

Regional Transportation Plan

2040





Regional Transportation Plan

2040

Draft April 6, 2016

Forecast Year 2040

Effective Date To be completed

Revision Summary

ACTION	DATE	RESOLUTION	SHORT DESCRIPTION
Adopted	July 8, 2016 (planned)	To be completed	New plan adopted. All content updated.
Amended			

See Appendix Q for detailed information on plan revisions, including approvals, resolutions, and description of changes.

As a regional council of governments in Thurston County, Washington, Thurston Regional Planning Council (TRPC) helps make the region an extraordinary place to live, work, and play. TRPC fosters the region's livability through collaborative, informed planning. It carries out regionally focused plans and studies on topics such as transportation, growth management, and environmental quality. Decision-makers from 21 jurisdictions and organizations in Thurston County make up the council, which meets regularly to address challenges related to the region's issues.

TRPC also provides information and education regarding the region and its emerging planning issues. Regional statistics, trends, analyses, and maps provide a basis for planning and decision-making on both the regional and local levels. A variety of council-sponsored community forums relating to regional planning help to educate and promote public participation and dialogue.

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SummaryRegional Transportation Plan 2040 What Moves You

Purpose

What Moves You serves as a strategic blueprint for the Thurston County, Washington transportation system. The Regional Transportation Plan (RTP) takes the long view, looking 25 years into the future. The RTP considers what our community's transportation needs may be in the coming decades and how to prepare to meet them.

Planning for the Future

The RTP is very much an active plan. Our regional leaders will work to implement their pieces of this coordinated plan. This includes preserving, improving, and selectively expanding the transportation system. The RTP includes a list of planned investments that will affect how people travel over large areas.

Leaders have also defined what they need to know to continue their collaborative transportation decision-making. Thurston Regional Planning Council (TRPC) will conduct data and policy analysis to address these

About TRPC

Thurston Regional Planning Council (TRPC) is comprised of 21 entities working together to make the region an extraordinary place to live, work, and play through collaborative, informed planning. Focused plans, studies, and data analysis for transportation, growth management, and environmental quality provide a common foundation for decision-making and cooperation. Members include cities, county, tribes, school districts, regional services, and higher education.

needs. This work program is reflected below in the *Planning for* ... responses to regional challenges.

Everyone is an expert on their travel needs. The region will require that expertise to shape future transportation choices. People can join in the regional collaboration in many ways – depending on time, energy, and interests.

People can help the environment, save money, get a little healthier, and ease congestion by trying a different mode of travel.



Participation ranges from day-to-day actions

– like choosing a more efficient transportation
option one day a week – to participating in
panels that define solutions for the coming
challenges. TRPC will tap everyone's expertise
and work together to keep the Thurston region
an extraordinary place to live, work, and play.

Guiding Principles

A shared set of values guide our region's decisions.

- Sustainable, balancing needs today and in the future.
- Supportive of communities and people.
- Responsive to needs and change.
- Fiscally responsible, making wise investments.
- Safety conscious for all users.
- Environmentally sensitive to our natural, social, and built settings.
- Collaborative in making informed, strategic choices.



Defining Priorities

In 2014, some people who live and work in the Thurston region told TRPC about their transportation priorities.

Using My Transportation Investment, an online calculator, participants experimented with balancing transportation investments in congestion relief, local travel options, and care and maintenance. The calculator, still available at TRPC's website, challenged people:

Pretend you have \$500 to spend on making transportation better in Thurston County. Where should that money go? Is it enough? Use the investment calculator to explore the options.

Participants completed a survey online or on paper, either in conjunction with or independent of. Most people used the calculator and found it useful in weighing their priorities. They discovered that their priorities had to change to stay within the budget.

Highlights from the survey shaped our understanding of the challenges facing the Thurston region and priorities for responding. See the full survey results online.

Challenges and Responses

What are some important influences in planning for a transportation system that works well in the future? How will the RTP help us respond to challenges?

Differing Priorities

We want our travel to be reliable, convenient, efficient, affordable, healthy, safe, and even fun. How to do this? People define it differently. Therein lies a big challenge.

What's important to one person in how they get around and what they're willing to pay

2/3

support raising transportation taxes and fees for their important priorities but...

Respondents varied widely on their important priorities

Widen roads ... Don't widen roads
More bike lanes ... No bike lanes
Expand transit ... Limit transit
More rail ... No more rail

Many wanted greater efficiency in government spending before raising taxes or fees.

Source: Transportation Investment Survey, TRPC 2014.

for – may differ from what another wants and will pay for. Age, income, or ability may limit some people's choices.

Transportation needs and wants change throughout a person's lifetime. A working parent of a 10-year old uses the system differently than a retiree who enjoys bicycling and volunteers as a classroom aide. A 9-to-5 office worker may have different requirements than a teenager working nights and weekends at a movie theater.

Our leaders have to strike the balance between choice and cost. Most people want enough choices to get where they want to go when they want to be there. The region needs sufficient funds to build, operate, maintain, and replace pieces of the transportation system in a timely way.

TRPC Work Programs – Planning for Choice

- Take care of the roadways and expand strategically.
- Make connections roads, sidewalks, paths – so it's easier to get around.
- Keep bus service robust where it can provide efficient service.
- Make alternatives convenient like telework, carpooling, and walking.
- Improve safety for everyone.

Growth

By 2040, many more people will live in the Thurston region, growing from about 270,000 residents in 2015 to nearly 400,000 in 2040. More people means more demands on the transportation system.

Where we live and work – and how we travel – will have a big impact on how well the system works. This is especially clear during the most congested times – the morning and evening commutes. Commuting into and out of the Thurston region is expected to double between now and 2040.



In 10 years, how do people feel their transportation needs will change?

40%

51%

43%

30%

40%

Will do more walking, bicycling, teleworking, riding the trail.

Will do less driving.

Will do the same amount of walking.

Will do the same amount of driving, bus riding, carpooling/ vanpooling. Will NOT carpool/vanpool, telework, ride the train.

Why the change? Respondents offered a number of different reasons.

- Retirement
- Changing Physical Ability
- Children Entering School
- Children Old Enough to Drive or Leaving Home
- More Future
 Transportation Options &
 Changing Technology
- Congestion
- Growth
- Employment Changes
- Location Changes
- Environmental Issues
- Increasing Costs

Source: Transportation Investment Survey, TRPC 2014.

The number of residents over 65 will grow from 12 to 20 percent by 2040. Transportation will have to serve the diverse and changing needs for a range of elders – from the frisky to the frail – many of whom will be retired. By 2040, tech savvy millennials will be midway into their careers and likely having kids. As a whole, will they still be loving the urban life, walking, and riding the bus ... or will they adopt a somewhat different lifestyle with school-aged kids in tow?

Many of us will be asking ourselves about our different transportation needs during these new eras in our lives. How much do we want to drive, walk, bicycle, telework, work a 4-day work week, ride the bus, or carpool? What reliable, convenient, affordable choices will be available? Where should we live and work to get the lifestyle – including the transportation choices – we want?

TRPC Work Programs – Planning for Growth

- Make I-5 work as reliably as possible
 especially during commute times.
- Mainstream employment options for a 4-day work week.
- Leverage technology to widely support working from home.
- Provide a good mix of housing options, including more urban choices.
- Make it easy to share the ride to work and school, wherever you live.



Technology

Smart cars, smart roads, smart apps...
Technology is quickly changing how we live, learn, work, play, and travel – or even if we travel at all. What will transportation technology be like in 25 years? How do we plan for and adapt to all these changes?

Let's consider smart vehicles. Today, many newer cars feature tools like adaptive cruise control, lane departure warning systems, automatic braking, parking assistance, and blind spot monitoring. Undoubtedly in the next 25 years, self-driving cars will become widely available. But how will we use them?

Will most of us own one ... or two, or three? Will we use a service to call for a driverless vehicle? Will our cars drive around while we're at work, or find a parking spot miles away, or smart park themselves in a packed garage? Will smart vehicles impact how many miles we travel, congestion, or wear and tear on the road network?

How smart will the rest of our transportation infrastructure be – like traffic signals and parking lots? How about keeping up with the cost of transportation system hardware and

software? What set of standards will be used to make this technology work well together? How will driver and motor vehicle licensing, driving regulations, and law enforcement change?

TRPC Work Programs – Planning for Technology

- Keep building efficient, walkable communities. Every trip begins and ends with walking.
- Keep investing in smart signal technology that will provide better traffic management now and support smart vehicle interactions in the future.
- Monitor changes in technology and regulation. The industry and federal and state government will control most changes.
- Expect new standards for how we build, maintain, and operate our transportation system and communities. Be ready to adapt to and accept new requirements.
- Budget for technology maintenance and upgrades.

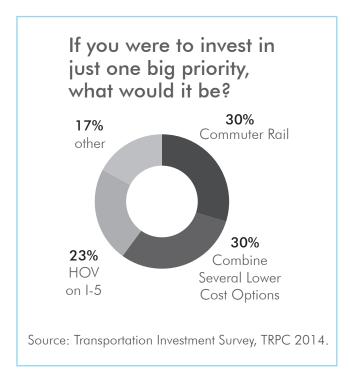
Funding

How will we fund the transportation system in the future? For decades, the gas tax played a major role. But we've known for a while that it's not a sustainable source for the future, especially as we move toward improved fuel efficiency, the use of alternative fuels, and hybrid-fueled vehicles. This is a challenge across the nation.

The RTP must be financially constrained, meaning that we can reasonably forecast enough revenue to cover the expected costs of building, operating, maintaining, and preserving the transportation system. In addition, our community supports local funding for targeted uses like maintaining streets and sidewalks, and supplying transit service.

Overall, the RTP's revenue forecast expects we will have enough funding to take care of what we have at some level and make strategic investments to expand system capacity. We will want to continue to closely watch the costs of maintaining our current system to make sure we make wise investments.

Major new investments – like widening I-5, adding commuter rail to Tacoma, or building a local streetcar system – would require a new source of revenue, and a careful assessment of the benefits, costs, and tradeoffs for the community.



TRPC Work Programs – Planning for Finance

- Focus development along main transportation corridors to provide convenient, cost effective transportation choices to more people.
- Take care of the transportation infrastructure we have to extend its life and delay costly retrofits.
- Use local funding options to address community priorities for preservation and access.
- Assess gaps in the transportation network and prioritize the most essential projects.

- Carefully weigh major transportation investments and their alternatives.
- Expect national and state leaders to fix the funding challenge of relying on the gas tax.
- Invest in projects that support our regional economy.

Our Environment

The ways we travel change our natural, built, and social environment. How can we sustain what we love about our region?

Energy use is a key element in creating a sustainable future. In our region, transportation accounts for about 40 percent of greenhouse gas production. Fueling our vehicles in new ways will help us curb our contribution to climate change. Another essential part is sharing the ride – moving more people for the same amount of energy. Riding the bus, carpooling, and vanpooling will need to grow.

In the last decades, we made a major shift in how we move in our communities. Most trips, even short ones, are made by car. This is a prime contributor to our much more sedentary lifestyles – over 60 percent of Thurston region adults are overweight or obese, and adolescent obesity has quadrupled in the last 30 years.

Where we choose to live and work, and how we build our communities determines most of our transportation choices. Where housing and jobs are concentrated in denser urban areas, we can afford to offer a wider range of transportation choices for shorter trips. Where businesses and households are more spread out, and longer trips are the norm, the focus is more on roads. It's very expensive to provide long stretches of transit, sidewalks, and bicycle lanes where fewer people use and pay for them. Having other options – carpooling and flexible work schedules – becomes even more important.

Thurston region leaders are committed to providing a range of choices for where we live and work, and how we get around. But a complete range of choices can't be sustained in all places. We have to scale our expectations and make tradeoffs based on where we work and live.

TRPC Work Programs – Planning for Our Environment

- Develop a Climate Action Plan to target effective action to reduce transportation energy use and greenhouse gas emissions.
- Develop a greenhouse gas emissions framework to understand the tradeoffs among our transportation choices.
- Improve community health through targeted community design that promotes active transportation, like walking.
- Encourage everyone to use more active transportation, like bicycling, where they can. It's better for our health, easier on the environment, and helps with vehicle congestion.
- Carefully design, build, operate, and maintain the transportation system to avoid or minimize its negative effects on the environment. Understand the impacts of our transportation choices.

A More Detailed Look

RTP Requirements

Both federal and state law direct TRPC to prepare a long-range transportation plan. TRPC is required to model and plan for a 20-year land use and transportation horizon, addressing multimodal travel. The plan must be strategic, efficient, financially feasible, use performance measures, and protect environmental quality (See Chapter 1).

Dynamic Future

This is a dynamic time in planning for our transportation future. Our region is poised for considerable growth – adding 50 percent more residents by 2040. Technology is quickly changing how we live, work, and travel. We'll need to track these changes carefully, preparing to adapt and adjust.

However, the basic principles of good transportation and land use planning still apply. Provide choices. Encourage compact land use in urban areas to support riding the bus, walking, and bicycling. Invest in taking good care of infrastructure. Harness technology to make the system safer and more efficient. Encourage telework and flexible schedules so we can travel a little less – or not at all – during rush hour.

State and Federal guidelines stipulate the elements and process for creating and maintaining the RTP. In many instances the requirements overlap, emphasizing the connection between state and federal regulation and goals. These guidelines address a consistent set of transportation system needs for communities around the state and country.

Work Program Priorities

The RTP lays out a work program for TRPC to help our region's leaders tackle the tough challenges ahead (See Chapter 2). Some highlights include:

- Develop a Climate Action Plan to target effective action to reduce transportation energy use and greenhouse gas emissions.
- Develop a greenhouse gas emissions framework to understand the tradeoffs among our transportation choices.
- Improve community health through targeted community design that promotes active transportation, like walking.
- Make I-5 work as reliably as possible especially during commute times.
- Focus development along main transportation corridors to provide convenient, cost effective transportation choices to more people.

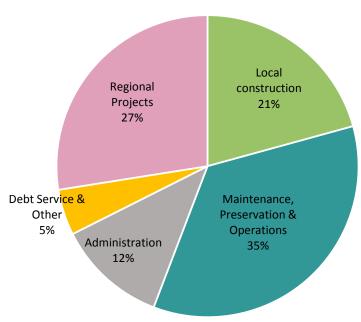
- Assess gaps in the transportation network and prioritize the most essential projects.
- Evaluate infrastructure maintenance needs.
- Invest in projects that support our regional economy.
- Determine what types of high capacity transportation (bus rapid transit, commuter rail, local streetcars) the region can support in the future.
- Enhance and promote the region's trail network.

Investments

Three-quarters of our region's transportation expenditures are used for operating, maintaining, and preserving the system (Figure ES-1). Fixing a signal, adding a sidewalk, re-paving a road, building local streets in a new neighborhood, and providing transit service – all these elements are needed to make the system work safely and smoothly.

The remaining one-quarter is used for regional projects, those projects listed individually in the RTP that impact the overall movement of people and goods at the regional scale (See Chapter 2). These large projects add substantial capacity to the system, create major change in access, or add new programs or services. The Regional Project List calls out road, bicycle, pedestrian, and transit facility, system, and service changes that have a substantial impact on how we travel in the future.

Figure ES-1: Streets, Roads, and Bridges Expenditure Forecast, 2015-2040



Source: Chapter 5: Finances, Table 5-2.

The regional projects will add:

- Around 14 new miles of road connections.
- Over 85 lane miles of new general purpose lanes and center turn lanes (including new connections).
- Over 75 miles of new or rebuilt bicycle and pedestrian facilities.
- Over 20 miles of new multiuse trails.
- 6 new or realigned highway interchanges.
- Improved transit facilities and services.

The Regional Project List must reflect needs and investments over at least the next 20 years.

Goals and Policies

The RTP guides transportation system investments through a set of 20 regional goals, and their associated policies (See Chapter 3). These Goals and Policies provide direction in implementing the Guiding Principles.

- Transportation and Land Use
 Consistency Ensure the design and function of the transportation facilities are consistent with and support sustainable, healthy urban, suburban, and rural communities.
- 2. Multimodal Transportation System Work toward an integrated, multimodal transportation system that supports the adopted land use plans, reduces overall need to drive alone, and provides alternative travel choices.
- 3. Barrier-Free Transportation Ensure transportation system investments support the special travel needs of youth, elders, people with disabilities, literacy, or language barriers, those with low incomes, and other affected groups.
- **4. System Safety and Security** Enhance the safety and security of those who use, operate, and maintain the system.
- 5. System Maintenance and Repair Protect investments that already have been made in the transportation system and keep life-cycle costs as low as possible.

- 6. Travel Demand Management Increase overall operating efficiency of the transportation system through the effective use of measures that reduce the need to drive alone.
- 7. Transportation Technologies Use technology-based approaches to address transportation congestion, safety, efficiency, and operations.
- **8. Freight Mobility** Promote efficient, cost-effective, timely and safe movement of freight in and through the region.
- 9. Streets, Roads, and Bridges Establish a street and road network that provides for the safe and efficient movement of people and goods while supporting adopted land use goals.
- 10. Public Transportation Provide an appropriate level of reliable, effective public transportation options commensurate with the region's evolving needs.
- 11. **Bicycling** Increase the share of all trips made safely and conveniently by bicycling.
- **12. Walking** Increase the share of all trips made safely and conveniently by walking.
- 13. Rail Ensure the continued long term viability of existing and rail-banked rail lines in the region for future freight and passenger rail travel.

- **14. Aviation** Provide an appropriate level of facilities and services to meet the general aviation needs of residents and businesses in the region.
- 15. Marine Transportation Provide an appropriate level of facilities and services to meet the region's marine transportation needs.
- 16. Public Involvement Build a community of an engaged and informed public that contributes ideas and supports actions to create a highly functional multimodal transportation system consistent with the goals and policies in this plan.
- 17. Intergovernmental Coordination

 Ensure transportation facilities and programs function seamlessly across community borders and between regions.

18. Environmental and Human Health

- Minimize transportation impacts on the natural environment and the people who live and work in the Thurston region.
- 19. Performance Measures Develop performance measures that are realistic, efficient to administer, effective in assessing performance, and meaningful to the public.
- **20. Transportation Funding** Secure adequate funding from all sources to implement the goals and policies of this plan.

A few of the key policies include:

- Five-lane maximum mid-block width for local arterials and collectors to preserve an acceptable community scale and minimize transportation impacts on adjacent land uses.
- Strategy corridors, where maintaining access will rely on alternatives to road widening – such as increased transit service, more sidewalks or bicycle facilities, a complete and connected street grid, transportation technology to improve efficiency, access management, parking management, or incentives for employees to telework or carpool.
- Prioritize maintenance, preservation, operations, and repair of the existing transportation system.
- Provide transportation facilities and service which appropriately support urban development in cities and Urban Growth Areas, and help maintain rural character outside Urban Growth Areas.
- Invest in a multimodal, accessible system to serve a wide range of transportation needs.

Future Conditions

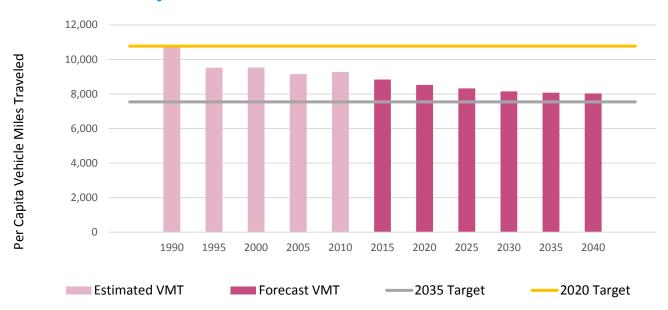
In 2040, the region will be more congested. Based on current trends, the region's population will increase nearly 50 percent, while the arterial and collector road capacity will increase 6 percent (See Chapter 4). Revenues are already stretched to maintain what we have and make that strategic increase in capacity. We can't afford to build our way out of congestion.

Our region's per capita vehicle miles traveled (VMT) is declining, and we've already met our first goal – to reach 1990 levels by 2020 (Figure ES-2). However, we will have to bend the trend to reach the 2035 goal (30 percent below 1990 levels) and our 2050 goal (50 percent below 1990 levels).

Evening commute time will increase while speeds decrease. One particular regional chokepoint is I-5 at the Nisqually River. The regional transportation model shows an average southbound speed of 22 m.p.h. today during the evening rush hour. Without action, the model shows this dropping to 6 m.p.h. in 2040. This highlights the importance of developing and implementing a strategy for I-5 through Thurston County.

The forecast is only as accurate as the assumptions behind it. It gives us important information about our general direction.

Figure ES-2: Annual Per Capita Vehicle Miles Traveled, Thurston County



Sources: Washington State Department of Transportation Highway Performance Monitoring System (1990-2014). TRPC Transportation Model (growth forecast 2015-2040).

Financial Feasibility

The RTP is required to be financially constrained, reasonably showing enough revenue to balance estimated expenditures (See Chapter 5). The RTP does this – with limitations.

- This is a planning level forecast looking out 20 years in the future.
- The cost for operating, maintaining, and preserving the system is based on current activities, with a modest increase, which is not necessarily the optimal condition.
- The Regional Project List includes phases, in part, because we can't reasonably expect some of these large projects to be funded in full, but rather constructed in stages.

Environmental Topics

The RTP considers potential impacts to the natural, built, and social environment (Chapter 6 and Appendix G) at the broader planning level. Each project referenced in the RTP will undergo rigorous environmental analysis prior to building. The RTP includes a variety of policies intended to eliminate, limit, and/or mitigate transportation's impacts on the environment.

Discussion of the natural environment includes air quality, climate change, water quality, habitat, and energy. Under Built Environment, the RTP considers land use, transportation, noise, and historic and cultural preservation. Environmental Justice and Personal Health are the focus of the Social Environment section.

The RTP reflects the region's Sustainable Thurston Plan intent and policies, and adopts the transportation-related goals to reduce VMT.

Air Quality

In the 1980s, wood smoke caused a PM10 (particulate matter less than 10 microns in size) air quality problem in the Lacey/ Olympia/Tumwater area. By 1990, with the promotion of more efficient wood burning stoves, PM10 decreased below the national standard, and continues today well below that national standard (See Chapter 6 and Appendix H).

TRPC monitors vehicle sources of PM10 to ensure the region's continuing good air quality – sources such as tailpipe emissions, road dust, and tire and brake wear. To this end, regulators established that the vehicle miles we travel in the Lacey/Olympia/Tumwater area should not exceed a sustained annual growth rate over 6.3 percent to keep on-road transportation sources of PM10 in check. The projected annual growth rate is well below that, nearer 1 percent.

Guiding Principles

A Regional Foundation of Shared Values

Previous regional plans used a single vision to provide structure and context for policies and recommendations. Over the years, the region found it harder and harder to communicate those over-arching values in a vision statement. A single vision could not adequately speak to the diversity found in this region's rural, suburban, and urban communities. Something different was needed, something that was "true" but which respected that diversity. That led to development of Guiding Principles.

Guiding Principles – An Overview

The Regional Transportation Plan is founded on essential values that are true throughout the region, even if their expression may differ between city and town, port and transit, tribe and state, urban and rural, civilian and military. Drawn from visions described in the region's 2010, 2020, and 2025 plans, these principles embrace the interdependent relationship between transportation and land use. They reflect the need for a balance among safety, mobility, community, and environmental goals. The principles acknowledge the need for costeffective solutions. They assume knowledgeable and on-going involvement of residents and active participation by all affected agencies and communities. These principles guide the region toward a transportation system that meets the evolving needs of residents and businesses with safe, affordable, sensible choices.

Sometimes these principles may seem to contradict each other. Regional policy makers observe that individual projects or programs will rarely comply fully with all the values that guide local and regional decision-making. Instead, transportation issues, choices, and consequences must be weighed against the full range of principles to select the best alternative. No single value will always overshadow the rest. Effective transportation decisions must be sensitive to aspects of individual and government situations, functions, and constraints.

Guiding Principles for the Regional Transportation Plan

To develop a transportation system that offers safe, efficient, affordable travel choices for people and goods, while supporting land use plans and long-term quality of life objectives, transportation decisions and investments will be:

Sustainable:

This means:

- Balancing our needs today with those of future residents.
- Thinking broadly, regionally, and globally

 and acting locally.
- Supporting community health and well-being with transportation options.
- Providing a transportation system which advances economic, personal, and environmental health.

Supportive:

This means:

- Reflecting adopted community goals and plans.
- Integrating transportation and land use decision-making processes.
- Increasing viable, affordable travel choices for people and goods.
- Moving people efficiently and costeffectively among diverse destinations.

- Improving access for all people, regardless of age, ability, or income.
- Promoting local economies without compromising other core values.
- Making investments that contribute to a community's character.
- Providing transportation infrastructure that meets the majority of transportation needs.
- Complying with Washington State's Growth Management Act requirements.
- Complying with all other state and federal requirements.

Responsive:

This means:

- Providing pragmatic, visionary leadership that maximizes future opportunities while recognizing today's realities.
- Revising direction as necessary to adapt to changing situations or objectives.
- Initiating timely response as substantive issues evolve.

Fiscally Responsible:

This means:

- Making cost-effective investments that result in best value solutions for the community.
- Ensuring system funding supports a range of transportation choices.
- Being realistic about financial capacity and prioritizing accordingly.

- Maintaining existing investments.
- Supporting efficient use of transportation resources and facilities.
- Evaluating the full cost of alternatives and recommendations.

Safety Conscious:

This means:

- Making the system safer for all users.
- Designing facilities that are appropriate to their intended use and location.
- Building redundancy into critical network links as emergency safeguards.

Environmentally Sensitive:

This means:

- Minimizing impacts on air and water quality, and natural habitat and resources.
- Mitigating or minimizing impacts on neighborhoods.
- Making investments that add lasting value to our communities and their overall function.
- Reducing the generation of transportation-related greenhouse gasses.

Collaborative:

This means:

- Fostering on-going and inclusive community involvement and education.
- Ensuring affected parties understand issues related to choices, effects, and timing.
- Promoting coordination among local, regional, tribal, state, and federal authorities.
- Coordinating with neighboring regions to identify workable strategies that ensure cross-regional consistency.

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