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**Multnomah County Comprehensive Plan Update
Transportation and Public Facilities Subcommittee Meeting #4**

October 5, 2015 6:30 – 8:30 p.m.

Room 126 Multnomah Building, 501 SE Hawthorne Blvd. Portland, Oregon

Agenda

- I. Welcome and Introductions (5 minutes) – Joanna Valencia
Public comment will be allowed on each policy topic before a final action is taken.
- II. Report on Transportation Related Feedback from Public Meetings (10 minutes) – Susie Wright

Desired Outcome: Information item to hear about community feedback.
- III. Policies on Key Transportation Topics (25 minutes) – Joanna

Desired Outcome: Review policy language on major transportation issues discussed at the July 13th and August 24th subcommittee meetings. Make recommendation to the CAC on proposed policies.
- IV. Existing Transportation Policies (40 minutes) – Jessica Berry

Desired Outcome: Review existing transportation related policies from the Comprehensive Plan and Rural Area Plans for recommendation to the CAC.
- V. Alternatives Analysis (30 minutes) – Susie

Desired Outcome: Review alternatives analysis for the TSP and provide feedback.
- VI. Public Comment (5 minutes)
- VII. Meeting Wrap-up (5 minutes)
- VIII. Adjourn

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TRANSPORTATION AND PUBLIC FACILITIES SUBCOMMITTEE MEETING
ROOM 126, MULTNOMAH BUILDING
501 SE HAWTHORNE BLVD, PORTLAND OR
AUGUST 24, 2015 6:30-8:30 PM

MEETING SUMMARY

I. Welcome, Introductions and Announcements

In attendance:

Subcommittee members

Andrew Holtz
Sara Grigsby
Martha Berndt
Jerry Grossnickle

Project Team

Rich Faith
Joanna Valencia
Susie Wright
Jessica Berry
Rithy Khut
Kate McQuillan

Other community members in attendance: Carol Chesarek and Greg Olson

Rich Faith welcomed everyone to the third meeting of this subcommittee, introductions were made, followed by a brief review of the meeting agenda.

II. Policies on Key Public Facility Topics

Rich introduced this agenda item by reminding the subcommittee that they have visited these two public facility topics in previous meetings.

Rest Stops Along Popular Transportation Routes

The policy on rest stops along popular travel routes has been revised based on their comments at the last meeting to make it more generic by taking out reference to bicycle routes and broadening it to apply to any heavily used travel route. The three strategies are new to reflect ideas from the last meeting.

One member thought that this policy goes counter to what is desired in the West Hills. The policy seems to be promoting recreational bicycle use of the roadways by offering more than just restrooms; it offers other amenities like picnic tables and water fountains. If rest stops are provided, that is like an open invitation for recreational use, and this is not what people in the West Hills want. Maybe if the policy talked about “designated” recreational and tourist routes it would be acceptable because that would narrow where rest stops are placed. My concern is that rest stops are placed in front of someone’s house or other places where they don’t belong.

Another member said that not all the listed amenities would have to be provided. Rather than say “should include”, the strategy could be changed to say “may include.” That would soften it a bit.

Another member felt that the third strategy addresses locatio because it talks about partnering with other agencies to determine suitable locations for these facilities. This raised a question about what type of permitting process these rest facilities would go through and whether it would involve notification and input from surrounding residents.

Other comments were:

- It would depend on the zone, but it would likely come under a community service use which is a conditional use and requires notification to surrounding property owners and the opportunity for their input.
- Rest stop facilities should be provided to support users of popular travel routes whether the people living along there want them or not.
- Rest stops are not in keeping with what residents of the West Hills want to see. Where are you going to put them?
- A rest stop at mile post 18 of Skyline is so far from where most people live that it won't affect anyone.
- Concern about the strategy that says to partner with other agencies. What if ODOT decides to put one in? How are you going to control them to put it in the most suitable spot? Affected property owners and residents need to be involved in the decision.
- All stakeholders need to be involved, not just those who live there. Stakeholders are those who travel the road and have a need for a rest stop.
- This conversation is similar to what occurred in Clackamas County when people got upset about placement of rest facilities. It all boiled down to I'm here and I don't want anyone else to be here.

Action Taken - Approved with the following changes:

- Change “should include amenities” to “may include amenities” in strategy a.
- Add a strategy about involving affected stakeholders in the decision process.
- Add a strategy about requiring a land use process ensuring that neighborhood compatibility and environmental impacts are addressed.

Sewage Disposal Requirements for Rural Developments

Rich provided brief background on this policy topic and the thinking behind the new policy language.

A subcommittee member asked if the change in how the policy is written will promote more development by permitting small lot sizes. The current one and two acre minimum lot sizes in rural centers are based on the ability of the land to accommodate a private

well and septic system – the carrying capacity of the site. And there are a number of existing small lots that cannot be developed because they can't support an in-ground septic system.

There was considerable discussion about the impact of this policy language and whether it could potentially result in more rural dwellings. Carol Chesarek expressed concern about the number of additional dwellings that might be allowed in the West Hills. She thought lots should have to be required to have the capacity to accommodate a septic system, but would be allowed to install another type of system if desired. This would ensure no increase in the number of dwellings over what is currently possible.

Some subcommittee members were OK with the policy language and felt it offered a good tradeoff because of better systems that are coming along with improved technology. These are actually more environmentally friendly than the older, conventional systems.

Another member thought that strategy 1a should also mention quality water as something that private wells need to provide. Others agreed.

Action Taken - Approved with the following change:

- Add a reference to water quality in strategy 1a.

III. Existing Public Facilities Policies

Rich introduced this agenda item and explained where these existing policies come from and the type of public facilities they address.

Some of the major comments and questions about these policies were:

- In reference to policy 1 under Parks and Recreation Planning on page 28, a subcommittee member wanted to know if the Intertwine Alliance is on Sauvie Island because she has never heard of them. That led to discussion about what the Intertwine Alliance is and its origin.
- Expand upon this policy by adding “other organizations” after The Intertwine Alliance.
- A member expressed his desire to change “adverse impacts” to “adverse effects” wherever that term is used.
- Someone wanted policy three under Parks and Recreation Planning on pg 28 of the packet to say “Allow...” rather than “Encourage...” After some discussion it was agreed to leave in the word “encourage” but to add “consistent with wildlife habitat and wildlife corridor protection” to the end of the policy.
- Leave in 4(2) that is proposed for deletion, but remove reference to the Bicycle Corridor Capital Improvements Program and just say Capital Improvements Program. Also delete the words “of bikeways” later in the policy.

- Policy 2c under Storm Water Drainage on page 22 should also say that run-off shall not adversely affect “existing improvements”.
- Internet service is problematic on Sauvie Island. Policies under Energy and Communications should speak to the desire for high quality, high speed internet service to the rural county, particularly to schools. Maybe this could be added to the list of factors under Strategy 1 on page 23. In this same strategy, don’t just say “Address provision for utility service needs...”, say “Address provision for utility services to adequately meet needs..”
- A subcommittee member brought up the matter of a power substation going in his neighborhood that is solely being done to serve a new residential development in North Bethany. How can that be prevented from happening again. Rich reminded the committee that this question has come up before and is on the parking lot list. Staff is in the process of researching it and will soon have information to share.
- Is reflection of sunlight off solar panels something that should be addressed in a policy? After more discussion it was decided it does not need to be.
- The policy on Alternative Uses of Public School Buildings is misleading because the building codes also regulate change of use from a school to other types of uses. Those codes have to be followed as well.
- Are the three alternate uses listed under policy C on page 26 listed as a hierarchy of the desired uses or do they all have equal status?
- Some members still had a list of other questions and comments on these policies, so in the interest of time, it was decided to finish the discussion of Existing Public Facilities Policies at the next meeting.

Action Taken - Continue to next meeting for further review.

IV. Policies on Key Transportation Topics

Joanna Valencia informed the subcommittee that the revisions to these various policies reflect comments from their last meeting. Major points from subcommittee members were:

- Under the policies for bicycle infrastructure, concern was expressed about including equestrian use as a mode of transportation to be accommodated on County roads. How can some of the narrow County roads in the West Hills, for example, safely accommodate horses? Maybe there should be a policy specifically on equestrian use.
- In response, others pointed out that this was discussed at the last meeting and those in attendance asked that the policy include all modes of transportation, including equestrian.
- If the policy is going to address accommodating all travel modes, maybe it should say “where reasonably possible”.

- The strategy that talks about considering climate change impacts should say “include climate change impacts...”
- In the second policy under Bicycle Infrastructure, rather than list out various modes of travel, just say all modes of travel similar to what is done in the first policy.
- Rather than say “all modes of transportation”, change it to “multiple modes of travel”.
- Rather than say “Consider context sensitive design..” say “Implement context sensitive design...”
- The fourth policy under Reduce Traffic Pressure on Westside Roads needs to go away because the biking community doesn’t like it. People don’t understand what is meant by “without encouraging purely recreational activities”.

Due to the late hour and because there was still much more to discuss on these key policy topics, everyone agreed that it will be necessary to hold another meeting to complete this discussion. There is another meeting of this subcommittee scheduled for October, but there will need to be another after that to complete everything that is left to do. Staff will take a look at the calendar and come back with a proposed meeting date, possibly in November or December.

Action Taken - Set up another meeting. Continue to that meeting for further review.

V. Existing Transportation Policies

Because there not enough time to cover everything, it was decided to postpone this agenda item to another time and to skip to the Alternatives Analysis.

VI. Alternatives Analysis

Susie Wright gave a quick introduction to this topic. She is mainly interested in feedback about the “filters” or criteria for evaluating and rating projects. When asked how the members can provide this feedback, Susie said they could phone or email her with the information. Some quick comments were:

- On Figures 5A and 5B, change the legend from “Proposed Shoulder Bikeways” to something else. Also, there should be more narrative about the different categories of bike facilities on these maps.
- Roadways going through wildlife corridors should be subject to different design standards than in other areas.
- Under the safety criteria, the ratings should not just be the number of bike or ped crashes, but should also try to gauge the fear factor, complaints about close calls, the user’s comfort zone on these roads. Safety perceptions are as important as actual crash data.
- On equity, is there a way of measuring access by low income populations. We should be looking for ways to help the lower income gain access to the roads.

- Under community destination, natural areas used as recreation should be included.
- How does topography and terrain factor into the filter?
- There ought to be separate capital improvement plans for urban and rural areas.

VII. Public Comment

Greg Olson said that he is a lot happier with what we have done than he was at previous meetings.

VIII. Adjourn

The meeting adjourned at approximately 8:52 pm.



Rich FAITH <rich.faith@multco.us>

transportation rating system email draft w/ policy recommendations

Carol Chesarek <chesarek4nature@earthlink.net>

Fri, Sep 18, 2015 at 12:24 PM

To: Joanna VALENCIA <joanna.valencia@multco.us>, Rich FAITH <rich.faith@multco.us>

Cc: Jerry Grossnickle <JerryGBW@aol.com>

Hi Joanna & Rich,

We've been thinking hard about the transportation project scoring criteria and rating system provided by staff, and wanted to provide both some general and specific comments. This email has been sent back and forth a few times, and the formatting has sometimes slipped around in odd ways, so I hope it is readable when it gets to you.

We appreciate the desirability of having a straightforward scoring system for transportation projects, and the thoughtful effort that staff has put into coming up with a set of objective criteria to use that reflect a wide variety of interests and input. But we found the proposed scoring and the results problematic, and based on Jerry's experience with ConnectOregon, we're doubtful that we'll easily find a good way to fix them given the limited time available.

Here are Jerry's general comments on transportation project rating systems. His experience with the project selection process used by ConnectOregon is especially relevant:

I do not think that a rating structure such as the one provided in the Overview is workable.

My experience with the project selection process of ConnectOregon leads me to make the following observations:

1. Staff work is important to identify quantitative (measurable) factors that can be considered in the ratings process, but it is very important that this function does NOT serve to predetermine decisions.
2. The criteria (or filters) must reflect considered and current policy decisions. An important element to this is that they must be continually updated, reconsidered and revised, preferably by many sets of eyes, representing different interests, with different backgrounds and points of view. This is not a staff job solely.
3. To be useful the point system needs to make at least some sense. At ConnectOregon meetings, especially in the early years, staff would propose criteria (usually based on statutory language) and suggest a point system, but committee

members would inevitably find that results defied common sense, with ridiculous projects often scoring higher than meritorious projects. It is not easy to quantify many aspects of the transportation system, and it is impossible to develop a scoring system that is perfect. Knowing this from the beginning makes it easier to revise and tweak when it makes sense to do so.

4. It should be noted that the point system itself should be a reasonable reflection of policy choices. If the range of points is just "0" or "1" (the same as "yes" or "no"), its impact on the final score is not very meaningful. But, just as an example, if there is an important wildlife corridor that would be benefitted or harmed by a project, it would be far more useful to have a larger number of points assigned to reflect its importance, with the possibility of negative points. The result more reasonably reflects a policy choice of protecting wildlife corridors, and it allows for ranking the relative importance of the particular corridor. This simple change could be applied to all of the criteria, with the number of allowable points per criterion reflecting its relative importance from a policy perspective. Very surely the project rankings ("priority") of the current system would shift dramatically.

5. Again, I suggest that developing a good project ratings system is a long-term and continuing proposition. The decisions of which filters to use and how many possible points to assign to a criterion are policy decisions, and they should be considered by many sets of eyes and should be revised regularly. (Perhaps the Planning Commission could take this on.) The system that ConnectOregon uses in the actual project selection process requires input from several different committees with very different transportation interests, and when their project rankings are complete, they are subject to consideration by a final review committee that compiles the results and deliberates on the inevitably conflicting committee rankings, eventually voting a final ranking (for further consideration by the Oregon Transportation Commission). Each of the ranking committees has developed its own project ratings system, so the final review committee uses just the committees' rankings as the basis of its deliberations, rather than delving into the various committees' project ratings systems.

To demonstrate the problems with the draft rating system provided by staff, we dug into the details and results and provide these specific comments on that proposal:

1. We need a way to rate projects based only on the factors relevant to the project. For example, why are vehicle crash numbers (and pavement quality) relevant to rating a "scenic viewing opportunity" acquisition (project #45 on Syline Blvd)? Unless the acquisition will somehow reduce vehicle crashes, that factor isn't relevant to this priority – depending on the location it might create more crashes as people pull in and out of the viewing area. How does an event permit calendar improve vehicle safety (project #17)? Perhaps the first decision should be which criteria are relevant to a project, and how those criteria should be weighted (for example, a recreation improvement such as a viewing area that will help repave 300 feet of a 10 mile road segment would get a low weight but a project that helped repave 5 of 10 miles would get a higher weight).

If there have been 10 vehicle crashes in a project area, will the project result in a drop of 100%, 50%, or 0% in the crash rate? Reducing 10 crashes by 50% should score better than reducing 2 crashes by 100% (assuming all crashes are equal in terms of injury/fatality/property damage). The question shouldn't be whether the project is located in an area with a safety problem, but how effectively the project will improve safety.

2. Pavement condition is variable over time and problematic (repaving is a maintenance operation, not a capital improvement). Will we re-score and re-prioritize projects every time a paving-only maintenance project is completed? There is some important synergy with projects that could improve pavement quality. But a safety project that only affects a couple hundred feet on a road section that's miles long has limited value. We need to scale this factor to correspond to the length of the project, and a way to update the scores based on updated pavement condition evaluations each year.

3. Safety projects should be evaluated based on whether the project itself will improve safety, not on how many crashes have occurred on a stretch of road. You could have a "safety improvement" proposed on a short stretch of a long road segment, and the safety project might have little or nothing to do with most or all of the accidents reported on that road segment.

4. We need a more detailed assessment of potential wildlife crossings if we are going to score them. If we can't get a meaningful system-wide assessment of the needs and opportunities for wildlife crossings, then the project's effect on wildlife needs to be assessed no later than the initial project planning stages (and added into the project budget at that time). If a project will widen a road without creating effective new wildlife crossings, its location in a wildlife corridor should result in a negative score, not a positive one.

5. We need a wider range of scores. Why can equity and wildlife corridors never score more than 1 point? Only 2 bike/ped crashes gets a project 2 points, should it be possible to score more points?

6. New recreation (scenic viewing) projects shouldn't rate higher than safety and public transportation improvements, especially when we can't adequately maintain the transportation facilities we have today. We can't keep the roads paved, but we're going to build and pave a new scenic viewing area?

7. We need a score for environmental impact (positive and negative), and for factors relating to the climate action plan. Will a project reduce vehicle miles and/or carbon emissions? Will it provide affordable transportation alternatives in a low income area?

8. Can we delete or redefine projects from the list, for example the safety improvements on Cornelius Pass Road have been redefined by that advisory committee, and the speed humps on Skyline Blvd seem of dubious value. These "traffic calming" humps make it significantly harder to safely pass cyclists, they are dangerous in ice and snow, and they

often aren't effective at reducing vehicle speeds.

9. If we are going to score animal crashes, we need a more thorough reporting mechanism. Do county maintenance staff and emergency responders report all animal crashes today, or only accidents resulting in property damage or human injury? An assessment of wildlife crossing areas would be a more useful measure of the value of a project for wildlife – just getting full reporting of wildlife related accidents could be a struggle, and really should include all roadkill.

10. Project cost should also be a factor. A \$200K project that eliminates 10 vehicle crashes should be a higher priority than a \$5M project that eliminates 10 vehicle crashes (again assuming the crashes are roughly equivalent for injuries/fatalities/property damage). One of the comments we heard over and over from the Cornelius Pass Road Safety Advisory Committee was that they wanted projects to be cost-effective.

We suggest that instead of a defined rating system, there should be a policy that requires the county to establish a system to rate projects on an ongoing basis (at least once every 2 years). That system should be based on an advisory committee, and the local community should have a strong voice in prioritizing projects in their area.

- Some or all of the criteria provided by staff in their draft should be considered by the advisory committee, but the committee needs to have flexibility to adapt the criteria, weights, ratings, etc.
- A similar (possibly the same) process should make decisions about transportation projects to be modified, added, or deleted from the list.
- Both policies need to require strong engagement with local neighborhoods/communities about projects in their area, in addition to appropriate experts.
- Criteria and recommendations by the advisory committee should reflect adopted transportation policies and local input.

Obviously more discussion will be needed, but we wanted to provide this input well in advance of the next transportation subcommittee meeting. We would, of course, be happy to answer questions or discuss possible policy language.

Many thanks, and we look forward to working with you to develop and implement policy.

Carol and Jerry

Memorandum

Comprehensive Plan Update

August 24, 2015

To: Transportation and Public Facilities Subcommittee
Cc: Project Team
From: Joanna Valencia, Senior Transportation Planner
Jessica Berry, Transportation Planner
Re: Policy Recommendations – Transportation

OVERVIEW

This memo presents draft proposed transportation policies and strategies related to topics discussed by the Transportation and Public Facilities Subcommittee at their July 13 meeting. This memo reflects revisions based on the conversation and recommendations from the subcommittee.

Note that some of the transportation policy issues presented here were also relevant to Sauvie Island and were discussed extensively during its recent RAP process. Therefore, staff is recommending that applicable policies from the SIMC RAP be applied countywide either unchanged or with minor revisions as reflected below.

ISSUE SUMMARY

TRANSPORTATION

BICYCLE INFRASTRUCTURE

Bicycle use has become increasingly popular in the Portland Metropolitan Region as a desirable commuter alternative to the passenger vehicle as well as a recreational activity. Within our heavily populated urban areas, significant investment is being made to improve the transportation system for the safety of bicycles now sharing the roads with vehicles. For the more scarcely populated rural areas, much less investment has been made in improving the road system to accommodate bicycles and to reduce road sharing conflicts with vehicles. Promotion of bike touring as an economic engine will likely draw an even greater number of bicyclists in the future to our rural roadways and bike paths.

***Questions:** Given the current conditions of the County's rural road system and the potential increase in bicycle recreation, how can Multnomah County best address increased bicycle/vehicle conflicts? How should the County's rural roads be improved to safely accommodate vehicular, bicycle and pedestrian traffic and to reduce conflicts between them? Are there particular designs the County can adopt for temporary bike/pedestrian infrastructure (assuming larger capital projects may still be 10-20 years in the future).*

Policy

Maintain and improve the transportation system for all modes of travel in a manner that reduces conflict, improves safety, minimizes impacts to the natural environment, and reflects the community's rural character while ensuring efficiency and connectivity. (Modified version of existing County Framework Plan and SIMC RAP policies)

Strategies:

- Explore implementing measures that looks at for traffic calming, traffic diversion, and speed enforcement.
- Consider climate change impacts and the Climate Action Plan's recommended actions when planning transportation investments and service delivery strategies.

Policy

Identify, prioritize, and implement short- and long- term solutions to safely accommodate bicyclists, pedestrians, agricultural equipment, and motor vehicles-, and equestrian use on Sauvie Island County roadways including on-road bikeways, separated multi-use paths, and explore funding options. (Sauvie Island/Multnomah Channel Rural Area Plan (SIMC RAP) draft policy, modified to apply county-wide)

Policy

Consider context sensitive design when reviewing rural road~~way~~ standards to determine appropriate paved shoulder widths to preserve the rural character of roads. Shoulder widening should aim to achieve a minimum 3 foot paved width. (Sauvie Island/Multnomah Channel Rural Area Plan (SIMC RAP) draft policy)

Strategies:

- Explore options for bike pull outs to allow for resting and passing
- Consider bike-friendly road~~way~~ treatments, especially in regards to maintenance of the road~~way~~
- Consider bike and environment friendly materials and treatments such as pervious asphalt
- Explore services and facilities to support bicyclists-, multimodal uses and reduce impacts on surrounding land uses
- Consider use of centerline rumble strips that prioritizes and supports for the purpose of prioritizing and supporting efficient and safe movement of farm and forest vehicles and avoid the use of fog line rumble strips which endangers bicyclists.
- In areas with steep slopes, landslide hazards, or wildlife habitat crossings, first consider alternatives such as signage and TDM strategies that do not require additional impervious surfaces.

Policy

~~Maintain and improve the transportation system for all modes of travel in a manner that reduces conflict, improves safety, and minimizes impacts to the natural environment, and reflects the community's rural character while ensuring efficiency and connectivity. (Modified version of existing County Framework Plan and SIMC RAP policies)~~

~~IMPROVE TRAFFIC FLOW~~ REDUCE TRAFFIC PRESSURE ON WESTSIDE ROADS

Many of the transportation related comments from the Westside open house held last November talked about the need to improve traffic flow on roads in the West Hills. In addition to traffic slowdowns that come from more bicyclists on the road, traffic flow is also hampered by other factors, most notable of which is the increased number of vehicles that now use these roads – far more than the roads were originally designed to handle. Higher traffic volumes can be attributed to residential development in the West Hills and in surrounding areas that interface with it, causing more traffic between where people live and where they work and shop. The County has begun to address some of these issues through planning for safety improvements to Cornelius Pass Road and other improvements identified in Rural Area Plan transportation system plans.

Questions: What are some specific Westside road system improvements or design alternatives that would improve traffic flow? What are the highest priority projects for improving traffic flow on West side roads? Are County roads in the West Hills appropriately classified on the Functional Road Classification Maps? Should the County consider singling out a particular road where bike improvements would be the highest priority?

Policy

~~Promote~~ Develop and implement effective use of signage designed to educate the public about farm equipment using roadways, wildlife crossings and bicycle and pedestrian safety, as well as ~~and~~ additional way finding signage. (Modified Sauvie Island/Multnomah Channel Rural Area Plan (SIMC RAP) draft policy)

Policy

West Hills: Address regional freight mobility and explore alternative routes to West Hills routes through unincorporated Multnomah County for freight. (New policy)

Countywide: Explore best routes for freight mobility through unincorporated Multnomah County.

Strategies:

- Participate in Regional Overdimensional Truck Routes Study and other regional studies as applicable.
- Examine the suitability of use of County roads as truck routes.

~~Support projects that address regional freight mobility and explore alternative routes to West Hills routes through unincorporated Multnomah County for freight. (New policy)~~

Policy

Implement a range of Transportation Demand Management (TDM) ~~policies-strategies~~ encouraging existing businesses and requiring new development (beyond single family residential use and agricultural uses) to help reduce vehicle miles traveled (VMT), maximize use of existing facilities and alleviate congestion on ~~US 30 and~~ county roads, ~~caused by seasonal and special event increasing traffic.~~ (Sauvie Island/Multnomah Channel Rural Area Plan (SIMC RAP) draft policy, modified to apply county-wide including removal of specific SIMC TDM strategies.)

Strategies:

- ~~-Explore Development of a Countywide TDM program.-~~
- ~~Sseek funding opportunities, such as through Metro's Travel Options grant program, to support TDM programming.-~~

Policy

Support the use of bicycle and public transportation as an alternative to single occupant vehicle automotive-use without encouraging purely recreational bicycle-activities that may increase this level-of-vehicle conflict on roadways. (Modified Sauvie Island/Multnomah Channel Rural Area Plan (SIMC RAP) draft policy)

Policy

Promote a transportation system that prioritizes and supports the efficient and safe movement of farm and forest vehicles and equipment. (From the Sauvie Island/Multnomah Channel Rural Area Plan (SIMC RAP) draft policy)

ADDRESS INCREASING TRAFFIC AND SAFETY ISSUES ~~WITHOUT WIDENING/BUILDING MORE ROADS~~

Although rural County residents recognize the need for improving the local road system, they also cherish the rural character of the areas they live in and prefer not to have more roads built or existing roads widened to a significant degree in order to accommodate increased traffic and to provide greater travel safety. Many of the comments from the November open house point out the traffic problems caused by growing population and commute patterns, but seek solutions that will not result in more road construction. Clearly, residents value the trees and the pastoral countryside characteristic of Multnomah County's rural areas and do not want to see the landscape diminished by construction of new and expanded roads, particularly in areas of steep slopes where large retaining walls would be necessary. Many residents also want to reduce impacts on wildlife in these areas. Rural residents will see even greater demands placed on the local road system as nearby urban lands are developed. Possible solutions for addressing increasing traffic and safety concerns might include public transit, strategically located traffic signals, dedicated bike paths, and sidewalks or wider shoulders in appropriate places.

Questions: Which areas of the county not currently served by public transit ought to be? How do we address increased traffic (e.g. commuters and freight) on County roads? Should Multnomah County consider a policy to encourage minor, low-cost safety improvements when performing basic maintenance such as lane striping or overlays?

Policy

Work with the Oregon Office of Emergency Management, Multnomah County Emergency Management and Multnomah County rural fire protection districts to ensure that the transportation system supports effective responses to emergencies and disasters. (*Sauvie Island/Multnomah Channel Rural Area Plan (SIMC RAP) draft policy, modified to apply county-wide*)

Policy

Coordinate and work with transit agencies and service providers (including, but not limited to, TriMet, CC Rider, and C-Tran) to identify existing transit deficiencies and the improvements necessary to increase access to transit services by potential users. (*Sauvie Island/Multnomah Channel Rural Area Plan (SIMC RAP) draft policy*)

Policy

~~County staff should w~~ork with ODFW and other partners to identify wildlife corridors and concentrations of wildlife crossings on county roads, and ~~work to~~ ensure that project design is wildlife friendly and mitigated where possible. (*Modified Sauvie Island/Multnomah Channel Rural Area Plan (SIMC RAP) draft policy*)

Strategies:

- Review and update Multnomah County Design and Construction Manual to include wildlife friendly design options that will implement applicable policies in the Comprehensive Plan

BETTER ROAD MAINTENANCE

With increased use of the County's rural roads comes the need for more road maintenance. Rural residents have cited better road maintenance as a major concern. The key to sustaining an effective, ongoing maintenance program is funding. State and local gas tax money is the customary source of funding used for local road maintenance. The state gas tax has not been adjusted to keep pace with the growing need, the increasing cost of road maintenance and diminishing revenues associated with improved fuel efficiency. The County has a local gas tax which similarly has not been adjusted to reflect cost increases.

Question: Should the County consider adopting an increase to its current local gas tax or adopting other funding sources such as user fees dedicated to road maintenance?

Policy

Explore alternative supplemental funding sources to improve County's road maintenance, safety projects, and other improvements. (New policy)

Strategies:

- Consider long term maintenance costs with development of capital projects
- Review and update County's Road Maintenance Program to implement applicable policies and strategies of the of Comprehensive Plan and SIMC Rural Area Plan.

Memorandum

Comprehensive Plan Update

August 24, 2015

To: Transportation and Public Facilities Subcommittee
Cc: Project Team
From: Joanna Valencia, Senior Transportation Planner
Jessica Berry, Transportation Planner
Re: Policy Recommendations – Existing Transportation Policies

OVERVIEW

This memo:

1. Contains a summary of the layout of prior Transportation System Plan Policies from existing county documents
2. Starts to look at a proposed layout for the Comprehensive Plan and TSP update
3. Contains proposed revisions to the existing policies, including regrouping of policies into one and deletion of duplicative policies.

ISSUE SUMMARY

TRANSPORTATION POLICIES

PLANNING DOCUMENTS WITH TRANSPORTATION POLICIES

The following county documents have Transportation policies and strategies that have been reviewed and approved through County planning processes. Each one of these plans has transportation policies that apply either to the entire county or to the area they represent. The documents cover 87 policies (and significantly more strategies) that fall into several themes, which are shown below. Based on the overlap and/or duplication of policies and strategies across the various documents, some policies have been regrouped and duplicative policies deleted as staff has recommended below.

	Plan	Number of policies	General themes or outline
1	County Comprehensive Plan – Transportation chapter	5	Transportation system Bike and Pedestrian Trafficways Transit
2	Columbia River Gorge NSA Rural Area Plan; Management Plan	1	Parking

	Plan	Number of policies	General themes or outline
3	Columbia River Gorge NSA Management Plan	3	Trails and pathways Transportation System Recreation resources
4	East of Sandy River Area Plan – Transportation policies	3	Scenic highway, mobility Non-motorized transportation
5	West of Sandy River Area Plan – Transportation policies	11	Balanced transportation system Equity Safe speeds Safety for bike/ped Rural character Environment Balanced system Coordination with agencies Commodity movement Cost-effective transportation
6	West Hills Area Plan – Transportation policies	5	Mobility, Freight Environment Maintenance Funding Regional trail system
7	Sauvie Island/Multnomah Channel Rural Area Plan (draft)	17	Safety Commodity movement Non-motorized Environment Mobility, Rural character Transportation Demand Management Coordinate with agencies Education/outreach Transit Enforcement Connectivity Restroom facility
8	Rural Westside TSP	15	Safety Roadway width/design Ridesharing Equity Multiuse paths Local roads/regional roads Utilities Coordination with agencies Commodity movement Stakeholder participation Safety

	Plan	Number of policies	General themes or outline
9	Pedestrian Master Plan	15	Ped networks Standards Aesthetics Maintenance Safety Transit-Ped connection Funding Education/outreach
10	Bicycle Master Plan	8	Facility types Funding Maintenance Outreach/education
11	Sauvie Island TSP (draft)	4	Safety Balanced system Rural character Economy Funding

COMMON THEMES

The following Policy Categories are recommended based on the themes shown above.

1. Overall Transportation System (includes balanced transportation, functional classifications, rural character)
2. Active Transportation (includes bicycle, pedestrian, trails), new theme: Safe Routes to School
3. Mobility and Freight (includes traffic calming)
4. Transportation Demand Management (includes Ridesharing, Outreach, Transit)
5. Safety (Includes Enforcement)
6. Maintenance
7. Funding
8. Equity
9. Environment
10. Health

OVERALL TRANSPORTATION SYSTEM

The following Policies and strategies pertain to the overall transportation system.

Policy (from WSR)

Enhance all modes of travel in a manner consistent with the ~~rural~~ character of the ~~Orient Rural Community and Pleasant Home Rural Service Center~~ area where the transportation system improvement is located.

Strategy: Apply context sensitive roadway improvements and evaluation of projects.

Policy (consolidated from Comprehensive Framework plan policies 33a and 34)

Implement and maintain a balanced, safe, and efficient transportation system using the existing roadway network.

Strategies:

A. Review and maintain a trafficway classification system;

- a. Trafficways should be classified into a functional network that is integrated with land uses and travel needs. The hierarchy of the functionally classified network should be based on trip types and length, traffic volume and travel modes, and access to adjacent land uses within travel corridors.

B. Improve streets to the standards established by the classification system, where necessary and/or appropriate, to mitigate identified transportation problems;

C. Implement access management standards

D. Place priority on maintaining the existing trafficways;

E. Review land use development and condition improvements on County Roads based on functional classification.

- a. The transportation system should be planned and developed consistent with land uses to be served with consideration given to planned land uses in adopted plans and resulting forecasted future travel demands. The transportation system should be developed in coordination with the development of land uses.

~~D-F. Maintain inventory of current and future deficiencies on County road/bike/pedestrian ways as the basis for Capital Improvement Plan and Program.~~

~~E. Developing additional transportation facilities to meet community and regional transportation needs where capacity of the existing system has been maximized through transportation system management and demand management measures;~~

~~F. Providing a safe and convenient pedestrian environment with road crossings and sidewalk network designed for pedestrian travel;~~

~~G. Limiting the number of, and consolidating ingress and egress points, on arterials and major collectors to preserve traffic flow;~~

~~H. Reducing reliance on the automobile and assuring that the planned transportation system supports patterns of travel and land use which will avoid or mitigate problems of air pollution, traffic congestion and community livability;~~

~~I. Encouraging ride-share and flextime programs to help meet the projected increase in travel demand. The County will work with METRO and Tri-Met to develop ride-share programs, flextime and other transportation demand strategies to achieve the ride-share goal given in the Regional Transportation Plan; and~~

~~J. Implementing the Street Standards Chapter 11.60 and street standards codes and rules, including adherence to access control and intersection design guideline criteria, and establishing a procedure for allowing variances from that ordinance.~~

~~K. Considering and allowing for implementation of regional street design elements (as shown in "Creating Livable Streets: Street Design for 2040" (1997) when planning for improvements to facilities designated on Metro's Regional Street Design Map. [Added 1999, Ord. 926 § 2]~~

~~L. Improving local circulation by keeping through trips on arterial streets and minimizing local trip lengths by increasing street connectivity. [Added 1999, Ord. 926 § 2]~~

~~Excluding that portion of Multnomah County included in the Columbia River Gorge National Scenic Area, this policy, and the functional classification of trafficways map accompanying this policy, shall control over conflicting provisions of community plans or other preexisting plans in determining the functional classification of trafficways. Trafficways located within the Columbia Multnomah County Physical Support Systems Policies River Gorge National Scenic Area are subject to, and superceded by, provisions of the Columbia River Gorge Scenic Area Management Plan.~~

~~STRATEGIES~~

~~A. TRAFFICWAYS~~

~~Adequate trafficways are essential for the efficient movement of goods and people. County trafficways should be designed and built to accommodate travel by a variety of travel modes, to provide access to abutting properties, and as locations for utilities within the trafficway right-of-way. To develop an efficient and safe trafficway system, the following strategies should be pursued:~~

~~1. Classification of Trafficways: Trafficways should be classified into a functional network that is integrated with land uses and travel needs. The hierarchy of the functionally classified network should be based on trip types and length, traffic volume and travel modes, and access to adjacent land uses within travel corridors.~~

~~2. System Efficiency: An inventory of the trafficway system should be maintained to determine current and future deficiencies as the basis for a capital improvements program. The trafficway system should:~~

~~a. Be designed and operated to optimize travel capacities within acceptable levels of service; and~~

~~b. Be consistent with land uses and transportation needs as determined by local and regional plans.~~

~~3. Fostering Choice: The trafficway system should be managed to provide opportunities for choices among available travel modes so that reliance on automobiles as single-occupant vehicles can be reduced, and so that total vehicle miles traveled as a measure of automobile use per capita can be reduced in the future, in accordance with the State Transportation Planning Rule.~~

~~4. Environmental and Social Values: Development and operation of the County trafficway system should promote air quality consistent with federal standards, preserve open space and agricultural and forest lands consistent with local plans, protect scenic views, protect~~

~~neighborhood cohesiveness and historic and cultural sites, and minimize the dislocation of residents and businesses resulting from county transportation projects.~~

~~5. Safety: Safety is a primary objective in the development and operation of the trafficway system through traffic signing and signalization, speed limits and speed control measures, road design and access control measures. Through the use of accepted design and traffic management principles and practices, traffic accidents and conflicts between pedestrians, bicyclists, equestrians and motorists can be minimized. Multnomah County Physical Support Systems Policies~~

~~6. Economics: Work with the business community and regional and state agencies to assure efficient movement of goods and services in and through the County, including coordination of the trafficway system with inter-modal facilities, and use of public right-of-way for power and telecommunication purposes.~~

~~7. Freight movement: County trafficways shall provide for the movement of freight on facilities designed and built to accommodate the types and frequency of freight trips, and which provide for convenient access to major highways, industrial areas and resource extraction sites. The County should identify a trafficway network for the purpose of freight movement.~~

~~8. Aesthetics: Trafficways are an important visual element in the urban and rural environment. As public spaces, trafficways should facilitate the public's use of the right-of-way in a manner that provides an aesthetic benefit to the community through facility design, landscaping, and their relationship to the natural and built environment.~~

~~9. Street Connectivity: Local street design impacts the effectiveness of the regional system when local travel is restricted by a lack of connecting routes, and local trips are forced onto the regional network. Streets should be designed to keep through trips on arterial streets and provide local trips with alternative routes. [Added 1999, Ord. 926 § 2]~~

~~B. TRANSPORTATION PLANNING~~

~~As part of Multnomah County's ongoing transportation planning program, the County should strive to anticipate and provide for the future travel needs of County residents, businesses and visitors.~~

~~1. Compliance with Rules and Regulations: Multnomah County should comply with existing and future state and federal legislation and resulting rules and regulations regarding environmental, energy, land use and transportation measures affecting the County trafficways system.~~

~~2. Comprehensive Framework Plan Policy Revisions: Multnomah County should revise CFP Policy 33 to include Policy 33d: Pedestrianways, that incorporates all policy references to the provision of pedestrian circulation, and a map of the County pedestrian network. CFP Policy 35: Public Transportation should be amended to incorporate all policy references to the transit~~

~~classification system and transportation demand management, and a map of the County transit system.~~

~~3. Land Use Coordination: The transportation system should be planned and developed consistent with land uses to be served with consideration given to planned land uses in adopted plans and resulting forecasted future travel demands. The transportation system should be developed in coordination with the development of land uses.~~

~~4. System Optimization: Transportation planning should strive to solve existing Multnomah County Physical Support Systems Policies transportation problems, in response to community input, by maximizing the operational capacity of the current system using available management techniques, and providing new or expanded facilities only where necessary.~~

~~5. Public Input: Community input is vital to the transportation planning process and should be sought at key points in each planning process, including project development.~~

~~6. Modal Plans: Modal plans should be developed to establish truck, pedestrian and transit networks on the County trafficway system in coordination with regional and local transportation plans, and the appropriate CFP policies amended to incorporate the network maps. Modal networks plans for the County trafficways and bikeways should be maintained in coordination with regional and local transportation plans.~~

~~7. Transportation Studies: Transportation studies and corridor analyses should be conducted to determine transportation needs and identify and analyze problems and alternative solutions, giving the public and communities the opportunity to participate in and effect the decision process.~~

~~Specific corridor studies should include:~~

~~Mt. Hood Parkway: A through-route connection between Interstate 84 and US-26 in the East County area.~~

~~201st/202nd Avenues: Study of the capacity needs of a connection between Powell Blvd. and Sandy Blvd. in the vicinity of 201st/202nd Avenues.~~

~~C. COMMUNITY DEVELOPMENT ORDINANCE~~

~~Measures to plan for, develop, and manage the County trafficway system should be codified in Multnomah County Code: Title II: Community Development.~~

~~1. Street Standards: Codes and Rules should be revised specifying characteristics, permitting requirements and operational measures necessary to implement the County transportation system identified in CFP Policies 33c, 33d, 34, and 35.~~

~~2. The Multnomah County Transportation Capital Improvement Plan and Program identifies and ranks by criteria of need, trafficway deficiencies and future capital needs,~~

~~identifies future capital, and programs future transportation improvements based on a schedule of capital available for expenditure on the trafficway system.~~

Strategy (formerly Policy 36)

Implement goals and policies of the comprehensive plan by requiring:

- A. The dedication of additional right-of-way appropriate to the functional classification of the street ~~given in Policy 34 and Chapter 11.60~~ as outlined in the MCRR;
- B. The number of ingress and egress points be consolidated through joint use agreements;
- C. Vehicular and truck off-street parking and loading areas;
- D. Off-street bus loading areas and shelters for riders;
- ~~E. Street trees to be planted; Multnomah County Physical Support Systems Policies~~
- ~~Policy 36: Transportation System~~
- ~~F.E.~~ A pedestrian circulation system as ~~given in the sidewalk provisions, Chapter 11.60~~ outlined in the MCRR;
- ~~G.F.~~ Implementation of the Bicycle Corridor Capital Improvements Program;
- ~~H.G.~~ Bicycle parking facilities at bicycle and public transportation sections in new commercial, industrial and business developments; and
- ~~I. New streets improved to County standards in unincorporated County may be designated public access roads and maintained by the County until annexed into a city, as stated in Ordinance 313.~~

~~West of Sandy River Policy 28~~

~~Implement a balanced transportation system that is safe and efficient in meeting the needs of all modes of travel for area residents and those traveling through the area by improving roadways to provide safe conditions for motorized and non-motorized travel.~~

~~Strategies:~~

- ~~28.1 Monitor Work with ODOT to obtain traffic data, including crash rates for all modes of travel, and focus safety improvement resources on the to inform road improvement projects at locations with high rates and/or severity of crashes.~~
- ~~28.2 Implement operational improvements within budgetary constraints.~~
- ~~28.3 Apply the County's access management and driveway spacing standards for proposed new access locations.~~
- ~~28.4 Implement feasible and cost-effective intersection consolidations to reduce potential connect points.~~
- ~~28.5 Consolidate Encourage shared driveway access points in the rural centers through the land development process and other appropriate methods.~~

- ~~28.6 Coordinate with Metro to identify potential improvements to the roadways providing direct access to Oxbow Regional Park.~~
- ~~28.7 Ensure that the County's Capital Improvement Plan evaluation criteria adequately considers the needs of the West of Sandy River Rural Area fairly and equitably address transportation needs throughout the county.~~
- ~~28.8 Update Keep County ordinances to meet up to date in meeting the requirements of the Transportation Planning Rule.~~

~~contained several policies pertaining to the overall transportation system. These policies also directly influence Multnomah County Road Rules and the Design and Construction Manual, which inform and direct the transportation development review process. The Trafficways section of the previous Comp Plan TSP outlines roadway functional classifications~~

ACTIVE TRANSPORTATION

Active Transportation includes bicycle and pedestrian facilities, trails, safe routes to school, and equestrian use (where appropriate). All of the policy documents listed above contain active transportation policies whether called out at bicyclist, pedestrian, non-motorized, or trails.

Overall Active Transportation Policy:

Develop and support programs and projects that educate and increase the safety of non-motorized transportation options in the County.

Strategies:

- Maintain Bicycle and Pedestrian Community Advisory Committee to provide input on non-motorized transportation infrastructure and programs
- Continue to participate in regional trails committee and other trail related projects and project development teams
- Build Safe Routes to School partnerships
- Continue to review development proposals and make recommendations for improvements consistent with Overall Transportation System policies regarding functional classification

POLICY (from Comp Plan 33C: Bicycle and Pedestrian Systems)

~~It is the County's Policy to c~~Create a balanced and safe multimodal transportation system in order to reduce dependency on automobile use and to reduce vehicle miles traveled (VMT) by implementing bicycle and pedestrian systems as integral parts of the County-wide transportation system through:

- A. ~~Identifying a connected network of pedestrian and bicycle facilities on the map titled Multnomah County Bikeway System, which provides the framework for future walkway~~

~~and bikeway projects and helps assure that future street improvement projects on a designated bikeway will be designed to accommodate bicycles.~~

B. Assuring that future street improvement projects on a designated bikeway are designed to accommodate and improve safety for bicyclists.

~~A. Identifying a connected network of pedestrian facility improvements on the map titled Multnomah County Pedestrian System, which provides the framework for future pedestrian improvement projects and assures that future street improvements will be designed to accommodate pedestrians.~~

C. Assuring that future street improvement projects on designated walkways are designed to accommodate and improve safety for pedestrians and transit users.

~~CD. Including standards for bikeways and walkways throughout in the Multnomah County Roadway Design and Construction Manual based on national and state best practices. to include the most current design standards and innovations for providing bicycle and pedestrian improvements.~~

~~DE. Providing for bicycle and pedestrian travel through the development and adoption of a County-wide Transportation Capital Improvements Program (CIP) that includes all the bikeways and walkways identified in the Multnomah County Bikeway and Pedestrian System Maps.~~

~~EF. Placing priority on constructing and maintaining the transportation system to improvements that reduce the number of fatal or serious injury crashes involving bicyclists and pedestrians.~~

~~FG. Coordinate with Metro to implement bicycle and pedestrian networks in the Regional Transportation Plan (RTP), the Regional Transportation Functional Plan (RTFP), and other local transportation system plans. Participate in updates to regional and local transportation plans.~~

~~GH. Promoting bicycling and walking as vital transportation choices.~~

I. Support transportation options programming in the region including Safe Routes to School, bicycle tourism initiatives, the development of future Transportation Management Associations (TMA's), and other programs funded through the Regional Travel Options program.

J. Support programs and policies that increase awareness and education about safety on the transportation system for all modes and users.

STRATEGIES

The following Strategies should be used to implement the County's bicycle and pedestrian system:

- A. Provide for bicycle and pedestrian facilities on the Multnomah County Bikeway System Map and the Multnomah County Pedestrian System Map through:
 1. The land development process where half-street improvements or dedication of a right-of-way or easement can be required as a condition of land development.
 2. Road improvements, where bicycle and pedestrian facilities can be designed, constructed and funded as part of the road improvement.
 3. Allocation of the County's 1% bikeway funds for stand alone bicycle and pedestrian improvements based on the priorities established in the County's CIP and with input from the Multnomah County Bicycle and Pedestrian Citizen Advisory Committee.
 4. Allocation of roadway funds dedicated to Americans with Disabilities Act compliance for curb ramp and sidewalk improvements in accordance with the Act.
 5. Aggressively seeking grants to stretch the funds available for bicycle and pedestrian improvements.
- B. Periodically review and update the County Roadway Design and Construction Manual to be consistent with the Oregon Bicycle and Pedestrian Design Guide, the latest edition of the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities., and the 2011 Proposed Right of Way Accessibility Guidelines (PROWAG) until design guidelines are adopted to enhance minimum requirements set forth in the Americans with Disabilities Act of 1990 (ADA).
- C. Ensure the continuation of a County Bicycle and Pedestrian Program that includes the following:
 1. A citizen involvement process including staffing the Multnomah County Bicycle and Pedestrian Citizen Advisory Committee for review and comment on proposed bicycle and pedestrian project criteria and project design.
 2. Identification of criteria to prioritize projects for inclusion in the CIP with special consideration given to safety, health and equity.
 3. Identification of bicycle and pedestrian facility projects based on the system maps and prioritized for funding through the various funding sources available.
 4. A project review and comment process to include the planning, engineering, and operations and maintenance sections, and the appropriate city or cities within Multnomah County.

Safe Routes to School Policy

Support and promote bicycle and pedestrian safety and education in County Schools

Strategies:

- Develop and maintain an active non-infrastructure program in schools (education, outreach, enforcement)
- Continue to identify and fund bicycle and pedestrian infrastructure to increase safety around schools – through Capital Improvement Program

Note: Bicycle and Pedestrian Plans contain additional strategies, some of which could be included here.

MOBILITY AND FREIGHT

Several policies from area plans reference maintaining rural character, maintaining county ownership and maintenance of routes, reducing through traffic on rural local roads, and indentifying freight and farm to market routes.

Policy (from Rural Westside TSP)

Promote transportation alternatives for the movement of freight.

Policy (from multiple plans)

Provide a transportation system that ensures economically viable transportation of farm vehicles and equipment as well as transport of goods from farm to market.

Policy (from multiple plans)

Oppose placement of new regional roadways on Multnomah County roads, should such roadways be contemplated by any regional transportation authority in the future.

Policy (from multiple plans)

Oppose placement of new regional roadways on Multnomah County roads, should such roadways be contemplated by any regional transportation authority in the future.

Policy (from RWTSP)

Discourage through traffic on trafficways with a functional classification of rural local road

Strategies:

- Reduce travel conflicts by providing appropriate facilities, signs, and traffic marking based upon user type and travel mode.
- On rural local roads with heavy through traffic, consider implementing appropriate traffic calming measures to reduce such traffic.

TRANSPORTATION DEMAND MANAGEMENT & TRANSIT

Transportation Demand Management covers parking management strategies, strategies to reduce overall use of roadways, education of bicyclists, drivers, and other users of the road, as well as outreach and promotional campaigns. Sauvie Island TSP (draft) contains many very useful strategies that should be included in the Comp Plan TSP and applied countywide. Additional language for education of ALL users should be included.

Policy (from Rural Westside TSP)

Objective A: provide a transportation system that functions at appropriate safety levels for all motorized and non-motorized traffic.

Strategies:

- Monitor accident rates for all modes of transportation and recommend implementation of low-cost operational improvements within budgetary limits. Target resources to reduce accident potential in the top 10 percent of accident locations
- Continue to monitor high accident location sites for all modes of transportation
- Implement access management standards to reduce vehicle conflicts and maintain the rural character of the area

Policy (From West of Sandy River TSP)

Actively support safe travel speeds on the transportation system.

Strategies:

- Support speed limit enforcement.
- Apply design standards that encourage appropriate motor vehicle and truck speeds.

MAINTENANCE

- See policy in new policies memo.

FUNDING

Funding was referenced in each of the policy documents. Primarily it was referenced through the Capital Improvement Program. The Multnomah County Transportation Capital Improvement Plan and Program identifies and ranks by criteria of need, transportation deficiencies and future capital needs, identifies future capital, and programs future transportation improvements based on a schedule of capital available for expenditure on the transportation system.

Policy (from WSR)

Maximize cost-effectiveness of transportation improvements using the Capital Improvement Plan process and maintenance program.

Strategies:

- Coordinate intersection improvements as appropriate through the County's Capital Improvement Plan and the County's maintenance program.
- Provide minor improvements during maintenance projects where possible.

Policy (from WH, incorporating bike, ped, and other plans)

Ensure the Capital Improvement Plan evaluation criteria adequately evaluates:

- Rural needs
- maintenance
- Cost effective improvements
- Safety
- Bicycle and pedestrian improvements

ENVIRONMENT

Policy (from Comp Plan Policy 33)

Avoid and minimize impacts to the natural environment, fish, and wildlife habitat when applying roadway design standards.

Strategies:

- Implement standards and best practices for all transportation projects with regard to water quality treatment - the reduction, detention and infiltration of stormwater runoff from existing and new impervious surfaces - to improve water quality as well as fish and wildlife habitats, consistent with requirements of the National Pollutant Discharge Elimination System - Municipal Separate Storm Sewer System Phase I Permit and the Water Pollution Control Facility - Underground Injection Control Permit, issued by the Oregon Department of Environmental Quality under the Federal Clean Water Act and Safe Drinking Water Act.
- Implement standards and best practices for all transportation projects with regard to protection of existing, and restoration of riparian buffers where waters of the state border current and future rights of way.
- Implement a program for the assessment and prioritization of fish passage barriers at stream crossings following the Oregon Department of Fish and Wildlife (ODFW) Fish Passage Rules.
- Secure funding for the restoration of existing fish passage barriers at stream crossings to meet ODFW Fish Passage Rules.
- Identify and protect critical fish and wildlife migration corridors to prevent the further fragmentation of existing habitats by future project alignments.

EQUITY

This policy language is from WSR TSP and WH TSP. It recognizes population differences but doesn't necessarily apply the equity lens that the County now recognizes. It should be rewritten to reflect new countywide policy.

Policy: Encourage mobility for the transportation disadvantaged

Strategy: work with public transportation providers to monitor and provide for the transportation needs of the transportation disadvantaged

HEALTH

Need Policy Language – work with health department, promote active transportation, livable communities, etc.

Memorandum

Comprehensive Plan Update

August 24, 2015

To: Transportation and Public Facilities Subcommittee
Cc: Project Team
 Susan Wright, Associate Engineer, Kittelson & Associates
From: Joanna Valencia, Senior Transportation Planner
 Jessica Berry, Transportation Planner
Re: Policy Recommendations – Transportation

OVERVIEW

The next several pages include a review of “filters” (or project selection criteria) that are used to evaluate projects identified through the planning process. The filters reflect the policies that have been discussed at the TSP subcommittee and the Bike and Pedestrian Citizen Advisory Committee.

Filters include:

1. Safety: Bike/Ped, Vehicles, and Animal Crashes
2. Bike Routes: identified by committee
3. Wildlife Corridors
4. Equity: (using household income as indicator)
5. Community Destinations
6. Pavement Condition

Criteria	Rating		
	0	1	2
Safety: Bike/Ped	No crashes in project area	1 crash in project area	2+ crashes in project area
Safety: Vehicles	No crashes in project area	0-10 crashes in project area	10+ crashes in project area
Safety: Animal Crashes	No crashes in project area	1 crash in project area	2+ crashes in project area
Bike Route	Not on a designated bike route	On a County designated shared connection	On County designated bike route
Wildlife Corridors	No wildlife corridors are in the project area	A wildlife corridor is in the project area	-
Equity	Project not in a lower income area	Project within a lower income area	-
Community Destinations	No community destinations in project area	1-2 community destinations in project area	3+ community destinations in project area
Pavement Condition	PCI of > 70	PCI of 50-70	PCI of <50

Project Number	Project Name	Project Description	CIPP/TSP/RAP?	Priority	Priority Score	Safety			Bike Routes	Vildlife Corridor	Equity	Destination	Pavement Condition
						Ped/Bike	Vehicles	Animal					
24	Loop Road Shoulder Improvements	Provide 3-4 foot paved shoulders on the loop roads including Reeder Road, Sauvie Island Road, and Gillihan Road.	TSP	high	10	0	2	1	1	1	0	2	3
29	US 30	Ride share parking – Provide parking for 100 spaces next to truck scale near county line. \$325,000	RAP	high	10	1	2	2	2	1	0	2	0
31	US 30	Scenic viewing opportunities – Access provided across railroad tracks adjacent to Burlington Bottoms using existing road approaches (per location). Exact locations to be determined. Providing pull outs of widening along US 30 will not be acceptable on the basis of safety. \$350,000	TSP RAP	high	10	1	2	2	2	1	0	2	0
30	US 30/Cornelius Pass Road	Public transportation – Provide commuter transit service from Columbia County over Cornelius Pass Road to Washington County. \$78,000/year	RAP	high	9	0	2	2	2	1	0	1	1
44	Skyline Boulevard	Safety improvement – Install traffic calming devices such as speed humps to reduce speeds from UGB to Cornelius Pass Road. \$485,000	TSP	high	8	1	2	0	1	0	0	2	2
45	Skyline Boulevard	Scenic viewing opportunities – Acquire property through fee or donation for development of parking area adjacent to roadway. \$350,000	TSP	high	8	1	2	0	1	0	0	2	2
54	Evan Road: Hurlburt Road to HCRH	Shoulder bikeway. \$4,463,908	CIPP	high	8	1	2	0	1	1	0	2	1
57	Orient Road/Dodge Park Boulevard Realignment	Realign the intersection to create a more perpendicular angle. Driveway modifications would be required to serve the autobody shop in the northwest quadrant of the intersection.	RAP	high	8	1	2	0	1	0	0	2	2
66	Orient Drive/Dodge Park Boulevard (PN 703)	Widen Orient Drive to create eastbound left turn lane. \$373,616	CIPP	high	8	1	2	0	1	0	0	2	2
71	302 nd Avenue: Division to Bluff	Shoulder bikeway. \$3,878,852	CIPP	high	8	1	2	0	1	0	0	2	2
17	Event Permit Calendar	Develop event permit calendar and implement use.	TSP	high	7	0	2	1	1	0	0	2	1
35	Skyline Boulevard	Safety improvement – Add to shoulders from UGB to Cornelius Pass Road (1.49 miles). \$ 2,039,000	CIPP TSP	high	7	1	1	0	1	0	0	2	2
38	Cornelius Pass Road	Safety and capacity needs – Study to look at climbing lanes, guardrail, drainage, addition of shoulders, and alternate routes. \$180,000	TSP	high	7	0	2	2	0	1	0	1	1
46	Cornelius Pass Road	Safety improvement – Construct pullouts at a number of locations for the purposes of speed enforcement. \$750,000	TSP	high	7	0	2	2	0	1	0	1	1
68	302 nd Avenue/Lusted Road (PN 704)	Realign Lusted Road and Pipeline Road to create perpendicular intersection at 302 nd , add left turn lane to each leg of intersection. \$5,613,717	CIPP RAP	high	7	1	1	0	1	0	0	2	2
72	Orient Drive: Welch Road to Dodge Park Boulevard	Shoulder bikeway. \$1,523,441	CIPP	high	7	1	2	0	1	0	0	2	1

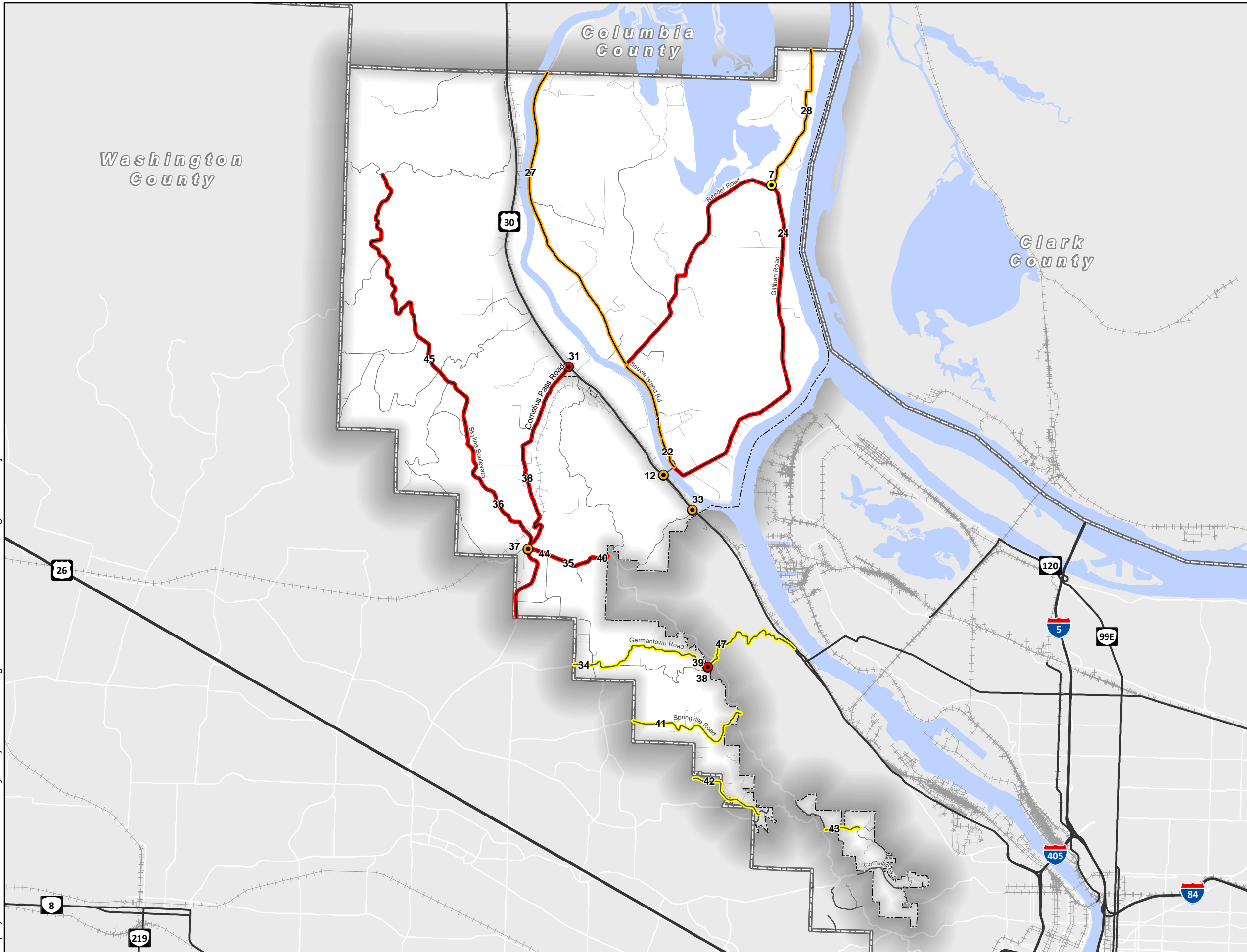
Project Number	Project Name	Project Description	CIPP/TSP/RAP?	Priority	Priority Score	Safety			Bike Routes	Wildlife Corridor	Equity	Destination	Pavement Condition
						Ped/Bike	Vehicles	Animal					
81	Corbett Hill Road/Historic Columbia River Highway (PN 147)	Improve intersection alignment by making stops at right angle. \$3,770,920	CIPP	high	7	1	2	0	1	1	1	0	1
1	Sauvie Island Road Multi-Use Path	Construct multi-use path parallel to sections of Sauvie Island Road located on the levee.	TSP CIPP	medium	6	0	1	1	1	1	0	1	1
21	SIMC Travel Demand Management Plan	Develop a Travel Demand Management Plan for the island that further explores each of the potential TDM strategies and explores and identifies a potential Transportation Management Association (TMA) for Sauvie Island. Elements of the TDM plan should include input from projects 14-20.	TSP	medium	6	0	2	0	0	0	0	2	2
40	Skyline Boulevard	Speed zone study – Conduct speed study to determine appropriate speed limit for Skyline Boulevard from Cornelius Pass Road east to city limits of Portland. \$5,000	TSP	medium	6	1	2	0	0	0	0	1	2
49	Cornelius Pass Road: (old) St. Helens Road to MP 2	Shoulder bikeway. \$3,684,602	CIPP	medium	6	0	2	1	0	1	0	1	1
65	Orient Drive/Bluff Road (PN 706)	Widen Orient Drive to create eastbound left turn lane to Bluff Road, realign Bluff and Teton to create perpendicular intersection. \$685,247	CIPP RAP	medium	6	0	2	0	1	0	0	2	1
70	Dodge Park Boulevard: 302 nd to County Line	Shoulder bikeway. \$7,592,686	CIPP	medium	6	0	2	0	1	0	0	1	2
74	Oxbow Drive: Division Drive to Hosner Road	Shoulder bikeway. \$5,393,681	CIPP	medium	6	0	2	0	1	0	0	1	2
2	Advisory Bike Lane Study	Conduct engineering study to identify potential locations for an advisory bike lane pilot test and verify adequate sight distance.	TSP	medium	5	0	2	1	1	0	0	0	1
3	Advisory Bike Lane Pilot Project	Implement advisory lane pilot test project. The project will temporarily implement an advisory lane and be monitored for compliance and use.	TSP	medium	5	0	2	1	1	0	0	0	1
9	Share the Road Improvements	Install warning/advisory signs are to inform motorists of bicycles and farm equipment sharing the road along facilities (all roads under existing conditions)	TSP	medium	5	0	0	0	1	0	0	2	2
12	US 30/Sauvie Island Road Intersection Upgrades	Upgrade the traffic signal controller at the intersection of US 30 and Sauvie Island Road.	TSP	medium	5	0	1	0	2	1	0	0	1
13	US 30/Sauvie Island Road Intersection Signal Study	Conduct study of signal timing at the intersection of US 30 and Sauvie Island Road for possible truck extensions, westbound detection issues, and optimization of green and red time.	TSP	medium	5	0	1	0	2	1	0	0	1
14	Parking Information Distribution Study	Study to determine the most effective and feasible method to implement distribution of parking information.	TSP	medium	5	0	2	1	1	0	0	0	1
15	Permitting Study	Work with ODF&W to implement an increased parking permit fee and/or limit number of permits. Include bicycle permitting.	TSP	medium	5	0	2	1	1	0	0	0	1

Project Number	Project Name	Project Description	CIPP/TSP/RAP?	Priority	Priority Score	Safety			Bike Routes	Vildlife Corridor	Equity	Destination	Pavement Condition
						Ped/Bike	Vehicles	Animal					
16	Sauvie Island Park-n-Ride and Shuttle Service Study	Study to determine location of off-island park-n-ride lots and plan for on-island shuttle service for events.	TSP	medium	5	0	2	1	1	0	0	0	1
18	Daily Trip Study	Study to explore a daily trip cap.	TSP	medium	5	0	2	1	1	0	0	0	1
19	Ticket and Permit Enforcement Study	Study the implementation of increased permits and enforcement of permits; including illegally parked vehicles, beach day use permits, and existing permit compliance.	TSP	medium	5	0	2	1	1	0	0	0	1
22	Sauvie Island Road/Reeder Road Intersection Improvement Study	Conduct an engineering/safety study to determine impacts and safety considerations for implementing three-way stop-control and channelized right-turn for northbound traffic at the intersection of Sauvie Island Road and Reeder Road.	TSP	medium	5	0	1	0	1	0	0	2	1
23	SIMC Rail Study	Conduct rail corridor study to identify feasible local street connections and railroad crossing consolidation and upgrades. Project will include coordinate with owners of the private rail crossings.	TSP	medium	5	0	2	1	1	0	0	0	1
27	Sauvie Island Road Shoulder Improvements	Provide 3-4 foot paved shoulders on Sauvie Island Road from Reeder Road to the Columbia County line.	TSP CIPP	medium	5	0	1	0	1	1	0	1	1
32	Cornelius Pass Road	<i>U.S. 30 intersection improvements</i> – Include a northbound turn lane and shared northbound left-turn/right-turn lane.	RAP	medium	5	0	2	0	0	1	0	1	1
33	Newberry Road	Safety spot improvement – Install guardrail ¼ mile south of US 30 and install speed hump 1.2 miles from US 30. \$450,000	TSP	medium	5	0	1	1	1	1	0	0	1
36	Skyline Boulevard	Safety improvement – Add to shoulders from Cornelius Pass Road to Rocky Point Road (4 ft). \$ 11,153,000	CIPP TSP	medium	5	0	2	0	1	0	0	0	2
51	Larch Mt. Road: HCRH to End of Road	Shoulder bikeway. \$26,341,706	CIPP	medium	5	0	2	0	1	0	1	1	0
52	Knieriem Road: Littlepage Road to HCRH	Shoulder bikeway. \$3,122,720	CIPP	medium	5	0	2	0	1	0	1	1	0
53	Hurlburt Road: HCRH to Littlepage Road	Shoulder bikeway. \$4,344,240	CIPP	medium	5	1	2	0	1	0	0	1	0
55	Woodard Road: HCRH to Ogden Road	Shoulder bikeway. \$2,338,065	CIPP	medium	5	0	1	0	1	0	0	1	2
85	Interlachen Lane: Marine Dr to Blue Lake Rd	Add sidewalks to both sides	PedMaster	medium	5	0	1	0	1	1	0	1	1
5	Gillihan Road Curve Improvements	Provide warning signs and delineation posts on curves along the loop roads.	TSP	medium	4	0	1	0	1	0	0	0	2
10	Gillihan Road Signage Improvements	Install speed limit signs on unsigned sections of Gillihan Road.	TSP	medium	4	0	1	0	1	0	0	0	2
25	Sauvie Island Speed Photo Radar Implementation	Implement permanent speed photo radar signs at several locations on Sauvie Island.	TSP	medium	4	0	2	1	0	0	0	0	1
26	Sauvie Island Speed Photo Radar Ticketing Implementation	Implement photo radar ticketing at several locations on Sauvie Island	TSP	medium	4	0	2	1	0	0	0	0	1

Project Number	Project Name	Project Description	CIPP/TSP/RAP?	Priority	Priority Score	Safety			Bike Routes	Vildlife Corridor	Equity	Destination	Pavement Condition
						Ped/Bike	Vehicles	Animal					
28	Reeder Road Shoulder Improvements	Provide 3-4 foot paved shoulders on Reeder Road from Gillihan Road to the Columbia County line.	TSP RAP	medium	4	0	1	0	0	0	0	2	1
37	Skyline Boulevard	Cornelius Pass Road intersection improvements – install signal, provide westbound left-turn lane and through/right lane on Skyline Boulevard. \$695,000	TSP	medium	4	0	2	0	0	0	0	1	1
58	Oxbow Drive/327 th Avenue Realignment	Channelizing the broad paved area on SE 327 th Avenue at the approach to SE Oxbow Drive to create a more perpendicular intersection is recommended to improve sight distance and reduce the potential for conflict between westbound left turns and northbound left turns.	RAP	medium	4	0	1	0	1	0	0	0	2
67	Oxbow Drive/Altman Road (PN 707)	Widen Oxbow Drive to create westbound left turn lane to Altman Road, realign intersection to a 5 perpendicular intersection. \$ 790,693	CIPP	medium	4	0	1	0	1	0	0	0	2
73	Oxbow Park Road: Oxbow Drive to Road End	Shoulder bikeway. \$1,834,695	CIPP	medium	4	0	1	0	1	0	0	0	2
75	Oxbow Drive: Hosner Terrace to Oxbow Park Road SE	Shoulder bikeway. \$1,259,838	CIPP	medium	4	0	1	0	1	0	0	0	2
6	Gillihan Road/Reeder Road Intersection Improvement Study	Conduct an engineering/safety study to determine impacts and safety considerations for implementing three-way stop-control at the intersection of Gillihan Road and Reeder Road.	TSP	low	3	0	1	0	1	0	0	0	1
7	Gillihan Road/Reeder Road Intersection Upgrades	Implement a three-way stop control at the intersection of Gillihan Road and Reeder Road.	TSP	low	3	0	1	0	1	0	0	0	1
8	SIMC Wayfinding Upgrades	Install additional wayfinding to provide guidance to motorized and non-motorized users to areas of interest such as types and location of recreation, parking, and other key destinations.	TSP	low	3	0	0	0	1	0	0	2	0
34	Germantown Road	Safety improvement – Add to 2.22 miles of shoulders (4 ft). \$6,744,000	TSP	low	3	1	2	0	0	0	0	0	0
39	Germantown Road	Safety spot improvements – Widen lanes on curves only, install center skip like reflective markers, and install mirror at intersection with Old Germantown Road. \$750,000	TSP	low	3	1	2	0	0	0	0	0	0
42	Laidlaw Road	Safety improvement – Add to shoulders (4 ft). \$643,000	TSP	low	3	0	2	0	0	0	0	1	0
43	Thompson Road	Safety improvement – Add to shoulders (4 ft). \$100,000	TSP	low	3	1	1	0	0	0	0	1	0
47	Germantown Road	Safety improvement – Install traffic calming devices such as speed humps to reduce speeds. \$887,000	TSP	low	3	1	2	0	0	0	0	0	0
48	Germantown Road/Old Germantown Road (PN 726)	Widen Germantown Road to create left turn pocket and improve sight distance. \$780,835	CIPP	low	3	1	1	0	1	0	0	0	0

Project Number	Project Name	Project Description	CIPP/TSP/RAP?	Priority	Priority Score	Safety			Bike Routes	Vildlife Corridor	Equity	Destination	Pavement Condition
						Ped/Bike	Vehicles	Animal					
59	Lusted Road/Powell Valley Road/282 nd Avenue Consolidation	Realignment to connect SE Lusted Road directly with SE Powell Valley Road is included in the County’s Capital Improvement Plan and Program. The project would require further engineering analysis and coordination with the City of Gresham to develop a recommend alignment. A traffic signal is warranted based on projected 2020 PM peak hour volumes, and would provide LOS B operations.	RAP	low	3	0	1	0	0	0	0	0	2
62	Cochran Drive: Troutdale Road to westerly 2175’ (PN 145)	Reconstruct to major collector standards: 2 travel lanes, center lane/median, sidewalks, bike lanes, and culvert replacement. \$7,442,765	CIPP	low	3	0	1	0	0	0	0	0	2
78	SE Division Drive: Troutdale to Oxbow Parkway	Bike lanes. \$3,371,407	CIPP	low	3	0	2	0	0	0	0	0	1
4	Sauvie Island and Multnomah Channel (SIMC) Bike Map	Work with Sauvie Island Community Association (SICA) and other Sauvie Island stakeholders to develop a bike map that includes wayfinding and education	TSP	low	2	0	0	0	0	0	0	2	0
11	Sauvie Island Mobile Speed Radar Implementation	Obtain a mobile speed radar unit for Sauvie Island that can be relocated at regular intervals.	TSP	low	2	0	0	1	0	0	0	0	1
50	Ogden Road: Mershon to Woodard	Shoulder bikeway. \$463,789	CIPP	low	2	0	1	0	1	0	0	0	0
56	Mershon Road: Ogden to HCRH	Shoulder bikeway. \$4,009,646	CIPP	low	2	0	1	0	1	0	0	0	0
60	282 nd Avenue/Stone Road Turn Lanes	The addition of turn lanes in the northbound and southbound direction on 282 nd would reduce the high incidence of rear end crashes at this location. Some roadway widening would be necessary.	RAP	low	2	0	1	0	1	0	0	0	0
61	Shoulder Widening to Meet Updated Standards	Prioritization for shoulder improvements within the West of Sandy River rural area should be given to roadways connecting to school sites, especially Barlow High School. Proposed shoulder widening should be evaluated based on potential impacts on drainage and adjacent productive lands. For shoulders wider than 1.8 meters, the adopted County standards require paved width of 1.5 meters. The remaining 0.3 meters may be unpaved. Shoulder widening should be incorporated into routine roadway maintenance wherever possible.	RAP	low	2	0	2	0	0	0	0	0	0
69	Division Drive/Troutdale Road (Included in Collector project above) (PN 186)	Realign intersection, eliminating NE leg, producing a 4-way intersection. Replace 3 existing culverts identified as fish barriers. \$ -	CIPP RAP	low	2	0	1	0	1	0	0	0	0
77	Troutdale Road: Strebin Road to 282 Avenue	Bike lanes. \$3,292,979	CIPP	low	2	0	2	0	0	0	0	0	0
79	Stark St: Eavans Ave to 35th St	Add sidewalk to southside	PedMaster	low	2	0	0	0	0	0	0	2	0

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Comprehensive Plan

Figure 9A Planned and Programmed Projects

Project Points

- High Priority
- Medium Priority
- Low Priority

Project Segments

- High Priority
- Medium Priority
- Low Priority

- Plan Areas
- County Boundaries

0 0.5 1 2 Miles

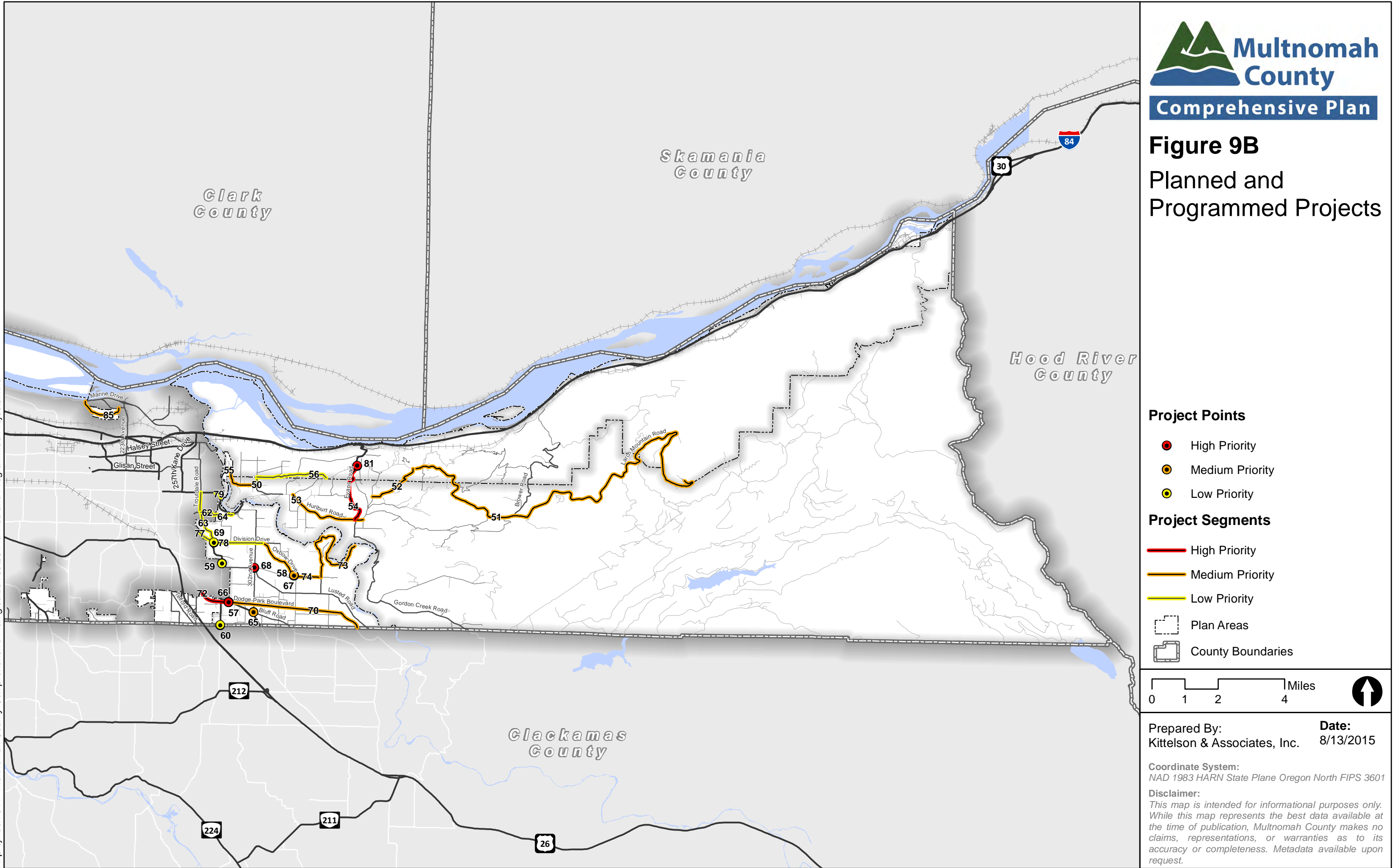


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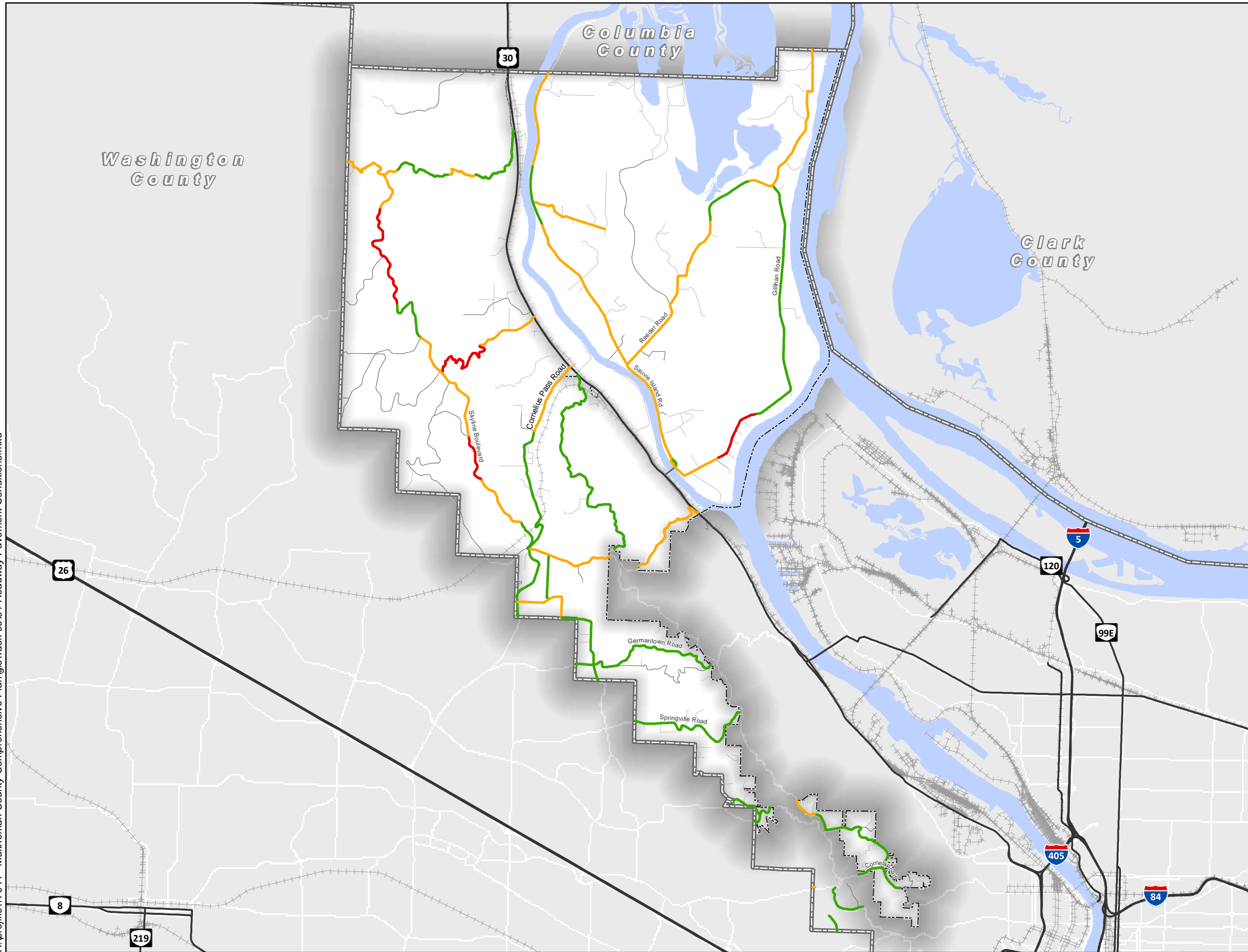
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Comprehensive Plan

Figure 1A

Roadway Pavement Conditions

Current Pavement Conditions Index

- <50 (does not meet county standard)
- 50 - 70 (acceptable for rural roads)
- >70 (meets county standard)

- Plan Areas
- County Boundaries

0 0.5 1 2 Miles



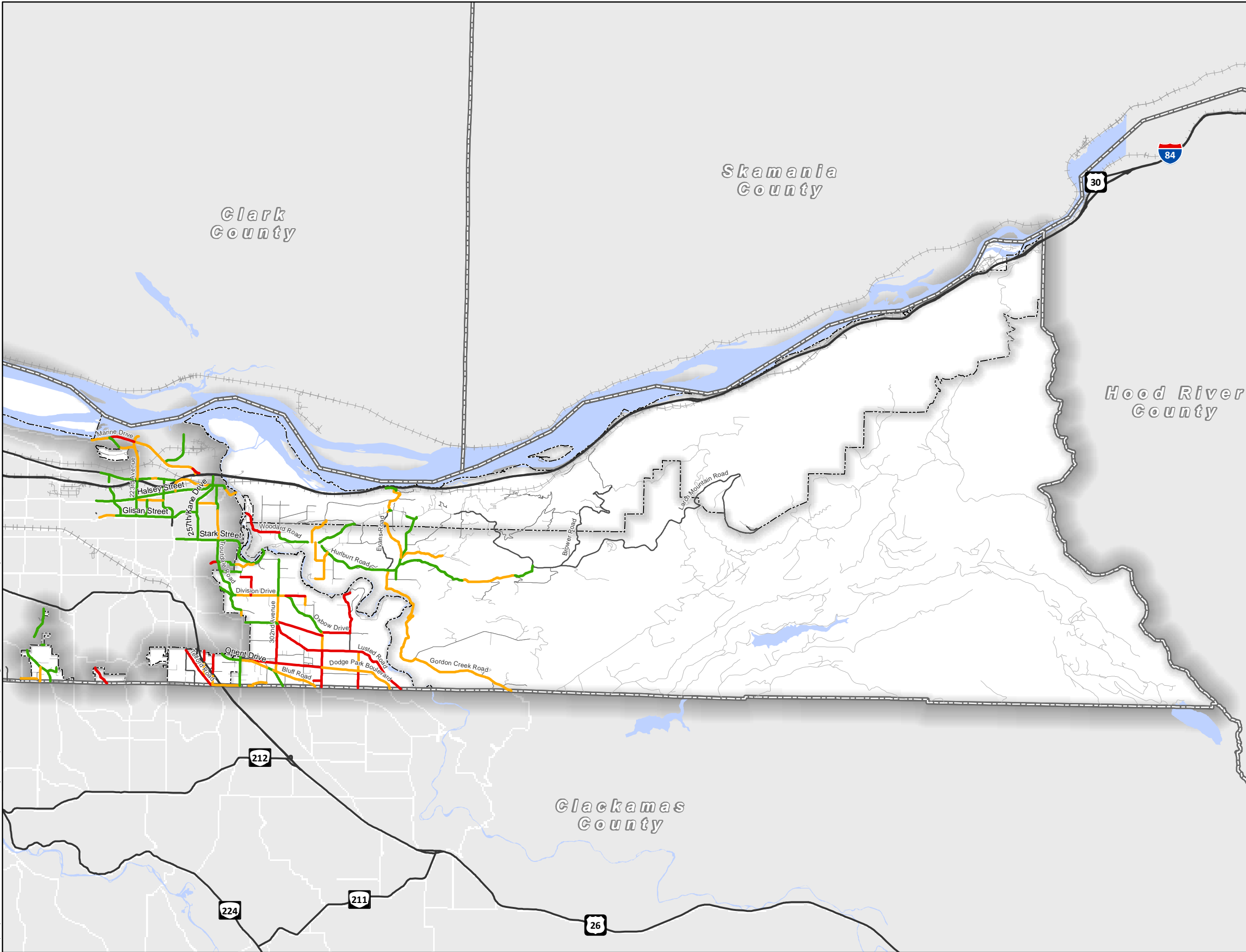
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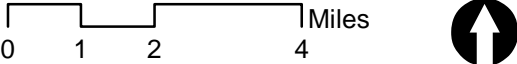
Figure 1B

Roadway Pavement Conditions

Current Pavement Conditions Index

- <50 (does not meet county standard)
- 50 - 70 (acceptable for rural roads)
- >70 (meets county standard)

- Plan Areas
- County Boundaries



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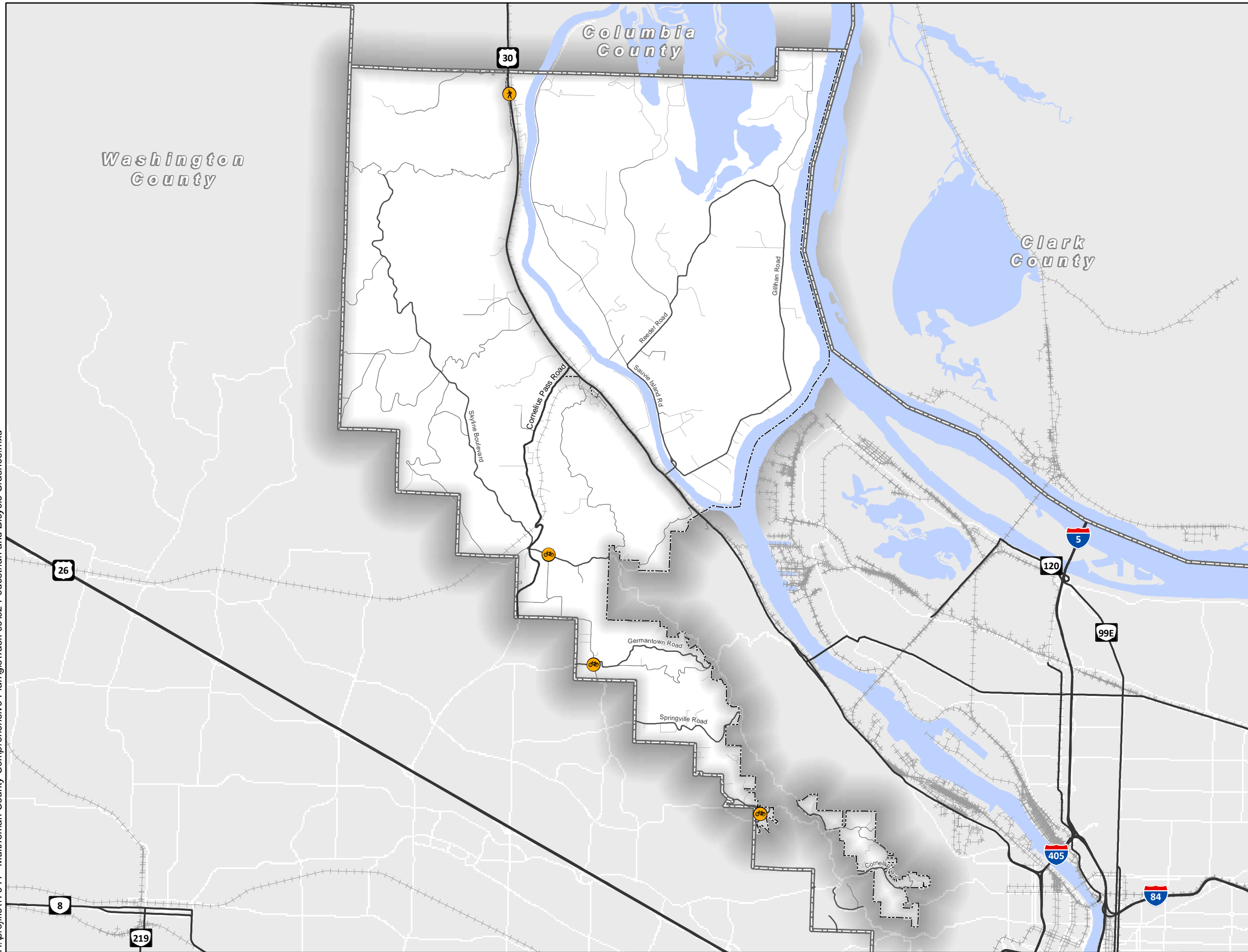








Figure 2A
Pedestrian and Bicycle Crashes

-  Fatal Crash Involving a Pedestrian
-  Injury Crash Involving a Pedestrian
-  Injury Crash Involving a Bicycle
-  Plan Areas
-  County Boundaries

0 0.5 1 2 Miles 

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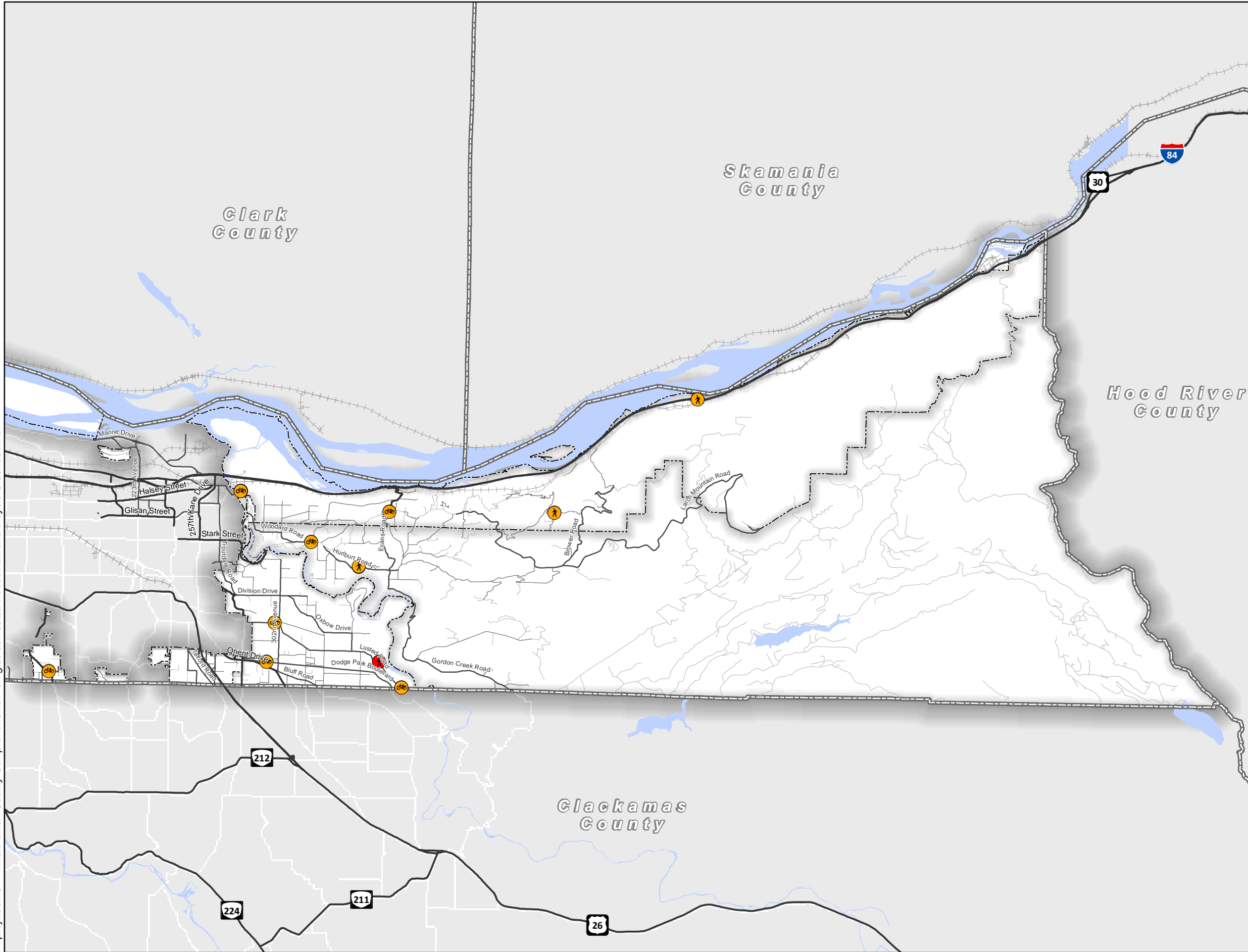





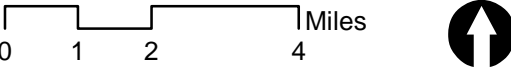


Figure 2B
Pedestrian and Bicycle Crashes

-  Fatal Crash Involving a Pedestrian
-  Injury Crash Involving a Pedestrian
-  Injury Crash Involving a Bicycle
-  Plan Areas
-  County Boundaries

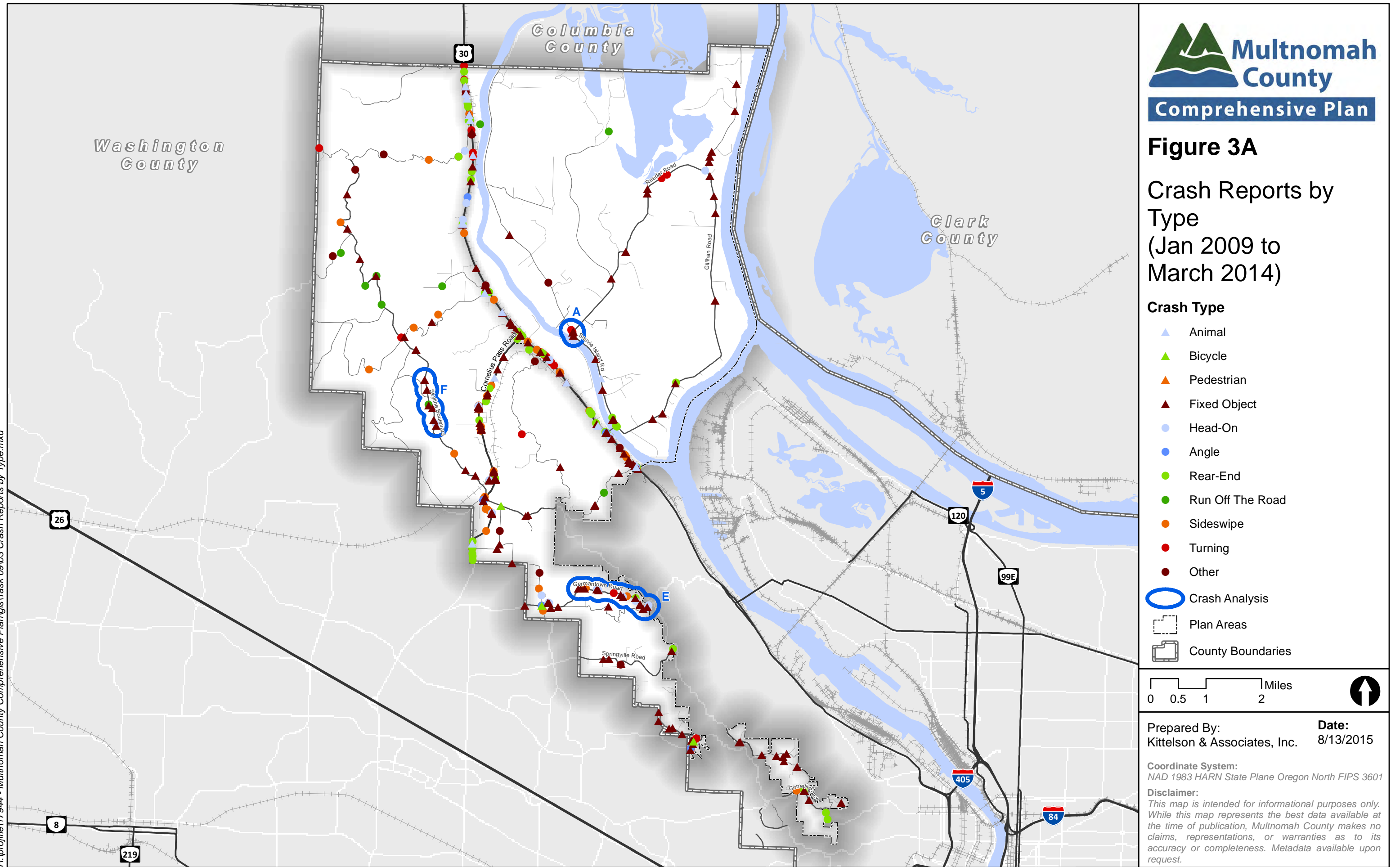


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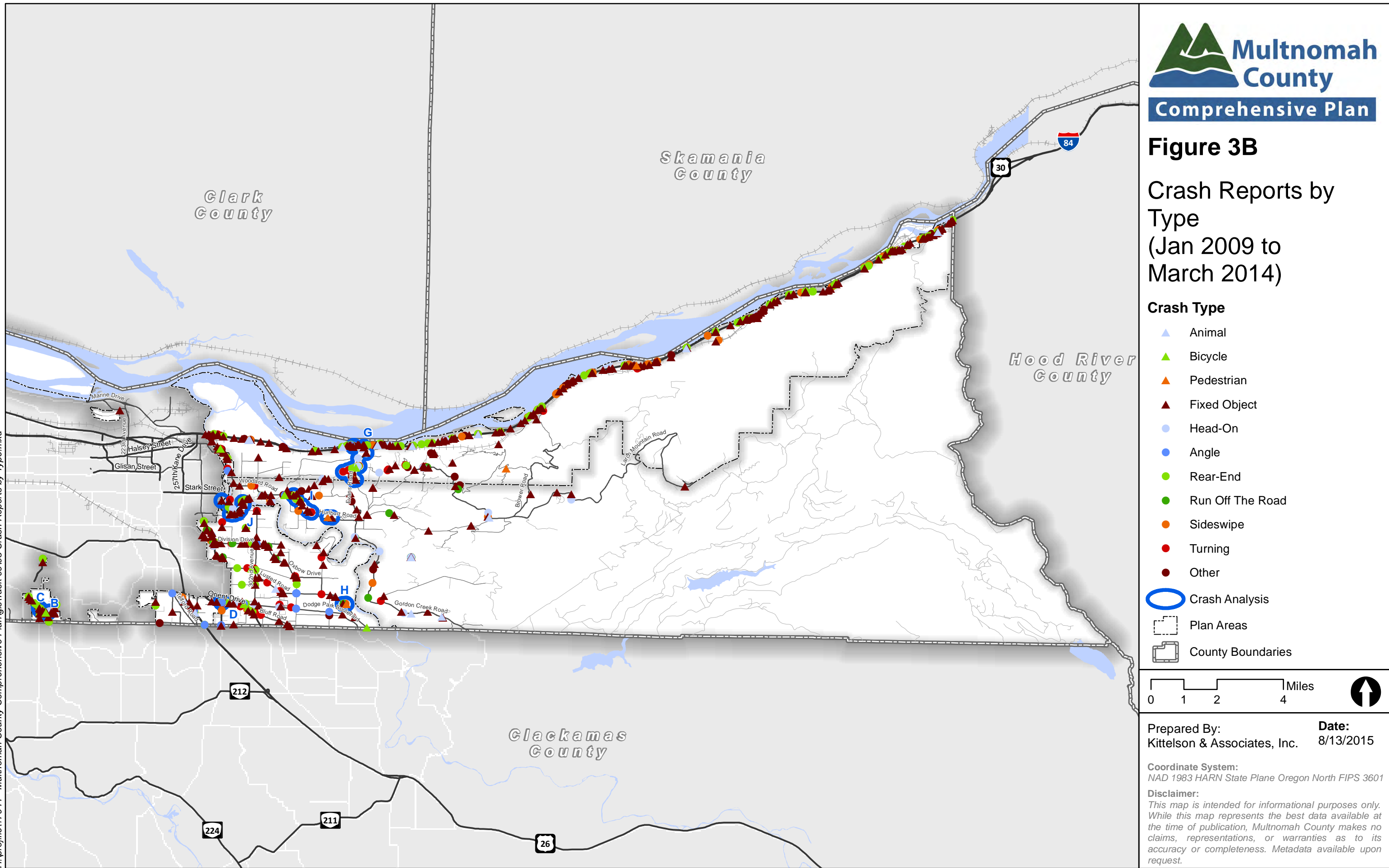
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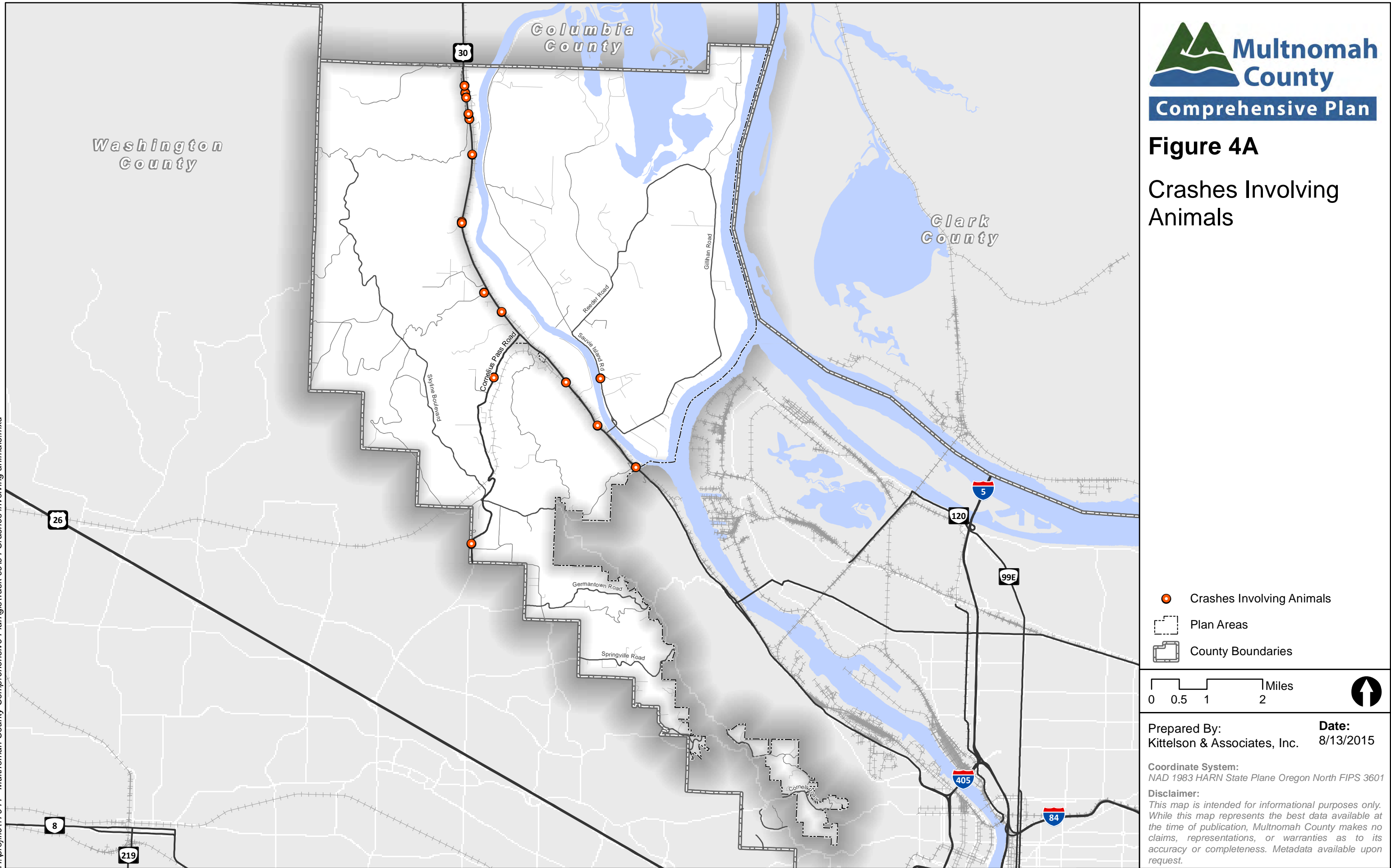
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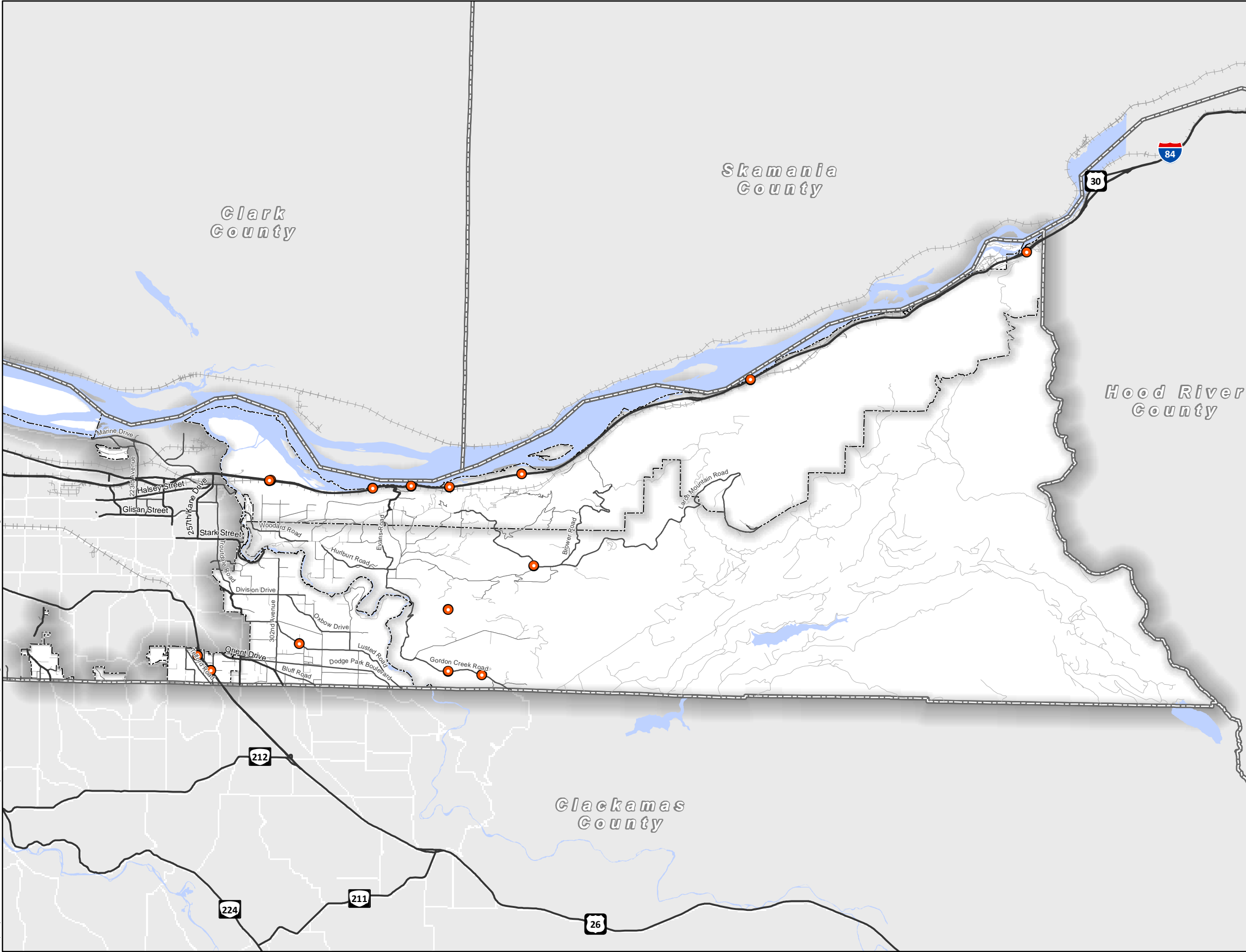
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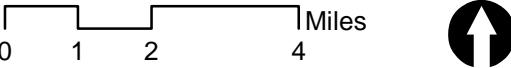
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Comprehensive Plan

Figure 4B
Crashes Involving
Animals

- Crashes Involving Animals
- Plan Areas
- County Boundaries

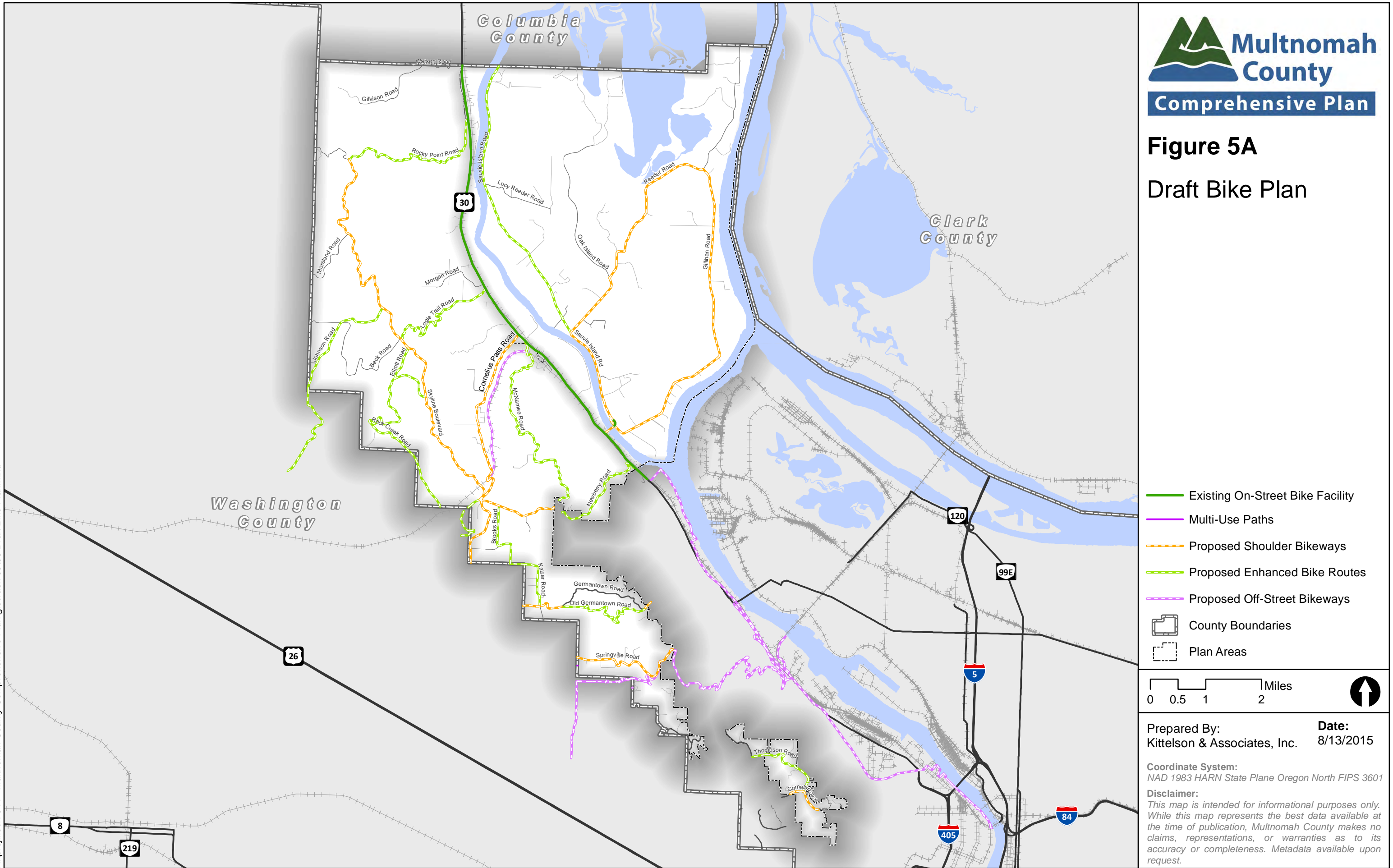


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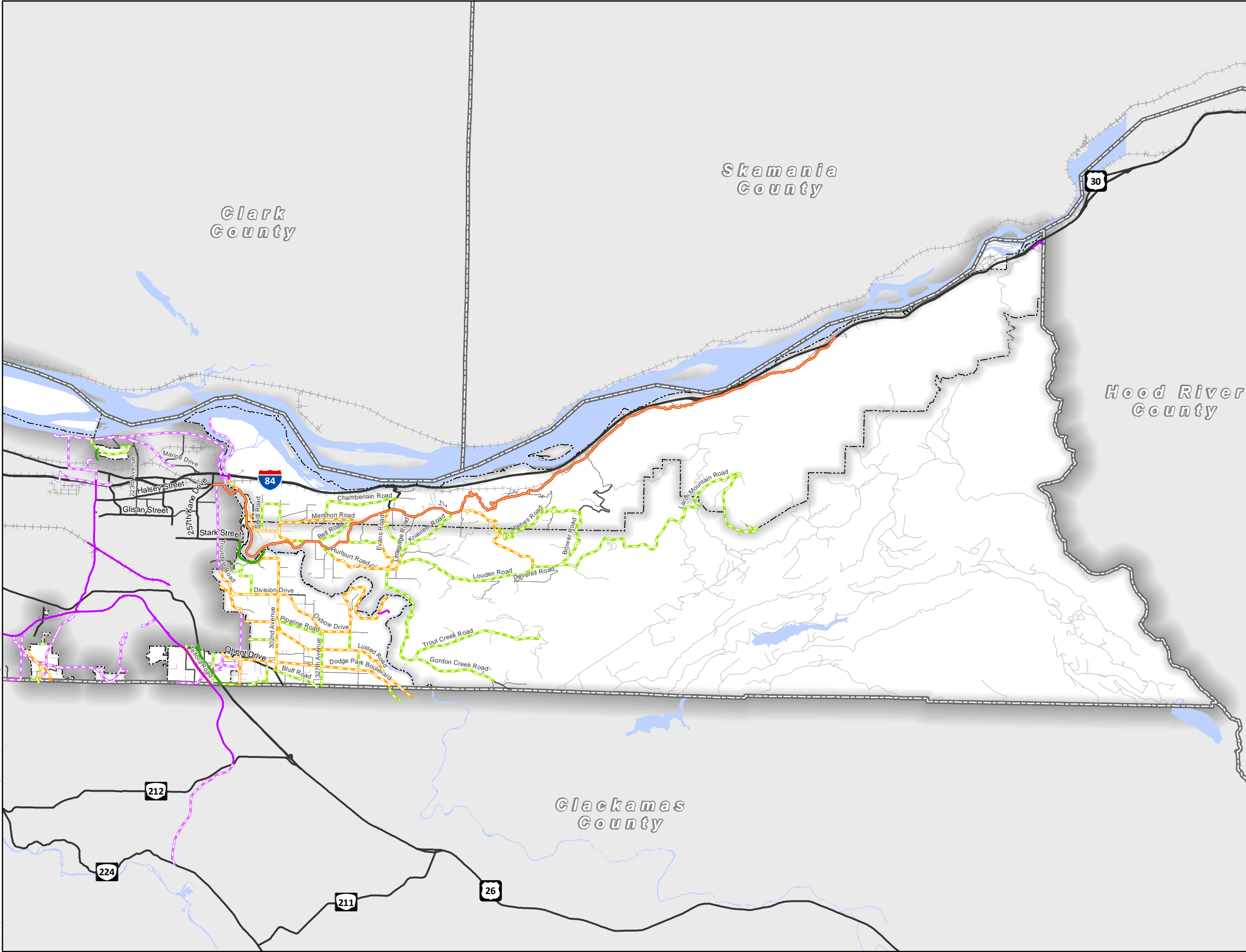
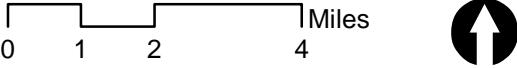


Figure 5B
Draft Bike Plan

-  Existing On-Street Bike Facility
-  Multi-Use Paths
-  Proposed Shoulder Bikeways
-  Proposed Enhanced Bike Routes
-  Proposed Off-Street Bikeways
-  Historic Columbia River
-  County Boundaries
-  Plan Areas

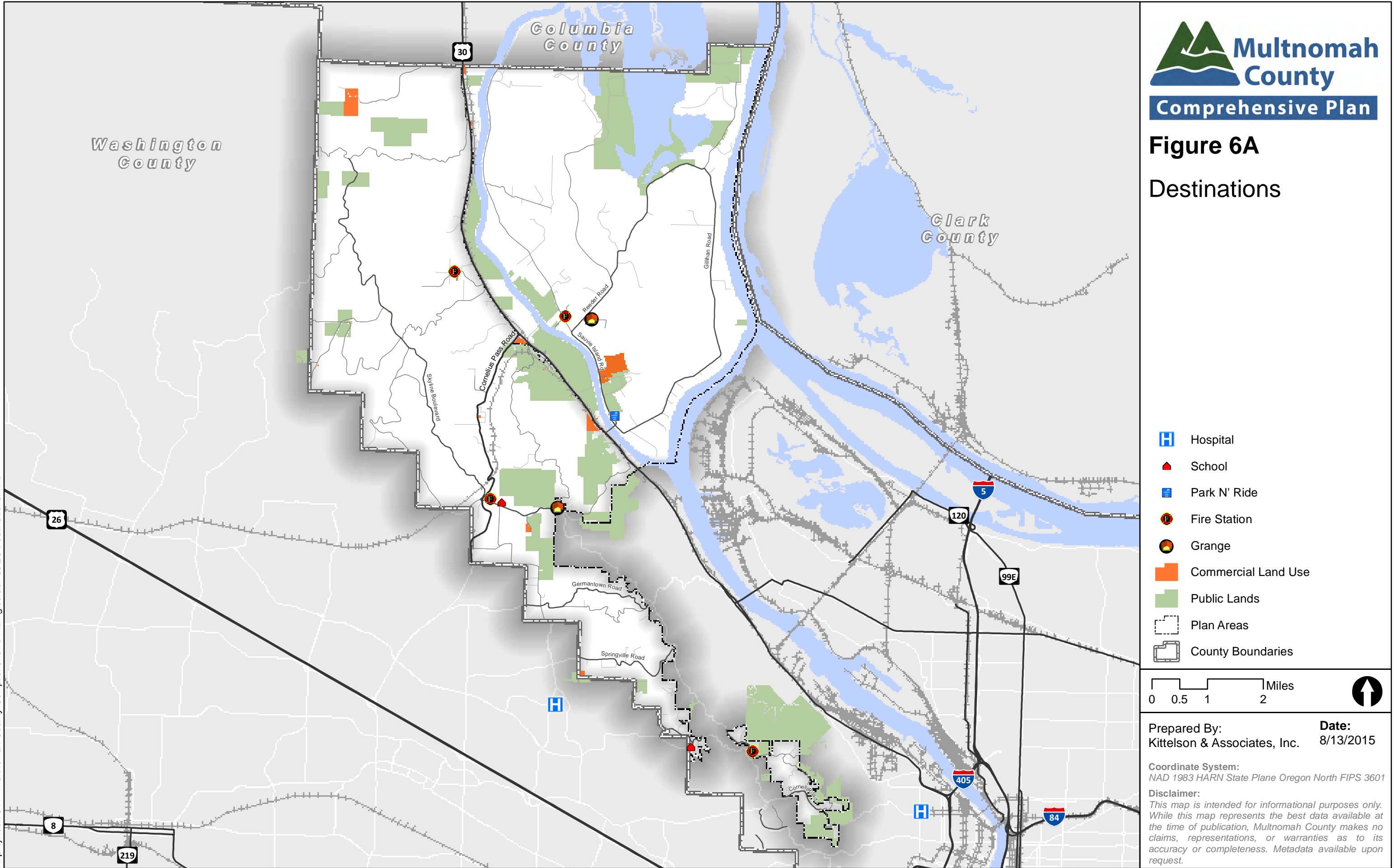


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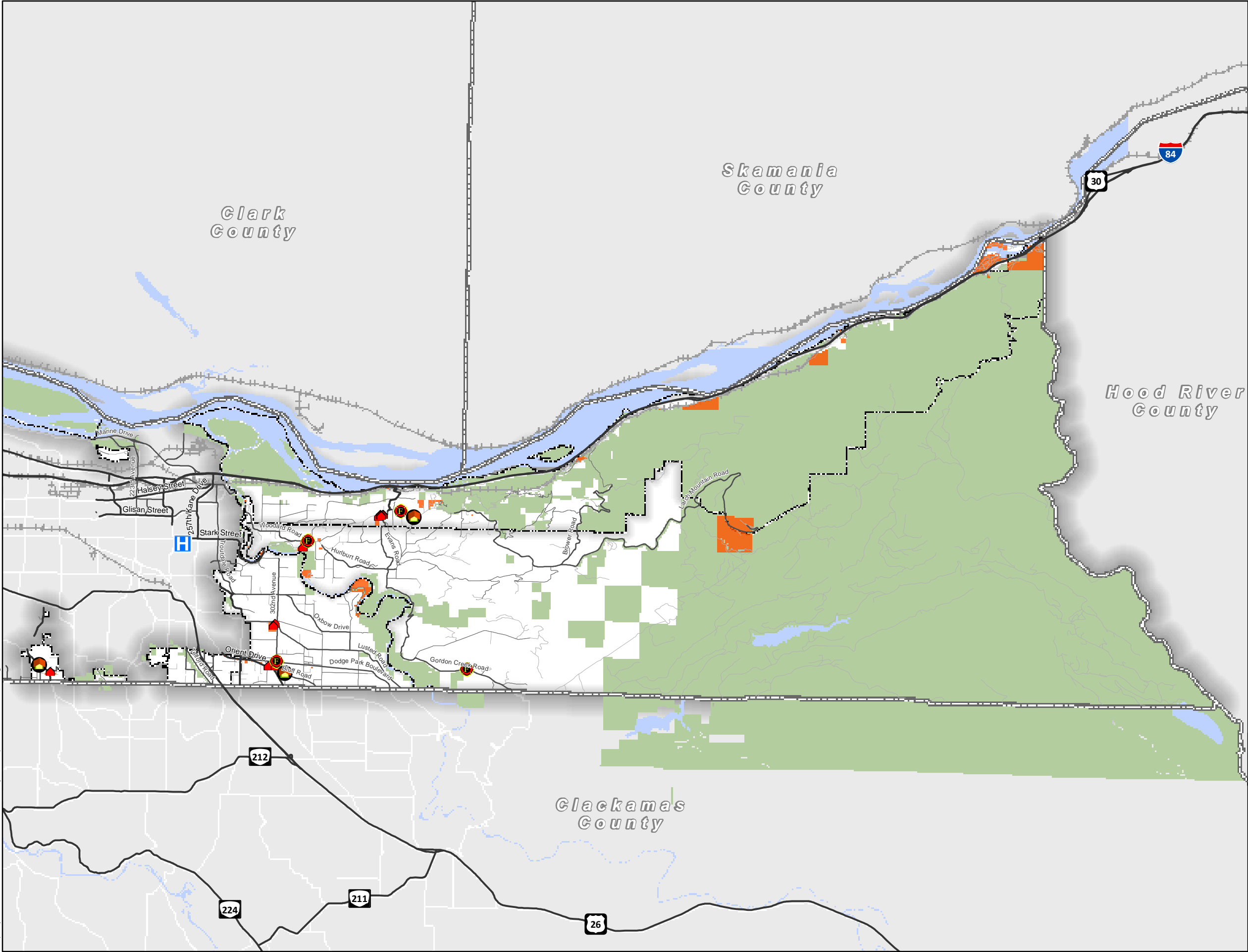
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Comprehensive Plan

Figure 6B

Destinations

- Hospital
- School
- Park N' Ride
- Fire Station
- Grange
- Commercial Land Use
- Public Lands
- Plan Areas
- County Boundaries



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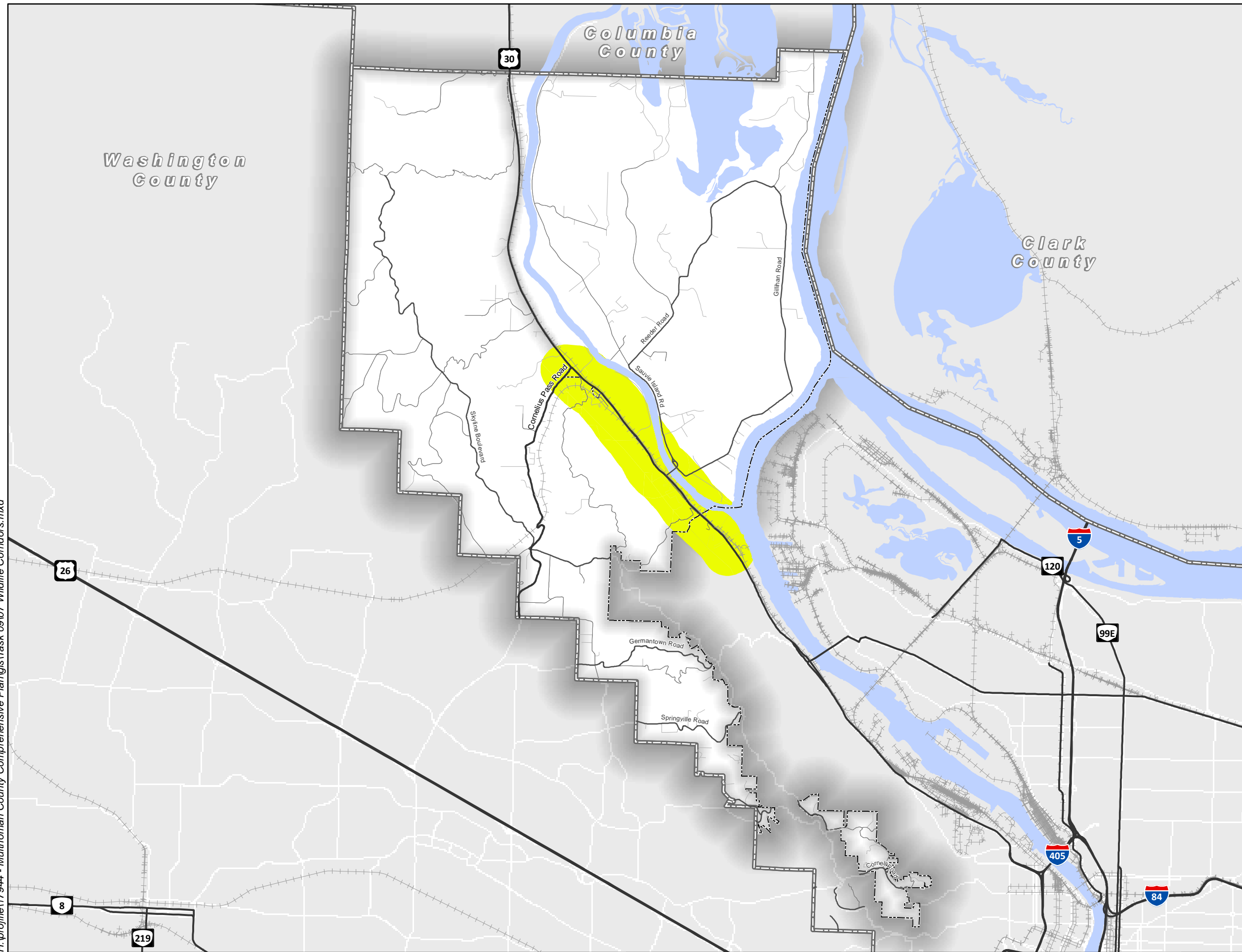





Figure 7A

Wildlife Corridor Connectivity Threat

-  Moderate Threat Level
-  Plan Areas
-  County Boundaries

0 0.5 1 2 Miles

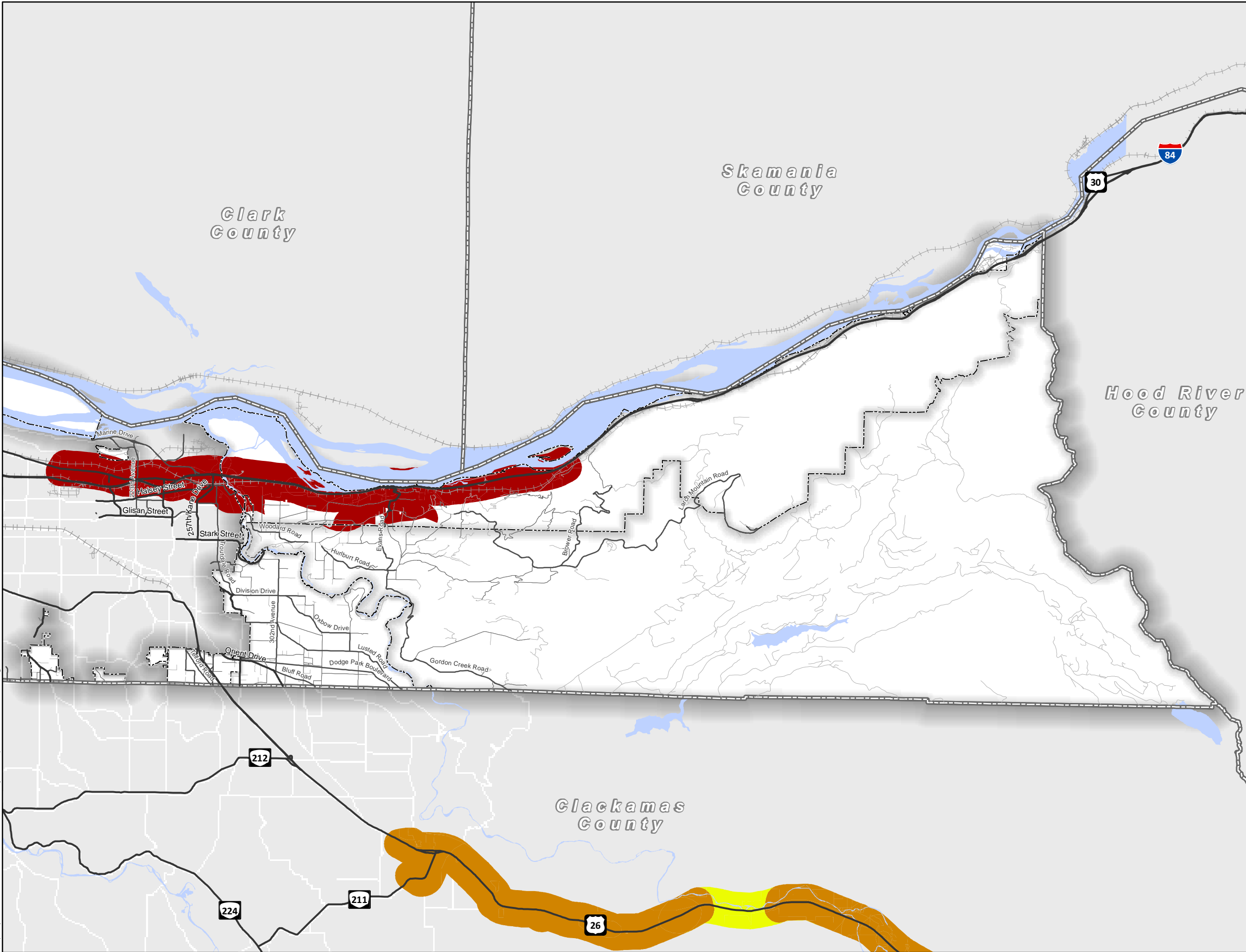


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Comprehensive Plan

Figure 7B
Wildlife Corridor
Connectivity Threat

- Moderate Threat Level
- Serious Threat Level
- Severe Threat Level
- Plan Areas
- County Boundaries

0 1 2 4 Miles



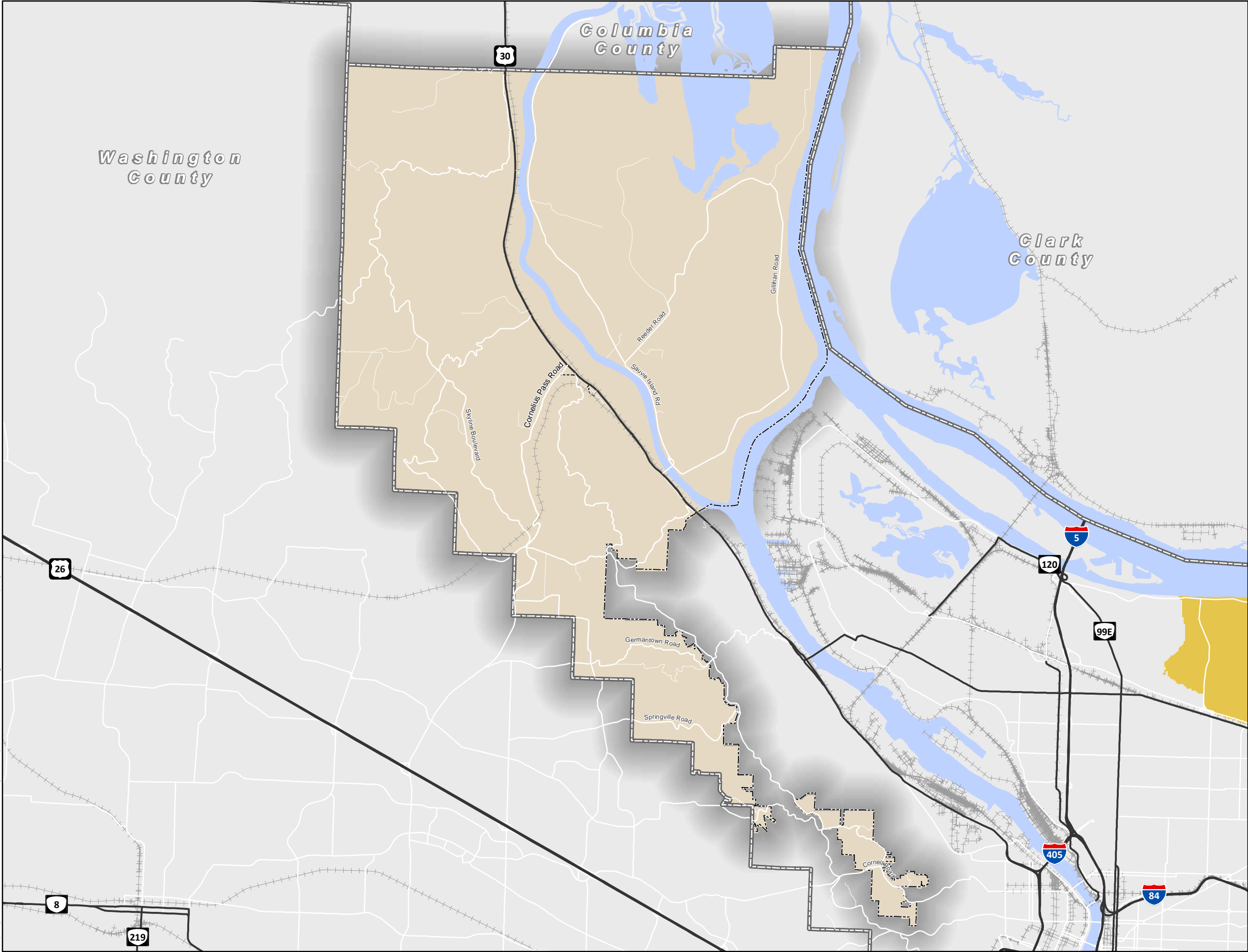
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Source: Oregon Department of Fish and Wildlife

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Comprehensive Plan

Figure 8A

Low Income Areas

Median Household Income Less than \$50,000

- \$50,000
- \$42,768
- \$34,545
- \$33,782

- Rural Plan Areas
- County Boundaries

0 0.5 1 2 Miles



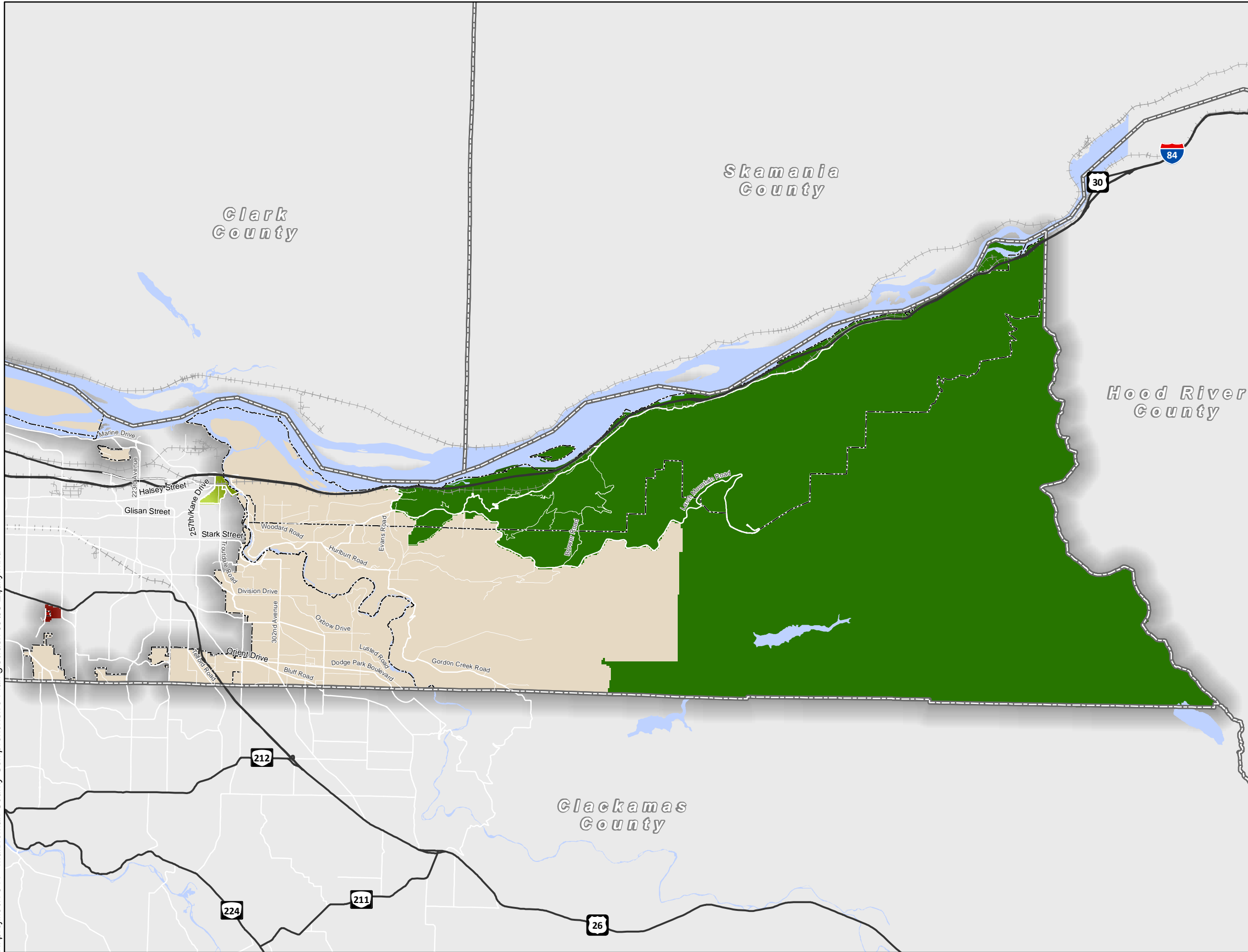
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Comprehensive Plan

Figure 8B
Low Income Areas

Median Household Income Less than \$50,000

- \$50,000
- \$42,768
- \$34,545
- \$33,782

- Rural Plan Areas
- County Boundaries

0 1 2 4 Miles



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Coordinate System: NAD 1983 HARN State Plane Oregon North FIPS 3601

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