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MEMORANDUM

DATE: August 5, 2019

TO: John Day Innovation Gateway Area Plan Team

FROM: Kevin Chewuk, DKS Associates

SUBJECT: **Technical Memo #7:**
Transportation Solutions Analysis P18194-000

This memorandum summarizes the multimodal transportation solutions needed to support new proposed development within the John Day Innovation Gateway Area Plan study area.

Proposed Concept Plan

The proposed Concept Plan is shown in Figure 1. Most of the study area north of the John Day River is zoned for industrial use, while most of the area south of the river is zoned for general commercial use. The proposed Concept Plan includes offices, a wastewater treatment plant, parks and open space and a campground north of the river, and a hotel, parks and open space, public works facilities and greenhouses south of the river.

Figure 1: Proposed Concept Plan

Proposed Circulation System

The following sections summarize the project site's proposed circulation system for pedestrian, bicycle, transit and vehicular travel, and proposed sections for newly constructed or reconstructed streets.

Pedestrian Circulation System

Pedestrians approaching and traveling within the project site will be able to safely and efficiently walk between destinations using a proposed system of sidewalks, multi-use paths and trails. As a primary pedestrian thoroughfare, an improved W Main Street section will include a continuous sidewalk on the north side from downtown John Day to Patterson Bridge Road, and from downtown John Day to the proposed Johnson Drive on the south side. No sidewalk is recommended on the south side west of the proposed Johnson Drive due to the lack of adjacent development and topography constraints. In addition, curb ramps are recommended at each intersection crossing along W Main Street to bring them into Americans with Disabilities Act (ADA) compliance.

The proposed 7th Street extension will serve as the primary pedestrian route north of the John Day River. It will provide a continuous pedestrian connection between Patterson Bridge Road and Bridge

Street. This street is proposed to include a 5-foot sidewalk on the north side and a multi-use path will parallel the roadway on the south side.

A 5-foot sidewalk is recommended on the east side of Patterson Bridge Road between W Main Street and the proposed Government Entry Road. The proposed Gateway Drive will also provide a local walkway linking the proposed 7th Street with the proposed Government Road extension. This street is proposed to include a 5-foot sidewalk on the north side.

The proposed multi-use path on the south side of the proposed 7th Street will provide a primary walkway along the John Day River. This multi-use path will provide for convenient and comfortable travel and recreation between the Oregon Pine and Innovation Gateway areas and the proposed Aquatic Center and existing multi-use pathway network within 7th Street Park, east of Bridge Street. In addition, a proposed network of multi-use paths and trails will link the proposed multi-use path along the John Day River with Hill Family City Park, Davis Creek Park and Campground, Oregon Pine, and Innovation Gateway areas.

An improved Oregon Pine Bridge and a bridge adjacent to Hill Family City Park will provide new pedestrian crossings of the John Day River, in addition to the existing crossings at Patterson Bridge Road and Bridge Street. This network of river crossings will provide shorter block lengths for the pedestrian system, will increase pedestrian access to destinations, and will also provide a recreational loop trail.

Safe and comfortable pedestrian crossings will be provided where facilities cross streets. This will include curb extensions and marked cross-walks where appropriate. A pedestrian wayfinding system for the site and the entire downtown area should also be developed.

Bicycle Circulation System

The proposed 7th Street extension will serve as a local bikeway, serving those traveling from downtown John Day and the neighborhoods to the north and east. Given the relatively slow vehicular speeds along the proposed street, bicyclists will share travel lanes with vehicular traffic. It is recommended to include sharrows to alert drivers to share the street and be designed with 12-foot travel lanes to allow bicyclists to travel outside of the door zone of parked vehicles.

In addition, cyclists can travel along the proposed multi-use path along the John Day River between the Oregon Pine and Innovation Gateway areas and Bridge Street. A potential link to Hill Family City Park and 7th Street Park will also connect the site with the multi-use path networks in these parks. This multi-use path will provide for convenient and comfortable bicycle travel between the Oregon Pine and Innovation Gateway areas and Bridge Street.

W Main Street will serve as the primary bikeway south of the John Day River. It is recommended to include 6-foot bike lanes between downtown John Day and Patterson Bridge Road. The recommended bike lanes will also enhance the Old West Oregon Scenic Bikeway through the project area.

Sharrows are also recommended on Patterson Bridge Road between W Main Street and the proposed Government Entry Road, and along Government Entry Road from Patterson Bridge Road to Valley View Drive.

In addition, it is recommended that bike racks and bike storage zones be incorporated in strategic locations along streetscapes and within future development to encourage bicycle use. A bicycle wayfinding system for the site and the entire downtown area should also be developed. This system could also consider routing to mountain biking opportunities, to enhance the city's reputation for the sport.

Transit Circulation System

The proposed 7th Street is recommended to serve as the primary pedestrian and bicycle path to bus service. Bus pull-outs are recommended in strategic locations along the proposed alignment to serve future bus service. The on-street sidewalk and multi-use pathway network will connect transit users from these facilities to other key destinations. Within reasonable proximity to the project site, pedestrians and cyclists can also access the existing bus stops on W Main Street.

The project site will be served by high quality pedestrian/bicycle connections. A network of river crossings will provide shorter block lengths and is oriented towards pedestrian and bicycle users, with active and inviting pathways and public walkways on both sides of the river. It is the intended that the project site will also include a supportive mix of uses and amenities for encouraging transit ridership. Future bus stop locations should also include necessary infrastructure (e.g., shelter, bench, signage) to encourage transit ridership.

Vehicular Circulation System

W Main Street provides primary access to the project site south of the John Day River, with two proposed accesses. One access is proposed to be located approximately 1,100 feet east of Patterson Bridge Road, serving the proposed hotel. The primary site access is proposed to be Johnson Drive, which will be located approximately 900 feet east of the proposed hotel driveway. Left-turn lanes are recommended on W Main Street at both proposed access points, and the Johnson Drive approach to W Main Street is recommended to include separate left-turn and right-turn lanes for exiting traffic.

Another key assumption of the proposed vehicular circulation system is the extension of 7th Street to Patterson Bridge Road north of the John Day River. 7th Street's proposed alignment will provide an

alternative route to the highway and a means of vehicular site access to areas north of the river. This new street connection will provide circulation between Patterson Bridge Road and Bridge Street and offer drivers from downtown John Day and neighborhoods to the north and east another option to access the site.

North-south running cross-streets, including Patterson Bridge Road and Bridge Street, will link the proposed 7th Street and W Main Street. The proposed Government Entry Road and Gateway Drive will connect 7th Street and Patterson Bridge Road with neighborhoods to the north, further enhancing connectivity north of the river.

The proposed street system modifies some of the classifications of the John Day Transportation System Plan (TSP). Given the City's standards, the estimation of traffic volumes on area streets and overall circulation needs, recommended classification/reclassification is as follows:

- **W. Main Street** will continue to serve as an Arterial Street
- **Patterson Bridge Road, Bridge Street and the proposed Government Entry Road** will continue to be Collector Streets
- **7th Street** is recommended to be a Minor Arterial Street, modified from a Collector Street in the TSP
- **Gateway Drive and Johnson Drive** are newly identified streets that were not in the TSP and are recommended as a Collector Street and Local Street, respectively

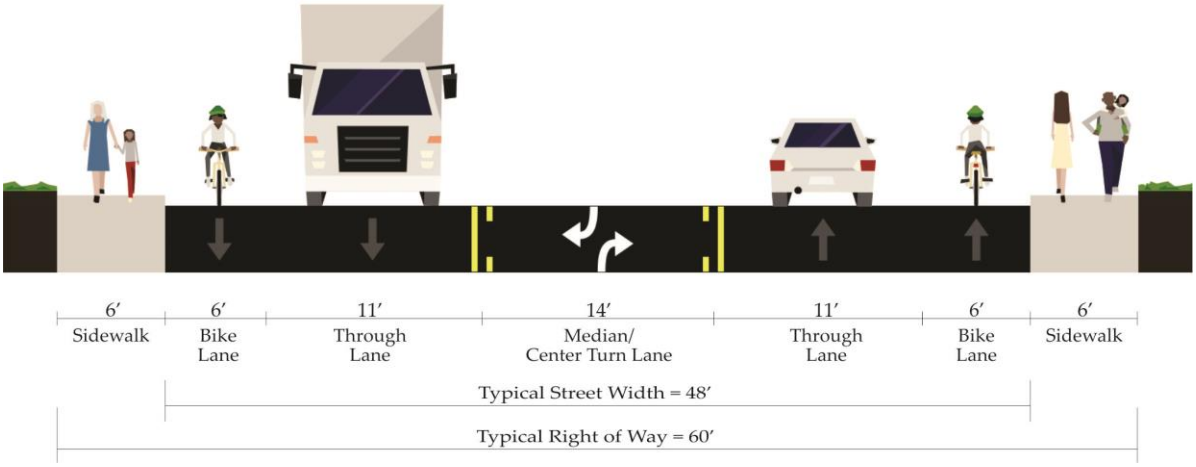
Street Sections

The recommended street sections are shown in Figures 2 through 10. Typical streets in the project site will consist of two lanes of traffic and occasional on-street parking. Landscape strips and lighting will enhance the pedestrian experience, while cross-walks at strategic locations will create safer, more fluid circulation opportunities.

W Main Street between NW 3rd Avenue and Johnson Drive

W Main Street is recommended to be consistent with the standard in the Highway Design Manual (HDM) between NW 3rd Avenue and the proposed Johnson Drive. This segment will include bike lanes (6-feet wide) and reconstructed sidewalks (6-feet wide) on both sides (see Figure 2) and would fit within the existing 60-foot highway right-of-way. Note that more right-of-way would need to be obtained (beyond the existing 60-feet) if a buffer is desired between the roadway and the sidewalk.

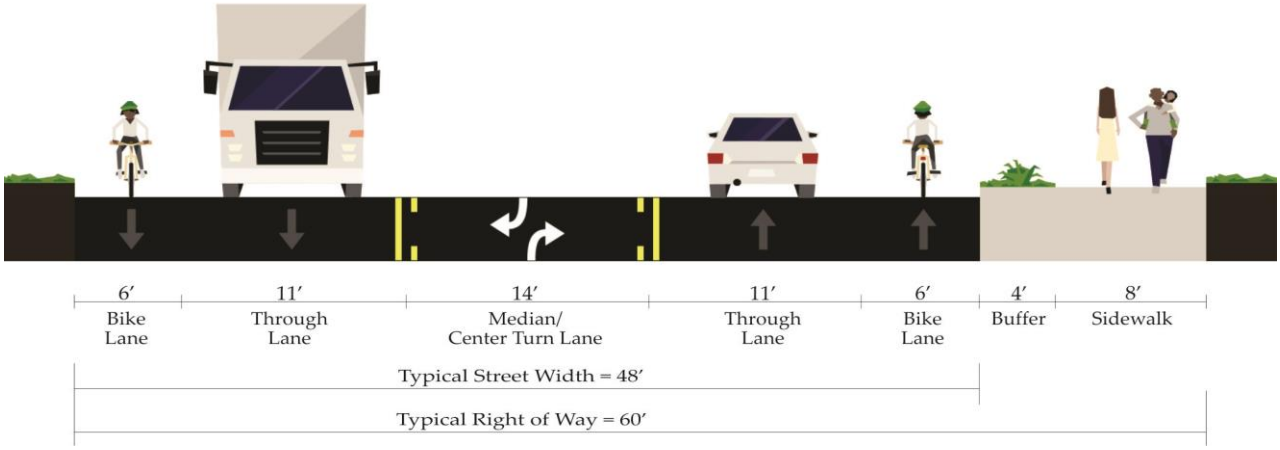
Figure 2: Recommended Design for W Main Street between NW 3rd Avenue and Johnson Drive



W Main Street between Johnson Drive and Patterson Bridge Road

W Main Street between the proposed Johnson Drive and Patterson Bridge Road is constrained by upward slopes on the south side of the highway. The south side of the highway along this segment also has no development potential and is recommended to include a sidewalk on the north side only (see Figure 3). The sidewalk on the north side is recommended to be wider (8 feet versus 6 feet in the HDM standard) and include a four-foot buffer. A left turn lane is only recommended at the proposed hotel driveway, Screech Alley and Patterson Bridge Road intersections with W Main Street. Otherwise, the center turn lane can be narrowed at mid-block locations as feasible.

Figure 3: Recommended Design for W Main Street between Johnson Drive and Patterson Bridge Road



7th Street

The current street design standards in the John Day TSP (amended by the 2009 John Day Local Street Network Plan) for an Arterial would require 7th Street to include at least 62-feet of right-of-way. This includes two 14-foot travel lanes and a 12-foot center turn lane, two 5-foot bike lanes and a 6-foot sidewalk on each side.

Narrower travel lanes are recommended along 7th Street (12 feet versus 14 feet) to encourage slower vehicular travel speeds. Given the relatively slow vehicular speeds expected, it is recommended to include sharrows instead of bike lanes. In addition, no center turn lane is recommended given the lack of driveways and slow travel speeds. A sidewalk is recommended on only one side of 7th Street given the proposed multi-use path that will parallel the roadway.

The recommended design for 7th street is shown in Figure 4a and 4b, with a conceptual view shown in Figure 4c. It includes 50-feet of right-of-way, consisting of two 12-foot travel lanes, a 7-foot landscape strip, a 5-foot sidewalk with a ½-foot buffer between adjacent development on the north side. On the south side, it will include a 5.5-foot landscape strip adjacent to on-street parking or a 12.5-foot landscape strip in areas without on-street parking.

Figure 4a: Recommended Design for 7th Street without Parking

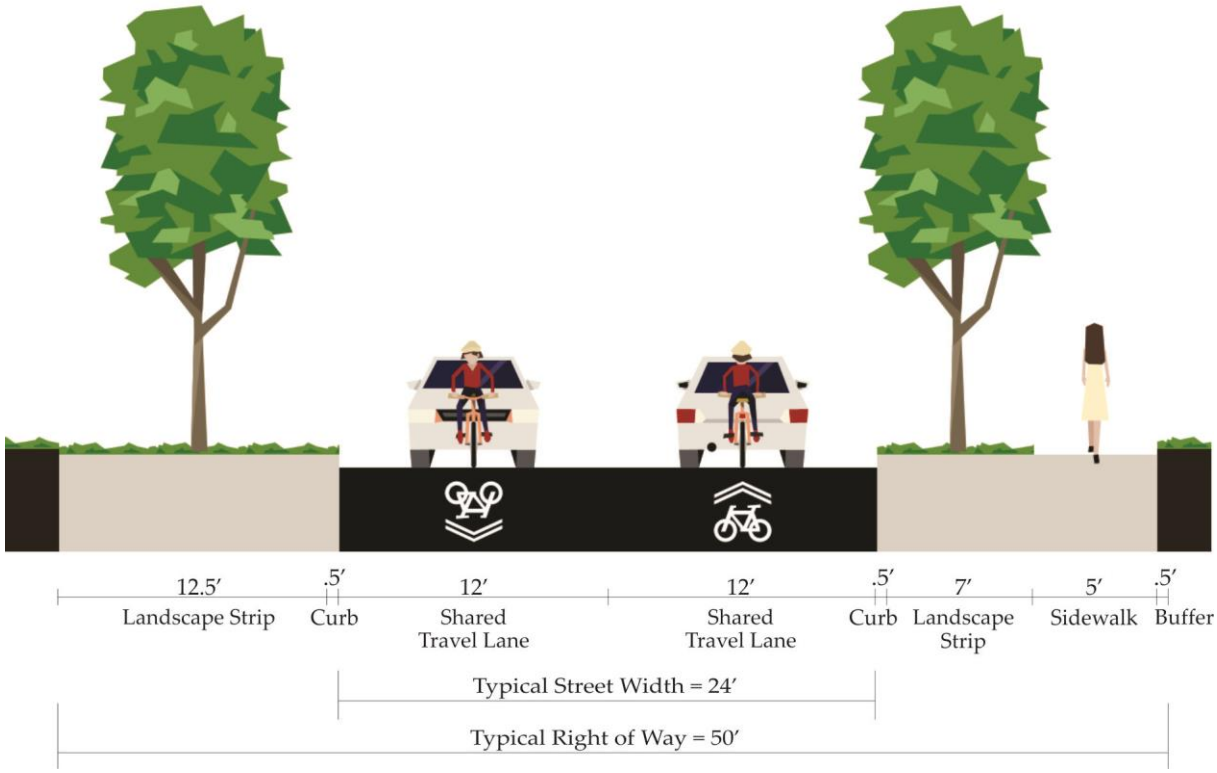


Figure 4b: Recommended Design for 7th Street with Parking

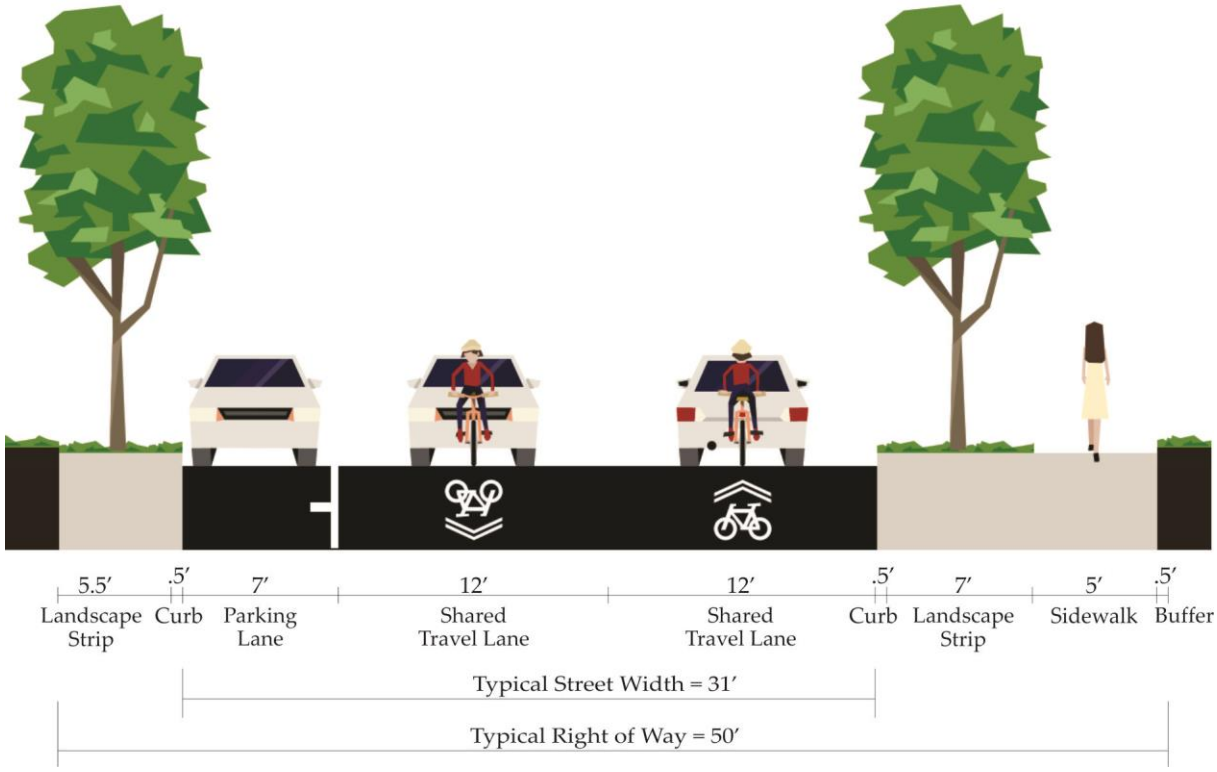


Figure 4c: Conceptual view of 7th Street

Gateway Drive

The current street design standards in the John Day TSP (amended by the 2009 John Day Local Street Network Plan) for a Collector would require Gateway Drive to include at least 40-feet of right-of-way. This includes two 11-foot travel lanes, two 5-foot bike lanes and a 6-foot sidewalk on one side.

Given that Gateway Drive is sloping upwards, wider travel lanes are recommended (12 feet versus 11 feet). Wider landscape strips are recommended to enhance the pedestrian experience and allow for occasional on-street parking. No bike facilities are recommended since facilities are recommended on adjacent routes (i.e., 7th Street, Patterson Bridge Road and Government Entry Road).

The recommended design for Gateway Drive is shown in Figure 5a and 5b. It includes 50-feet of right-of-way, consisting of two 12-foot travel lanes, a 7-foot landscape strip, a 5-foot sidewalk with a ½-foot buffer between adjacent development on the north side. On the south side, it will include a 5.5-foot landscape strip adjacent to on-street parking or a 12.5-foot landscape strip in areas without on-street parking.

Figure 5a: Recommended Design for Gateway Drive without Parking

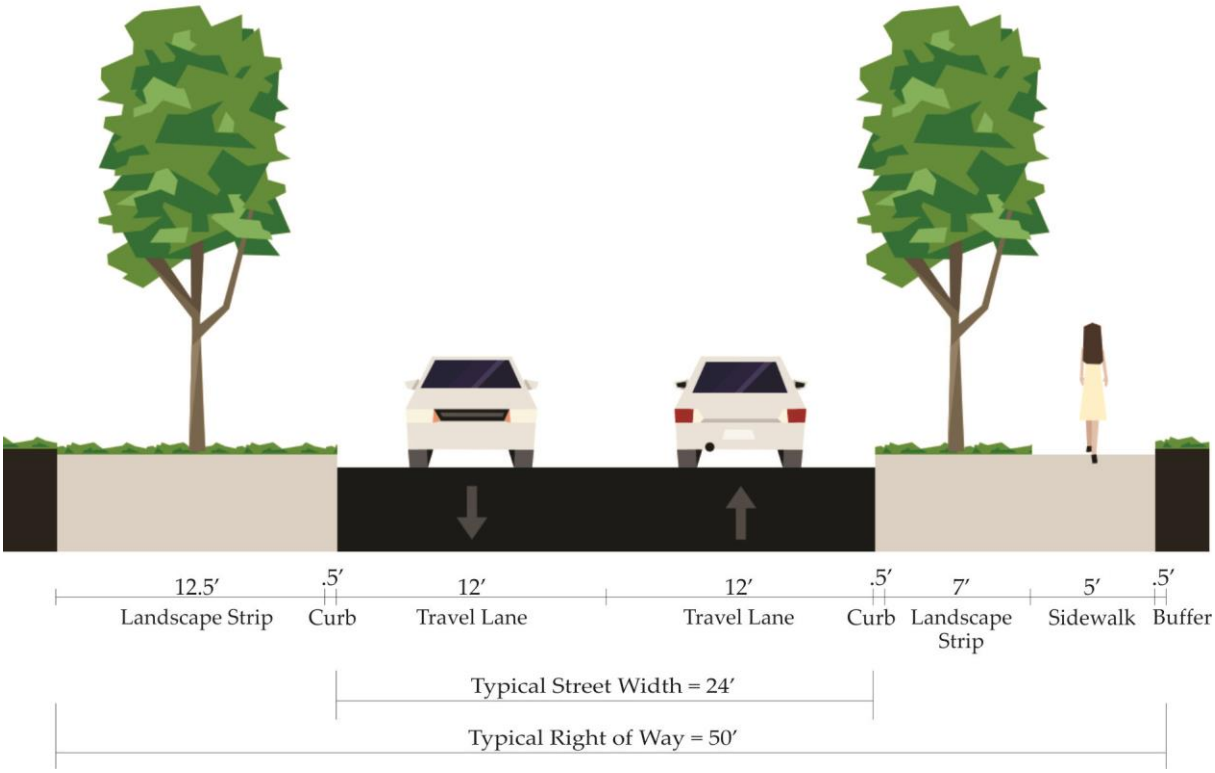
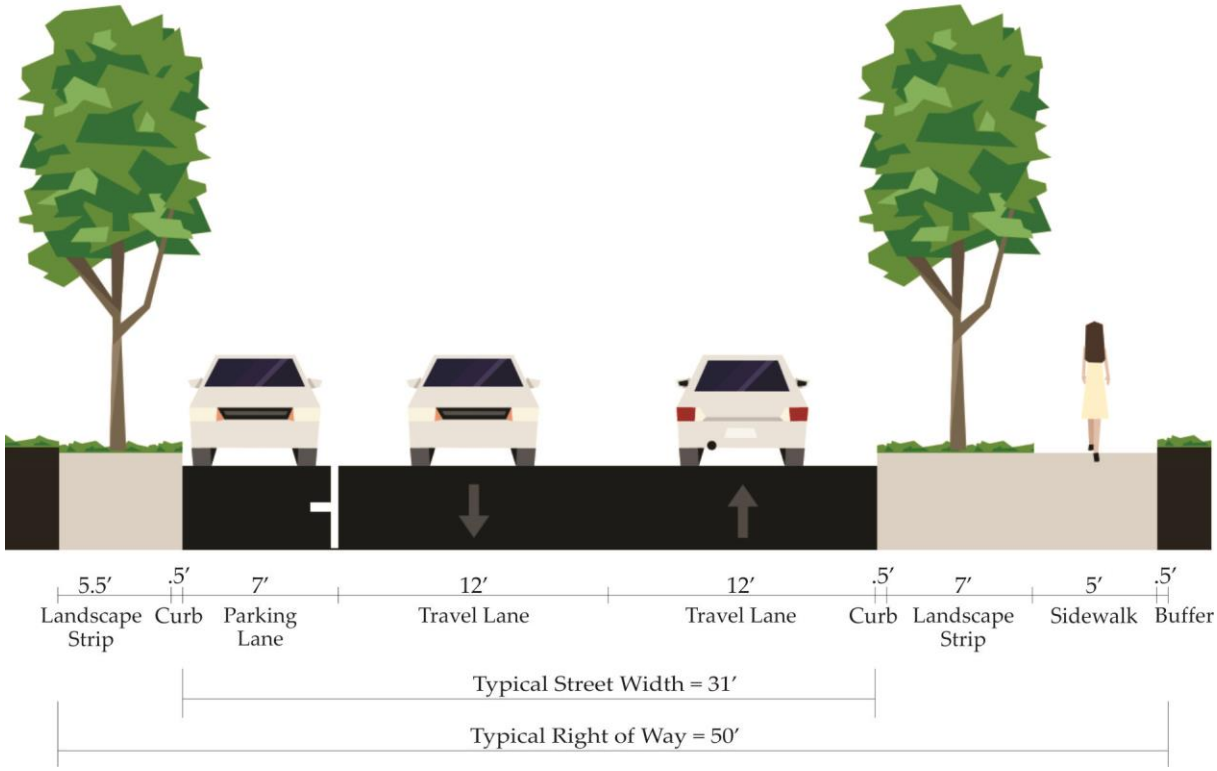


Figure 5b: Recommended Design for Gateway Drive with Parking



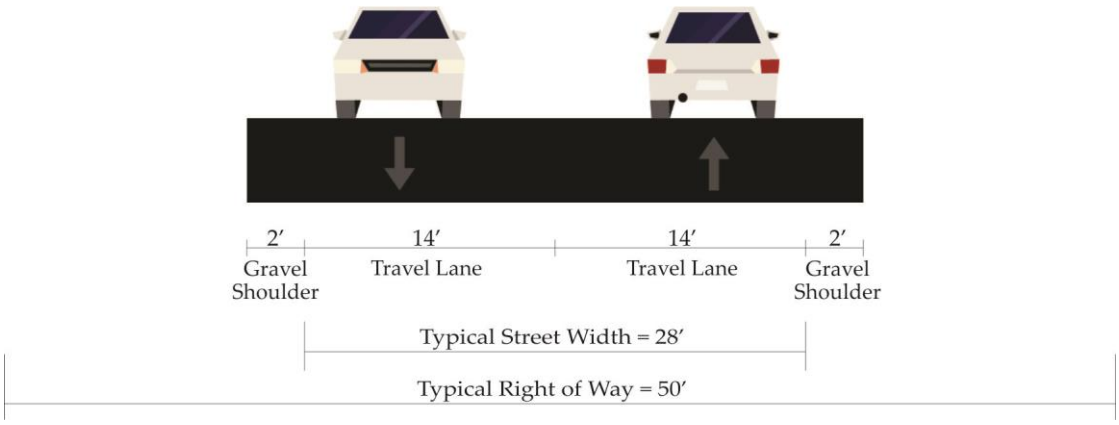
Government Entry Road

The current street design standards in the John Day TSP (amended by the 2009 John Day Local Street Network Plan) for a Collector would require Government Entry Road to include at least 40-feet of right-of-way. This includes two 11-foot travel lanes, two 5-foot bike lanes and a 6-foot sidewalk on one side.

Since Government Entry Road travels uphill, wider travel lanes are recommended (14 feet versus 11 feet). Given the expected low traffic volumes and slow vehicular speeds, it is recommended to include sharrows instead of bike lanes. A two-foot gravel shoulder is recommended on each side for pedestrian travel in place of a sidewalk given rural nature of the surrounding uses and the minimal pedestrian travel expected.

The recommended design for Government Entry Road is shown in Figure 6. It includes 50-feet of right-of-way, consisting of two 14-foot shared travel lanes and a 2-foot gravel shoulder on each side.

Figure 6: Recommended Design for Government Entry Road



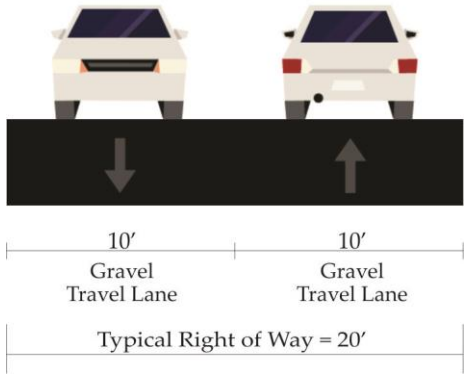
Johnson Drive

The current street design standards in the John Day TSP (amended by the 2009 John Day Local Street Network Plan) for a Local Street would require Johnson Drive to include at least 40-feet of right-of-way. This includes two 10-foot travel lanes, an 8-foot parking lane and a 6-foot sidewalk on one side.

Parking is proposed to be provided in lots surrounding Johnson Drive, so no on-street parking is recommended. In addition, a network of walkways and trails is recommended just to the west of Johnson Drive that would connect to recommended sidewalks on W Main Street. Therefore, no sidewalks are recommended along the alignment.

The recommended design for Johnson Drive is shown in Figure 7. It includes 20-feet of right-of-way, consisting of two 10-foot gravel travel lanes.

Figure 7: Recommended Design for Johnson Drive



Summary of Transportation System Recommendations

Table 1 and Figure 8 summarize transportation improvements needed to support future growth and new development within the John Day Innovation Gateway Area Plan study area, including projects previously identified in the TSP or Local Street Network Plan.

Not all recommended improvements need to be in place prior to developing land within the John Day Innovation Gateway Area Plan study area. Upgrade of the existing streets will be driven by the multi-modal access needs of the adjacent properties. Many of the street construction projects, such as 7th Street and Johnson Drive, will be dependent on new development.

Table 1: Recommended Transportation System Improvements in the John Day Innovation Gateway Area Plan Study Area

Project ID	Project Description	Project Summary	Project Source
Projects Constructing or Improving Streets within the Plan area			
1	7th Street	Extend a minor arterial from Bridge Street to Patterson Bridge Road; install a sidewalk along the north side and include sharrows	Modified version of TSP Project Alternative 2 (modified roadway design and classification)
2	Government Entry Road	Construct a collector street from Patterson Bridge Road to Valley View Drive; include gravel shoulders and sharrows	Modified version of Local Street Network Plan Project 10 (modified roadway design)
3	Gateway Drive	Construct a collector street from 7th Street to Government Entry Road; install a sidewalk along the north side	New Project
4	Johnson Drive	Construct a local street north of W Main Street	New Project
5	W Main Street Upgrade Segment 1	Improve between NW 3rd Avenue and Johnson Drive to include one travel lane in each direction, a center turn lane, and sidewalks and bike lanes on both sides	Local Street Network Plan Projects 38 and 39
6	W Main Street Upgrade Segment 2	Improve between Johnson Drive and Patterson Bridge Road; include one travel lane in each direction, a left-turn lane at key intersections, bike lanes on both sides and a sidewalk on the north side	Modified version of Local Street Network Plan Projects 38 and 39 (modified roadway design)
7	Patterson Bridge Road	Construct to collector standards between W Main Street and Government Entry Road; include a sidewalk on the east side and sharrows	New Project
Projects Constructing Multi-Use Paths and Trails in the Plan area			
8	John Day River Multi-Use Path	Construct a multi-use path between the Oregon Pine Bridge and 7th Street Park	Local Street Network Plan Project 5
9	Oregon Pine and Innovation Gateway Area Paths and Trails	Construct path and trail network within the Oregon Pine and Innovation Gateway Areas; provide a connection to the Oregon Pine Bridge river crossing and W Main Street pedestrian and bicycle facilities	New Project
10	Hill Family City	Construct path and trail network within the	New Project

	Park Paths and Trails	Hill Family City Park; provide a connection to the proposed Hill Family City Park Bridge	
11	Davis Creek Park and Campground Paths and Trails	Construct path and trail network within the Davis Creek Park and Campground; provide a connection to the John Day River multi-use path	New Project
Projects Constructing or Improving Bridges the Plan area			
12	Oregon Pine Bridge	Improvements to the existing bridge to serve pedestrian and bicycle river crossings	New Project
13	Hill Family City Park Bridge	Construct a bridge to serve pedestrian and bicycle river crossings	New Project

LEGEND

- FUTURE JOHN DAY RIVER MULTI USE TRAIL
- FUTURE STREETS
- FUTURE STREETS (outside Plan area)
- GRANT COUNTY PEOPLE MOVER ROUTES
- FUTURE BRIDGE

PROJECTS

Constructing or Improving Streets within the Plan area

1 7th Street: Extend minor arterial from Bridge St to Patterson Bridge Rd; install sidewalk along north side and include sharrows
2 Government Entry Road: Construct a collector street from Patterson Bridge Road to Valley View Drive; include gravel shoulders and sharrows
3 Gateway Drive: Construct a collector street from 7th St to Government Entry Rd; install sidewalk along the north side
4 Johnson Drive: Construct a local street north of W Main St
5 W Main Street Upgrade Segment 1: Improve between NW 3rd Avenue and Johnson Drive to include one travel lane in each direction, a center turn lane, and sidewalks and bike lanes on both sides
6 W Main Street Upgrade Segment 2: Improve between Johnson Drive and Patterson Bridge Road; include one travel lane in each direction, a left-turn lane at key intersections, bike lanes on both sides and a sidewalk on the north side
7 Patterson Bridge Road: Construct to collector standards between W Main Street and Government Entry Road; include a sidewalk on the east side and sharrows

New Multi-Use Paths and Trails in the Plan area

8 John Day River Multi-Use Path: Construct a multi-use path between the Oregon Pine Bridge and 7th Street Park
9 Oregon Pine and Innovation Gateway Area Paths and Trails: Construct path and trail network within the Oregon Pine and Innovation Gateway Areas; provide a connection to the Oregon Pine Bridge river crossing and W Main Street pedestrian and bicycle facilities
10 Hill Family City Park Paths and Trails: Construct path and trail network within the Hill Family City Park; provide a connection to the proposed Hill Family City Park Bridge
11 Davis Creek Park and Campground Paths and Trails: Construct path and trail network within the Davis Creek Park and Campground; provide a connection to the John Day River multi-use path

Constructing or Improving Bridges the Plan area

12 Oregon Pine Bridge: Improvements to the existing bridge to serve pedestrian and bicycle river crossings
13 Hill Family City Park Bridge: Construct a bridge to serve pedestrian and bicycle river crossings

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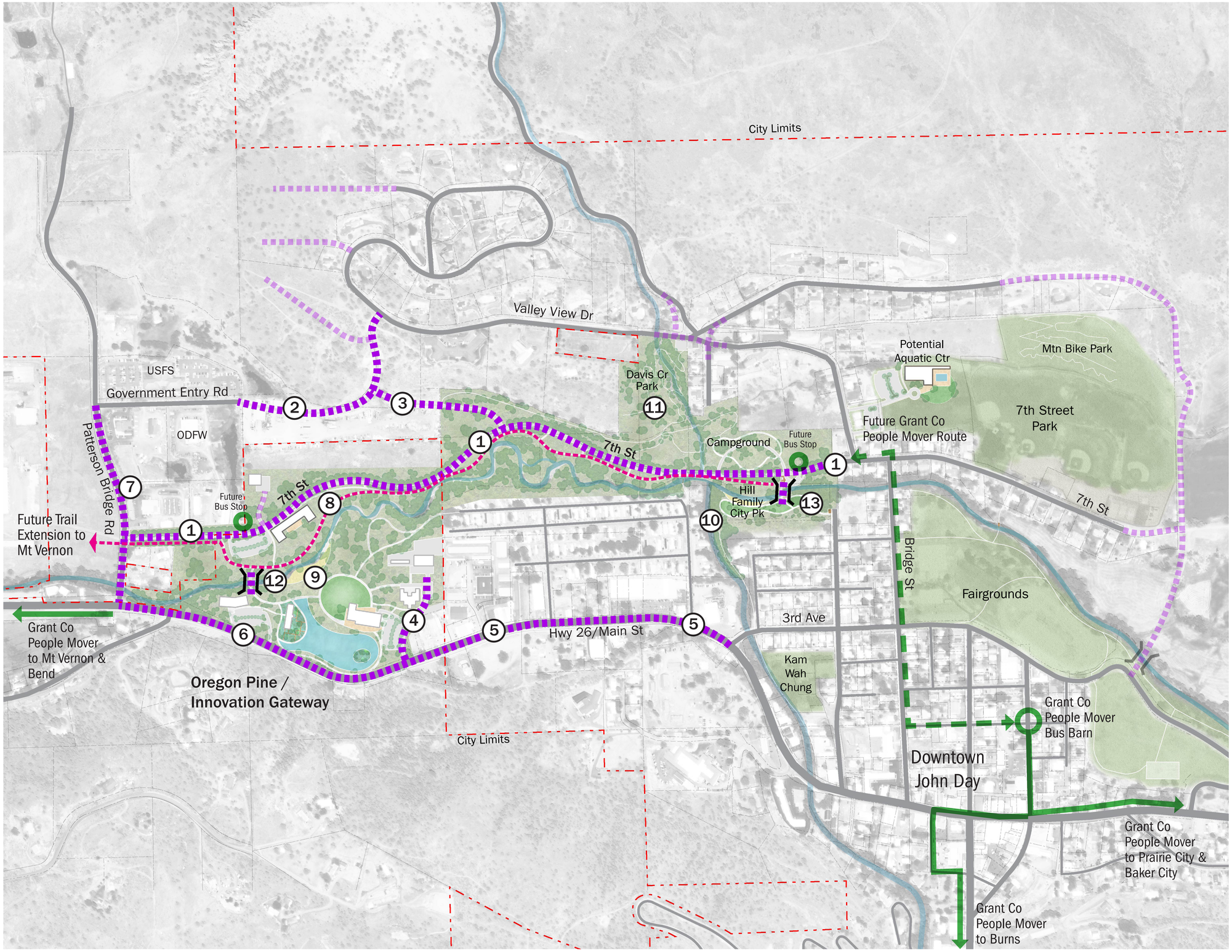

JOHN DAY INNOVATION GATEWAY
TRANSPORTATION SOLUTIONS MAP