FVI Project Development Team Meeting #6
Draft Meeting Minutes

April 7, 2005, 9 a.m. to 11:30 a.m.
Rogue Valley Sanitary Sewer Building

ODOT Present: Debbie Timms (Project Leader), Jerry Marmon (Environmental PM), Brian Sheadel (Roadway), Leslie Schwab (Cultural), Peter Schuytema (TPAU), James Burford (Bridge), David Pyles (Land Use), Susan Landis (ROW), Christina Fera-Thomas (TPAU),

Non-ODOT Present: Denis Murray (City of Phoenix), Dale Petrasek (Jackson County Roads), Vicki Guarino (RVCOG), Dan Moore (RVCOG), Nancy Reynolds (URS), Emily Moshofsky (URS)

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1. APPROVAL OF MINUTES

The PDT last met in September 2004. The group approved the September minutes.

2. REVIEW PROJECT STATUS

In the previous months, J. Marmon presented the Purpose and Need and Goals and Objectives to CETAS and the group concurred with both. There have been 17 alternatives and 9 options developed by the PDT, plus 9 additional CAC-developed alternatives. The PDT received draft matrices summarizing the alternatives and options.

The CAC recommended in November 2004, to drop 6 alternatives. The CAC also made additional recommendations to drop 4 alternatives and 3 options at its April 2005 meeting.

3. INTRODUCTION TO NEW CAC-DEVELOPED ALTERNATIVES

The PDT had not previously reviewed the CAC-developed alternatives. The following list summarizes 7 alternatives initially developed by the CAC at a workshop meeting. CAC members subsequently developed 2 additional alternatives, not listed below. Each alternative is briefly described in a bulleted list.

CAC Table 1--Single Point Urban Interchange, N. Phoenix Through

Description:

- Connection to the east on N. Phoenix Road through alignment; connection turns north just west of Petro, and reconnects with existing N. Phoenix Road just north of Arrowhead Ranch.
- Realigned N. Phoenix Road would traverse Arrowhead Ranch.
- Fern Valley Road access to N. Phoenix Road begins at existing Fern Valley Road/N. Phoenix Road intersection, and connects to N. Phoenix Road just north of the UGB.
- There is flexibility in the northeast quadrant regarding placement of the local roadway system.

CAC Table 2--Single Point Urban Interchange, Fern Valley Through with Underpass to N. Phoenix (with optional alignment for N. Phoenix) (Lewin)

Description:

- Construct SPUI slightly north of existing interchange.
- Correct skew of interchange in relation to I-5.
- Connect interchange to OR 99 at Cheryl; Fern Valley Road would remain generally along existing alignment with slight adjustments to the north and south to accommodate interchange location.
- East of interchange, road alignment would pass north of existing Petro and then south to connect with existing Fern Valley Road.
- N. Phoenix Road intersection would be east of Petro, and would cross under the major local access road from the interchange.
- Access to the existing southeast commercial quadrant (currently served by Fern Valley Road) and Petro would be via N. Phoenix Road.
- Access to the neighborhood in the southeast quadrant would be via Fern Valley Road at Breckinridge.

CAC Table 2--Partial Cloverleaf, Original Fern Valley Alignment, N. Phoenix Through East

Description:

- Interchange is the same configuration and location as PDT Alternative 21 (see below).

CAC Table 3--Single Point Urban Interchange, Fern Valley Through

Description:

- Construct interchange and west connection to OR 99 in same location and configuration as CAC Table 2 (Lewin) alternative.
- Correct skew of interchange in relation to I-5.
- East side connection to Fern Valley Road would have same curvature and location as CAC Table 2 (Lewin) alternative.
- N. Phoenix Road would be relocated to the east, intersecting Breckinridge Drive at the east edge of the UGB. N. Phoenix Road would then be realigned to directly to the north, turning west generally north of the UGB through Arrowhead Ranch, and reconnecting with existing N. Phoenix Road west of Arrowhead Ranch.
- Access to neighborhood in southeast quadrant would be at Breckinridge Drive.
- Access to commercial areas in northeast and southeast quadrants would be north of Fern Valley Road in a location similar to CAC Table 2 (Lewin).

CAC Table 3--Single Point Urban Interchange, South of FVI Alignment

Description:

- Construct SPUI slightly south of existing interchange location.
- Correct skew of interchange in relation to I-5.
- Would keep the alignment of Fern Valley Road Road east of I-5 generally the same as the existing conditions.

- Fern Valley Road would intersect with N. Phoenix Road at existing location. Fern Valley Road to N. Phoenix Road movement would remain a left turn.
- N. Phoenix Road would traverse the developable commercial land in the northeast quadrant, reconnecting with existing N. Phoenix Road west of Arrowhead Ranch.
- West of the interchange, Fern Valley Road would be realigned through the southwest quadrant, displacing the existing Luman Road access; would cross north of existing Fern Valley Road through the southern portion of Coleman Creek Estates, and connect to OR 99 at Cheryl Lane.

CAC Table 4--Interchanges at S. Bear Lake Estates, S. Stage Road and Fern Valley Road

Description:

- Would retain the existing Fern Valley Road interchange, and add diamond interchanges at South Stage Road and just south of Bear Lake Estates.
- Fern Valley Road connection to OR 99 would be realigned using Cheryl or Bolz options.

CAC Table 4--South Interchange with Connection to 4th Street

Description:

- Construct diamond interchange just south of existing interchange.
- Correct skew of interchange in relation to I-5.
- East of interchange, connect to Fern Valley Road near existing alignment.
- Realign N. Phoenix Road just south of the UGB, then north through Arrowhead Ranch, reconnecting with existing N. Phoenix Road west of Arrowhead Ranch.
- West of interchange, road would connect to OR 99 across Luman Road, along north and western edge of pond, with connection at north end of the couplet at 4th Street.
- Access to the northwest and southwest quadrants of the existing interchange would be via existing Fern Valley Road or a Bolz extension. Either option would be a cul-de-sac; therefore the primary access to these developments would be via OR 99.

4. REVIEW CAC RECOMMENDATIONS ON ALTERNATIVES AND OPTIONS TO DROP

At the April 2005 meeting, the CAC recommended dropping four of the alternatives: CAC Table 2--Partial Cloverleaf; CAC Table 3--SPUI-Fern Valley Through; PDT 1--SPUI, Original Fern Valley Alignment; and PDT 7--Regular Diamond-South Stage Road Alignment, which was dropped by the PDT in September 2004, but needed to be retained for modeling.

The CAC also recommended dropping three options: Option 4-Fern Valley Connection to Bolz, Option 6-Old South Stage Overcrossing to N. Phoenix, and Option 8-1st Street Extension to Bear Lake Estates (as a stand-alone project). The CAC had previously voted to recommend dropping Option 16--Fern Valley Connection to 4th and Option 17-Fern Valley Connection to 5th.

At the April 2005 meeting, the PDT voted on each alternative and option to determine whether to drop that alternative or option, or to keep it for further consideration and analysis. The PDT already determined (in their July and September 2004 meetings) that 7 alternatives and 5 options

should be dropped from further consideration. These include the following alternatives: PDT 1-SPUI Original Fern Valley Alignment; PDT 2-Split Diamond-Original Fern Valley Alignment; PDT 7--Regular Diamond-South Stage Road Alignment; PDT 13 and 22, Regular Diamond-Bolz to N. Phoenix Northern Alignment; PDT 23-Regular Diamond 5th to N. Phoenix Northern Alignment; PDT 24-Regular Diamond 4th to N. Phoenix Northern Alignment; and PDT 25-Regular Diamond, Glenwood Road.

ALTERNATIVES (PDT)

PDT Alternative 1A--Single Point Urban Interchange, N. Phoenix Through

Description:

- Construct SPUI just north of existing interchange.
- Correct skew of interchange in relation to I-5.
- Connection to the east via new roadway slightly north of Fern Valley Road, reconnecting at existing N. Phoenix Road intersection. The Fern Valley to N. Phoenix Road movement would remain a left turn.
- N. Phoenix Road realigned north of its existing alignment, reconnecting with existing roadway near UGB.
- Connection to OR 99 via Cheryl or Bolz.

Discussion:
The concept for this alternative is the same as some of the other alternatives when looking at the connections of the off-system road network to the interchange. A realigned N. Phoenix Road would go through Arrowhead Ranch, which is problematic, but it would provide access to west side businesses. The CAC recommended keeping a very similar SPUI with N. Phoenix as the through movement. Since the two alternatives are essentially the same, the PDT voted to combine this alternative with CAC Table 1 SPUI, N. Phoenix Through.

Vote:
Combine with the CAC Table 1, SPUI alternative.

PDT Alternative 3--Regular Diamond, Perpendicular Fern Valley Alignment

Description:

- Construct diamond interchange north of existing interchange.
- Correct skew of interchange in relation to I-5.
- Connect to the east via new roadway slightly north of Fern Valley Road, reconnecting at existing N. Phoenix Road intersection. The Fern Valley to N. Phoenix Road movement would remain a left turn.
- Realign N. Phoenix Road north of its existing alignment, reconnecting with existing roadway near UGB.
- Connect to OR 99 via Cheryl or Bolz.

Discussion:
There is a long distance required between ramp terminals. The first full access would be OR 99. The resulting access to business areas surrounding the interchange would be poor.

Vote:
The PDT voted to drop this alternative.

PDT Alternative 14--Regular Diamond, Cheryl to N. Phoenix Northern Alignment

Description:
- Interchange would be in about the same location and configuration as PDT Alternatives 13 and 22 above, except the west local road connection to OR 99 would be located directly west of the interchange at Cheryl Lane.

Discussion:
This alternative would impact the RV Park. The topography on the east side of I-5 is a problem.

Vote:
The PDT voted to drop this alternative.

PDT Alternative 20--Diamond with S.E. Loop, Original Fern Valley Alignment, N. Phoenix Through East

Description:
- Construct a diamond interchange at the existing interchange location; include an additional northbound loop on-ramp in the southeast quadrant.
- Fern Valley Road would remain on its existing alignment.
- Realign N. Phoenix Road to extend from Breckinridge Lane north of its existing alignment, reconnecting with existing N. Phoenix roadway south of the planned Home Depot property.
- Connect to OR 99 at Cheryl or Bolz.

Discussion:
The Breckinridge neighborhood has been very vocal about their concerns regarding impacts to their neighborhood. This option would result in a major intersection at Breckinridge, impacting the neighborhood. This option would also impact circulation at the truck stop.

Vote:
The PDT voted to drop this alternative.

PDT Alternative 21--Partial Cloverleaf, Original Fern Valley Alignment, N. Phoenix Through East

Description:

- Similar to PDT Alternative 20 except on west side, where the alternative would include an additional loop ramp in the northwest quadrant. East side of interchange would be the same as Alternative 20.

Discussion:
This alternative is the same as PDT 20, but an additional loop ramp has been added, resulting in additional impacts to commercial land at the interchange.

Vote:
The PDT voted to drop this alternative.

ALTERNATIVES (CAC)

The following CAC alternatives are described under #3 on the agenda. The PDT voted on each to determine whether to keep the alternative for further consideration and analysis.

CAC Table 1--Single Point Urban Interchange, N. Phoenix Through

Discussion:
This alternative is essentially the same as PDT Alternative 1A.

Vote:
The PDT voted to combine this alternative with PDT Alternative 1A.

CAC Table 2--Single Point Urban Interchange, Fern Valley Through with Underpass to N. Phoenix (with optional alignment for N. Phoenix) (Lewin)

Discussion:
The general perspective of the CAC is that a North Phoenix connection is, in effect, building an interchange for S. Medford. D. Murray has concerns about access to businesses with this alternative, but agreed that it is okay to keep the alternative for now.

P. Schuytema recommends keeping the alternative at this time. It pulls in about 10% more traffic. It is not significant for less travel times, but it is the second-best performing SPUI, because it has a right turn rather than a left turn at the intersection. D. Pyles asked about Section 4(f) properties and Arrowhead Ranch. J. Marmon commented that avoiding a Section 4(f) historic site is not currently a defining point because all of the alternatives that use N. Phoenix Road will have issues with Arrowhead Ranch.

Vote:
The PDT voted to keep this alternative.

CAC Table 2--Partial Cloverleaf. Original Fern Valley Alignment, N. Phoenix Through East

Discussion:
This alternative is similar to other SPUIs. D. Moore commented that this alignment is the most consistent with the alignment in the Transportation System Plan. However, there are access issues with this alignment. There is no direct access for about ½ mile from the interchange. B. Sheadel tried to place key features on the map to show the group.

Vote:
The PDT voted to drop this alternative.

CAC Table 3--Single Point Urban Interchange, Fern Valley Through

Discussion:
The east side road would connect with the realigned N. Phoenix Road at Fern Valley and Breckinridge Drive; therefore, the intersection would be located at the entrance to a residential area. Increased traffic into the residential area is likely. This would be a large intersection, and would not be pedestrian-friendly. There is concern by landowners regarding whether Fern Valley Road is used as the primary connector to the interchange or whether N. Phoenix Road becomes the access road to northeast quadrant developable commercial land. There would also be some impact to residences from Northridge neighborhood at the north edge of the neighborhood.

Vote:
The PDT voted to drop this alternative.

CAC Table 3--Single Point Urban Interchange, south of FVI alignment (Lowry)

Discussion:
This alternative keeps the left turn, but it links to the south more efficiently than the PDT SPUI. It is the best performing SPUI of the group.

Vote:
The PDT voted to keep this alternative.

CAC Table 4--Interchange at S. Bear Lake Estates, S. Stage Road and Fern Valley Road

Discussion
The interchange spacing is too close; there is less than one mile between the Fern Valley Interchange and the Bear Lake Interchange. With more interchanges, it is more difficult to meet spacing standards. (FHWA policy is to fully use the existing system before expanding the system to include new interchanges.) A south interchange would connect into Breckinridge Drive, impacting the neighborhood with traffic and noise, as well as visual impacts. All interchanges would impact Bear Creek Greenway. The cost of the project would increase with each additional interchange.

Vote:

The PDT voted to drop this alternative.

CAC Table 4--South Interchange with Connection to 4th Street

Discussion
The alternative has out-of-direction access to northwest and southwest quadrant commercial properties. It would add an additional Bear Creek crossing; impacts to Bear Creek Greenway and the pond and/or riparian vegetation in the southwest quadrant. N. Phoenix Road realignment would traverse Arrowhead Ranch and EFU land outside the UGB. The alternative would impact Bear Lake Estates, which may be an environmental justice issue.

Vote:
The PDT voted to keep this alternative.

OPTIONS

Option 4--Fern Valley Connection to Bolz

Description:
- West end of Fern Valley Road would be realigned south to connect with Bolz Road.
- Diagonal East Bolz Road would be removed.

Discussion:
D. Murray asked about the impact to the intersection at Fern Valley and Bolz. He believes the PDT should keep this option. Bolz Road dead-ends at the high school. He sees this option as eliminating a major problem at the current OR 99/Bolz Road intersection because the traffic will be forced to dissipate onto other streets by pulling cars away from the intersection.

Vote:
This option was retained for further consideration.

Option 5--Fern Valley Connection to Cheryl

Description:
- Fern Valley would be realigned to connect with Cheryl Lane. Two possible sub-options were identified: a) direct connection north of existing access into market; b) connection through market property.
- East Bolz Road connection to Fern Valley Road would be removed.

Discussion:
Fern Valley Road volumes drop with this option, which would allow more access to northern Phoenix. Using Bolz as the connection to OR 99 from the interchange would take existing traffic and route it north and/or south. People are now using Ray's Market parking lot as a U- turn. As a note, it shouldn't affect the schedule if both Options 4 and 5 are studied.

Vote:
This option was retained for further consideration.

Option 6--Old South Stage Overcrossing to N. Phoenix

Description:

- Extend Old South Stage Road east from OR 99 crossing over I-5 to connect with N. Phoenix Road.

Discussion:
The relative effectiveness of this option drops if the area is urbanized and the speed limit varies. P. Schuytema looked at different speeds, between 45 mph and 35 mph. If South Stage Road is a rural road in the year 2030, it would pull 20% traffic off of Fern Valley Road. This would be out-of-direction travel. If a slower speed is designated on South Stage Road, the traffic would most likely use the existing interchange instead. This overcrossing is a very speed-sensitive choice.

J. Burford asked if destination shops are included in the model. They are not specifically included, but potential large growth is included, not specific development details. The model does include new employment data, new street connections, etc. Another PDT member asked if the traffic modelers know the specific amount of traffic that travels south from South Stage Road and then proceeds north. That is difficult to gauge. However, it is anticipated that Jacksonville and southwest Medford traffic would use the South Stage Road overcrossing as a beltline.

P. Schuytema noted that any alternative has to meet Purpose and Need for this project. South Stage Road is not a bad project per se, but it doesn't meet the Purpose and Need for this particular project. It is possible that Home Depot would attract traffic from South Stage Road.

Vote:
The PDT voted to drop the option.

Option 8--1st Street Extension to Bear Lake Estates

Description:

- Connect Bear Lake Estates to OR 99 couplet at 1st Street; the option would provide a new outlet for local Bear Lake Estates traffic to use instead of relying on Fern Valley Road.
- Option would extend east across Bear Creek.

Discussion:
This option would hopefully take volume off of Fern Valley Road. Differences were localized at specific intersections. It is not recommended as a stand-alone option, but it could work in combination with other alternatives. There are alternatives that would require this option, specifically, if Luman Road were displaced by a proposed alternative. Therefore, this option could be considered at a later time.

Vote:
The PDT voted to drop Option 8 as a stand-alone option.

Option 15--Northridge Terrace Overcrossing

Description:

- Connect Bear Lake Estates to OR 99 couplet at 1st Street; the option would provide a new outlet for local Bear Lake Estates traffic to use instead of relying on Fern Valley Road.
- Option would extend across Bear Creek.

Discussion:
A new east/west roadway would pull local traffic into the northeast quadrant and beyond. There is a lot of traffic on Fern Valley Road that is cross-town traffic. Option 15 would be a primary connection. The proximity to Phoenix is better because South Stage Road would require out-of-direction travel. There is a need for travel time reduction on a local street connection. Most of the alternatives and options would impact low-income housing, and have associated environmental justice issues. Northridge Terrace Overcrossing provides an east west connection across the interstate.

D. Murray commented that previously dropping the S. Bear Lake Overcrossing to Breckinridge option reduces the possibilities for an east-west connection across I-5. The Phoenix Comprehensive Plan shows the need for crossing at Oak Street or 4thStreet. He believes that, in the long term, it is important to maintain an option for an additional crossing.

After some discussion, the PDT agreed that the key elements of the project need to be those necessary to support the interchange, and that additional street construction (e.g., S. Bear Lake Overcrossing to Breckinridge) cannot be included in the project if it is not critical to the functioning of the project alternatives, even though those connections may be identified in the local comprehensive plan.

Vote:
The PDT voted to keep the option.

5. EXISTING CONDITIONS PRESENTATION

C. Fera-Thomas presented an Existing Baseline Analysis of the No-Build conditions. The data presented was for the peak hour of traffic, between 4-5 p.m., with July as the peak traffic month.

To describe what volume-to-capacity (v/c) ratios are, C. Fera-Thomas used a “bucket filled with water” analogy. If you are carrying a bucket that is 1/3 full of water, you can walk at a steady pace. The more water that you add to the bucket, carrying the bucket at a steady pace becomes more difficult. When the bucket is completely full, the volume-to-capacity ratio is at 1.0. It is difficult to move without spilling. If you then try to add more water (i.e., more cars), the volume is overflowing the amount of capacity, so the ratio would be over 1.0. At this point, you have a failing system, whether it is an overflowing bucket, or a highway where the cars are at a standstill.

V/c ratios relate to the Fern Valley project. Local jurisdictions and the Oregon Highway Commission set maximum standards for v/c ratios. The goal is to not exceed those standards. Different types of roadways have different levels or standards applied to them; 0.85 is the standard for Fern Valley Road, and 0.80 is the standard for I-5. The Fern Valley Interchange has become an issue because there is a lot of traffic congestion surrounding the interchange and adjacent intersections. It is anticipated that, without improvements, the system will eventually fail.

To project the year 2030 No-Build traffic levels, the traffic modelers made assumptions and used available data for the project area. These included using updated information for land uses, the anticipated number of future households based on regional projections, future employment numbers, etc. Substantial regional development is also included in these projections.

In 2004, the FVI was below the v/c standards. The Highway Manual design standards for roadways are actually lower than the v/c standards specified in the Oregon Highway Plan. The intersections around Fern Valley Road are crowded, but not yet failing. By the year 2030, all intersections will be failing for v/c under the No-Build Alternative. Since Fern Valley Road will be failing in 2030, traffic will route to OR 99 and other local streets. Additional queuing on Fern Valley Road will then occur because eastbound vehicles won't be able to cross OR 99.

6. MODELING SCREENING RESULTS

P. Schuytema presented the modeling screening results completed to date. There are multiple variables included in the model. The model groups households and activities, and then simulates connections. Activities are grouped into zones, called Behavior Transportation Analysis Zones (TAZ). Groupings are composed of homogeneous behaviors, activities, land uses, etc. Then a roadway network is placed on top of the TAZ. This will help determine trip generation, production and attractions. Gravity models are used to help decide what attractions are pulling traffic (or people) towards them. For example, schools, workplaces, shopping centers are all specific attractions. Trip distribution can then be simulated based on the zones and expected behaviors. Certain zones have a lot of attractions--big box retail stores, for example.

There are also different types of trips that the model tries to capture. There are internal trips, which are ones that stay within the model study area. External trips are outside of the model area. There are also external-external trips which means the person drives through the study area without stopping.

The model includes the mode of the trip, i.e., walking, transit, single vehicle, etc. The traffic modeler makes uses the idea of the "shortest path" for the trip assignment. Roadways with the shortest pathway receive more trips. The model will generate future v/c ratios.

Review of Technical Memorandum #1

The Technical Memo information is based on the model discussed above. The technical memo focused on CAC-recommended alternatives, and also included P. Schuytema's recommendations on alternatives and options to drop based on the modeling analysis.

The local jurisdictions developed the data that was included in the model. ODOT modeled the alternatives and options. The information provided by the model can't be used with actual, on-the-ground traffic counts because the model is only a mathematical relationship and needs to be tied to actual traffic volumes. The traffic modelers used 2030 Tier 1 designated projects. Tier 1 projects are listed in the Regional Transportation Improvement Program for funding. For example, the Bear Creek Bridge is scheduled for construction in 2007. (Tier 2 projects are planned for the future, but are not yet funded.) The Rogue Valley Metropolitan Planning Organization model is still under construction. Therefore, the model used in evaluating the Fern Valley Interchange alternatives and options was based on the older traffic model. A separate

model run for each alternative scenario is required. Relative differences were applied to the 2004 No-Build numbers to generate the 2030 numbers.

There was a question about how much traffic would be routed near the high school if Cheryl Lane were used as the interchange connection to OR 99. There were also questions on how this might impact the north entrance to Ray's Marketplace. The results from the first level of traffic model analysis won't answer those questions. However, there will be additional analysis that will help to answer those types of questions. C. Fera-Thomas will take the traffic modeling numbers and apply them to the next level of analysis. The first level of modeling doesn't include detailed v/c ratios; it only provides data on a relative basis so alternatives can be compared. For this round of modeling, the new Rogue Valley Council of Government's data and the old model were used. At a future date when the new model is complete, the data from this exercise will be run through the new RVMPO regional model. However, the results should not show much difference. The City of Talent data is not included in this model, but will be counted in the larger regional model. The City of Talent is outside of the current project area and therefore was not included in this analysis. All expected regional growth is being included, and all data from the City of Phoenix is also included.

Included in the model are the RTP city and county projects. The Fern Valley project is not included in the model since the model must be developed to show how the project alternatives compare to existing conditions. Over a normal week there is a 10% fluctuation in the data (i.e., the traffic activity), so the traffic modelers are looking for results above that 10% threshold.

The PDT discussed the alternatives and options described in Tech Memo #1 and then voted on each Tech Memo recommendation to keep or drop it from further consideration. (These are discussed above.)

NEXT MEETING:

P. Schuytema will be working with the model to develop volume-to-capacity ratios on the alternatives still under consideration. He will be primarily looking at the main interchange configurations, for example, the functionality of a diamond interchange. This analysis will include more work on v/c analysis, queuing, etc.

The project is currently about 6 months behind schedule due to delays caused by the development of the traffic model. The project team will provide the PDT with an updated schedule at the next meeting.