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ALTERNATIVES CONSIDERED

Shading indicates alternatives and options that were dropped by PDT.

Map Ref.	PDT Alternatives	Description of Alternative	Comments
None	<p>Single Point Urban Interchange (SPUI)¹ – Original Fern Valley Alignment</p> <p>PDT action: Dropped by PDT (May 2004)</p>	<ul style="list-style-type: none"> SPUI located on the original Fern Valley alignment. Interchange placed at an angle to I-5. 	<p>Background:</p> <ul style="list-style-type: none"> Map not developed because of fatal design flaw. <p>Reasons for not advancing:</p> <ul style="list-style-type: none"> SPUIs cannot be located on a severely skewed alignment.
1 & 1A ² <i>(red lines at intchg)</i>	<p>Single Point Urban Interchange – Fern Valley Through</p> <p>PDT action: Dropped by PDT (April 2005)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<ul style="list-style-type: none"> Construct SPUI about 300 feet north of existing interchange. Correct skew of interchange in relation to I-5. <p>To the east:</p> <ul style="list-style-type: none"> Connection to the east via new roadway slightly north of Fern Valley Road, reconnecting at existing N. Phoenix Road intersection. The Fern Valley Road to N. Phoenix Road movement would remain at its current location with left-turn access. Realign N. Phoenix Road north of its existing alignment, reconnecting with existing N. Phoenix roadway near urban growth boundary (UGB). <p>To the west:</p> <ul style="list-style-type: none"> Fern Valley Road would access OR 99 via Cheryl, existing access across from Ray’s Market, or Bolz. All options would require widening at OR 99 and the east end of these city streets to accommodate the highway connection. Fern Valley 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> Poorest travel times of any SPUI-based alternative; significantly worse than other SPUIs. Would not attract significantly more traffic when compared to the baseline³ alternative. Left-turn movement from Fern Valley Road onto N. Phoenix Road is a problem for traffic flow. First access to local roads would be about ½ mile from interchange. As with most other alternatives, would have problems with road connection spacing and signals at OR 99.⁴ Connection to N. Phoenix Road bisects several large commercial properties proposed for development. Part of alternative would be located on EFU land outside the UGB. A goal exception would likely be required.⁵ May impact access (require right-in/right-out) to the “Stores at Exit 24” if ramps are brought in at-grade.

¹ Single Point Urban Interchange (SPUI) footprint minimizes impacts and right of way; SPUI improves staging and construction.

² Option locations are included on many maps. These options do not need to be included with the alternatives unless specifically identified.

³ A diamond interchange in the existing Fern Valley Interchange location was used as the baseline for traffic comparisons. This included widening Fern Valley Road and the southern portion of N. Phoenix Road to four lanes.

⁴ As project alternatives developed, it became clear that all alternatives would result in substantial impacts to OR 99. Alternatives were not dismissed solely based on these potential impacts—but these impacts were acknowledged as an issue of concern.

⁵ As project alternatives developed, it became clear that alternatives that would realign N. Phoenix Road may require goal exceptions. Formal legal evaluations of whether goal exceptions would be required for alternatives will be completed in the technical analysis phase of project development. Alternatives were not dismissed solely based on whether an exception would be required.

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		<p>Road would be slightly realigned for Cheryl option; would be along the existing alignment for existing access across from Ray's Market; and would be on completely new alignment for Bolz option.</p> <p>Potential options (suggested by CAC):</p> <ul style="list-style-type: none"> ◦ Have Luman Road pass under interchange on west side; construct road below grade. ◦ Modify N. Phoenix Road to allow access to businesses and residences. 	
<p>1 & 1A <i>(yellow lines at intchg)</i></p>	<p>Single Point Urban Interchange – N. Phoenix Through</p> <p>PDT action: Combined with CAC Table 1 Alternative (April 2005).</p>	<ul style="list-style-type: none"> • Construct SPUI about 300 feet north of existing interchange. • Correct skew of interchange in relation to I-5. <p>To the east:</p> <ul style="list-style-type: none"> • Realign N. Phoenix Road, which would begin directly at the interchange, turn north just west of Petro, and reconnect with existing N. Phoenix Road near Furry Lane. • Connect Fern Valley Road and S. Phoenix Road to realigned N. Phoenix Road northwest of the existing Fern Valley Road/N. Phoenix Road intersection, just north of the UGB. There is some flexibility in the northeast quadrant regarding placement of the local roadway system. • Realigned N. Phoenix Road would traverse Arrowhead Ranch. <p>To the west:</p> <ul style="list-style-type: none"> • Fern Valley Road would access OR 99 via Cheryl, existing access across from Ray's Market, or Bolz. All options would require widening at OR 99 and the east end of these city streets to accommodate the highway connection. Fern Valley Road would be slightly realigned for Cheryl option; would be along the existing alignment for existing access across from Ray's Market; and would be on completely new alignment for Bolz option. <p>Potential option:</p> <ul style="list-style-type: none"> ◦ Leave roadway connection west of interchange elevated, and have Luman Road access under road connection. 	<p>Refer to CAC Table 1 SPUI.</p>
<p>2</p>	<p>Split Diamond – Original Fern Valley</p>	<ul style="list-style-type: none"> • Construct split diamond interchange along existing Fern 	<p>Reasons for not advancing:</p>

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	<p>Alignment</p> <p>PDT action: Dropped by PDT (Sept. 2004)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<p>Valley Road alignment.</p> <ul style="list-style-type: none"> • North portion of interchange would be located at Fern Valley Road. • South portion of interchange would be located south of Bear Lake Estates. • Interchanges would be connected by frontage roads east and west of I-5. <p>To the east:</p> <ul style="list-style-type: none"> • Fern Valley Road would remain along existing alignment. • N. Phoenix Road realigned north of its existing alignment, passing behind Petro, and reconnecting with existing roadway near UGB. • Minor realignment of north end of S. Phoenix Road to connect at N. Phoenix Road intersection. • South half of interchange would cut through hill and connect directly into the neighborhood via Breckinridge Drive. <p>To the west:</p> <ul style="list-style-type: none"> • Fern Valley Road would remain along existing alignment, and would be used as the primary connection to OR 99. Fern Valley Road would access OR 99 via Cheryl, existing access across from Ray’s Market, or Bolz. All options would require widening at OR 99 and the east end of these city streets to accommodate the highway connection. Fern Valley Road would be slightly realigned for Cheryl option; would be along the existing alignment for existing access across from Ray’s Market; and would be on new alignment for Bolz option. • West side would connect to OR 99 south of Bear Lake Estates at Oak Street. • Frontage roads would connect the north and south portions of the interchange; these would be located adjacent to I-5. 	<ul style="list-style-type: none"> • Would require major cuts into large hill on east side of freeway (south end of alternative). • Frontage roads would require large amounts of land to accommodate the new roadways. • Major impacts to Bear Lake Estates (right of way displacement of homes, major visual impacts and additional traffic and associated noise immediately adjacent to property). Bear Lake Estates may be an environmental justice issue. • Major impacts to Breckinridge Drive neighborhood (major visual impacts and additional traffic and associated noise in vicinity). • Federal interchange policy does not allow direct connections to local streets, only to arterials. In order to handle the traffic volumes, this alternative would require upgrading the functional classification of local streets, such as Breckinridge Drive, with potentially substantial impacts to the neighborhood. • Would result in impacts to two 4(f) resources: Bear Creek Greenway and Blue Heron Park. • Would require four crossings over Bear Creek. • Substantial cost to build sound walls to protect Bear Lake Estates • A greater amount of coordination is required to maintain traffic flow and facilitate construction. Staging issues exist any time a new facility or major change is planned on an existing alignment (Fern Valley Road). A greater amount of coordination is required to maintain traffic flow and facilitate construction.
<p style="text-align: center;">3</p>	<p>Regular Diamond – Perpendicular Fern Valley Alignment</p> <p>PDT action: Dropped by PDT (April 2005)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<ul style="list-style-type: none"> • Construct diamond interchange about 300 feet north of existing interchange. • Correct skew of interchange in relation to I-5. <p>To the east:</p> <ul style="list-style-type: none"> • Slightly realign Fern Valley Road to the north, reconnecting at existing N. Phoenix Road intersection. The Fern Valley Road to N. Phoenix Road movement would remain a left turn. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Major right of way impacts to existing and proposed commercial development east and west of interchange. • Loss of direct access to the northwest and southwest quadrants. (OR 99 would be the first access point to the west from the interchange.) • As with most other alternatives, would have problems with road connection spacing and signals at OR 99.

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		<ul style="list-style-type: none"> N. Phoenix Road realigned north of its existing alignment, reconnecting with existing roadway near UGB. <p>To the west:</p> <ul style="list-style-type: none"> Fern Valley Road would access OR 99 via Cheryl, existing access across from Ray’s Market, or Bolz. All options would require widening at OR 99 and the east end of these city streets to accommodate the highway connection. Fern Valley Road would be slightly realigned for Cheryl option; would be along the existing alignment for existing access across from Ray’s Market; and would be on new alignment for Bolz option. 	<ul style="list-style-type: none"> If both connections to Cheryl and Bolz are retained, three structures over Bear Creek would be required. Would impact access (require right-in/right-out) to the “Stores at Exit 24” if ramps are brought in at-grade. Part of alternative may be located on EFU land outside the UGB. A goal exception would likely be required.
3A	<p>Regular Diamond – N. Phoenix Through</p> <p>PDT action: Dropped by PDT (April 2005)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<ul style="list-style-type: none"> Construct interchange at same location as PDT Alternative 3. <p>To the east:</p> <ul style="list-style-type: none"> Connection 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. <p>To the west:</p> <ul style="list-style-type: none"> Connections to OR 99 would be the same as PDT Alternative 3. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> Major right of way impacts to existing and proposed commercial development east and west of interchange. Would reduce direct access to all current interchange quadrants. (OR 99 would be the first access point to the west from the interchange.) Would impact access (require right-in/right-out) to the “Stores at Exit 24” if ramps are brought in at-grade. If both connections to Cheryl and Bolz are retained, three structures over Bear Creek would be required. As with most other alternatives, would have problems with road connection spacing and signals at OR 99. Would have topographic issues—a hill is located north of Fern Valley Road. Would impact Arrowhead Ranch (Potential 4(f) resource). Major right of way impacts to existing commercial development west of interchange; major impacts to usable land on the east side. Connection to N. Phoenix bisects several large commercial properties proposed for development. Part of alternative would be located on EFU land outside the UGB. A goal exception would likely be required.
7 ⁶	<p>Regular Diamond – South Stage Road Alignment</p>	<ul style="list-style-type: none"> Construct a diamond interchange at South Stage Road. Existing Fern Valley Interchange ramps would be removed; 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> Interchange spacing is fatal flaw due to the proximity of

⁶ Map numbers are not sequential because some solutions were later identified as options, which could be incorporated into other alternatives.

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<p>PDT action: Dropped by PDT (Sept. 2004)--- but retained for modeling. PDT reaffirmed dropping alternative (April 2005).</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<p>Fern Valley Road would be retained as an overcrossing to serve local traffic.</p> <ul style="list-style-type: none"> • Traffic volumes would require additional lanes on South Stage Road as well as Fern Valley Road, resulting in a total of 6 lanes for east-west traffic. <p>To the east:</p> <ul style="list-style-type: none"> • Connect interchange to N. Phoenix Road by new roadway along property lines. <p>To the west:</p> <ul style="list-style-type: none"> • Connect interchange to the west at Old South Stage Road; extend Old South Stage Road east from OR 99, across I-5 to N. Phoenix Road. 	<p>the South Medford interchange to the South Stage interchange, and from South Stage Road interchange to N. Phoenix Road interchange.</p> <ul style="list-style-type: none"> • If closure of the existing Fern Valley interchange is required (which would be likely), existing businesses would be isolated from the interchange. There would be substantial opposition from the City of Phoenix and commercial property owners at the existing Fern Valley interchange. • Would cross Bear Creek Greenway in wide area, resulting in more impacts to the Greenway than most other alternatives. (Although South Stage Road interchange would be located through proposed Medford Sports Park in this area, the park plan identifies a corridor to allow for an interchange at the South Stage Road location.) • Staging issues exist any time a new facility or major change is planned on an existing alignment (Fern Valley Road). A greater amount of coordination is required to maintain traffic flow and facilitate construction. • Interchange would attract about 15% more traffic than what would be diverted from Phoenix. Traffic is from south Medford and is likely diverting from the South Medford Interchange rather than the Fern Valley interchange. • Interchange would result in sections between OR 99 and I-5 on South Stage Road that would be over-capacity. Would have segments that would be significantly worse when compared with the baseline. These include segments outside of the over-capacity segment. • Would have poor travel times because of the long travel time required to access I-5 northbound from Phoenix. • Majority of traffic using the interchange would use it to access OR 99 or I-5 rather than N. Phoenix Road. • All of the traffic from Phoenix wanting to use northbound I-5 would have to divert to Old South Stage Road. • Diverting traffic from the south Medford area also would use this section of Old South Stage Road to access I-5. • Having two lanes on Old South Stage Road and two on
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			<p>Fern Valley Road would be insufficient; Old South Stage Road would need to be four lanes in the OR 99 to I-5 section, for a total of six east-west lanes. (There are six other alternatives that can handle the east-west flow in four lanes, so there are better alternatives available.)</p> <ul style="list-style-type: none"> • South Stage Road Interchange could run through a power station. • Would be located on EFU land outside the UGB. A goal exception would likely be required.
<p>11</p>	<p>Regular Diamond – Southern Bear Lake Estates Alignment</p> <p>(Alternative is essentially the same as PDT Alternative 18.)</p> <p>PDT action: Dropped by PDT (May 2004)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<ul style="list-style-type: none"> • Construct diamond interchange south of Bear Lake Estates. • Correct skew of interchange in relation to I-5. • Existing Fern Valley Interchange ramps would be removed; Fern Valley Road would be retained as an overcrossing to serve local traffic. <p>To the east:</p> <ul style="list-style-type: none"> • Interchange would cut through hill and connect directly into the neighborhood via Breckinridge Drive. • N. Phoenix Road would be realigned directly north of Breckinridge Drive, run parallel to the UGB, and reconnect to existing N. Phoenix Road at Furry Lane. <p>To the west:</p> <ul style="list-style-type: none"> • Interchange would connect to OR 99 at Oak Street or slightly to the south directly west of new interchange structure. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Interchange spacing is fatal flaw due to the proximity of the Southern Bear Lake Estates interchange to the Talent interchange. • Closure of the existing Fern Valley interchange would isolate existing businesses (along Fern Valley Road) from the interchange. There would be substantial opposition from the City of Phoenix and commercial property owners at the existing Fern Valley interchange. • Federal interchange policy does not allow direct connections to local streets, only to arterials. In order to handle the traffic volumes, this alternative would require upgrading the functional classification of local streets, such as Breckinridge Drive, with potentially substantial impacts to the neighborhood. • Would impact Breckinridge Drive neighborhood (major visual impacts, additional traffic through the neighborhood, and associated traffic noise). Major arterial would act as a separation, dividing neighborhood. • Would result in impacts to two 4(f) resources: Bear Creek Greenway and Blue Heron Park. The connection through the park would be very unlikely to receive federal approval because it violates federal policy. • Major impacts to Bear Lake Estates (right of way displacement of homes, major visual impacts and additional traffic and associated noise immediately adjacent to property). Bear Lake Estates may be an environmental justice issue. • Substantial cost to build sound walls to protect Bear Lake Estates.

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			<ul style="list-style-type: none"> • Would require major cuts into large hill on east side of freeway (south end of alternative). • There is a gas pipeline that runs under the proposed interchange; this would have to be moved or accommodations made to address it. • Part of alternative is outside the UGB on EFU land. A goal exception would likely be required.
<p>13 & 22</p>	<p>Regular Diamond – Bolz to N. Phoenix Northern Alignment</p> <p>PDT action: Dropped by PDT (Sept. 2004)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<ul style="list-style-type: none"> • Construct diamond interchange about 1300 feet north of existing Fern Valley Interchange. • Correct skew of interchange in relation to I-5. • Existing Fern Valley Road would cross under the new northbound off ramp and southbound on ramp. • Existing Fern Valley Interchange ramps would be removed. <p>To the east:</p> <ul style="list-style-type: none"> • East ramps and N. Phoenix Road connection would bisect Home Depot site and EFU property north of the UGB, and reconnect with N. Phoenix Road near Arrowhead Ranch. <p>To the west:</p> <ul style="list-style-type: none"> • Connect interchange to OR 99 at Bolz; would bisect most of the Stores at Exit 24 and Coleman Creek Estates. Connection to OR 99 would cross over Fern Valley Road and the Bear Creek Greenway on structure and directly reconnect to OR 99 at Bolz. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Steep ramps would be needed to achieve the vertical geometry. This may be a fatal flaw due to the profile/grade. • Interchange would have double-decker height in order to cross Fern Valley Road and Bear Creek, requiring a long facility to get back down to grade. This would be very high cost. • Major impacts to residential and commercial properties in the developed northwest quadrant of the existing interchange. • Major impacts to existing and planned commercial development property east of interchange. Because existing Fern Valley interchange would be changed to an overcrossing, existing businesses would be isolated from the I-5 interchange. There would be substantial opposition from the City of Phoenix and commercial property owners at the existing Fern Valley interchange. • Would result in substantial out-of-direction travel. In order to access the east side of the interchange, vehicles would have to go to OR 99 and then circle back to get to Fern Valley Road. • Southbound off-ramp (northwest interchange quadrant) would likely impact Bear Creek Greenway, resulting in 4(f) impacts. (This would be a longitudinal impact along the creek and adjacent riparian vegetation.) • An additional crossing of Bear Creek would be required over Fern Valley Road. • Part of alternative would be located on EFU land outside the UGB. A goal exception would likely be required.
<p>14</p>	<p>Regular Diamond – Cheryl to N. Phoenix Northern Alignment</p>	<ul style="list-style-type: none"> • Interchange would be in about the same location and configuration as PDT Alternatives 13 and 22 above, except 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Actual configuration of interchange is unlikely to work

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<p>PDT action: Dropped by PDT (April 2005)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<p>west local road connection to OR 99 would be located directly west of interchange at Cheryl Lane.</p>	<p>because the standard diamond would likely require loops, which would require a lot of space.</p> <ul style="list-style-type: none">• Closure of existing Fern Valley interchange would be required; therefore, existing businesses would be isolated from the interchange. There would be substantial opposition from the City of Phoenix and commercial property owners at the existing Fern Valley interchange.• Connections with OR 99 at Cheryl Lane and Fern Valley Road would be spaced very close together, creating access problems. This would not be allowable based on road spacing requirements.• Would result in major impacts to Stores at Exit 24, Coleman Creek Estates, and Holiday RV Park in the northwest quadrant of the existing interchange.• Major impacts to existing and planned commercial development property east of interchange. Because existing Fern Valley interchange would be changed to an overcrossing, existing businesses would be isolated from the I-5 interchange. There would be substantial opposition from the City of Phoenix and commercial property owners at the existing Fern Valley interchange.• Would result in substantial out-of-direction travel. In order to access the east side of the existing interchange, vehicles would have to go to OR 99 and then circle back to get to Fern Valley Road.• Southbound off-ramp (northwest interchange quadrant) would likely impact Bear Creek Greenway, resulting in 4(f) impacts. (This would be a longitudinal impact along the creek and adjacent riparian vegetation.)• An additional crossing of Bear Creek would be required over Fern Valley Road.• Would result in access issues to residential areas and businesses.• Connection to Cheryl Lane is a problem because of the concern regarding the safety of school children along this road.• Proposed interchange may not provide enough capacity to solve the traffic problem.• Fern Valley Road connection would require restructuring, so the alternative would not produce any
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			<p>cost savings.</p> <ul style="list-style-type: none"> • Would require cutting into hillside on east side. • Coleman Creek Estates has a low-income population, which is an environmental justice issue. • Part of alternative would be located on EFU land outside the UGB. A goal exception would likely be required.
<p>18</p>	<p>Regular Diamond – Siphon to Frontage Road Southern Alignment</p> <p>PDT action: Dropped by PDT (Sept. 2004)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<ul style="list-style-type: none"> • Same as PDT Alternative 11 except an additional local road connection would be added south of Phoenix Hills neighborhood, connecting to S. Phoenix Road. <p>Potential option:</p> <ul style="list-style-type: none"> ◦ If a SPUI is used in this location, it would make the footprint smaller, but there would still be problems with the connections to Breckinridge Drive and through the park. One possibility is to look at moving the interchange farther south. This would be an effort to minimize impacts to the hill and connect the south ramps to S. Phoenix Road rather than to Breckinridge Drive. However, this would create a situation where the distance between the proposed interchange at Bear Lake would be too close to the existing interchange at Talent, and would thus violate the spacing standard. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Interchange spacing is a fatal flaw due to the proximity of the proposed interchange to the Talent interchange. • Closure of the existing Fern Valley interchange is required (which would be likely) would isolate existing businesses from the interchange. There would be substantial opposition from the City of Phoenix and commercial property owners at the existing Fern Valley interchange. • Federal interchange policy does not allow direct connections to local streets, only to arterials. In order to handle the traffic volumes, this alternative would require upgrading the functional classification of local streets, such as Breckinridge Drive, with potentially substantial impacts to the neighborhood. • Would Impact Breckinridge Drive neighborhood (major visual impacts, additional traffic through the neighborhood, and associated traffic noise). Major arterial would act as a separation, dividing the neighborhood. Access to S. Phoenix Road would result in similar additional impacts to the neighborhood. • Would result in impacts to two 4(f) resources: Bear Creek Greenway and Blue Heron Park. The connection through the park would be very unlikely to receive federal approval because it violates federal policy. • Major impacts to Bear Lake Estates (right of way displacement of homes, major visual impacts and additional traffic and associated noise immediately adjacent to property). Bear Lake Estates may be an environmental justice issue. • Substantial cost to build sound walls to protect Bear Lake Estates. • Would require major cuts into large hill on east side of freeway (south end of alternative).

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			<ul style="list-style-type: none"> • There is a gas pipeline that runs under the proposed interchange; this would have to be moved or accommodations made to address it.
<p>19</p>	<p>Regular Diamond – Original Fern Valley Alignment</p> <p>PDT action: Dropped by PDT (Oct. 2005)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p> <p>(This alternative was originally kept in the alternative mix for modeling for alternative comparison.)</p>	<ul style="list-style-type: none"> • Alternative is similar to the north portion of the split diamond interchange described in PDT Alternative #2. • Construct diamond interchange along existing Fern Valley Road alignment. <p>To the east:</p> <ul style="list-style-type: none"> • Fern Valley Road would remain along existing alignment, and would be used as the primary connection to N. Phoenix Road. • N. Phoenix Road would be realigned to extend from Breckinridge Drive north of its existing alignment, reconnecting with existing N. Phoenix Road at the south end of the planned Home Depot. • Would involve minor realignment of north end of S. Phoenix Road to connect to the N. Phoenix Road intersection. <p>To the west:</p> <ul style="list-style-type: none"> • Fern Valley Road would remain along existing alignment, and would be used as the primary connection to OR 99. Fern Valley Road would access OR 99 via Cheryl, existing access across from Ray’s Market, or Bolz. All options would require widening at OR 99 and the east end of these city streets to accommodate the highway connection. Fern Valley Road would be slightly realigned for Cheryl option; would be along the existing alignment for existing access across from Ray’s Market; and would be on completely new alignment for Bolz option. <p>Potential option:</p> <ul style="list-style-type: none"> ◦ CAC suggested that some modification of this alternative might make it better, especially around the area of the Petro truck stop. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Would not handle as much traffic volume as other alternatives; it would not have as much longevity in handling traffic as a SPUI. (Although project costs may increase, it is important to keep traffic in the area to support jobs; the SPUIs will accomplish this; the Regular Diamond would not.) • Csts of the interchange types are likely to be similar because, while the SPUI would have a more expensive structure, the Regular Diamond would require more right of way. • One of the primary goals of the CAC is to minimize impacts to existing and proposed businesses; by not limiting the size of the footprint, the Regular Diamond Interchange cannot meet this goal. • Unsignalized v/c ratio is the worst of all of the interchange types. • Would have more impacts to the neighborhood because of its location on the east side. • Even if the Regular Diamond met the Purpose and Need, the PDT must explore alternatives that minimize impacts. The Diamond configuration would have substantial impacts to businesses in the area, and there would be a potential for it requiring a number of business purchases. • If there was not development in the area, a Diamond Interchange, with its larger footprint, would be a good choice; but in a developed area, the impacts would be too great. • Would result in no direct access to the northwest and southwest quadrants of the interchange, resulting in substantial impacts to the interchange commercial area. Would have major access constraints to existing and future businesses between I-5 and OR 99. • Would force relocation of Luman Road, or require new access to Bear Lake Estates. • Would bisect several developable commercial properties

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			<p>in northeast quadrant.</p> <ul style="list-style-type: none"> • A greater amount of coordination is required to maintain traffic flow and facilitate construction. Staging issues exist any time a new facility or major change is planned on an existing alignment (Fern Valley Road). A greater amount of coordination is required to maintain traffic flow and facilitate construction. • Interchange would still be located on a skewed alignment with I-5.
<p>20</p>	<p>Diamond w/ SE Loop – Original Fern Valley Alignment</p> <p>(aka Partial Clover Leaf)</p> <p>PDT action: Dropped by PDT (April 2005)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<ul style="list-style-type: none"> • 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. <p>To the east:</p> <ul style="list-style-type: none"> • N. Phoenix Road would be realigned to extend from Breckinridge Drive north of its existing alignment, reconnecting with existing N. Phoenix Road at the south end of the planned Home Depot. <p>To the west:</p> <ul style="list-style-type: none"> • Fern Valley Road would remain along existing alignment, and would be used as the primary connection to OR 99. Fern Valley Road would access OR 99 via Cheryl, existing access across from Ray’s Market, or Bolz. All options would require widening at OR 99 and the east end of these city streets to accommodate the highway connection. Fern Valley Road would be slightly realigned for Cheryl option; would be along the existing alignment for existing access across from Ray’s Market; and would be on new alignment for Bolz option. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Would have problems with road connection spacing and signals at OR 99. Would not allow direct access to the northwest and southwest quadrants of the existing interchange, resulting in access impacts to the Stores at Exit 24, Coleman Creek Estates in the northwest quadrant, and businesses in the southwest quadrant. First full access from interchange to the west would be at OR 99. • First access to local roads would be about ½ mile from interchange. • Loop ramp would result in major impacts to commercial areas in the southeast interchange quadrant, including the truck stop, Petro and the hotel—impacting road circulation in this area. • Moving loop ramp to the east would also require moving the northbound on-ramp to the east, resulting in major impacts on future commercial development property in the northeast quadrant. • Neighborhood impacts from the N. Phoenix Road realignment to intersect with Breckinridge Drive. Additional traffic would use the neighborhood street, resulting in noise and livability impacts. • Staging issues exist any time a new facility is planned on an existing alignment. A greater amount of coordination is required to maintain traffic flow and facilitate construction. • Additional costs for rebuilding Fern Valley overpass; the current structure is not wide enough to allow the southeast and southwest interchange ramps to pass underneath.

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			<ul style="list-style-type: none"> • Interchange would likely result in a request by the state to make Fern Valley Road a city street. Although road is considered substandard now, it may not be substandard for a city street. However, the City of Phoenix would likely ask for a new bridge or rehabilitation. An additional problem is that this jurisdictional change would result in added maintenance costs for the City. • Fern Valley structure would be higher and longer when rebuilt, because of new standards. • Spacing issues from existing Fern Valley Road and other OR 99 connections. • Part of alternative may be located outside of the UGB on EFU land. A goal exception may be required.
21	<p>Partial Cloverleaf – Original Fern Valley Alignment</p> <p>PDT action: Dropped by PDT (April 2005)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<ul style="list-style-type: none"> • Similar to PDT Alternative 20 except on west side, where alternative would include additional loop ramp in the northwest quadrant. East side of interchange would be the same as Alternative 20. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Similar impacts as Alternative 20, plus major additional right of way and access impacts to existing businesses in the northwest and southwest quadrants due to the additional loop ramp. Most of the land currently occupied by the Stores at Exit 24 would be used by the interchange.
23 <i>(red line connection to OR 99)</i>	<p>Regular Diamond – 5th to N. Phoenix Northern Alignment</p> <p>(Similar to PDT 13 and 22 above.)</p> <p>PDT action: Dropped by PDT (July 2004)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<ul style="list-style-type: none"> • Similar to PDT Alternatives 13 and 22, except connection at OR 99 would be at 5th Street. Connection to OR 99 would cross over Fern Valley Road on structure, along the Bear Creek Greenway on structure, and directly reconnect to OR 99 at 5th Street, nears the northern end of the OR 99 couplet. This would provide direct access to the hear of downtown from the interchange. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • The same as PDT Alternatives 13 and 22, except for impacts associated with the OR 99 connection. • Would result in more impacts to Bear Creek Greenway with longitudinal alignment of roadway. • Much of access road to Phoenix would be elevated (going over Fern Valley Road and Bear Creek), resulting considerable cost. • Additional commercial impacts to businesses south of Fern Valley Road along OR 99.
24 <i>(blue line connection to OR 99)</i>	<p>Regular Diamond – 4th to N. Phoenix Northern Alignment</p> <p>PDT action: Dropped by PDT (July 2004)</p> <p>CAC recommendation: Agreed with</p>	<ul style="list-style-type: none"> • Same as PDT Alternative 23, except connection to OR 99 would be further south at 4th Street, at the north end of the existing northbound couplet leg. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • The same as PDT Alternative 23, except connection to OR 99 would result in more longitudinal Bear Creek Greenway impacts. • Slightly different impacts to commercial businesses south of Fern Valley Road along OR 99.

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	PDT not to advance this alternative.		
25	<p>Regular Diamond – Glenwood Road</p> <p>PDT action: Dropped by PDT (Sept 2004)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<ul style="list-style-type: none"> • Construct diamond interchange at Glenwood Road, about 3900 feet north of existing Fern Valley Interchange. • Remove Fern Valley Road interchange ramps; Fern Valley Road would operate as an overcrossing. <p>To the east:</p> <ul style="list-style-type: none"> • Connect interchange directly to N. Phoenix near Arrowhead Ranch at Furry Lane. <p>To the west:</p> <ul style="list-style-type: none"> • Connect interchange to OR 99 along Glenwood Road. • Fern Valley Road would remain along existing alignment. It could access OR 99 via Cheryl, existing access across from Ray’s Market, or Bolz. Fern Valley Road would be slightly realigned for Cheryl option; would be along the existing alignment for existing access across from Ray’s Market; and would be on new alignment for Bolz option. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Interchange spacing may be a fatal flaw due to the proximity of the South Medford interchange to the Glenwood Road interchange, and from Glenwood Road interchange to Fern Valley interchange. • Closure of the Fern Valley interchange would isolate existing businesses from the interchange. There would be substantial opposition from the City of Phoenix and commercial property owners at the existing Fern Valley interchange. • An alignment on Glenwood Road would result in major impacts to adjacent mobile home parks (right of way displacement of homes, major visual impacts, additional traffic and associated noise immediately adjacent to properties.) There may be environmental justice issues. • Interchange ramps are located parallel to Bear Creek, which increases the longitudinal Bear Creek Greenway impacts. • There is a pond that could be impacted on the northeast side of the freeway. • Alternative is located on EFU land and is outside the UGB. A goal exception would likely be required.

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Map Ref.	CAC Alternatives	Description of Alternative	Comments
<p>CAC 1 and CAC close-up at OR 99</p>	<p>Single Point Urban Interchange – N. Phoenix Through</p> <p>PDT action: Combined with PDT Alternative 1A (April 2005)</p> <p>PDT action: Voted to advance alternative into the environmental document for further evaluation. (Oct 2005)</p> <p>CAC recommendation: CAC recommended this alternative be advanced into the environmental document for further evaluation. (Oct2005)</p>	<p>(This represents one of two Table 1 alternatives. It was combined with PDT Alternative 1A and refined. The following information reflects this refinement.)</p> <ul style="list-style-type: none"> • Construct a SPUI about 300 feet north of existing interchange. • Correct skew of interchange in relation to I-5. <p>To the east:</p> <ul style="list-style-type: none"> • Realign N. Phoenix Road, which would begin directly at the interchange, turn north just west of Petro, turn west just south of the UGB, and reconnect with existing N. Phoenix Road just north of Furry Lane. Realigned N. Phoenix Road would traverse Arrowhead Ranch. • Fern Valley Road and S. Phoenix Road access to N. Phoenix Road begins at existing Fern Valley Road/N. Phoenix Road intersection (signalized), and connects to N. Phoenix Road just south of the UGB. (This changed slightly from the original CAC location because there is some flexibility in the northeast quadrant regarding placement of the local roadway system.) • Cul-de-sac Fern Valley Road or provide additional access to existing N. Phoenix Road via undercrossing immediately adjacent to east side of the SPUI—from Fern Valley Road to south and west side of Home Depot; retain this portion of existing N. Phoenix Road for additional alternate access to Home Depot and adjacent properties. • Provide access road from existing N. Phoenix Road west of Home Depot to realigned N. Phoenix Road at new intersection to the east. <p>To the west:</p> <ul style="list-style-type: none"> • Provide jughandle access to northwest quadrant (Stores at Exit 24, mobile homes and commercial businesses accessed by cul-de-sac) and southwest quadrant (Bear Lake Estates). (The jughandle allows for full access, but through right turns, therefore accommodating more traffic.) • Add median from north of Coleman Creek to north end of couplet. • Add signals at Cheryl and Bolz. 	<p>Issues discussed:</p> <ul style="list-style-type: none"> • SPUI must be realigned because SPUI's do not work well on a skewed alignment; therefore, this alternative would not have an option that follows the existing Fern Valley Road alignment. • SPUI footprint minimizes impacts and right of way. • SPUIs are expensive. • SPUI improves staging and construction • Concern that this alternative favors access for south Medford residents rather than supporting access to the area Phoenix wants to develop on the east side. • A house of historic interest may be displaced. • It would adequately serve the traffic needs in the future; it would have the best v/c ratio and could best handle both existing and future development. • Would not have any segments over capacity or significantly worse v/c ratios than the baseline. Would not have significantly less travel times than the baseline. However, has one of best travel times for eastside connection of Fern Valley and N. Phoenix Road due to direct through movements. • It considers where the traffic is actually coming from. It can handle development both in the North Phoenix Road and Fern Valley Road areas. • Would provide the best access opportunities for existing and planned development. • It best meets the Purpose and Need for the project. It is a good, solid alternative. • Two of the key elements of the goals and objectives were to accommodate future growth and minimize socioeconomic impacts. This alternative best meets these desired criteria. Future growth is outside of ODOT's purview; these decisions are made at a local level. • Would not significantly attract more traffic when compared to the baseline. • An off-roadway bike/pedestrian facility should be considered.

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		<ul style="list-style-type: none">• Connect interchange to OR 99 at Bolz.• Fern Valley Road would become cul-de-sac at OR 99.• Add northbound right-turn lanes on OR 99 at Bolz.• Add southbound left-turn lanes on OR 99 at Bolz.• Add northbound left-turn lane on OR 99 at Cheryl.• Widen east end of Bolz and Cheryl.• Combine and realign access to properties immediately northeast of couplet. <p>Early potential options considered (on original CAC map, but not included in refined alternative):</p> <ul style="list-style-type: none">◦ Leave roadway connection west of interchange elevated, and have Luman Road access under road connection. This would require one new bridge and one bridge replacement.◦ Retain Fern Valley Road as the through movement; realign Fern Valley Road and N. Phoenix Road.◦ Make N. Phoenix Road the through movement; this would require a new connection from N. Phoenix Road to Fern Valley Road (probably at Breckinridge Drive).◦ Right-in/right-out at accesses along Fern Valley Road west of interchange (minimum spacing standard for right-in/right-out from the interchange ramps is 800 feet).	<p>Northeast and southeast quadrants:</p> <ul style="list-style-type: none">• Major impacts to usable land in the northeast quadrant. Connection to N. Phoenix bisects several large commercial properties proposed for development.• Topography (hill located north of Fern Valley Road) is a concern.• Realigned N. Phoenix Road would go through Arrowhead Ranch.• Realigned N. Phoenix Road would be located on EFU land outside of the UGB; therefore, a goal exception would need to be evaluated.• Would result in significantly better travel times on the east side of I-5 because of the direct through move for N. Phoenix Road traffic.• Provide access near interchange for local traffic circulation.• It would be the best alternative for the neighborhood—even with the out-of-direction travel—because it moves the roadway away from the residential area.• Although it provides for future growth, it would have fewer impacts if the North Phoenix Road intersection were moved further to the south. <p>Northwest and southwest quadrants:</p> <ul style="list-style-type: none">• As with most other alternatives, would have problems with connections to OR 99.• Would impact access to the “Stores at Exit 24,” mobile home parks (both currently accessing Fern Valley Road) and commercial business accesses (currently accessing OR 99).• Due to access constraints, commercial property in the northwest and southwest quadrants would not have full direct connections to Fern Valley Road.• This is a spacing issue with connections to OR 99.• There are volume/capacity ratio problems and potential vehicular queuing problems.• It is not yet known if an additional signalized intersection is possible on OR 99. (This is dependent on whether the distance between public road accesses is 500 or 700 feet. OR 99 is a district highway, which has different spacing requirements. Two signalized
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			<p>intersections would be difficult to obtain. Right-in/right-out would not allow for good circulation.</p> <ul style="list-style-type: none"> • Bolz and Cheryl would have access problems. However, Bolz would help provide the opportunity for more local access, and could offer a more direct entrance to downtown Phoenix. • CAC does not want traffic going onto roadways that go directly to the high school. (The high school is located off of Cheryl Lane, and even though the alternative would not include construction as far as the high school, the CAC is concerned about traffic on that road.) • Coleman Creek Estates may be environmental justice issue.
<p>CAC 1 (alt)</p>	<p>Partial Cloverleaf – Located N. of FVI, N. Phoenix Through East</p> <p>This alternative was essentially combined with the CAC Table 2, Partial Cloverleaf.</p>	<p>(This represents one of two Table 1 alternatives.)</p> <ul style="list-style-type: none"> • Same as CAC Table 2, Partial Cloverleaf – Located N. of FVI, N. Phoenix Through East, except it included Fern Valley Road/S. Phoenix Road connection to the realigned N. Phoenix Road. This would be done via a new roadway beginning at the existing Fern Valley Road/N. Phoenix Road intersection, then turning to the west north of the UGB, and connecting with realigned N. Phoenix Road just south of the Arrowhead Ranch buildings. 	
<p>CAC 2</p>	<p>Partial Cloverleaf – Located N. of FVI, N. Phoenix Through East</p> <p>PDT action: Dropped by PDT (April 2005)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<p>(This represents one of two Table 2 alternatives.)</p> <ul style="list-style-type: none"> • Very similar to PDT Alternative 13 and 22, as well as CAC 1 (alt), except includes construction of partial cloverleaf interchange with loop ramps in the northwest and southeast quadrants. • Existing Fern Valley interchange ramps would be removed. Fern Valley Road would remain as east-west overcrossing for local access. • Fern Valley Road would cross over new northbound off ramp and southbound on ramp. Would require rebuilding the FV interchange area to get the new ramps underneath. The existing structure is too narrow to currently accommodate the ramps. (The existing bridge is not on the cracked bridge list.) • Fern Valley Road would become a city street. • Connection to OR 99 would be via Cheryl or Fern Valley Road. Both options would require widening at OR 99, affecting adjacent local streets and properties. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Would result in substantial right of way requirements because of large interchange footprint to accommodate the loops. • Would require additional costs for rebuilding Fern Valley overpass. Width for new ramps is not available under the current structure. The existing bridge would have to be reconstructed to allow space for the southeast and southwest ramps. • Interchange would likely result in a request by the state to make Fern Valley Road a city street. Although road is considered substandard now, it may not be substandard for a city street. However, the City of Phoenix would likely ask for a new bridge or rehabilitation. An additional problem is that this jurisdictional change would result in added maintenance costs for the City.

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			<ul style="list-style-type: none"> • Major economic impacts to City. • Would not significantly attract more traffic when compared to the baseline. • Would be many locations where v/c ratio would be significantly worse than the baseline. Travel times would be significantly less than the baseline primarily because of direct Fern Valley to N. Phoenix Road connection. • Segment between new N. Phoenix Road connection and existing Fern Valley Road would be over-capacity. • Would result in major impacts to Coleman Creek Estates (potential environmental justice issue) and Stores at Exit 24 in northwest quadrant. • Potential longitudinal impacts to Bear Creek Greenway. • First signalized intersection on the west side would be at OR 99; this would result in change of access to businesses and residences on Fern Valley Road. • OR 99 would be significantly over-capacity and would require six lanes. • Intersection of Fern Valley and interchange at OR 99 would be close together resulting in potential traffic management problems. • Fern Valley Road/Bear Creek Bridge is considered substandard now, but may not be as a city street. However, the City of Phoenix may still ask for a new bridge or rehabilitation. • If changed to a SPUI, the footprint would be much smaller, but would still result in property impacts. • Interchange spacing may be a problem. • Major impacts to developable commercial land in northeast quadrant; commercial land east of interchange would be difficult to develop due to reduced direct access to interchange. Interchange would displace approved Home Depot development. • Part of alternative would be located outside of UGB on EFU land. A goal exception may be required.
CAC 2	<p>Partial Cloverleaf – Original Fern Valley Alignment</p> <p>PDT action: Dropped by PDT (April 7,</p>	<p>(This represents one of two Table 2 alternatives.)</p> <ul style="list-style-type: none"> • Interchange is the same configuration and location as PDT Alternative 21. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Same as PDT Alternative 21.

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	<p>2005)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>		
<p>CAC Lewin</p>	<p>SPUI – North of FVI, Underpass for N. Phoenix and Fern Valley Roads</p> <p>(suggested by David Lewin)</p> <p>PDT action: Dropped by PDT (Oct. 2005)</p> <p>CAC voted unanimously to recommend to the PDT to drop the Lewin SPUI.</p>	<p>(This alternative was suggested by David Lewin, and was refined to the alternative shown on the map.)</p> <ul style="list-style-type: none"> • Construct SPUI about 250 feet south of existing interchange. • Correct skew of interchange in relation to I-5. <p>To the east:</p> <ul style="list-style-type: none"> • 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 interchange ramps to reconnect with existing N. Phoenix Road adjacent to I-5. • Access to the existing southeast commercial quadrant (currently served by Fern Valley Road) and Petro would be via the realigned N. Phoenix Road. • Access to the neighborhood in the southeast quadrant would be via Fern Valley Road at Breckinridge Drive. <p>To the west:</p> <ul style="list-style-type: none"> • 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. <p>Potential options:</p> <ul style="list-style-type: none"> ◦ Connect interchange to N. Phoenix Road via new alignment along the east UGB, turning west just north of the UGB, and reconnecting with existing N. Phoenix Road just west of Arrowhead Ranch, near Furry Lane. ◦ Connect to OR 99 via 4th Street; this would include an alignment east of and adjacent to Bear Creek and the nearby pond. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • There would be access issues associated with this alternative; access for trucks would be especially difficult. • Trucks would be prevented from making necessary turning movements. • Additional costs would be incurred to provide an undercrossing for North Phoenix Road. • The configuration would result in landlocked parcels and would bisect other developable parcels. • It would have the highest v/c ratio with the least flexibility. • The design is unusual, and therefore not conducive to meeting driver expectations. • Reduced access to northwest and southwest quadrants; right-in/right-out access may be possible on west side. • Would impact developable commercial land in northeast quadrant, but less impact than some of the alternatives. • Adds curvature to Fern Valley replacement road. • Some impact to residences due to road curvature at the north edge of the neighborhood. (This could probably be adjusted.)
<p>CAC 3</p>	<p>Single Point Urban Interchange, Fern Valley Through</p>	<p>(Alternative is similar to the alternative identified in the City of Phoenix Transportation System Plan.)</p>	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • East side road would connect with the realigned N.

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	<p>PDT action: Dropped by PDT (April 2005)</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<ul style="list-style-type: none"> Construct interchange in same location and configuration as CAC Table 2 (Lewin) alternative. Correct skew of interchange in relation to I-5. <p>To the east:</p> <ul style="list-style-type: none"> 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, near Campbell. 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). <p>To the west:</p> <ul style="list-style-type: none"> Construct west connection to OR 99 in the same location and configuration as CAC Table 2 (Lewin) 	<p>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.</p> <ul style="list-style-type: none"> Would add curvature to Fern Valley replacement road. There is substantial 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. Would impact developable commercial land in northeast quadrant. Some impact to residences from Northridge neighborhood at the north edge of the neighborhood. Constructability is a problem because the new interchange would use the existing road system; therefore, detours are more difficult than new interchange and roadway locations. Would not significantly attract more traffic when compared to the baseline. Had poor travel times compared with other SPUI alternatives, with problems increased by requiring left turn from Fern Valley Road onto N. Phoenix Road. (Travel times were slightly under the 10% significant threshold.) Realigned N. Phoenix Road would be located on hill. Part of alternative would be located outside of UGB on EFU land. A goal exception may be required.
<p>CAC Lowry</p>	<p>SPUI – South of FVI, Realigned Fern Valley Road</p> <p>PDT actions: Retain alternative for further study (April 2005) Voted to advance alternative into the environmental document for further evaluation. (Oct 2005)</p>	<p>(This alternative was suggested by David Lowry. It originally was shown as a regular diamond interchange, but evolved from the CAC Table 3 SPUI to a SPUI located just south of the existing interchange. It was refined to the alternative shown on the map.)</p> <ul style="list-style-type: none"> Construct SPUI about 250 feet south of existing interchange location. Correct skew of interchange in relation to I-5. <p>To the east:</p> <ul style="list-style-type: none"> Would move the alignment of Fern Valley Road slightly north 	<p>Issues discussed:</p> <ul style="list-style-type: none"> Alternative would not impact existing businesses/residences as much as other alternatives, and it would allow for future development. Alternative would not have as high cost for right of way acquisitions as other alternatives. It would not handle as much traffic as the CAC Table 1 SPUI. If traffic were the only consideration, it would be dropped. Would not attract significantly more traffic when compared to the baseline. Traffic results are generally no different from the baseline.

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	<p>CAC recommendation: CAC recommended this alternative be retained for further study (April 2005) and advanced into the environmental document for further evaluation (Oct 2005).</p>	<p>of its existing alignment, with a signalized intersection just north of the existing Fern Valley Road/N. Phoenix Road intersection. Fern Valley Road to N. Phoenix Road movement would remain a left turn.</p> <ul style="list-style-type: none"> • Existing Fern Valley Road west of intersection with S. Phoenix Road would be cul-de-sac, with possible access road connection under interchange to Home Depot area. • New access connection(s) to realigned N. Phoenix Road to serve the Home Depot and adjacent properties. • Existing Fern Valley Road east of intersection with S. Phoenix Road would provide access to neighborhood. May consider access directly north from Breckinridge Drive to new Fern Valley Road alignment. • N. Phoenix Road would be realigned north of the signalized intersection, and reconnect with existing N. Phoenix Road west of Arrowhead Ranch at Furry Lane. <p>To the west:</p> <ul style="list-style-type: none"> • West of interchange, connection to OR 99 would be at a signalized Bolz intersection • Access to Fern Valley Road would be via OR 99 with intersection at Cheryl (this would access properties in the northwest and southwest interchange quadrants). • Median required along portions of OR 99. • Right-in/right-out access at Ray's would be supplemented by access road west of and behind Ray's. • Diagonal E. Bolz Lane would be cul-de-sac. • Combine and realign access to properties immediately northeast of couplet. 	<ul style="list-style-type: none"> • Shorter links between streets result in shorter travel times; no segments would be over-capacity or result in significantly worse v/c ratios than the baseline. • Some City Council members feel this is a better design for Fern Valley Road for access to business properties. • It costs a little less than the CAC Table 1 SPUI. • It has good connectivity for Phoenix; it is the one design that really ties the east and west sides of Phoenix together. • Strong community support for the alternative; no fatal flaws identified at this time. • Staging problems are a concern since it parallels the existing route. <p>Northwest and southwest quadrants:</p> <ul style="list-style-type: none"> • Access to northwest quadrants would be circuitous, requiring considerable out-of-direction travel, with possible economic impacts to businesses. • Luman Road would be realigned under the interchange structure to provide access to Bear Lake Estates. <p>Northeast and southeast quadrants:</p> <ul style="list-style-type: none"> • As designed, would have a large intersection near the Breckinridge neighborhood. • Part of alternative would be located on EFU land outside of the UGB. A goal exception may be required.
<p>CAC 4</p>	<p>Interchanges at S. Bear Lake Estates, South Stage Road and Fern Valley Road</p> <p>PDT action: Dropped by PDT (Sept 2004); South Stage interchange retained for modeling purposes.</p>	<p>Description of initial alternative:</p> <ul style="list-style-type: none"> • 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 would access OR 99 via Cheryl, existing access across from Ray's Market, or Bolz. All options would require widening at OR 99 and the east end of these city streets to accommodate the highway connection. Fern Valley 	<p>Reasons for not advancing initial alternative:</p> <ul style="list-style-type: none"> • Interchange spacing too close: there is less than one mile between the Fern Valley Interchange and the Bear Lake Interchange. The more interchanges, the more difficult to meet spacing standards. (FHWA policy is to fully use the existing system before expanding the system to include new interchanges.) • All interchanges would impact Bear Creek Greenway.

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	<p>Final agreement to drop (April 2005).</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<p>Road would be slightly realigned for Cheryl option; would be along the existing alignment for existing access across from Ray's Market; and would be on completely new alignment for Bolz option.</p> <p>Description of South Stage alternative for modeling (see PDT Alternative #7):</p> <ul style="list-style-type: none"> • Would replace Fern Valley Interchange with a diamond interchange at South Stage Road. • Fern Valley interchange ramps would be removed, and replaced with an overcrossing to serve local traffic. • Would extend Old South Stage Road east from OR 99 to N. Phoenix Road. • Does not include interchange south of Bear Lake Estates. 	<ul style="list-style-type: none"> • A south interchange would cut into the hill southeast of I-5. • Grade differential at south interchange would be significant, making the interchange more difficult to design. • South interchange would connect into Breckinridge Drive, impacting the neighborhood with traffic and noise, as well as visual impacts. • South interchange would impact Bear Lake Estates, displacing several homes, introducing new interchange with traffic noise and visually impacting area. • South interchange would impact Blue Heron Park. • Cost of project would increase with each additional interchange. <p>Reasons for not advancing South Stage modeling alternative: See PDT Alternative #7.</p>
<p>CAC Table 4</p>	<p>S. Interchange w/ Connection to 4th Street</p> <p>PDT action: Dropped by PDT (July 2005).</p> <p>CAC recommendation: Agreed with PDT not to advance this alternative.</p>	<ul style="list-style-type: none"> • Construct diamond interchange about 400 feet south of existing interchange. • Correct skew of interchange in relation to I-5. <p>To the east:</p> <ul style="list-style-type: none"> • East of interchange, connect to Fern Valley Road near existing Fern Valley Road/N. Phoenix Road intersection. • Realign N. Phoenix Road from the existing intersection, going north near the east side of the UGB, turning west just south of the UGB, then north through Arrowhead Ranch, and reconnecting with existing N. Phoenix Road west of Arrowhead Ranch at Furry Lane. <p>To the west:</p> <ul style="list-style-type: none"> • West of interchange, road would connect to OR 99 by crossing Luman Road and moving west along the north and western edge of pond, with a connection to OR 99 at the north end of couplet at 4th Street or 5th Street. • Luman Road would be cul-de-sac near southbound off-ramp. • Access to the northwest and southwest quadrants of the existing interchange would be along existing Fern Valley Road. An option would be to connect via a Bolz extension. Either option would be a cul-de-sac; therefore the primary 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Out-of-direction access to northwest and southwest quadrant commercial properties. • Impacts to commercial properties east of OR 99 due to access road to northwest/southwest quadrants. • Signal spacing would probably work with this alternative, and it would maintain existing connections. • Northbound off-ramp would bisect southeast commercial quadrant, impacting the motel, restaurant and gas station. • N. Phoenix Road realignment would traverse Arrowhead Ranch and EFU land outside the UGB. A goal exception may be required. • Would impact Bear Lake Estates (right of way displacement of homes, major visual impacts and additional traffic and associated noise immediately adjacent to north end of property). Access to Bear Lake Estates would have to be relocated. Bear Lake Estates may be an environmental justice issue. • Additional Bear Creek crossing, impacting the Greenway, the pond and/or riparian vegetation in the southwest quadrant.

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		access to these developments would be via OR 99.	
	Options	Description of Alternative	Comments
	<p>Fern Valley Cheryl/Bolz Couplet</p> <p>PDT action: Dropped by PDT (June 2005).</p> <p>CAC recommendation: Forwarded to PDT for review. Agreed with PDT not to advance this option.</p>	<ul style="list-style-type: none"> • Would construct a one-way westbound along Fern Valley Road to Cheryl Lane, and a one-way eastbound from Bolz across Bear Creek and reconnecting to Fern Valley Road near Luman Road. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Would result in operational difficulties associated with the couplet. • Would require greater amounts of out-of-direction travel.
	<p>Existing Fern Valley Location – Ray’s Connection</p> <p>PDT action: Dropped by PDT (July 2005).</p> <p>CAC recommendation: Agreed with PDT not to advance this option.</p>	<ul style="list-style-type: none"> • Would continue using existing Fern Valley Road alignment, resulting in dead-end configuration at Ray’s Market 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Would result in excessive queue lengths at all nearby intersections. • Would eliminate either Cheryl Street or Bolz Street connections to OR 99; both could not be kept open with this option.
4	<p>Fern Valley Connection to Bolz</p> <p>PDT action: Voted to forward into the environmental document as the OR 99 west side connection, incorporated into the CAC Table 1 SPUI and Lowry SPUI alternatives. (Oct 2005)</p> <p>CAC recommendation: Upon review of Bolz and traffic analysis, unanimous to recommend to PDT.</p>	<ul style="list-style-type: none"> • West end of Fern Valley Road would be realigned south to connect with Bolz. • Diagonal E. Bolz Lane would be cul-de-sac. 	<p>Reasons for advancing:</p> <ul style="list-style-type: none"> • Provides east-west connectivity. • Refinement of design can address ongoing issues, such as left-turn restrictions. • Better option regarding environmental impacts. • Would allow easier access to Fern Valley Road from neighborhoods surrounding Bolz Lane. (Currently, there are turn restrictions at the OR 99/Bolz Lane intersection, which result in limited direct access to Fern Valley Road.) Traffic would use Fern Valley Road to directly access Bolz Lane neighborhoods with the revised connection.
5	<p>Fern Valley Connection to Cheryl</p> <p>PDT action: Dropped by PDT (July 2005).</p> <p>CAC recommendation: Agreed with</p>	<ul style="list-style-type: none"> • Fern Valley Road would be realigned to connect with Cheryl Lane. Two possible sub-options were identified: a) direct connection north of existing access into Ray’s Market; b) connection through Ray’s Market property. • East Bolz Lane connection to Fern Valley Road would be removed. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Excessive traffic queue lengths on Cheryl. • Sub-option “b” would displace the market. • Sub-option “a” would impact access to the market. • Eliminates access to multiple properties. • Impacts multiple businesses.

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	<p>PDT not to advance this option.</p>		<ul style="list-style-type: none"> • Environmental issues with crossing Coleman Creek; culvert is on the ODFW list as a fish barrier, cost \$3 million to put in a bridge to replace culvert
<p>6</p>	<p>Old South Stage Overcrossing to N. Phoenix</p> <p>PDT action: Dropped by PDT (April 2005) [Note: city and county representatives voted to keep this option]</p> <p>CAC recommendation: Agreed with PDT not to advance this option.</p>	<ul style="list-style-type: none"> • Extend Old South Stage Road east from OR 99 crossing over I-5 to connect with N. Phoenix Road. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Effectiveness drops as area urbanizes and speeds slow down, or as improvements are made to the Fern Valley Road corridor. Option would only draw traffic from Fern Valley Road if speeds are higher. (Would work at 55 mph, but not at 45 mph. With 55 mph roadway, would cause a 20% reduction of traffic on Fern Valley Road assuming no improvements in the Fern Valley Road corridor. If roadway speed drops to 45 mph, then option would lose about half of its traffic volume because the longer distance required for travel would not be as advantageous with the slower speed. The likely future speed on an overcrossing at South Stage Road would probably be 45 mph.) • A significant amount of traffic would not go directly to N. Phoenix Road in order to access I-5. • Most traffic using the overcrossing would be from southwest Medford area (Jacksonville). • Would have substantial impacts to Bear Creek Greenway and riparian areas west of I-5. • At least part of the option would be located on EFU land outside the UGB. A goal exception may be required.
<p>8</p>	<p>1st Street Extension to Bear Lake Estates</p> <p>PDT action: Dropped as a stand-alone connection; retained as a possibility if Luman Road access to Bear Lake Estates closed.</p> <p>CAC recommendation: Agreed with PDT not to advance this option.</p>	<ul style="list-style-type: none"> • Connect Bear Lake Estates to OR 99 couplet at 1st Street; 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. <p>Potential option:</p> <ul style="list-style-type: none"> • If required, Bear Lake Estates residents would consider an alignment that would be located northwest of their property, near the RV parking area. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Impacts to Bear Lake Estates traffic circulation. • Potential impacts to some Bear Lake Estates homes to allow for connection. • Additional Bear Creek Greenway crossing. • Used as a stand-alone option, would not provide any significant volume reductions on Fern Valley Road (with or without improvements on Fern Valley Road or with or without the existing Luman Road connection). • Would result in some significant volume changes to the local downtown area where the connection would be located. • Resulted in strong opposition from Bear Lake Estates.

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9	<p>South Bear Creek Estates Overcrossing to Breckinridge</p> <p>PDT action: Dropped by PDT (May 2004).</p> <p>CAC recommendation: Agreed with PDT not to advance this option.</p>	<ul style="list-style-type: none"> • Construct overcrossing south of Bear Lake Estates. • Connect with OR 99 at south end of couplet. • Connect on east side with Breckinridge Drive. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Would have major traffic to the neighborhood along Breckinridge Drive, increasing noise and impacting neighborhood livability. • Would require an additional Bear Creek Greenway crossing. • Would impact to Blue Heron Park. • Would require substantial cut into large hill south of neighborhood. • Would result in new roadway adjacent to south Bear Lake Estates, increasing noise and impacting livability in that area of the property.
15	<p>Northridge Terrace Overcrossing</p> <p>PDT action: Dropped by PDT (July 2005).</p> <p>CAC recommendation: Agreed with PDT not to advance this option.</p>	<ul style="list-style-type: none"> • Construct new east-west roadway connecting OR 99 to N. Phoenix Road. Would extend east from OR 99 along Northridge Terrace, cross over Bear Creek and I-5, and connect with N. Phoenix Road just north of the UGB. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • No significant traffic improvement (10% or greater) to Fern Valley Road. • Regardless of what's done on Fern Valley Road, because this option is close to Fern Valley Road, an overcrossing at Northridge Terrace would pull about 20% of traffic from the Fern Valley interchange. • Impacts to adjacent mobile homes west of I-5, resulting in potential environmental justice issues, primarily due to the large number of mobile home parks. (Note: impacts to mobile home parks and environmental justice issues likely with any alternative.) • Option would not be speed-sensitive because it is so close to Fern Valley Road, thus would significantly reduce volumes on Fern Valley Road.
16	<p>Fern Valley Connection to 4th</p> <p>PDT action: Dropped by PDT (July 2005)</p> <p>CAC recommendation: Agreed with PDT not to advance this option.</p> <p>[Note: Initially, this option was not forwarded due to longitudinal impacts to the Bear Creek Greenway. However, it was later redesigned to decrease the</p>	<ul style="list-style-type: none"> • 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 couplet at 4th Street. • Can be used with CAC Table 3 SPUI (Lowry) Alternative. • Can be used with CAC Table 4, S. Interchange w/ Connection to 4th Street Alternative. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> • Northbound and southbound traffic fills entire intersection at OR 99. • Excessive queue lengths through all major intersections on OR 99 caused by signals and high volumes. • Average queue extends entire length of 4th Street between OR 99 northbound and southbound couplet. • Insufficient storage on 4th Street between OR 99 northbound and southbound, increasing westbound queue at intersection of 4th Street and OR 99 northbound. • 6-lane cross-section at 4th Street between OR 99

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	longitudinal impacts in association with CAC Table 3 SPUI (Lowry) alternative, and CAC Table 4, S. Interchange w/ Connection to 4 th Street alternative.]		northbound and southbound couplet. <ul style="list-style-type: none"> Increases traffic through downtown. Impacts to commercial properties east of OR 99 due to access road to southwest quadrant. Additional Bear Creek crossing; impacts to Bear Creek Greenway, the pond and/or riparian vegetation in the southwest quadrant.
17	<p>Fern Valley Connection to 5th</p> <p>PDT action: Dropped by PDT (July 2005)</p> <p>CAC recommendation: Agreed with PDT not to advance this option.</p> <p>[Note: Initially, this option was not forwarded due to longitudinal impacts to the Bear Creek Greenway. However, it was later redesigned to decrease the longitudinal impacts in association with CAC Table 1 SPUI – N. Phoenix Through alternative; CAC Table 3, south of FVI alignment (Lowry); and CAC Table 4, S. Interchange w/ Connection to 4th Street alternative.]</p>	<ul style="list-style-type: none"> 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 couplet at 5th Street. Can be used with CAC Table 1 SPUI – N. Phoenix Through Alternative. Can be used with CAC Table 3 SPUI (Lowry) Alternative. Can be used with CAC Table 4, S. Interchange w/ Connection to 4th Street Alternative. 	<p>Reasons for not advancing:</p> <ul style="list-style-type: none"> Impacts to commercial properties east of OR 99 due to access road to southwest quadrants. Additional Bear Creek crossing; impacts to Bear Creek Greenway, the pond and/or riparian vegetation in the southwest quadrant.
Turn-Around (Lewin)	Turn-Around Lewin, Fern Valley Road/Bolz	<p>(Suggested by David Lewin.)</p> <ul style="list-style-type: none"> Would develop modified traffic circle using Fern Valley Road, OR 99, and E. Bolz Road. 	<ul style="list-style-type: none"> Could not handle projected traffic volumes.