Meeting Notes

The Active Transportation Needs Inventory (ATNI) project team conducted separate meetings with the technical advisory committee (TAC) and the stakeholder advisory committee (SAC) in mid-January. The meetings covered the same content information and requested similar input from each group:

- Confirmation of the gaps and deficiencies methodology and classification.
- Input on evaluation criteria selection for the Phase II suitability analysis and evaluation.

This document is organized as follows to summarize input from the meetings and outline next steps:

- Executive summary of the input received at both the TAC and SAC meetings;
- Detailed notes from each meeting;
- An annotated list of evaluation criteria that emerged from the meetings; and,
- Next steps in the project.

EXECUTIVE SUMMARY

- Both the TAC and the SAC confirmed the gaps and deficiencies general methodology and classification, and the project team clarified/addressed their questions/comments.
- Both the TAC and the SAC will have an opportunity to review the gaps and deficiencies maps when they are complete. Complete maps are anticipated by mid-February.
- The TAC and SAC both provided input on the evaluation criteria:
    - In the TAC meeting, some measures emerged as leading choices of the group, including
        - Number of crashes
        - A "perceived safety" measure, such as level of traffic stress
        - Proximity to essential destinations
        - Proximity to transit
        - Fills a gap in the system without alternate route
        - A measure of equity, especially including high portions of elderly or children and households with low/no vehicle access
        - Priority in local jurisdiction plan
    - In the SAC meeting, stakeholders affirmed the leading choices of the TAC, and voted on additional potential evaluation criteria.
- More detail on evaluation criteria identified by the TAC and SAC is included in the Evaluation Criteria section and in the attached evaluation criteria vote tally.

DETAILED MEETING NOTES

TAC Meeting #2

January 13, 2015 – 2:00 p.m. to 5:00 p.m.
ODOT Region 1 HQ – Room B

Attendees: Magnus Bernhardt (Environmental), Basil Christopher (Bike/Ped), Stephanie Millar(Ped/Bike Modal Plan PM) Kristie Gladhill (Safety), Rodger Gutierrez (Bike/Ped – Salem), Dee Hidalgo (Community Affairs), Jessica Horning (Active Trans.), Larry Krettler (Roadway), Steve Lindland (Roadway – Salem), Sheila Lyons (Active Trans. – Salem),

Lidwien Rahman (Planning), Alan Snook (Major Projects), Jamie Staehely (District 2B), Tony Coleman (Mobility), Karyn Criswell (Transit), Laura Wipper (Asset Mgmt.), Larry Olson (District 2C), Karla Kingsley (Consultant PM)

Introductions

Project Overview

Jessica reviewed the overall project scope and schedule:

- Since setting a goal of 100% bicycle facility and sidewalk coverageon urban state highways by 2030, coverage has been decreasing, due to jurisdictional transfer of completed highways and the incorporation of formerly rural facilities into the urban area. This project is needed to provide a procedure for inventorying and strategically choosing bike/ped improvement projects so we can make progress towards goals.
- Schedule:
    - We are nearing the end of Phase I (data inventory and mapping of gaps and deficiencies).
    - We are starting Phase II this week (selection of evaluation criteria, suitability analysis, needs evaluation).
- End Products:
    - Updated inventory database
    - Needs Assessment spreadsheet

Larry O. asked if the TAC had received the inventory yet. Jessica let the TAC know that an atlas was almost completed. Feedback and changes to the maps from local jurisdictions are still being added. The atlas will be ready for review by the TAC in the next few weeks. Larry O. asked about areas where minimum standards that cannot be met, due to environmental characteristics, for example. Jessica replied that this will be covered in an upcoming part of the presentation.

Phase I Progress

Jessica reported on the work that has been completed to date in Phase I of the project.

Stakeholder Outreach

- The project team has conducted 21 stakeholder meetings/interviews, with the following recurring themes:
    - Crossings-Getting across an ODOT facility is a barrier to reach destinations
        - Jessica mentioned that the project team is still wrapping up the inventory of existing ODOT "enhanced" crossing locations.
        - Magnus asked what was considered a "crossing" in the inventory – does it include only locations with curb ramps or all legal crossings? Jessica responded that ODOT already has a curb ramp inventory. This inventory will include unsignalized crossings that are somehow enhanced – they have a pedestrian refuge, painted crosswalk, etc. We will not be updating or expanding the curb ramp inventory, though.
        - The inventory will also record where there have been identified crossing needs in TSPs. However, we will not be applying a standard, such as a crosswalk every 500 feet. Lidwien added that ODOT does not have a standard for spacing of crossings, but policy guidance could be given in the statewide pedestrian/bicycle plan.
    - Americans with Disabilities Act compliance-This is outside of the project scope.
        - ODOT has done a pilot project to collect data that took 2 weeks to collect a mile of sidewalk data.
        - Steve Lindland noted that there is an ADA transition plan in the works that will need to be addressed at some time, but it is not a current priority
    - Policy and Design Standards-
        - The ATNI project team will send comments to the Bike/Ped Modal Plan staff in Salem

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    - Coordination with local plans
        - There's a lack of consistency on how local jurisdictions approach ODOT facilities in their plans
        - Some agencies do not include ODOT facilities in their plans
        - Some agencies have designs on ODOT facilities
- The project team will conduct a virtual open house (VOH) to gather more feedback from the public

Field Inventory

- The project team has completed a field data inventory including frontage roads, collectors and areas that had not been completed in previous inventories.
- There will be an inventory of enhanced crossings added to the existing midblock crossings asset.
- RICS data is being integrated into the bike/ped inventory for shoulder width data in rural areas.

Local Plan Review

- About 300 ped/bike needs have been identified in local jurisdiction plans.
- The list of identified needs and maps was sent to each jurisdiction for review.
- This information will be included in the gaps and deficiencies mapping,, classified as "Tier 3 Needs".

Identifying Needs

- Tier I, Tier II, and Tier III methodologies need to be signed off by the TAC
- The Highway Design Manual (HDM) was used to define minimum standards for urban and rural facilities. There was some discussion about how the HDM standards differ somewhat depending on what chapter is referenced. This is something to potentially address in the statewide bicycle/pedestrian plan.
- Discussion
    - Steve said that the freight community would be interested in the process.
    - Tony C. said that with the limited ROW, there is a give and take between bicycle lane and roadway width and that Freight gets concerned when the lane width is narrower than 11 feet. He noted that the freight community is interested in seeing full coverage of bicycle facilities that meet standards.
    - Lidwien reminded the group that no projects are being developed in this project. It is just a list of identified needs.
- There were no objections to the Tier definitions

Draft "Gaps" & "Deficiencies" Maps

- Jessica let the group know that everyone will get a pdf copy of the gaps & deficiencies atlas for review.
- Discussion
    - Dee wanted to know if they will be interactive maps or PDFs. Jessica said eventually there would be both, and she wanted to know what formats would work best. The map data could also be available in a KML so people could look at the sites on google earth. For the purposes of review, however, the maps will only be provided in pdf format.
    - Karyn likes to use the TransGIS interface and would think that it would be useful in that format
    - Rodger noted that a draft would not be available in TransGIS but the final version will eventually be in TransGIS
    - Laura added that the data can be maintained in any GIS format
    - Larry O asked about the needs identified in the TSPs. TSPs are only for urban areas. Jessica noted that the TSP project needs will be highlighted in the final map atlas, and then people would look up more detailed information in the spreadsheet of local needs.

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Phase II Initiation

Evaluation Criteria Discussion

Karla began the criteria discussion by outlining the relationship between criteria and goals. An evaluation criterion is a way to measure a goal. She provided an example: The goal of safety is measured by the criterion of ped/bike crash frequency.

- Larry O. asked where we get crash frequency data. Jessica said that we would get it from Kristie in Traffic.
- The group discussed the shortcomings of existing crash data.
    - It comes from the DMV, and therefore does not include any crashes that don't involve a motor vehicle.
    - It also does not include any crashes with property damage amounting to less than $1500.
    - Stephanie noted that ODOT is in the process of developing a better resource of safety data such as emergency services records.
    - The group agreed that, in the meantime, we need to develop criteria using data that is consistently available.
    - Kristie noted that she has a definition for pedestrian- and bicycle-involved crashes that should be used.

Karla noted that the criteria are arranged to line up with the draft goals of the Statewide Ped/Bike Modal plan. The evaluation process and spreadsheet deliverable will be modeled after a similar research project, National Cooperative Highway Research Program (NCHRP) 7-17, which developed a methodology for evaluating and ranking pedestrian and bicycle needs. Karla noted that the goals of the Ped/Bike Plan and the NCHRP 7-17 overarching "factors" (similar to goals) line up fairly well already. There are two factors in the NCHRP 7-17 method that have already been incorporated into the team's work: existing conditions (by including the presence, width, and condition of active transportation facilities) and compliance (by assessing whether they meet ODOT standards or local jurisdiction adopted plans).
Karla also discussed what makes a good criterion for this type of application:

- It is objective. For example, "traffic volumes" are objective; "aesthetic quality" is not.
- It is easy to understand.
- It uses data that is already available in the entire region and is of consistent quality across the region.
- It helps differentiate between needs. If too many of the needs have the same value, such as "fair" condition, then the criterion is not helpful in ranking needs.
- It does not double count with two separate criteria covering similar elements.
- It makes a clear link to the agency goals. However, the project does not necessarily need to have a criterion for each goal.

Karla showed an example of the prioritization that Washington County recently completed for pedestrian and bicycle needs in their urbanized area, in which they considered four overarching goals/factors, with criteria to measure each:

- Land Use
    - Population Density
    - Proximity to transit
    - Proximity to other essential destinations
- Street Network
    - Number of roads and intersections per square mile
- Safety
    - Number of crashes
    - Traffic volumes
    - Truck route
- Social Equity
    - Metro's equity index (including areas with high ethnic minorities, poverty, children, and elderly)

Karla noted that the scope for the ATNI includes evaluating up to 10 criteria. The PMT will make ultimately make recommendations based on input from the TAC and SAC, and ODOT Management will approve the final criteria.

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Criteria Selection Exercise

Karla asked the group to participate in a criteria sticker voting exercise. There were two separate posters displays, one for pedestrians and one for bicycles. Each TAC member received 10 stickers to place as follows:

- Two red bicycle criteria stickers (worth $2 each)
- Three yellow bicycle criteria stickers (worth $1 each)
- Two red pedestrian criteria stickers (worth $2 each)
- Three yellow pedestrian criteria stickers (worth $1 each)

Before placing stickers on the poster displays, Karla asked whether TAC members had other criteria they would like to add to the posters.

- Stephanie wanted to add Chronic Disease, GHG Emissions and Obesity Rates. She noted that the statewide plan has been looking at these measures. The measures were added to the posters.
- Sheila suggested that regional trails could be added. Jessica mentioned that network trails would be added as parallel facilities to interstates and expressways. Regional trails were added to the posters.
- Laura wanted clarification on the paratransit and if it included the elderly. Jessica clarified that paratransit is transit not on a fixed route (e.g. TriMet LIFT services). She explained that sometimes paratransit is used if there is not a safe way for people to access existing bus stops, and paratransit use may go down if people have sidewalk facilties to access the transit stops for fixed route transit.
- Karyn noted that transit ridership and access to transit are related, but not the same. She noted that there may be latent demand in places where there is not existing access to transit, so transit ridership should not be the only indicator used.
- Kristie asked about how vulnerable users are defined. Jessica noted that this metric was used in the Clackamas County TSP, and includes a number of different characteristics, like populations of elderly and children, poverty rates, ethnic minorities, and no vehicle access.
- The group discussed how to quantify "strategic investments". Sheila noted that ODOT has a STIP benefit/ cost (b/c) analysis.
- Lidwien emphasized that the stakeholders will be coming from the perspective of network design but the project team is not designing projects, the project team is developing a method to prioritize fixing gaps. She noted that the criteria the project team uses will be different than ones that might be used for network design.

TAC Members used their stickers to vote on criteria for bicycles and pedestrians. Following the sticker exercise, the group discussed some of the popular measures in more depth.

- The group discussed how to best use "**number of crashes**" as a criterion.
    - Kristie explained that it means crashes where bicycle and peds are involved in the crash. Laura asked if there was enough data to use bicycle and pedestrian crashes. Kristie said that there is an argument for using all crashes, because there are relatively low numbers of bicycle and pedestrian-involved crashes. Sheila noted that for the Statewide Pedestrian and Bicycle Safety Implementation Plan (PBSIP), they found that there were not enough bicycle and pedestrian crashes reported for statistical analysis, so instead they used speed, volumes, and number of lanes for analysis. Jessica added that the project team could use two criteria, with one based on number of crashes and one based on level of traffic stress or perceived safety. Laura and Rodger supported that method.
    - Karla noted that safety was an important factor to the group and she would consider ways to leverage the work from the PBSIP.
- **Proximity to transit and proximity to essential destinations**.
    - The starting point for essential destinations was the Metro definition.
    - There was discussion about whether some destinations should be separated from a group of essential destinations, such as transit.
    - Larry O. noted that this works well in urban areas but not so much in rural areas. Larry K looks at populations less than 10,000 persons.
    - Stephanie advocated for grade schools to be included and potentially prioritized higher, since a nine year old does not have the cognitive ability to safely cross the street.

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    - The group discussed whether high capacity transit should be weighted higher than other routes. In rural areas, this distinction would not apply. Karyn noted that many transit facilities have a stop on an 8' sidewalk but no crossing.
    - Jessica summarized the essential destinations discussion saying that the project team should look at:
        - Potentially separating proximity to Transit
        - Potentially separating proximity to schools
    - Lidwien added that if you look at Title VI, if you look at just ethnicity or schools, it is not enough.
    - Karyn wanted to have some more conversation on how to distinguish between different types of transit. Jessica thought that different weights might be an approach. Karyn thinks that separating transit would be a good idea.
- **Presence of crossings as part of a safety need**.
    - Sheila reiteriated the potential to look at perceived risk factors such as number of lanes, speed, and volume. She noted that a lack of crossings is a risk factor.
    - Jessica noted that this project will only use crossing needs that have been identified in local plans. This process will not be used to define new crossings.
    - Shelia stated that ODOT needs to develop a policy for crossings. Rodger noted that the Highway Design Manual states that there should be a crosswalk every quarter mile.
- **Traffic Level of Stress** discussion: how to define traffic level of stress?
    - The group generally thought this was an important criterion.
    - One way that it can be used is to look at changes in level of stress along a segment and prioritize areas within the segment that have a high level of stress to improve connectivity.

Weighting

- Karla introduced the concept of weighting different criteria, noting that we can apply weights to emphasize the relative importance of different criteria or goals. This is a good area in which to get public input. The project team will be getting input from the TAC, Stakeholders and the public (through the VOH) about weighting.
- Karla explained that weighting does not need to be a finalized choice. It will ultimately be a feature that can be changed in the spreadsheet so that people can identify needs that rise to the top for different reasons.
- Jessica will be emailing a survey about the weighting process sometime in February or March and looking for feedback, since the next TAC meeting does not happen until May.

[Next Steps are outlined after the SAC Meeting summary]

SAC Meeting #1

January 20, 2015 – 3:00 p.m. to 5:00 p.m.
ODOT Region 1 HQ – Conference Room 344

Attendees: Jessica Horning (ODOT Project Manager), Karla Kingsley (Consultant), Matt Braughton (Consultant), Sandra Koike (ODOT), Susan Peithman (OBPAC), Jeff Owen (TriMet), Lake McTighe (Metro), Shelley Oylear (Washington County), Kate McQuillan (Multnomah County), Lori Mastrantonio (Clackamas County), Abbot Flatt (Clackamas County), Gordon Zimmerman (Cascade Locks), Margi Bradway (Portland), Roger Geller (Portland), Brad Choi (Hillsboro), Mark Bernard (Tigard), George Wilson (Mt Hood Bike/Ped Coalition), Rob Sadowsky (BTA), Kathryn Doherty-Chapman (Oregon Walks), Nastassja Pace (Travel Oregon), Ruth Harshfield (OHA), Rodger Gutierrez (ODOT), Steve Lindland (ODOT), Kristie Gladhill (ODOT), Basil Christopher (Bike/Ped)

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The SAC meeting agenda and content presented by the project team covered the same material as the TAC meeting. Therefore the SAC Meeting summary notes primarily focus on the discussion and input received from the SAC members, rather than the content presented by the project team.

Phase I Progress

Jessica outlined the overarching reasons for the project and discussed the project team's progress to date in mapping existing data, interviewing stakeholders, doing the field data inventory, and beginning to map gaps and deficiencies.

General project discussion

- George Wilson (Mt Hood Bike/Ped Coalition) was concerned that Mt. Hood Villages were not shown as urbanized, but he thought they may warrant facilities typical for an urbanized area. He also noted that crossings of Highway 26 are a concern in the area.
- Jessica emphasized that the project would NOT be designing new facilities, committing funding for projects, changing ODOT standards or policies, or looking at local facilities.
- Jeff Owen (TriMet) asked about how the needs would be sorted into high, medium, and low, and whether there would be a list of discrete needs or a generalized area of priority. He asked how network would be segmented. Jessica noted that the methodology for segmentation was still to be determined, but that the project would result in a list of discrete needs with beginning and ending highway milepoints.
- Lori Mastrantonio (Clackamas County) asked why crossings were not being further expanded. Jessica noted that with this project's scope and timeline, the project team is only able to take the initial steps of 1.) expanding the inventory of existing crossings to include "enhanced" crossings of ODOT facilities and 2.) gathering the crossings "needs" from local adopted plans. Future projects can expand on crossing information, identify a set of criteria for them, and/or establish other methods for identifying needs.
- George and other stakholders wanted to confirm that the most recent data was being used – Jessica emphasized that Draft TSPs were used when available.
- Roger Geller (Portland) had a question about how planned deficiencies will be handled when there is no specificity on the facility standard in the Plan, since Portland leaves the plan flexible. Jessica said she would discuss Portland's plan deficiencies with Roger in more detail.
- George noted a concern about urban versus rural funding allocation. He said he doesn't want rural communities to not get equal benefit from the study.

Discussion on Outreach

- Jessica explained that the project team would be conducting outreach in the form of a virtual open house, in addition to all the outreach to stakeholder groups.
- Ruth Harshfield (OHA) asked whether local jurisdictions would be able to help with outreach. Jessica told SAC that stakeholders would be provided a link to the website in late February and that the virtual open house would be live in March for three weeks.
- Rob (BTA) suggested that it would make sense to extend the virtual open house to overlap with the Oregon Active Transportation Summit at the end of March to increase visibility.

Discussion on Gaps and Deficiencies

- Jessica explained the methodology for categorizing gaps and deficiencies, and outlined the three tiers of need:
    - Tier 1: No facility present
    - Tier 2: Existing facility does not meet ODOT minimum standard
    - Tier 3: Existing facility meets ODOT minimum standard but does not meet local adopted plan.
- Roger asked whether deficiencies would be classified as both functional and plan deficiencies if applicable (tier II and tier III). Karla confirmed that they would.
- Rob commented that we should consider classifying ADA deficiencies as Tier I gaps, since they aren't ADA compliant. Jessica and Karla noted that Tier II is designed to capture facilities not meeting standards, but noted that it could be useful to apply a further screen to identify facilities that would have less than 4 feet of clear space. This could be one of the evaluation criteria.

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- Margi Bradway (Portland) asked whether functional deficiencies would be different for urban versus rural areas because of different standards. Jessica noted that standards were different, with a shoulder standard in rural areas for both bicycles and pedestrians, and bicycle lanes and sidewalks in urban areas.
- Lake McTighe noted that it would be helpful if the needs inventory addresses connecting different jurisdictions/ communities. This is something Metro tried to do with the Regional Active Transportation Plan (RATP). Jessica noted that there may be an evaluation criterion to address this idea.
- Margi asked whether physical constraints/environment has played a role in determining the gaps and deficiencies. Jessica answered that it has not yet – the project team is currently focusing on big picture ideal network with physical constraints to come in later in the process.
- Shelly noted that it would be helpful to include ODOT Rail crossings in the evaluation at some point in the future, since they are significant gaps/barriers.
    - Jessica agreed and said she would try to include a representative from ODOT Rail in the project.
    - Jessica said she would provide a link to the project website to SAC members who will be able to access PDF mapbooks when they are available.

Phase II Initiation

Karla introduced Phase II of the project, discussed evaluation criteria and goals, and outlined the Washington County example.

Discussion on Evaluation Criteria

- Lake voiced a concern that structuring the criteria list under individual goals will lead to the goals and evaluation criteria being one and the same. She noted that in some cases, criteria address multiple goals. She noted that the project needs to address criteria overlap between goals and that not all aspects of the goals are addressed by individual criteria.
- George suggested looking at future conditions versus existing conditions, in terms of traffic volumes. He noted a large increase in volume/tourism on Highway 26 impacting Mount Hood Villages.
    - The project team added "projected traffic volumes" to the criteria list.
- George also voiced a concern over how the snow banks impact the pedestrian and bicycle facilities, and that this is a unique aspect of certain areas on Mount Hood.
    - The project team added "seasonal weather impacts" to the criteria list.
- Rob noted that it's important to ensure that access to jobs/transit is included. He expressed concerns over using Strava data for equity concerns, but thought that using bicycle and pedestrian volumes data would generally be a good criterion where data is available.
- The group discussed the potential to use land use/density as a potential proxy for access to jobs.
- The group discussed the lack of good volume data for bikes/peds but discussed possible proxies, including transit ridership, population density, land use.
- Jeff brought up that TriMet has ramp deployments by stop as well. This could serve as a proxy for an accessibility need.
- Susan Peithman (OBPAC) noted that she was concerned about the lack of funding criteria in the performance measures.
- The SAC discussed the desire to ensure that criteria would support funding from state/regional/county sources, but also noted that criteria used for funding may be different and more qualitative than criteria used for this evaluation and ranking. Margi noted that ODOT also has some discretionary funding and has more flexibility to choose projects for funding than a lot of local jurisdictions, and that it does not rely only on the same funding sources.
- Rob suggested that instead of doing the sticker exercise, the group should just start with what Washington County had done in their evaluation, and decide what to change. He said that this group had discussed criteria in other settings, such as determining criteria for funding sources.
- Shelly noted that there are some aspects of the Washington County prioritization that may not apply directly:
    - It only included urban areas.

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    - With the street network criterion, they wanted to provide priority to roadways that provided critical link. She said that roadway miles and intersections per square mile was only a proxy for prioritizing critical links. They used roadway miles and intersections per square mile in order to make it an automated, repeatable GIS process.
- Gordon Zimmerman (Cascade Locks) noted that it would be important to ensure that there is an econometric emphasis on the project selection to allow cost-effective rural projects with good benefits to compete with higher-profile, expensive urban projects.
- Shelley noted that Washington County is currently working on a rural prioritization effort. She noted potential options for rural critiera:
    - Scenic Roads, speed, presence of passing zones, sinuosity of roadway, grade, presence of schools, ADT, truck percentages, and land use density/"landmark locations".
- George expressed concern about rural areas falling behind and just "maintaining" current conditions rather than improving conditions for bicyclists/pedestrians.
- Jessica agreed to touch base with economists at ODOT about quantifying economic benefits.

After the initial discussion on criteria, Jessica and Karla shared with the SAC the criteria that had clearly risen to the top after discussions with the TAC, and asked whether the SAC had any objections to these criteria being selected. The SAC approved of this initial set of criteria:

- number of crashes;
- perceived safety (LTS);
- access/proximity to essential destinations;
- access/proximity to transit; and
- fills a gap in the network with no alternative route.

The group identified two additional criteria as top priorities that all SAC members could all agree upon and should not need to be voted on:

- equity measure of transportation disadvantaged;
- priority in local jurisdiction plan.

Jessica and Karla circled these approved criteria and asked SAC members to use their stickers to vote for additional secondary criteria to be considered if possible.

During the sticker exercise, Margi noted that hazard bussing zones or school zones may currently exclude ODOT roads and noted that she would propose a slightly different criterion to account for schools.

PROPOSED EVALUATION CRITERIA FOR PMT DISCUSSION

Based on input from both the TAC and the SAC, along with consideration of ODOT Active Transportation goals and national best practices, the following evaluation criteria are strongly recommended for use in Phase II. With each criterion is an explanation of how the project team may approach the analysis along with any data needs or items for discussion.

1. Pedestrian- and bicycle-involved crashes *(applied to pedestrian and bicycle)*
    - **Assumption:** Will follow a similar process as is being used for the ODOT Region 1 ARTS Systemic Safety project (include all pedestrian- and bicycle-related crashes, weighted using ODOT's crash severity rating factors).
    - **Data Needs:** Will use the most current available crash data from ODOT Region 1. (KAI has this data).
    - **Discussion:** Do we want to use ped-involved crashes for pedestrian analysis and bike-involved for bicycle analysis? Or do we want to use total ped- or bike- involved crashes for both networks? (KAI's initial recommendation is the former).
2. Level of traffic stress (LTS) *(applied to bicycle)*
    - **Assumption:** Will follow the methodology outlined in the ODOT Analysis Procedures Manual for roadways segments here: http://www.oregon.gov/ODOT/TD/TP/APM/APMv2_Ch14.pdf The analysis will use Exhibit 14-3, 14-4, 14-5, and 14-11. The analysis will not evaluate LTS for intersections or crossings.

- **Data Needs:** Presence of parking, roadway lane numbers, lane widths, bicycle lane presence and width. (KAI has this data).
- **Discussion:** What type of measure do we want to use for pedestrians? Elements to consider: presence/width of shoulder or bicycle lane, presence of sidewalk buffer, speeds, volumes. If we want to use these elements, does ODOT have a methodology developed similar to LTS for combining them? Or, do we want to consider each as a separate criterion?

3. Proximity to essential destinations *(applied to pedestrian and bicycle)*
   - **Assumption:** Use Metro's definition of "essential destinations" for the Portland Metro area.
   - **For Discussion:**
     - How do we want to define essential destinations for the rural areas and metro areas outside Portland Metro? Can we ensure that this data is consistent with the Metro area?
     - What distance do we want to assume for pedestrian? For bicycle? Potential to use different distance in rural areas?
   - **Data Needs:**
     - Layer(s) from Metro for essential destinations in the Metro region.
     - GIS data from other jurisdictions (cities and counties) on essential destinations in their regions.
   - **Methodology Proposal:**
     - We would recommend a network analysis for each essential destination to find a particular distance along the network and then counting the number of essential destination overlaps on each segment.
4. Access to transit stops *(applied to pedestrian and bicycle)*
   - **For Discussion:** With transit stops, we could approach the analysis in several ways. A couple options:
     a. Count transit stops within a half-mile distance of the ODOT highway segment with a gap – more stops increases the priority.
     b. Use only transit stops on ODOT facilities in the analysis, and classify the gaps in a few different ways:
        - Has a transit stop on the gap (highest priority – "4")
        - Has a stop within 500 feet of the gap. Same distance for pedestrian and bicycle? ("3")
        - Gap is on a transit route (therefore may have people walking/biking to access the stop) ("2").
        - Gap is not on a transit route (lowest priority – "1")
   - **Assumptions for discussion:** A couple options
     - All transit stops will be equally weighted (no differentiation for rail or high-frequency bus).
     - Weight transit stops according to ridership.
   - **Data:** Will use RLIS data for transit stops in the Metro.
   - **Data Needs:**
     - Do we want to consider future transit stops? If so, how far in the future? Is the Orange line in RLIS? Powell/Division? SW Corridor? Other planned bus routes?
     - Transit data for other jurisdictions outside the metro
5. Transportation disadvantaged population index *(applied to pedestrian and bicycle)*
   - **Assumption**: We will use a definition similar to the Clackamas County TSP, as follows: The index is calculated at the census tract or block level as the sum of people 65 and older, 17 and younger, under 200% of the poverty line, non-white and non-Hispanic, living in households with 0 vehicles, and living in households where no adult speaks English well. That sum is divided by total tract or block population. People fitting into multiple vulnerability categories are counted multiple times. Household level data is multiplied by the average household size of the county to convert it to a person unit.
   - **Assumption**: Each segment will be assigned an equity index value based on the tract that it is in. A segment at the boundary of two tracts or touching multiple tracts will be assigned the average of those tracts.
   - **Data**: Will use most recent available census data. Did Oregon Public Health Institute build a model tool to crunch the numbers for the Clackamas County Transportation System Plan?

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6. Fills gap in the network with no alternate route that improves utilization and efficiency *(applied to pedestrian and bicycle)*
    - **Discussion:** To apply this criterion, the project team will need to determine an automated screening process, and the project team may need to adapt the criterion to enable this. Several possibilities are:
        - Redefine criteria to "crosses barrier" and use the ODOT bridge layer to identify areas where an ODOT facility crosses a barrier to active transportation connectivity.
        - Use methodology similar to Washington County's – count street centerline miles and/or intersections within close proximity of the segment to roughly identify areas without alternate routes. Areas with low centerline miles or intersections would be ranked higher.
        - Identify "gaps" in the network that have completed facilities on both sides. If we choose this method, is there a threshold for the length of the gaps that we want to identify?

7. Priority in Local Jurisdiction Plans *(applied to pedestrian and bicycle)*
    - **Discussion:** We've identified projects in plans for Tier III. If the project team wants to go beyond that, the project team could; however, this may not fully represent local community desires due to inconsistencies with how/whether local jurisdictions addressed ODOT facilities in their plans. Two potential methods would be:
        - Rely on outreach of RATP and use RATP classifications for Metro area. If we go this route, we would need to figure out how to assess non-Metro areas.
        - Further examine the local jurisdiction plans to understand the priority of various projects and identify "high-priority" areas.

Other evaluation criteria also received strong support from members of the TAC and SAC and would tie to ODOT Active Transportation goals. These criteria and their scores from the TAC and SAC meeting for each mode are shown in the table below. Tables showing the complete results of the TAC and SAC sticker voting exercises are included at the end of this document.

Criteria	Pedestrian Score	Bicycle Score
Presence of crossings *(not recommended due to data availability)*	19	1
Transit ridership *(could be incorporated in transit measure above)*	18	5
Type/mix of land uses *(could be duplicative with essential destinations)*	8	1
Paratransit activity *(could be duplicative with essential destinations, equity index, and/or transit ridership)*	7	0
Expressed level of public interest *(could be based on VOH input)*	10	5
Population density *(would increase urban priority)*	9	7
Within hazard bussing zone OR in or near a school zone *(could use PBOT recommendation – do we have the data for this?)*	12	8
Increase in use by providing good user experiences – attracts visitors / residents / business *(what data would provide an appropriate proxy for this?)*	7	16
Crash rates *(don't have volume data to calculate for peds/bikes)*	4	6
Scenic bikeways *(could increase rural priority in some areas)*	0	8
Leverages funds from other sources *(relatively qualitative - what data source?)*	6	9
Provides greatest benefit in relation to costs *(relatively qualitative - what data source?)*	2	9
Urban, rural, and suburban areas *(could be applied after sorting)*	6	8

Indicates one of the highest scoring criteria for that mode

NEXT STEPS

Following the TAC and SAC meetings, the project team will move forward to complete Phase I and start on Phase II.

- Finalize the data inventory of enhanced crossing and highway segments.

- Prepare complete drafts of the gaps and deficiencies maps, based on methodology approved by TAC and SAC during the meetings.
- Select evaluation criteria based on input from the TAC and SAC meeting, refine methodology, and map the initial evaluation criteria.
- Prepare and hold a virtual open house during the month of March to solicit input from the public.
- Create a draft evaluation spreadsheet with rankings by criteria for all the identified gaps and deficiencies.
- TAC and SAC meetings in May to report progress and share deliverable drafts.

DRAFT

Complete TAC/SAC Sticker Voting Results

Bicycle Network Evaluation Criteria Sticker Voting Results

indicates criteria that SAC agreed upon as priorities prior to beginning sticker voting exercise (a conservative score of 5 "red" votes is assumed for scoring/ranking purposes)

			TAC			SAC				
ODOT Ped Bike Goal	ID#	Potential Criteria	Red	Yellow	weighted	Red	Yellow	weighted	total	Notes
Safety	1	Number of Crashes	10	0	20	5		10	30	
Accessibility and connectivity	15	Proximity /access to transit and essential destinations	8	2	18	5		10	28	
Mobility and Efficiency	13	Fills gap in the network with no alternate route	4	6	14	5		10	24	
Safety	3	Vehicle speeds	2	5	9	5		10	19	Element of Crash Risk and Level of Traffic Stress criteria
Safety	4	Average daily Traffic	1	5	7	5		10	17	Element of Crash Risk and Level of Traffic Stress criteria
Eommunity and Economic Vitality	25	Increase in use by providing good user experiences (attracts new visitors/residents/businesses)	0	2	2	4	6	14	16	
Equity	31	percent of census tracts with above average portions of children and the elderly	1	3	5	5		10	15	Element of Vulnerable Users/Transportation Disadvantaged criterion
Safety	2	Level of Traffic Stress	2	0	4	5		10	14	
Safety	5	Number of Lanes	2	0	4	5		10	14	Element of Crash Risk and Level of Traffic Stress criteria
Coordination, Cooperation, Collaboration	46	priority in local jurisdiction plans	0	4	4	5		10	14	
Equity	27	presence of vulnerable users	0	1	1	5		10	11	
Equity	28	percent of census tracts with above average rates of poverty	0	1	1	5		10	11	Element of Vulnerable Users/Transportation Disadvantaged criterion
Equity	30	percent of census tracts with above average portions vehicle access	0	1	1	5		10	11	Element of Vulnerable Users/Transportation Disadvantaged criterion
Accessibility and connectivity	21	2040 town centers/station areas	0	0	0	5		10	10	Element of Proximity to Essential Destinations criterion
Equity	29	percent of census tracts with above average portions of ethinic minorities	0	0	0	5		10	10	Element of Vulnerable Users/Transportation Disadvantaged criterion

Bicycle Network Evaluation Criteria Sticker Voting Results

indicates criteria that SAC agreed upon as priorities prior to beginning sticker voting exercise (a conservative score of 5 "red" votes is assumed for scoring/ranking purposes)

			TAC			SAC				
ODOT Ped Bike Goal	ID#	Potential Criteria	Red	Yellow	weighted	Red	Yellow	weighted	total	Notes
Strategic Investment	41	opportunity to leverage funds from other sources	0	1	1	2	4	8	9	
Strategic Investment	42	provides the greatest benefit in relation to costs	3	1	7	1	0	2	9	
Accessibility and connectivity	19	Within hazard bussing zone for schools	0	0	0	3	2	8	8	
Eommunity and Economic Vitality	26	Scenic bikeways	0	1	1	3	1	7	8	
Equity	33	urban, rural and suburban areas	0	0	0	2	4	8	8	
Safety	6	Truck Route & Truck %	0	1	1	2	2	6	7	
Accessibility and connectivity	16	population density	0	1	1	2	2	6	7	
Safety	8	Crash rates	0	0	0	3	0	6	6	
Safety	10	Presence or width of shoulder	1	1	3	0	2	2	5	
Accessibility and connectivity	24	transit ridership	0	0	0	1	3	5	5	
Coordination, Cooperation, Collaboration	49	level of expressed pubic interest	0	3	3	0	2	2	5	
Accessibility and connectivity	20	Number of roadway miles and intersections per square mile	0	0	0	2	0	4	4	
Accessibility and connectivity	22	Future land use plans	0	0	0		4	4	4	
Strategic Investment	39	Project feasibility- ROW available	0	0	0	1	2	4	4	
Strategic Investment	43	upcoming construction or maintenance planned	0	2	2	0	2	2	4	
Accessibility and connectivity	23	Topography resulting in undesirable grades	1	1	3	0	0	0	3	
Health	35	Bicycle ridership	0	1	1	0	2	2	3	
Strategic Investment	44	project feasibility -structure, environmental or other physical constriants	0	3	3	0	0	0	3	
Coordination, Cooperation, Collaboration	48	Leverages priviate development or other funding partnerships	0	0	0	1	1	3	3	

Bicycle Network Evaluation Criteria Sticker Voting Results

indicates criteria that SAC agreed upon as priorities prior to beginning sticker voting exercise (a conservative score of 5 "red" votes is assumed for scoring/ranking purposes)

			TAC			SAC				
ODOT Ped Bike Goal	ID#	Potential Criteria	Red	Yellow	weighted	Red	Yellow	weighted	total	Notes
Safety	9	"cost" of crashes	0	1	1	0	1	1	2	
Safety	11	Existing bike facility width	0	1	1	0	1	1	2	
Health	36	Proximity to health/treatment/services facilities	0	1	1	0	1	1	2	
Health	37	proximity to parks	0	0	0	0	2	2	2	
Safety	7	Presence of crossings	0	1	1	0	0	0	1	
Safety	12	Existing sidewalk width	0	1	1	0	0	0	1	
Mobility and Efficiency	14	Critical link in system that will imporve utilization and efficiency	0	1	1	0	0	0	1	
Accessibility and connectivity	17	Density of land uses	0	0	0	0	1	1	1	
Accessibility and connectivity	18	Type/mix of land uses	0	1	1	0	0	0	1	
Equity	32	Serves all ability levels	0	0	0	0	0	0	0	
Equity	34	paratransit activity	0	0	0	0	0	0	0	
Health		Air quality	0	0	0	0	0	0	0	
Health		Obesity rates	0	0	0	0	0	0	0	
Health		chronic disease rates	0	0	0	0	0	0	0	
Sustainablilty	38	Natural built and cultural resources at risk	0	0	0	0	0	0	0	
Sustainablilty		Emissions/GHG	0	0	0	0	0	0	0	
Sustainablilty		Regional Trails	0	0	0	0	0	0	0	
Strategic Investment	40	project costs/capital costs	0	0	0	0	0	0	0	
Strategic Investment	45	reduces need for highway expansion	0	0	0	0	0	0	0	
Coordination, Cooperation, Collaboration	47	RATP classification	0	0	0	0	0	0	0	
Coordination, Cooperation, Collaboration		Partnership opportunites	0	0	0	0	0	0	0	

Pedestrian Network Evaluation Criteria Sticker Voting Results

indicates criteria that SAC agreed upon as priorities prior to beginning sticker voting exercise (a conservative score of 5 "red" votes is assumed for scoring/ranking purposes)

			TAC			SAC				
ODOT Ped Bike Goal	ID#	Potential Criteria	Red	Yellow	weighted	Red	Yellow	weighted	total	Notes
Safety	1	Number of Crashes	10	0	20	5		10	30	
Accessibility and connectivity	15	Proximity /access to transit and essential destinations	7	4	18	5		10	28	
Equity	30	percent of census tracts with above average portions vehicle access	3	6	12	5		10	22	Element of Vulnerable Users/Transportation Disadvantaged criterion
Mobility and Efficiency	13	Fills gap in the network with no alternate route	4	2	10	5		10	20	
Safety	7	Presence of crossings	0	6	6	6	1	13	19	
Safety	3	Vehicle speeds	2	3	7	5		10	17	Element of Crash Risk and Level of Traffic Stress criteria
Accessibility and connectivity	24	transit ridership		1	1	6	3	15	16	
Safety	5	Number of Lanes	2		4	5		10	14	Element of Crash Risk and Level of Traffic Stress criteria
Safety	4	Average daily Traffic	1	1	3	5		10	13	Element of Crash Risk and Level of Traffic Stress criteria
Equity	31	percent of census tracts with above average portions of children and the elderly	0	3	3	5		10	13	Element of Vulnerable Users/Transportation Disadvantaged criterion
Equity	28	percent of census tracts with above average rates of poverty	0	2	2	5		10	12	Element of Vulnerable Users/Transportation Disadvantaged criterion
Coordination, Cooperation, Collaboration	46	priority in local jurisdiction plans	0	2	2	5		10	12	
Accessibility and connectivity	19	Within hazard bussing zone for schools	1	1	3	4	1	9	12	
Safety	2	Level of Traffic Stress	0	1	1	5		10	11	
Accessibility and connectivity	21	2040 town centers/station areas	0	0	0	5		10	10	Element of Proximity to Essential Destinations criterion
Equity	27	presence of vulnerable users	0	0	0	5		10	10	

Bicycle Network Evaluation Criteria Sticker Voting Results

indicates criteria that SAC agreed upon as priorities prior to beginning sticker voting exercise (a conservative score of 5 "red" votes is assumed for scoring/ranking purposes)

Equity	29	percent of census tracts with above average portions of ethinic minorities	0	0	0	5		10	10	Element of Vulnerable Users/Transportation Disadvantaged criterion
Coordination, Cooperation, Collaboration	49	level of expressed pubic interest	0	4	4	1	4	6	10	
Accessibility and connectivity	16	population density	1	2	4	1	3	5	9	
Accessibility and connectivity	18	Type/mix of land uses	0	4	4	1	2	4	8	
Eommunity and Economic Vitality	25	Increase in use by providing good user experiences (attracts new visitors/residents/businesses)	0	0	0	2	3	7	7	
Equity	34	paratransit activity			0	1	5	7	7	
Equity	33	urban, rural and suburban areas	0	0	0	2	2	6	6	
Strategic Investment	41	opportunity to leverage funds from other sources	0	1	1	1	3	5	6	
Coordination, Cooperation, Collaboration	48	Leverages priviate development or other funding partnerships	0	0	0	3		6	6	
Safety	10	Presence or width of shoulder	1	2	4		1	1	5	
Health	35	Bicycle ridership	1	1	3		2	2	5	
Strategic Investment	43	upcoming construction or maintenance planned	0	3	3		2	2	5	
Safety	8	Crash rates	1	0	2		2	2	4	
Accessibility and connectivity	23	Topography resulting in undesirable grades	1	0	2	1		2	4	
Strategic Investment	39	Project feasibility- ROW available	0	0	0	1	2	4	4	
Safety	6	Truck Route	0	1	1	1		2	3	
Safety	11	Existing bike facility width	0	0	0		2	2	2	
Mobility and Efficiency	14	Critical link in system that will imporve utilization and efficiency	0	2	2			0	2	

Bicycle Network Evaluation Criteria Sticker Voting Results

indicates criteria that SAC agreed upon as priorities prior to beginning sticker voting exercise (a conservative score of 5 "red" votes is assumed for scoring/ranking purposes)

Accessibility and connectivity	22	Future land use plans	0	0	0	2	2	2
Health	37	proximity to parks	0	0	0	2	2	2
Strategic Investment	42	provides the greatest benefit in relation to costs	1	0	2		0	2
Strategic Investment	44	project feasibility -structure, environmental or other physical constriants	0	2	2		0	2
Safety	9	"cost" of crashes	0	0	0	1	1	1
Safety	12	Existing sidewalk width		1	1		0	1
Health	36	Proximity to health/treatment/services facilities	0	0	0	1	1	1
Accessibility and connectivity	17	Density of land uses	0	0	0		0	0
Accessibility and connectivity	20	Number of roadway miles and intersections per square mile	0	0	0		0	0
Eommunity and Economic Vitality	26	Scenic bikeways	0	0	0		0	0
Equity	32	Serves all ability levels	0	0	0		0	0
Health		Air quality	0	0	0		0	0
Health		Obesity rates	0	0	0		0	0
Health		chronic disease rates	0	0	0		0	0
Sustainablilty	38	Natural built and cultural resources at risk	0	0	0		0	0
Sustainablilty		Emissions/GHG	0	0	0		0	0
Sustainablilty		Regional Trails	0	0	0		0	0
Strategic Investment	40	project costs/capital costs	0	0	0		0	0
Strategic Investment	45	reduces need for highway expansion	0	0	0		0	0
Coordination, Cooperation, Collaboration	47	RATP classification	0	0	0		0	0