

APPENDIX L

# **Design Acceptance Workshop Comments and Response**

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## City of Bend Review Comments

<b>Date:</b>	February 18, 2011	<b>Project Name:</b>	US97/Murphy Rd: Brookwood to Parrell
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<b>Department:</b>	Transp. Eng.	<b>Submittal:</b>	Design Acceptance Package (30% Design)
<b>Reviewer:</b>	Julia Wellner	<b>Deadline</b>	February 18, 2011

Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
1	Sheet 2B-2	Show Bend Area Transit (BAT) bus stop, southbound Brookwood just north of Pinebrook, at approx. paving limit. Currently under design. Contact Heather Ornelas, COIC-BAT for latest design. This location has been ID'd as a temporary one until completion of the Murphy roundabout. Stop to be relocated to roundabout entry at later date.	S	Coordination will occur during final design phase
2	"	Reconstruct existing driveway loops at approx. sta. PB 3+00 to within right-of-way?	N	Need City direction to respond to this comment
3	Traffic Control Plans General Comments	Recommend incorporating Project ID signs in advance of all major entry points to project area, with name of project and anticipated completion date.	N	These types of details will be addressed during the final design phase.
4	"	For all closures of existing roads, recommend use of custom advance notice signs, posted min. 7 calendar days prior to closure of existing roads, with legend such as MURPHY RD CLOSED / AT PARRELL RD / (DATE) TO (DATE). Post sufficiently far in advance so that drivers can alter routes to avoid closure. Ie for Murphy/Parrell closure, post at EB Pinebrook before 3 <sup>rd</sup> St; Murphy WB before Country Club; Country Club NB before Murphy, etc.	S	These types of details will be addressed during the final design phase.
5	"	Incorporate advance signing and facilities for bikes/pedestrians as necessary.	S	These types of details will be addressed during the final design phase.
6	Sheet 2C-3	Suggest adding additional advance TRUCK DETOUR signing 1-2 miles ahead of BRIDGE WORK sign, NB, SB on US97.		These types of details will be addressed during the final design phase.
7	"	Upsize sign sizes for higher order road class. (i.e. warning sign TRUCKS riders to 18 inches high) See similar plaque sizes in MUTCD.		These types of details will be addressed during the final design phase.
8	"	Suggest 2 <sup>nd</sup> set of Truck Detour signs on US97 SB in advance of Powers Rd for trucks that access US97 at Reed Market or those that do not exit at Reed Market in response to 1 <sup>st</sup> set of signs.		These types of details will be addressed during the final design phase.
9	"	Consider detouring NB trucks from 3 <sup>rd</sup> back to US97 using Powers rather than Pinebrook. Weigh unprotected, skewed left turns at Pinebrook against Stop sign Parkway access from Powers.		DAP Workshop topic

**COMMENT TYPE:**

'F' - FATAL FLAW MUST BE REVISED

'S' - SERIOUS PROBLEM, NEEDS TO BE ADDRESSED. COULD ESCALATE TO 'F' IF LEFT UNATTENDED.

'C' - COORDINATION PROBLEM. DISCIPLINE NEEDS TO TALK.

'N' - NOTE TO DESIGNER, ITEM, NOT SERIOUS, NO NEED TO INCORPORATE, BUT COULD RESULT IN A BETTER PRODUCT IN FUTURE.

Key #: 14215 Project: US 97/Murphy Rd: Brookwood-Parrell (Bend) Review milestone: DAP Constr. Proj. Mgr.: Amy Pfeiffer Project Leader: 0 Roadway Designer: CH2M HILL Project Spec Writer: N/A					
Sheet #	Commentor's Name	Plan Comments	Response/Follow-Up	Response By	Comment Resolved? (Y/N)
?					
	Curtis Ehlers (Geology and Geotechnical)	I have reviewed the DAP document for the US97/Murphy Rd Overcrossing Project prepared by CH2Mhill and am satisfied that there are no fatal flaws within the geology and geotechnical portions of the document. I have no comments to provide.	None Required	Simmons	Y
	John Ostendorff(Geology and Foundation)	I have reviewed the following documents: Preliminary Foundation Recommendations and Geotechnical Data Report. I have been in contact with Paul Davis of CH2 on several occasions in response to research, drilling embankment and retaining wall preliminary design concepts etc. I have no major comments requiring a response from CH2.	None Required	Simmons	Y
	Peter Schuytema/TPAU	The DAP report as far as traffic goes is not complete enough to support the design alternative. The main body and the table of contents refer to a "Traffic Analysis Report" in Appendix H but there is no report there. What is in Appendix H is one volume figure and the analysis result sheet s for the intersections, merge/diverge and segments in the project study area. This in no way can be or substitute for a traffic analysis report for an ODOT project there can be full geotechnical reports then there should be a full traffic report. There needs to be analysis and discussion surrounding the existing conditions, the future no-build at the future project build. This means full volume figures, analysis (LOS, v/c, queuing, and any simulation MOE results if applicable. There also needs to be explanations/discussions of background, purpose and need, safety data, and summary/comparisons between the build and no-build. Methodologies are also needed.	Per 3/2 Conference Call, Traffic Analysis Data and Referenced Reports were provided to ODOT on 3/22	Woody	Y
	Peter Schuytema/TPAU	I can see that the v/c's are within acceptable ranges which means the design is likely workable but there is discussion. For example, the Murphy Road/Brookwood roundabout has a v/c of 1.13 which exceeds Bend standards which indicates to me that Brookwood really needs to be 4-alnes (as per the original refinement study) as long queuing would be expected. There is a "mitigated" roundabout analysis sheet which seems to have a 2-aine approach on Brookwood judging by the approach v/c is cut in half but there is no other context. I shouldn't have to guess what was done to fix this (even assuming that the fix is part of the final design).	Per 3/2 Conference Call, Traffic Analysis Data and Referenced Reports were provided to ODOT on 3/22	Woody	Y
	Peter Schuytema/TPAU	A couple technical things in the analysis sheets on US97 segments - the driver population factor is 1.00 which is too high as it assumes all familiar drivers. This is a high recreational area, so this factor should not be any higher than 0.95. Also, the free-flow speed was measured north and south of the ramp locations at 40 mph. This seems low especially considering the signals won't be here anymore - should be at least 60 mph judging from other sections of US97.	Per 3/2 Conference Call, Traffic Analysis Data and Referenced Reports were provided to ODOT on 3/22	Woody	Y
	Peter Schuytema/TPAU	Also, as part of Section 3.13 (page 3-22) I see nothing about noise impacts. I would assume for a project of this size that a noise study would be required (the connections from 3rd Street push closer to the Romaine Village area and the punching through for Murphy Road to Brookwood could have significant impacts). Even if no noise study was needed, there still needs to be something here.	None Required	Simmons	N
	Peter Schuytema/TPAU	To evaluate this project package properly I will need the full traffic report as there is just not enough here	Per 3/2 Conference Call, Traffic Analysis Data and Referenced Reports were provided to ODOT on 3/22	Woody	Y
5, Const. Note 2, 3 & 20	Bill Hilton (Dist 10)	Pipe Min 18" dia: X, Core 10 GR: X. No inlets shown. What type of inlet for storm sewer?	inlet locations not yet determined, however, CG-3 (Sidewalk Catch Basin) inlets along Brookwood Blvd, Murphy Rd, 3 <sup>rd</sup> St, Parrell Rd ROWs, including roundabouts.G-2 (Catch Basin Double) inlets will be used along the US 97 Northbound Ramp down-station to B505+00.	Attanasio	Y
6, Const. Note 2 & 20	Bill Hilton (Dist 10)	Pipe Min 18" dia: X, Core 10 GR: X. No inlets shown. What type of inlet for storm sewer? I'd like to discuss the drainage details more one on one before we finalize	inlet locations not yet determined, however, CG-3 (Sidewalk Catch Basin) inlets along Brookwood Blvd, Murphy Rd, 3 <sup>rd</sup> St, Parrell Rd ROWs, including roundabouts.G-2 (Catch Basin Double) inlets will be used along the US 97 Northbound Ramp down-station to B505+00.	Attanasio	Y
7, Const. Note 2, 3 & 20	Bill Hilton (Dist 10)	Pipe Min 18" dia: X, Core 10 GR: X. No inlets shown. What type of inlet for storm sewer? The large aggregate on the pavement side of the filter strip could be a problem with a shoulder less than 8 ft. as disable traffic will likely park on this material and then bring large rocks onto the roadway causing a traffic hazard.	The proposed aggregate is crushed shoulder aggregate.	Attanasio	Y
8, Const. Note 8	Bill Hilton (Dist 10)	The large aggregate on the pavement side of the filter strip could be a problem with a shoulder less than 8 ft. as disable traffic will likely park on this material and then bring large rocks onto the roadway causing a traffic hazard.	See responses above	Attanasio	Y
9, Const. Note 8	Bill Hilton (Dist 10)	The large aggregate on the pavement side of the filter strip could be a problem with a shoulder less than 8 ft. as disable traffic will likely park on this material and then bring large rocks onto the roadway causing a traffic hazard.	See responses above	Attanasio	Y

Sheet #	Commentor's Name	Plan Comments	Response/Follow-Up	Response By	Comment Resolved? (Y/N)
10, Const. Note 8	Bill Hilton (Dist 10)	The large aggregate on the pavement side of the filter strip could be a problem with a shoulder less than 8 ft. as disable traffic will likely park on this material and then bring large rocks onto the roadway causing a traffic hazard.	See responses above	Attanasio	Y
12, Const. Note 2 & 20	Bill Hilton (Dist 10)	Pipe Min 18" dia: X, Core 10 GR: X. No inlets shown. What type of inlet for storm sewer?	See responses above	Attanasio	Y
S-8	Bill Hilton (Dist 10)	With 6' shldr/bike lane and 6' sidewalk there will not be enough snow storage unless the sidewalk is used causing the sidewalk to be closed. 8' is the minimum required with 10' be the desired width for snow storage. It would also be preferable to have a snow barrier above the bridge rail to prevent stow being plowed onto the parkway.	This will not serve pedestrians - there are no sidewalks connecting to bridge. Sidewalk is provided for a potential future phase.	Simmons	Y
AppF	Heather Howe	Under sections 2.4: I think that if they are going to list water, sewer, and storm I think they should also list the other utilities even if they state "see the Utility Conflict Analysis in Section 3...."	Comment to be addressed through revisions to text	Simmons	Y
Plans	Heather Howe	The irrigation district lines/ditches need to be identified on the plans.	Comment to be addressed through revisions to plans	Simmons	Y
DAP Narrative					
1.1	Dan Serpico	last sentence of first paragraph states... "and reduce the crashes at these locations, which are some of the highest in Central Oregon." - Data to support = US 97 @ Pinebrook Blvd 2007-2009 top 5% SPIS site, US 97 @ 3rd St (signal) 2005 top 10%	Comment to be addressed through revisions to text	Simmons	Y
table 2-1	Dan Serpico	Existing US 97 V=65 mph (south of 3rd St) - current speed limit is 45 mph until south of China Hat Rd, should design speed of 55mph be used to that point?	A design speed of 65 mph south of 3rd and a 55 mph north of 3rd will be used.	Simmons	Y
table 2-1	Dan Serpico	Existing US 97 Interchange spacing - there will also be design deviations for the at grade intersections that remain on US 97 and at the end of the ramps for 3rd St. Spacing standard for Private and Public Approaches on Statewide Urban Expressway @ 45mph = 2640', distance between nearest at-grade and the end of the taper for Urban Expressways @ 45mph = 1 mile	Accesses along SB 97 to be purchased and closed	Simmons	Y
3.5	Dan Serpico	May want to refer to OPAL and AMStrat for details on each approach. ODOT internal staff has an AM meeting next week to discuss R/W impacts and make recommendations for Management. A draft OPAL and AMStrat have been created but waiting for Management approval before creating final.	Comment to be addressed through revisions to text	Simmons	Y
3.5.1	Dan Serpico	Old Murphy Rd will be converted to Left in - Right in - Right out	Comment to be addressed through revisions to text	Simmons	Y
3.5.2	Dan Serpico	last sentence is confusing. This will eliminate the need for a signalized intersection by making it a Right in Right out only.	Comment to be addressed through revisions to text	Simmons	Y
3.5.4	Dan Serpico	750' spacing from Table 7 is based on fully developed urban. The section south of Murphy Rd is less than 85% developed, with vacant lots and should be 1320'.	Comment to be addressed through revisions to text	Simmons	Y
Table 3-2	Dan Serpico	Analysis for US 97 @ Pinebrook, US 97 3rd Street Ramps?	Refer to Traffic Analysis Report provided to ODOT on 3/22	Simmons	Y
Section 1.1	Joel McCarroll	Last sentence in the first paragraph, "reduce the crashes at these locations, which are some of the highest in central Oregon." The clause does not make much sense. I would suggest ending the sentence after Oregon and starting a new sentence that summarize the current operational and safety deficiencies. i.e V/C ratio and SPIS number.	Comment to be addressed through revisions to text	Simmons	Y
Section 1.1	Joel McCarroll	First two bullets: Capitalize the 'B' in Business 97.	Comment to be addressed through revisions to text	Simmons	Y
Figure 1.1	Joel McCarroll	Study Area Intersections: Why aren't US 97 at Pinebrook and the ramp terminal intersections in the study area?	US97/Pinebrook was not a study intersection, as it will be converted to R/RO. There are no ramp terminal intersections in this project	Simmons	Y
Table 2.1	Joel McCarroll	Proposed Design Standards, Page 2-12: The shoulder widths on US 97 are narrower than we discussed earlier. I assume the reason for this is that there is a 2 foot shy not shown in the shoulder width that is maintained.	Correct	Brown	Y
Table 2.1	Joel McCarroll	Are there multi-use path design guidelines or standards that we should be referencing?	These will be added to the table	Brown	Y
Table 3.2	Joel McCarroll	Table 3.2: Future Build Traffic Analysis: How do US 97 at Pinebrook (R/RO on both sides) and the ramp terminal intersections operate?	Consultant was directed to include analysis for only this project phase	Simmons	Y
3.1	Joel McCarroll	3.10: General Comment: This project will require a traffic management plan. Is that part of the consultant's scope?	Yes - a TMP is included in the consultant's SOW for the next phase of the project	Simmons	Y
3.10.2	Joel McCarroll	3.10.2, Stage 1: See my comment #1.	Detour route no longer required with decision to proceed with a precast bridge type	Simmons	Y
	Joel McCarroll	Stage 2 and Stage 3: The stages change traffic patterns at US 97 and Pinebrook. What effect will this have on traffic operations? Do we need to change signal timing/phasing? Will the consultant provide this for us?	TMP will include this analysis	Woody	Y
1-3	Mike Morris	Sec. 1.3.2 states that the design year is 2030, wouldn't it be more like 2032 or 2033?	Travel demand model year is 2030	Simmons	Y
2-1	Mike Morris	Sec. 2.1.1 states the design is shown in figure 2-1, but the figure does not show the project elements.	Comment to be addressed through revisions to text	Simmons	Y
2-2	Mike Morris	4th paragraph on this page states double lane roundabout is anticipated to accommodate 2030 traffic demands, should this be 2032 or 2033?	Travel demand model year is 2030	Simmons	Y
2-6	Mike Morris	1st paragraph states existing US97 Urban Principal Arterial, this section is Urban Expressway and the classification comes from the Oregon Highway Plan.	Comment to be addressed through revisions to text	Simmons	Y
2-7	Mike Morris	Same issue as page 2-7, standard for existing US97 is Urban Expressway and the source is Oregon Highway Plan, Appendix D.	Comment to be addressed through revisions to text	Simmons	Y
2-8	Mike Morris	We are actually doing work on US97 so we should list the standards horizontal curvature and stopping sight distance.	Comment to be addressed through revisions to text	Simmons	Y
2-9	Mike Morris	Same comment as page 2-8, we should list the standard on US 97 for grade, min. K for sag and crest.	Comment to be addressed through revisions to text	Simmons	Y
2-10	Mike Morris	Same comment as page 2-8, we should list the standard on US 97 for super elevation and spiral length.	Comment to be addressed through revisions to text	Simmons	Y
2-12	Mike Morris	Design exceptions will be needed for both inside and outside shoulders. I know the intent of the project is maintain the existing shoulder width, but since this existing width is substandard we should document the condition of US97 through the project limits.	Comment to be addressed through revisions to text	Simmons	Y

Sheet #	Commentor's Name	Plan Comments	Response/Follow-Up	Response By	Comment Resolved? (Y/N)
3-1	Mike Morris	Section 3.1, both inside and outside shoulders will need an exception. Would add explanation in Sec. 3.1.2 on how the existing outside shoulder is 6' and project will leave this condition in place.	Comment to be addressed through revisions to text	Simmons	Y
	Mike Ogden	Table 1, Design Criteria, under Regulatory Framework on page 3 indicates that for Collection and Conveyance, the 25 year NRCS Type I 24 hour design storm or rational method will be used.	Rational method will be used for conveyance and spread calculations; NRCS for water quality.	Attanasio	Y
	Mike Ogden	The ODOT Hydraulics Manual indicates in Chapter 13, Storm Drainage, in section 13.7.1; that design discharge used in sizing storm drainage systems is determined by the rational method. Additionally, in Chapter 3, Section 3.6 Design Recurrence Interval, Table 3 Design Recurrence Interval is the 10 Year Storm for Storm Drainage systems.	City of Bend cites COSM, which requires 25-year for conveyance systems per section 8.1.1.	Attanasio	Y
	Mike Ogden	Please have the designers utilize the Rational Method using the 10 Year Design Storm in calculating the capacity for the conveyance system as outlined in the ODOT Hydraulics Manual. An example is provided in the manual in Appendix F in Chapter 13.	City of Bend cites COSM, which requires 25-year for conveyance systems per section 8.1.1. Would ODOT prefer ODOT only systems be designed to 10-year rational method?	Attanasio	Y
Section 3.5 Access Modifications:	Terry Pistole	Additional access modifications beyond what has been discussed concerning access closures and reservations may have an affect on right of way and needs further discussion and resolution prior to DAP to be sure the right of way footprint has been defined.	None Required	Simmons	Y
Section 3.5.1	Terry Pistole	paragraph 2: suggest last sentence be revised to say The flag-lot property located in the northwestern corner of the Brookwood Boulevard/Murphy Road roundabout will receive a driveway that feeds directly into the circulating roadway of the roundabout to maintain access to the property which has no alternative access.	Comment to be addressed through revisions to text	Simmons	Y
Section 3.11 Stormwater:	Terry Pistole	Paragraph 2: I'm just wondering about the sentence that makes reference into discharging stormwater runoff into the River should be included. I'm not aware this is ever allowed.	The intent of the sentence is to indicate there are no water bodies nearby to discharge treated runoff. No change is required.	Attanasio	Y
Section 3.12 Utility Conflict Analysis:	Terry Pistole	I am very concerned about the discussion regarding the Pacific Power. How does this affect the right of way footprint?	None Required	Simmons	Y
Roats Water & Avion Water:	Terry Pistole	With regard to the statement that Avion Water & Roats Water requests to construct a 16-inch water main between US97 and the proposed Brookwood Boulevard roundabout, following the new Murphy Road alignment...to be constructed before the roadway:	Comment to be addressed through revisions to text	Simmons	Y
	Terry Pistole	While some of the alignment is owned by the City and ODOT through the alignment, there are also numerous private properties where right of way will need to be acquired prior to any construction of water facilities. Adding language to this affect would be beneficial.	Comment to be addressed through revisions to text	Simmons	Y
Section 3.15 Project Schedule:	Terry Pistole	First bullet "Demolish existing building on 3 <sup>rd</sup> Street should be removed.	Comment to be addressed through revisions to text	Simmons	Y
<b>Title Sheet</b>					
1	Dan Serpico	Is US97/Murphy Road: Brookwood - Parrell (Bend) the official name of the project?	Yes - from the STIP	Simmons	Y
1	Dan Serpico	The stationing for the Highway does not match the R/W stationing and does not include the Station Equations.	Comment to be addressed through revisions to plans	Simmons	
	Terry Pistole	what is the bold line at the westerly end of the project depicting. I think its pinebrook work but the southerly line is not on top of Brookwood, so I'm not sure what it is.	Comment to be addressed through revisions to plans	Simmons	Y
<b>Typical Sections</b>					
<b>Details</b>					
2B-2	Terry Pistole	at NE corner of Brookwood/Pinebrook label R/W line (triangular take area)	Comment to be addressed through revisions to plans	Simmons	Y
	Terry Pistole	Are ADA ramps being built at Brookwood/Pinebrook and Pinebrook/Fircrest?	Yes - ramps to be added following DAP	Simmons	Y
<b>Traffic Control</b>					
2C-3	Joel McCarroll	The sheet shows all trucks being detoured off US 97. Is is all trucks or just those over a certain height and what is that height? Needs to be worked with industry. More comments in the DAP narrative.	Detour is only for trucks over 15'-7". The detour assumes a CIP PT box bridge type, which has been eliminated, so detour is no longer necessary.	Simmons	Y
2C-6	Joel McCarroll	Significant traffic is rerouted through the US 97 Pinebrook intersection? What will that do to signal operations? Will we need to split phase the side street? What are the volumes will we detour from NB 97 to EB Pinebrook? Will those volumes cause concern?	STMP to evaluate	Woody	Y
2C: general comment all sheets	Terry Pistole	General comment all Traffic Control Plan sheets: Since no right of way lines are indicated I can't tell if the sign locations are within the right of way. Some of these signs are quite large and we will need to see their relation to the right of way prior to DAP to determine if there are additional right of way needs.	A review of ROW needs for temporary and permanent signs and illumination reveals no additional ROW needs	Simmons	Y
<b>Pipe Data</b>					
<b>Roadway Plans &amp; Profile</b>					
2B	Dan Serpico	Note for installation of crash gate to Romaine Village - should the gate be further from roadway so a vehicle can park off the road to unlock?	Comment to be addressed through revisions to plans	Simmons	Y
	Dan Serpico	How does the path connect to Romaine Village	Comment to be addressed through revisions to plans	Simmons	Y
31	Dan Serpico	Installing mountable curb in front of an Impact Attenuator may cause vehicles to launch and not hit the attenuator. Bulnose the mountable curb approx. 50' from the attenuator. This dim will be verified with the District office.	Comment to be addressed through revisions to plans	Simmons	Y
	Dan Serpico	Do not extend fogline through intersection of Pinebrook	Comment to be addressed through revisions to plans	Simmons	Y
10	Joel McCarroll	Is the gate at Romaine Village required for emergency or maintenance access? If not, it appears that we could provide a better connection between the multi-use path and Romaine Village and maybe get rid of the 90 degree turn.	Comment to be addressed through revisions to plans	Simmons	Y

Sheet #	Commentor's Name	Plan Comments	Response/Follow-Up	Response By	Comment Resolved? (Y/N)
33	Joel McCarroll	Should we anticipate bike/ped crossings between the connection from US 97 on the north side and the multi-use path on the south side? The median width appears to be less than 2 feet here. If it was six or eight feet wide, it would allow a future two stage crossing.	Design of path has been modified to provide access to only the south side of Murphy Road. Further refinements may be necessary post DAP.	Simmons	Y
34	Joel McCarroll	If we build the southbound off-ramp from US 97 in the future, we will impact BP 3. Is that ok? Would it be relocated or removed?	Yes - this path ramp would be removed when a southbound ramp is built	Simmons	Y
5,6,7	Jon Heacock	Review design exception for distance from NB off-ramp to approach - (current 580' standard1320' (750'))	Access deviation will be required	Simmons	Y
34	Jon Heacock	Not clear where canal relocation is going to?	Comment to be addressed through revisions to plans	Simmons	Y
2B	Terry Pistole	label existing R/W along Romaine Village Way on north side	Comment to be addressed through revisions to plans	Simmons	Y
4	Terry Pistole	Note 12: is the roundabout a template, or a new standard for City, or what the City wants? It looks like bringing the/sidewalk curb tight to the roadway would lower impact on adjacent property (Arco) and eliminate maintenance issues for City of landscape area. Would we really be able to defend "need" for landscape area?	Comment resolved at DAP workshop	Simmons	Y
	Terry Pistole	Are there ADA ramps at roundabout, Albertsons/Shari's driveway, & existing Murphy Rd?	Yes - ramps to be added following DAP	Simmons	Y
	Terry Pistole	The R/W line at Shari's and the driveway does not connect to anything	Comment to be addressed through revisions to plans	Simmons	Y
	Terry Pistole	Why is the driveway connection to 3rd at Shari's being narrowed?	Refer to revised design in Final DAP. A two-lane exit is being reduced to a single lane right-turn exit	Simmons	Y
	Terry Pistole	It appears the right of way take at the Shari's/Albertson driveway should extend across the driveway to include the construction of the improvement that is narrowing the opening	Comment resolved at ROW workshop	Simmons	Y
5	Terry Pistole	Cut and file lines exceed limits of right of way at various locations	Comment resolved at ROW workshop	Simmons	Y
	Terry Pistole	Center mutual driveway at approx Sta 195+00 on property line	Comment resolved at ROW workshop	Simmons	Y
	Terry Pistole	Will additional right of way be needed to construct and/or maintain retaining wall?	Comment resolved at ROW workshop	Simmons	Y
6	Terry Pistole	Will additional right of way be needed to construct and/or maintain retaining wall?	Comment resolved at ROW workshop	Simmons	Y
10	Terry Pistole	Fill line exceeds limits of R/W and cut at very edge of structure	Comment resolved at ROW workshop	Simmons	Y
15	Terry Pistole	Label R/W line at NE corner Brookwood/Pinebrook (triangular take)	Comment to be addressed through revisions to plans	Simmons	Y
16	Terry Pistole	Label new R/W line on SE corner Murphy/Brookwood	Comment to be addressed through revisions to plans	Simmons	Y
	Terry Pistole	Label Existing R/W along both sides of Larkwood	Comment to be addressed through revisions to plans	Simmons	Y
	Terry Pistole	Are there ADA ramps Murphy/Brookwood roundabout & at Wrenwood/Brookwood?	Yes - ramps to be added following DAP	Simmons	Y
17	Terry Pistole	Does City want to provide driveway access at the note 19 at the southwest end of project. It appears to be gate at the back of the property?	Comment resolved at ROW workshop	Simmons	Y
	Terry Pistole	ADA ramps at Finchwood/Brookwood?	Yes - ramps to be added following DAP	Simmons	Y
18	Terry Pistole	Fill runs into property line at NW Brookwood	Comment resolved at ROW workshop	Simmons	Y
	Terry Pistole	Does City want to provide driveway access on property to west of the flag lot which appears to access a gate; there is a primary access to the parcel further to the SW	Comment resolved at ROW workshop	Simmons	Y
20	Terry Pistole	Consider eliminating landscaping area on south side, perhaps use retaining wall too, to avoid impacts to Mobile Home park improvements?	Comment resolved at ROW workshop	Simmons	Y
21	Terry Pistole	Consider eliminating landscaping area on south side, perhaps use retaining wall too, to avoid impacts to Mobile Home park improvements?	Comment resolved at ROW workshop	Simmons	Y
22	Terry Pistole	There has been discussion about a future roundabout along Murphy Road at this parcel. Where would it be located in relation to the swale?	Between Sta 723+00 and Sta 725+00	Simmons	Y
24	Terry Pistole	New Bike/Ped path has added another R/W file at 181217BB00200	Comment resolved at ROW workshop	Simmons	Y
26	Terry Pistole	Is there room to construct the swale without the need for a TE from 181217BA00604?	Comment resolved at ROW workshop	Simmons	Y
	Terry Pistole	Add definition of note 11	Comment to be addressed through revisions to plans	Simmons	Y
27	Terry Pistole	SE corner Murphy/Parrell: much of the circulation to garages on this property currently encroach on the R/W. Will encroachment on R/W be allowed by City during and after project?	Comment resolved at ROW workshop	Simmons	Y
	Terry Pistole	Label new R/W line at NW property (triangular take)	Comment to be addressed through revisions to plans	Simmons	Y
	Terry Pistole	Label new R/W line at SW corner	Comment to be addressed through revisions to plans	Simmons	Y
	Terry Pistole	Label existing R/W line northeast side of Murphy Rd.	Comment to be addressed through revisions to plans	Simmons	Y
	Terry Pistole	ADA ramps @ all crosswalks?	Yes - ramps to be added following DAP	Simmons	Y
28	Terry Pistole	Fill on north side runs into the right of way line, will a TE be needed at this parcel? This would add a r/w file	Comment resolved at ROW workshop	Simmons	Y
	Terry Pistole	Cut exceeds r/w boundaries on south. Will a TE be needed for this parcel? This would add a r/w file.	Comment resolved at ROW workshop	Simmons	Y
29	Terry Pistole	New file for Roats Lane (Private) probably associated with 181217BA00900	Comment resolved at ROW workshop	Simmons	Y
30	Terry Pistole	Label new R/W line NW ;	Comment to be addressed through revisions to plans	Simmons	Y
	Terry Pistole	Label new R/W and existing R/W NE along Murphy	Comment to be addressed through revisions to plans	Simmons	Y
	Terry Pistole	Label new R/W line SW	Comment to be addressed through revisions to plans	Simmons	Y
	Terry Pistole	Label new R/W & existing R/W at SE corner	Comment to be addressed through revisions to plans	Simmons	Y
34	Terry Pistole	Cut line right against R/W on west at approx BP2 56+00, will additional r/w be required?	Comment resolved at ROW workshop	Simmons	Y

Sheet #	Commentor's Name	Plan Comments	Response/Follow-Up	Response By	Comment Resolved? (Y/N)
<b>Erosion Control</b>					
<b>Hydro (Culverts, Fish Passage, Temporary Water Mgmt., Stormwater, Waterway Enhancement)</b>					
<b>Geo/Enviro (Getechnical Data, Retaining Walls, Bank Protection, Landslide Correction, Hazmat, Material Source/Disposal Sites, Rockfall Mitigation)</b>					
<b>Bridge</b>					
S-2	Joel McCarroll	There are no conduit locations for utilities. Will there be a future need?	Conduit to be added post DAP	Wagner	Y
S-8	Joel McCarroll	There are no conduit locations for utilities.	Conduit to be added post DAP	Wagner	Y
Precast BT 48 Girders	Zach Beget	I have no structural concerns with this design. My only concern is purely aesthetic. While this may be the most inexpensive option and easiest to construct, it doesn't fit in with the other Parkway Bridges. They are CIP PT boxes, and the bottom flange is a full curved hauch to mid span.	None Required	Simmons	Y
Precast variable depth boxes	Zach Beget	This is a better option for aesthetics than the Bulb-T girders. This will also give you quicker construction time and one will not need a detour for over height vehicles.	None Required	Simmons	Y
CIP PT Boxes	Zach Beget	Aesthetically to me this appears to have the cleanest lines, and will match the current Parkway corridor bridges the best. While there would need to be a detour for over height vehicles, the detour is short and uncomplicated. I assume the signals will still be left in place making it easy for large trucks to get back onto US97. This option compared to the variable depth box girders is only 80k more.	None Required	Simmons	Y
TS&L Narrative	Zach Beget	Section 3.3 states that the rails will have weathering steel. The other Parkway bridges have a painted or powder coated steel railings, which I personally feel makes a better end product. The Baker/Knott Road overpass just south of this project has weathering steel rail, and its straining the concrete. I personally don't think it looks very good.	None Required	Simmons	Y
S-1	Jon Heacock	What is ped's accomodation plan around structure?	Murphy Road has sidewalks, as does the bridge	Simmons	Y
S-4	Jon Heacock	What is ped's accomodation plan around structure?	Murphy Road has sidewalks, as does the bridge	Simmons	Y
S-9	Jon Heacock	Make sure Region is ok with prestressed girders - not aware that this has been approved	None Required	Simmons	Y
<b>Traffic (Striping, Signing, Illumination, Signals)</b>					
	Dan Serpico	Illumination and signing will need to be looked at for R/W impacts	A review of ROW needs for temporary and permanent signs and illumination reveals no additiona ROW needs	Simmons	Y
	Joel McCarroll	The Traffic Control Plans show detouring trucks off of US 97 onto 3rd Street in Stage 1 while the two overcrossing are being constructed. This is something that we will need to get input from the freight industry. The DAP package doesn't have information on vertical clearances limitations necessary to construct the overcrossings. We will need to provide data to the industry about length of detour, constraints on the alternate route, what it would take to lessen the impacts. I am happy to work with you, the City and the consultant team on this. I am confident that we will be able to work through the issues, but we don't have approval currently.	Decision to pursue precast bridge types eliminates detour due to elimination of falsework.	Simmons	Y
	Joel McCarroll	There is no information about signs or interchange illumination in the DAP. Relocating/Replacing expressway signs on the mainline (particularly guide signs and TIC signs) can have an impact on r/w. Similarly, signing on the new the 3rd Street Interchange may have an effect on r/w. Also locations of luminaire poles, conduit and connection to electrical service can have an impact on r/w. I don't think we need full blown sign and illumination plans, but we do need to know if the r/w widths are wide enough to accommodate what we will need. Jeff did a similar thing for the North Interchange in Redmond. He may be a resource for the consultant.	A review of ROW needs for temporary and permanent signs and illumination reveals no additiona ROW needs	Simmons	Y
<b>Traffic Control</b>					
2c-2	Jon Heacock	Does the falsework (if cast in place) construction of the 3rd street flyover bridge block the existing 3rd/US97 signal for SB traffic.	CIP falsework no longer applicable, based on decision to persue precast bridge types	Simmons	Y
2c-5	Jon Heacock	Will new 3rd street flyover bridge block the existing 3rd/US97 signal for SB traffic.	Yes - this will likely be an issue - temporary supplemental heads may be needed	Simmons	Y
2c-5	Jon Heacock	with elevation difference between new and existing roundabout grades is additional temp widening necessary to stage build this area?	Adequate space is available	Brown	Y
2c-5	Jon Heacock	What changes are needed at US97/Pinebrook signal to accommodate the increased traffic from the 3rd/97 signal? What are the additional impacts anticipated to the entrance to the loading dock to Albertsons from the increased traffic and turning movements at this intersection.	To be addressed by TMP	Woody	Y



## City of Bend Review Comments

<b>Date:</b>	February 18, 2011	<b>Project Name:</b>	US97/Murphy Rd: Brookwood to Parrell	
<b>Department:</b>	Transp. Eng.	<b>Submittal:</b>	Design Acceptance Package (30% Design)	
<b>Reviewer:</b>	Julia Wellner	<b>Deadline</b>	February 18, 2011	Page 2 of 20
Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
10	Sheet 2C-4	BAT Route 2 will be impacted beginning with Stage II closure of SB Brookwood. Coordinate with Heather Ornelas, COIC-BAT, regarding temporary rerouting/bus stop relocation.	S	Coordination will occur during final design phase
11	Sheet 2C-4	Provide advance sidewalk/shoulder closure signs for bikes/peds SB on Brookwood.		These types of details will be addressed during the final design phase.
12	“	Could use single modified R11-4 sign: ROAD CLOSED / LOCAL TRAFFIC ONLY instead of 2 separate signs shown.		These types of details will be addressed during the final design phase.
13	“	ROAD CLOSURE barricade likely to block visibility of oncoming traffic for SBLT vehicles, due to road curvature to south. Suggest adding note to plan to place barricade accordingly.		These types of details will be addressed during the final design phase.
14	“	Consider adding DO NOT ENTER signs on each side of the open NB lane of Brookwood, just south of Pinebrook (in addition to the No Left Turn sign shown).		These types of details will be addressed during the final design phase.
15	Sheet 2C-5	Suggest showing existing blue Business Logo signs (currently for Crown Villa RV Park) on US97 and 3 <sup>rd</sup> St, NB. Add note for contractor to coordinate with Travel Information Council to temporarily modify/relocate signs as needed. See OSS 225.05		These types of details will be addressed during the final design phase.
16	“	Could use blue BUSINESS ACCESS signs (ODOT Sign Policy CG20-11) to assist motorists in finding accesses, where appropriate.		These types of details will be addressed during the final design phase.
17	Sheet 2C-6	The proposed detour for SB 3 <sup>rd</sup> St to US97, at Pinebrook is a significant concern. Current intersection geometry creates overlap in opposing left turns, which frequently results in bottlenecks. Evaluate and consider options, including temporary modifications to signal phasing and or intersection geometry.	S	These types of details will be addressed during the final design phase.
18	“	Warning sign plaques should be upsized for higher speed facilities; 18 inch height. See MUTCD Part 6.		These types of details will be addressed during the final design phase.
19	“	Suggest using W20-2 DETOUR XXX FT signs, or DETOUR AHEAD signs with distance plaques, to provide better info.(ALL)		These types of details will be addressed during the final design phase.
20	“	Could use standard DETOUR + Arrow (M4-9) signs rather than separate DETOUR and Arrow signs.		These types of details will be addressed during the final design phase.

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## City of Bend Review Comments

<b>Date:</b>	February 18, 2011	<b>Project Name:</b>	US97/Murphy Rd: Brookwood to Parrell
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<b>Department:</b>	Transp. Eng.	<b>Submittal:</b>	Design Acceptance Package (30% Design)
<b>Reviewer:</b>	Julia Wellner	<b>Deadline</b>	February 18, 2011

Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
21	Sheet 2C-9	Local street detour of Murphy Rd traffic onto local streets (Tapadera, Silver Sage) not recommended for any extended period.		These types of details will be addressed during the final design phase.
22	“	Note that SB US97 and 3 <sup>rd</sup> St. motorists destined for SW Bend use Pinebrook to access Brookwood SB. Add SB Brookwood Detour signing at US97/Pinebrook, SB and WB, directing them south to Ponderosa. Custom advance signing as described in Item # 4 would be beneficial.	S	These types of details will be addressed during the final design phase.
23	“	Suggest adding DETOUR/MURPHY/Straight Arrow sign assembly on China Hat EB prior to Parrell.		These types of details will be addressed during the final design phase.
24	Sheet 15	Show proposed BAT bus stop at approx. STa. BB601+00Rt. Location is approved; final design is not. Contact Heather Ornelas/BAT for current design. Stop to be relocated to roundabout entry at later date.	S	Coordination will occur during final design phase
25	“	Should median be curtailed at north end to provide a buffer for SBLT vehicles in icy weather?		Design has been altered – refer to Final DAP
26	Sheet 16	Future BAT bus stop location will be at approx. Sta. BB603+00 Rt., between crosswalk and bike ramp. A minimum 5 foot wide (measured along curb) by 10 feet deep concrete pad with maximum 2.0% slope, front to back, is required. 10 feet wide is preferred. Construct pad as part of project, if possible, between curb and sidewalk. Sidewalk can be included in pad dimensions.	S	These types of details will be addressed during the final design phase.
27	Sheet 24	Recommend curved or angled sidewalk transitions rather than the 90 degree sidewalk angles shown.		These types of details will be addressed during the final design phase.
28	Sheet 31	Note 32 (Remove Existing Signal) should be noted at Murphy. No existing signal at Pinebrook.		No action required. This sheet shows the US97/Pinebrook intersection, where an existing signal will be removed.

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## City of Bend Review Comments

<b>Date:</b>	February 18, 2011	<b>Project Name:</b>	US97/Murphy Rd: Brookwood to Parrell
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<b>Department:</b>	Stormwater Program Manager.	<b>Submittal:</b>	Design Acceptance Package (30% Design)	
<b>Reviewer:</b>	Wendy Edds	<b>Deadline</b>	February 18, 2011	<b>Page 4 of 20</b>
Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
29		Looks very good. We like the approach. Consider, how will you provide safe passage for the 100-year event?"		The 100-year will either be stored in the infiltration swale without freeboard or the swale area graded to allow free discharge without danger to citizens or damage to property.

<b>Department:</b>	Street	<b>Submittal:</b>	Design Acceptance Package (30% Design)	
<b>Reviewer:</b>	Hardy Hanson	<b>Deadline</b>	February 18, 2011	<b>Page 4 of 20</b>
Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
30	2B	Square up D/Way alignment to avoid water and debris collection area.		Design has been altered – refer to Final DAP
31	3	Traffic queue stack area?		Design has been altered – refer to Final DAP
32	4	Extend queue for mall parking		These types of details will be addressed during the final design phase.

<b>Department:</b>		<b>Submittal:</b>	Design Acceptance Package (30% Design)	
<b>Reviewer:</b>	Paul Roy	<b>Deadline</b>	February 18, 2011	<b>Page 4 of 20</b>
Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
		No Comments		

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## City of Bend Review Comments

<b>Date:</b>	February 18, 2011	<b>Project Name:</b>	US97/Murphy Rd: Brookwood to Parrell
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<b>Department:</b>		<b>Submittal:</b>	Design Acceptance Package (30% Design)	
<b>Reviewer:</b>	Robin Lewis	<b>Deadline</b>	February 18, 2011	<b>Page 5 of 20</b>
Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
33		Many of my comments are trying to rationalize the system provided for people walking and people biking as well as the interface of these multi-modal systems to the motor vehicle system. The comments that follow attempt to create a smoothly integrated system – from my point of view – as well as identify logical start and end points, logical connections. A big item that we need to focus on is - where we want people walking and biking and NOT walking and biking – both in the interim and in the future. Rather than try to piecemeal my comments together with others – who may also be commenting on these issues – I recommend it would be a good idea to run a giant roll plot of this DAP set – and re-convene the bike-ped group – we can refine all these sidewalk and bike issues in one meeting. We might be able to eliminate (postpone construction to another project) some sidewalk pieces and add other sidewalk pieces or connections so as to maximize system usability without adding costs. Can the design team set up that meeting for us all in the next week or so?		
34		Is there a process/step identified in project to identify jurisdiction/ownership/maintenance responsibilities of roadways/bridges? How does Division 51 relate to decisions made on this project?		

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<b>Department:</b>		<b>Submittal:</b>	Design Acceptance Package (30% Design)	
<b>Reviewer:</b>	Robin Lewis	<b>Deadline</b>	February 18, 2011	Page 6 of 20
Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
35	<b>2B</b>	<p>Romaine Village Way (RVW): RVW between Hwy 97 and off-set Cul-de-sac:</p> <p>a) refine the transitions for bike/ped connections. There is existing sidewalk on the south side of RVW which will be used to access the new bike/ped path along Hwy 97. The new path is shown to terminate at the north edge of RVW. Consider adding an ADA ramp at this path terminus at RVW and then crossing the street - consider adding a receiving ADA ramp on the RVW sidewalk opposite the path. These two additional ramps will connect the two system elements (sidewalk and path).</p> <p>b) There are existing bike lanes on the Parkway, existing bike lanes on RVW, and existing shoulder used by people riding bicycles on Hwy 97 to Sunriver. How is the interface between these systems designed in this project? Is there a way to get past the fence/gate system for bikes? Since the intersection with RVW is being eliminated will bike lane striping be continued across RVW – another clue to motorists that the roadway intersection is removed...</p> <p>Similarly, there is existing curb-tight sidewalk that exists from the north – this will be removed and replaced by the path? There is existing curb-tight sidewalk that wraps on the south side of RVW onto the Parkway/Hwy 97. Is there signage that says cross-walk closed? Should this sidewalk be removed? What is the means of getting stranded motorists off the Parkway/Hwy 97?</p> <p>c) RVW is currently striped with bike lanes. These could end at the cul-de-sac – and removed east of the new d/w apron – show how the bike lanes transition in 60% plans submittal.</p> <p>d) details for the driveway apron – is it envisioned to be totally flat – as the roadway elevation does not change from east to west of the new driveway apron...what happens to RVW east of</p>		Comments addressed at DAP workshop or during final design phase

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## City of Bend Review Comments

**Date:** February 18, 2011      **Project Name:** US97/Murphy Rd: Brookwood to Parrell

the new cul-de-sac? What happens to old curb/and the old pavement outside the limits of the new driveway? Whatever remains needs to be street sweepable – no curb pinch points. It seems the driveway could span the entire roadway which may be less costly, but in either case (as shown or a 36' driveway) some portions of old curb line would need to be removed and replaced so that the driveway creates a logical tie in to old RVW to the east.

f) is there a need to remove the old intersection with RVW and make it look less like an intersection – so motorists don't forget about the closure? Maybe just a driveway apron for emergency use? What signage exists/proposed?

**Department:**      **Submittal:** Design Acceptance Package (30% Design)

**Reviewer:** Robin Lewis      **Deadline:** February 18, 2011      **Page 7 of 20**

Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
36	2B-2	<p>Sidewalk proposed for Pinebrook on north side to connect to Fircrest Place – great connectivity – is there any chance this could be propertyline tight or buffered from the street? Any buffers/parkstrips provide a location for snow storage and create a better level of service for users.</p> <p>There is a transit stop on the west side of Brookwood...at first we were thinking that there would be no pedestrian crossings of Brookwood at Pinebrook, and that all crossings would occur at the RAB just a few hundred feet south – but with the transit stop being relocated to Pinebrook, it seems that pedestrians will cross at Pinebrook...it seems that a ped crossing on the south leg of the intersection, in the shadow of the left turn could work. Coordinate transit and ped crossing.</p> <p>Median bull nose – see attached detail at end of these comments.</p>		Comments addressed at DAP workshop or during final design phase
37	2C-9	<p>Verify intersection sight distance at Silver Sage/Parrell, westbound looking north. Are sight lines available? If not, consider a different route.</p>		Comments addressed at DAP workshop or during final design phase

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# City of Bend Review Comments

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**Project Name:** US97/Murphy Rd: Brookwood to Parrell

**Department:**  **Submittal:** Design Acceptance Package (30% Design)

**Reviewer:** Robin Lewis

**Deadline:** February 18, 2011

Page 8 of 20

Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
38	3	<p>Southbound volumes today on 3<sup>rd</sup> Street are low – even 2030 projections are pretty low – considering the 5 lane section there is a lot of capacity provided. The southbound right turn lane into Albertson's isn't warranted, and prevents a continuous bike lane southbound. Remove the southbound right turn lane by moving curb line over and paint in the bike lane instead.</p> <p>I put in a similar request for the Walmart Expansion since there is a similar issue at Pinebrook. As they exist today, these two closely spaced right turn lanes create a decreased LOS for people biking in a short stretch of 3<sup>rd</sup> Street. In the future this could be a very bike-ped friendly corridor.</p> <p>The introduction of the southbound Type C traffic separator at about "3<sup>rd</sup> Sta 184+50" could cause operations issues – it is not very commanding and may not be seen. Consider adding an island to separate the back to back left turn pockets.</p>  <p>— This might command greater attention and provide more visual cues to the driver. Are delineators mounted on top of the Type C curb?</p> <p>Street sweeper and street plow operations are a concern for this design with the narrow pockets for the left-in movements and the curb used to prevent left-out movements. Are there other means of creating the same restrictions? Maybe porkchops on the sidestreets rather than on the main line?</p>		Southbound right turn lane removed. Traffic separator removed – see Final DAP plans.

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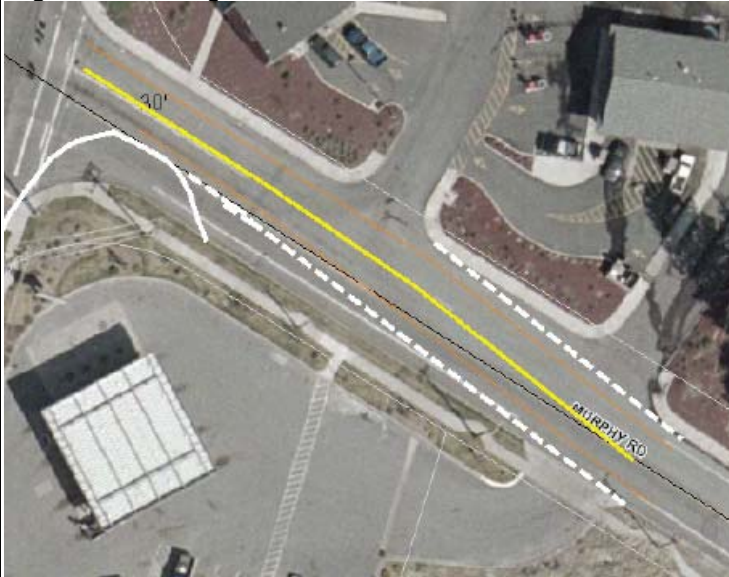
**Project Name:** US97/Murphy Rd: Brookwood to Parrell

**Department:**  **Submittal:** Design Acceptance Package (30% Design)

**Reviewer:** Robin Lewis

**Deadline:** February 18, 2011

**Page 9 of 20**

Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
39	4	<p>Old Murphy – are we going to rename that street? Albertson's Way to get points from Albertson's owners?</p> <p>Old Murphy – the south side of old Murphy is the side of the street that has continuous curb without variation. The north side varies.</p> <p>Old Murphy is a 2-lane street. The proposal is to move the south side curb north with a large curb bulb-out extension. This causes a shift of 12' as the road moves from east to west – is the proposal to create the shift with paint? Not sure how to accomplish the shift as proposed. See next drawing showing the impact of the curb bulb-out extension on the roadway alignment with regard to this 12' shift:</p> <div style="text-align: center;">  </div> <p>As an alternative, I recommend moving the north side curb to the south to create the two-lane opening connection with 3<sup>rd</sup> Street. This results in a clean non-shifting roadway and</p>		Old Murphy approach redesigned – see final DAP plans

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City of Bend Review Comments

Date: February 18, 2011

Project Name: US97/Murphy Rd: Brookwood to Parrell

appears to work with existing conditions better – see next drawing.



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## City of Bend Review Comments

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**Project Name:** US97/Murphy Rd: Brookwood to Parrell

**Department:**

**Submittal:** Design Acceptance Package (30% Design)

**Reviewer:** Robin Lewis

**Deadline:** February 18, 2011

**Page 11 of 20**

Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
40	5	<p>Both sidewalks east side and west side of 3<sup>rd</sup> Street are shown curb tight. Any buffering of the sidewalk provides a place for snow storage, and provides a better level of service for users. Curb tight sidewalk is not city standard for these two reasons.</p> <p>Driveways at “3<sup>rd</sup> 192+00” west and “3<sup>rd</sup> 192+25 east” do not align and do not have adequate center lane storage to accommodate lefts in without having a significant portion of the left turning vehicle dwelling in the through travel lane. These driveways are very close to the roundabout, not quite 100’. Can we discuss again the extension of the splitter island/median to create right-in and right-out at these driveways. This option, although not desirable from the property owner point of view - would be preferable from a safety and operations point of view. Let’s discuss operations, safety and right of way issues with this. I think it could be very important.</p> <p>Transitions and angle points northbound where the roadway transitions from a horizontal curve+roadway widening...appear a bit awkward in vicinity of “3<sup>rd</sup> 195+00” to “3<sup>rd</sup> 196+00”. This is complicated by the driveway at “3<sup>rd</sup> 195+00”. The driveway in the middle of the widening can cause friction, and we do have crash histories in town in situations where this occurs. Can the widening occur south of the driveway so it is complete by the time they hit the driveway or can it occur north of the driveway so it doesn’t begin until after the driveway?</p> <p>There are two lanes southbound exiting onto 3<sup>rd</sup> Street from the roundabout – the inside lane is proposed to drop – this appears to be a bit awkward. Can the outside lane be dropped rather than the inside lane as this would perhaps be the more expected condition and easier to sign/mark with right lane ends signs? Would either choice influence roundabout operations with desired lane choice? Are two lanes exiting southbound necessary for operations? KAI study?</p>		<p>Comments addressed at DAP workshop or during final design phase</p>

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**Date:** February 18, 2011      **Project Name:** US97/Murphy Rd: Brookwood to Parrell

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<b>Department:</b>		<b>Submittal:</b>	Design Acceptance Package (30% Design)	
<b>Reviewer:</b>	Robin Lewis	<b>Deadline</b>	February 18, 2011	<b>Page 12 of 20</b>

Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
41	6	<p>There is some sidewalk on the east side of Hwy 97 south of "3<sup>rd</sup> 199+00 abutting the single family homes east of Hwy 97. Eventually, this sidewalk will be connected up to the 3<sup>rd</sup> Street sidewalk system. There is a proposed Retaining Wall – see circle note 30 on this sheet. The wall creates a very narrow area between the wall and the property lines. The sidewalk will eventually need to be put in this tight area – is it possible to create the sidewalk as a contiguous part of the wall – maybe as part of the wall footing? Or is it possible to separate the sidewalk from the wall but construct it as part of the project? Or is it possible to at least accommodate the space for the future sidewalk by moving the wall west – perhaps an 8' area is necessary – could be helpful for wall maintenance/access as well.</p>		<p>Comments addressed at DAP workshop or during final design phase</p>

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**Date:** February 18, 2011      **Project Name:** US97/Murphy Rd: Brookwood to Parrell

<b>Department:</b>		<b>Submittal:</b> Design Acceptance Package (30% Design)		
<b>Reviewer:</b> Robin Lewis		<b>Deadline:</b> February 18, 2011		<b>Page 13 of 20</b>
Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
42	7	<p>There is a 600' gap in sidewalk on the project between the end sidewalk near Les Schwab and this new bridge sidewalk. As noted on page one of these comments – there may be a desire to create the connection and accommodate the continued sidewalk behind the guard rail proposed on the west side of 3<sup>rd</sup> Street. If not done now as part of the project, sidewalk connection beyond the south Les Schwab driveway to get through the guard rail will need to occur.</p> <p>If this 600 foot gap in sidewalk is mitigated – and the sidewalk on the west side of 3<sup>rd</sup> Street gets us all the way to the southbound on-ramp – should we then also connect to the new bike-ped trail system? Discuss with bike-ped subcommittee.</p>		Comments addressed at DAP workshop or during final design phase
43	7	<p>Guard Rail – there appears to be a gap in guard rail – the guard rail comes down the west side of 3<sup>rd</sup> Street, curb tight, which is the preferred location given the curbing, but then the guard rail appears to end and there is pedestrian rail on the back of the sidewalk. This gap is undesirable – motorists driving their cars northbound on the off ramp – could mistakenly continue straight – and then it is possible that the gap in guard rail would not protect them from continuing northbound and going over the edge. Another driver error could occur if a northbound ramp driver hits the intersection too fast and proceeds to attempt a left turn to the west – hitting the guardrail gap at a high angle – or because there is an elevation difference introduced by the curb, becoming launched and hitting the bridge railing too high and going over that way.</p> <p>I know this is a common practice in central Oregon on both City and ODOT facilities, but introducing the curb 6' from the rail is not a recommended safety practice in either the Roadside Design Guide or AASHTO's green book. AASHTO recommends a barrier-type bridge rail of adequate height should be installed <u>between</u> the pedestrian walkway and the roadway – and a pedestrian rail or screen should be provided on the outer edge of the walkway. This keeps the guard rail</p>		Comments addressed at DAP workshop or during final design phase

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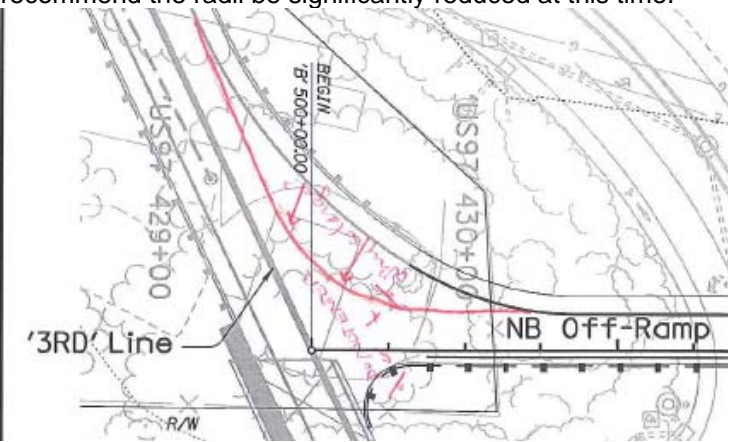
# City of Bend Review Comments

**Date:** February 18, 2011      **Project Name:** US97/Murphy Rd: Brookwood to Parrell

continuous and provides for guard rail in the preferred lateral location with respect to the curb.

**Department:**      **Submittal:** Design Acceptance Package (30% Design)

**Reviewer:** Robin Lewis      **Deadline:** February 18, 2011      **Page 14 of 20**

Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
44	10	<p>SB on-ramp – where does the bike lane on the Parkway end and transition to shoulder bike usage? With the introduction of the on-ramp is there an accommodation of bike lane to safety cross the ramp in a perpendicular manner similar to other ramp treatments on the Parkway further north – is this a safe situation or what other accommodations are proposed – could the bike lane end north of RVW and transition to the new bike path and then a route from RVW to the shoulder to avoid the ramp/bike lane interface issue?</p> <p>Similar discussion for the northbound bike lane – where does it begin/end on the Parkway/Hwy 97 – what are the transitions between shoulder use and bike lane?</p>		Comments addressed at DAP workshop or during final design phase
45	12	<p>NB off intersection with "3<sup>rd</sup>" at Station "B 500+00". There is a large radii connection proposed. Staff goals were to create cues to the motorists that they were exiting a highway and entering a city roadway system – the ramp does a good job slowing exiting vehicles with its mild but ever-upward climb. I recommend the radii be significantly reduced at this time.</p>  <p>Is there signage for do not enter to prevent wrong way ramp</p>		Comments addressed at DAP workshop or during final design phase

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## City of Bend Review Comments

**Date:** February 18, 2011

**Project Name:** US97/Murphy Rd: Brookwood to Parrell

traffic?

Is there a stop sign proposed for vehicles that want to make a left (re-enter the Hwy system on the SB on-ramp?). Is it assumed that there will be no control for the northbound off to northbound 3<sup>rd</sup> Street traffic – at this time there is no motor-vehicle conflicting traffic – but could be at least two conflicts...a northbound exiting motorists wanting to turn left and head back to the Hwy – perhaps they missed an exit or the High Desert or something odd is one type of conflict – and the other could be a person riding a bike on the overpass heading to north 3<sup>rd</sup> Street. Is there a shoulder on the overpass on both sides of the roadway? Sheet 2A shows a 6' shoulder on the north side, and a 4' shoulder on the south side. Do we want people on bikes on this roadway at this time? We could discuss as part of the subcommittee meeting on bike/ped...

It seems that we want to eventually provide bike connectivity eastbound/northbound from the RVW area to the 3<sup>rd</sup> Street south area...but in the interim, maybe we don't – but there could still be at least bike traffic heading east/north and conflicting with the northbound off ramp even if we officially do not want bicyclists using this section of roadway yet...Having a reduced speed helps create that continued slowing from highway to city system.

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## City of Bend Review Comments

**Date:** February 18, 2011      **Project Name:** US97/Murphy Rd: Brookwood to Parrell

<b>Department:</b>		<b>Submittal:</b> Design Acceptance Package (30% Design)		
<b>Reviewer:</b> Robin Lewis		<b>Deadline:</b> February 18, 2011		<b>Page 16 of 20</b>
Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
46	19	Bullnose – see attached detail at bottom of comment sheets.		Comments addressed at DAP workshop or during final design phase
47	20	Centerline striping – can we discuss not striping centerline on Murphy Road? Could help with speed reduction. ADT of 4,000 does not warrant CL stripe. There may be issues with curvature?		Comments addressed at DAP workshop or during final design phase
48	21-22	Police pull out requested for patrolling – Eastbound and Westbound		Comments addressed at DAP workshop or during final design phase
49	23	<p>Infiltration swale – alignment of future rab at frontage road from the south? Can the assumed rab loc be dashed/dotted in? We have been discussing pedestrian access to Pinebrook Neighborhood in vicinity of “MR 728+00” coming through the common area – with the swale it appears that the direct ped connection will not be able to get from the common area to the roundabout. Is there a way to bridge the swale, split it into two swales? We should discuss possibilities for the ped connection in this area as part of the subcommittee work.</p> <p>On another topic – similar to earlier comment on guard rail for 3<sup>rd</sup> street overpass – the guard rail here starts behind sidewalk and carries over – it is desirable to keep guard rail at curb line to prevent vaulting vehicles. In this area – without the future frontage road from the north, there may not be much opportunity to strike the curb at greater than 15 degrees so the issues may not be the same as those on the 3<sup>rd</sup> Street overpass. Should be looked at though to ensure consistent design and safety levels.</p> <p>Round sidewalk widening areas with a fillet or other transition to prevent 90 degree sidewalk interfaces.</p>		Comments addressed at DAP workshop or during final design phase

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<b>Department:</b>		<b>Submittal:</b> Design Acceptance Package (30% Design)		
<b>Reviewer:</b> Robin Lewis		<b>Deadline:</b> February 18, 2011		<b>Page 17 of 20</b>
Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
50	24	<p>Does the bike ped path switchbacks eventually tie into the sidewalk on the Parkway? Is there a 5' connection piece missing in the drawing?</p> <p>Similar discussion on sidewalk widening areas – fillet connection to have it smoother sidewalk and not create sharp angle width transition points.</p>		Comments addressed at DAP workshop or during final design phase
51	31	<p>Pinebrook – at Parkway</p> <p>Concerned with:</p> <p>Sight distance without the control – verify ISD for 45 mph exists – also sight distance for 85% speed should be checked as well.</p> <p>Now that there is no signal – do the radii or need for decel/accel lanes need to change?</p> <p>The continued desire of pedestrians to cross and hop across the median barrier. Are there ways to sign/fence/way-find folks out of that behavior? For instance – eliminate the ped ramps aimed at the crossing – aim pedestrians more directly across Pinebrook.</p> <p>Striping/signing could reinforce the RIRO operations by painting in a porkchop on Pinebrook. Are there street name signs proposed since the overhead signing with the signal will be eliminated? No pedestrian crossing signs?</p> <p>Bike lane re-stripe – could it help re-inforce RIRO and no crossing areas?</p> <p>Police request for pull-out in vicinity – both nb and sb.</p>		Comments addressed at DAP workshop or during final design phase
52	35	Does NB on-ramp concrete barrier need an impact attenuator?		Comments addressed at DAP workshop or during final design phase
53	<b>END of COMMENTS–</b> <i>(see attached bull nose detail: it is assumed taper rate depends on speed of roadway (this example was for a 25 mph roadway))</i>			

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**Department:**      **Submittal:** Design Acceptance Package (30% Design)

**Reviewer:** Robin Lewis      **Deadline:** February 18, 2011      **Page 18 of 20**

Item #	Dwg Sht/ Spec Paragraph	Comments	Type	Consultant Response
54	4-5	<p>On all the rabs the bike lane ramps are different than the RAB guide...can we discuss options?</p> <p>On this 3<sup>rd</sup>/ Murphy Rab, the storage between yield line and ped crossing varies, some scale to much less than one car length...which could cause blocking...esp if it occurs on the exit leg...wondering if we could discuss options – I know earlier we'd discussed the possibilities of straight line ped crossings...maybe re-look at that?</p> <p>At this level of plans do we need to show the underground conduit for the multi-lane rab to enable future ADA signalization?</p> <p>Robin, Brian Ray with KAI, and Dave Simmons will work on RAB refinement in the next two weeks.</p> <p>See mark up for RABs attached.</p> <p>Driveways at "3<sup>rd</sup> 192+00" west and "3<sup>rd</sup> 192+25 east" do not align and do not have adequate center lane storage to accommodate lefts in without having a significant portion of the left turning vehicle dwelling in the through travel lane. These driveways are very close to the roundabout, not quite 100'. Can we discuss again the extension of the splitter island/median to create right-in and right-out at these driveways. This option, although not desirable from the property owner point of view - would be preferable from a safety and operations point of view. Let's discuss operations, safety and right of way issues with this. I think it could be very important.</p> <p>There are two lanes southbound exiting onto 3<sup>rd</sup> Street from the roundabout – the inside lane is proposed to drop – this appears to be a bit awkward. Can the outside lane be dropped rather than the inside lane as this would perhaps be the more</p>		Comments addressed at DAP workshop or during final design phase

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expected condition and easier to sign/mark with right lane ends signs? Would either choice influence roundabout operations with desired lane choice? Are two lanes exiting southbound necessary for operations? KAI study?

**Department:**      **Submittal:** Design Acceptance Package (30% Design)

**Reviewer:** Robin Lewis      **Deadline:** February 18, 2011      **Page 19 of 20**

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55	15 & 16	<p>See mark up for RAB attached. The geometry issues to tweak/refine/polish include:</p> <p>Brookwood – near Pinebrook – the northbound traffic is aligned too far east and will run over the bikelane.</p> <p>The ped crossing of Brookwood at Pinebrook</p> <p>Bike ramp configuration</p> <p>Operations – a v/c of 1.13 – anything to easily mitigate through geometry?</p> <p>Shy distances on the splitter island and other curbing for trucks</p> <p>The off-set intersection creates out of direction travel for northbound Brookwood – this is affecting speeds and could affect the yielding rate of Murphy connection – Murphy is tying in at an obtuse angle,</p> <p>Buffered sidewalk – desirable on SW corner – need the area for sight lines anyway – need to remove outcrop or other sight obstructing materials – typ all sight lines.</p>		Comments addressed at DAP workshop or during final design phase
56	25	<p>See roundabout attached figure</p> <p>Items include bike ramp location/tie-in design</p> <p>Results from Kittelson regarding lane reductions</p> <p>Taper out of rab eastbound on Murphy Road – pretty quick with horizontal curvature may be a bit less conventional...</p>		Comments addressed at DAP workshop or during final design phase

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**Page 20 of 20**

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57	27	See roundabout attached figure. Items include: Bike ramp tie-in design  Entering/exiting leg geometry  Truck shy to curbs – with truck turning shown  Sidewalk logical end points – Is there a need/desire to design an alternative for the “we can’t afford this RAB” situation? What logical alignment/sidewalk elements exist if two-way-stop remains?		Comments addressed at DAP workshop or during final design phase

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