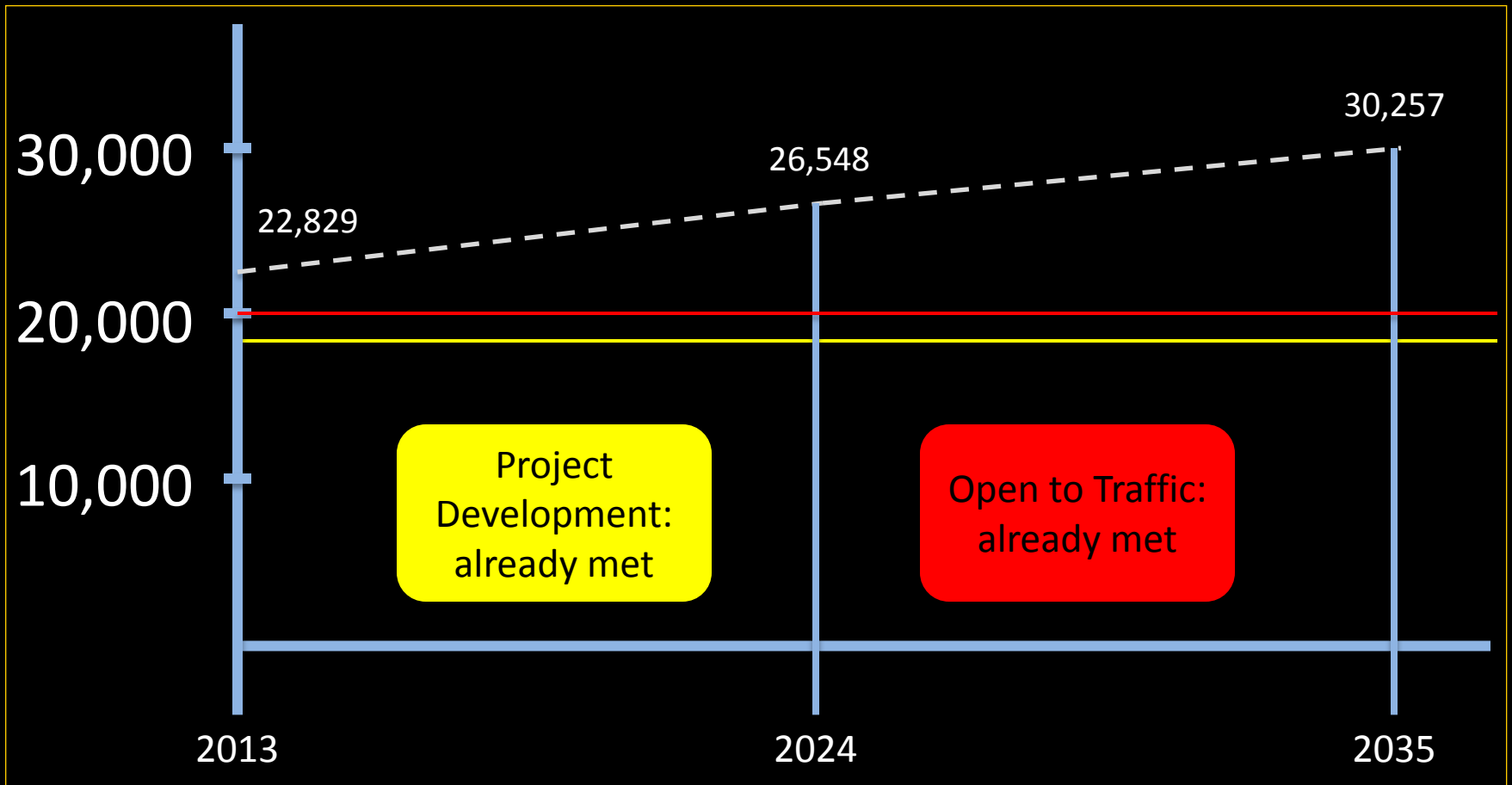


WY 390 @ WY 22
(^{'10-'14} annual rate of traffic growth)



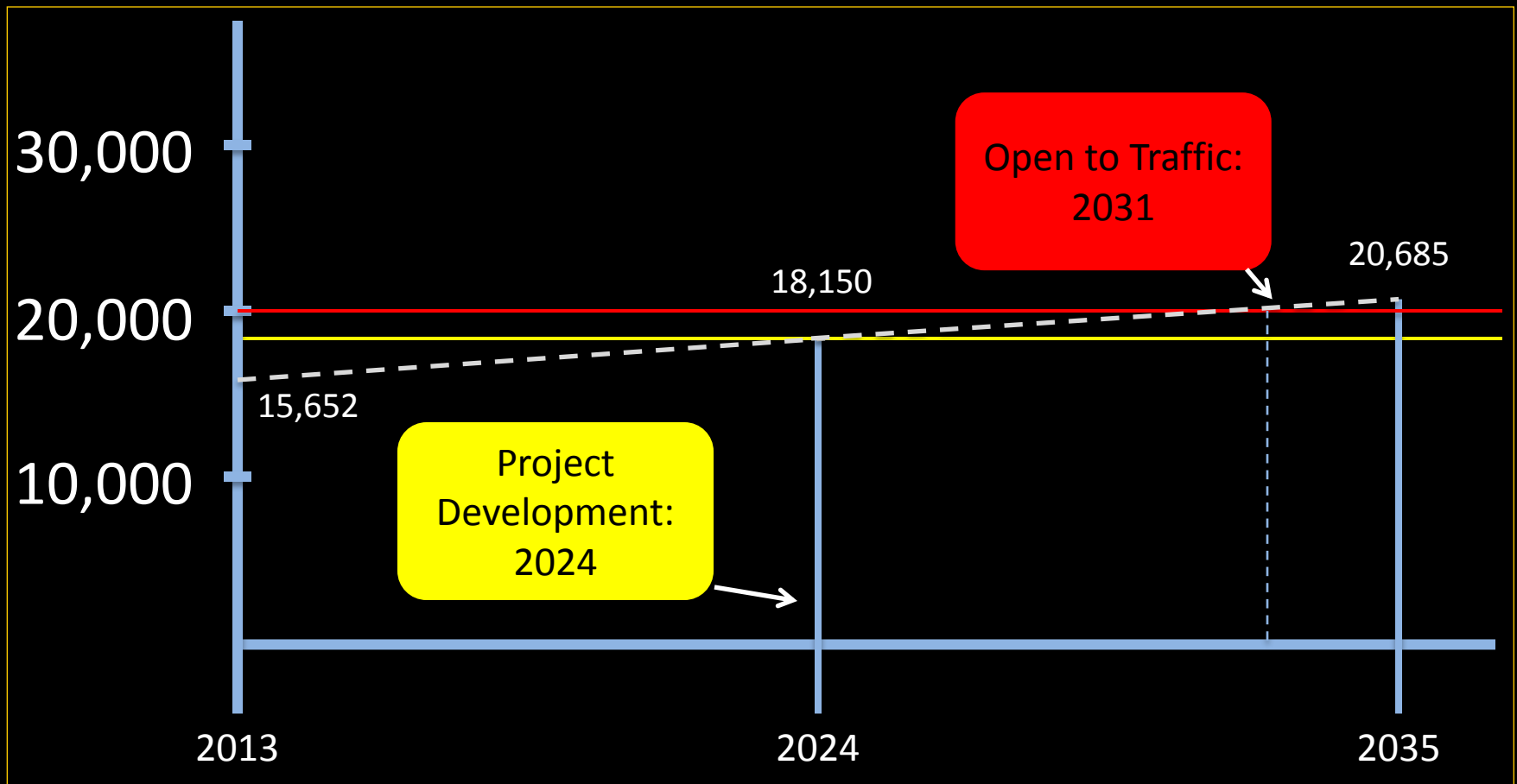
Capital Group 1 Benchmarks

(WY-22 – July)



Capital Group 1 Benchmarks

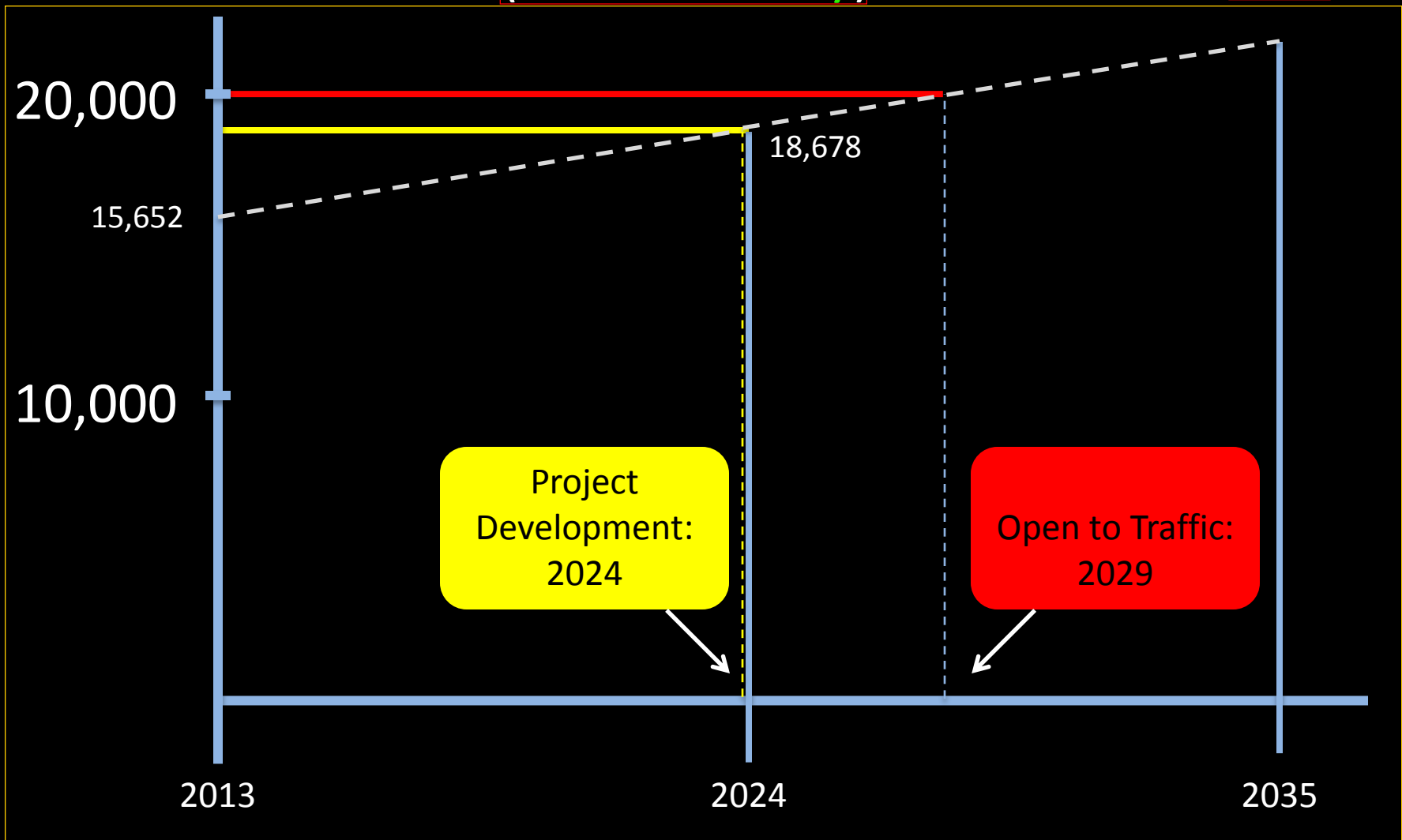
(WY-22 – Annual)



Capital Group 2 Benchmarks

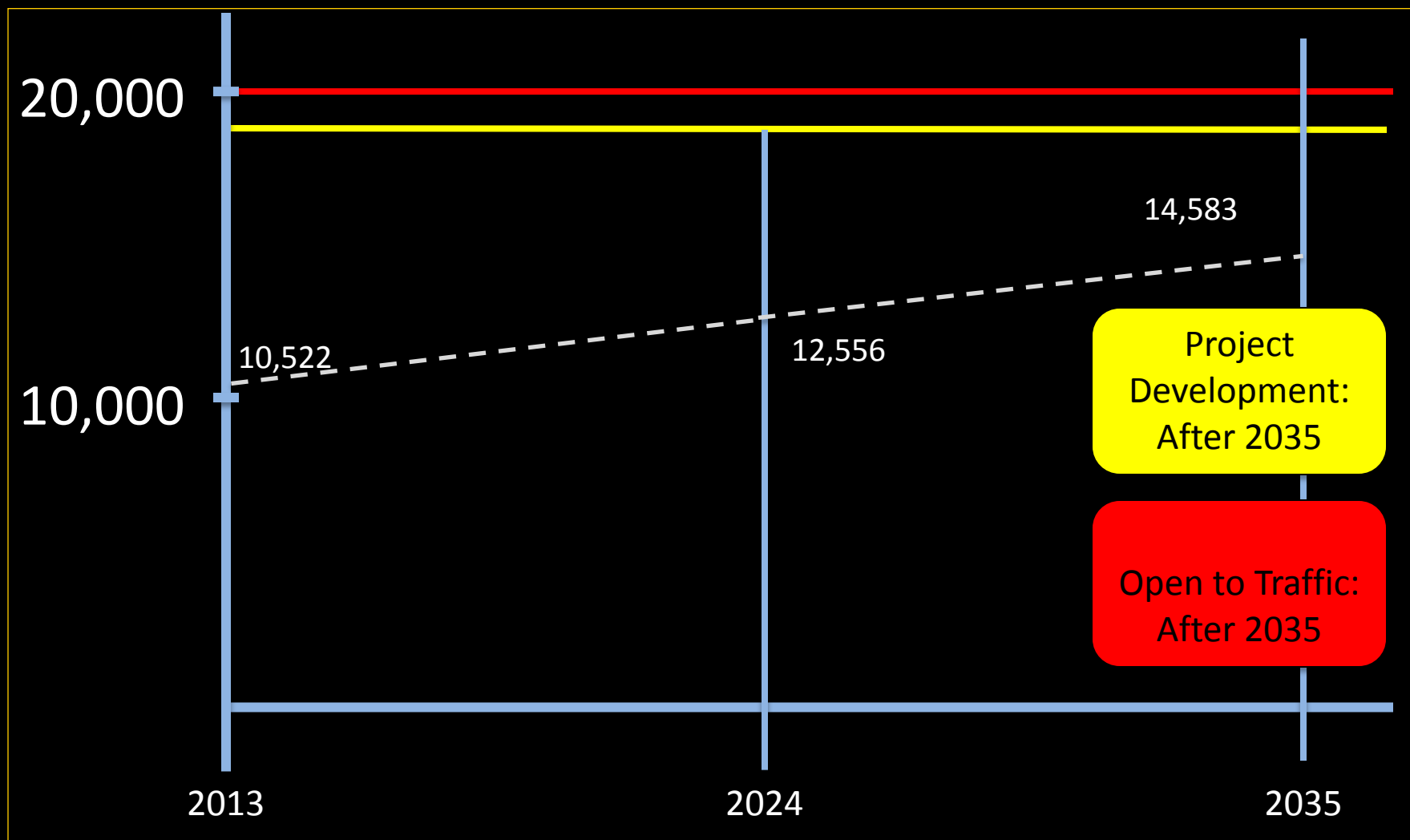
(WY-390 – July)

21,693



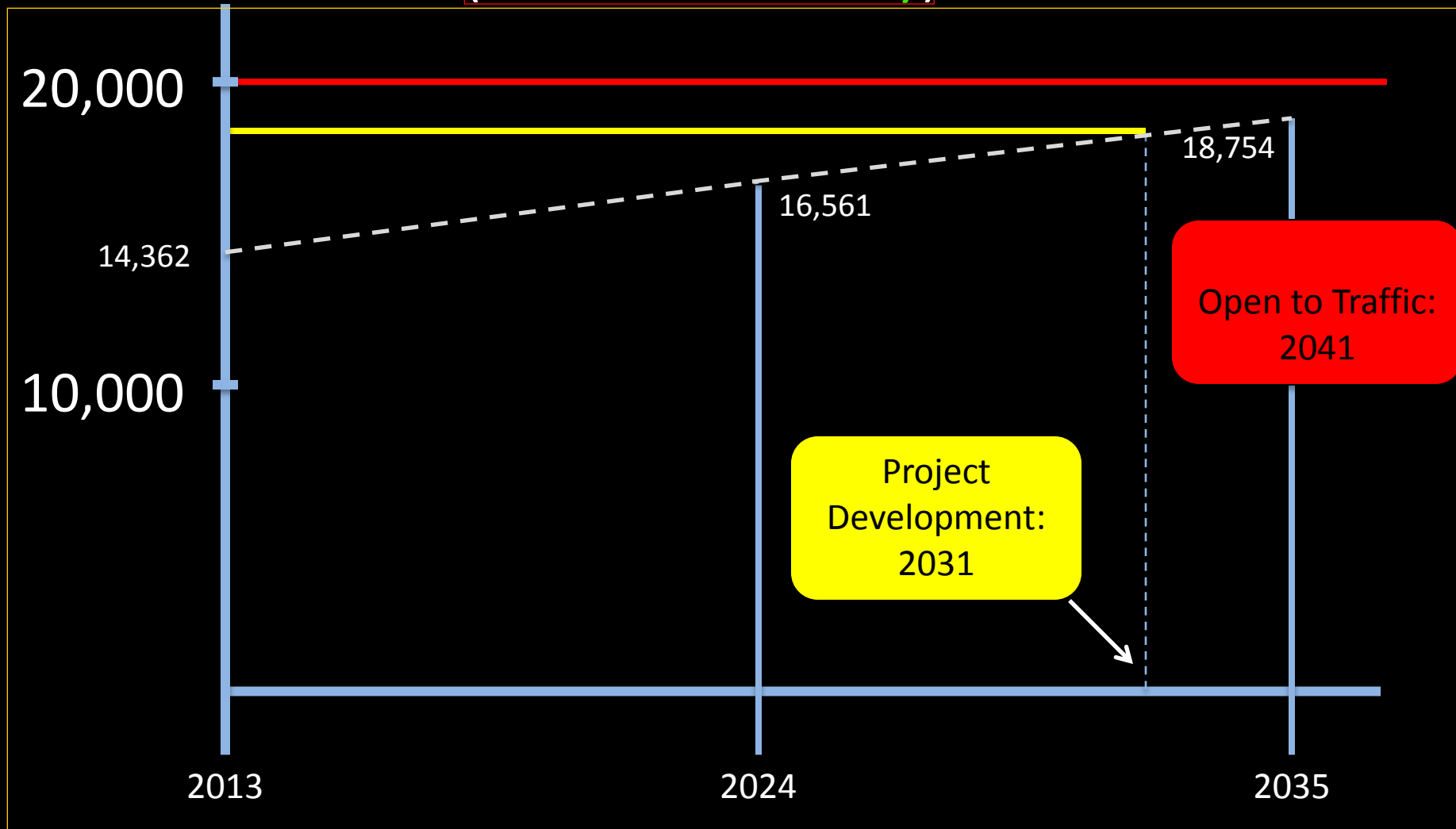
Capital Group 2 Benchmarks

(WY-390 – Annual)



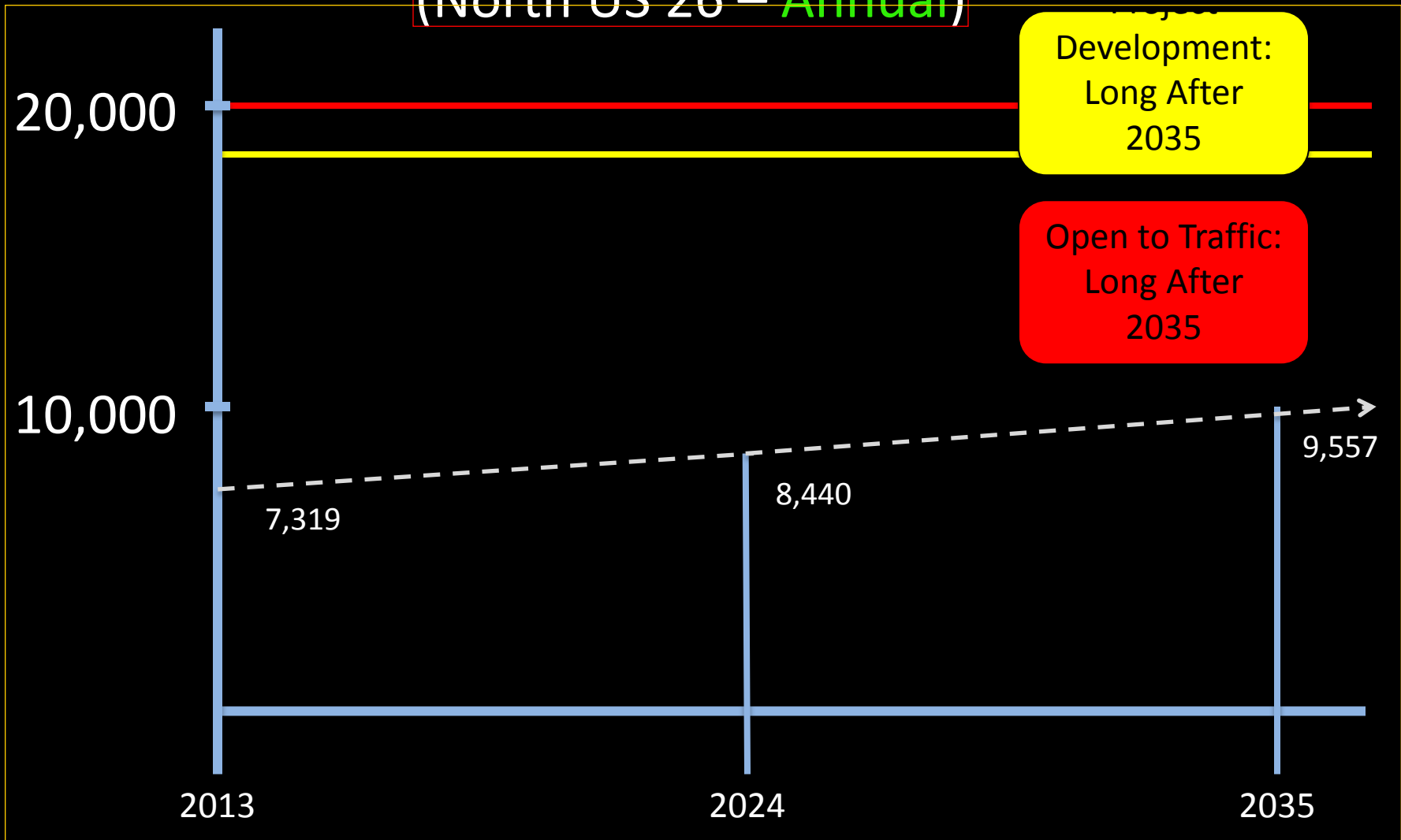
Capital Group 3 Benchmarks

(North US 26 – July)



Capital Group 3 Benchmarks

(North US 26 – Annual)



Highway Network Development

- All major corridors must be multimodal
- Address BRT potential Town – Village
- Proactive approach to wildlife protection

Proactive Approach to Wildlife Protection

- Work with WYDOT to implement wildlife mitigation/protection measures in 22/390 PEL
- Work with WYDOT to implement fencing and grade crossings as part of south US-26 projects
- Ask WYDOT to lower speed limits to 45mph on US-26, Hoback to Jackson
- Convene a partnership (federal, state, local) to address mitigation/protection measures along US-26 north of Jackson

IMPLEMENTATION

4. Improve internal connectivity (all modes) in towns and villages

Internal Connectivity

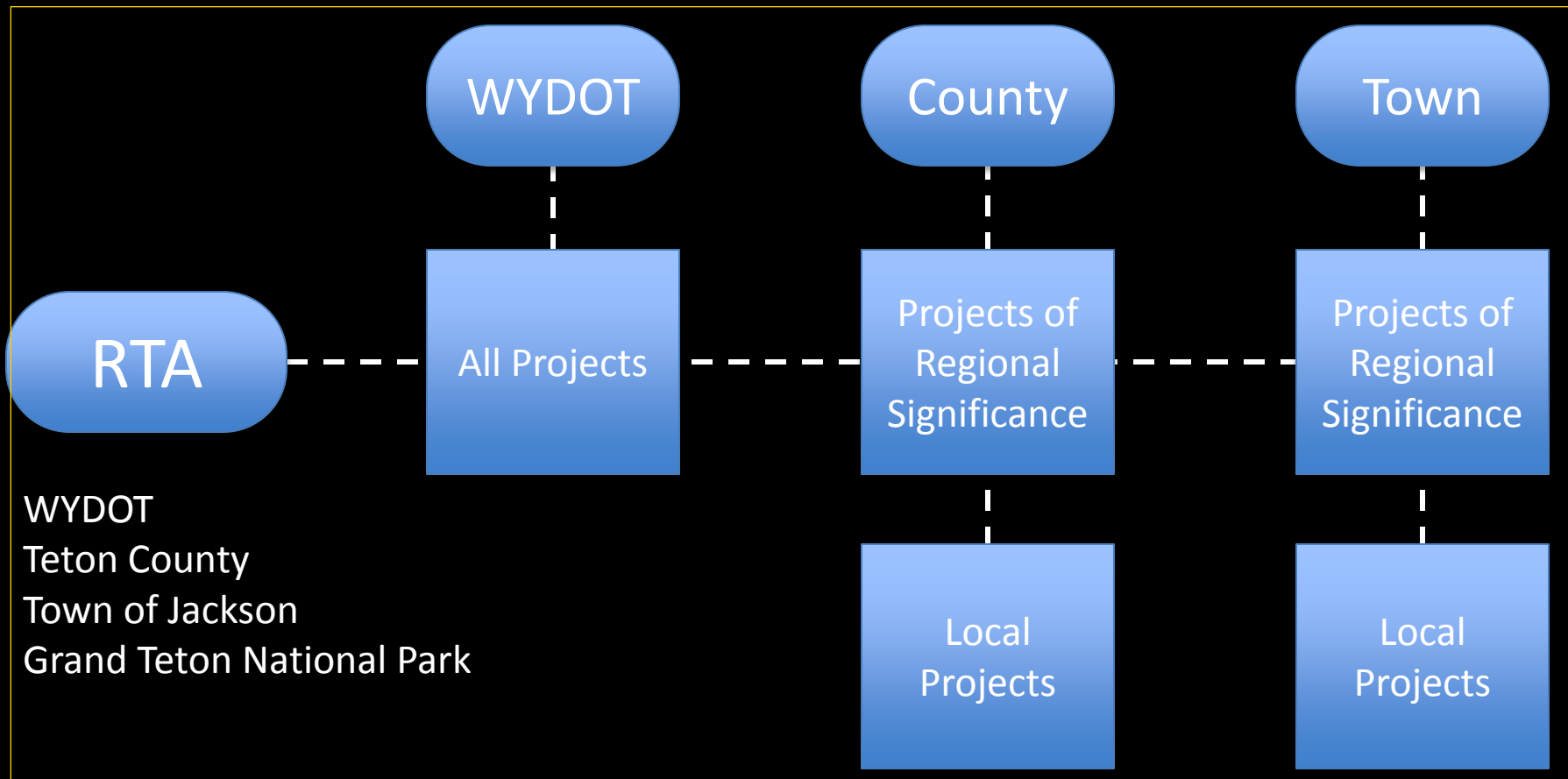
Including:

- Tribal Trails Connector
- Maple Way – Snow King Corridor
- Town – New Streets Plan
- County sidewalks and multi-use pathways
 - Wilson
 - South Park
 - West Bank

IMPLEMENTATION

5. Establish a “Regional Transportation Authority” (Town/County/WYDOT)

Potential Role of Regional Transportation Authority



Revenue

This plan cannot be funded
from existing sources

Net Additional Plan Cost (recurring annual)

2018: \$1,800,000

2024: \$5,000,000

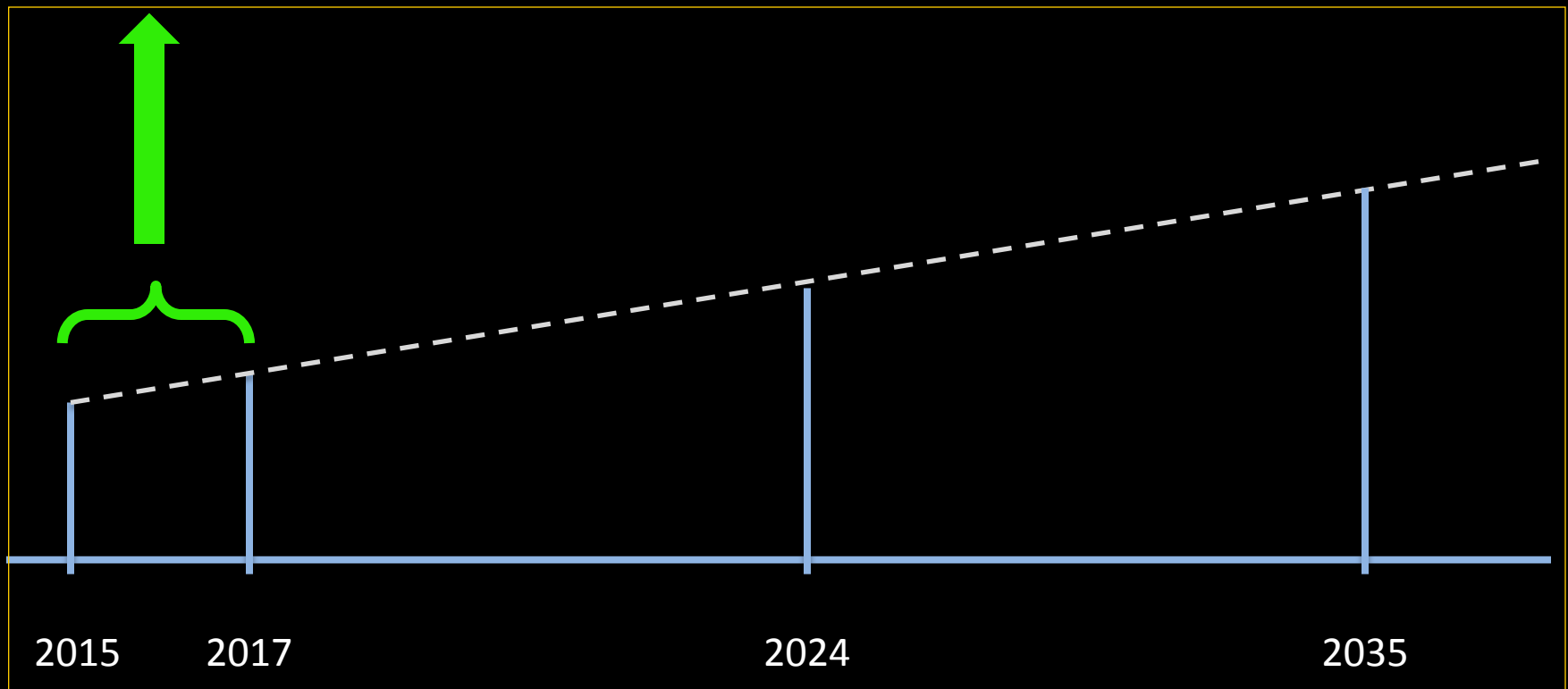
(+ capital costs)

Recommended Action Plan

2015 - Increase staff capacity – transportation planner

2016 - Form RTA

2017 - Address revenues



At the Table

Town

County

WYDOT

Park Service

Major Employers

Transit Operators

School District

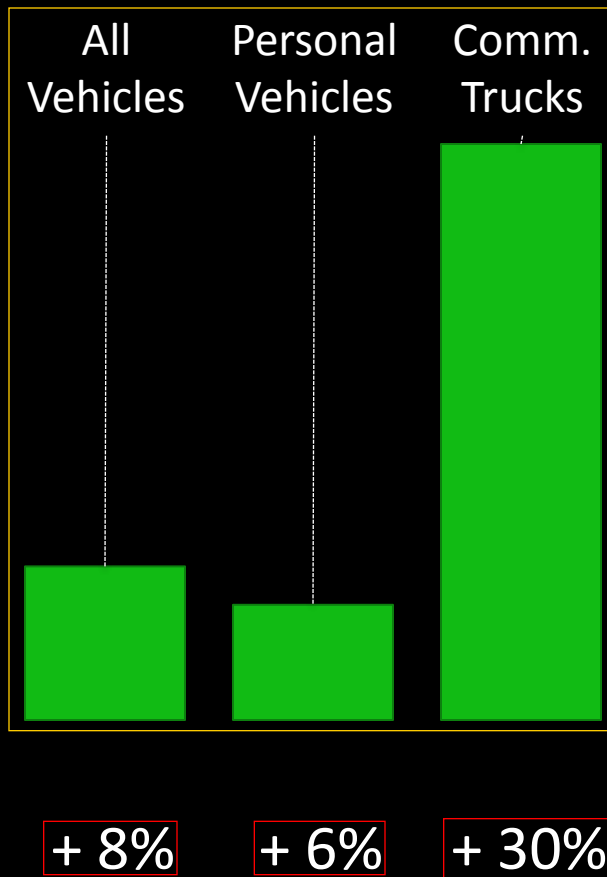
Local NGOs

Questions, Discussion

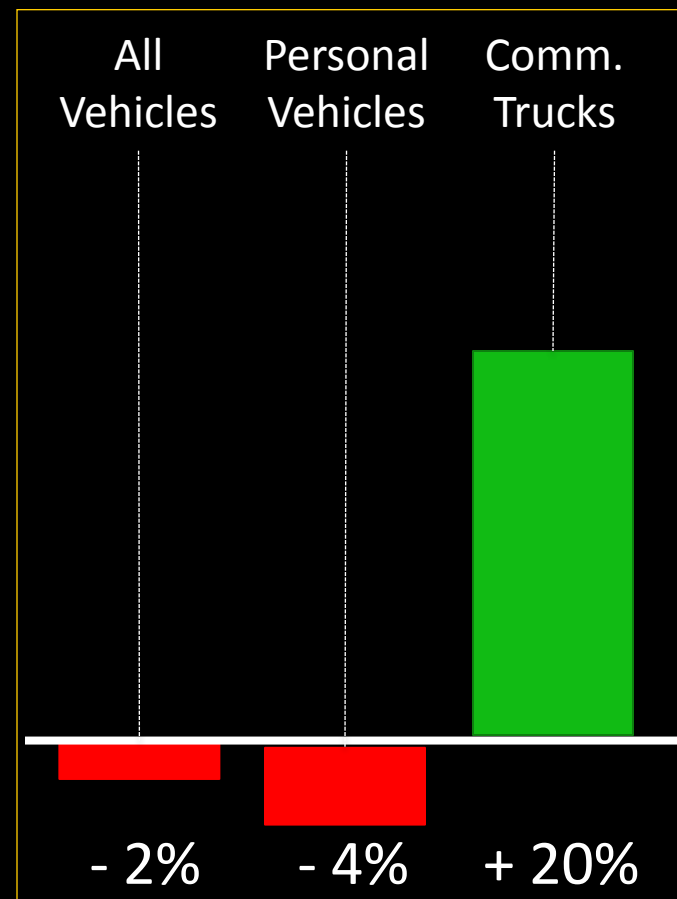


Trends in Total US VMT

2000 - 2012

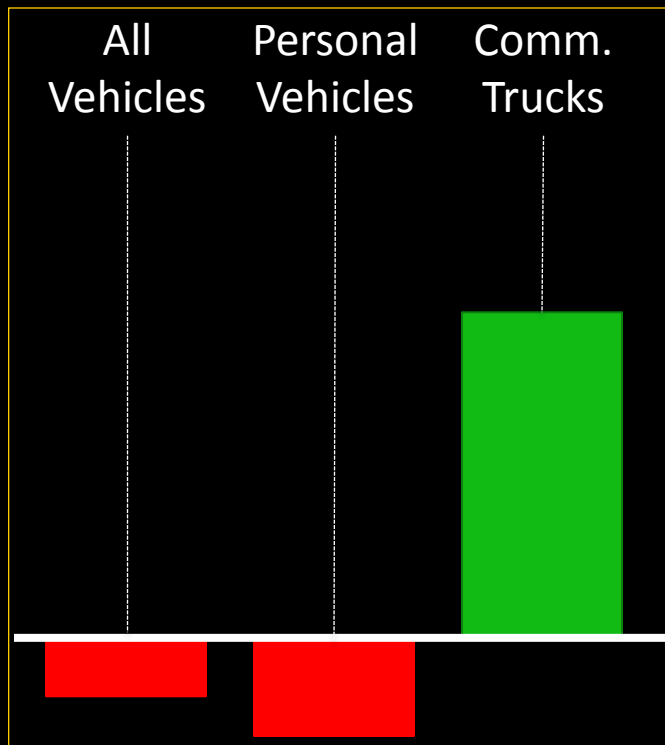


2006 - 2012



Per Capita US VMT

2000 - 2012

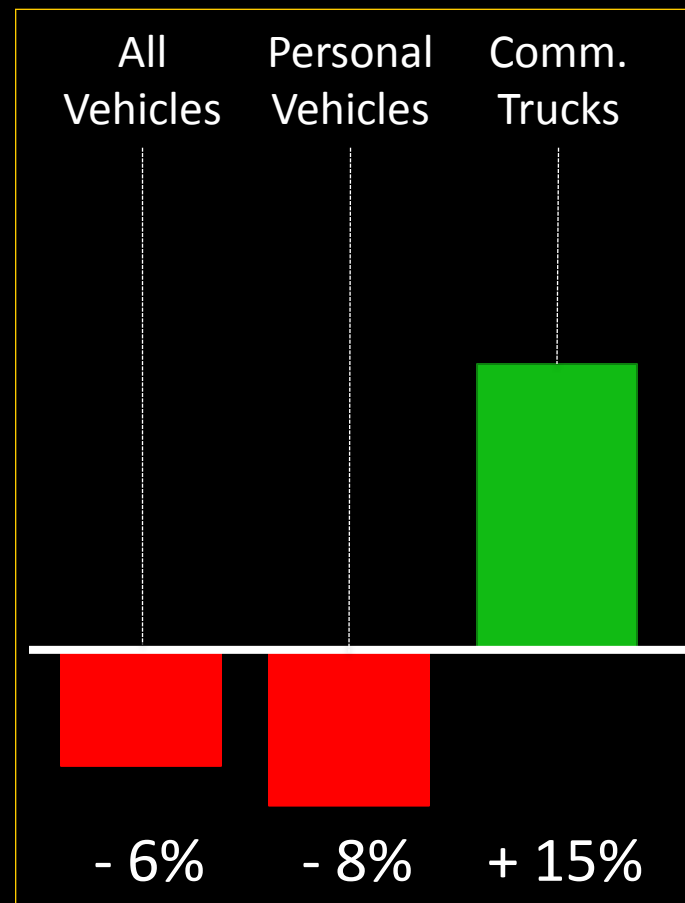


- 3%

- 5%

+ 17%

2006 - 2012



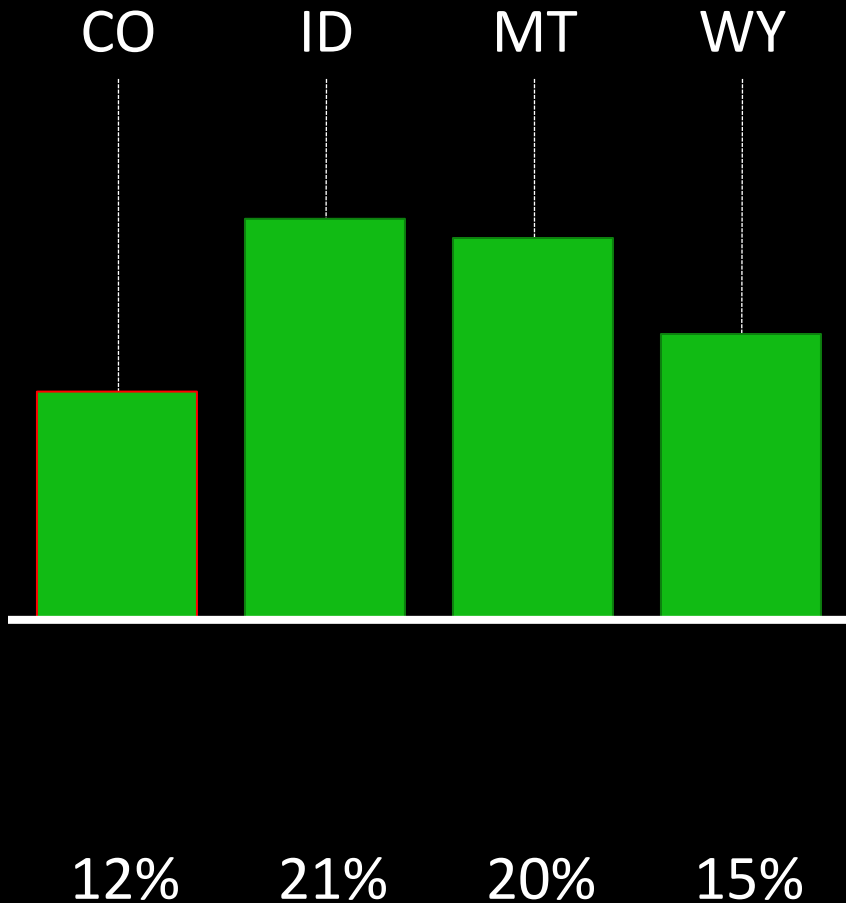
- 6%

- 8%

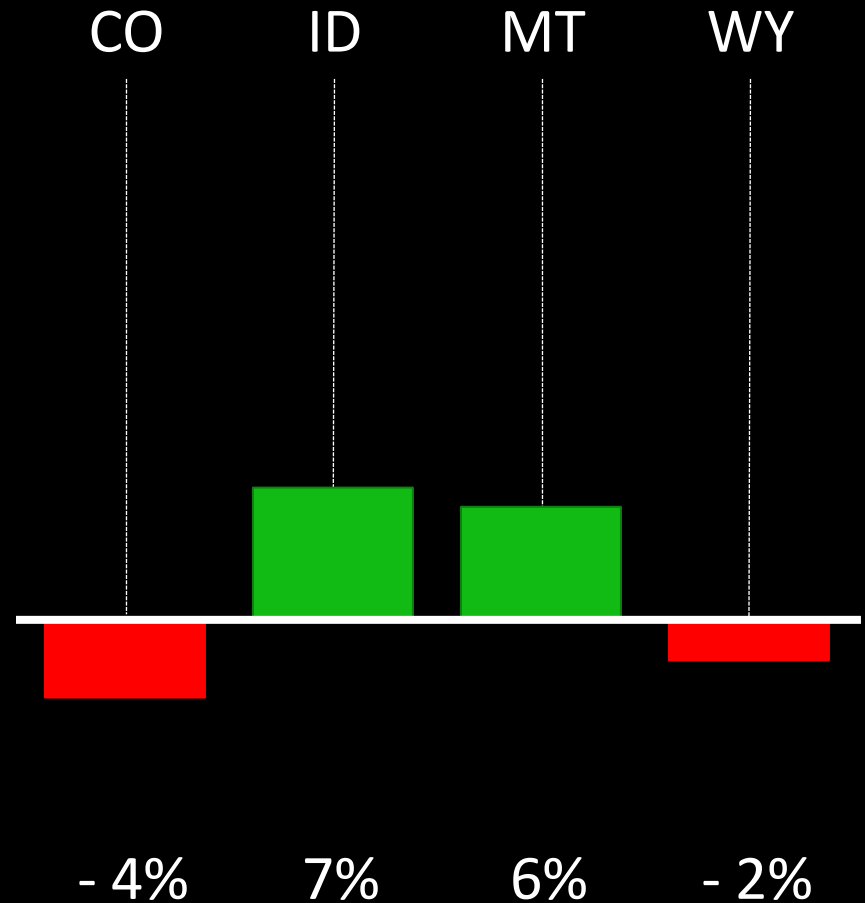
+ 15%

VMT Trends – Interior West States

2000 - 2012

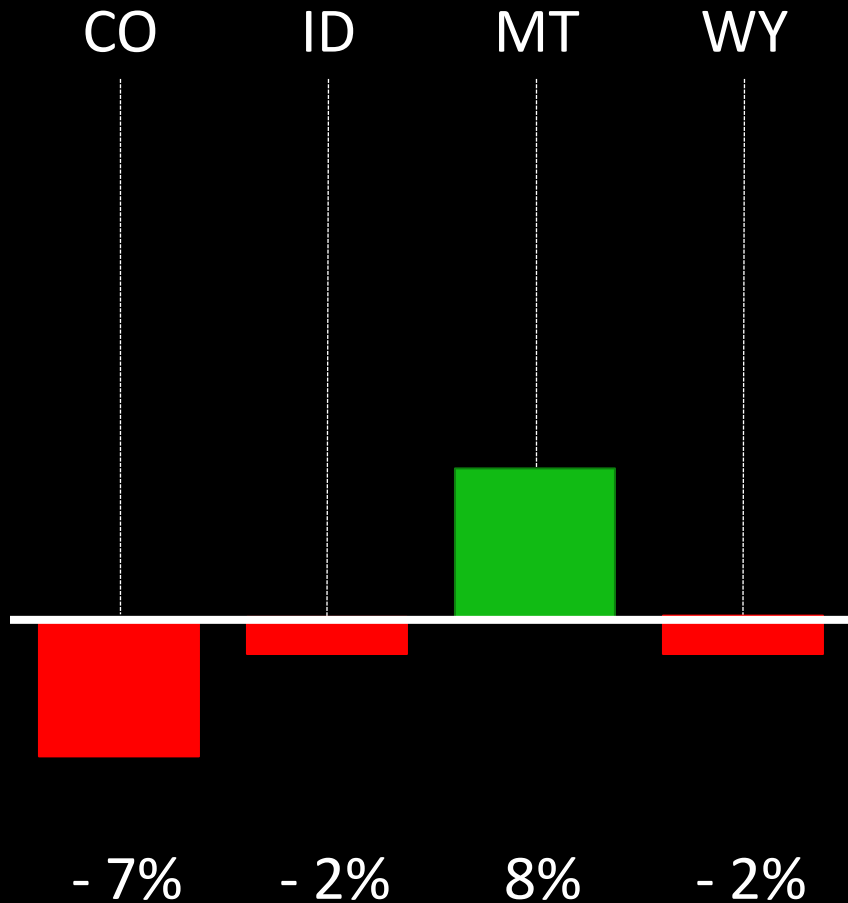


2006 - 2012

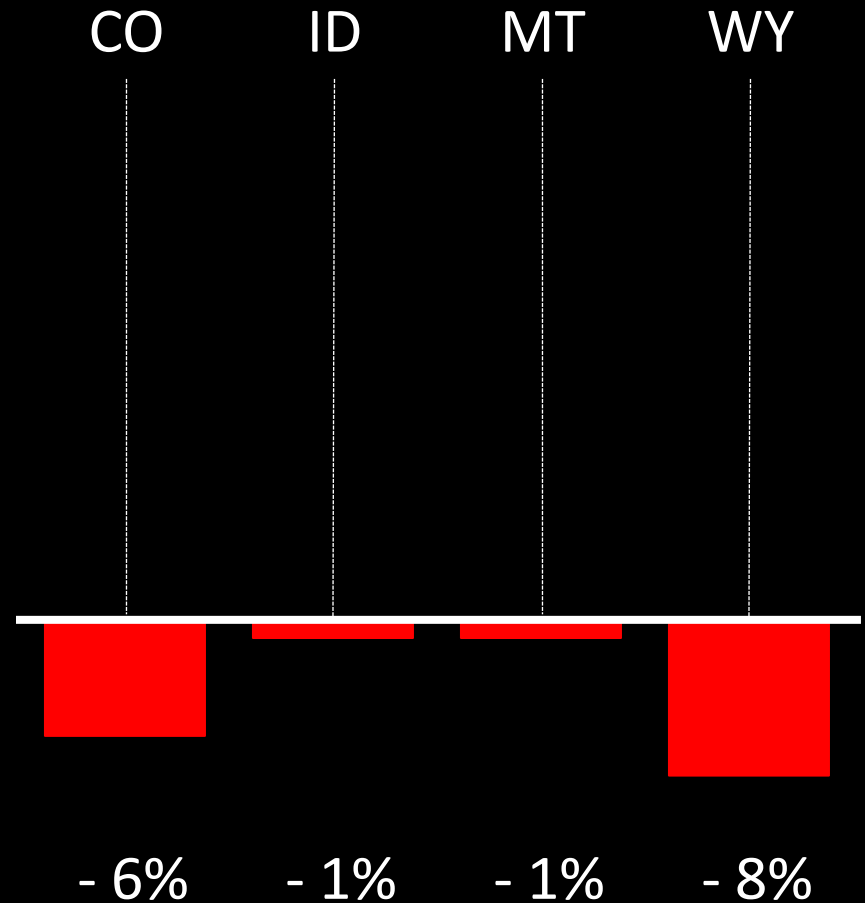


Per Capita VMT – Interior West States

2000 - 2012

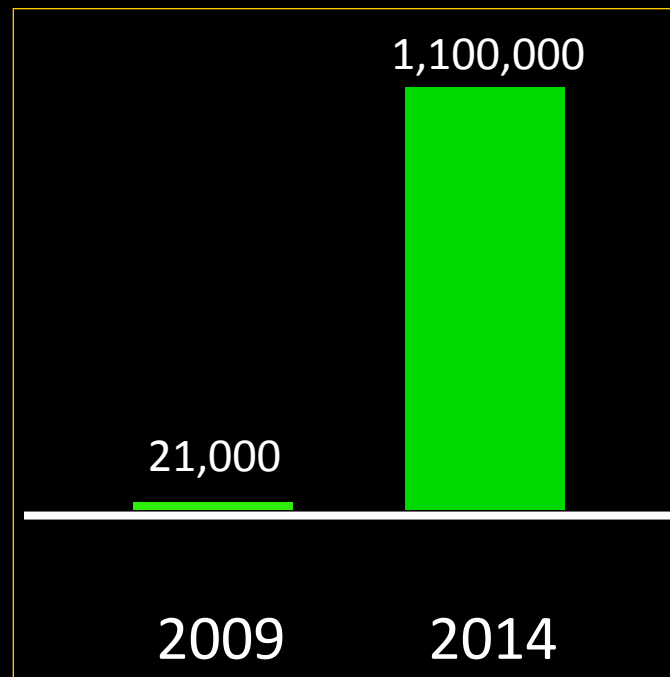


2006 - 2012



Oil by Rail

US – Barrels/Day



WYOMING

In 2011, Wyoming produced 40% of all coal mined in the United States

NORTH DAKOTA

Oil production in North Dakota increased 35% from 2010 to 2011

COLORADO

Colorado's vast fossil fuel resources include the Niobrara shale, which is estimated to contain as much as 2 billion barrels of oil

TEXAS

Texas will always be known as an oil state, but it's also the national leader in wind power production

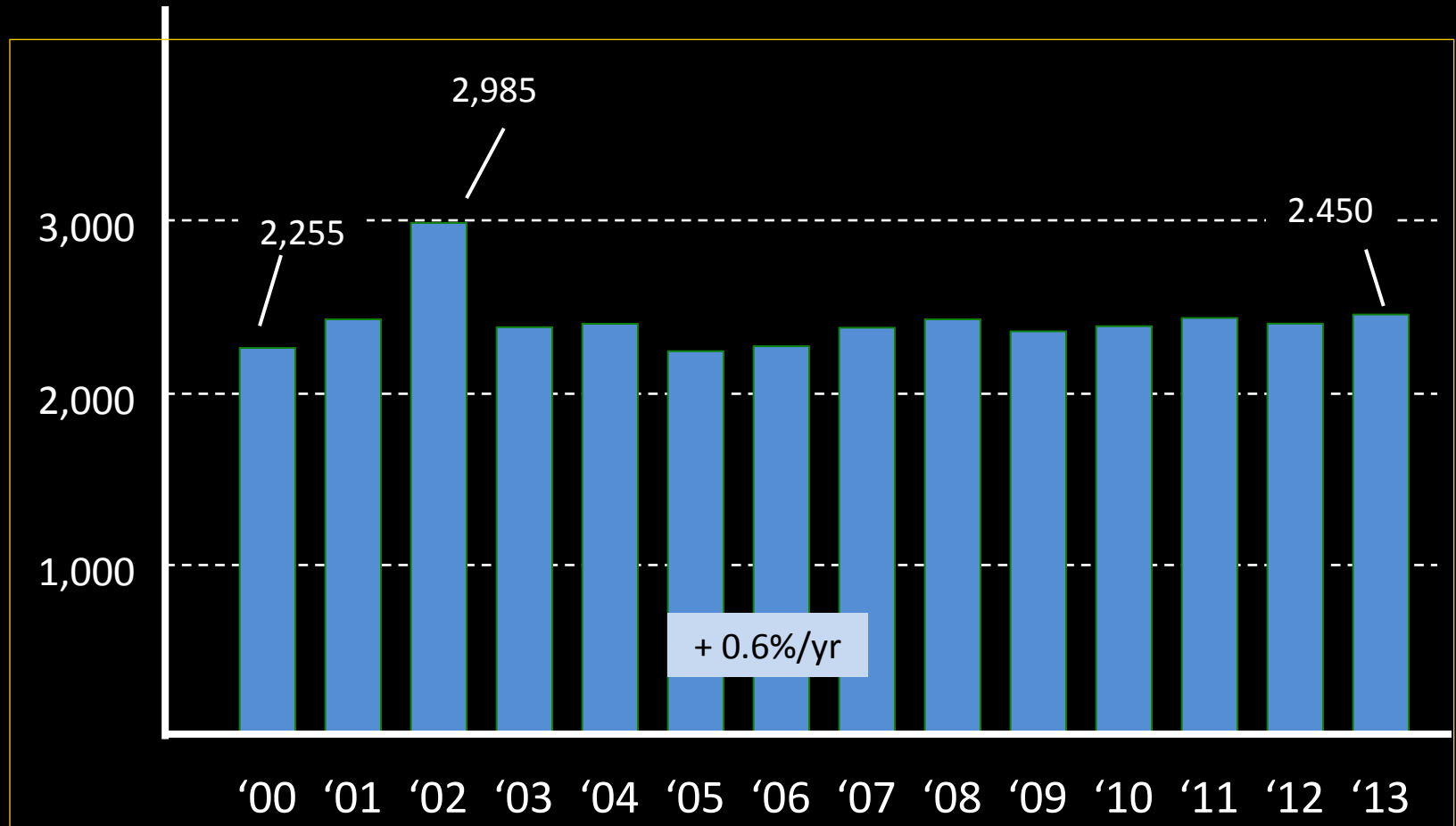
PERCENTAGE OF NATIONAL ENERGY PRODUCTION





GTNP Traffic Trend: Moose Entrance

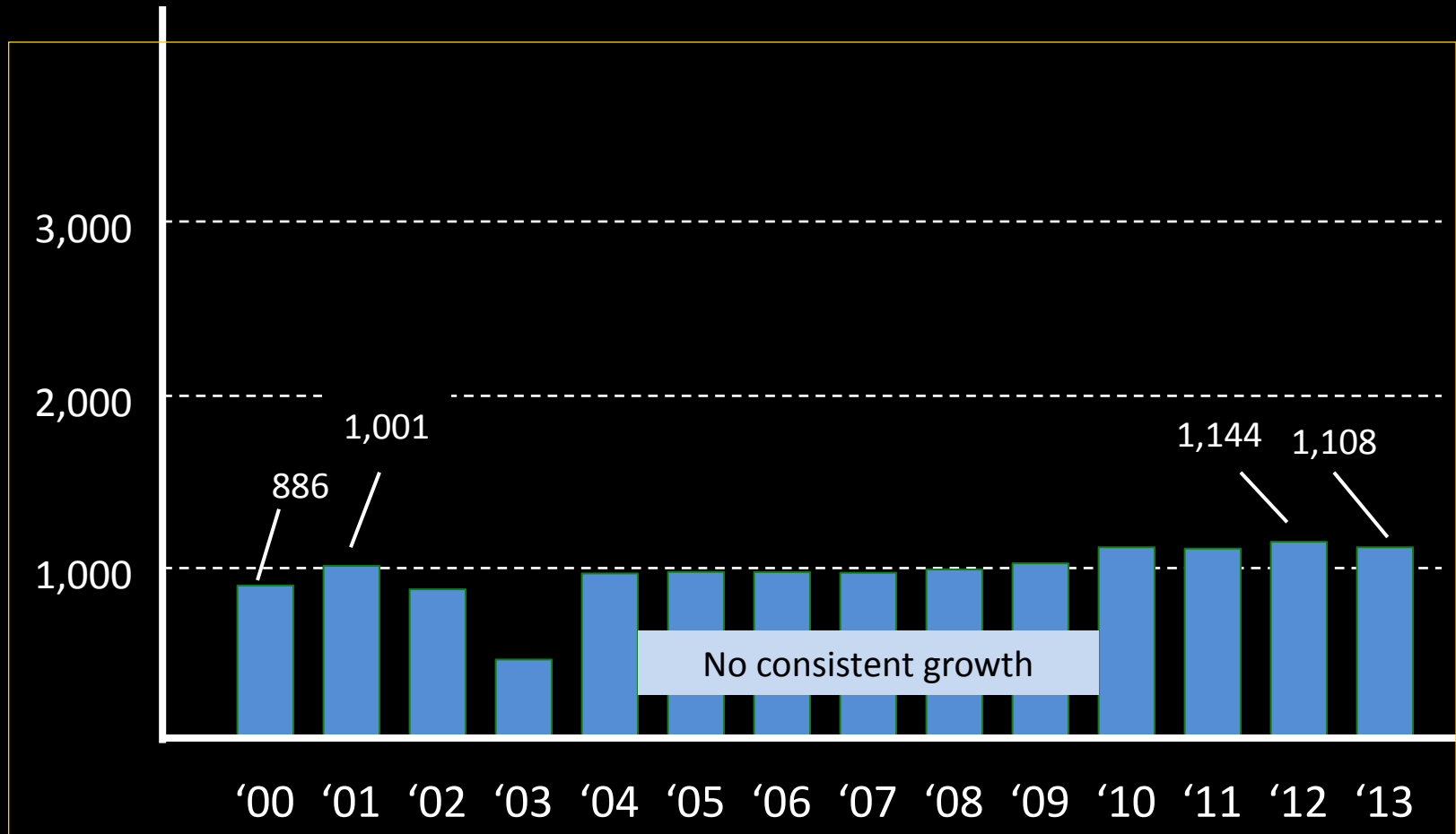
(July Average Daily Traffic – Inbound Only)



GTNP Traffic Trend:

Moose-Wilson Entrance

(July Average Daily Traffic – Inbound Only)



GTNP Annual Visitorship Trend

(millions)

