

**Bend Metropolitan  
Planning Organization**  
2020-21 Draft Work  
Program & Budget

# Presentation Outline

- ▶ Budget history
- ▶ FY2020-21 draft work program
  - ▶ Priorities & major work activities
  - ▶ Schedule & budget of major activities and milestones
- ▶ UPWP Submittal & Deadlines

# Budget History

▶ Historic budget totals

FY	PL/Match	5303	Total
2011-12	\$164,241	\$42,850	\$207,091
2012-13	\$164,241	\$48,224	\$212,465
2013-14	\$150,710	\$55,730	\$206,440
2014-15	\$150,710	\$55,730	\$206,440
2015-16	\$153,993	\$44,734	\$198,727
2016-17	\$157,558	\$44,949	\$202,507
2017-18	\$161,476	\$46,359	\$207,835
2018-19	\$164,615	\$46,154	\$210,769
2019-20	\$181,948	\$47,265	\$229,213
2020-21	\$171,642	\$49,002	\$220,644



- ▶ 2019-20 funding surpassed 2012-13 funding
- ▶ 2020-21 funding will decline by 3.7%
- ▶ Population growth >18% (2013-2019)
- ▶ Significant workload past two years
- ▶ Supplementing budget with STBG funding & other sources

# FY2020-21 Priorities

## Highest Priorities

- ▶ Metropolitan Transportation Plan update
  - ▶ Incorporate: Transportation Safety Action Plan; Deschutes County ITS Plan; Bend Parkway (US 97) Facility Plan; Cascades East Transit Master Plan; and City of Bend TSP
- ▶ Work with partners to develop an implementation strategy for all recently completed plans
  - ▶ Seek grant funding for some work
- ▶ ODOT projects - north interchange analysis & Baker Road IAMP
- ▶ Transportation model updates & future strategy



Parkway Study



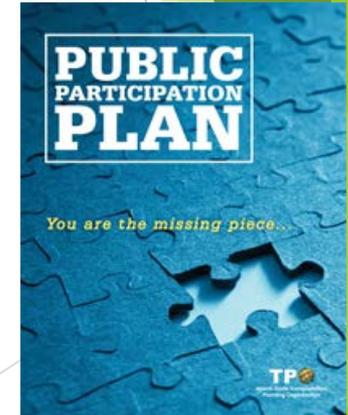
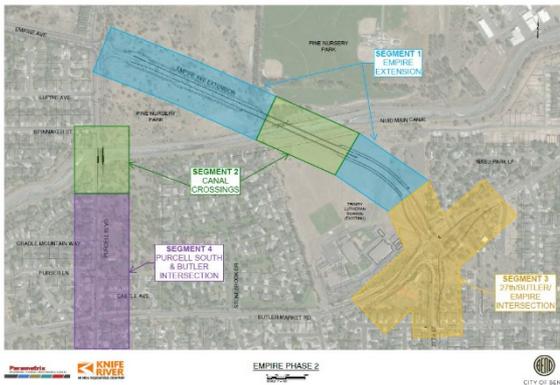
ITS Plan update



# FY2020-21 Priorities

## Other Priorities

- ▶ Update Public Participation Plan
- ▶ Performance monitoring & reporting
- ▶ Data collection & analysis, and regional data warehouse discussions
- ▶ Transportation modeling support for planning and project development efforts



# FY2020-21 Priorities

## Schedules & Budgets

Project	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Completion	Budget Notes
MTP					summer/fall	City of Bend & MPO jointly funded
Implementation strategy					fall	possible budget amendment(s)
ODOT projects					fall/spring	
Transportation model					TBD	travel survey & data collection costs

## Planning Emphasis & Focus Areas

- ▶ Completing priority projects
- ▶ Coordinated approach to prioritizing, scheduling and funding the actions identified in plans

# FY2020-21 Schedule

- ▶ 1<sup>st</sup> and 2<sup>nd</sup> quarters
  - ▶ Metropolitan Transportation Plan update
  - ▶ Implementation strategy- prioritization, scheduling and funding for the plan actions
  - ▶ US97 north interchange analysis
  - ▶ US97/Baker Rd IAMP
  - ▶ Transportation model - action plan
  - ▶ Data collection, analysis and management
  - ▶ Public participation plan update
  - ▶ Interagency Coordination
- ▶ Mid-year check-in with TAC & Policy Board
  - ▶ Review and reprioritize if necessary

# Proposed 2020-21 Budget: Summary

Fiscal Year 2020-21 Budget Summary		
	Resources	Appropriations
Beg. Working Capital	\$ 112,300	
		<b>By Budget Category:</b>
FHWA PL <sup>1</sup>		MPO Program \$ 626,400
Federal Share	154,000	Interest Expense -
State Match	17,600	Loan Repayment 100,000
		Contingency 100,000
		<b>Total Budgeted Appropriations \$ 826,400</b>
FTA Section 5303	49,100	
Local Match <sup>2</sup>	5,620	
		<b>By Task:</b>
STBG - BMPO Planning	347,900	Task 1: Dev. & Program Management \$ 359,080
Local Match <sup>2</sup>	39,820	Task 2: Short Range Planning 99,296
		Task 3: Long Range Planning 284,948
		Task 4: Regional Travel Demand Modelin 83,016
<b>Total Grant Funding</b>	<b>\$ 551,000</b>	<b>\$ 826,339</b>
Total Match Funding	63,039	
City of Bend Loan	100,000	
<b>Total Budgeted Resources</b>	<b>\$ 826,339</b>	<b>Total Budgeted Requirements \$ 826,339</b>

# 2020-21 UPWP Schedule

- ▶ Meeting with ODOT, FHWA, and FTA - February 6
- ▶ Draft Work Program and Budget documents posted on BMPO website - revisions to follow in coming weeks
- ▶ Budget Committee meeting - late March or early April
- ▶ Policy Board adoption of Work Program & Budget - April 21
  
- ▶ Questions?

<b>MPO</b>	<b>Annual Amount</b>	<b>Amount off the Top?</b>	<b>Application Process?</b>	<b>Project Ranking Criteria?</b>
AAMPO	\$670k	None	Yes, coincides with TIP cycle*	None established, but policy of allocating “majority” of STBG to maintenance/preservation
CAMPO	\$700k	None	Yes, coincides with TIP cycle*	Yes
Central Lane	\$3M	\$750k for staffing, \$300k for TDM	Yes, coincides with TIP cycle*	Yes
MRMPO	\$600k	None	Yes, coincides with TIP cycle*	Yes
RVMPO	\$1.5M	\$700k to transit district	Yes, coincides with TIP cycle*	Yes
SKATS	\$4.5M	\$500k for staffing, \$275k to traffic control center	Yes, coincides with TIP cycle*	Yes

\*Project solicitation every two years to award the next three year TIP cycle of STBG funds.



**BEND MPO**  
Metropolitan Planning Organization

# **Draft 2021-2024 Metropolitan Transportation Improvement Program (MTIP)**

January 29, 2020  
MPO Policy Board

# What is the MTIP?

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4 year list of funded projects

Consistent with the MPO plan

Financially constrained

Updated every 3 years

# Metropolitan (MTIP) & Statewide (STIP) Transportation Improvement Program

**MTIP**

MPO area  
projects

MPO  
boundary

Approved  
at local  
level

**STIP**

Projects  
throughout state

Includes  
all MTIP  
projects

Approved  
at state  
level

# STBG Multi-Year Funding Allocation - *Proposed*

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- The Surface Transportation Block Grant Program (STBG) is a federal funding source that provides federal dollars for a broad range of transportation uses
- Proposal to allocate funding by percentages
- Reviewed and amended annually if available funds differ from MTIP

# 2020 *Proposed* STBG Funding

## 2020 STBG Funding: \$1,204,611

Project Name	Year	Project Award - Estimated	Local Match	Percent of annual funding	2029 STBG Balance	Entity
Street Preservation	2020	\$799,233	\$47,954	60%	\$532,822	City of Bend
ITS Projects	2020	\$133,205	\$7,992	10%	\$399,617	City of Bend
MPO Planning - Household survey	2020	\$119,885	\$13,722	9%	\$279,732	Bend MPO or ODOT
Bend MPO Required planning such as MTP and MTIP	2020	\$279,731	\$32,017	21%	-	Bend MPO

# 2021 *Proposed* STBG Funding

## 2021 STBG Funding: \$1,205,000

Project Name	Year	Project Award - Estimated	Local Match	Percent of annual funding	2021 STBG Balance	Entity
Street Preservation	2021	\$723,000	\$43,380	60%	\$482,000	City of Bend
ITS Projects	2021	\$120,500	\$7,230	10%	\$361,500	City of Bend or ODOT
MPO Planning - household survey	2021	\$108,450	\$12,413	9%	\$253,050	Bend MPO or ODOT
Bend MPO Required Planning such as MTP and MTIP	2021	\$253,050	\$28,963	21%	-	Bend MPO

# 2022 *Proposed* STBG Funding

## 2022 STBG Funding: \$1,205,000

Project Name	Year	Project Award - Estimated	Local Match	Percent of annual funding	2022 STBG Balance	Entity
Street Preservation	2022	\$723,000	\$43,380	60%	\$482,000	City of Bend
ITS Projects	2022	\$120,500	\$7,230	10%	\$361,500	City of Bend or ODOT
Other projects	2022	\$192,800	\$19,801	16%	\$168,700	Various
Bend MPO Required Planning such as MTP and MTIP	2022	\$168,700	\$17,325	14%	-	Bend MPO

# 2023 *Proposed* STBG Funding

## 2023 STBG Funding: \$1,205,000

Project Name	Year	Project Award - Estimated	Local Match	Percent of annual funding	2023 STBG Balance	Entity
Street Preservation	2023	\$723,000	\$43,380	60%	\$482,000	City of Bend
ITS Projects	2023	\$120,500	\$7,230	10%	\$361,500	City of Bend or ODOT
Other projects	2023	\$192,800	\$19,801	16%	\$168,700	Various
Bend MPO Required Planning such as MTP and MTIP	2023	\$168,700	\$17,325	14%	-	Bend MPO

# Performance Measures

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- Performance measurement framework must be used in the development of the MTIP and the MTP
- Provide more transparency in the selection and prioritization of transportation projects

# Performance Measures

GOAL AREA	PERFORMANCE MEASURES
<p><b>Safety</b> To achieve a significant reduction in traffic fatalities and serious injuries on all public roads</p>	<p>Number of Fatalities</p> <p>Fatality Rate</p> <p>Number of Serious Injuries</p> <p>Serious Injury Rate</p> <p>Number of Non-Motorized Fatalities and Serious Injuries</p>
<p><b>Infrastructure Condition</b> To maintain the highway infrastructure asset system in a state of good repair.</p>	<p>Pavement % of non-interstate NHS pavement in Good Condition % of non-interstate NHS pavement in Poor Condition</p> <p>Bridges % of NHS Bridges in Good Condition % of NHS Bridges in Poor Condition</p>
<p><b>System Reliability</b> To improve the efficiency of the surface transportation system.</p>	<p>Travel Time Reliability % of person-miles traveled on non-interstate NHS that are reliable</p>
<p><b>Transit Asset Management</b> To maintain transit assets in a state of good repair.</p>	<p>Non-Revenue Vehicles % that have met or exceeded their usable life benchmark (ULB)</p> <p>Revenue Vehicles % that have met or exceeded their usable life benchmark (ULB)</p>
<p><b>Transit Safety</b> To achieve a reduction in transit-related fatalities, serious injuries, and safety events, and improve mechanical reliability.</p>	<p>Fatalities Total number of reportable fatalities and rate per total vehicle revenue miles by mode</p> <p>Injuries Total number of reportable injuries and rate per total vehicle revenue miles by mode</p> <p>Safety Events Total number of reportable events and rate per total vehicle revenue miles by mode</p> <p>System Reliability Mean distance between major mechanical failures by mode</p>

# Performance Measures for Projects

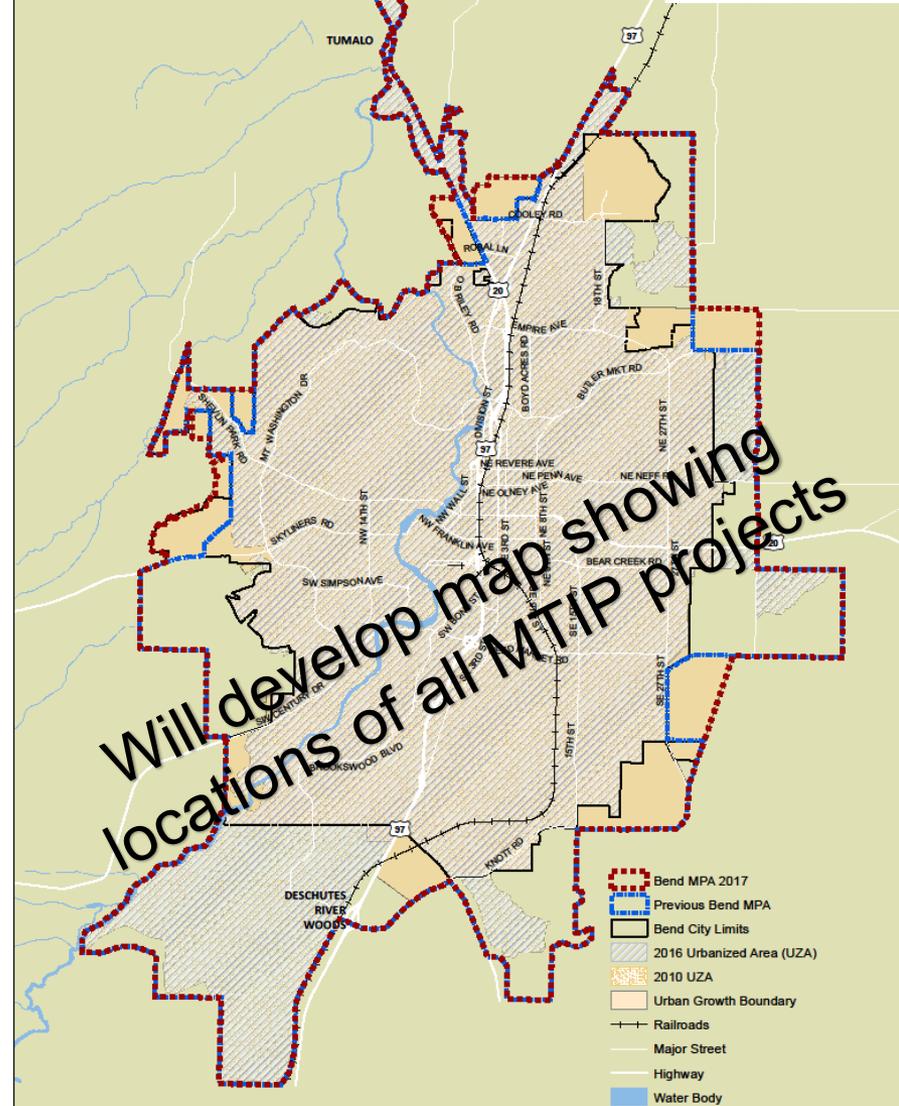
Key Number	Project Name	Supports Safety	Supports Infrastructure Condition	Supports Transit Asset Mgmt	Supports System Reliability
20011	US20: Deschutes River Bridge - Roble Rd.	x	x		x
20073	All Roads Transportation Safety, Ph2	x			
20391	US20: Empire - Greenwood (3rd St.)	x	x		x
21229	US 97/Cooley Road Area	x			

*Table 8 assesses how MTIP projects support performance measures*

# Bend MPA Metropolitan Planning Area (MPA)



## Projects in the 2021- 2024 MTIP



0 0.5 1 2 Miles

This map is for reference purposes only. The information was derived from Deschutes County GIS and City of Bend land records. Care was taken in the creation of this map, but it is provided "AS IS". Please contact the City of Bend to verify map information or to report any errors.

# Funding Summary: 2021-24 MTIP

Entity	Federal Total	State Total	Local Total	Total Current Estimate
CET <sup>1</sup>	\$6,029,657	-	\$3,045,673	\$9,075,330
Bend MPO <sup>2</sup>	\$1,408,842	\$51,963	\$109,287	\$1,570,092
ODOT <sup>3</sup>	\$49,526,169	\$5,332,452	\$201,324	\$55,059,945
<b>Total</b>	<b>\$56,964,668</b>	<b>\$5,384,414</b>	<b>\$3,356,285</b>	<b>\$65,705,367</b>

<sup>1</sup>STIF funds may not be correctly entered

<sup>2</sup>Assumes some STBG funding

<sup>3</sup>Does not include full north corridor funding

# Project list: MTIP 2021-2024 (1)

Key #	Project Name	Federal Total	State Total	Local Total	Total Current Estimate
19806	All Roads Transportation Safety (City of Bend)	\$1,114,018	-	\$93,982	\$1,208,000
20011	US20: Deschutes River Bridge - Robal Rd (Bend)	\$9,400,846	\$1,125,969	-	\$10,526,815
20073	All Roads Transportation Safety (Bend, phase 2)	\$646,462	-	\$54,538	\$701,000
20391	US20: Empire - Greenwood (3rd St, Bend)	\$1,825,108	\$208,892	-	\$2,034,000
20615	Bend MPO planning SFY22	\$469,614	\$17,321	\$36,429	\$523,364
20714	US97: multi-use trail planning study	\$5,345,371	\$611,801	-	\$5,957,172

# Project list: MTIP 2021-2024 (2)

Key #	Project Name	Federal Total	State Total	Local Total	Total Current Estimate
21229	US97 and Cooley Road (Bend) mid-term improvements	\$25,124,400	\$2,875,600	-	\$28,000,000
21489	US20: 3rd St - Purcell (Greenwood, Bend)	\$1,166,490	\$133,510	-	\$1,300,000
21578	Bend MPO Planning SFY23	\$469,614	\$17,321	\$36,429	\$523,364
21579	Bend MPO Planning SFY24	\$469,614	\$17,321	\$36,429	\$523,364
21580	Bend Transit operations capital 2020 (5307)	\$1,268,220	-	\$908,358	\$2,176,578
21581	Bend Transit operations capital 2021 (5307)	\$1,271,132	-	\$905,446	\$2,176,578
21582	Bend Transit operations capital 2022 (5307)	\$1,271,132	-	\$905,446	\$2,176,578

# Project list: MTIP 2021-2024 (3)

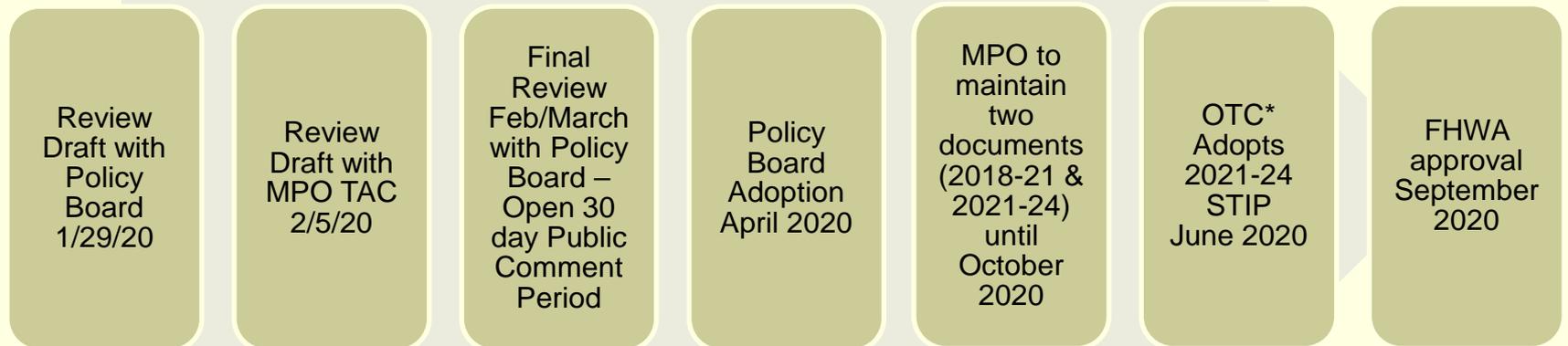
Key #	Project Name	Federal Total	State Total	Local Total	Total Current Estimate
21584	5310 Elderly & Disabled transit capital (20-22)	\$312,707	-	\$35,791	\$348,498
21594	All Roads Transportation Safety (City of Bend) Ph2	\$782,395	\$13,201	\$52,804	\$848,400
21667	US20: Ward / Hamby Rd. Intersection	\$3,595,658	\$303,342	-	\$3,899,000
21758	US20: Sisters Interchange Bridge (Bend)	\$525,421	\$60,137	-	\$585,558
21969	Enhanced Mobility Program - COIC FFY22	\$174,347	-	\$43,587	\$217,934
21977	Enhanced Mobility Program - COIC FFY23	\$178,000	-	\$44,500	\$222,500

# Project list: MTIP 2021-2024 (4)

Key #	Project Name	Federal Total	State Total	Local Total	Total Current Estimate
21987	Enhanced Mobility Program - COIC FFY24	\$182,000	-	\$45,500	\$227,500
22022	Oregon Transportation Network - Deschutes Co FFY22	\$457,373	-	\$52,348	\$509,721
22037	Oregon Transportation Network - Deschutes Co FFY23	\$457,373	-	\$52,348	\$509,721
22051	Oregon Transportation Network - Deschutes Co FFY24	\$457,373	-	\$52,348	\$509,721

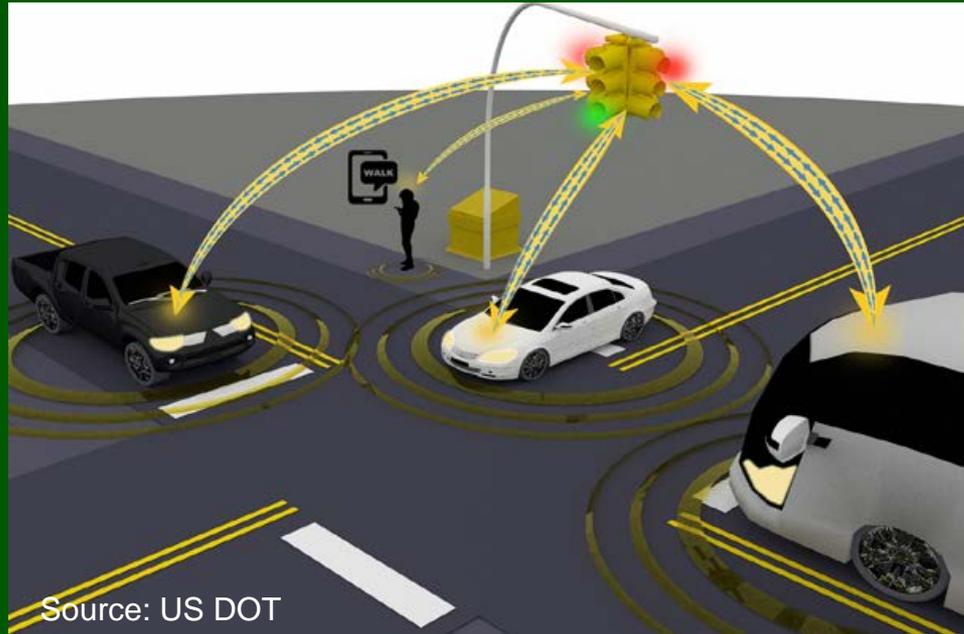
This "living" document lists the projects in the draft MTIP. This document will be updated as projects change or new ones are added. More information is provided at [www.bendoregon.gov/MTIP](http://www.bendoregon.gov/MTIP)

# MTIP 2021-2024 Timeline



Full Document posted here: [www.bendoregon.gov/MTIP](http://www.bendoregon.gov/MTIP)

\*OTC = Oregon Transportation Commission



# ODOT & City of Bend Connected/Smart Traffic Signal System Implementation Plan

*Modernizing traffic signal management to ensure a safe and efficient transportation system for all users*

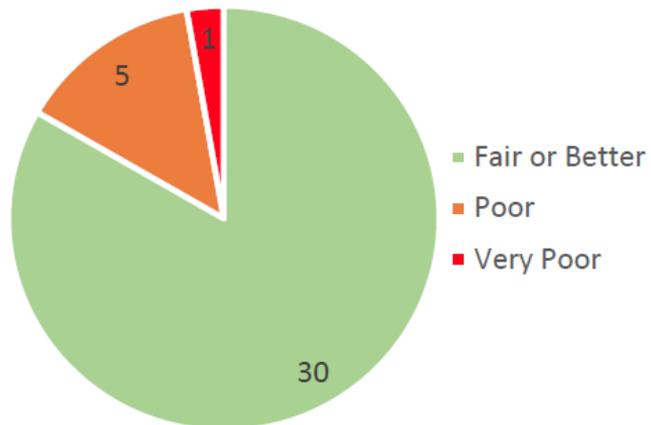


# Background Information – Signal Operations

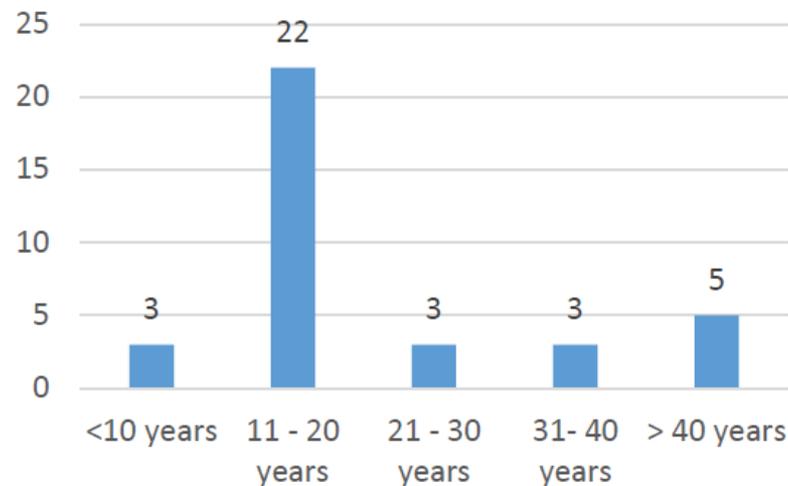


# City of Bend Signal Inventory

City of Bend  
Traffic Signal Conditions - Good

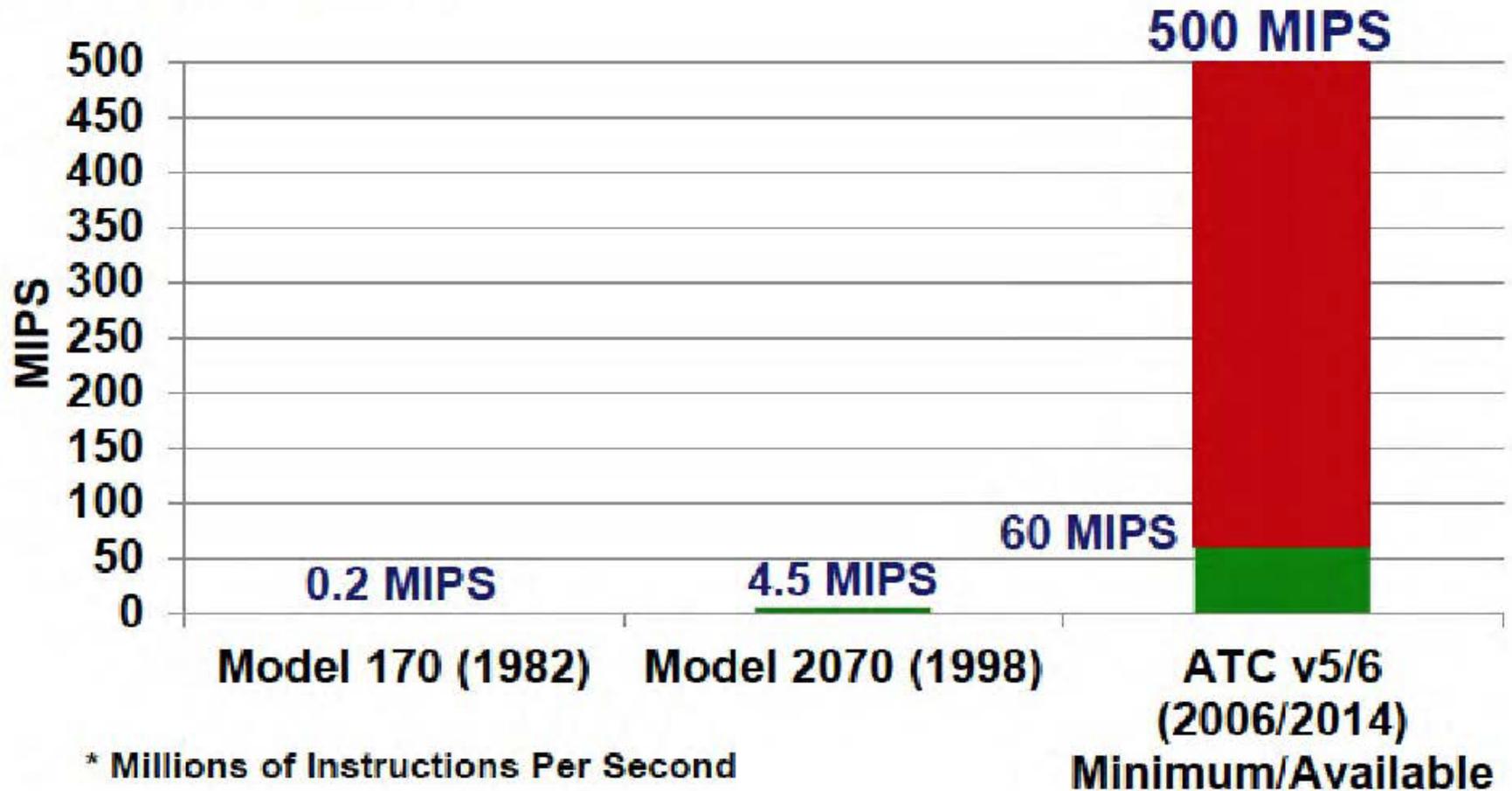


City of Bend  
Traffic Signal Age



Type	Number
Traffic Signals	36
RRFBs	2
Warning Flashers	6

# Transportation Controller Comparative Performance



Graphics: Ralph W. Boaz

# ATC Business Case

## Benefits of the ATC and a connected signal system



### System Benefits (*safe, efficient travel*)

- Serve all modes/users on the system (e.g., vehicles, bikes, pedestrians, transit)
- Optimize intersections and corridors, reduce delays + cut congestion

### ODOT & Agency Partner Benefits (*cost and time savings*)

- 24/7 access to higher quality, more complete traffic data
- Continuous performance monitoring for proactive & targeted maintenance + real-time operational evaluation (e.g., signal re-timing)
- Foundation for future enhancements + new technologies (CAVs)

# Implementation Plan

## Step 1:

- Plan for improved operations by aligning with other Intelligent Transportation System (ITS) related efforts to ensure cross jurisdictional outreach and implementation

# Timeline of ITS Planning in Deschutes County

**2005**

**Original  
Deschutes  
County ITS Plan  
Completed**

**2010**

**ODOT Region 4  
ITS and  
Communications  
Plan Update**

**2011**

**Deschutes  
County ITS  
Plan Update**

**2019**

**Bend TSP/MTP  
Update  
&  
Deschutes  
County ITS  
Plan Update**



# Plan Development

## Step 2:

- Mesh with statewide operations program management efforts

# ODOT Operations Program Mission and Goals

**Mission:** Move people and goods safely and efficiently

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## Goals:



Integrate Operations into appropriate agency projects, policies, plans and procedures



Optimize the efficiency and safety of the existing multimodal transportation system



Be agile and innovative in identifying, adopting, and accommodating effective operations technology and strategies



Promote safe and efficient travel through communication of accurate and timely transportation system status information and collaboration with public and private partners



Utilize performance based strategies to drive operations planning and decision making



Achieve a sustainable Operations Program supported by good asset management practices

# Plan Development

## Step 3:

- Identify Requirements
- Prepare for ongoing maintenance of assets

# Smart Signal Operational Requirements



Server



Dedicated Staff



Communications



Robust Detection



# Plan Development

## Step 4:

- Establish ongoing collaborative working groups



Management



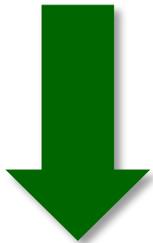
Engineers



Planners



Elected Officials



Public



Businesses



Private Sector  
(data aggregators)

# Data Warehouse



# Plan Development

## Step 5:

- Identify projects
- Provide true implementation costing
- Categorize, group, and prioritize



# Plan Development

## Step 6:

- Identify implementation challenges and work to address them

# Strategic Funding Sources



# The "Dimensions" of Capability



*Business and  
technical support  
strategies*

*Organization  
and relationships  
support processes*

# Plan Development

## Step 7:

- Establish and revisit implementation goals
- Continually measure performance and report
  - Identify and reevaluate priorities

# Current ATC Transition Project Goals



1. Connect all signals in the City of Bend to the Central Signal System by 2020.
2. Fully implement ATCs on the Region 4 traffic signal system by 2025.
3. Establish an ITS working group in 2020

# City of Bend Signal Program

## Infrastructure Projects - Planned

1. Signal Evaluation
  1. Oregon/ Wall and Oregon/Bond (\$25K)
  2. 3<sup>rd</sup>/ Franklin
2. Signal Replacement Design (\$120K each)
  - a. 3<sup>rd</sup>/ Wilson (\*MPO Funding contribution)
  - b. Franklin/ Wall and Franklin/Bond
3. Signal Replacement/ CIP
  - a. Purcell/ Butler Market
  - b. Purcell/ Neff



# City of Bend Signal Program

## Infrastructure Projects - Proposed

1. Signal reconstruction - 6 signals (\$500K - \$1M/signal)
2. Strategic ATC controller conversion (\$3 – \$40K/signal)
3. Systematic switch to Radar Detection (\$35K/signal)
4. On going traffic signal replacement (\$500K – \$1.2M each)



# City of Bend Signal Program

## Communications/ITS Projects

1. 9 signal communications upgrades (\*MPO funded in 2019)
2. 3 signal communications upgrades – in progress
3. ITS Plan Update (TSP & Signal Program)
4. Partner with ODOT on Colorado/Arizona Grant
5. Partner with ODOT on 3<sup>rd</sup>/ 27<sup>th</sup> Bluetooth travel data
6. Plan for ATC controller conversion



# City of Bend Signal Program

## Operations Projects

1. Spot signal timing modifications
2. Flashing yellow arrow (FYA) evaluations and program updates
3. T-intersection pedestrian timing changes
4. Reed/Bond roundabout metering evaluation
5. Corridor signal timing coordination projects - 3<sup>rd</sup>, 27<sup>th</sup>, North Corridor (\$25K each)
6. Identify signal performance measures
7. Prepare communications plan and reporting mechanisms



# Call to action



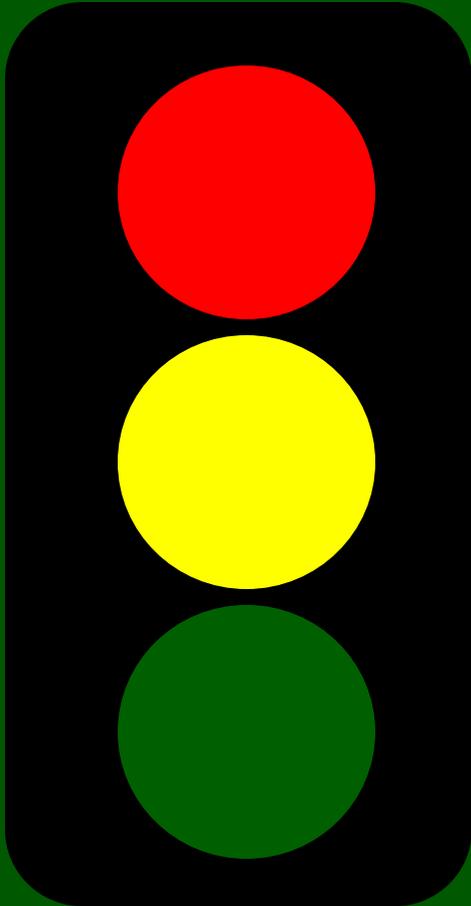
What do you need from us to continually support this plan?

Systematic reporting?

Funding/Project breakdowns?

Engagement efforts?

# Questions?



## Contact

Dave Hirsch, PE, PTOE

ODOT Region 4 – Traffic Operations Engineer

541.388.6472

[David.Hirsch@odot.state.or.us](mailto:David.Hirsch@odot.state.or.us)

Janet Hruby, PE

City of Bend – Project Engineer/Streets

541.322.6336

[jhruby@bendoregon.gov](mailto:jhruby@bendoregon.gov)

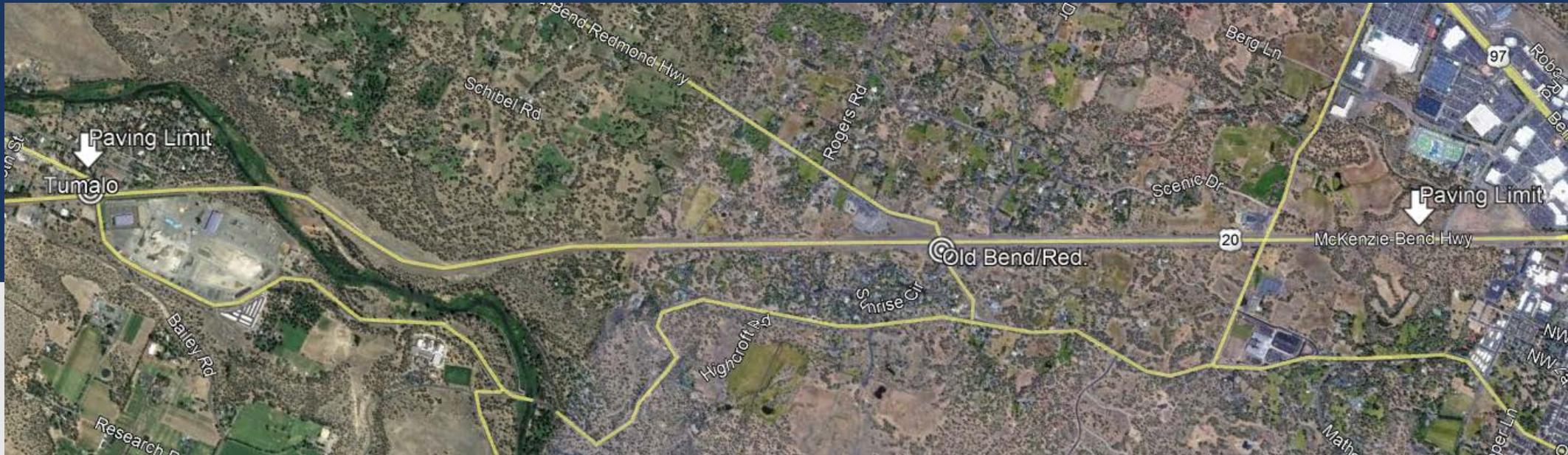
# Thank you.

# US20 Corridor Project Status





# US20 NORTH CORRIDOR – Current Project



- 2 Dual Lane Roundabouts  
(Tumalo / Old Bend Redmond)
- Dual EB Lanes OB to Robal (Median Barrier)
- Pavement Preservation
- Bids Fall 2021 - Construction 2022

Deschutes County Contribution Appx. \$7 million

ODOT Contribution Appx. \$12 million  
(Fix-It, ARTS, Highway Leverage, Safety Leverage)

### Variables:

- Deschutes County TSP Amendment
- Trucking Industry Approval



# US20 NORTH CORRIDOR – Ultimate Project



Budget - Appx. \$35 Million

-4 Dual Lane Roundabouts

-Dual EB & WB Lanes from Old Bend Redmond - Robal

-Raised Median from Old Bend Redmond - Robal

-Pavement Preservation – Tumalo - Robal

-Construction 2022

## Variables:

**Deschutes County TSP Amendments**

**City of Bend TSP Amendments**

**City of Bend Transportation Bond**

**Private Development**

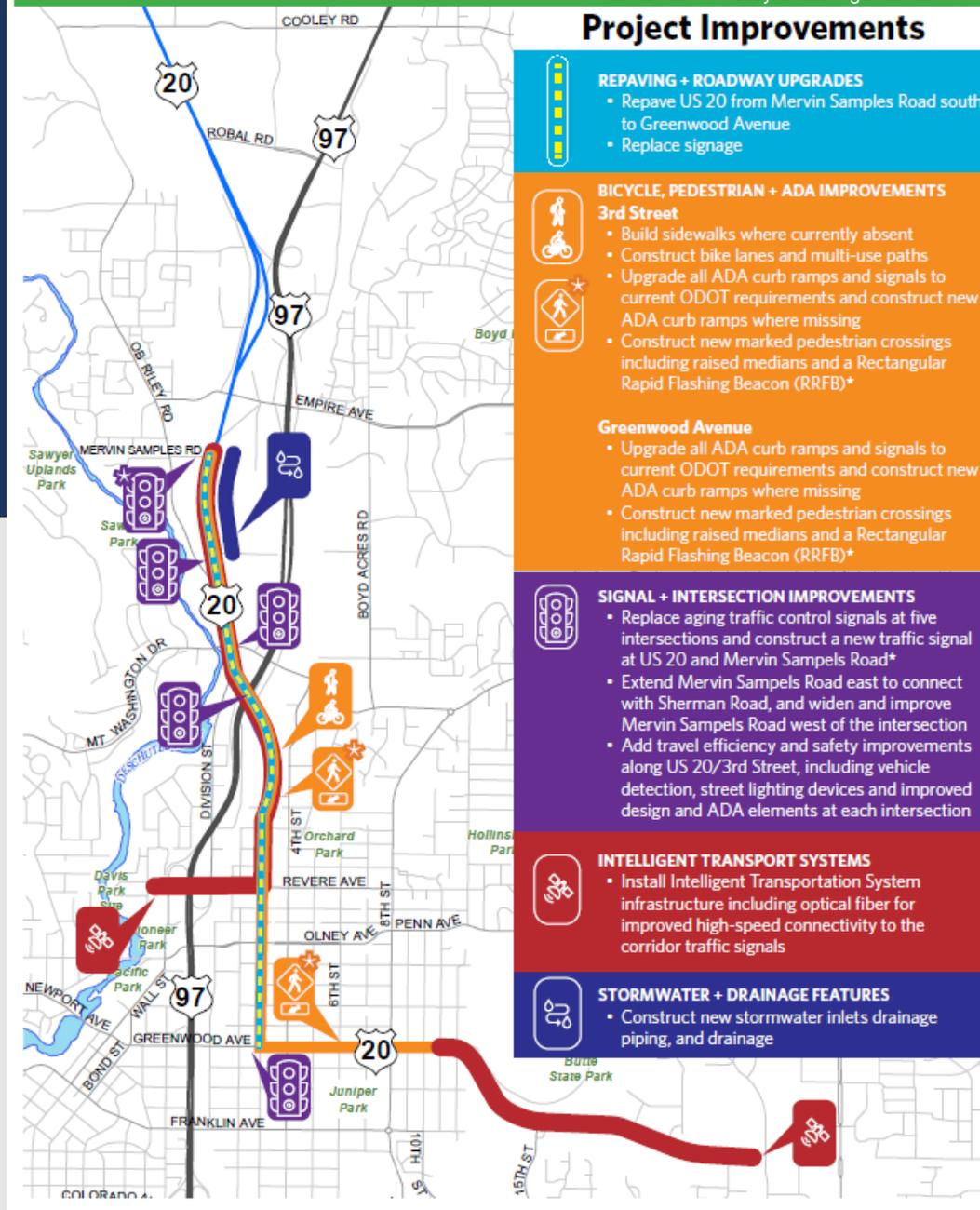
**Trucking Industry Approval**

# US20 Bend Corridor

US20: Empire to Greenwood  
-Budget - Appx. \$12 Million  
-Construction 2021

## US 20: Empire to Greenwood (3rd Street, Bend)

1.29.20 MPO Policy Board Agenda Item 8. US 20 Projects Overview



# US20 BEND CORRIDOR



US20: 3<sup>rd</sup> Street – Purcell

-Budget - Appx. \$2 Million

-Construction 2022

-Reconstruct ADA Curb Ramps

-Upgrade signs

-Construct new crosswalks with a pedestrian refuge at 4<sup>th</sup> Street

-Upgrade signal connectivity

**Variables:**

**City of Bend ADA/Sidewalk Infill Funding**



QUESTIONS?





**Full Spine Alternative**

**US 97: Bend North Corridor  
Full Build, NB US 20 to Existing US 97,  
with Robal SB On-Ramp, and Cooley  
Widening At-Grade**

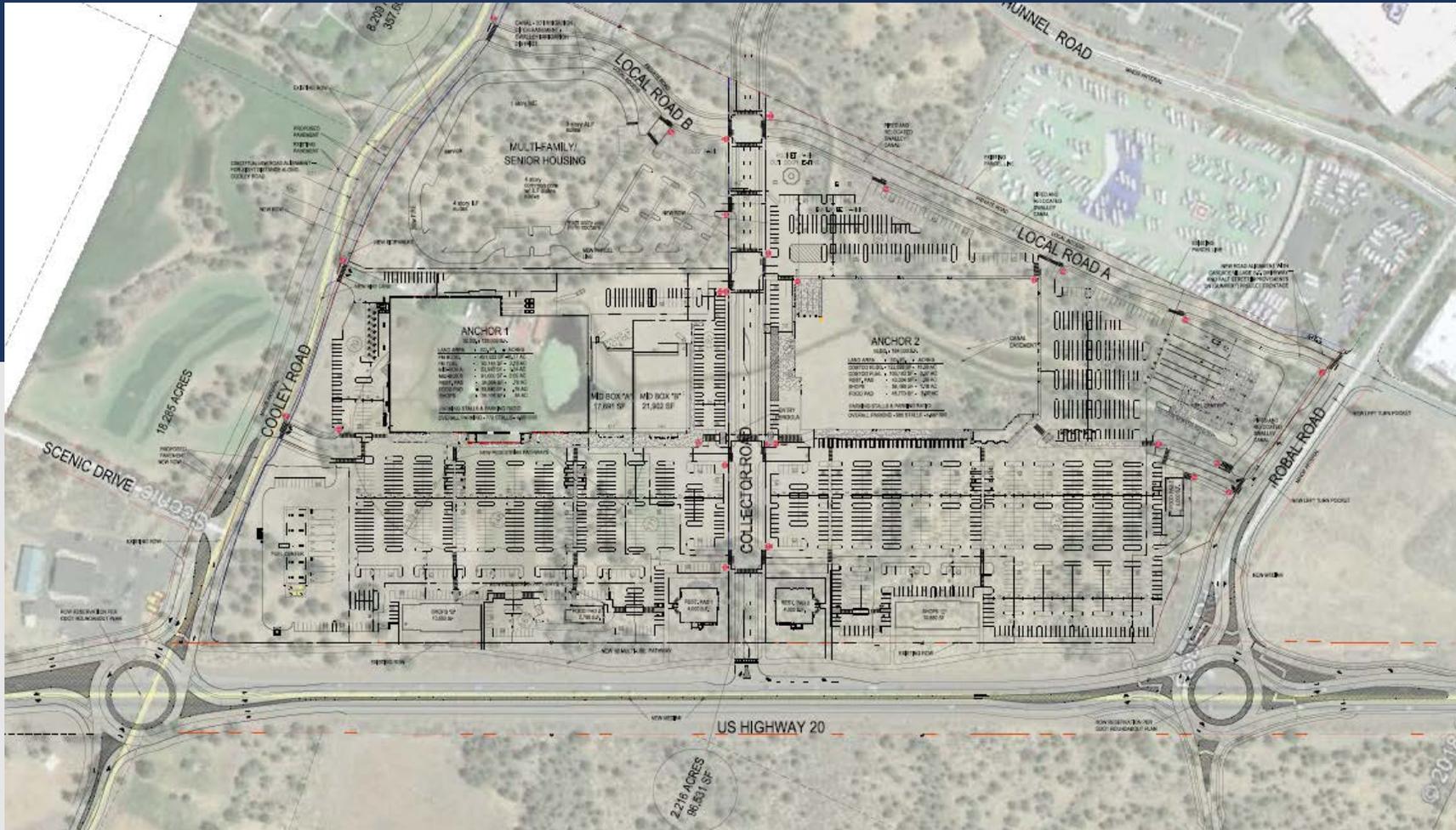
**21 October 2019 DRAFT Print**

# US20 Corridor





# US20 CORRIDOR



City of Bend TSP Update – Collector Road & Roundabouts

Grant of Access – Timeline

Roundabout Design

Cooperative Improvement Agreement