

2024 Highway System Plan Draft





2024 Highway System Plan

Public Review Draft

This report is available in electronic format only.

It can be downloaded and printed from the WSDOT Statewide Planning website at:
www.wsdot.wa.gov/construction-planning/statewide-plans/highway-system-plan.

For more information about this report, please contact:

WSDOT Multimodal Planning and Data Division

310 Maple Park Ave SE

Olympia, WA 98504-7370

hsp@wsdot.wa.gov

Translation services

If you have difficulty understanding English, you may, free of charge, request language assistance services by calling 360-704-6371 or email us at: hsp@wsdot.wa.gov.

(Español – Spanish)

Servicios de traducción

Aviso a personas con dominio limitado del idioma inglés: Si usted tiene alguna dificultad en entender el idioma inglés, puede, sin costo alguno, solicitar asistencia lingüística con respecto a esta información llamando al 360-704-6371, o envíe un mensaje de correo electrónico a:

hsp@wsdot.wa.gov.

(中文 – Chinese)

翻译服务

如果您难以理解英文，则请致电：360-704-6371，或给我们发送电子邮件：

hsp@wsdot.wa.gov，请求获取免费语言援助服务。

(tiếng Việt-Vietnamese)

các dịch vụ dịch thuật

Nếu quý vị không hiểu tiếng Anh, quý vị có thể yêu cầu dịch vụ trợ giúp ngôn ngữ, miễn phí, bằng cách gọi số 360-704-6371 hoặc email cho chúng tôi tại: hsp@wsdot.wa.gov.

(한국어-Korean)

번역 서비스

영어로 소통하는 것이 불편하시다면, 360-704-6371 으로 전화하시거나 다음 이메일로 연락하셔서 무료 언어 지원 서비스를 요청하실 수 있습니다: hsp@wsdot.wa.gov.

(Af-soomaaliga – Somali)

Adeegyada Turjumaada

Haddii ay kugu adag tahay inaad fahamtid Ingiriisida, waxaad, bilaash, ku codsan kartaa adeegyada caawimada luuqada adoo wacaaya 360-704-6371 ama iimayl noogu soo dir: hsp@wsdot.wa.gov.

(русский - Russian)

Услуги перевода

Если вам трудно понимать английский язык, вы можете запросить бесплатные языковые услуги, позвонив по телефону 360-704-6371 или написав нам на электронную почту:

hsp@wsdot.wa.gov.

(العربية - Arabic)

خدمات الترجمة

إذا كنت تجد صعوبة في فهم اللغة الإنجليزية، فيمكنك طلب خدمات المساعدة اللغوية مجاناً عن طريق الاتصال بالرقم

hsp@wsdot.wa.gov، أو مراسلتنا عبر البريد الإلكتروني 360-704-6371

Title VI notices and Americans with Disabilities Act (ADA) information

English

Title VI Notice to Public

It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equity and Civil Rights (OECR). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OECR's Title VI Coordinator at (360) 705-7090.

Americans with Disabilities Act (ADA) Information

This material can be made available in an alternate format by emailing the Office of Equity and Civil Rights at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA(4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

Español

Notificación de Título VI al Público

La política del Departamento de Transporte del Estado de Washington (Washington State Department of Transportation, WSDOT) es garantizar que ninguna persona, por motivos de raza, color u origen nacional, según lo dispuesto en el Título VI de la Ley de Derechos Civiles de 1964, sea excluida de la participación, se le nieguen los beneficios o se le discrimine de otro modo en cualquiera de sus programas y actividades. Cualquier persona que considere que se ha violado su protección del Título VI puede presentar una queja ante la Oficina de Equidad y Derechos Civiles (Office of Equity and Civil Rights, OECR) del WSDOT. Para obtener más información sobre los procedimientos de queja del Título VI o información sobre nuestras obligaciones contra la discriminación, comuníquese con el coordinador del Título VI de la OECR al (360) 705-7090.

Información de la Ley sobre Estadounidenses con Discapacidades (ADA, por sus siglas en inglés)

Este material puede estar disponible en un formato alternativo al enviar un correo electrónico a la Oficina de Equidad y Derechos Civiles a wsdotada@wsdot.wa.gov o llamando a la línea sin cargo 855-362-4ADA(4232). Personas sordas o con discapacidad auditiva pueden solicitar la misma información llamando al Washington State Relay al 711.

한국어-Korean

제 6 조 관련 공지사항

워싱턴 주 교통부(WSDOT)는 1964 년 민권법 타이틀 VI 규정에 따라, 누구도 인종, 피부색 또는 출신 국가를 근거로 본 부서의 모든 프로그램 및 활동에 대한 참여가 배제되거나 혜택이 거부되거나, 또는 달리 차별받지 않도록 하는 것을 정책으로 하고 있습니다. 타이틀 VI 에 따른 그/그녀에 대한 보호 조항이 위반되었다고 생각된다면 누구든지 WSDOT 의 평등 및 민권 사무국(OECR)에 민원을 제기할 수 있습니다. 타이틀 VI 에 따른 민원 처리 절차에 관한 보다 자세한 정보 및/또는 본 부서의 차별금지 의무에 관한 정보를 원하신다면, (360) 705-7090 으로 OECR 의 타이틀 VI 담당자에게 연락해주시시오.

미국 장애인법(ADA) 정보

본 자료는 또한 평등 및 민권 사무국에 이메일 wsdotada@wsdot.wa.gov 을 보내시거나 무료 전화 855-362-4ADA(4232)로 연락하셔서 대체 형식으로 받아보실 수 있습니다. 청각장애인은 워싱턴주 중계 711 로 전화하여 요청하실 수 있습니다.

русский-Russian

Раздел VI Общественное заявление

Политика Департамента транспорта штата Вашингтон (WSDOT) заключается в том, чтобы исключить любые случаи дискриминации по признаку расы, цвета кожи или национального

происхождения, как это предусмотрено Разделом VI Закона о гражданских правах 1964 года, а также случаи недопущения участия, лишения льгот или другие формы дискриминации в рамках любой из своих программ и мероприятий. Любое лицо, которое считает, что его средства защиты в рамках раздела VI были нарушены, может подать жалобу в Ведомство по вопросам равенства и гражданских прав WSDOT (OECR). Для дополнительной информации о процедуре подачи жалобы на несоблюдение требований раздела VI, а также получения информации о наших обязательствах по борьбе с дискриминацией, пожалуйста, свяжитесь с координатором OECR по разделу VI по телефону (360) 705-7090.

Закон США о защите прав граждан с ограниченными возможностями (ADA)

Эту информацию можно получить в альтернативном формате, отправив электронное письмо в Ведомство по вопросам равенства и гражданских прав по адресу wsdotada@wsdot.wa.gov или позвонив по бесплатному телефону 855-362-4ADA(4232).

Глухие и слабослышащие лица могут сделать запрос, позвонив в специальную диспетчерскую службу штата Вашингтон по номеру 711.

tiếng Việt-Vietnamese

Thông báo Khoản VI dành cho công chúng

Chính sách của Sở Giao Thông Vận Tải Tiểu Bang Washington (WSDOT) là bảo đảm không để cho ai bị loại khỏi sự tham gia, bị từ khước quyền lợi, hoặc bị kỳ thị trong bất cứ chương trình hay hoạt động nào vì lý do chủng tộc, màu da, hoặc nguồn gốc quốc gia, theo như quy định trong Mục VI của Đạo Luật Dân Quyền năm 1964. Bất cứ ai tin rằng quyền bảo vệ trong Mục VI của họ bị vi phạm, đều có thể nộp đơn khiếu nại cho Văn Phòng Bảo Vệ Dân Quyền và Bình Đẳng (OECR) của WSDOT. Muốn biết thêm chi tiết liên quan đến thủ tục khiếu nại Mục VI và/hoặc chi tiết liên quan đến trách nhiệm không kỳ thị của chúng tôi, xin liên lạc với Phối Trí Viên Mục VI của OECR số (360) 705-7090.

Thông tin về Đạo luật Người Mỹ tàn tật (Americans with Disabilities Act, ADA)

Tài liệu này có thể thực hiện bằng một hình thức khác bằng cách email cho Văn Phòng Bảo Vệ Dân Quyền và Bình Đẳng wsdotada@wsdot.wa.gov hoặc gọi điện thoại miễn phí số, 855-362-

4ADA(4232). Người điếc hoặc khiếm thính có thể yêu cầu bằng cách gọi cho Dịch vụ Tiếp âm Tiểu bang Washington theo số 711.

العربية - Arabic

العنوان 6 إشعار للجمهور

(في ضمان عدم استبعاد أي شخص، على أساس العرق أو اللون أو WSDOT تتمثل سياسة وزارة النقل في ولاية واشنطن)
الأصل القومي من المشاركة في أي من برامجها وأنشطتها أو الحرمان من الفوائد المتاحة بموجبها أو التعرض للتمييز فيها
بخلاف ذلك، كما هو منصوص عليه في الباب السادس من قانون الحقوق المدنية لعام 1964. ويمكن لأي شخص يعتقد أنه تم
(التابع لوزارة النقل في OEER انتهاك حقوقه التي يكفلها الباب السادس تقديم شكوى إلى مكتب المساواة والحقوق المدنية)
ولاية واشنطن. للحصول على معلومات إضافية بشأن إجراءات الشكاوى و/أو بشأن التزاماتنا بعدم التمييز بموجب الباب
7090-705 (360) السادس، يرجى الاتصال بمنسق الباب السادس في مكتب المساواة والحقوق المدنية على الرقم

معلومات قانون الأمريكيين ذوي الإعاقة (ADA)

يمكن توفير هذه المواد في تنسيق بديل عن طريق إرسال رسالة بريد إلكتروني إلى مكتب المساواة والحقوق المدنية على
wsdotada@wsdot.wa.gov أو عن طريق الاتصال بالرقم المجاني: (4232) 4ADA-362-855. يمكن
للأشخاص الصم أو ضعاف السمع تقديم طلب عن طريق الاتصال بخدمة Washington State Relay على الرقم
711.

中文 – Chinese

《权利法案》 Title VI 公告

<華盛頓州交通部(WSDOT)政策規定，按照《1964年民權法案》第六篇規定，確保無人
因種族、膚色或國籍而被排除在 WSDOT 任何計畫和活動之外，被剝奪相關權益或以其
他方式遭到歧視。如任何人認為其第六篇保護權益遭到侵犯，則可向 WSDOT 的公平和
民權辦公室(OEER)提交投訴。如需關於第六篇投訴程式的更多資訊和/或關於我們非歧視
義務的資訊，請聯絡 OEER 的第六篇協調員，電話 (360) 705-7090。

《美国残疾人法案》(ADA)信息

可向公平和民權辦公室發送電子郵件 wsdotada@wsdot.wa.gov 或撥打免費電話

855-362-4ADA(4232), 以其他格式獲取此資料。听力丧失或听觉障碍人士可拨打 711

联系 Washington 州转接站。

Af-soomaaliga – Somali

Ciwaanka VI Ogeysiiska Dadweynaha

Waa siyaasada Waaxda Gaadiidka Gobolka Washington (WSDOT) in la xaqiijiyo in aan qofna, ayadoo la cuskanaayo sababo la xariira isir, midab, ama wadanku kasoo jeedo, sida ku qoran Title VI (Qodobka VI) ee Sharciga Xaquuqda Madaniga ah ah oo soo baxay 1964, laga saarin ka qaybgalka, loo diidin faa'iidooyinka, ama si kale loogu takoorin barnaamijyadeeda iyo shaqooyinkeeda. Qof kasta oo aaminsan in difaaciisa Title VI la jebiyay, ayaa cabasho u gudbin kara Xafiiska Sinaanta iyo Xaquuqda Madaniga ah (OECR) ee WSDOT. Si aad u hesho xog dheeraad ah oo ku saabsan hanaannada cabashada Title VI iyo/ama xogta la xariirta waajibaadkeena ka caagan takoorka, fadlan la xariir Iskuduwaha Title VI ee OECR oo aad ka wacayso (360) 705-7090.

Macluumaadka Xeerka Naafada Marykanka (ADA)

Agabkaan ayaad ku heli kartaa qaab kale adoo iimeel u diraaaya Xafiiska Sinaanta iyo Xaquuqda Madaniga ah oo aad ka helayso wsdotada@wsdot.wa.gov ama adoo wacaaya laynka bilaashka ah, 855-362-4ADA(4232). Dadka naafada maqalka ama maqalku ku adag yahay waxay ku codsan karaan wicitaanka Adeega Gudbinta Gobolka Washington 711.

Letter from Secretary Millar

Placeholder page.

DRAFT

Executive summary

Our transportation system influences the daily lives of every person who lives in or visits the Evergreen state, providing the goods, services, and mobility to pursue their dreams. State highways make up the backbone of that system and it is vital that we do everything possible to protect and enhance this network.

The Highway System Plan recommends program funding levels for 20 years in preservation, maintenance, and the capacity and operational improvement of the highway system, including safety considerations. It also meets the other requirements provided under RCW 47.06.050 and elsewhere.¹

“A primary emphasis for [the Highway System Plan] is the relief of congestion, the preservation of existing investments and downtowns, ability to attract or accommodate planned population, and employment growth, the improvement of traveler safety, the efficient movement of freight and goods, and the improvement and integration of all transportation modes to create a seamless intermodal transportation system for people and goods.”²

Based on our community engagement and scenario planning processes, WSDOT recommends that new revenue for state highways over the next 20 years be dedicated first to adequately funding preservation and maintenance, with remaining funds balanced between safety and efficiency strategies and highway expansion projects at a 2:1 ratio. This recommendation provides for a resilient state highway system that is:

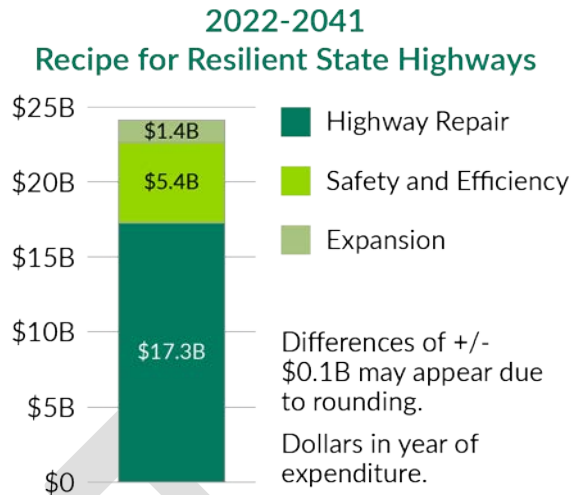
- **SOUND.** All bridges and highways remain open and are maintained in working condition.
- **SAFE.** Fewer crashes by providing safer spaces for all modes.
- **SMART.**
 - **Healthier Environment.** Removal of fish passage barriers, fewer vehicle miles traveled, and decreased greenhouse gas emissions.
 - **More Equitable Outcomes.** Agency investments and policy decisions are equitable and inclusive.
 - **More Walking, Bicycling, and Rolling.** Closure of most active transportation gaps on, next to, or across highways.

¹ RCW 47.06.050 – State-owned facilities component.
<https://app.leg.wa.gov/rcw/default.aspx?cite=47.06.050>

² Revised Code of Washington (RCW) 47.06.040 – Statewide multimodal transportation plan.
<https://apps.leg.wa.gov/rcw/default.aspx?cite=47.06.040>.

- **More Travel Options.** Reduction of commute trips by coordinating with cities, employers, and transit to add or support more modes and travel options.
- **Smoother Transportation Operations.** More effective handling of crashes, information, and low-cost solutions.

This recommendation is based on WSDOT’s work to understand the highway investment priorities of Washington residents. While no investment recommendation will satisfy everyone, this robust community engagement process helped the Highway System Plan find a non-partisan funding recommendation.



New revenue does not include Move Ahead Washington or baseline funding.

Dollars are for long-range planning, and not appropriate for budgeting.

Figure 1: 2022-2041 Recipe for resilient state highways.

The limited nature of transportation program funding combined with a limitless public desire for improvements leads to challenging tradeoff choices. To help inform those decisions, the Highway System Plan used scenario planning to consider different funding futures. During this process we were fortunate to hear a wide range of opinions, but even across that broad spectrum there were very clear overall trends that showed:

- Strong support for preservation and maintenance funding across all regions and demographic groups.
- Preference for strategies that increase safety and efficiency for the existing system, while still funding some highway expansion.
- The importance of addressing equity by increasing travel choices, improving access to affordable housing, and creating economic opportunities from highway investments for overburdened and vulnerable communities.

In order to fully realize this resilient transportation future and reach our goals, a series of actions are required. WSDOT staff must effectively advise and coordinate with the Legislature to align budget requests to this plan. Project evaluation and selection processes must be improved, as well as our performance target setting and tracking. Working closely with our metropolitan, regional, and tribal planning partners is essential to improving coordination, alignment, and expectations. And finally, we must also continue to involve our communities through strong and effective engagement.

Table of contents

Translation services.....	2
Title VI notices and Americans with Disabilities Act (ADA) information.....	4
Letter from Secretary Millar	9
Executive summary.....	10
Table of contents	12
List of figures and tables	14
2024 Highway System Plan.....	15
A bold vision for state highways	16
Washington plans for resilience in the face of transformative change.....	17
The Legislature directs WSDOT to prioritize preservation and safety	19
This plan focuses on balancing tradeoffs among highway programs.....	20
WSDOT listened to the community	21
WSDOT analyzed different investment scenarios	23
What might different futures look like?	26
The recipe for resilience.....	28
How did Move Ahead Washington affect the analysis?.....	29
What could the Legislature achieve with continued policy shifts?	30
What does the Highway System Plan’s recommended future look like?	31
How do we make it happen?	32
Appendix A: Equity in the Highway System Plan	33
Appendix B: Land use and state highway planning.....	35

Appendix C: 2007-2026 HSP Appendix G – Development Impacts

Assessment 36

Appendix D: Updated level of service (LOS) standards 38

 Current LOS usage and challenges 38

 Alternatives considered 40

 Methodology and preliminary findings 42

 Additional work to be conducted 44

 Local agency consultation 44

Appendix E: Maps relevant to the highway system planning process 46

 Highways of statewide significance map 47

 National Highway System map 48

 Freight and Goods Transportation System map 49

 Marine highway system map 50

 Metropolitan Planning Organizations map 51

 Regional Transportation Planning Organizations map 52

 WSDOT regions map 53

Appendix F: Key enabling legislation for the Highway System Plan 54

Acknowledgements 55

Glossary 56

List of figures and tables

Figure 1: 2022-2041 Recipe for resilient state highways.....	11
Figure 2: Emerging issues and trends.	17
Figure 3: Emerging issues and trends (continued).....	18
Figure 4: Public outreach process for the Highway System Plan.....	22
Figure 5: WSDOT funding groups and highway programs.....	23
Figure 6: How highway repair funding affects mobility, safety, and stewardship.	25
Figure 7: A side-by-side comparison of the three final investment scenarios.	26
Figure 8: A comparison of benefits for the three final scenarios.	27
Figure 9: 2022-2041 Recipe for resilient state highways.....	28
Figure 10: Breakdown of the recipe for resilience, Move Ahead Washington, and baseline funding levels.....	29
Table 1: Four innovations and two variations considered for changes to level of service standards.....	41
Table 2: Preliminary feedback on the four innovations and two variations considered for changes to level of service standards.....	44
Table 3: Key enabling legislation for the Highway System Plan.....	54

2024 Highway System Plan

The Washington State Department of Transportation (WSDOT)'s Highway System Plan is a roadmap for preserving, maintaining, improving, and operating state highways for all people using all types of transportation. It was developed with input from Washington residents, WSDOT leaders, and transportation partners, and follows the direction of state statutes. WSDOT develops a separate long-range plan for the marine highways of the Washington State Ferry system. WSDOT also develops plans for other types of transportation, such as freight, rail, aviation, active transportation, and public transportation.

Planning for state highways matters:

- Over half of vehicle travel in Washington occurs on state highways.
- People drive cars and ride in vanpools and buses on highways to reach their destinations, like jobs, schools, services, and recreation.
- Truckers transport goods to market on highways.
- People walk, bicycle, roll, and access transit along highways.
- State highways serve as main streets in many communities and support their economies.
- Planning can address the legacy of state transportation actions of the past, which often disproportionately negatively affected low-income communities, minority neighborhoods, and people of color and persist in disparities today.³

WSDOT is committed to providing safe, reliable, and cost-effective transportation options for all travelers.

This Highway System Plan replaces the previous edition that was released in 2007. From funding packages to technology, many aspects of our highway system have changed since 2007 and will continue to see changes over the next twenty years. This plan will cover the future vision and trends, the relevant state transportation laws, and how tradeoffs are balanced across different programs. Then we will cover the planning and community engagement process before getting into scenario outcomes and a final recommendation for how to move forward.

³ This statement was developed from the American Association of State Highway Transportation Officials (AASHTO) Policy Resolution PR-2-20 which addresses race, equity, diversity, and inclusion in transportation planning and decision-making processes. URL: <https://transportation.org/policy/wp-content/uploads/sites/56/2023/06/PDF-AASHTO-policy-resolutions-updated-6-13-2023-1.pdf> (PDF, 1.65 MB).

The term highways will be used extensively throughout this document and this refers to any interstate highways, state highways, or state routes in Washington state. Washington also has many marine highways that are covered in the separate Washington State Ferries Long Range Plan.

All in-text or bulleted lists are not prioritized unless otherwise specified. For descriptions and more information on any transportation terms, please visit [the Glossary on page 56](#).

A BOLD VISION FOR STATE HIGHWAYS

Development of the Highway System Plan was aided by advisory, steering, and internal alignment committees whose members provided professional expertise and knowledge of industry best practices. Using the visions and goals from the Washington Transportation Plan as a guide, these committees came up with the following aspirational vision statements for the future of state highways:⁴

Financially Sustainable. Highway assets will be proactively maintained and preserved to achieve and sustain a state of good repair and operation.

Safe. There will be zero fatal and serious injury crashes on Washington highways.

Equitable. Transportation policies and investments will effectively respond to the needs of historically underserved and overburdened communities, resulting in the equitable improvement of all types of transportation infrastructure and services and the reduction of environmental health disparities.

Integrated. To ensure transportation strategies are integrated across agencies and modes and the system operates seamlessly across boundaries, proposals for new highway investments will be informed by:

Washington Transportation Plan Vision

Washington's transportation system...



safely connects people and communities,



fostering commerce and economic opportunities for all,



operating seamlessly across boundaries and providing travel options



to achieve an environmentally sustainable system.

⁴ The full Washington Transportation Plan: 2040 and Beyond can be found on the Washington Department of Transportation website here: <https://wsdot.wa.gov/construction-planning/statewide-plans/washington-transportation-plan>.

- Engagement with the public.
- Consultation with local governments and tribes.
- Prioritization through applicable metropolitan or regional planning processes.
- Coordination with the state ferry system and other transportation service providers.

Multimodal. Pedestrians, bicyclists, ferry users, and transit riders of all ages and abilities, as well as motorists and freight transporters, will have improved access along and across highways.

Environmentally Sustainable. Transportation policies and investments will result in lower per capita vehicle miles traveled, reduced emissions, improved health, long-term resilience, and increased fish habitat.

WASHINGTON PLANS FOR RESILIENCE IN THE FACE OF TRANSFORMATIVE CHANGE

While the future is always uncertain, we can reasonably anticipate how emerging issues and trends might affect the Highway System Plan's recommendations. We asked WSDOT leaders and organizations with an interest in transportation about emerging issues and trends that might affect WSDOT's highway programs in the next 20 years. Check out Figures 2 and 3 below for a summary of what may transform transportation in the near future.

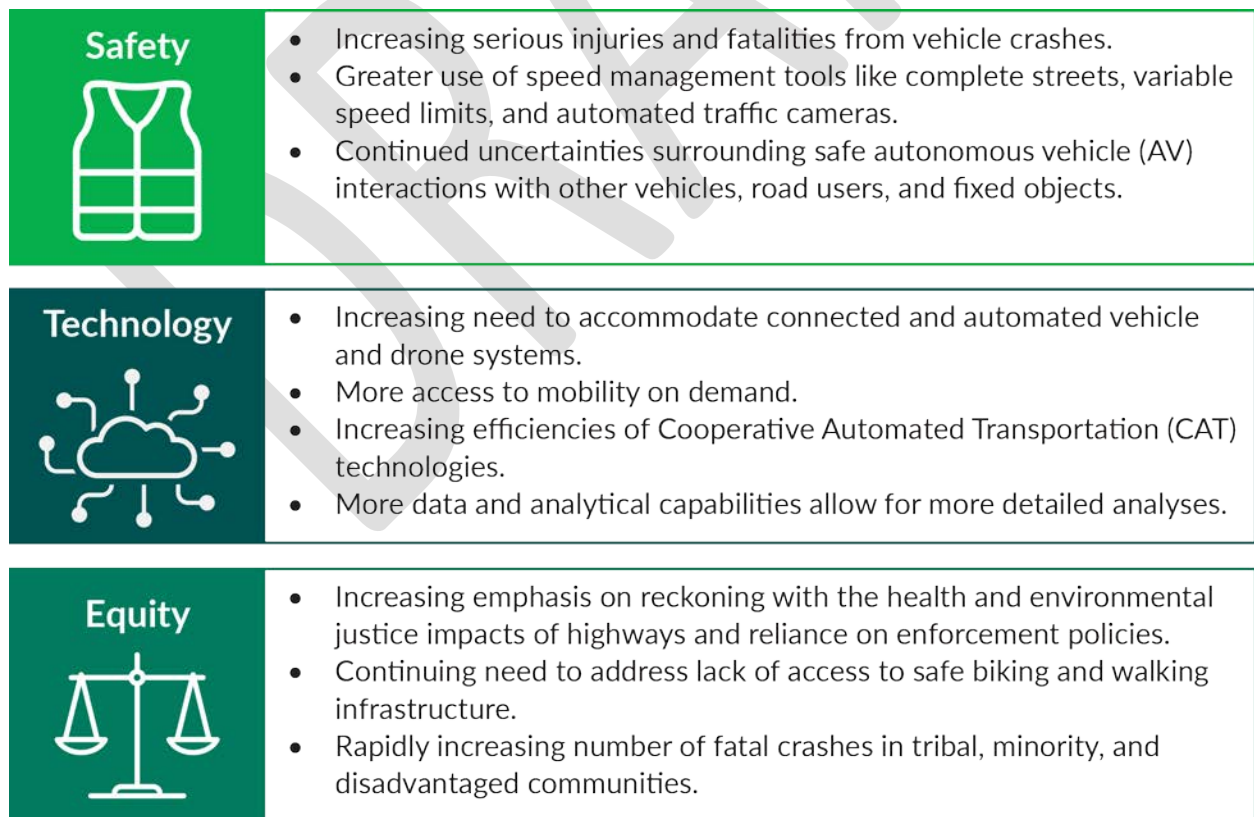


Figure 2: Emerging issues and trends.







<p>Multimodal Travel Demand</p> 	<ul style="list-style-type: none"> • Changing commute patterns due to telework. • Increasing emphasis on making transit, biking, walking, and rolling safe, affordable, flexible, accessible. • Improvements in network evaluation are creating better connections and encouraging parity across modes.
<p>Economy</p> 	<ul style="list-style-type: none"> • Continuing preservation and maintenance funding shortfalls resulting in more system failures. • Declining tax revenue due to fuel efficiency, increases in electric vehicles, and reduced consumption. • Increasing personal, financial, and societal costs from more vehicular crashes.
<p>Demographics</p> 	<ul style="list-style-type: none"> • Increasing need for non-emergency medical trips. • Increasing elderly and special needs populations. • More demand for community services that allow people to age in place. • Increasing climate change migration.
<p>Environment</p> 	<ul style="list-style-type: none"> • Increasing vulnerability of bridges and roads to climate change, especially in rural areas and tribal reservations. • Continuing need to address air and water quality—roads are pathways for pollution. • Increasing use of strategies that reduce per capita vehicle miles traveled and emissions.
<p>Deliveries & Logistics</p> 	<ul style="list-style-type: none"> • More demand for online shopping and related freight infrastructure. • Increasing use of strategies that separate traffic by vehicle types in heavily congested corridors to improve safety. • Larger and heavier trucks to reduce trips. • Increasing curb space management and last mile consolidation
<p>Green Transportation</p> 	<ul style="list-style-type: none"> • Increasing alternative fuel vehicle sales and supportive policies. • Increasing need for fueling and charging for alternative fuel vehicles. • Increasing use of E-bikes and E-scooters expanding the number and diversity of people bicycling and rolling.

Figure 3: Emerging issues and trends (continued).

THE LEGISLATURE DIRECTS WSDOT TO PRIORITIZE PRESERVATION AND SAFETY

WSDOT strives to achieve the six statutory policy goals in the text box below, prioritizing preservation and safety as directed by the Legislature.⁵ State statute also directs WSDOT to assess strategies to enhance the operational efficiency of the existing network before recommending system expansion.⁶ Additionally, WSDOT is working to implement legislative direction through the Healthy Environment for All (HEAL) Act to address environmental justice for overburdened communities and vulnerable populations. For a complete list of statutory requirements, please refer to [Appendix F](#).

Transportation System Policy Goals (RCW 47.04.280)

It is the intent of the legislature to establish policy goals for the planning, operation, performance of, and investment in, the state's transportation system. Public investments in transportation should support achievement of these policy goals:

- (a) Preservation: To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services, including the state ferry system;
- (b) Safety: To provide for and improve the safety and security of transportation customers and the transportation system;
- (c) Stewardship: To continuously improve the quality, effectiveness, resilience, and efficiency of the transportation system;
- (d) Mobility: To improve the predictable movement of goods and people throughout Washington state, including congestion relief and improved freight mobility;
- (e) Economic vitality: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy; and
- (f) Environment: To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment.

The powers, duties, and functions of state transportation agencies must be performed in a manner consistent with the policy goals set forth in subsection (1) of this section with preservation and safety being priorities.

⁵ Revised Code of Washington (RCW) 47.04.280 – Transportation system policy goals.
<https://app.leg.wa.gov/rcw/default.aspx?cite=47.04.280>

⁶ RCW 47.06.050(c) – State-owned facilities component.
<https://app.leg.wa.gov/RCW/default.aspx?cite=47.06.050>

By state law, the Highway System Plan recommends highway program funding levels and specific and financially realistic improvements to the highway system for the next twenty years. This plan focuses on highway program funding levels. Recommendations for specific highway improvements are not included in this plan.

These statutes serve as a good starting point and there are other important things to consider. First, chronic disinvestment in preservation and maintenance threatens the ability of the highway system to support the state's economy. Second, traffic fatalities are surging to levels not seen in the past 30 years. Third, reversing the generational harms from past infrastructure projects is a large and complex undertaking that will take many years to accomplish.

It is also an unavoidable fact that while visions can generate unlimited needs for investment, there will never be unlimited public funds. This means that difficult tradeoffs will need to be made in any realistic funding recommendation. Some or all policy goals will be left unfulfilled in any recommendation that could be made under limited funding.

THIS PLAN FOCUSES ON BALANCING TRADEOFFS AMONG HIGHWAY PROGRAMS

By their nature, tradeoffs are difficult decisions to make. Each side of a decision has value, and the decider must balance the benefits and costs. Scenario planning allows us to safely test how these tradeoffs would likely turn out, gaining insights and incorporating that information with the perspectives gained during community engagement.

The Highway System Plan explored different scenarios for future investment in highway programs and evaluated how those scenarios achieved the six legislative policy goals and met public expectations. The planning process investigated questions including:

- What if new highway funding emphasized preservation and maintenance?
- What if it focused on new and bigger highways?
- What if most new funding was dedicated to safety or strategies that increase the operational efficiency of the existing system?

WSDOT analyzed how different investment scenarios would affect outcomes, including:

- How many highways or bridges would close?
- What emission reductions could we expect?
- What are the anticipated safety benefits?

We shared these scenarios and the results with the public and asked for their feedback to better understand their preferences. This approach allowed us to:

- Explore realistic investment choices constrained by reasonable funding assumptions.
- Be transparent about the performance that results from different levels of investment.
- Develop a balanced investment recommendation based on community input and professional expertise.

DOES THIS NEW HIGHWAY SYSTEM PLAN FULLY ADDRESS EVERY IMPORTANT ISSUE?

This Highway System Plan's recommendations identify common ground among diverse statewide interests on the distribution of funding among different highway programs. Large-scale plans will always leave out or limit details on some topics that are still important. This plan's focus is informing the tough but necessary tradeoffs decision-makers must make within constrained resources to achieve established policies and priorities. The Highway System Plan is only a piece of the policy puzzle.

For example, while the Highway System Plan analyzed the effects of different program funding scenarios on greenhouse gas emissions, changes outside the scope of the Highway System Plan would be needed to achieve the state's greenhouse gas emission reduction goals. Strategies like transportation-efficient land use or congestion pricing leverage four to twelve times the reductions that can be achieved through highway funding changes alone. Those types of policy shifts are being carefully considered in the context of other WSDOT planning efforts, like the Carbon Reduction Plan or the agency's Vehicle Miles Traveled Targets Final Report.

WSDOT LISTENED TO THE COMMUNITY

Community engagement is an important part of aligning long-range plans to the needs and desires of the public. WSDOT used a number of methods to collect feedback from communities across the state, including a statistically representative survey, virtual open houses, scenario workshops, and an online opinion poll. In addition, interviews with overburdened communities and vulnerable populations were used for the first time to improve response rates. Even though Washington is a large and diverse state, there were very clear overall trends in the responses that indicated:⁷

- Strong support for preservation and maintenance funding across all regions and demographic groups.
- Preference for strategies that increase safety and efficiency for the existing system, while still funding some highway expansion.

⁷ The full Highway System Plan community engagement survey report can be found here: <https://wsdot.wa.gov/construction-planning/statewide-plans/highway-system-plan>.

- Importance of addressing equity by increasing travel choices, improving access to affordable housing, and creating economic opportunities from highway investments for overburdened and vulnerable communities.

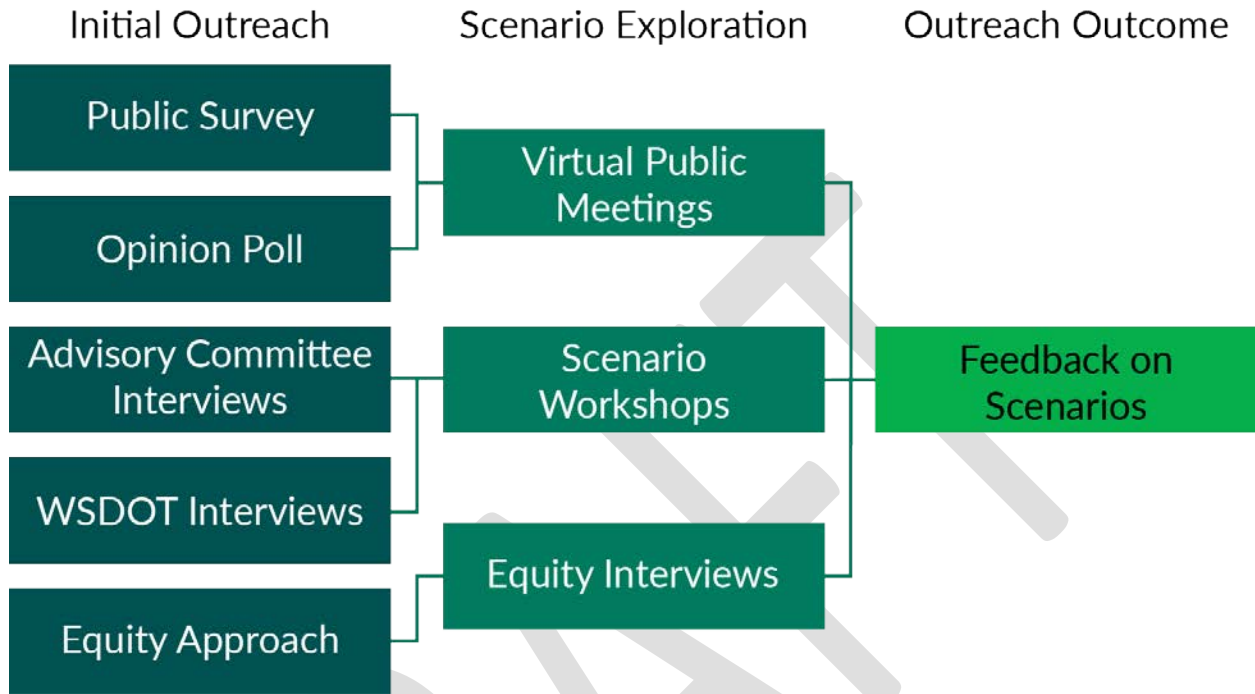


Figure 4: Public outreach process for the Highway System Plan.

These transportation investment opinions represent the majority point of view, though we were fortunate to hear ideas from just about every viewpoint imaginable. This shows that the engagement worked well at taking a cross section of our state’s population.

No investment recommendation will satisfy everyone. The Highway System Plan’s purpose is to provide a recommendation for highway investment that strikes a reasonable balance based on:

- Legislative direction.
- WSDOT’s professional duty to steward the transportation system.
- Consistency with federal requirements.
- Alignment with state and regional plans.
- Professional expertise and industry best practices.
- Public input.

The Highway System Plan identifies common ground for state highway investment priorities that make sense for Washington.

WSDOT ANALYZED DIFFERENT INVESTMENT SCENARIOS

WSDOT receives state and federal funding to help accomplish our mission of providing safe, reliable, and cost-effective transportation options for all travelers. These funds are distributed to different programs that each work on a specific task area. During the community engagement process we learned that people generally grouped the highway system programs into the three main categories shown in Figure 5: highway repair, safety and efficiency, and highway expansion. These programs and groups were used for the scenario analysis and to explore how different funding levels might change our future highway system. Ultimately there are two main questions for highway funding:

- Should preservation and maintenance (repair) be adequately funded, or partially funded?
- What is the right mix of safety and efficiency strategies and highway expansion strategies?



Figure 5: WSDOT funding groups and highway programs.

Some programs were non-negotiable and had to be included before considering different investment scenarios. For example, a federal court injunction in 2013 required WSDOT to repair or replace culverts that impede salmon and steelhead migration by 2030. There are also standard

agency costs that apply regardless of the chosen investment scenario, including program administration, information technology support, and facilities, among others. After those programs, a wide range of possible investment scenarios were carefully vetted with public input and an analysis of performance along with vision and goal alignment. Based on this process, WSDOT considered a final set of three potential highway program investment scenarios.

What is highway repair and why does it matter?

Roadway surfaces begin to degrade right after they are paved. Our highways are worn down by heavy vehicles 24 hours a day through heat, rain, ice, and snow. Roadways are built in layers much like a cake, with the deepest layer being the most important. The layers on top protect that base layer and help prevent failures like cracks and potholes. It is preservation and maintenance activities that keep the top layers in the best possible condition which in turn extends the life of the entire roadway.

Currently, the preservation program is funded at just 40% of what is needed to keep the state highway system open and functional. This means that the preservation project backlog gets larger each year. Figure 6 shows what the potential tradeoffs would look like to a highway user at three different highway repair funding levels. Increasing preservation funding would lower the funding available for other policy goal areas, but falling behind on preservation leads to larger replacement costs in the future.

During community engagement the public overwhelmingly rejected the idea of closing or placing new limits on some bridges and highways in order to spend money on other highway programs. Adequately funding preservation and maintenance activities aligns with the Legislature's prioritization of the preservation policy goal, WSDOT's strategic plan, the Washington Transportation Plan, and transportation industry best practices. It also makes sense from a taxpayer perspective – underfunding preservation and maintenance ends up costing five times more to restore highways to acceptable condition in the future.⁸ For all these reasons, each of the final three scenarios analyzed include adequate funding for preserving and maintaining highways in a functional state.

⁸ WSDOT Pavement Office






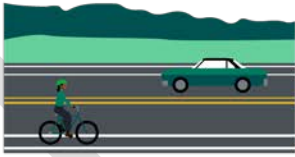



	Current Funding 40% of Adequate Funding	Increased Funding 70% of Adequate Funding	Adequate Funding 100% of Adequate Funding
Mobility	 <p>Severe deterioration for up to 90 percent of all state highways, affecting transport of people and goods in Washington.</p>	 <p>Severe deterioration for up to 50 percent of all state highways, affecting transport of people and goods in Washington.</p>	 <p>All state highways remain open and functional.</p>
Safety	 <p>To keep the traveling public safe, roads will be closed as conditions deteriorate and the safety of facilities is compromised.</p>	 <p>To keep the traveling public safe, roads will be closed as conditions deteriorate and the safety of facilities is compromised.</p>	 <p>No roads risk closure for safety reasons. Implementing complete streets enhances safety for all road users.</p>
Stewardship			 <p>Meets road stewardship responsibilities. No additional cost at the end of 20 years.</p>

Figure 6: How highway repair funding affects mobility, safety, and stewardship.

Three scenarios for investing remaining funds

With all three scenarios including adequate funding for preservation and maintenance, WSDOT explored how each one balanced the remaining funds between safety and efficiency strategies and highway expansion strategies. The first scenario was based on the balance preferred by most members of the public during the engagement process: committing two-thirds of the remaining funding to improving the safety and efficiency of the existing system and one-third to highway expansion strategies.

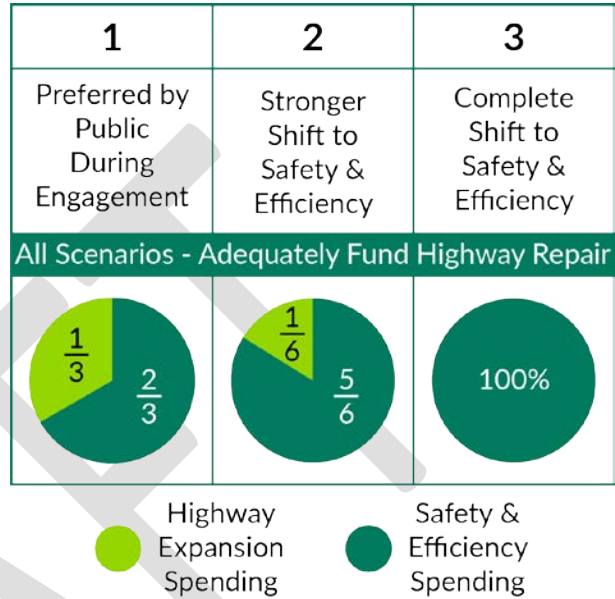


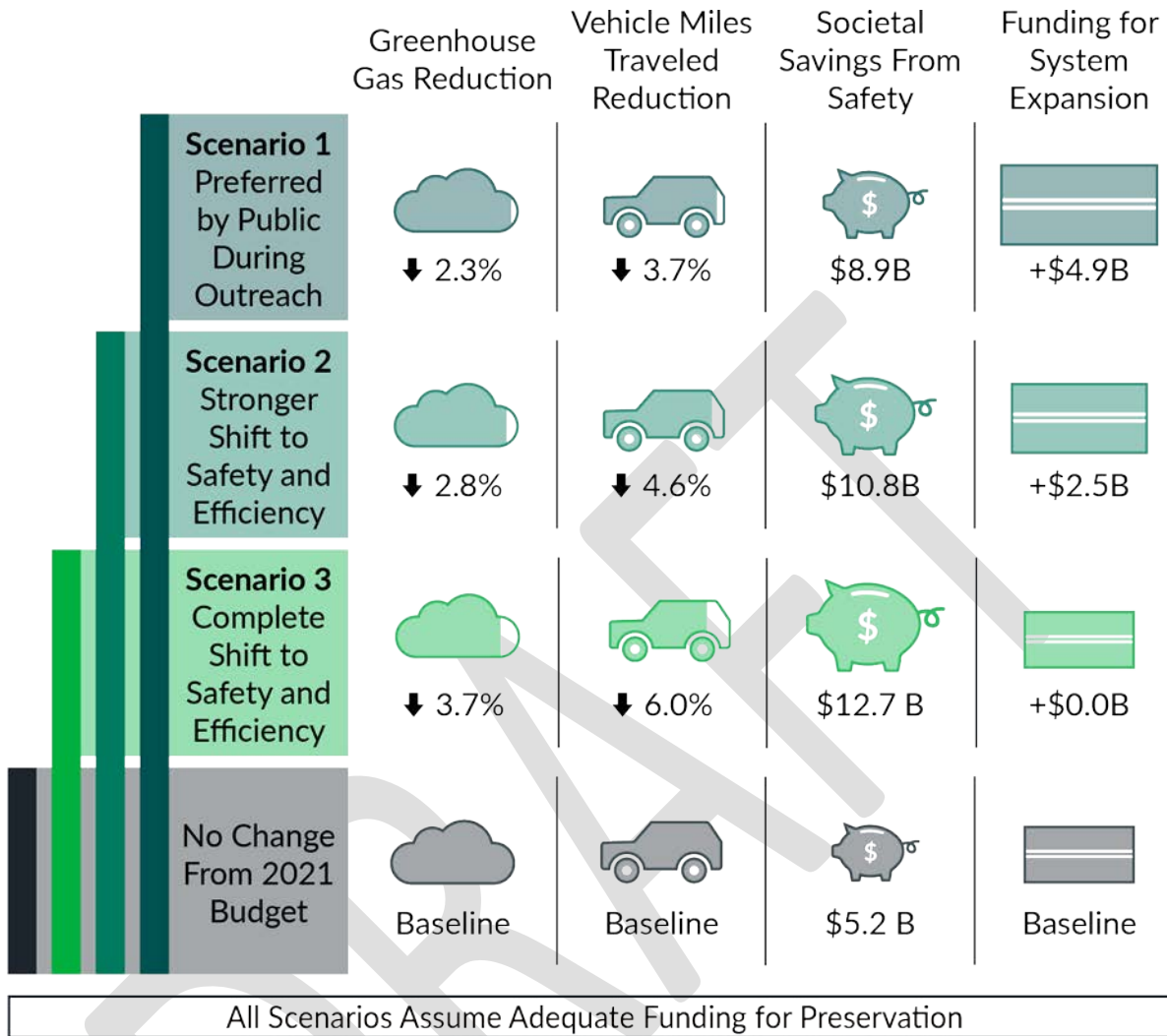
Figure 7: A side-by-side comparison of the three final investment scenarios.

We compared this scenario to a stronger shift to safety and efficiency strategies and to a complete shift to safety and efficiency strategies, as shown in Figure 7. We evaluated the performance of these scenarios using measures aligned with the six state transportation policy goals. For more information on this process, please visit our [Highway System Plan website](#).⁹

WHAT MIGHT DIFFERENT FUTURES LOOK LIKE?

The future of Washington’s highway system depends on how we invest new revenue. Using a combination of data sources and analysis tools, we explored how the three different investment scenarios would affect greenhouse gases, vehicle miles traveled, societal safety dividends, and available highway system expansion funding. Figure 8 below shows a comparison of the expected results for the three final scenarios WSDOT analyzed. For more details on the scenario analysis process, please refer to the scenario documentation on our [Highway System Plan website](#).

⁹ WSDOT Highway System Plan website. <https://wsdot.wa.gov/construction-planning/statewide-plans/highway-system-plan>.



Dollars in year of expenditure.

Differences of +/- \$0.1B may appear due to rounding.

Dollars are for long-range planning, and not appropriate for budgeting.

These figures were developed based on the 2021 budget for the purposes of long-range planning. Current estimates based on additional system deterioration and changes to policy are made available through the priority programming processes and Capital Improvement and Preservation Program.

Figure 8: A comparison of benefits for the three final scenarios.

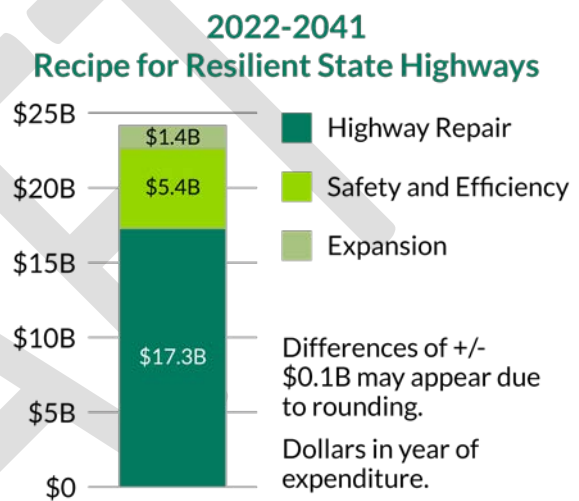
THE RECIPE FOR RESILIENCE

WSDOT recommends new revenue for state highways be dedicated first to adequately funding preservation and maintenance with remaining funds balanced between safety and efficiency strategies and highway expansion projects at a ratio of 2:1.

While this recommendation is a significant shift from current practices, it responds to public preferences and is consistent with professional best practices. It provides acceptable performance and emphasizes the legislative priority goals of preservation and safety. This recipe for resilience will provide more positive economic, safety, and equity benefits to more Washingtonians across the state, enhanced by the state’s new complete streets and environmental justice requirements. It will enable WSDOT to progress toward making the system as safe as possible and getting the most we can out of the existing system. Sometimes, strategic expansion that focuses on moving people and

goods safely and efficiently is the practical solution.

However, expansion should only be implemented after first enhancing the operational efficiency of the existing system and considering higher priority goal areas like preservation and safety.



New revenue is needed in addition to existing revenue from the baseline plus Move Ahead Washington.

Dollars are for long-range planning, and not appropriate for budgeting.

Figure 9: 2022-2041 Recipe for resilient state highways.

Here are WSDOT’s recommended highway investment priorities for the next twenty years:

- **Fix It First.** Adequately fund preservation and maintenance to keep all highways in a functional state by investing an additional \$17.3 billion over the next twenty years. Investing less than what is needed to keep the system working will multiply future costs and reduce available funding for other priorities.
- **Prioritize Safety and Efficiency.** After adequately funding preservation and maintenance and factoring in the new revenue from Move Ahead Washington, invest an additional \$5.4 billion in various strategies and programs that will improve the safety and efficiency of the existing system.

- Economize on Expansion.** In addition to the new revenue committed to highway expansion in Move Ahead Washington, invest \$1.4 billion in highway expansion projects. Consider the benefits of delaying other highway expansion projects or refocusing their purpose to better achieve higher priority preservation and safety outcomes. Each expansion project also adds greater future preservation and maintenance needs.

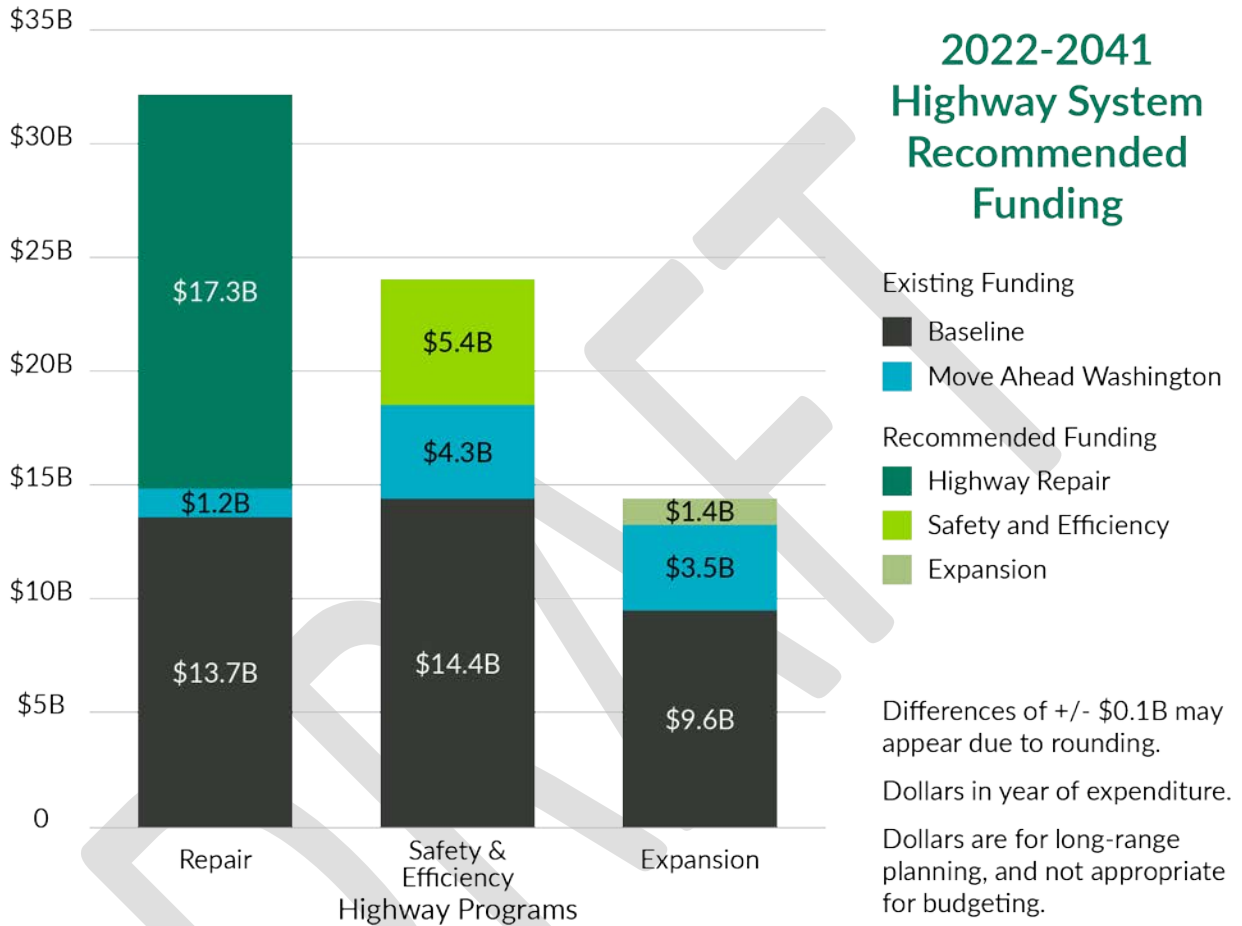


Figure 10: Breakdown of the recipe for resilience, Move Ahead Washington, and baseline funding levels.

HOW DID MOVE AHEAD WASHINGTON AFFECT THE ANALYSIS?

Midway through the planning process, the 2022 Legislature funded Move Ahead Washington.

This sixteen-year, \$17 billion transportation revenue package promised to invest approximately \$11.4 billion in strategies related to state highway programs, including:

- Highway repair.** An additional \$1.2 billion for highway preservation and maintenance provided a down payment toward keeping the state system open and operational but left a large funding gap (over \$17.3 billion) that needs to be addressed in future budgets.
- Fish passage.** An additional \$2.4 billion supported Washington’s obligation to open 90% of blocked fish habitat identified in 2013 by 2030.

- **Safety and efficiency.** An additional \$4.3 billion funded stormwater retrofits and improvements, the reducing rural roadway departures program, traffic mobility and safety services, incident response, low-cost enhancements, and transit and demand management. A new complete streets requirement supported safe walking, bicycling, and rolling.
- **Highway expansion.** An additional \$3.5 billion funded new highway projects proposed by local communities and provided continued funding for state highway projects.

While Move Ahead Washington improves transportation funding in many areas, there are additional areas of financial need that are the focus of this plan. The investment scenario preferred during community engagement is still achievable when factoring in the funding provided by the Move Ahead Washington package, but it would necessitate that the Legislature make a strong pivot toward investing in highway repair, safety, and efficiency instead of relying on expensive highway expansion strategies to address transportation needs.

Plans take time to bring community engagement efforts and data together with vision statements, recommendations, and other insights. The development process for the 2024 Highway System Plan included a global pandemic, inflation, a new federal transportation bill, and the Move Ahead Washington transportation funding package. Each of these had a significant impact on transportation funding, adding an element of uncertainty to the financial planning process. As such, this plan serves as a useful reference point for long-range planning, but it is not appropriate for developing near-term budgets. This uncertainty also underscores the need for regular plan updates that keep policies and spending aligned to the dynamic nature of our state.

WHAT COULD THE LEGISLATURE ACHIEVE WITH CONTINUED POLICY SHIFTS?

There are compelling reasons for more change in transportation investment. Past legislative transportation revenue packages responded to demand for larger scale highway expansion investments after many years of more modest and focused spending. However, while highway expansion may seem like the most practical solution, at the system level it is too often an overvalued and less effective strategy than preserving the existing system and making safety and efficiency improvements in more locations across the state.

Transportation contributes to increases in climate risks such as wildfires and flooding, the number of serious injuries and fatalities on our highways, and the environmental burdens on our most vulnerable communities. The \$200 million cost of just one moderate highway expansion could instead allow WSDOT to preserve 1,200 miles of rural highway for the next twenty years.

Alternatively, investing the same amount in the safety program could save many lives and also avoid approximately \$800 million in societal crash costs.¹⁰

Shifting from the construction of new and bigger highways to investing in preservation, safety, and efficiency strategies would provide more positive economic, safety, and equity benefits to more Washingtonians across the state. This is especially true because the Legislature's recently adopted complete streets and environmental justice policies direct WSDOT to prioritize safer and more equitable transportation investments. A stronger shift to preservation, safety, and efficiency strategies would also modestly reduce transportation-related greenhouse gas emissions. Lowering emissions aligns with Washington's carbon reduction policies and improves air quality for everyone.

WHAT DOES THE HIGHWAY SYSTEM PLAN'S RECOMMENDED FUTURE LOOK LIKE?

If this plan's recommendations are realized, our future state highway system will be resilient and:

- **SOUND.** All bridges and highways, critical to supporting Washington's existing economy, remain open and are maintained in working condition – a condition that last occurred in 2009.
- **SAFE.** WSDOT decreases serious injuries and saves lives by providing safer spaces for people who walk, bicycle, and roll, new guardrails and roundabouts, and intersection improvements. This also results in an \$8.9 billion reduction in the costs to society from crashes over twenty years.
- **SMART.**
 - **Healthier Environment.** Finish the removal of fish passage barriers required by court injunction. Daily vehicle miles traveled are 3.7% lower and greenhouse gas emissions are 2.3% lower than baseline.
 - **More Equitable Outcomes.** Agency investments and policy decisions are equitable and inclusive, creating outcomes that benefit historically underserved and overburdened communities and reduce environmental health disparities.
 - **More Walking, Bicycling, and Rolling.** WSDOT closes most walking, bicycling, and rolling gaps along, across, or adjacent to state highways identified in the Active Transportation Plan, resulting in safer and more efficient travel.
 - **More Travel Options.** More employers encourage their workers to take the bus, carpool, bicycle, walk, and work from home. More cities are given support to implement strategies for transportation-efficient communities. WSDOT also provides more grant support so transit agencies can improve bus service, deliver

¹⁰ Societal crash costs include lost household productivity, property damage, workplace costs, and productivity loss from congestion delays.

more service for people with disabilities, and deploy more vanpools employees can use to go to work together.

- **Smoother Transportation Operations.** Crashes are cleared faster, travelers are provided with more information, and other low-cost changes are made that benefit all highway users.

HOW DO WE MAKE IT HAPPEN?

Implementation of the Highway System Plan depends on legislative policy and budget decisions, supportive agency business processes, and the alignment of local and regional agency transportation and land use decisions to support safety and transportation efficiency.

Washingtonians expect transportation strategies to be coordinated across agencies and facilities and for services to operate seamlessly across boundaries. The Highway System Plan identifies common ground for funding a resilient state highway system that plays an appropriate role within the larger transportation network, meeting the expectations and priorities of Washington residents and the state and federal requirements. Some implementation pathways for this plan include:

- **Budget Requests.** By statute, the Highway System Plan serves as a basis for the agency's Capital Improvement and Preservation Program and two-year biennial budget requests to the Legislature. The capital investments recommended in these documents should be consistent with Highway System Plan recommendations.
- **Project Selection.** By statute, the Highway System Plan recommends specific and financially realistic improvements to the Legislature. Highway System Plan recommendations should inform the weighting and criteria used in the performance-based project evaluation model directed by the Legislature. Consideration will also be first given to projects that enhance operational efficiencies.
- **Planning Guidance and Performance Targets.** The Highway System Plan guides WSDOT's corridor, subarea, and network planning by providing a common language for communicating agency priorities and strategies. Recommended program funding levels should guide planning objectives and recommended strategies. Additionally, the expected performance of the recommended scenario should inform agency performance targets and the adoption of updated level of service standards. For more information on the level of service updating process, please refer to [Appendix D](#).
- **External Communications.** The Highway System Plan helps WSDOT facilitate external coordination and alignment with other tribal, state, regional, and local agencies. With limited funding constraints, the Highway System Plan sets the financial, performance, and outcome expectations for each type of state highway investment.

Appendix A: Equity in the Highway System Plan

Equity is defined by the Presidential Executive Order Number 13985 as “the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.”¹¹ Further, the term “underserved communities” is defined as “populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.”¹²

WSDOT is committed to providing a multimodal transportation system that serves all Washingtonians by actively improving our agency’s policies and practices.¹³ For the transportation planning process, it is vital that members of any these population groups feel that they have been given an opportunity to participate in the public process, a process that determines which plans and projects ultimately move forward. In addition, the outcomes of plans and projects should avoid or mitigate any adverse impacts to members of these population groups. The Highway System Plan addresses equity in several different ways. Most importantly, the planning process for the HSP began with listening to people’s transportation concerns and desires. Using a series of engagement methods, we were able to capture a diverse range of opinions from across the state. However, even after numerous rounds and methods of community engagement were completed, there were still some demographic groups that remained underrepresented when compared to the statewide population average. These groups included people with annual incomes below \$25,000, people identifying as female, people of color, people with Limited English Proficiency (LEP), and people between the ages of 18 and 34.

¹¹ Executive Order No. 13985 (2021). Section 2. Definitions.
<https://www.federalregister.gov/documents/2021/01/25/2021-01753/advancing-racial-equity-and-support-for-underserved-communities-through-the-federal-government>.

¹² Executive Order No. 13985 (2021).

¹³ WSDOT Secretary’s Executive Order Number E 1119.00 (2021).
<https://wsdot.wa.gov/sites/default/files/2021-11/Anti-Racism-Policy-DEI-Planning-E119.pdf> (PDF, 270 KB).

WSDOT staff developed another series of targeted engagement to improve response rates from these groups and improve the overall results and analysis. WSDOT's Office of Equity and Civil Rights and WSDOT region planning offices suggested meeting these groups at community spaces and gatherings instead of inviting them to WSDOT meetings or events. New changes to statewide legal guidance also allowed us to compensate members of the public for their time spent sharing their perspectives and lived experiences. Project staff worked with a range of community-based organizations to organize intercept interview opportunities and focus group discussions.

Across 11 engagement events targeting feedback from these underserved groups, we saw very representative participation. Translation support allowed over 25% of participants to give feedback in Spanish. We were fortunate to hear perspectives from all of the groups we targeted as well as every other demographic group. The key themes we heard during these events centered around the importance of supporting all modes, especially active and public transportation, and preserving and maintaining the system, with each of these modes supporting safety as well.

The Highway System Plan also addresses equity through its recommendations. All the concerns that we heard from the initially underrepresented groups were included in this plan's set of sound, safe, and smart recommendations. A sound system that preserves and maintains pavements will keep roads and bridges open, preserving access and mobility. This means users of all modes can reach the homes, jobs, goods, and services that they need without taking long detours. A safe system will include safer spaces for all modes, reducing the number and severity of crashes. A smart system will provide cleaner air, equitable and inclusive transportation investments and policies, more active transportation infrastructure, more public transit, and speedier crash clearance, among other benefits.

Equity is woven throughout the Highway System Plan document and process. However, that process is not yet complete. Now that the Highway System Plan draft is ready for release, we will once again make sure that everyone has an opportunity to review the document and let us know what they think. WSDOT will engage directly with communities, partners, and tribes and listen to their perspectives.

This appendix and the final plan document will be updated once the community engagement efforts for the final plan are complete.

Appendix B: Land use and state highway planning

This appendix is still in development and will be available in the final plan. Land use was recently affected by the following two bills passed by the Washington State Legislature in 2023:

- Second Substitute Senate Bill 5412
- Engrossed Second Substitute House Bill 1181

DRAFT

Appendix C: 2007-2026 HSP Appendix G – Development Impacts Assessment

The State Environmental Policy Act (SEPA) requires local jurisdictions to assess and mitigate, when reasonable and proportionate, the impacts of new development projects, including impacts to traffic. Together, local jurisdictions and WSDOT agree on an acceptable level of service (LOS). A particular development could cause traffic impacts to a highway segment or an intersection to fall below the LOS thresholds.¹⁴ The LOS thresholds are defined as:

For Highways of Statewide Significance (HSS) including the ramp intersections, the LOS is set by WSDOT (RCW 47.06.140):¹⁵

- Urban Areas: LOS “D”
- Rural Areas: LOS “C”

For Regionally Significant State Highways (non-HSS):

- The LOS thresholds adopted by the local MPO/RTPO shall apply. In the absence of an adopted LOS threshold, the LOS for HSS shall apply. Where there is a specific inter-local agreement with WSDOT, the applicable LOS threshold levels are established by the agreement.

When a development affects a segment or intersection where the LOS is already below the applicable threshold, the pre-development LOS will be used instead of the otherwise applicable deficiency level.

¹⁴ Level of service definition (2007): A qualitative measure that incorporates the collective factors of speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs provided by a highway facility under a particular volume condition. Traffic operational characteristics: LOS A: A condition of free flow in which there is little or no restriction on speed or maneuverability caused by the presence of other vehicles. LOS B: A condition of stable flow in which operating speed is beginning to be restricted by other traffic. LOS C: A condition of stable flow in which the volume and density levels are beginning to restrict drivers in their freedom to select speed, change lanes, or pass. LOS D: A condition approaching unstable flow in which tolerable average operating speeds are maintained but are subject to sudden variations. LOS E: A condition of unstable flow in which operating speeds are lower with some momentary stoppages. The upper limit of this LOS is the capacity of the facility. LOS F: A condition of forced flow in which speed and rate of flow are low with frequent stoppages occurring for short or long periods of time; with density continuing to increase causing the highway to act as a storage area.

¹⁵ For counties consisting of islands whose only connection to the mainland are state highways or ferry routes (Island County), the level of service standards for state highways and ferry route capacity must be a factor in meeting the concurrency requirements. In Island County, the LOS has been set at Urban Areas: LOS “E” and Rural Areas: LOS “D”. This is a GMA based requirement not a SEPA requirement per RCW 36.70A.070(6)(a)(iii)(C).

When a development would degrade the facility's LOS below the applicable threshold, the facility would be considered deficient to support the development, and WSDOT and its partners would seek reasonable and proportionate mitigation of traffic impacts.

Mitigation can take the form of development constraints (for example, the appropriate placement of highway access points or phasing the development), development constructed transportation improvements, financial contribution or right of way dedication. Details on these and other mitigation strategies are contained in the WSDOT Development Services Manual and the Design Manual.

DRAFT

Appendix D: Updated level of service (LOS) standards

WSDOT is revisiting the LOS standards provided in Appendix C as part of the new Highway System Plan (HSP). WSDOT staff were asked to look into potential alternatives to the Highway Capacity Manual vehicle-based Level of Service (LOS) metric that has historically informed decision making in many business areas of the agency as well as among jurisdictions.

Based on their research, including input from the HSP Steering Committee, WSDOT staff recommend further development of two alternatives to LOS:

- Context-based multimodal LOS, which puts vehicle mobility on par with other modes, and uses a safe systems approach,
- VMT-based approach, which adopts VMT reduction as the primary assessment metric for each project; or
- A hybrid combination of the above two alternatives.

The process for arriving at this recommendation is described below.

Having arrived at this recommendation, WSDOT staff's next steps include consultation with local agencies and jurisdictions, development and implementation of pilot programs, and drafting updates to the new HSP, Design Manual, and other guiding documents. As appropriate, staff will also develop training materials to assist others in analysis and interpretation of any adopted alternative.

CURRENT LOS USAGE AND CHALLENGES

LOS is generically defined as the minimum amount of a public facility which must be provided to meet that community's basic needs and expectations.¹⁶ Currently, WSDOT uses the vehicle-based LOS methodology found in the Highway Capacity Manual (HCM), characterized as one of six levels, represented by the letters A through F. 'A' represents the free unimpeded flow of traffic and 'F' represents an amount of traffic that exceeds the amount of facility available, such that vehicles must wait more than one cycle at an intersection or freeway speeds drop to zero. WSDOT uses LOS in many of its decision-making and project delivery processes, including planning,

¹⁶ Municipal Research and Services Center of Washington (MRSC), 2023. Comprehensive Planning. <https://mrsc.org/Home/Explore-Topics/Planning/General-Planning-and-Growth-Management/Comprehensive-Planning.aspx#LOS>.

development and environmental review, project development and design selection, and transportation operations. The most recent editions of the HCM have included level of service methodologies for bicycling, walking, and transit, but those methods have not been widely adopted at WSDOT.

LOS is also considered in the Revised Code of Washington and related to WSDOT's interpretation of the Growth Management Act (GMA). The GMA requires that road infrastructure meets the demand stemming from new development or has funding to do so within six years. State law does not require any specific LOS metrics, but does require that standards be established for arterials, transit service, and other types of facilities.¹⁷

Despite its widespread use at WSDOT and elsewhere in the North American transportation profession, vehicle-based LOS presents some challenges as a measure of throughput and traffic flow. For example, the measure is based on vehicle delay, which skews towards an auto-centric interpretation that LOS A is objectively the best condition and LOS F the worst. In fact, a main street operating at vehicle LOS E or F is an indicator of a healthy downtown economy, which is desirable for communities. The lower speeds of an arterial operating at vehicle LOS E or F are safer for pedestrians, also a desirable outcome. When coupled with quality transit, active transportation facilities, and transit-supportive land use, vehicle LOS E/F can incentivize people to shift away from single-occupancy vehicles, which helps to reduce greenhouse gas emissions and wear and tear on roadways. Moreover, facilities operating at vehicle LOS A-C can pose safety, mobility, and access challenges for pedestrians and other users because of high speeds, long distances between safe crossings, and wide roads.

Additional challenges identified with vehicle LOS include that it:¹⁸

- Punishes recent development, inhibits infill, and pushes development outward.
- Exacerbates regional congestion even while “solving” local congestion.
- Inhibits transit.
- Inhibits active transportation.

¹⁷ The WSDOT Active Transportation Plan, for example, establishes level of traffic stress (LTS) and the active transportation standard, a form of level of service. LTS is presented as range between 1 and 4, with LTS1 being acceptable to pedestrians and bicyclists of all ages and abilities and LTS4 being the most stressful for people walking and bicycling.

¹⁸ California Office of Planning and Research, 2016.
https://opr.ca.gov/docs/743_February_2016_Webinar.pdf.

- Measures mobility, not access.
- Measures mobility poorly, failing to optimize the network even for private vehicles.
- Forces more road construction than is affordable to maintain.
- Is difficult to calculate and is inaccurate.

ALTERNATIVES CONSIDERED

The HSP Steering Committee directed WSDOT staff to consider alternatives to the Highway Capacity Manual (HCM) vehicle LOS that address the above challenges and prioritize balancing the needs of multiple transportation modes, improving access to destinations, providing flexibility based on land use and other context factors, and managing local impacts on the state highway system.

With these considerations in mind, WSDOT staff developed four ‘innovations’ with two variations for a total of six. The HSP Technical Advisory Group provided feedback and guidance on how these innovations might function in different decision-making contexts.

While the research has demonstrated some of the challenges with the historic LOS metric, it is important to note that this work is part of a process with no predetermined outcomes. One of the critical next steps for WSDOT is consultation with local jurisdictions to determine which alternative, including a baseline “no change” alternative, provides the strongest path forward for WSDOT and its partners.

Name	Description	ID
Baseline	No change. Keep current vehicle LOS standards.	0
Baseline adapted	Keep the current level of service standards but use them differently.	0A
Access or mobility based on context	Like Maryland: Add access and multimodal metrics to vehicle LOS standards and set standards based on more detailed contexts.	1

Name	Description	ID
Context-based complete streets	Vehicle mobility is put on equal footing with other modes; consistent with ESSB 5974. ¹⁹	1A
VMT as global measure	California: Reduce VMT per capita and job problems with LOS. ²⁰	2
Person-based supply & demand	Bellevue: Supply greater than demand.	3
Add multimodal to baseline	Add multimodal and other metrics on top of current vehicle LOS. One option: RCW 47.80.030 1(f). ²¹	4

Table 1: Four innovations and two variations considered for changes to level of service standards. Note: unique identifiers are included for reference only and do not imply any level of preference.

0. Baseline

Maintains the current vehicle LOS standards.

0A. Baseline adapted

Maintains the current vehicle LOS standards but uses them in conjunction with other metrics (e.g., Level of Traffic Stress) for a more balanced approach. Access or mobility based on context

The current LOS metric ignores how different land uses present travelers with significantly different levels of access – the number of places one can get to in a given amount of time – and mobility – how far one can travel in a given amount of time. An approach developed by the Maryland Department of Transportation categorizes land uses or context to determine appropriate thresholds for mobility and access.²² Within each context, various road treatments and intersection controls are recommended as appropriate for the types of modal priorities. In an

¹⁹ Engrossed Substitute Senate Bill 5974 – Transportation Resources – Various Provisions. <https://lawfilesexternal.wa.gov/biennium/2021-22/Pdf/Bills/Session%20Laws/Senate/5974-S.SL.pdf?q=20230111133013> (PDF, 733 KB).

²⁰ California Office of Planning and Research, 2016. https://opr.ca.gov/docs/743_February_2016_Webinar.pdf.

²¹ Revised Code of Washington 47.80.030§1(f). Regional transportation plan—Contents, review, use. <https://app.leg.wa.gov/rcw/default.aspx?cite=47.80.030>.

²² Maryland Department of Transportation, 2021. Context Driven: Access & Mobility for All Users.

urban core, for example, greater priority is given to pedestrian mobility, while vehicle traffic is relatively slow and controlled. In more rural contexts, vehicles have a higher modal priority, and are likely to move at higher speeds with fewer intersection controls.

1A. Context-based complete streets

Based on the context of the roadway, provide street access with all users in mind, including pedestrians, bicyclists, and public transportation users.

2. VMT as global measure

In 2020, the California State Legislature removed vehicle LOS as a measure of a transportation project's impact, replacing it with vehicle-miles traveled (VMT). State transportation project alternatives are analyzed for their relative contribution to overall VMT, which is analyzed at local, regional, and state geographies. Project alternatives that decrease VMT are in keeping with statewide VMT reduction goals, and viewed favorably in comparison to those that increase VMT.

3. Person-based supply & demand

The City of Bellevue's planning concurrency standards require a supply of new transportation infrastructure that meets or exceeds the expected growth in demand for it. In this framework, transportation projects are analyzed to determine the overall supply of "mobility units" – essentially the number of person-trips accommodated by the new infrastructure – versus the overall demand generated by population growth and new land use development. A plan cannot be approved if the net total demand for the transportation network exceeds the system's ability to accommodate trips. The city also uses multimodal LOS (MMLOS) metrics with context-specific considerations for the quality of infrastructure users will expect.

4. Add MMLOS to Baseline

Similar to the Bellevue MMLOS, this option calls for the development of LOS standards for pedestrians, bicyclists, transit, and other modes. Other metrics could also be added to the various LOS standards that are specific to the user experience, such as route completeness for bicycle LOS or service frequency for transit LOS.

METHODOLOGY AND PRELIMINARY FINDINGS

WSDOT staff conducted a literature review to determine best practices. Additionally, staff conducted interviews with jurisdictions in Washington and other states. Each innovation was considered through the lens of typical WSDOT decision-making contexts, such as comprehensive

plan review, corridor planning, programming and project selection, and development and principal engineering of large capital projects.

Staff then worked with the HSP Level of Service Technical Advisory Group to balance preliminary feedback against each innovation’s effectiveness. It was clear from feedback that no one innovation would achieve all desired outcomes or address all challenges, so the final recommendation would be a hybrid combination of two or more of the innovations. Additional preliminary feedback included the following:

Name	Preliminary Feedback	ID
Baseline	Would not address challenges or achieve desired outcomes.	0
Baseline adapted	Would not address challenges or achieve desired outcomes.	0A
Access or mobility based on context	Was the most popular innovation. It can be adapted to WSDOT and state with several suggested variations; came closest to achieving the goals laid out by the HSP Steering Committee.	1
Context-based complete streets	This was a popular innovation. It is context based and aligned with agency direction, based on the complete streets law that passed in the 2022 legislative session.	1A
VMT as global measure	This innovation will help achieve desired goals and is aligned with state VMT reduction goals. However, WSDOT does not currently have access to the needed data, especially at the level needed for development review. This innovation needs additional application investigation.	2
Person-based supply & demand	This approach has merit, as it aligns with context-based standards and could be implemented at the city or county level, or within WSDOT regions. However, as it would not allow the regions the flexibility in application, we did not want to specify it as a statewide option.	3

Name	Preliminary Feedback	ID
Add multimodal to baseline	While this appeared to be the easiest approach to adopt, it did not address many of the goals set by the HSP Steering Committee. Predicted outcomes included wider street designs which would increase active travel distances and potentially trigger expensive right of way acquisitions.	4

Table 2: Preliminary feedback on the four innovations and two variations considered for changes to level of service standards.

Note: unique identifiers are included for reference only and do not imply any level of preference.

ADDITIONAL WORK TO BE CONDUCTED

The recommendation to consider moving forward with the context-based multimodal LOS and VMT-based innovations is a preliminary step in a longer process. Next, WSDOT staff will consult local agencies on the preliminary recommendations in order to gather additional feedback and further refine the proposed approach. Additional discussions to understand how the innovations would impact each of WSDOT’s business areas, as well as the work of external partners, will be conducted simultaneously.

As a recommendation is further refined, staff will develop and conduct pilots to understand outcomes of the proposed approach. Staff will then develop documentation of the adopted recommendation in a technical addendum to the HSP, as well as all relevant WSDOT manuals and any relevant training materials.

LOCAL AGENCY CONSULTATION

In order to fulfill the requirement for local agency consultation for updating level of service standards on highways of statewide significance, WSDOT will provide:

- Formal notice and opportunity to comment. Send an email and/or letter to the highest administrative official of each city, town, and county in Washington state informing them of current and proposed level of service standards for highways of statewide significance and providing a minimum 21-day period for review and comment.

In addition, following the guidance of the [Centennial Accord Plan](#) and [WSDOT Executive Order E 1025.01](#) and the protocols recommended by WSDOT’s tribal liaisons, WSDOT will cooperatively establish the manner and time frame for consultation with the appropriate tribal governments.

Finally, in alignment with WSDOT's commitment to public participation in decision making and following the guidelines outlined in its [2016 Community Engagement Plan](#), WSDOT also will provide:

- Notice of Intent. This serves as notice of WSDOT's intent to update Level of Service Standards for highways of statewide significance.
- Stakeholder Outreach. WSDOT will reach out to transportation stakeholders (e.g., city and county associations) to increase awareness of city and county representatives and other interested parties about current and proposed level of service standards and identify contacts to reach out to with contact information for how to request more information (meeting, webinars) prior to the 21-day comment period.
- Presentations. WSDOT will present information about current and proposed level of service standards in venues such as the Department of Commerce Planners' Forums.
- Newsletter Articles. WSDOT will provide content on the proposed level of service standards to relevant organizations who publish newsletters such as the Washington Association of Counties, Association of Washington Cities, and Department of Commerce.
- Online Open House and Webinars. WSDOT will provide information about the proposed level of service standards at an online open house and through at least one webinar.
- Adoption of Plan Amendment. Once the initial required consultation is conducted, and a technical evaluation is complete, WSDOT will publish draft level of service standards in an amendment to the Highway System Plan, anticipated to be released by the end of December 2023. Public comment on the new plan will be invited through an online open house, press releases, and social media posts prior to final adoption.

Appendix E: Maps relevant to the highway system planning process

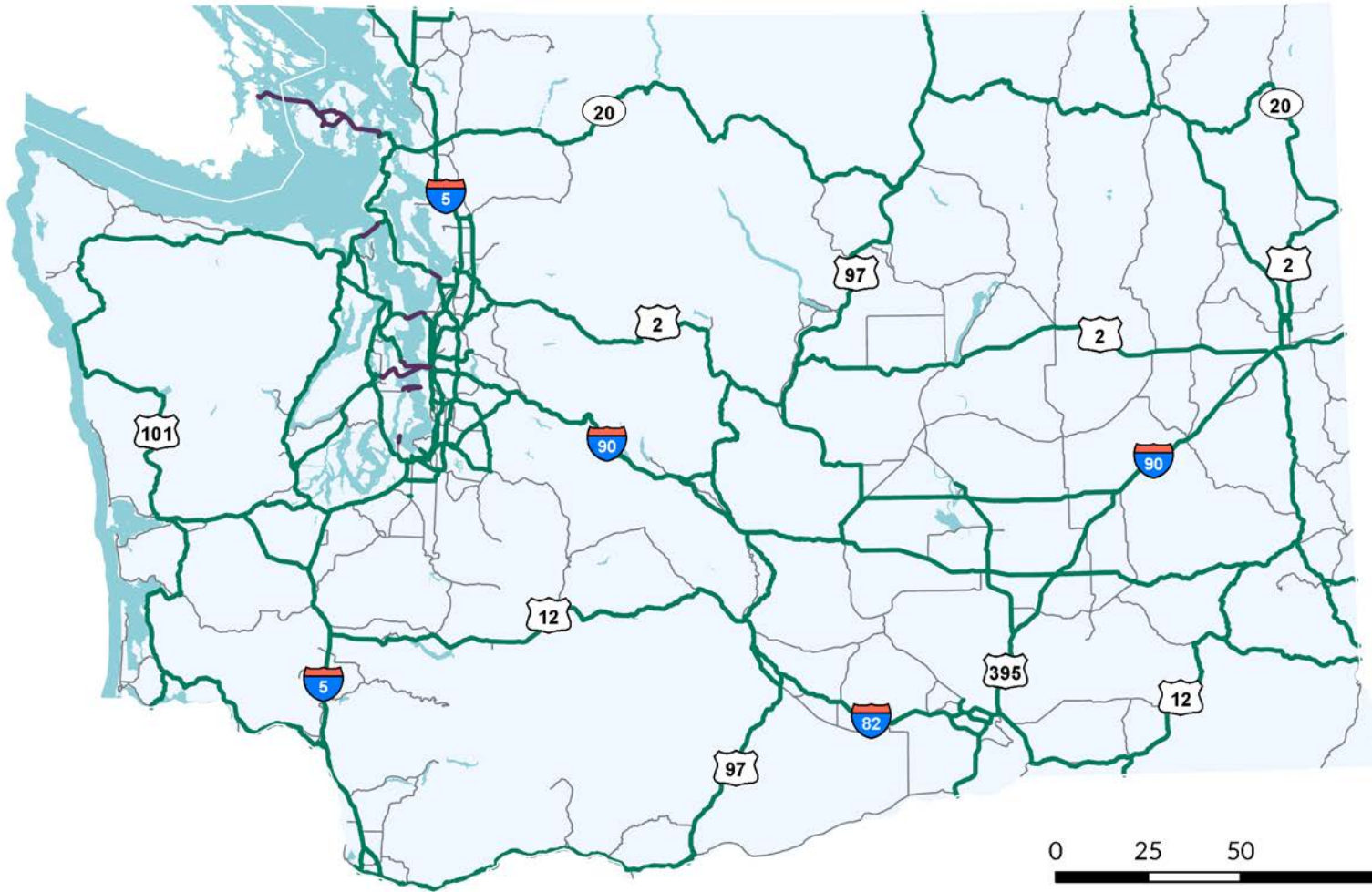
List of maps on the following pages:

- [Highways of statewide significance map](#)
- [National Highway System map](#)
- [Freight and Goods Transportation System map](#)
- [Marine highway system map](#)
- [Metropolitan Planning Organizations map](#)
- [Regional Transportation Planning Organizations map](#)
- [WSDOT regions map](#)

The maps in this plan were created from the following data sources using ArcGIS Pro version 3.1.1 software under license by Esri:

- Cadastral Framework of Washington State, County Boundaries, Washington State Department of Natural Resources, 2007
- Cadastral Framework of Washington State, State Boundary - Washington State Department of Natural Resources, 2007
- Ferry Routes of Washington State, WSDOT, 2020
- Freight and Goods Transportation System of Washington, WSDOT, 2021
- Major Shorelines of Washington State, WSDOT, 1995
- Regions of the Washington State Department of Transportation at 1:500,000, WSDOT, 2018
- Roadway Highway Statewide Significance, WSDOT, 2013
- Roadway National Highway System (NHS), WSDOT, 2010
- sde.SDE.NHD_MajorWaterbodies, USGS, 2019
- State Routes of Washington State 1:500,000, WSDOT, 2022
- Transportation Planning Organizations of Washington State, WSDOT, 2020
- Urban Areas National Geodatabase, United States Census Bureau, 2021

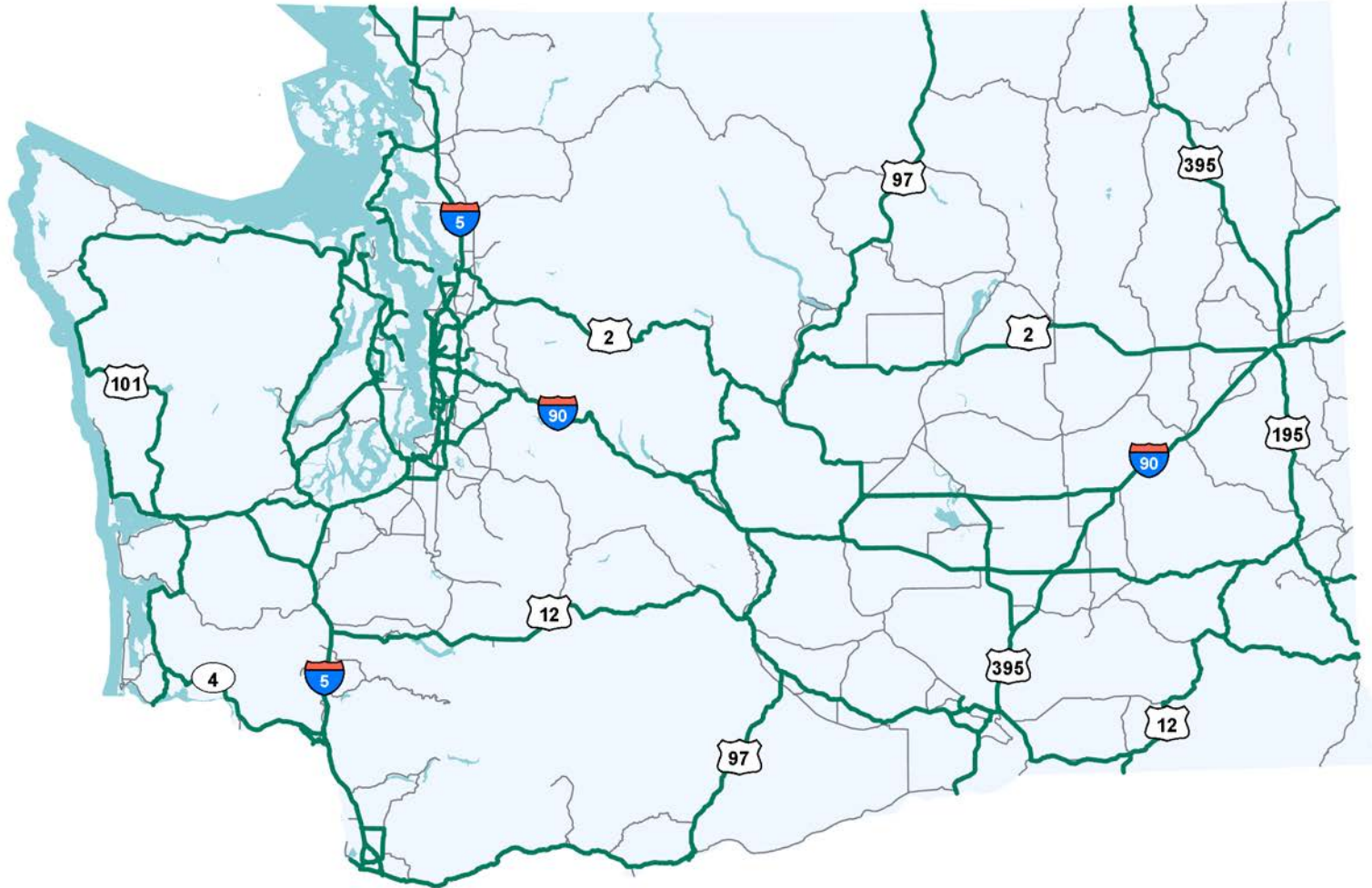
HIGHWAYS OF STATEWIDE SIGNIFICANCE MAP



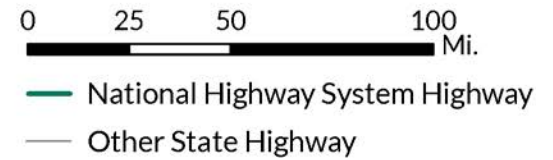
Highways of Statewide Significance (HSS) include interstate highways and other principal arterials that connect major communities in the state. The designation helps assist with the allocation and direction of funding. State ferry routes are also significant to the state transportation system.

- Highway of Statewide Significance
- Ferry Route of Statewide Significance
- Other State Highway

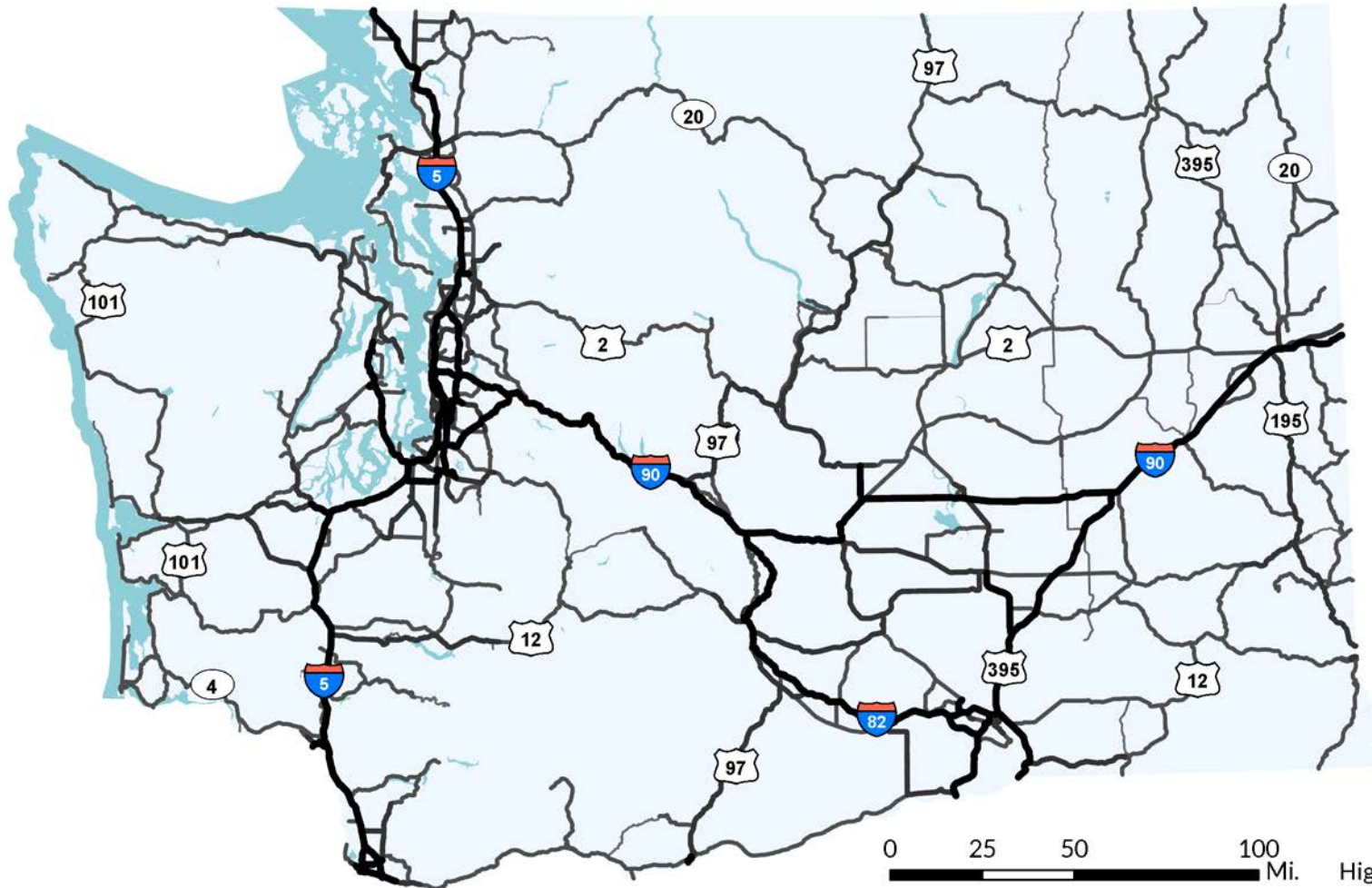
NATIONAL HIGHWAY SYSTEM MAP



To meet shifting population and economic demands and extend the benefits of the Interstate Highway System to other areas, FHWA responded to the mandate of Congress and developed the concept of a national highway system as a way of focusing federal resources on the nation's most important roads. In 1995, Congress approved the NHS.



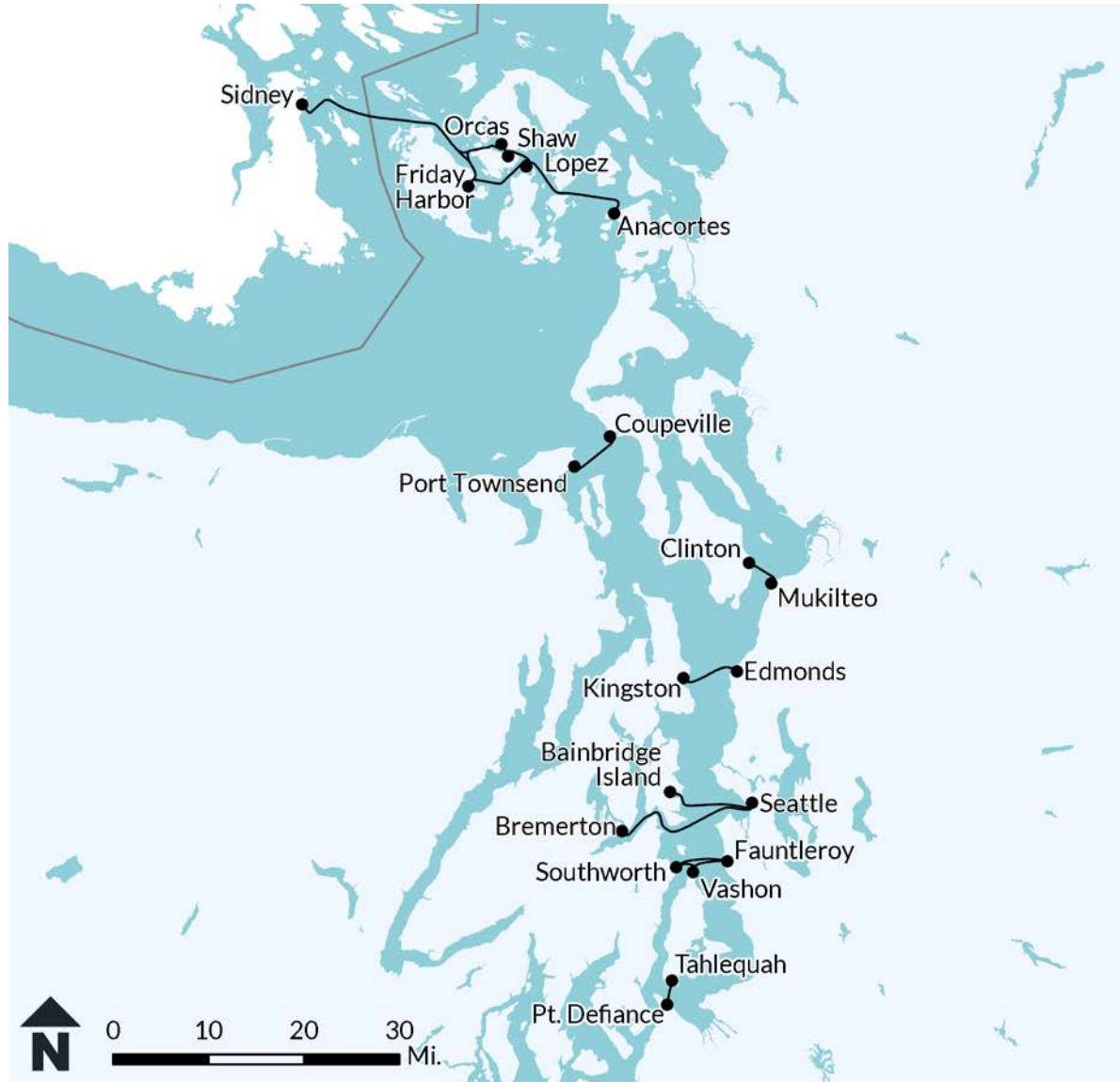
FREIGHT AND GOODS TRANSPORTATION SYSTEM MAP



The Freight and Goods Transportation System (FGTS) is a ranking of roads in Washington State by average gross annual truck tonnage carried. The system is affected by changes in the economy, international trade, and the transportation industry. This map displays only state highways on land, not the entirety of the freight and goods system.

- Highway Class
- T-1
 - T-2
 - T-3
 - T-4
 - T-5

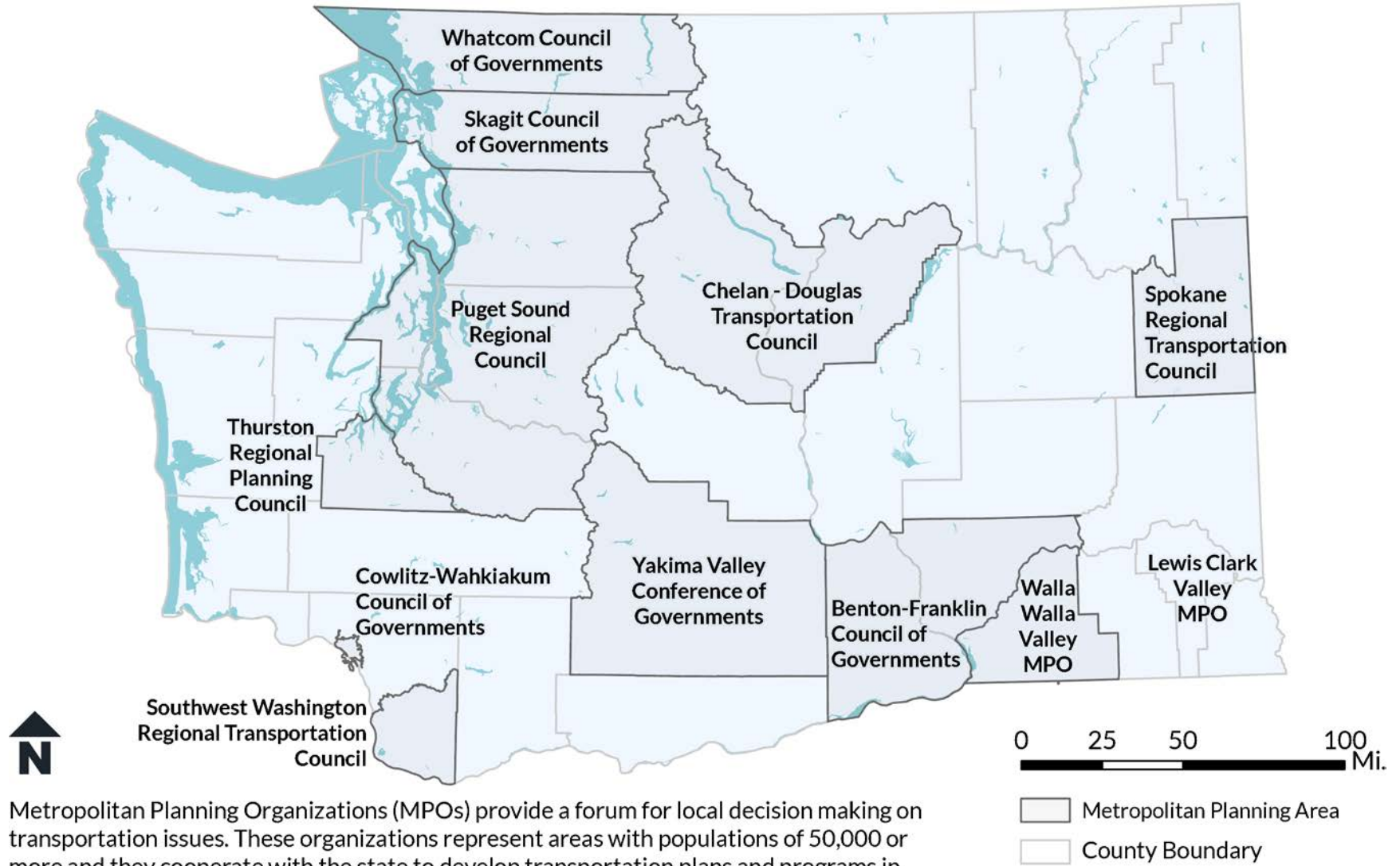
MARINE HIGHWAY SYSTEM MAP



- Ferry Terminal
- Ferry Route
- United States Border

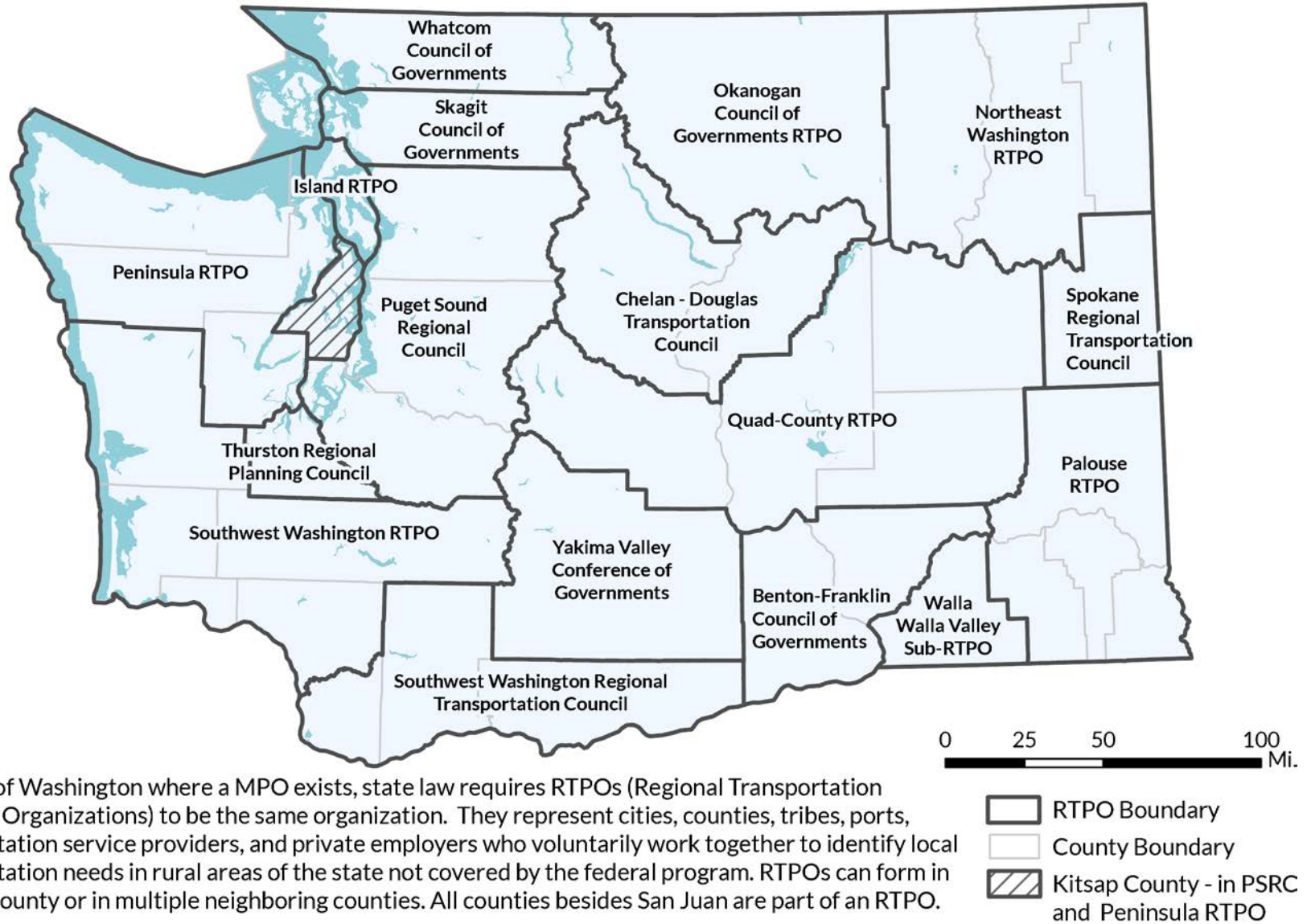
The Washington State Ferries (WSF) system is an essential part of Washington’s highway system, linking communities on both sides of Puget Sound with the San Juan Islands and internationally to Sidney, British Columbia. Every day, WSF ferries carry commuters, recreational travelers, and commercial vehicles safely across Pacific Northwest waters. The ferry system brings economic opportunities through tourism and trade, and provides a critical lifeline to island residents who need medical services on the mainland.

METROPOLITAN PLANNING ORGANIZATIONS MAP



Metropolitan Planning Organizations (MPOs) provide a forum for local decision making on transportation issues. These organizations represent areas with populations of 50,000 or more and they cooperate with the state to develop transportation plans and programs in urban areas.

REGIONAL TRANSPORTATION PLANNING ORGANIZATIONS MAP



WSDOT REGIONS MAP



Appendix F: Key enabling legislation for the Highway System Plan

Regulation or statute	Summary
RCW 47.06.040 – Statewide multimodal transportation plan	The Highway System Plan will be consistent with other state, regional, and local transportation plans, reflect public involvement, and address a range of primary emphasis areas.
RCW 47.06.050(1) – State-owned facilities component	The HSP will identify program, financial, and project needs that support system preservation, highway maintenance, capacity and operational improvement, scenic and recreational highways, and paths and trails.
RCW 47.06.140 (2) – Transportation facilities and services of statewide significance—Level of service standards	WSDOT will set level of service standards for state highways in consultation with and consideration of local government needs.
RCW 70A.02 – Environmental Justice	WSDOT will reduce environmental and health disparities from transportation policies, plans, programs, practices, and projects.

Table 3: Key enabling legislation for the Highway System Plan.

Acknowledgements

Placeholder page.

DRAFT

Glossary

Placeholder page.

DRAFT