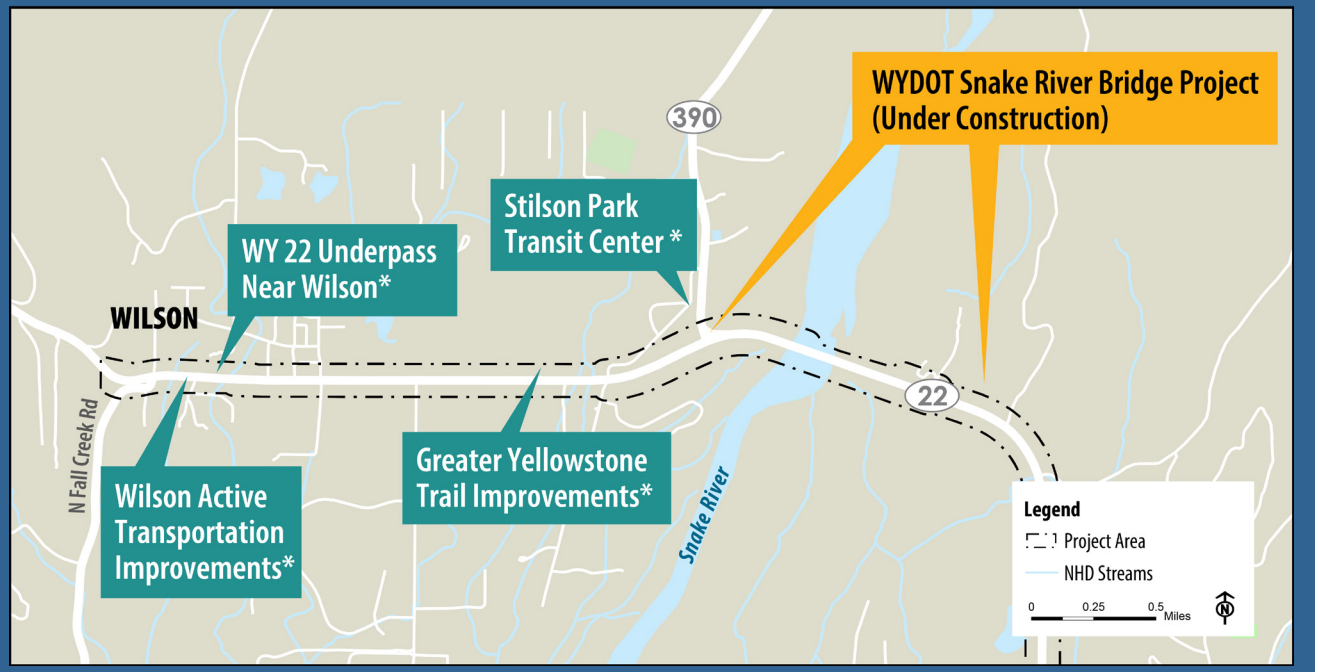
WY22 Corridor Project

Project Background:

- In 2014, WYDOT completed a Planning and Environmental Linkages (PEL) study for WY 22, which also included a portion of WY 390. The study included robust stakeholder engagement and established a vision for the future of the WY 22 corridor.
- The WY 22 Corridor project is part of WYDOT's larger plan to implement recommendations from the PEL study.

Originally planned for 2026, WYDOT advanced the WY 22 Corridor NEPA funding to start the project in late 2022.

The WY Corridor Project would complement other ongoing projects being studied and constructed by WYDOT and Teton County.



The highest priority identified in the PEL, the Snake River Bridge replacement, began construction in the spring of 2023.

Learn about the Snake River Bridge at WY 22 Project at: www.wy22wilsonsrb.com/ or scan →

Level 1 Core Concept Alternatives to be Considered

Mainline Configuration Alternative	Description
No Action	Includes general maintenance activities and programmed and funded projects.
2-Lane Low Build (LB)	Intersections are improved but no changes to the number of through lanes on the mainline.
2-Lane Peak Period Shoulder (PPS)	A full shoulder is created along the length of the project to serve as a travel lane during the peak period.
3-Lane	One general purpose lane in each direction (i.e., same as the existing condition) but a center turn/acceleration lane is added.
4-Lane Add General Purpose (GP)	Add one GP lane in each direction.
4-Lane Add Managed Lane (ML)	Add one ML in each direction. How the managed lane would function (e.g., HOV, HOV/bus, etc.) will be determined during Level 2 screening.
5-Lane	Add one GP lane in each direction, and a center turn lane.

Transportation Linkage Alternative	Description
No Action Alternative	Includes general maintenance activities and programmed and funded projects.
Tribal Trail Connection	Extend Tribal Trail Road to WY 22.

Screening Criteria

In coordination with the Project Advisory Committee, the Technical Team, and FHWA, WYDOT has developed the following screening criteria to measure the performance of each alternative.

Category	Level 1 Screening Criteria (Purpose and Need)	Level 2 Screening Criteria
Safety	• Reducing the potential for crashes, notably related to congestion, turning movements, and wildlife vehicle collisions (WVCs) • Potential to improve multi-modal intersection safety and access • Potential to improve reliable access for emergency vehicles • Potential to improve transportation network resiliency caused by natural disasters	• Potential for crash reduction: quantitative comparison of total and severe crash reductions, using Highway Safety Manual methods. • Improves intersection safety: quantitative comparison of conflict points and bicycle level of stress (at intersections), qualitative discussion of multi-modal movement through the intersection. • Provides additional first-response access through corridor and to adjacent areas: qualitative discussion supported by quantitative comparison of the number of access points. • Decreases emergency response times between West Bank areas and the town and South Park: quantitative comparison of minutes of travel time savings based on traffic model results and data provided by local emergency management staff. • Minimizes natural hazard risk to roadway users: quantitative comparison of cut slope lengths combined with qualitative discussion of how alternative minimizes cut slopes.
Mobility	• Potential to reduce peak period travel time delay. • Potential to accommodate existing and future person trips • Potential to improve multi-modal intersection operations • Supports a multi-modal transportation corridor and maintains pathway connectivity. • Potential to improve transportation linkage/network.	• Reduction in peak period travel delay: quantitative comparison of peak-hour delay in minutes, measured on a per vehicle and per person basis. • Person throughput: quantitative comparison of people moving through the corridor calculated through equation considering travel mode and occupancy. • Intersection LOS: quantitative comparison using LOS rating. • Intersection delay (vehicle and person): quantitative comparison of vehicle and person delay during the peak hour in seconds. • Queue length (Broadway and Spring Gulch): quantitative comparison of average and 95th percentile queue length (through movements and turn pockets) during the peak hour. • Supports multi-modal movement: qualitative assessment of conflict points along WY 22 based on number of pathway crossings and bicycle/pedestrian visibility, Quantitative assessment of pathway mobility based on conflict points and design criteria (e.g. grades, curves). Maintains pathway connectivity and considers user experience. • Transit travel times: quantitative comparison of travel times for existing and planned transit service. • Transportation linkage (addressed under Safety).
Fatal Flaw	• Does the improvement have irresolvable environmental impacts? [1] • Is the improvement not constructible? [2] • Does the improvement have exorbitant costs? [3]	• N/A (fatal flaws criteria only apply during Level 1 screening)
Goals [4]	• N/A (Level 1 screening includes environmental consideration as part of the fatal flaw analysis)	• Wetlands and waters impact: quantitative comparison of impacted acres and types of wetlands impacted. • Conservation easement impacts: quantitative comparison of impacted acres. • Relative degree of noise impact: quantitative comparison of impacted receptors based on noise contour. • Increases wildlife permeability of WY 22: qualitative discussion of the alternative's ability to reduce the potential for WVC and improve habitat connectivity. • Potential impact to cultural resources: qualitative discussion of potential to impact any cultural resources in the project area. • Relative degree of visual impact: qualitative assessment of visual disruption to the surrounding area and its natural setting.

[1] Impacts that cannot be mitigated or those for which an environmental permit could not be obtained from regulatory agencies.

[2] Can the alternative be built using industry-accepted methods?

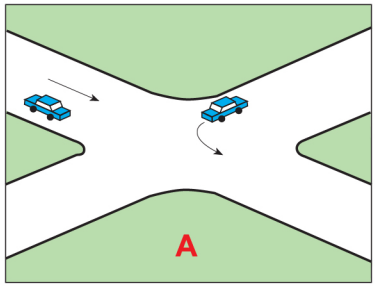
[3] Defined as a cost or range of costs that is considered unreasonably high, or grossly exceeding normal, when compared to cost estimates for comparable projects or project components in Teton County, WY.

[4] Evaluation based on available information and on environmental resources with the greatest potential to influence alternatives decision making.

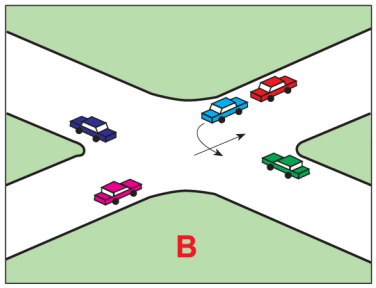
What is Level of Service?

LOS describes operational conditions within a traffic stream and their perception by motorists. The designated LOS compares the existing or proposed roadway to the 'ideal' conditions for that type of roadway. LOS is defined by a letter designation from A to F, with A representing the best operating conditions and F the worst operating conditions. This definition describes the conditions encountered in terms of such factors as speed, travel time, maneuverability, traffic interruptions, comfort, convenience, and safety.

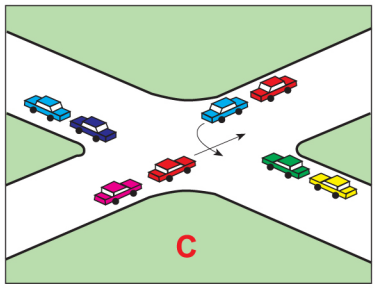
A No vehicle waits longer than one signal indication.



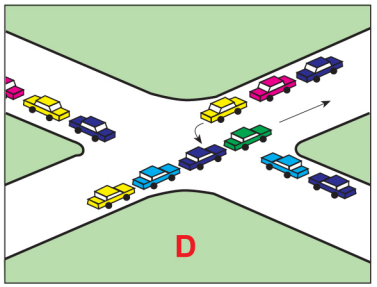
B On a rare occasion, vehicles wait through more than one signal indication.



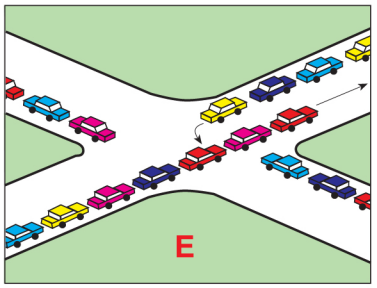
C Intermittently, vehicles wait through more than one signal indication, occasionally backups may develop, traffic flow still stable and acceptable.



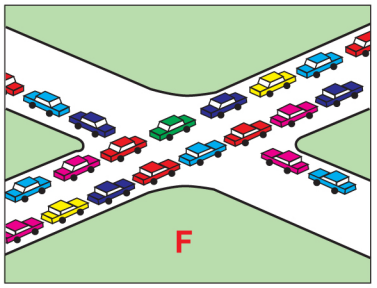
D Delays at intersections may become extensive, but enough cycles with lower demand occur to permit periodic clearance, preventing excessive backups.



E Very long queues may create lengthy delays.



F Backups from locations downstream restrict or prevent movement of vehicles out of approach creating a "gridlock" condition.



Alternatives

What other alternatives did WYDOT consider but not include in the range of alternatives?

The Project team considered several transportation linkage alternatives but dismissed them as being unreasonable because they would not address the Purpose and Need. These include:

East-West Connector

A proposed connection located between US 89 and South Park Loop Road. The connector is identified as a major project in the Jackson/Teton Integrated Transportation Plan. As planned, the connector would help accommodate planned development in South Park and ease traffic on local roads such as High School Road. It would not address the safety and mobility needs for WY 22, including accommodating forecasted person trips or reducing travel time delays during peak periods and therefore deemed to not be a reasonable alternative. Teton County is currently evaluating the connector as part of a separate study.

Connection Between Red Tail Butte and Coyote Canyon Roads

This potential roadway link would provide a secondary access for the Teton Science School should Coyote Canyon Road be closed during emergencies. Despite this benefit, the connection would not address other safety and mobility needs for WY 22, including accommodating forecasted person trips or reducing travel time delays during peak periods. Furthermore, these connecting roadways are privately owned. Because it fails to meet the Purpose and Need, it was deemed to not be a reasonable alternative for this project.

North Bridge Connection

This connection would create a new alternate route connecting WY 390 with US 89 north of Jackson, requiring a new 'north bridge' crossing of the Snake River. Despite benefits to reducing traffic on WY 22 and through the Y intersection, this connection was not included in the range of alternatives because: Its inability to directly address several project needs including the need to reduce wildlife-vehicle collisions, improve multimodal intersection safety and access, and support a multimodal transportation corridor; It was not identified in the PEL, Project Advisory Committee feedback; it was not recommended as a Major Capital project in the Integrated Transportation Plan; and likelihood that the alternative would have one of more fatal flaws related to cost and environmental impact.

Reversible Center Lane

A reversible center lane alternative would include one additional travel lane with the capability to reverse flow for a period of time. A reversible lane requires directionally imbalanced flows most commonly associated with daily commuter periods. Generally, one direction of traffic should exhibit double the volume as the other. In other words, a 2:1 ratio for directional traffic split is needed, while a 3:1 ratio is preferable. The WY 22 corridor does not exhibit the distribution characteristics necessary to indicate a reversible lane would be effective (i.e., the direction split is below 2:1). In addition, there are operational safety issues with reversible center turn lanes and this alternative would result in the loss of left-hand turns; therefore, this alternative was not included in the alternatives range.

Six-Lane Alternative

WYDOT considered if an alternative with three lanes in each direction might be needed to meet the Purpose and Need, notably the needs to reduce peak period travel time delay, improve multi-modal intersection operations, and accommodate existing and future person trips. To determine this, a Travel Demand Model was used to generate 2045 traffic model volumes for WY 22 under different scenarios and additional travel lanes. This provided peak hour volumes and Volume-to-capacity (V/C) ratios, which compare roadway demand (vehicle volumes) with roadway supply (carrying capacity. The study team observed that a four-lane facility would likely accommodate the additional future volume attracted by a six-lane facility. Considering that less costly and impactful alternatives likely could meet the Purpose and Need, a six-lane highway was not included in the range of alternatives.

Supplemental Elements

What is a Supplemental Element?

Supplemental elements are defined as intersections and other physical and operational improvements that do not meet the Purpose and Need individually but improve or supplement the core concepts in meeting the project needs.

What Supplemental Elements is WYDOT considering?

- Add Queue Jumps
- Add Wildlife Crossings / Fencing/ Jumpouts
- Add U-Turn Locations
- Add Emergency Parking
- Median Treatments
- Drainage Features/Curb & Gutter
- Hydrology (aquatics and fish passage)
- Center refuge lanes
- New Carpool/Park-n-Ride Lot(s)
- Add Commercial Truck Emergency Parking / Refuge
- Add Pathways and Pathway Crossings
- Transit Signal Priority (TSP)
- Underground Overhead Transmission Lines*
- Add / Improve Lighting
- Add On-Street Bike Lanes
- Expand START Bus Service*
- Add Sidewalk
- Create Emergency Evacuation and Response Plan*
- Add Queue Warning
- Add Wildlife Detection and Alert System at Fence Ends
- Enhance ITS infrastructure
- Add VMS signage
- Enhance Lane Markings (e.g., solar lights)
- Implement Variable Speed Limits
- Implement Automated Speed Enforcement*
- Implement Changes to Speed Limits

Note: Some improvements would not fall within WYDOT purview to implement but have been added because: 1) they could serve as part of a comprehensive corridor solution; 2) their mention in community planning documents; and/or 3) as a result of coordination with the TT and/or PAC. Improvements outside WYDOT's purview are noted with an "".*