

Kick-Off Meeting Minutes**June 12, 2019****1:00 pm – 5:00 pm****STAKEHOLDER ATTENDEES**

Brent Crowther (Kimley Horn) – Facilitator
Brian Smalkoski (Kimley Horn) – Facilitator
Nick Hines WYDOT Facilitator
Jack Koehler (Friends of Pathways)
Heather Overholser (Teton County)
Amy Ramage (Teton County)
Melissa Turley (Teton Village Association ISD)
Darren Brugmann (Southern Teton Area Rapid Transit)
Bob Hammond (Wyoming Department of Transportation)
Tyler Sinclair (Town of Jackson)
Susan Mick (START Board Member)
Garret Smith (Resident)
Jeff Dior (Operations Manager, Southern Teton Area Rapid Transit)
Ally (Jackson Hole News and Guide)

Additional Attendees

Joel Meena (WYDOT Traffic)
Jeff Mellor (WYDOT Traffic)
Hank Doering (WYDOT Project Development)
Keith Compton (WYDOT D3 District Engineer)
Ted Wells (WYDOT D3 District Construction Engineer)
Stephanie Harsha (WYDOT D3 Public Relations Specialist)
Darin Kaufman (WYDOT D3 District Traffic Engineer)
Meg Mordahl (WYDOT NEPA Coordinator)
Marshall Newlin (WYDOT)
Hank Rettinger (FHWA)
Bob Bonds (FHWA)

Draft Agenda

1. Opening Remarks and Introductions (10 minutes) – Jeff Mellor, with Brent Crowther/Brian Smalkoski

WYDOT goal: Ensure project is built to accommodate transit. Focus on what needs to occur from a transit perspective.

Jeff Mellor: introduced consultants.

In subsequent transit subgroup meetings, consultants may not lead. They are currently scheduled to be back in Sept/Oct once transit study is complete.

Look at corridor as a whole and then focus on project area.

They will look closely at lane configuration that accommodates transit. Concepts will be brought to a public meeting and conveyed in a final report.

2. Study Expectations(15 minutes) – Jeff Mellor / Brent Crowther
 - a. Scope overview (Brent Crowther)
 - b. Identify key agency contacts (Jeff Mellor)
 - c. Discussion of role of the transit group (Jeff Mellor)

Another assessment will be conducted this summer with a presentation this fall.

3. Previous Plans and Studies (15 minutes) – Brent Crowther
 - a. Wyoming Highways 22 and 390 Planning and Environmental Linkages Study
 - b. Jackson/Teton Integrated Transportation Plan
 - c. Jackson Travel Demand Study

Stilson Master Plan should be included.

4. Available corridor data (15 minutes) – Brent Crowther
 - a. Travel time
 - b. Traffic volumes
 - c. Transit ridership
 - d. Transit schedule
 - e. On-time performance

Data collection started June 1 and will continue through the summer. Per group, data will show a seasonal spike in June and July (numbers roughly double when compared to November). Using Google Travel Time Data (Traction)

5. Discussion of sources of transit delay (20 minutes) – Brian Smalkoski
 - a. Jackson to Teton Village
 - b. Teton Village to Jackson
 - c. Jackson to Driggs
 - d. Driggs to Jackson

Route 30 is commuter run (four buses in the morning and then begin again in the afternoon). Buses stop in Stilson. There needs to be a focus on the Stilson Transit Center.

Route 20 is the green line.

Transit buses do not have any stops from Stilson into town.

Bottlenecks? The whole corridor is a bottleneck. Specifically, WY 390 to the Y. Evening and summer days from the intersection all the way into town. The Y is the beginning of traffic back-up. There is an opportunity to optimize time for buses out of Stilson Transit Center (takes approx. 3-4 min).

West of intersection, traffic does not tend to back up unless there's an accident.

6. Discussion of corridor needs and deficiencies (20 minutes) – Brian Smalkoski
 - a. Group A (15 minutes)
 - i. Corridor Needs and Deficiencies
 - b. Group B (15 minutes)
 - i. Corridor Need and Deficiencies
 - c. Report Out (15 minutes)
7. Discussion of goals and objectives, improvements to consider (30 minutes) – Brian Smalkoski
 - a. Group A (15 minutes)
 - i. Goals and Objectives
 - b. Group B (15 minutes)
 - i. Goals and Objectives
 - c. Report Out (15 minutes)

Biggest source of delay is off-board fare vending. Shoulders could be used as a dedicated running way for buses. Most BRT stations in urban settings are kept on the roadway. It creates a slight delay for other vehicles but improves bus times. Queue jump may make sense at intersections (bus gets a green light ahead of traffic). This could occur on the shoulder.

From PELS:

- 1) Maintain transportation safety of all modes.
- 2) Encourage use of alternative modes.
- 3) Increased use of transit.

The challenge with existing transit is that the buses have to go everywhere and there is limited space in town. There are limited travel options. There are different factors between winter and summer due to a drastic difference in traffic volumes and user differences. During the winter, the public can get to the ski resort faster if they park at Stilson and take the bus in. In the winter, employees have to park at the Stilson Transit Center, so it increases bus use.

In the winter, there are 98 round trips from Stilson to the resort and only 17 in the summer.

At Spring Gulch, significant delays occur when there is congestion at the Y.

At the WY 22/390 intersection, the signal was modified to allow more left turns on WY 22, which drastically helped congestion on 390 and overall flow.

There is no signal at the Stilson Transit Center. The most delayed turn includes the LHT onto 390 from the northern access point. A signal could be placed there that always allow buses through (would need to have two access points: one for buses and one for other vehicles). Real data needs to be collected to determine timing, etc. Route match (AVL) data would be helpful. Lefts should not occur from WY 390 into Stilson. It is quicker to go through the intersection and make

a right off of WY 22 onto Beckley Parkway into Stilson. Minimum shoulder width for transit is 11 or 12 feet, but depends on bus widths. Width of the START bus is approx. 11.5 feet. This would be an issue in the winter due to snow and inability to see pavement markings.

Southbound to eastbound movement from WY 390 to WY 22 in the summer from 5 – 6:30 pm creates the most congestion.

Resort community best practices would be helpful. It would be hard to justify a BRT-dedicated lane but possibly a shoulder lane. How can this be done safely?

North on WY 390: there is a delay for southbound buses. North of Calico, the Aspen, and Teton Science Center are the three stops north of Stilson on WY 390. There is a need for safer crossings in this area. The Aspens and West Bank are the bigger stops. Free parking exists for cars with three or more people.

HOV/bus lane could be open to all vehicles during non-peak times.

There is a need for winter parking off of WY 390.

Consultants would like plans for the intersection and AVL data.

Electric zero emissions buses are planned for next summer.

Next meeting should be prior to public meeting...day before (possible by early Sept. 2019). Showcase pre-grading plans. Public meeting would include general project info, transit, and wildlife crossings.

At this time, the next transit subgroup meeting was not scheduled.



Agenda

- Opening Remarks/Introductions
- Study Expectations
- Previous Plans & Studies
- Available Corridor Data
- Sources of transit delay
- Corridor needs and deficiencies
- Breakout Groups
 - Goals and objectives/improvement alternatives

Introductions

Project Team

- Jeff Mellor, WYDOT, Project Manager
- Brent Crowther, Kimley-Horn, Consultant Project Manager
- Brian Smalkoski, Kimley-Horn, Sr. Consultant

Stakeholders

- Agency
- Title/Role
- Interest in this project



Opening Remarks and Introductions

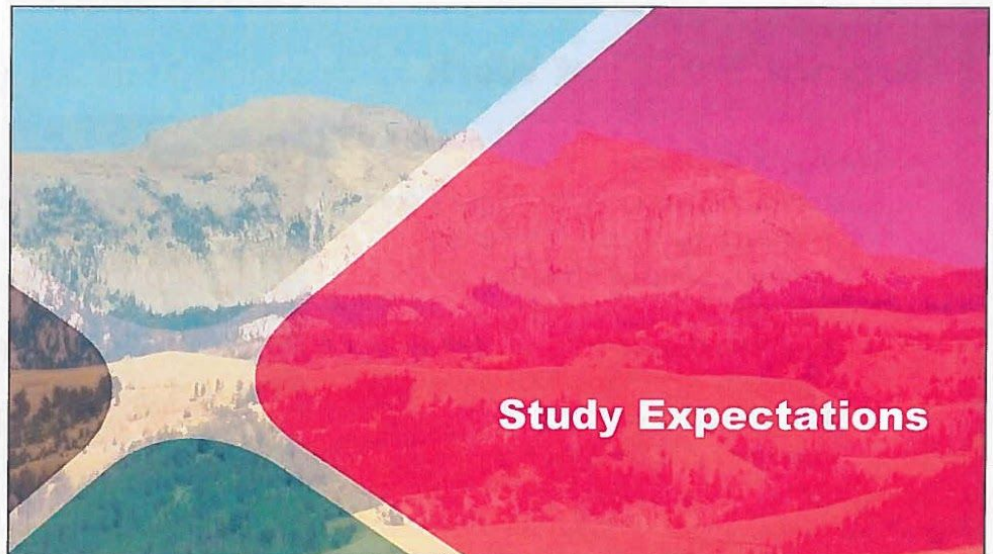
Project Need Overview

Project Purpose

Identify, evaluate, and select transit improvements that: connect Jackson to Teton Village, reduce transit travel times, and improve transit operations, transit ridership, and traffic operations on the WY 22 and WY 390 corridor.

Project Objectives –

- Review corridor recommendations from WY 22 and 390 PELS, and Jackson Integrated Transportation Plan (ITP)
- Develop corridor transit alternatives
- Determine impact of transit alternatives at intersection of WY 22 / WY 390 and Snake River Bridge
- Obtain stakeholder and public input on the alternatives



Project Scope of Work

- Project Need Overview
 - Review Existing Documentation and Planning Efforts
 - Transportation Network Review
 - Existing transit metrics
 - Vehicular conditions
 - Evaluate “no-build” impacts
 - Best Practice Targets
 - Projects in similar contexts for ITS and BRT operations

Recent Planning Efforts:

- WY 22 and 390 Planning and Environmental Linkages (PEL) Study
- Jackson/Teton Integrated Transportation Plan
- Teton Village/Jackson Hole Mountain Resort Transportation Demand Management Plan

Deliverables:

- ✓ Technical Memo 1: Project Needs and Objectives

Project Scope of Work

- Strategy Concepts
 - Establish Concepts Performance Criteria
 - Framework to evaluate improvements
 - Preliminary Strategy Concepts and Screening
 - Operational viability
 - Fatal flaws
 - Lane configuration
 - Operational requirements

Deliverables:

- ✓ Technical Memo 2: Preliminary Screening
- ✓ Technical Memo 3: Refined Strategy Concepts
- ✓ Technical Memo 4: Design Concepts and Prioritization

Project Scope of Work

- Project Public Meeting
 - Present concepts for public feedback
 - Presentation materials
 - Document public feedback

Project Scope of Work

- Draft / Final Report
 - Summarize study technical memoranda
 - Narrative of project process and outcomes
 - Impacts of improvements on WY 22 and 390 corridors, focus on the Y intersection

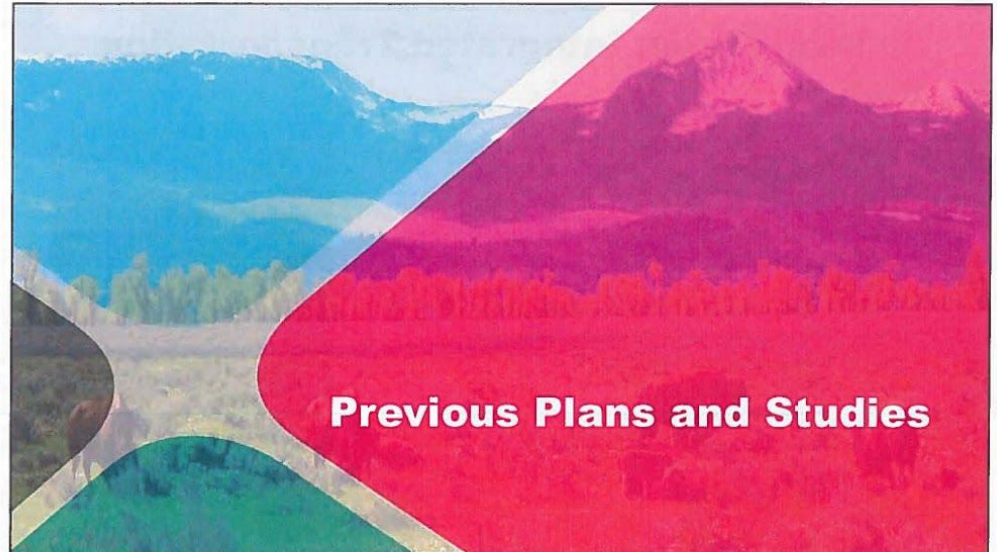
Deliverables:
✓ Draft Report
✓ Final Report

Key Agency Contacts

- Jack Koehler – Friends of Pathways
- Heather Overhosler – Teton County
- Amy Ramage – Teton County
- Bill Schreiber – Jackson Hole Mountain Resort
- Melissa Turley – Teton Village Association ISD
- Darrin Brugmann – START Transit Director
- Bob Hammond – WYDOT
- Tyler Sinclair – Town of Jackson

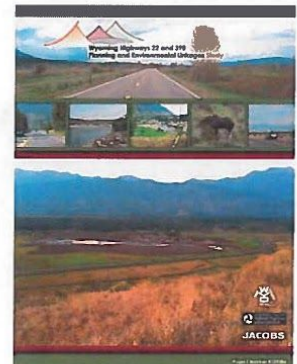
Role of the Transit Subcommittee

- **Technical Review** – Review and weigh in on study findings and recommendations
- **Values/Trade-off Analysis** – Provide community context and technical support in values/trade-off decision-making
- **Decision Support** – Provide decision-making support and recommendations on key decision points
- **Community Context** – Represent the community context in study decisions to affect positive near & long term community impacts



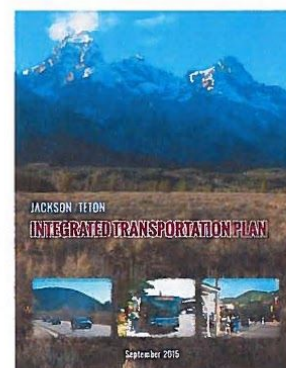
Wyoming Highway 22 and 390 Planning and Environmental Linkages (PEL) Study

- Key Transit Recommendations:
 - High Priority Locations
 - Queue jump lanes and signal prioritization at:
 - WY 22/Broadway
 - WY 22/WY 390
 - WY 22/Spring Gulch Rd
 - Medium Priority Locations
 - Bus lanes/pullouts and queue jumps on WY 390 between WY 22 and Lake Creek
 - Consider Park and Ride where appropriate



Jackson/Teton Integrated Transportation Plan

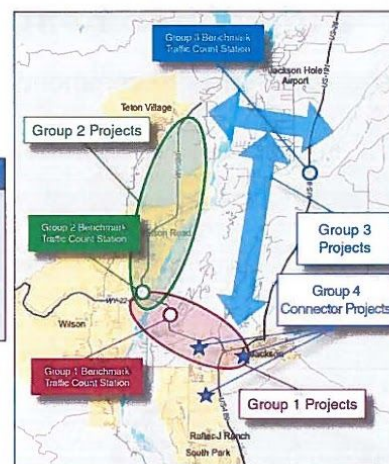
- Key Transit Recommendations Related to Teton Village Route:
 - Use excess fleet capacity to increase service in the summer
 - Implement BRT between Jackson and Teton Village
 - Addition of a bus / HOV lane along WY 22
 - Redesign the WY 22 / WY 390 intersection
 - Streamline route alignment
 - Increase service levels
 - Implement branding and off-board fare collection
 - Implement employer TDM principles to improve commuter ridership



Jackson/Teton Integrated Transportation Plan

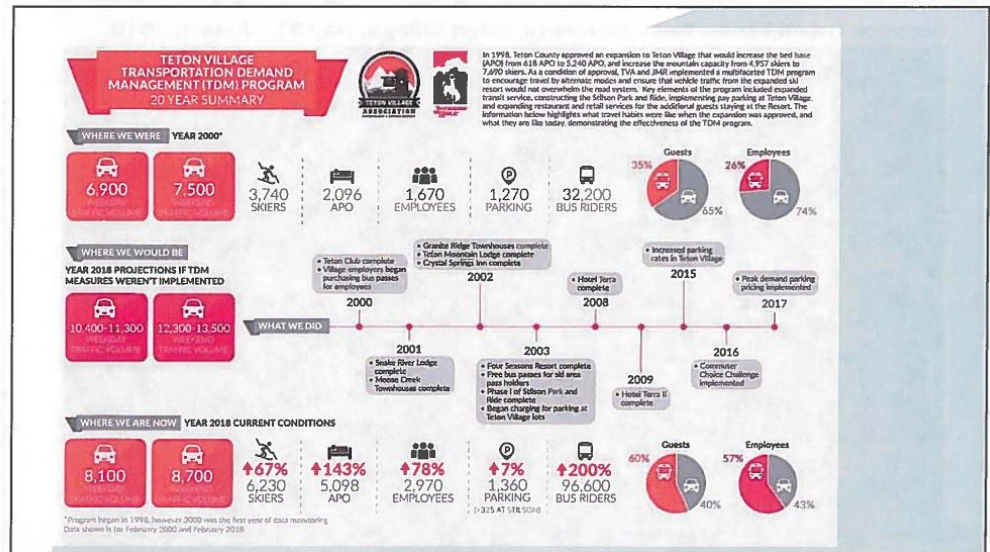
Table 5-1. Major Capital Project Groups

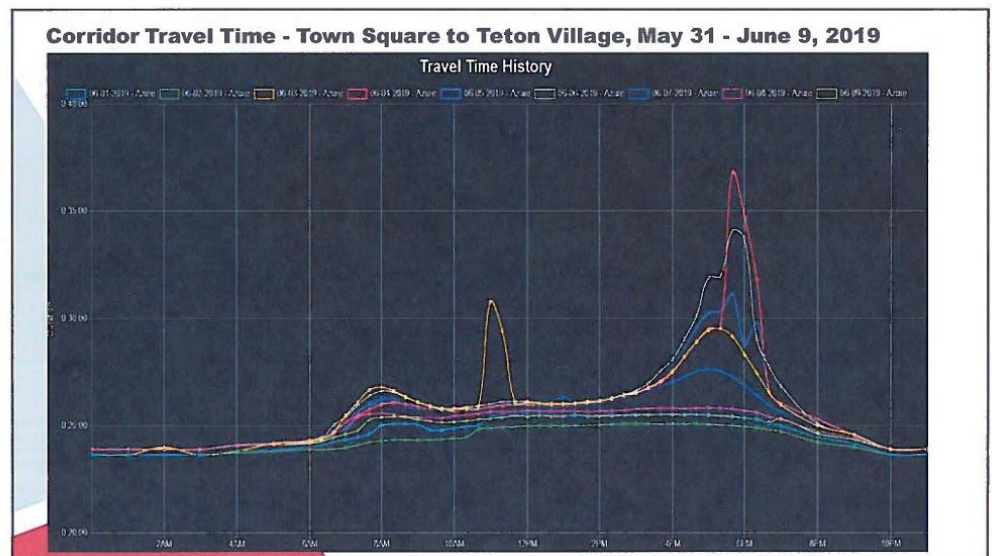
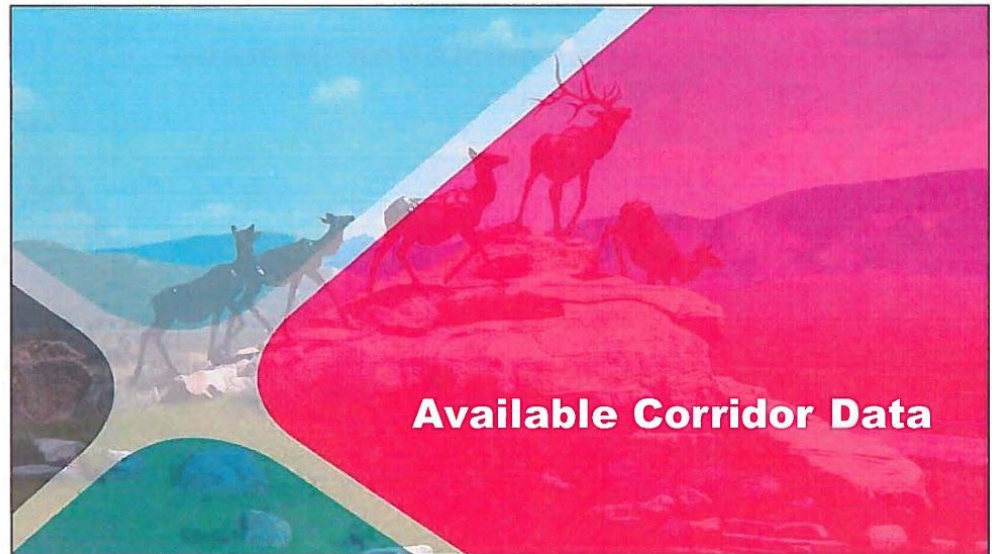
Group 1 WY 22 (Jackson - WY 390)	Group 2 WY 390	Group 3 Regional Connections	Group 4 Key Local Connections
<ul style="list-style-type: none"> Multimodal Reconstruction of the "T" Intersection Tribal Trails Connector WY 22 Multi Lane 6 Multimodal Improvements WY 22 Pathway (Wilson - Jackson) Multimodal Reconstruction of the Intersection of Spring Gulch and WY 22 Wildlife Permeability (from PEL Study) 	<ul style="list-style-type: none"> WY 390 Multimodal Improvements (WY 22 - Teton Village) Multimodal Reconstruction of the Intersection of WY 390 and WY 22 (Study) Wildlife Permeability (from PEL Study) Bus Rapid Transit (Jackson - Teton Village) 	<ul style="list-style-type: none"> Perce and Upgrade Spring Gulch Road Fixed Guideway Transit New North Network Connector 	<ul style="list-style-type: none"> Tribal Trails Connector (also in Group 1) East West Connector Maple Way - Swan King Corridor

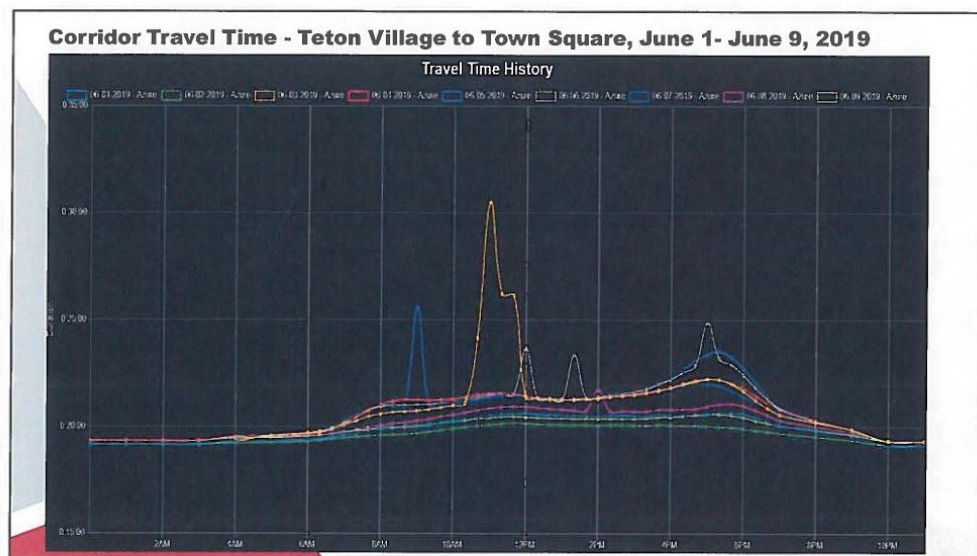


Teton Village Transportation Demand Management Program

- TDM plan developed in 1998
- TDM strategies include:
 - Expanded transit service
 - Stilson Park and Ride
 - Paid parking at Teton Village
 - Expansion of on-site restaurant and retail options in Teton Village







Traffic Volumes

- Two Automatic Vehicle Classifier (AVC) count locations along study roadways
 - WY 22 east of WY 390
 - WY 22 west of WY 390
 - WY 390 north of WY 22
- Highest volumes observed in July
- Lowest volumes observed in November

Month	WY 22 (E of WY 390)	WY 22 (W of WY 390)	WY 390
January (19)	17,299	-	11,978
February (19)	16,968	9,421	11,910
March (19)	17,617	10,278	12,044
April (19)	12,896	9,145	7,399
May (18)	15,662	11,104	9,709
June (18)	20,799	14,116	13,848
July (18)	23,106	15,574	15,652
August (18)	22,086	14,698	*
September (18)	19,889	13,371	12,369
October (18)	15,640	10,944	9,509
November (18)	12,630	8,797	7,737
December (18)	16,329	10,222	11,171
Average	17,577	11,606	11,211

- Road Construction

*Counter malfunction

Transit Routes

- Two routes on WY 22 (Routes 20 & 30)
- One route on WY 390 (Route 20)



Current Transit Schedule

- Route 20 (Teton Village – Jackson)
 - ≈30 minute headways
 - 35 buses/day
 - Jackson to Teton Village: 5:00 am through 11:30 pm
 - Teton Village to Jackson: 6:00 am through 12:00 am
- Route 30 (Driggs – Wilson – Jackson)
 - 4 buses/day in each direction (weekdays only)
 - AM Service (Driggs to Jackson):
 - ≈ 40 min headway
 - First bus from Driggs: 5:40 am, last bus from Driggs: 7:40 am
 - PM Service (Jackson to Driggs): 4 buses/day, 90 min apart
 - ≈ 90 min headway
 - First bus from Jackson: 3:45 pm, last bus from Jackson: 7:30 pm

Discussion Topics

Discussion: Sources of Transit Delay

- Jackson to Teton Village
- Teton Village to Jackson
- Jackson to Driggs
- Driggs to Jackson



Discussion: Corridor Needs and Deficiencies

- WY 22 - between Jackson and WY 390
- WY 390- between WY 22 and Teton Village

**Break into 2 groups
(15 minutes)
Report out**

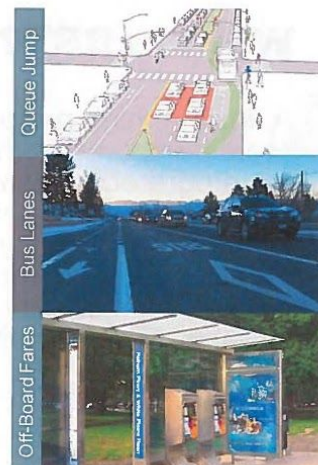


Discussion: Goals, Objectives, Improvements to Consider

1. Improvements goals and objectives
2. Types of transit improvements that should be evaluated and prioritized

Break into 2 groups (15 minutes)

Report out



Transit Mode Basics

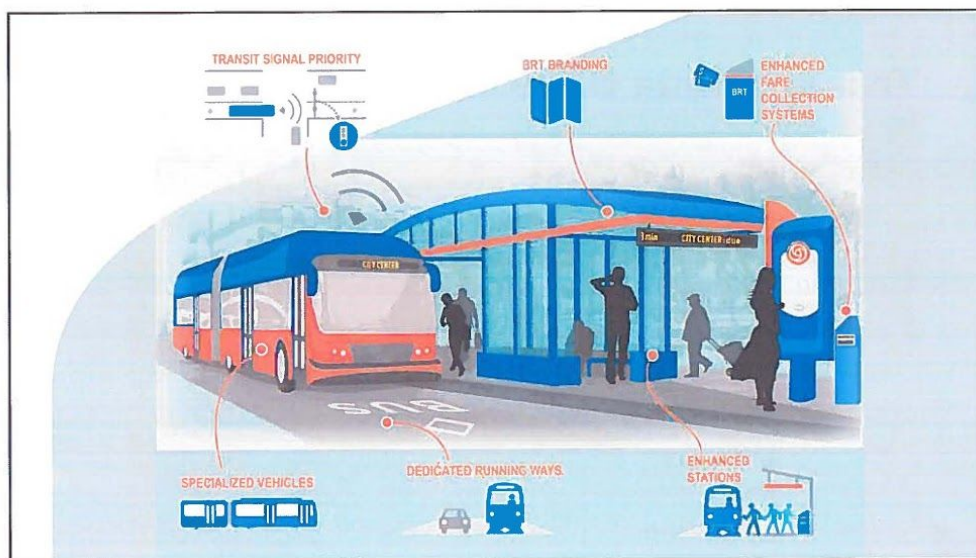
MODE		PEAK FREQUENCY	RUNNINGWAY		SYSTEM LENGTH	CAPITAL COSTS	STATION SPACING	DAILY BOARDINGS
		How often does a typical bus stop or station arrive on a way along the road (miles)?	How often does a typical bus stop or station arrive on a way along the road (miles)?	How often does a typical bus stop or station arrive on a way along the road (miles)?	How often does a typical bus stop or station arrive on a way along the road (miles)?	How often does a typical bus stop or station arrive on a way along the road (miles)?	How often does a typical bus stop or station arrive on a way along the road (miles)?	How often does a typical bus stop or station arrive on a way along the road (miles)?
All-Day/Frequent Service	Local Bus	Varies	✓		5-15 miles	\$	1/8 - 1/4 mile	N/A
	Arterial Bus Rapid Transit	Every 7-15 minutes	✓		5-15 miles	\$\$	1/4 - 1/2 mile	50+
	Streetcar	Every 7-15 minutes	✓		1-5 miles	\$\$\$-\$\$\$\$	1/8 - 1/2 mile	No regional guidance
	Light Rail Transit	Every 10 minutes		✓	5-20 miles	\$\$\$\$\$	1 mile	200+
	Dedicated Busway	Every 10 minutes		✓	5-20 miles	\$\$\$\$	1 mile	No regional guidance
Commuter/Express Service	Highway Bus Rapid Transit Station-to-Station	Every 10-15 minutes	✓	✓	10-25 miles	\$\$\$	2 miles	100+
	Express Bus	Every 30+ minutes	✓		10-25 miles	\$-\$\$	5 miles (Market Specific)	200+
	Highway Bus Rapid Transit Express	Every 30+ minutes	✓	✓	10-25 miles	\$\$-\$\$\$	5 miles (Market Specific)	200+
	Commuter Rail	Every 30+ minutes		✓	20-50 miles	\$\$\$	7 miles or longer	200+

What is BRT?

A flexible, high performing rapid transit mode that is an integrated system of physical, operating, and system amenities, with a quality image, to improve the speed, reliability, and identify of bus transit.

Typical elements:

- Transit Way – Dedicated BRT Lanes
- Active Transit Signal Priority
- Queue Jumps
- Accessible, safe, secure, and attractive stations
- Off-board Fare Vending
- Frequent Headways
- Extended Service Span
- Short Headways
- Reduced Travel Times
- Branded, Stations and Low Floor Vehicles



BRT can be BIG where needed

- Dedicated BRT Lanes
- Transit Signal Priority
- Rail-like Stations
- Off-board Fare Vending
- Frequent Headways
- Extended Service Span
- Reduced Travel Times
- Service Branding



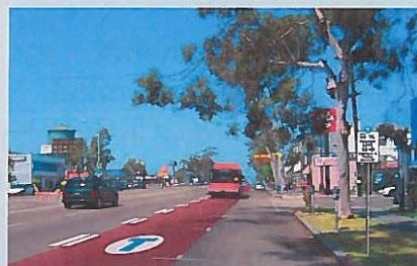
BRT can be Small where needed

- Corridor Running
- Transit Signal Priority
- Defined Stations
- Frequent Headways
- Extended Service Span
- Reduced Travel Times
- Service Branding

BRT Corridors

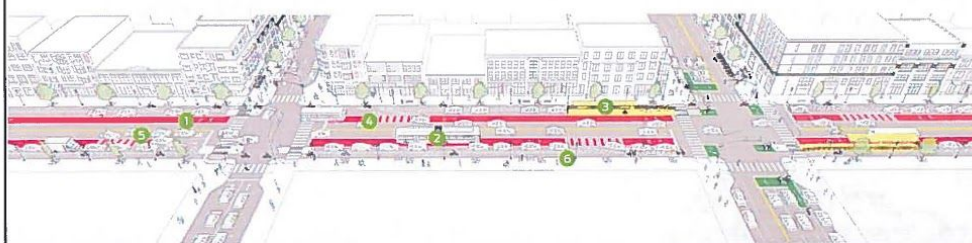
- Travel lanes
 - Mixed Use Lanes
 - Dedicated running way
 - Median lanes
 - Shoulder or curb lanes
- Intersection improvements
 - Transit signal priority
 - Queue jump lanes
 - Grade separations
 - Transit only signals

BRT elements scalable to the needs of Jackson!



Dedicated Running Way

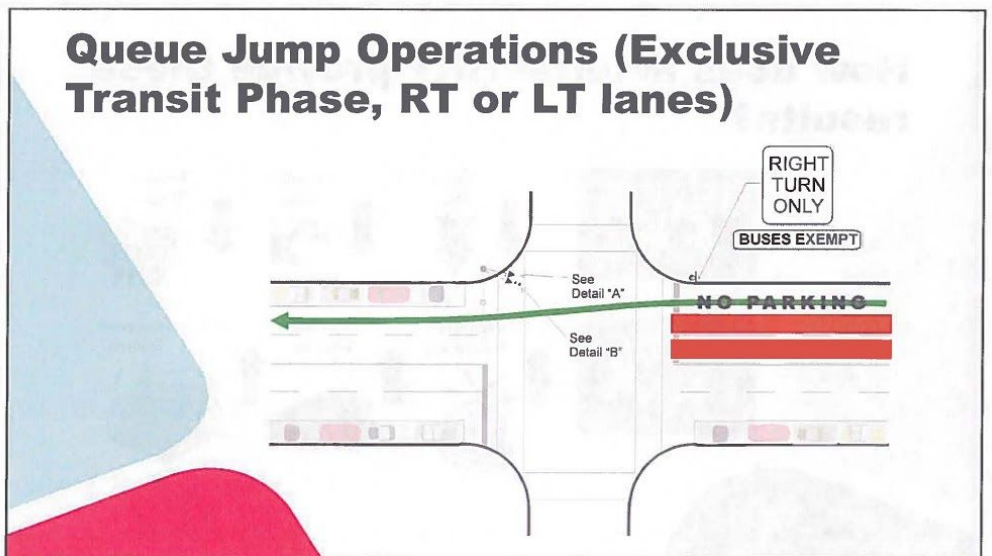
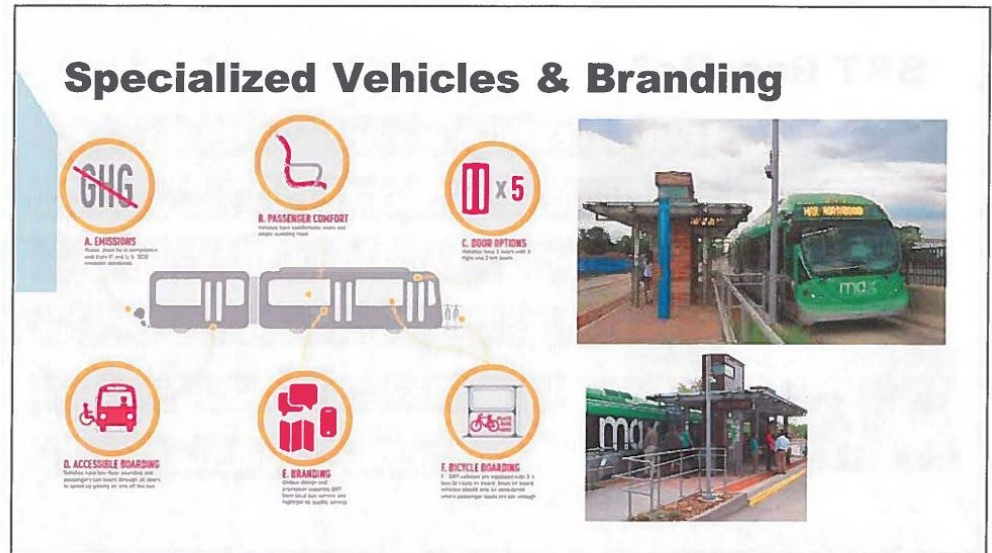
- Dedicated lanes separate buses from traffic, increasing speed and reliability
- Time specific or peak-only



Enhanced Stations

- Near-level platforms
- Off-board fare payment
- Real time arrival information
- Shade & passenger amenities





BRT Results?

FASTER SERVICE

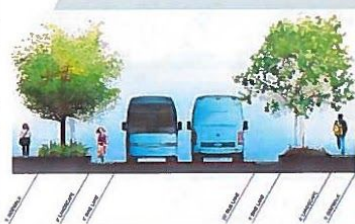
INCREASES RELIABILITY

IMPROVES PASSENGER EXPERIENCE

ATTRACTS NEW RIDERS

INCREASES CARRYING CAPACITY

AFFORDABLE MOBILITY



How does arterial BRT provide these results?

Faster Service

Improved Experience

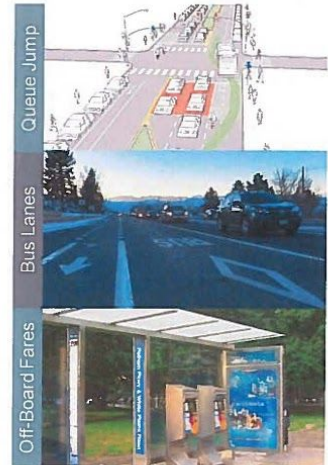


Discussion: Goals, Objectives, Improvements to Consider

1. Improvements goals and objectives
2. Types of transit improvements that should be evaluated and prioritized

Break into 2 groups (15 minutes)

Report out



Next Steps

- Project Need Overview
 - Review Existing Documentation and Planning Efforts
 - Transportation Network Review
 - Best Practice Targets
 - Summary of Project Needs and Objectives
- Strategy Concepts
- Public Meeting
- Project Summary