APPENDIX A

PUBLIC INVOLVEMENT DOCUMENTATION
This memorandum summarizes the ten stakeholder interviews that were conducted by CH2M HILL in September 2006. The purpose of these interviews was to obtain stakeholder input on the existing and planned uses along Murphy Road, and the need for improvements to the Murphy corridor. Information from the stakeholder interviews will be used to establish the project’s goals and objectives, and will be used to inform the project’s decision framework. The decision framework will in turn be used to evaluate potential project alternatives.

Dave Simmons and Theresa Carr of CH2M HILL conducted face-to-face interviews with eight stakeholders or stakeholder groups in Bend on September 13 and 14, 2006. All interviews were approximately one hour in length. When possible, interviews were held at the interviewee’s place of business or location of choice. Two additional interviews were conducted via telephone the following week. The list of stakeholder interviews is provided in Table 1 below and illustrated in Figure 1.
TABLE 1
List of Stakeholders Interviewed for Murphy Road Corridor Study

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<thead>
<tr>
<th>Interview No.</th>
<th>Person</th>
<th>Affiliation</th>
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<tr>
<td>9</td>
<td>Shane LaBelle</td>
<td>Wood Hill Homes</td>
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<tr>
<td>10</td>
<td>Dennis Pahlisch, Steve Miller</td>
<td>Pahlisch Homes</td>
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The list of stakeholders was provided by the City of Bend Public Works Department. The team was unsuccessful in scheduling one additional interview with the Mayor of Bend. Figure 2 illustrates the location of current and expected future development in the Murphy corridor.

Interview questions were open-ended to the extent possible, and interviewees were encouraged to talk about their (or their organization’s/member’s) use of Murphy Road; their observations of current conditions along Murphy Road; their understanding or knowledge of future area growth expectations; and the expected impact of future growth to Murphy Road. In general, interviews with City of Bend staff focused on conveyance of information (other studies underway, development trends, etc.) and interviews with non-City staff focused on use and need for improvements along Murphy Road.

Findings from the non-City of Bend stakeholder interviews are illustrated in Figure 3 and described over the next several pages. Highlights are listed below:

- **Support for Easterly Extension to 15th Street.** All stakeholders interviewed voiced support for an extension of Murphy to 15th Street. Although the specific rationale varied by stakeholder interest, general support for the extension stemmed from a desire for improved access.

- **Extend Eastern Study Parameter to 27th Street.** Most stakeholders questioned the eastern study parameter of 15th Street and requested that analysis be conducted for an extension of Murphy Road to 27th Street. Many stakeholders felt that extending Murphy Road to 27th Street would alleviate pressure from Reed Market and Knott. One stakeholder, however, thought that the extension of Murphy to 27th would be aligned too close to Knott and not remove traffic from either Knott or Reed Market.

- **Support for Westerly Extension to Brookswood Boulevard.** Many stakeholders also voiced support for the westerly extension of Murphy Road over the Parkway and the connection to Brookswood Boulevard. This support appeared to stem from a desire to improve access to the Parkway and to create another true east-west connection across Bend.

- **Growth in Southeast Bend.** All stakeholders referred to increasing development pressures in southeast Bend, both along Murphy Road and along or near the potential alignment to the east. One action item resulting from the stakeholder interviews for CH2M HILL was to verify that land use assumptions in the Bend travel demand model accurately represent these expected development trends.
• **Deficiencies along Existing Corridor.** Stakeholders did not consistently cite deficiencies along the existing Murphy Road corridor between 3rd Street and Brosterhous Road. Most felt that the existing corridor met the current needs of its users, but would need capacity improvements to meet future demands. Some stakeholders cited safety concerns due to limited site distance at the corner of Murphy Road and Parrell Road and the lack of continuous sidewalks along Murphy Road as existing needs. Others cited a concern for access to 3rd Street with the planned Murphy overcrossing project. Others cited a concern for a potential bottleneck on the western end of Murphy (near Brookswood) if that segment is designed as a two-lane facility.

The remainder of this memo summarizes findings on an interview-by-interview basis.
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Emergency services avoid at-grade RR crossings. Reed Market study calls for grade-separated crossing.

Murphy extension expected to alleviate traffic from Reed Market.

Parrell is sometimes used as a frontage road.

Old Farm NA encourages consideration of freight along Murphy.

Retain access between Murphy and 3rd.

Sight distance concerns.

This section of Murphy is narrow.

City is sensitive to existing constraints along corridor.

Several stakeholders suggested focusing on intersection needs.

Emergency services avoid at-grade RR crossings.

School District interested in retaining access control along Murphy.

When ahead of schedule, trains block at-grade crossings at Wilson and Reed Market.

Concern about impacts of Murphy extension to side streets such as Ferguson.

Pahlisch and Ward support a southerly alignment for Murphy to 15th.

Desire to avoid or minimize impacts to the ASI.

Fire Department encourages future roundabouts to be two-lane, equipped with Opticon, and with a slip lane for emergency vehicles.

All stakeholders interviewed supported an extension of Murphy Road to 15th on the east and Brookwood on the west.

Most stakeholders requested extending analysis to 27th.

* Public Works and Community Development staff did not advocate any project recommendations through the stakeholder interview process.
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Interview #1: Bend Public Works

Wednesday, September 13, 2006
12:00 p.m. 2:00 p.m.
City of Bend Public Works Department
575 NE 15th Street

Attendees:
Ken Fuller, Director of Public Works
Michael Magee, Engineering Division
Mike Miller, Capital Improvements and Master Plans Division
Paul Rheault, Water and Sewer Division
Tom Hickman, Water and Sewer Division

Interview Summary:

Thoughts on Murphy Road Corridor

- Extension of Murphy Corridor to 15th and to Brookswood is expected to alleviate some of the demand on the Reed Market Corridor, though to what extent is uncertain. Sees Reed Market and Murphy playing a critical role in serving east-west demand in Bend.

- Trains run along tracks about 12 times a day. Mixture of cargo, no passenger. There is no expectation at this time that the railroad wishes to expand switch capacity south to Murphy area.

- Bend is open to innovative design concepts, but will need to fully understand the impacts of various alternatives. Areas of specific analysis need to be acuteness and duration of congestion, and ability to address safety needs.

- The Reed Market study calls for a grade-separated crossing of the tracks at Reed Market. If the Murphy Road extension were built first it would help meet demands during construction for this Reed Market crossing.

City Objectives

- Wants to be sensitive to existing constraints, minimize impacts to property owners and develop a solution that is implementable, cost effective, and fundable.

- Wants to address not just current needs along Murphy Road, but be aware of Murphy’s role as an east-west connector within all of southern Bend, and within all of Bend. The
desire is to think about expected growth in Bend over the long-term, and what role Murphy Road will play in serving this growth.

- The City wants an implementation schedule for phasing improvements in over time, and a realistic plan that can be achieved.
- Looking for innovative funding solutions to constructing grade separated crossings of railroad tracks.

**Other Efforts Underway Along Murphy**

- There is an effort identified and budgeted to install a new 12” water line from Country Club Road to Brosterhous Road. The draft timeline for this extension is July 2007, though this can be held if it makes sense to sync improvements with the Murphy Road improvements.

- There is a conceptual plan to extend a 12” water line from Brosterhous Road to 15th Street along the new alignment of Murphy Road but funding is not specifically identified at this time.

- Sewer system along Murphy Road is nearing capacity with pump station near Brosterhous Road pumping approximately 17 hours/day.

- Plans exist for expanding the sewer infrastructure and two options have been explored. Cost of the new facility and the pace of new development will play a role in what method is selected.

- Drivers for the sewer line extension include development proposals along the eastern end of the existing Murphy Road corridor. The sewer line extension may be built incrementally but a solution will be needed within 5 years.

- Pahlisch Homes has a site development proposal submitted to the City for 75 acres immediately east of 15th Street. (See Interview #10 with Pahlisch Homes for more information about this development.)

- Check in with the Planning Department about current and future proposed developments and zoning applications.

**Location-Specific Considerations**

- Focus on what is needed at intersections – Murphy/Parrell, Murphy Brosterhous, etc.

- Consider using a lower design speed to encourage more appropriate travel speeds through school and residential areas.

- Evaluate the potential for Murphy Road and 15th Street intersection as a double lane roundabout.

- The Public Works and Community Development departments are in the process of evaluating extending Murphy Road to 27th Street. This evaluation may become part of this study as it moves forward.
Interview #2: Bend Golf and Country Club

Wednesday, September 13, 2006
2:30 p.m. 3:30 p.m.
Bend Golf and Country Club
61045 Country Club Drive

Attendees:
Mont Green, General Manager

Interview Summary:

Background and Operation of Golf Club

- Golf course area was annexed into the city approximately 8-9 years ago.
- The Country Club hosts large functions, including weddings, rotary club meetings (approximately 100 attendees on Wednesdays, and 70 attendees on Fridays), and monthly chamber of commerce meetings (approximately 150 attendees).
- Country Club also hosts large golf tournaments approximately once a week during the summer season.
- The composition of club members has evolved. The majority of members (approx. 75-80%) have lived in Bend for 10 years or less. A smaller but still significant percentage of members have been living in the City for 20 years or longer.
- Activity at the Club is largely seasonal. During the winter the only activities are associated with the indoor elements of the club, including the health club (indoor pool, tennis, weight room) and the restaurant.
- Overflow parking is along grass north of existing parking lot, and across Country Club Road.
- Primary access is along Country Club Road. There is a secondary access along Fairway.
- Non-member or employee traffic includes trash pickup (three times a week) and delivery trucks to the restaurant (daily during off-peak hours). The loading dock is located along the east side of the building.
Future Plans at Golf Club

- Development plans at the Club include improvements to the health club facilities, including an expansion from two to four indoor tennis courts, and a two-story 3,000 s.f. building for weights and aerobic facilities.

- The Country Club wishes to lease a ½ - 1-acre area across Country Club Road from the School District for overflow parking.

Understanding of Needs (Along Murphy, Elsewhere)

- Murphy Road operates fine right now.

- Intersection of Country Club and Murphy is only a problem during peak events when everyone is leaving at one time.

- Supports extension of Murphy to both the east and the west, and sees that as helping their members access the Golf Club.

- Non-Murphy needs include:
  - Additional/improved access at Wilson and the Parkway
  - Improved access at Reed Market and 3rd Street
  - Improvements along China Hat Road, Baker Road, and Knott Road to address limited site distance and reduce speeds

Distribution of Information to Golf Club Members

- The Country Club is willing to poll its members and alert them of upcoming public meetings for the corridor study.
Interview #3: Southeast Neighborhood Association

Wednesday, September 13, 2006
4:00 p.m. 5:00 p.m.
Simply Organic Coffee
5 SW Bond Street

Attendees:
Harold Anderson, Neighborhood Association Chairman

Interview Summary:

Background of Southeast Neighborhood Association
- The Southeast Neighborhood Association was formed last month (August, 2006).
- Currently there are 50 members of the Neighborhood Association. They are currently conducting a membership drive. The Neighborhood Association is scheduling its general meeting in October.
- The association received funding of $2,500 to outreach with the neighborhood.
- The Chairs of all neighborhood associations in Bend meet once a month (11am-noon) to discuss issues of interest and share information. Following that meeting the chairs will meet with a city staff person to talk about a particular project or effort.

Expected Growth in Southeast Bend
- There are 800 acres in Southeast Bend, including 1,800 taxlots available for development (out of a total of 2,450 taxlots).
- Murphy and Brosterhous – residential development expected in this vicinity (cited 137 homes on 151 acres).
- Southeast Bend is most likely to see and receive the focus of future development.
- Bend is seeing an increase of 1.5 families/day.

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1 As per an early morning report on Bend Radio 1110.
• Residential developments in this neighborhood association include Stone Gate (79 homes), Wood Hill, Mountain High, Timber Ridge, Golf Crest, and Hunters Green.

• The Golf Course is putting a 140’ cell tower in the center of the golf course. It looks like a Ponderosa Pine tree. Because it has been built to blend in with the area, the golf course and the neighborhood association support it.

Thoughts and Concerns about Murphy Corridor and Southern Bend

• The Southeast Neighborhood Association supports a five-lane cross section of Murphy extending from Brookswood Boulevard to 27th Street, to serve existing and expected future development².

• The association wants to see ample road width to avoid choke points. The roundabouts need to be constructed so they are big enough to accommodate traffic and emergency vehicles. According to Harold, the Old Farm Neighborhood Association has voiced concerns regarding access to and from Murphy Road, involving choke points and road width, including the alignment of the proposed extension.

• The intersection of Murphy and Parrell is of concern. The intersection is blocked by trees and is on a curve, so it is very difficult for cars on Parrell to see if it is clear to make a turn or go across Murphy. A fence is being constructed by a homeowner in the area that could (in Harold’s opinion) worsen sight distance issues.

• Concerned that with overcrossing project (to west of Murphy Corridor Study) access from Murphy to 3rd Street will be eliminated. Residents of the Southeast Neighborhood Association need access to the businesses along 3rd Street.

• Reed Market is congested and Murphy Road is expected to alleviate some of the congestion along Reed Market.

• The train is an issue, because it switches just north of Murphy Road. If it is early or late, it stops, blocking the at-grade crossings at Wilson or Reed Market. This has been observed to occur for up to 20 minutes at a time. Cars have few alternatives to waiting for the tracks to clear.

• The Southeast Neighborhood Association is concerned about potential for increased residential densities.

² It should be noted that the Southeast Neighborhood Association, being a new organization, may not represent all residents located within its boundaries. Further outreach is recommended to homes along Murphy Road.
Interview #4: City of Bend Community Development Department

Wednesday, September 13, 2006
5:30 p.m. 6:30 p.m.
Bend City Hall
710 NW Wall Street

Attendees:
Mel Oberst, Community Development Director

Interview Summary:

Urban Growth Boundary Expansion Efforts

- The City is currently assessing the need to expand its Urban Growth Boundary (UGB).
- The process for recommending an expansion to the UGB is dependent on a variety of factors, including water and sewer capacity, transportation, topography, and lot patterns. There is a ranking system that will rank all areas being considered. This will facilitate the immediate expansion recommendations, and will assist future UGB expansions as well.
- A master plan is required of all areas wishing to be annexed into the UGB. The specific content of master plans will differ depending on the area.
- The timeline on recommending the area for UGB expansion is within the next few months. A public meeting is expected in January.
- The Oregon Division of State Lands owns a large tract currently outside the UGB. This area is immediately east of the UGB boundary, east of 27th, north of Murphy Road. This area has completed a master planning effort.
- There is interest in expanding the UGB to the southeast, though a master plan has not been conducted at this time.
- The area outside the UGB immediately east of Murphy does not have a master plan for water, and sewer is considered difficult as well. Avion water serves this area. The City is considering a $40 Million sewer trunk line down 27th Street.
Bend Economy

- The Bend economy is doing well. The unemployment rate is the lowest in the state. There is little manufacturing, many small businesses, high tech/electronics, alternative fuels, and investment firms. The medical segment is thriving, and Bend is becoming known for its medical professionalism and specialty. Bend serves as the primary medical provider for all of eastern Oregon.

- Bend has the highest number of home business occupations in the state.

- The airport is thriving.

- Bend has an ordinance dictating a fee on all new home construction go into a fund for building affordable housing. (Note: this is not low income housing, but built for 80% of the median annual income).

Growth Assumptions

- The City (Nick Arnis) has created a map that shows approved and pending development applications in southeast Bend, which will be useful for assessing accuracy of the model’s land use assumptions.

- Development in Bend has been consistently underestimated, which can put many parties in reactive mode. There is a desire to be more proactive with improvements, to plan for growth in a more comprehensive manner.

Thoughts on Murphy Corridor

- Murphy corridor should be expected to serve as a significant east-west connector for southern Bend.

- Anticipates transit running along this corridor in the 20-year time period.

- The City is considering various potential funding sources for the westerly improvements of Murphy Road, including an urban renewal district, and a recovery district. A recovery district is when a property owner puts in the initial improvements and is “reimbursed” by subsequent developments.

Staff Resources

- Planning staff to serve as resources include Damian Syrnyk, Wendy Robinson, and Colin Stevens.
Interview #5: Bend / LaPine School District

Thursday, September 14, 2006
8:00 a.m. 9:00 a.m.
Bend / LaPine School District Administrative Offices
520 NW Wall Street

Attendees:
Paul Eggleston, Director of Facilities

Interview Summary:

Information on School District and Jewell Elementary School

- There are 25 schools in total in the Bend / LaPine School District. A total of 22 of these schools are located in Bend.

- There is an existing elementary school (Jewell) north of Murphy Road. Jewell Elementary School currently serves between 550 and 600 children and is one of 14 elementary schools in Bend/LaPine.

- There are six busses that serve the school. Busses enter and exit the school via Brosterhous Road, dropping off children in the AM and picking them up in the PM. Some busses also serve the school at lunchtime.

- Food deliveries are made once or twice a day (usually mid-morning). Garbage pickup is daily as well. Delivery and garbage trucks access the school via Brosterhous.

- Parent pick up/drop off is off of Murphy.

- Public parking is off of Murphy, to the west of the elementary school.

- Teachers also access the elementary school from Murphy.

- There are recreational facilities (two ballfields north of the school) used by children and adults after school hours. The school district coordinates the use of these facilities. There is a small little league field, and a larger field which is used for little league but also for adult recreational softball teams. Rae Road provides access to the ballfields from the west.

- Ray Road used to connect to Brosterhous Road but was disconnected by the City.
The school district is working on a parking agreement with the Country Club for them to establish overflow parking on part of their parcel off Country Club Road.

**Plans for Future Schools in Vicinity of Murphy Road**
- The school district owns a parcel to the west of the existing elementary school. This is planned for a future middle school, to be built in the 2010-2015 timeframe.
- The future middle school would serve approximately 800 children.
- The parking area is expected to be shared between the elementary and the middle school.
- The school district owns 55 acres off of Country Club Road which is planned for a future High School. This high school is forecast for buildout in the 2010-2015 timeframe.
- The school district does not expect to continue its agreement with the Country Club for overflow parking after the Country Club Road site is developed for a future high school.

**November’s Bond Measure**
- Bend is experiencing an increase of about 500 students/year. The Bond Measure would be $119 Million over four years to build 175 projects including three new elementary schools, and improvements to 25 schools.

**Needs along Murphy Road**
- No serious traffic concerns have been observed to date along Murphy Corridor.
- No sidewalks exist on the west end of Murphy Road, which is an issue because walkers access the school from all directions.
- Brosterhous to 15th Street opens up a different set of bus routes and may shift the school district boundaries.
- Connection to 27th Street creates a southern bypass and an alternative to Reed Market and may further serve to shift school district boundaries.
- Support for an extension to 15th Street.
- Support for an extension to 27th Street.
- Interested in maintaining controlled accesses off of Murphy.

**Coordination and Information Sharing**
- Paul has data on future school-related growth in the area that may be helpful to compare against land use assumptions.
Interview #6: Bend Fire Department

Thursday, September 14, 2006
9:00 a.m. 10:00 a.m.
Bend Fire Department Administrative Offices
1212 SW Simpson Avenue

Attendees:
Doug Koellermeier, Deputy Chief of Operations

Interview Summary:

Background Information about Fire Department
• Bend’s Fire Department responds to calls for service in a geographical area consisting of approx. 1500 sq. miles. This also includes ambulance service vehicles.

• Bend has five fire stations. Four have a minimum three person crew and one has a minimum of two personnel. When staffing allows additional staffing is currently added to the North (305) and East (304) fire stations. Apparatus used by the fire department includes a brush fire truck, a water tender, an ambulance, and a fire truck in each station. One station has a rescue vehicle and one has a ladder truck. Crews will respond with the appropriate apparatus based on the need. Other apparatus remain in the station and unmanned until the crew returns. Any additional apparatus and personnel needs for the same or additional incidents are received from next nearest station.

• Station 303 is located at the corner of Murphy Road and Country Club Road. It has a three-person crew.

• The Bend Fire Department consists mainly of career staff with just a few volunteers.

• The Fire Department has property in the vicinity of 15th and Bear Creek to be built as funding allows. Time frames are yet to be determined.

Overall Concerns of Fire Department
• The Bend Fire Department’s major concerns are with roundabouts and railroad tracks
  – Railroad Crossings – Emergency services avoids at-grade crossings of the railroad tracks for any type of emergency response situation. This includes the at-grade crossings of Reed Market and Country Club Road. Station 303 will typically follow
Murphy Road east to Brosterhous Road south because there is a railroad undercrossing at Brosterhous. Train traffic is increasing every year and the at-grade crossing issue is not expected to improve in the near future. The Fire Department supports addressing signaling devices to alert drivers at nearest major cross streets of train traffic on the tracks. This will allow the Fire Department to potentially use at grade crossings thus decreasing response times for Emergency vehicles.

- **Roundabouts** – Current roundabouts are known to delay an emergency vehicle by 9-10 seconds. This could be due in part to the geometry of smaller roundabouts, but is also just due to traffic flow within a roundabout. Vehicles are uncomfortable stopping or pulling over in a roundabout, or there is no place to pull over. Larger vehicles such as fire trucks, snow plows, tractor trailers, and buses have difficulty maneuvering through the roundabout. In emergency response every second counts and going through current (smaller) roundabouts costs time.

Bigger, full two-lane roundabouts would work better. Slip lanes allow for immediate right hand turn needs however do not provide for through traffic needs of emergency apparatus.

- There are flood and snow runoff issues associated with major thunderstorm and snowstorms. Franklin/3rd and Greenwood/3rd flood regularly. When flooding issues occur combined with train traffic, snow burms, etc., emergency response routes are considerably reduced.

- Skinny streets are an issue for emergency services.

**Thoughts and Concerns along Murphy Road**

- The western end of the existing corridor between 3rd and Benham Road is narrow, with blind corners.

- The intersection of 3rd Street and Murphy Road can be congested.

- East-west connectivity is needed. The Parkway provides the north-south connectivity.

- Emergency services supports an extension of Murphy Road to 27th Street. This extension would allow them to more quickly access a growing area of the region.

- Emergency Services wants:
  - Murphy to cross the railroad tracks as a grade-separated crossing
  - Tie to 27th Street
  - Tie to Brookswood Boulevard
  - Would prefer no roundabouts on arterial roads or highways.
  - If roundabouts are constructed, make them larger full 2-lane, equipped with Opticom.
Interview #7: Southwest Neighborhood Association

Thursday, September 14, 2006
10:30 a.m. 11:30 a.m.
Simply Organic Coffee
5 SW Bond Street

Attendees:
Mike Lovely, Neighborhood Association Chairman

Interview Summary:

Background Information about Southwest Neighborhood Association

- The boundaries of the Southwest Neighborhood Association are Powers on the north to the City boundary on the south, 3rd Street to the east and the Deschutes River to the west.
- The Neighborhood Association had approximately 3,037 lots as of last April. This area has seen the largest growth in taxlots in the City.
- The Southwest Neighborhood Association is the first association recognized by the City (5 years ago)
- The Neighborhood Association has approximately 500 members, though not all are active.
- The Neighborhood Association is currently focused on code enforcement and traffic and safety.

Participation in Murphy Crossing Study

- The Neighborhood Association has been involved in the Murphy Crossing study and supports the extension to Brookswood. The Pinebrook Homeowners Association has recently voiced concerns about sewer.
Concerns and Needs for Murphy Corridor

- Parrell to 3rd – what happens to Murphy? Wants access to 3rd from a right turn from Murphy. Interested in knowing what happens to that existing leg.
- Concerned that the Albertsons is not engaged
- Need left turn lanes at intersections
- Doesn’t like medians – City ends up having to maintain the medians along the Parkway. Appreciates Xeriscaping, and design so that water runoff in the median drains into the center.
- Development is happening quickly on the east end of Murphy. Warned that timing is critical so an alignment is not locked in for us.
- Southerly alignment of Murphy avoids impacts to the ASI and existing development.
- Murphy needs to be extended to 27th Street. Recommends that we look at this now.
- Pedestrian safety is a problem – there is no standardized pedestrian policy in Bend.
- Asks that the team look at a four lane option to the Parkway with left turn pockets at intersections.

Distribution of Information to Neighborhood Association Members

- Willing to distribute project information and announcements of upcoming meetings to neighborhood association members. We can also coordinate with the neighborhood associations on a blurb on Channel 11, an insert in the city newspaper, and at the neighborhood association sponsorship of local football games.
Interview #8: Old Farm Neighborhood Association

Thursday, September 14, 2006
11:30 a.m. 12:30 p.m.
Simply Organic Coffee
5 SW Bond Street

Attendees:
Nan Loveland, Neighborhood Association Chairman
Daryl Loveland, Neighborhood Association Land Use Committee Chair
Mark Schindel, Neighborhood Association Transportation Committee Chair

Interview Summary:

Background Information about Old Farm Neighborhood Association
• The Old Farm Neighborhood Association began in June 2003 to address land use issues associated with the Stone Haven and Silver Crest housing developments.
• The Neighborhood Association has approximately 5,000 members representing 3,000 taxlots. There are 30 commercial members.

Growth in Southeast Bend and Murphy Corridor
• Jewell Elementary School is overflowing – there are 2-3 modular buildings outside the school now.
• There are 1,700 housing units built, in the process of being built, or pending over the past three years.
• Parrell is used as a frontage road to the Parkway. Locals use it as a parallel route.
• The number of trains per day in Bend is increasing.
• An effort is underway to expand the UGB, possibly near this potential extension corridor.

Thoughts and Concerns about Murphy Corridor Study
• Improvements to the Murphy corridor will take pressure off of Reed Market.
• Consider freight needs – an extension to 15th Street is a way to access freight which has difficulty moving in the east/west direction through town.

• Concern that a two-lane section west of the Parkway is going to be too narrow.

• The Neighborhood Association has concerns about impacts to side streets, such as Parrell, Brosterhous, Ferguson, and Knott. What are the impacts to side streets when Murphy is improved? What happens when Murphy is extended to 15th, and traffic needs to go to 27th? They travel to the 15th and Ferguson intersection, and travel Ferguson to 27th Street. So what are the impacts of the Murphy extension on Ferguson? Wants to make sure that this is being considered.

• The Neighborhood Association supports an extension of Murphy Road to 27th Street and strongly encourages the technical team to analyze out to 27th Street.

• It is important to consider over to 27th Street, considering the DSL property and the UGB expansion efforts.

• What will the impacts be to the ASI of the extension of Murphy Road? Will we be able to avoid impacting it?

• What happens to access to 3rd Street from Murphy with the overcrossing project?

• Maintenance concerns about the medians. Design them so the storm drainage is in the middle and be careful what you plant. Cobblestones are okay to some, and Xeriscaping, including Rabbit Brush and Sage Brush.

**Distribution of Information to Neighborhood Association Members**

• Willing to distribute project information and announcements of upcoming meetings to neighborhood association members.

• The Neighborhood Association sent out a survey to their members and have to date received 40-50 responses. The due date for responses is September 28.
Interview #9: Wood Hill Homes

Friday, September 15, 2006
2:00 p.m. 3:00 p.m.
By Telephone

Attendees:
Shane LaBelle

Interview Summary:

- Wood Hill Homes is developing a tract of land east of Brosterhous Road, west of the railroad tracks and south of the proposed extension of Murphy Road between Brosterhous Road and 15th Street for single family homes. The site formerly served as a manufactured home park.

- Wood Hill Homes has a Bend office, but Shane is based out of their Portland location. He is familiar with the proposal to extend Murphy east of Brosterhous through discussions with the City regarding the alignment and right-of-way needs for the road along the north boundary of their development. He indicated that Wood Hill Homes did not support shift of the alignment south near the tracks, due to impacts it would cause on their development.

- Shane did not have any feedback on the Murphy Road Corridor Study and did not identify any issues or concerns with the existing transportation system on or around Murphy Road.

- Wood Hill Homes is working for Matrix Development in the development of this site. Shane asked that future correspondence regarding this project be directed to David Oringdulph at Matrix Development.
Interview #10: Pahlisch Homes

Tuesday, September 19, 2006
3:00 p.m. 4:00 p.m.
By Telephone

Attendees:
Dennis Pahlisch, Owner
Steve Miller, Planner

Interview Summary:

- Pahlisch Homes owns 75 acres on the east side of 15th Street. They have submitted an application for a PUD of 375 homes on this 75 acres. The development, called Shadow Glen, would be built in four phases over the next three years. The estimated completion date is the end of 2009. The preliminary site layout is attached.

- The PUD includes a potential roundabout at the connection of Murphy and 15th Street, at the intersection of H Street of the Shadow Glen development.

- Pahlisch Homes supports an extension of Murphy Road to the north, around the ASI and connecting with Shadow Glen at H Street. They do not support a southern alignment of Murphy Road connecting with A Street at the south end of the Shadow Glen development. It is in Dennis’ opinion that Jan Ward would also not support a southern alignment of Murphy Road.

- The southerly alignment of Murphy is believed by Pahlisch Homes to have greater impacts on the ASI, and cuts up the heart of a developable tract owned by Mr. Ward. This property could be developed for residential in the next couple of years.

- Pahlisch Homes doesn’t believe a further extension of Murphy Road to 27th Street would be of much help, especially with the southerly alignment because they believe Murphy would be too close to Knott and wouldn’t attract any trips.

- They support an extension to 15th because they see a benefit to their residents, who will have reduced travel time to reach the Parkway.

- Pahlisch Homes has often served as a liaison between Jan Ward and the City of Bend, and they are happy to serve in that role. Their City liaison has been Ken Fuller of the PublicWorks Department.
## Murphy Road Corridor Study

Technical Advisory Committee Meeting # 1  
Tuesday, October 3, 2006  
1:30 – 2:30 p.m.  
City Council Chambers  
710 NW Wall Street, Bend

### Agenda

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<th>No.</th>
<th>Item</th>
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<tr>
<td>1.</td>
<td>Welcome, Review of Agenda</td>
<td></td>
<td>1:30 p.m.</td>
</tr>
<tr>
<td>2.</td>
<td>Project Overview and Role of TAC</td>
<td></td>
<td>1:40 p.m.</td>
</tr>
<tr>
<td>3.</td>
<td>Stakeholder Interviews</td>
<td></td>
<td>1:50 p.m.</td>
</tr>
<tr>
<td>4.</td>
<td>Discussion of Project Need and Objectives</td>
<td></td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>5.</td>
<td>Update on Technical Products</td>
<td></td>
<td>2:20 p.m.</td>
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<tr>
<td></td>
<td>• Project Website</td>
<td></td>
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<tr>
<td></td>
<td>• Traffic Methodology and Assumptions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Schedule Next Meetings / Adjourn</td>
<td></td>
<td>2:30 p.m.</td>
</tr>
</tbody>
</table>
# Meeting Summary

## Attendees

<table>
<thead>
<tr>
<th>Committee</th>
<th>Consultant Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nick Arnis, Bend Public Works, Transportation</td>
<td>Dan Graber, Bend Public Works Engineering</td>
</tr>
<tr>
<td>Judy Barnes, Central Electric Cooperative</td>
<td>Tom Hickman, Bend Public Works, Water and Sewer</td>
</tr>
<tr>
<td>Sandi Baxter, Bend Police Department</td>
<td>Deborah Hogan, Bend Public Works, Engineering</td>
</tr>
<tr>
<td>Rod Carlile, Cascade Natural Gas</td>
<td>Dave Knitowski, Bend Community Development</td>
</tr>
<tr>
<td>Tyler Deke, Bend Metropolitan Planning Organization</td>
<td>Michael Magee, Bend Public Works, Engineering</td>
</tr>
<tr>
<td>Paul Eggleston, Bend LaPine School District</td>
<td>Mike Miller, Bend Public Works, Capital Improvements and Master Plans</td>
</tr>
<tr>
<td>Ken Fuller, Bend Public Works</td>
<td>Wendy Robinson, Bend Community Development</td>
</tr>
<tr>
<td>Ken Gould, Bend Public Works Engineering</td>
<td>Jason Wick, Avion</td>
</tr>
</tbody>
</table>

Handouts included the meeting agenda and draft Technical Memorandum 2.1: Summary of Stakeholder Interviews. This meeting summary covers questions and discussion related to each of the TAC meeting agenda items. Please refer to the meeting handouts for more detail on agenda topics.

1. **Welcome, Review of Agenda**
   Ken Gould welcomed the group and discussed the importance of TAC involvement and review of key project deliverables. He acknowledged that all TAC members may not be able to attend all meetings.

2. **Project Overview and Role of TAC**
   Dave Simmons gave a brief overview of the Murphy Road Corridor Study. The objective of this project is to identify needed improvements to Murphy Road between 3rd Street and Brosterhous Road, and evaluate an extension of Murphy Road east to 15th Street.
said that the extension of Murphy Road to 15th Street, including a grade-separated crossing of the railroad tracks, was cited as the highest public works priority in the City.

The project timeline runs from August, 2006 through May, 2007.

3. Stakeholder Interviews

Theresa Carr provided an overview of the stakeholder interviews. Dave Simmons and Theresa Carr of CH2M HILL met with ten stakeholder groups on September 13 and 14 in Bend. The purpose of these interviews was to obtain stakeholder input on the existing and planned uses along Murphy Road, and the need for improvements to the Murphy corridor. Information from the stakeholder interviews will be used to establish the project’s goals and objectives, and will be used to inform the project’s decision framework. The decision framework will in turn be used to evaluate potential project alternatives.

The main findings from the stakeholder interviews were:

- All stakeholders interviewed voiced support for an extension of Murphy to 15th Street.
- Stakeholders also voiced support for the westerly extension of Murphy Road over the Parkway and the connection to Brookswood Boulevard.
- Many stakeholders requested that analysis consider extending Murphy Road to 27th Street. The City agreed with this request and authorized an analysis of traffic pattern variations associated with an extension of Murphy Road to 27th Street.
- All stakeholders referred to increasing development pressures in southeast Bend, both along Murphy Road and along or near the potential alignment to the east.
- Stakeholders did not consistently cite deficiencies along the existing Murphy Road corridor between 3rd Street and Brosterhous Road. Most felt that the existing corridor met the current needs of its users, but would need capacity improvements to meet future demands.

Please refer to Technical Memorandum 2.1 Summary of Stakeholder Interviews for more information.

4. Discussion of Project Need and Objectives

Theresa facilitated a group discussion on project need and objectives. This began with the needs and objectives identified through the 10 stakeholder interviews:

<table>
<thead>
<tr>
<th>Stakeholder-Identified Project Needs and Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Need</strong></td>
</tr>
<tr>
<td>Improve Connectivity</td>
</tr>
<tr>
<td>Address Future Growth</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Improve Safety</td>
</tr>
</tbody>
</table>
### Stakeholder-Identified Project Needs and Objectives

<table>
<thead>
<tr>
<th>Need</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade-separated crossing of railroad tracks and extension to 15th to reduce response times to emergencies east of Brosterhous</td>
<td>o Sight distance issues at Murphy and Parrell</td>
</tr>
<tr>
<td></td>
<td>o Inconsistent sidewalks on west end of Murphy</td>
</tr>
<tr>
<td></td>
<td>o Safe routes to school for students at Jewell Elementary School.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Retain but Streamline Access</th>
<th>Retain connection between Murphy and 3rd to continue access to businesses.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Provide access management along Murphy Road in conjunction with new development</td>
</tr>
</tbody>
</table>

The TAC added the following needs and objectives to this list:

- **Take a Balanced Approach** – consider the needs of all stakeholders including businesses, residents, the school, emergency services, and local and regional travelers.

- **Analyze the Network** – look at SE Bend as a network, and don’t focus on just the Murphy corridor. Recommend that we look at how improvements to Murphy affect the overall network, including Reed Market.

- **Consider Roadway Classification** – extending Murphy Road to Brookswood and to 15th is likely to change the character of its use. The team should consider whether Murphy Road needs to be reclassified as a Minor Arterial, and what that would mean (80’ vs. 100’ right of way).

- **Coordinate with Utilities** – this includes water, sewer, natural gas, and phone. Central Electric operates east of 15th though extensions would be expected to serve future development. Pacific Power operates west of 15th Street. Upgraded gas line on 15th, would want to look at extending down Murphy west of 15th Street.

- **Lack of Shoulders** – Bend Police cited the need for adequate shoulders for vehicles to pull over and allow emergency vehicles to pass, for disabled vehicles, and for police to use in traffic violation situations. Innovative design features should be balanced with safety needs shown with design features.

  Bend Police also cited concerns with at-grade railroad crossings in town.

- **Engage the Public** – regular communication with the neighborhoods is important, and the Neighborhood Associations provide a good avenue for this communication. The project should consider producing a project newsletter.

- **Improve Accessibility** – adhere to standards laid out in the Americans with Disabilities Act (ADA) for sidewalk widths and grades and curb ramps.
• *Retain Good School Access* – the Murphy corridor is home to one school and will be home to two future schools within the 20 year planning horizon. Access to schools for pedestrians and bicyclists will be very important.

5. **Update on Technical Products**

Dave gave an update on technical products, including:

• *Website*: the technical team has purchased the domain name [www.murphycorridor.com](http://www.murphycorridor.com), and has produced a draft website with tabs on project overview, team, products, meetings, schedule, and upcoming meetings. The website is expected to go live within the next two weeks and when this occurs a message will be sent to the TAC.

• *Traffic Methodology and Assumptions*: The technical team has developed a memo documenting the proposed project traffic methodology and list of assumptions. This has been distributed to the City for review. Nick Arnis also requested a copy of this memo.

6. **Schedule Next Meetings / Adjourn**

The group scheduled future TAC meetings for the first Tuesday of the month (not all months were scheduled). Future meetings are listed below. Please NOTE that the next TAC meeting will be a workshop-style format, with a subgroup of TAC members. All TAC members are invited to participate, though it is not expected.

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Purpose</th>
</tr>
</thead>
</table>
| 2*  | November 7 | Discuss evaluation framework  
 |     |             | Present existing conditions                                               |
| 3   | December 5 | Adopt evaluation framework                                              |
|     |            | Summarize Existing and Future conditions                               |
|     |            | Pre-public meeting #1                                                   |
|     |            | Brainstorm alternatives                                                 |
| 4   | January 9  | Evaluate alternatives                                                   |
|     |            | Pre-public meeting #2                                                   |
| 5   | March 6    | Review/discuss preferred alternative                                    |
|     |            | Approach to corridor improvement plan                                  |
| 6   | May 1      | Review draft corridor improvement plan                                  |
|     |            | Pre-public meeting #3                                                   |

Not all TAC members are expected to participate in TAC Meeting #2.

The meeting was adjourned at approximately 2:45 p.m. The actions listed below will be completed by the 2nd TAC meeting.
### Action Items

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Responsible</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Develop draft evaluation framework based on stakeholder and TAC discussion of objectives and project needs.</td>
<td>CH2M HILL</td>
<td>October</td>
</tr>
<tr>
<td>2.</td>
<td>Send message to TAC when website is live.</td>
<td>CH2M HILL</td>
<td>Mid-October</td>
</tr>
<tr>
<td>3.</td>
<td>Review traffic methodology memo</td>
<td>Nick Arnis, Dave Knitowski, Tyler Deke</td>
<td>Early-October</td>
</tr>
<tr>
<td>4.</td>
<td>Make note of all remaining TAC meetings</td>
<td>All</td>
<td>Immediately</td>
</tr>
</tbody>
</table>
Murphy Road Corridor Study

Technical Advisory Committee Meeting # 2
Tuesday, November 7, 2006
1:30 – 2:30 p.m.
City Council Chambers
710 NW Wall Street, Bend

Agenda
NOTE: This will be a subgroup meeting for TAC members interested in discussing the project’s evaluation framework and existing conditions.

The full TAC will be briefed on the 11/7 discussion through meeting notes and at the 12/5 TAC meeting.

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Presenter</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Welcome, Review of Agenda</td>
<td>Ken</td>
<td>1:30 p.m.</td>
</tr>
<tr>
<td>2.</td>
<td>Project Status Update</td>
<td>Dave</td>
<td>1:35 p.m.</td>
</tr>
<tr>
<td>3.</td>
<td>Existing Conditions</td>
<td>Dave/Theresa</td>
<td>1:45 p.m.</td>
</tr>
<tr>
<td>4.</td>
<td>Evaluation Framework</td>
<td>Theresa</td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>5.</td>
<td>Next Steps</td>
<td>Ken</td>
<td>2:30 p.m.</td>
</tr>
</tbody>
</table>

Handouts
1. Agenda
2. Draft Tech Memo 4.1 Existing Conditions
Handouts included the meeting agenda and three draft Technical Memoranda – Tech Memo 3.1 Plan and Policy Review; Tech Memo 4.1 Existing Conditions and Deficiencies; and Tech Memo 7.1 Evaluation Framework. This meeting summary covers questions and discussion related to each of the TAC meeting agenda items. Please refer to the meeting handouts for more detail on agenda topics.

1. Welcome, Review of Agenda
Ken Gould welcomed the group to the 2nd TAC meeting and thanked everyone for their participation in the Murphy Corridor project.

2. Project Status Update
Dave Simmons gave a brief status of work products to date:

- Tech Memo 2.1 Stakeholder Interviews Completed
- Project website is live (www.murphycorridor.com)
- Tech Memo 3.1 Plan and Policy Review drafted
- Tech Memo 3.2 Traffic Analysis Methodology drafted
- Tech Memo 4.1 Existing Conditions and Deficiencies drafted
- Tech Memo 7.1 Evaluation Framework drafted
The team is now focused on receiving outputs from the traffic model for future no build and build conditions scenarios to complete Task 5 (Future Conditions and Deficiencies). It is expected that the team will receive this information from ODOT in early December. This delays the project schedule by at least one month.

3. Existing Conditions

Theresa Carr provided an overview of existing conditions and deficiencies. Highlights from this analysis are listed below: Please refer to Technical Memorandum 3.1 Existing Conditions and Deficiencies for more information.

- **Land Use Assumptions** – The project analysis assumes growth consistent with regional projections, but will conduct a sensitivity analysis for the preferred alternative to ensure that it will be effective under an alternate, expedited-growth scenario.

- **Areas of Special Interest** – There are two Areas of Special Interest (ASIs) located in the study area. One ASI is located south of the existing Murphy Road between Country Club Drive and Brosterhous Road. The second ASI is located east of the existing terminus of Murphy Road at Brosterhous Road and immediately east of the railroad tracks. According to Section 10-10.26C-D of the Bend Code, public streets can be placed within an ASI if it is shown that no other practicable method exists to avoid the ASI.

- **Social Characteristics** – There are a higher percent of the study area aged 65 or higher than the City, County, and State average.

- **Corridor Crash Rate** – The crash rate for the existing Murphy Corridor was 2.25 per million vehicle miles (MVM). The statewide average crash rate for urban collectors for the period 1999-2003 was 3.84 per MVM.

- **Intersection-Level Crash Rate** – The highest crash rate was located at Parrell Road, with a crash rate of 0.53 per million entering vehicles (MEM). Crash rates below 1.0 do not indicate a safety concern.

- **Pedestrian Facilities** – Sidewalks do not exist on the western end of Murphy Road and are intermittent between Mel Court and Brosterhous Road. Sidewalks should be continuous and at least 5 feet wide on both sides of the roadway to meet city standards. Future sidewalks will need to meet requirements from the Americans with Disabilities Act (ADA), including wheelchair ramps at intersection corners.

- **Horizontal Alignment** – Near Parrell Road and Mel Court, horizontal curve radii are shorter than design standard. This reduced radius may impact a drivers’ ability to safely navigate the curve at the posted speed.

- **Sight Distance** – Near Parrell Road and Mel Court, drivers on Murphy Road have restricted horizontal sight distance due to objects, such as trees, located close to the roadway on the inside of the curve. Objects that can obstruct a drivers line of sight through a corner need to be set back a specific distance from the centerline of the inside lane to provide the necessary stopping sight distance.
• **Median Width** – The current alignment of Murphy Road is a curb-to-curb width of 36 feet. This allows for two 12’ travel lanes and two 6’ bike lanes. As a Major Collector, the curb-to-curb width should be 52’ to also allow for a 16’ continuous center turn lane.

• **Intersection Operations** – Three study intersections are currently above acceptable levels of traffic mobility. None of these intersections are along Murphy Road.
  - **Pinebrook Boulevard/SE 3rd Street** – The eastbound approach of Pinebrook Boulevard at SE 3rd Street currently is operating at LOS F
  - **Pinebrook Boulevard/Brookswood Boulevard** – The westbound approach of Pinebrook Boulevard at Brookswood Boulevard is operating at LOS F
  - **China Hat Road/Ponderosa/US 97** – The westbound approach of China Hat Road/Ponderosa at US 97 operates at LOS F

• **Queuing Analysis** – The intersections of US97/China Hat-Ponderosa, 3rd/Pinebrook, 3rd/Murphy, and Brookwood/Pinebrook all have at least one lane group that has a 95th percentile queue that exceeds 200 feet. Potential areas of concern for these intersections are safety issues associated with the long queue or spillback of the queue to the previous intersection.

Comments from the TAC included:

• Include some mention in the memo that Murphy Road’s character is very likely to change over time.

• Is Murphy Road a freight route? (No, it is not)

• Include some mention of emergency services routes along Murphy

• Add language about any funded or planned utility projects related to sewer/infrastructure

Ken Gould requested comments on the Existing Conditions memo to be submitted by COB next Thursday, 11/16.

4. Evaluation Framework

Theresa presented the draft evaluation framework. The framework will be used by the technical team and the TAC to evaluate the performance of each alternative against a broad range of important project characteristics, representing a full range of city and stakeholder values. The evaluation criteria tie back to the findings from the September 13-14, 2006 stakeholder interviews and the October 2, 2006 TAC meeting. There are seven proposed criteria:

• Congestion/Mobility
• Connectivity
• Cost
• Environment – Built (Residential/Business Impacts)
• Environment – Natural
• Multimodal Solutions
• Safety
The TAC made the following changes and suggestions to the evaluation framework:

- **Ratings** – The ratings value the “not applicable” rating the same as the most negative rating (“0”). Suggest making “not applicable” a value of “0” and the negative rating a value of “-2.” Specify that the value of “0” rating indicates not applicable or no effect.

- **Congestion Mobility** – For congestion/mobility criterion, use either V/C or LOS (not both). There was some discussion among group members about dropping the delay measure, though after the discussion the group recommended keeping delay.

- **Connectivity** – There was discussion of dropping the connectivity criterion because it is unlikely to be different for each alternative. However, the group decided to keep the criterion to look at trip travel times and to reflect the importance given to connectivity.

- **Cost** – it was recommended to separate cost estimates from the other performance measures under the “Cost” criterion. The group recommended splitting the “Cost” criterion into two criteria, including “Cost” which would consist of cost estimates, and “Constructability” which would look at phasing and use of existing pavement.

The discussion on evaluation framework ended before going through the entire evaluation framework, due to time constraints. Ken Gould asked the group to submit comments by the end of the day next Thursday, 11/16.

### 5. Next Steps

The project next steps are focused on finalizing the evaluation framework and conducting the future conditions work. If the model is ready, future scenario outputs can be expected the second week in December. This delays the project schedule by approximately one month. For this reason, the December TAC meeting will be delayed until January. The January 9 TAC meeting will adopt the final evaluation framework, discuss future deficiencies along Murphy, and brainstorm possible project alternatives. An open house will also be held in January. If the model is delayed further, the January TAC meeting will also be postponed. More information will be available on December 8.

The meeting was adjourned at approximately 2:45 p.m. The actions listed below will be completed by the 3rd TAC meeting.

### Action Items

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Responsible</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Comment on Tech Memo 4.1 Existing Conditions</td>
<td>TAC</td>
<td>November 16</td>
</tr>
<tr>
<td>3.</td>
<td>Comment on Tech Memo 7.1 Evaluation Framework</td>
<td>TAC</td>
<td>November 16</td>
</tr>
<tr>
<td>4.</td>
<td>Finalize Tech Memo 3.2 Traffic Methodology</td>
<td>CH2M HILL</td>
<td>November 16</td>
</tr>
<tr>
<td>5.</td>
<td>Finalize Tech Memos 3.1, 4.1, and 7.1</td>
<td>CH2M HILL</td>
<td>December 1</td>
</tr>
<tr>
<td>6.</td>
<td>Remove December 5 TAC meeting from calendars</td>
<td>TAC</td>
<td>Immediately</td>
</tr>
<tr>
<td>7.</td>
<td>Confirm or postpone January 9 TAC meeting</td>
<td>CH2M HILL</td>
<td>December 8</td>
</tr>
</tbody>
</table>
Murphy Road Corridor Study

Technical Advisory Committee Meeting # 3
Wednesday, January 17, 2007
1:30 – 3:00 p.m.
Annex Conference Room 2
745 NW Bond Street, Bend

Draft Agenda

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Presenter</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Welcome, Review of Agenda</td>
<td>Ken</td>
<td>1:30 p.m.</td>
</tr>
<tr>
<td>2.</td>
<td>Project Status Update</td>
<td>Dave</td>
<td>1:35 p.m.</td>
</tr>
<tr>
<td>3.</td>
<td>Results of Future Conditions Analysis</td>
<td>Craig</td>
<td>1:45 p.m.</td>
</tr>
<tr>
<td>4.</td>
<td>Discussion of Potential Solutions</td>
<td>Dave</td>
<td>2:15 p.m.</td>
</tr>
<tr>
<td>5.</td>
<td>Next Steps</td>
<td>Theresa</td>
<td>2:30 p.m.</td>
</tr>
<tr>
<td></td>
<td>− Project Open House</td>
<td></td>
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<tr>
<td></td>
<td>− Development of Potential Solutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>− Evaluation of Potential Solutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Adjourn</td>
<td>Ken</td>
<td>3:00 p.m.</td>
</tr>
</tbody>
</table>

Handouts

1. Agenda
2. Draft Tech Memo 5.1 Future Conditions
3. Final Tech Memo 4.1 Existing Conditions
Meeting Summary

ATTENDEES

Committee
Nick Arnis, Bend Public Works, Transportation  
Judy Barnes, Central Electric Cooperative  
Tyler Deke, Bend Metropolitan Planning Organization  
Ken Gould, Bend Public Works Engineering  
Dave Knitowski, Bend Community Development  
Doug Koellermeier, Bend Fire Department  
Mike Miller, Bend Public Works  
Paul Rheault, Bend Public Works  
Wendy Robinson, Bend Long-Range Planning  
Ron Taylor, Bend Police (for Sandi Baxter)  
Jim Wodrich, Bend Public Works Engineering

Guests
Mike Linkoff, Bend Public Works  
Kevin Ramsey, Bend Street

Consultant Team
Dave Simmons, CH2M HILL  
Theresa Carr, CH2M HILL  
Tony Woody, CH2M HILL (phone)

Handouts included the meeting agenda and three Technical Memoranda – a draft of Tech Memo 5.1 Future Conditions and Deficiencies; a final Tech Memo 4.1 Existing Conditions and Deficiencies; and a final Tech Memo 7.1 Evaluation Framework.

This meeting summary covers questions and discussion related to each of the TAC meeting agenda items. Please refer to the meeting handouts for more detail on agenda topics.

1. Welcome, Review of Agenda
Ken Gould welcomed the group to the 3rd TAC meeting and thanked everyone for their participation in the Murphy Corridor project.

2. Project Status Update
Dave Simmons gave a brief status of the project since the last TAC meeting (November 7th):
- Tech Memos 4.1 and 7.1 were finalized to reflect comments received from the TAC
The consultant team coordinated with the MPO and ODOT’s Transportation Planning and Analysis Unit (TPAU) on future condition model scenarios to be run for the Murphy Road Corridor study. Modeling outputs were received from the MPO and future conditions analysis was completed. This required some iterative analysis including some rework due to changes in underlying model assumptions from TPAU.

Tech Memo 5.1 Future Traffic Conditions and Deficiencies was drafted (see Agenda Item #3)

3. Results of Future Conditions Analysis

Tony Woody provided an overview of future conditions and deficiencies. The future traffic analysis identified expected future traffic conditions and congested-related deficiencies within the project study area. The purpose of the task was to determine how improvements to Murphy Road, including a westerly extension to Brookwood Boulevard and an easterly extension to 15th Street, affect future travel patterns and future traffic operations within the study area and southeast Bend. Highlights from this analysis are listed below:

- Traffic volumes along Murphy Road increase under all future scenarios.
- Traffic increases are higher under scenarios where improvements are made to Murphy Road, although the net difference observed from widening to a five-lane cross section was not significant.
- The addition of signals at Parrell Road, Country Club Road, and 15th Street\(^1\), and left turn pockets along Murphy Road at each intersection between 3rd Street and 15th Street bring traffic operations along Murphy Road into compliance with relevant City of Bend and Oregon Department of Transportation (ODOT) mobility standards.
- An extension of Murphy Road east to 27th Street shifts a low to moderate amount of traffic onto Murphy Road from 15th Street and Knott Road.

Please refer to Technical Memorandum 5.1 Existing Conditions and Deficiencies for more information.

Questions from the TAC are listed below:

- Differentiation is needed between the Model Scenario (called the Murphy Crossing Scenario) and the Murphy Crossing study, which analyzed a westerly extension of Murphy Road between the Parkway and Brookwood Boulevard.

Ken Gould requested comments on the Future Conditions memo to be submitted by COB next Friday January 26th.

4. Discussion of Potential Solutions

Dave facilitated a group discussion on potential solutions. The TAC felt that due to the findings of the traffic analysis, a five-lane section does not need to be developed any further. The group also felt that an extension to 27th Street would have limited utility. This is

\(^1\) Traffic signals were analyzed at Parrell Road, Country Club Drive and 15th Street. Though it is anticipated that roundabouts would work at these locations as well, further operations analysis at these locations would be required prior to final recommendation.
because existing residential developments south of Ferguson would make a connection to that street east of 15th Street too impactful, and to avoid the school Murphy Road would need to be brought to the south, near its connection with Knott Road. That limits its usefulness as a route for anything except local use. Therefore, the TAC recommended against further development of that extension as an alternative.

The TAC recommended development of three alternatives:

1. A three-lane section for the entire length of Murphy Road, between 3rd Street and 15th Street. This would be built to be consistent with City Design Standards.

2. A two-lane section for Murphy Road between 3rd Street and Brosterhous Road, expanding to a three lane section between Brosterhous and 15th Street (the new roadway section), with signals at key intersections.

3. An alternative similar to #2 above except with roundabouts at key intersections instead of signals.

The team will present these three potential alternatives to the public at the January 31 open house and solicit additional ideas before proceeding towards alternatives development and evaluation.

5. Next Steps

Theresa presented next steps, which are to:

- Hold Public Meeting #1 to present findings to date and request input on draft corridor design alternatives
- Develop potential corridor alternatives
- Evaluate potential corridor alternatives

The meeting was adjourned at approximately 3:00 p.m. The actions listed below will be completed by the 4th TAC meeting.

Action Items

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Responsible</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Comment on Tech Memo 5.1 Future Conditions and Deficiencies</td>
<td>TAC</td>
<td>January 26</td>
</tr>
<tr>
<td>2.</td>
<td>Hold Public Meeting #1</td>
<td>All</td>
<td>January 31</td>
</tr>
<tr>
<td>3.</td>
<td>Finalize Tech Memo 5.1 Future Conditions and Deficiencies</td>
<td>CH2M HILL</td>
<td>February</td>
</tr>
<tr>
<td>4.</td>
<td>Develop draft corridor alternatives based on TAC direction and public input</td>
<td>CH2M HILL</td>
<td>February</td>
</tr>
<tr>
<td>5.</td>
<td>Develop order-of-magnitude cost estimates for draft corridor alternatives</td>
<td>CH2M HILL</td>
<td>February</td>
</tr>
<tr>
<td>6.</td>
<td>Evaluate draft corridor alternatives based on project evaluation framework</td>
<td>CH2M HILL</td>
<td>March</td>
</tr>
</tbody>
</table>
Meeting Summary
The City of Bend held a public open house on Wednesday, January 31, 2007 at the City Council Chambers for the Murphy Road Corridor project. The main purpose of the meeting was to present background information on the project, including the project’s objectives, existing land use, environmental, and traffic conditions, and future traffic conditions, and to gather suggestions for improvement from the public. The open house began at 4:00 p.m. and concluded at 6:00 p.m.

The project team posted a meeting announcement on the Murphy Road Corridor’s and the City of Bend’s websites and issued a press release to local newspapers, including the Bend Bulletin. Project postcards were sent to approximately 1,090 local residents, businesses, and community leaders to notify them of the open house. A follow up email was sent to the local neighborhood associations’ chairs and stakeholders that were interviewed during the early phases of the project, asking to inform their members of the upcoming meeting. A display ad promoting the Open House appeared in the Bend Bulletin on Sunday, January 28, 2007.

An open house format was used at the meeting, allowing members of the public to attend at their convenience and have the opportunity to discuss the project and issues surrounding it with staff members. Ken Gould, the City of Bend Project Manager, and Dave Simmons, CH2M HILL made two brief presentations, at 4:00 p.m. and 5:00 p.m. Both presentations were followed by a question and answer session.

Attendees were encouraged to submit comments on the project by completing a form asking for input about important issues and for suggestions on future improvements. They were also encouraged to contribute ideas on flip charts placed around the room. The majority of the comments received were during the question and answer portion after the presentations. Approximately 75 people attended the meeting.

The following items were on display at the meeting:

♦ Project schedule and map of the project area in relation to the other projects occurring in the area

♦ Stakeholder interview comments, existing conditions, future traffic conditions, and the evaluation criteria
Handouts distributed at the open house included the following:

- Comment form
- Project postcard
- All project documents produced to date, including agendas and meeting materials from the Technical Advisory Committee meetings

The following comments were submitted on individual comment sheets and were offered during the question and answer period after each of the presentations.

**Verbal Comments**

Questions asked during the presentation sessions are listed below, followed by responses from the City of Bend and the consultant team. Questions are denoted by a diamond-shaped bullet (♦). Responses are denoted by a circle-shaped bullet (●)

- Existing conditions doesn't have water drainage, there is standing water on the road. Will the project fix that? Also Reed Market construction starts this summer; people will head south on Murphy, what will happen to Ferguson?
  - Any alternative that will move forward, will address water drainage issues along Murphy Road. Ferguson will most likely experience some additional traffic from the Reed Market construction, which is understood to be an inconvenience.

- The Murphy overcrossing project shows the alignment of Murphy shifted to the south, starting around Parrell. What happens to the existing Murphy alignment, between Parrell and 3rd? Will this section become a dead-end?
  - That is a different study, being conducted by ODOT, and so they would need to be consulted on that. The alignment for the section of Murphy Road from 3rd Street to Parrell has not been decided yet.

- Concerned about noise, especially with a 5-lane road. Will there be adjustments made?
  - It is a City policy not to install sound walls and studies for other City projects have shown that they do not significantly reduce the noise due to the need for frequent openings in the walls for access. While the project initially looked at 5-lanes, it was decided that three lanes were adequate.

- Concerned about the speed of cars; what will be the speed?
  - It is estimated now that the speed will be 35 miles per hour with a 20 mile per hour school zone near Jewell Elementary.

- Have you considered an extension to Ferguson (which would be a shorter road) instead of going down to 27th?
  - Creating an extension to Ferguson would cause more of an impact to the existing built environment than having the alignment to the south.
I want to raise the idea of curbs with slots that slope to the center that has plants in it to filter the runoff.

- The city has created something like this at 27th and we will have to see if that works there.

What is your best guess about an extension to 27th versus stopping at 15th?

- It is not in the near future because 27th is outside the City limits. If it starts to develop, the City and County can tie it into the City’s Urban Growth Boundary.

Where is this project in the CIP?

- Murphy Road is within a five year plan, which will be aggressively pursued. However, the railroad over crossing is a multi-million dollar effort with lots of coordination, so it may take more time.

I appreciate seeing Knott and 15th is a red circle [does not meet mobility standards] because that intersection is a problem today. Speed limit signs help a bit. Please do coordinate with the County. Not coordinating doesn’t help those out there. For example, a Rickard Road upgrade could easily link to Burns and serve as a bypass.

- The City will coordinate with the County on what improvements are needed at the 15th and Knott intersection.

With the new building on Reed Market and 15th, what happens to 15th if Murphy stops there? I would hate to live there with the morning traffic.

- The City is looking at traffic patterns for the larger transportation network, including Murphy, 15th, and Reed Market. The future traffic analysis indicates some moderate increase in traffic on 15th north of Murphy, but lower traffic volumes on 15th south of Murphy.

Will the improvements to Reed Market be built first or will Murphy Road be constructed to 15th Street first?

- The improvements to Reed Market between 15th and 27th are being designed and will be constructed first. The timing for construction of the improvements to Reed Market between 3rd and 15th relative to the Murphy Road extension to 15th Street has not been determined. Constructing Murphy Road first would provide for an alternate route while Reed Market is under construction and would provide immediate benefits as an emergency response route.

It seems that moving traffic and connectivity are the main concerns, rather than impacts to the residents who live along Murphy Road.

- Considering impacts to existing homes and businesses is one of this project’s evaluation criteria. However, Murphy Road is a collector street. In March, when the Evaluation Criteria will be considered, that is when we can discuss this concern at the detail level.
Is there coordination with this project and the possible sewer extension that will take place along Murphy Road?
- Yes, coordination is taking place between this project and the sewer improvements.

Will there be cut outs installed for buses along Murphy Road?
- The project is coordinating with the transit authority; however, the project is not at that level of detail.

Is the criterion for two lanes sufficient? A few years ago, a report came out that said there was one car per seven seconds on the road.
- For this project, we have taken traffic volumes, the number of cars, where they are going, the land use for future development and related car usage to create a traffic model. The traffic analysis found that three lanes are sufficient to carry traffic volumes on Murphy Road.

Will the scenarios consider Highway 97 blocked off by barricades?
- Yes, the project at China Hat Road is included.

Did you consider current zoning standards (5,000 additional homes allowed) for the future conditions? There is a huge amount of growth forecasted. One lane in each direction seems too small.
- The project assumes that most vacant land would build up and took a large forecast look at another option for high density. The project is also conducting a sensitivity analysis to see what happens when growth occurs at a more intense level than what was assumed by the travel demand model.

Have you looked at scenarios of southeast Bend being brought into the Urban Growth Boundary? Will this project dovetail with the new Urban Growth Boundary?
- It was assumed that there would be some level of growth outside the Urban Growth Boundary, along 27th Road. The City will correlate this project with the new Urban Growth Boundary maps.

If the existing dedicated right of way is not enough for a three lane, is the assumption that the Ward property will be taken?
- The main concern for inadequate existing right of way is along the older sections of development along Murphy Road. Newer development is required to have a wider space set aside than what it may appear to have.

Have the new high school and middle school be considered?
- Yes, they have been considered in the project.

Is there an idea regarding the change of traffic? How many more cars will there be along Murphy Road?
• Murphy Road is a collector, which means that it is expected to carry vehicles traveling between local streets and the arterial system. The road will eventually carry more traffic than it does today, however, improvements will be consistent with the designation of a collector street.

♦ I assume this project is because of Reed Market. Will you look at the impact it has on Reed Market? If Murphy were extended to 15th, would it reduce traffic on Reed Market? What about to 27th?

• From initial work, it appears that Murphy serves a specific role in southeast Bend and that improvements to Murphy will help address some of the growth, but it won’t draw a large volume of traffic off Reed Market. It appears that traffic using Reed Market will continue to use it and not be redirected to Murphy.

♦ If Murphy Road is extended to 15th will there be an at-grade rail crossing, or will it be above or below grade?

• The railroad crossing will be an over crossing.

♦ What is the schedule to build?

• Construction is the most expensive part of the process and so it is difficult to schedule. We are looking at funding options and it is a high priority for the city.

♦ In one of the boards, you indicated that you plan to add a traffic signal at Murphy and Country Club. Don’t use a roundabout there because of the fire department on Country Club Drive.

• Emergency response is a huge consideration. The Technical Advisory Committee for the project has a fire representative and the project has been working with them. The project is looking at either signals or roundabouts for congested intersections. For the alternative selection, both options will be examined.

♦ There is a lot of constraint in southeast Bend because of the sewer capacity. Are you coordinating with sewer improvements?

• Yes.

♦ What is the plan and timeframe for 3rd? What about for Parrell to Brosterhous?

• The segment of Murphy Road in the vicinity of 3rd requires coordination with the ODOT Murphy Road overcrossing project. This will affect the timeframe. They are just now formulating concepts. For Parrell to Brosterhous, the phasing and budget will be determined when there is a better idea of the preferred alternative.

♦ What about Brosterhous; going down to Knott and American Lane?

• There are no improvements planned along Brosterhous, with this project. However, we are looking at the situation there as it related to the improvements on Murphy and how they could affect traffic on Brosterhous and American Lane.

♦ Is connecting Chase Road to Brosterhous in the pipeline.
• There is rapid growth and an inadequate road, but that must be done when development is occurring so that the corridor plan and private development will improve it.

♦ Is the green line to 27th [on the PowerPoint modeling slide] the preferred alignment?

• No. That alignment was drawn for traffic analysis only, and was drawn to avoid impacts to existing residential directly south of Ferguson Road, and the school on 27th. The traffic analysis indicates that an extension of Murphy Road to 15th appears adequate.

♦ What if the Urban Growth Boundary were pushed out, would the Murphy extension to 27th help in the future?

• The modeling did not show a huge impact at this stage.

♦ I would suggest that you do look at an extension to 27th Street now, because it could end up with a situation like at Ferguson. Have to do it now. I realize that it is an ongoing question that the City has to develop growth, not the developer.

• With the traffic model developed, the City now has a tool to be more proactive in working with developers to plan new street connections.

♦ Is the point of this project to update the Transportation System Plan (TSP) once the preferred alternative is adopted?

• The road is already a collector and we are not proposing to change the designation, therefore no change to the TSP would be needed. There would be a need to update the TSP if Murphy were extended to 27th.

♦ What is the next step?

• After a preferred alternative is selected, the City Council will vote to adopt it, the capital development project will go to final design, it will be bid out, and built.

♦ Is it easier to get developers to pay if we have a plan?

• A plan helps to keep everything on the same page.

**Written Comments**

♦ Think about a traffic circle at Country Club Drive and Murphy.
Murphy Road Corridor Study

Technical Advisory Committee Meeting # 4
Tuesday, March 6, 2007
1:30 – 3:00 p.m.
Council Chambers
710 NW Wall Street, Bend

Agenda

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Presenter</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Welcome, Review of Agenda</td>
<td>Ken</td>
<td>1:30 p.m.</td>
</tr>
<tr>
<td>2.</td>
<td>Project Status Update</td>
<td>Dave</td>
<td>1:35 p.m.</td>
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<td></td>
<td>− Project Open House (January 31)</td>
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<td></td>
<td>− Development of Draft Corridor Alternatives</td>
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<td>− Evaluation of Corridor Alternatives</td>
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<tr>
<td>3.</td>
<td>Presentation of Murphy Road Corridor Alternatives</td>
<td>Jose</td>
<td>1:40 p.m.</td>
</tr>
<tr>
<td>4.</td>
<td>Discussion of Draft Alternative Evaluation</td>
<td>Theresa</td>
<td>2:00 p.m.</td>
</tr>
<tr>
<td>5.</td>
<td>Next Steps</td>
<td>Dave</td>
<td>2:45 p.m.</td>
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<td></td>
<td>− Project Open House (April 5)</td>
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<td></td>
<td>− Select Preferred Corridor Alternative</td>
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<td>− Draft Refinement Plan</td>
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<td>6.</td>
<td>Adjourn</td>
<td>Ken</td>
<td>3:00 p.m.</td>
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</table>

Handouts

1. Agenda
2. Final Tech Memo 5.1 Future Conditions
3. Draft Corridor Alternatives
4. Draft Corridor Alternative Evaluation
Handouts included the meeting agenda, the three draft alternatives (Alternatives A, B, and C), order-of-magnitude cost estimates for all three alternatives, and the technical team’s preliminary evaluation of the three alternatives. The team also distributed the final Tech Memo 5.1 Future Conditions and Deficiencies. This meeting summary covers questions and discussion related to each of the TAC meeting agenda items. Please refer to the meeting handouts for more detail on agenda topics.

1. Welcome, Review of Agenda
Ken Gould welcomed the group to the 4th TAC meeting and thanked everyone for their participation in the Murphy Corridor project.

2. Project Status Update
Dave Simmons gave a brief status of progress since the last TAC meeting (January 17th):

- Public Meeting #1 was held on January 31st at Bend City Council Chambers. Approximately 75 people attended the meeting. A summary of the workshop is available on the project website.
- The team developed conceptual designs for three corridor alternatives, labeled Alternatives A, B, and C. These alternatives were developed based on direction from the
January TAC meeting and input received at the January 31 Public Meeting (see Agenda Item #3)
- The technical team performed a preliminary evaluation of the three alternatives (see Agenda Item #4)
- The traffic team received future build traffic volumes from the MPO following the January 31 open house which affected the future traffic analysis at three intersections:
  1. **15th and Knott** – earlier analysis showed this intersection as deficient. Subsequent analysis found this intersection operating at an acceptable level
  2. **15th and Ferguson** – earlier data showed this intersection operating as acceptable in future conditions (2030). However, updated data received from the MPO affected operations at this intersection. It was noted that – though the intersection is deemed deficient in 2030 – the issue at the intersection was fairly minor (affecting 15 eastbound vehicles turning left onto 15th).
  3. **27th and Ferguson** – similar to the 15th and Ferguson intersection above, the 27th and Ferguson intersection showed as operating at an acceptable level in earlier analysis, but using updated data from the MPO this intersection does not operate at an acceptable level. Delay indicates that some treatment (signal, roundabout) will be needed at this intersection in future years. This will be pursued further by the City as part of a separate effort.

Tech Memo 5.1 has been finalized to reflect the updated information described above.

### 3. Presentation of Murphy Road Corridor Alternatives

Jose Vasquez presented the three draft corridor alternatives. These alternatives will be made available on the project website. All alternatives address improvements to the existing Murphy Road between Parrell and Brosterhous, and an extension of Murphy Road between Brosterhous and 15th. All alternatives complete the sidewalk system between Parrell and 15th, and retain on-street bicycle lanes. A description of the three alternatives is provided below:

- **Alternative A:** This alternative widens Murphy Road to meet City standards, as outlined in the City of Bend Development Code. The cross section of Murphy Road for Alternative A includes two 14’ travel lanes (one lane in each direction), a 16’ center-turn lane, and 6’ bicycle lanes, 6’ planter strips, and 6’ sidewalks on both sides of Murphy Road. The minimum right-of-way needed for this alternative is 80’. Signals and left-turn lanes are installed at Parrell Road, Country Club Road, and Brosterhous Road. A left-turn lane is installed at 15th Street, though this intersection will be stop-controlled.

- **Alternative B:** This alternative installs signals at Parrell Road, Country Club Road, and Brosterhous Road. Between Parrell and Brosterhous, the corridor remains similar to what exists today, with two 12’ travel lanes (one in each direction) and 6’ on-street bicycle lanes. The 6’ width sidewalk network is extended to Parrell Road on both sides of Murphy Road, making continuous sidewalks throughout the corridor. Between Brosterhous and 15th Street, Murphy Road is built to City design standards, with a three lane section and a left-turn lane at 15th Street. The intersection of Murphy Road and 15th Street is stop controlled.
• **Alternative C**: This alternative is similar to Alternative B, but installs roundabouts in lieu of signals at Parrell Road, Country Club Road, and Brosterhous Road. Diameter of the roundabout would be 120’ and approach widths would be 14’.

4. **Discussion of Draft Alternatives Evaluation Framework**

Theresa presented the preliminary alternative evaluation that was conducted by the technical team using the evaluation framework outlined in Technical Memorandum 7.1. The evaluation framework ties back to the findings from the September 13-14, 2006 stakeholder interviews and the October 2 and November 7, 2006 TAC meetings. There are seven criteria:

- Congestion/Mobility
- Connectivity
- Cost
- Environment – Built (Residential/Business Impacts)
- Environment – Natural
- Multimodal Solutions
- Safety

The TAC discussed all criteria as they related to the three alternatives, and made several important revisions to the alternatives evaluation. Major elements of discussion are listed below. The revised evaluation of alternatives is included as an attachment to this meeting summary.

- **Congestion/Mobility** – the TAC retained the variation of scores (a 4 for Alternative A, and a 2(3) for Alternatives B and C) to reflect that the center turn lane for Alternative A will minimize delay along the corridor by allowing left-turning vehicles to pull out of the travel lane. The group ranked Alternatives B and C lower than A because even though operations were acceptable at intersections along Murphy Road, delay would occur between intersections. Mike Miller asked for a comparison of future traffic volumes between the Murphy Road and Reed Market corridors – the Murphy Road volumes are approximately 1,000 vehicles/hour near Parrell Road.

- **Connectivity** – The group agreed that all alternatives equally met the objective of this criterion by extending eastward to 15th Street.

- **Constructability** – The technical team originally ranked Alternative C lower than the other two alternatives because of perceived costs and impacts associated with utility relocation, and also because it was perceived that pavement could be best reused under Alternative B. However, the TAC stated that pavement would likely not be reusable under any alternative, and that utility relocation would likely be of issue under any alternative. The revised rankings were a “4” for Alternative B, and a “2” for Alternatives A and C.

- **Cost** – no changes were made to the Cost evaluation – Alternative B appears to be the lowest cost due to minimal right of way acquisition needs, with Alternatives A and C having very similar costs.
• **Environment – Built (Residential/Business Impacts)** – no changes were made to this criteria evaluation. Alternative A impacts more residents and businesses because a swath of land is required from many parcels to construct the alternative to design code requirements. Alternative B has minimal direct impacts to homes and businesses. The impacts of Alternative C are limited to the roundabout locations.

• **Environment – Natural** – The scores of this criterion were not changed by the TAC. Alternative A contains some impacts to the Area of Special Interest (ASI) located immediately south of Murphy Road, east of Country Club Road. This occurs because Alternative A widens the Murphy Road cross section in that area. Alternatives B and C contain no impacts to that ASI. None of the alternatives impact the ASI located east of the railroad tracks.

• **Multimodal** – the TAC had a good discussion about comfort of pedestrians and bicyclists of crossing Murphy Road under each of the alternatives. Elements of this discussion included the comfort of pedestrians crossing through roundabouts, and how the width of a cross section impacts pedestrian comfort levels. At the end the group decided that all alternatives met the objective of this criterion, meeting the needs of all users of the road (bicyclists, vehicles, pedestrians, youth, elderly, and physically disabled).

• **Safety** – the TAC also had an extensive discussion on the safety criterion, centered around the expected vehicle speeds and emergency response times for each alternative. At the end, the group decided to give Alternatives A and C a “2” rating, and gave Alternative B a “0” rating (0 ratings indicate non-applicable). The pros and cons of each alternative, as outlined by the TAC, are listed in the attachment.

After rating each of the criterion, the TAC spent some time discussing what they liked and disliked about each of the alternatives. The group agreed that they liked the safety and mobility elements of the three-lane cross section, but disliked the residential impacts associated with its wide cross section. They liked the safety advantages of roundabouts, which reduce intersection-area conflicts and are linked to substantial safety benefits due to reduced crash rates and reduced severity of crashes. There was concern that Alternative B, though it is lower cost and minimizes impacts, would not have any safety or mobility benefits.

The group requested that the technical team develop a hybrid alternative that combines elements of Alternatives A and C, to include a three-lane section with roundabouts at key intersections. The hybrid alternative would reduce the cross section of Murphy Road to minimize residential and business impacts. This Alternative, labeled “A2,” would require an exception from City design standards.

The technical team will develop and conduct a preliminary evaluation of this alternative, to be discussed by the TAC prior to the next Public Meeting (scheduled for April 5).
5. Next Steps
The immediate next steps are for the technical team to develop Hybrid Alternative A2 for evaluation by the TAC prior to the next public meeting.

Public Meeting #2 will be held Thursday April 5 from 4-6pm in the Pines Room of the Bend Golf and Country Club (61045 Country Club Drive). The purpose of this meeting will be to obtain feedback from the public on the four Murphy Road corridor alternatives.

Bend Public Works will make a presentation to Bend City Council in mid-April on alternatives. It is the intent that a preferred alternative will be selected at this meeting.

The next TAC meeting (TAC Meeting #5) is scheduled for Tuesday, May 1, 2007.

The meeting was adjourned at approximately 3:30 p.m. The actions listed below will be completed by the 5th TAC meeting.

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Responsible</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Develop Alternative A2 – minimum three-lane cross section with roundabouts at key intersections</td>
<td>CH2M HILL</td>
<td>March 16</td>
</tr>
<tr>
<td>2.</td>
<td>Prepare preliminary evaluation of Alternative A2 for review by TAC</td>
<td>CH2M HILL</td>
<td>March 16</td>
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<tr>
<td>3.</td>
<td>Revise evaluation of Alternative A2</td>
<td>TAC</td>
<td>March 30</td>
</tr>
<tr>
<td>4.</td>
<td>Hold Public Meeting #2</td>
<td>All</td>
<td>April 5</td>
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<tr>
<td>5.</td>
<td>Present Alternatives to Bend City Council</td>
<td>Ken Gould, with support from CH2M HILL</td>
<td>Mid-April</td>
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</tbody>
</table>
Murphy Road Corridor Plan
Revised Evaluation of Corridor Alternatives by TAC
As of: March 6, 2007

ALTERNATIVE SCORING

The TAC evaluated each alternative against the objectives, measures, and rating descriptions outlined in the Murphy Road Corridor Study evaluation framework (Technical Memorandum 7.1). This evaluation was revised from a preliminary evaluation conducted by the technical team. Members populated the notes section of the table first, and then used the descriptions in the framework and summarized in general below to rate the alternative. The table below displays the scores and notes from the technical team and the TAC.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
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<tbody>
<tr>
<td>4</td>
<td>Alternative directly and positively addresses the intent of the criterion.</td>
</tr>
<tr>
<td>2</td>
<td>Alternative partially meets the intent of the criterion, addressing some but not all of the objectives.</td>
</tr>
<tr>
<td>0</td>
<td>Alternative neither meets nor does not meet intent of criterion. Alternative has no effect, or criterion does not apply.</td>
</tr>
<tr>
<td>-2</td>
<td>Alternative does not support the intent of, or negatively impacts, the criterion.</td>
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<thead>
<tr>
<th>Specific Objectives and Criteria</th>
<th>Alternative A (Continuous Three-Lane Section)</th>
<th>Alternative B (Two-Lane Section With Increased Capacity at Key Intersections)</th>
<th>Alternative C (Two-Lane Section with Roundabouts at Key Intersections)</th>
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</thead>
<tbody>
<tr>
<td><strong>CONGESTION/MOBILITY</strong></td>
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<td></td>
<td></td>
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<tr>
<td><strong>MEASURE: V/C, DELAY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RATING</strong></td>
<td>4</td>
<td>2 (3)</td>
<td>2 (3)</td>
</tr>
<tr>
<td><strong>NOTES</strong></td>
<td>- All alternatives will improve congestion over the no build.</td>
<td>- Alternative will improve congestion when compared to no build.</td>
<td>- Alternative will improve congestion when compared to no build.</td>
</tr>
<tr>
<td></td>
<td>- Alternative A performs better than Alternatives B and C by removing left-turn vehicles from the main through movement traffic streams along EB/WB Murphy Road through movements.</td>
<td>- A slight increase in delay may occur over Alternative A due to mid-block left turn vehicles blocking through trips along EB/WB Murphy through movements.</td>
<td>- A slight increase in delay may occur over Alternative A due to mid-block left turn vehicles blocking through trips along EB/WB Murphy through movements.</td>
</tr>
</tbody>
</table>
## Specific Objectives and Criteria

<table>
<thead>
<tr>
<th>Connectivity Measure: Trip Travel Distance, Travel Time</th>
<th>Alternative A (Continuous Three-Lane Section)</th>
<th>Alternative B (Two-Lane Section With Increased Capacity at Key Intersections)</th>
<th>Alternative C (Two-Lane Section with Roundabouts at Key Intersections)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Notes</td>
<td>All alternatives will improve connectivity when compared to no build</td>
<td>All alternatives will improve connectivity when compared to no build</td>
<td>All alternatives will improve connectivity when compared to no build</td>
</tr>
</tbody>
</table>

## Constructability Measure: Cost Efficiencies, Funding Competitiveness, Phasing Potential, Impacts During Construction

<table>
<thead>
<tr>
<th>Rating</th>
<th>Alternative A (Continuous Three-Lane Section)</th>
<th>Alternative B (Two-Lane Section With Increased Capacity at Key Intersections)</th>
<th>Alternative C (Two-Lane Section with Roundabouts at Key Intersections)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes</td>
<td>Alternative impacts driveway connections to Murphy Road. A moderate amount of existing pavement is used, though it is not clear whether the condition of the pavement substructure will allow reuse.</td>
<td>The largest amount of existing pavement is used under this alternative, though it is not clear whether the condition of the pavement substructure will allow reuse.</td>
<td>This alternative has the highest initial construction cost, and the largest impact to construction phasing. Utility relocations were originally felt to be greatest under this alternative but it is now understood that they will be approximately the same among alternatives.</td>
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## Cost Measure: Order-of-Magnitude Cost Estimates

<table>
<thead>
<tr>
<th>Rating</th>
<th>Alternative A (Continuous Three-Lane Section)</th>
<th>Alternative B (Two-Lane Section With Increased Capacity at Key Intersections)</th>
<th>Alternative C (Two-Lane Section with Roundabouts at Key Intersections)</th>
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<tbody>
<tr>
<td>Notes</td>
<td>Highest ROW acquisition and initial construction cost.</td>
<td>Least amount of ROW acquisition, storm sewer &amp; utility relocations.</td>
<td>ROW acquisition 2nd highest. Most storm sewer modifications.</td>
</tr>
</tbody>
</table>

## Environment – Built (Residential/Business Impacts) Measure: Business and Residences Impacted, Businesses and Residences Displaced, Air Quality, Noise, Ability to Mitigate

<table>
<thead>
<tr>
<th>Rating</th>
<th>Alternative A (Continuous Three-Lane Section)</th>
<th>Alternative B (Two-Lane Section With Increased Capacity at Key Intersections)</th>
<th>Alternative C (Two-Lane Section with Roundabouts at Key Intersections)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes</td>
<td>-2</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>
**Specific Objectives and Criteria**

<table>
<thead>
<tr>
<th>Alternative A (Continuous Three-Lane Section)</th>
<th>Alternative B (Two-Lane Section With Increased Capacity at Key Intersections)</th>
<th>Alternative C (Two-Lane Section with Roundabouts at Key Intersections)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOTES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Air quality and noise were not determining factors for any of these alternatives.</td>
<td>- No residences or businesses are displaced and a minimal amount of property will be taken at intersections.</td>
<td>- Impacts are at the roundabouts, including impacts to built environment and access to road.</td>
</tr>
<tr>
<td>- An estimated 29 houses or businesses are within 30’ of the existing right of way.</td>
<td>- Three houses or businesses are within 30’ of the existing right of way and would be negatively impacted. Two of these are at Parrell and Murphy Road, so ODOT’s design of this intersection greatly determines the magnitude of impact. The third is at Brosterhous and Murphy, but it is a sliver of land taken.</td>
<td>- One or more houses are expected to be displaced, though specific number is unclear due to level of design detail and new housing construction in the vicinity of Country Club and Brosterhous. If this alternative were selected, shifting location to avoid displacements would be explored.</td>
</tr>
<tr>
<td>- An estimated four houses would be displaced.</td>
<td>- There are no additional impacts to the ASI immediately east of Country Club Road.</td>
<td>- There are no additional impacts to the ASI immediately east of Country Club Road.</td>
</tr>
</tbody>
</table>

**ENVIRONMENT – NATURAL MEASURE: IMPACT ON ASI**

<table>
<thead>
<tr>
<th>RATING</th>
<th>2</th>
<th>4</th>
<th>4</th>
</tr>
</thead>
</table>

**NOTES**

- Approximately 10’ to 15’ of the ASI immediately east of Country Club Road would be impacted. Since the ASI boundary was already entered, and this alternative would expand on the exiting roadway, the impacts are minimal.
- There are no impacts to the ASI immediately east of the railroad tracks.
- There are no impacts to the ASI immediately east of the railroad tracks.
### MURPHY ROAD CORRIDOR STUDY

#### TAC MEETING #2 SUMMARY

**Specific Objectives and Criteria**

<table>
<thead>
<tr>
<th>Alternative A (Continuous Three-Lane Section)</th>
<th>Alternative B (Two-Lane Section with Increased Capacity at Key Intersections)</th>
<th>Alternative C (Two-Lane Section with Roundabouts at Key Intersections)</th>
</tr>
</thead>
</table>

#### MULTIMODAL SOLUTIONS

**MEASURE: PROVISION OF SERVICES TO USERS OF ALL MODES, SAFETY AND CONTINUITY OF BICYCLE AND PEDESTRIAN ROUTES TO SCHOOLS**

<table>
<thead>
<tr>
<th>RATING</th>
<th>Alternative A</th>
<th>Alternative B</th>
<th>Alternative C</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES**

- The pedestrian and bicycle facilities are connected and form a continuous link.
- All users benefit from this alternative.
- Suggested pedestrian crossing slightly west of the old school drive to Jewell Elementary to provide safe, mid-block connections.
- Future improvements for buses can be built incrementally; bus pullout may be beneficial for traffic flow. Pullouts could be added later with minimal impacts to some areas of the road.
- Good visibility is positive.
- A median refuge may be needed, and/or longer signal time to allow safe crossings for elderly, physically disabled, and/or youths.

#### SAFETY

**MEASURE: NUMBER OF CONFLICT POINTS/MOVEMENTS, COMPARISON AGAINST DESIGN STANDARDS, ABILITY TO DIVERT TRAFFIC AWAY FROM KNOWN CONCERNS, TRAVEL TIMES FOR EMERGENCY RESPONSE**

<table>
<thead>
<tr>
<th>RATING</th>
<th>Alternative A</th>
<th>Alternative B</th>
<th>Alternative C</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

- Visibility is good between roundabouts.
- Elderly, disabled, and/or young users of the road may have difficulty crossing the road at the roundabout. It may require longer waits or more information (to users of the road and signage). However, the comfort level of pedestrians and bicyclists with roundabouts is high in Bend, and this was not felt to be of great concern.
<table>
<thead>
<tr>
<th>Specific Objectives and Criteria</th>
<th>Alternative A (Continuous Three-Lane Section)</th>
<th>Alternative B (Two-Lane Section With Increased Capacity at Key Intersections)</th>
<th>Alternative C (Two-Lane Section with Roundabouts at Key Intersections)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOTES</td>
<td>- Separates mid-block turning vehicles from through lanes.</td>
<td>- Number of conflict points is not reduced, and the alternative does not improve or harm response time. The Alternative neither meets nor does not meet the intent of this criterion.</td>
<td>- Alternative reduces number of turning vehicle conflicting points and decreases severity of crashes in intersection vicinity.</td>
</tr>
<tr>
<td></td>
<td>- Concern about higher vehicle speeds due to wider roadway, leading to a greater number of and more severe crashes.</td>
<td></td>
<td>- The Alternative may increase response time, though all agreed that design of roundabout should include adequate approach widths and internal radius to best accommodate and serve emergency vehicles.</td>
</tr>
<tr>
<td></td>
<td>- Response time is improved when compared to no build and to Alternatives B and C.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL SCORE</td>
<td>18</td>
<td>26 (27)</td>
<td>22 (23)</td>
</tr>
</tbody>
</table>
Murphy Road Corridor Study

Second Project Open House
Thursday, April 5, 2007
4:00 to 6:00 p.m.
Bend Golf and Country Club
61045 Country Club Drive, Bend

Meeting Summary
The City of Bend held a public open house on Thursday, April 5, 2007 at the Bend Golf and Country Club for the Murphy Road Corridor project. The main purpose of the meeting was to present four preliminary alternatives and to gather feedback on the alternatives, or suggestions for new alternatives, from the public. The public was also encouraged to tell the project team which alternative would most benefit the corridor. The open house began at 4:00 p.m. and concluded at 6:00 p.m.

The project team posted a meeting announcement on the Murphy Road Corridor’s and the City of Bend’s websites and issued a press release to local newspapers, including the Bend Bulletin. Project postcards were sent to 1,102 local residents, businesses, and community leaders to notify them of the open house. A follow up email was sent to the local neighborhood associations’ chairs and stakeholders that were interviewed during the early phases of the project, as well as individuals that had provided email addresses on the website. A display ad promoting the Open House appeared in the Bend Bulletin on Sunday, April 1, 2007.

An open house format was used at the meeting, allowing members of the public to attend at their convenience and have the opportunity to discuss the project and the four alternatives with staff members. Ken Gould, the City of Bend Project Manager, and Dave Simmons, CH2M HILL made two brief presentations, at 4:00 p.m. and 5:00 p.m. Both presentations were followed by a question and answer session.

Attendees were encouraged to submit comments on the project by completing a form asking for input about important issues and for suggestions on future improvements; these comments are attached. They were also encouraged to contribute ideas on flip charts placed around the room, however, there were no comments collected this way. The majority of the comments received were during the question and answer portion after the presentations. Approximately 70 people attended the meeting.

The following items were on display at the meeting:

♦ Project schedule, description of open house format, and how to get involved
♦ Four alternatives (Alternatives A1, B, C, and A2) with graphic and textual description
Evaluation Criteria and results of the criteria
Next Steps for the project

Handouts distributed at the open house included the following:
Comment form
Project postcard
All technical memorandums produced to date

The following comments were submitted on individual comment sheets, via the website comment form, or were offered during the question and answer period after each of the presentations.

Verbal Comments

Questions asked during the presentation sessions are listed below, followed by responses from the City of Bend and the consultant team. Questions are denoted by a diamond-shaped bullet (♦). Responses are denoted by a circle-shaped bullet (●)

♦ Are roundabouts more expensive?
  • Roundabouts are about 1/3 more expensive to install, but take less to maintain so over time signals and roundabouts are about the same cost.

♦ What about the intersection at 15th?
  • That will be a “T” intersection, with right and left turns only, and based on the traffic model will operate adequately with a stop sign. Recent development plans were included in the traffic analysis.

♦ How do you perform traffic analysis?
  • Traffic analysis was performed using the Bend Metropolitan Planning Organization’s travel demand model, with post-processing and intersection-level analysis performed in the traffic analysis software, Synchro. All alternatives operated acceptably, though Alternatives B and C may not operate as efficiently as Alternatives A1 and A2 because they do not include a continuous left turn lane.

♦ Is the project expected to increase traffic volumes along the corridor and throughout the area?
  • The extension of Murphy to 15th will increase traffic both along the Murphy Road corridor and along 15th Street. However, the analysis estimates that the volumes are not terribly high and both Murphy Road and 15th Street would operate well during peak periods.

♦ Does this project extend to Highway 97 South?
• This project starts at 3rd Street (Hwy 97 Business) on the west. The Oregon Department of Transportation is working on another project that creates an overpass of Highway 97 at Murphy Road.

♦ I live on Murphy. How much of my property will be taken?

• Property impacts vary by alternative and are preliminary at this time. One-on-one discussions about specific property impacts can be accommodated after the group presentation or at the property owner’s convenience.

♦ Who will be using Murphy when it is extended to 15th compared to using Reed Market? Why are you making this connection?

• The Murphy Road extension would serve existing residents of southeast Bend, as well as current and future development east of the railroad. Murphy Road would be another parallel route to Reed Market that would serve the southeast neighborhood. Also, the proposed alternatives would provide a crossing over the railroad, needed by the fire station and emergency vehicles. The extension would also allow the school district to better serve residents east of the railroad tracks.

♦ Is Alternative A1 the only one with sidewalks?

• No, all the alternatives would have continuous sidewalks.

♦ Has the cost been figured out for these alternatives?

• Preliminary cost estimates have been prepared for the Alternatives. Alternative A1 is the most expensive, followed by A2, Alternative C, and Alternative B. Cost estimates include right of way acquisition.

♦ There is a big development on Murphy that would increase left and right turns and I am concerned about accidents. I am also concerned about people turning onto and from side streets, Murphy is already busy.

• Safety concerns are part of the evaluation. The continuous left turn lane can increase safety. The only way to limit turns onto or from side streets is to install a median that would prohibit entrance to driveways and side streets. That would be more expensive and cause the road to be widened further.

♦ What is the size of these roundabouts? Is there an example in Bend? Will it accommodate fire trucks?

• Smaller than the one at 8th and Bond and Reed Market but larger than the one at Bear Creek Road. The fire department has been involved throughout the Murphy Road study process and roundabouts built on Murphy Road would accommodate fire trucks.

♦ How is stormwater management addressed?

• The project team is coordinating with City of Bend water and sewer, but specific drainage issues would be addressed at a later phase of the project.

♦ What are the advantages and disadvantages of the alternatives?
• Specific advantages and disadvantages are explained in the boards that describe alternatives evaluation and evaluation criteria.

♦ I am concerned about the roundabouts restricting access to homes. Also, you need to have another survey of the homes because your aerial is two or three years old.

• That has been considered and access restrictions are one of the challenges of roundabouts. The project will have new aerial photos of the corridor within the next few months.

♦ Will the railroad crossing be an overpass?

• Yes.

♦ I am concerned about the roundabout aprons accommodating commercial vehicles, which can be up to 75 feet long.

• That is a good issue to raise. Roundabouts would be built to accommodate commercial vehicles, with mountable aprons.

♦ Will there be street lights? Where will be located?

• Street lighting will be determined during the design phase. However, there is an ordinance against light pollution (that is directed upward).

♦ Is there a comparison of the traffic flow at 15th (after Murphy is extended) to another location in Bend?

• The comparison of those other streets was not included in the project, although it is possible to compare to a similarly sized road there are always individual circumstances that will pertain only to this location.

♦ Will Murphy Road be connected to 27th?

• The project did some traffic modeling to look at extensions to 27th, however, development near Ferguson limits a direct, parallel route to 27th. Pushing Murphy to 27th at a more southern alignment did not have a lot of value to the greater Bend community.

♦ How far along are the Murphy Over-crossing and South Parkway projects?

• Those projects are being led by the City of Bend and ODOT respectively. They are moving at a similar pace as the Murphy Corridor study. Links to these studies will be posted on our website.

♦ Will the roundabout at Parrell have a fifth leg?

• This is unlikely, however, the new alignment that will connect to the over crossing project has not been determined yet.

♦ When will construction begin?

• First the project needs to establish a preferred alternative and funding mechanism. Then the final design will be determined. The city may decide to move around some
budget to begin some phases of the project within the next few years. However, the project will be constructed in phases based on the funding available.

♦ Will you get money from the developers?
  • A portion of the funding comes from system development charges but the project will also look at other funding possibilities, including state and federal money.

♦ If Juniper Ridge goes ahead, where would this project fall in the pecking order?
  • Several projects could be constructed at the same time. However, the construction timeframe is not known at this time.

♦ Can you explain the sizes of the alternatives?
  • Alternative A1 is 80 feet wide from curb to curb. Alternative A2 is between 60 and 70 feet between Parrell Road and Brosterhous Road, depending on right of way availability.

♦ How do the alternatives compare to each other for the cost of construction?
  • Alternative A1 is the most expensive, next A2, then C, and finally B is the least expensive.

♦ What would the speed limit be on Murphy for these alternatives?
  • The speed limit is expected to be left at the current 35 MPH.

♦ Will the extension out to 15th occur at the same time as improvements along the existing Murphy Road?
  • The project will be set up to allow for phased construction based upon available funding.

♦ Did the traffic analysis look at the number of cars turning onto Murphy?
  • Yes

♦ It may be hard to find gaps to enter roundabouts from side streets onto Murphy.
  • The project did consider a high volume of traffic and through traffic, however, it would be substantially less than Reed Market. Since Murphy is more southern, it will attract more local traffic so there will still be gaps in the traffic at a roundabout to allow traffic from side streets to get onto Murphy.

♦ Is the traffic model data available to the public?
  • While the model itself is proprietary, the results of the model for this project are available in Technical Memorandum 5.1 (available at open house and on website)

♦ Has there been any evaluation of the roundabout on 15th and Franklin? Or at Bear Creek? Specifically with roundabouts close to schools?
- Children as pedestrians use the roundabout in different ways. There are trade offs between traffic signals and roundabouts. Safe routes to schools in the area are important and were considered. There is also the possibility of adding crosswalks along Murphy Road between intersections. We can take your request to examine existing roundabouts to the Technical Advisory Committee.

- I have a problem with the roundabout at Country Club because of the fire station. With a signal, the fire station can control the signal.

- We have had a fire department representative on the Technical Advisory Committee to examine the design of the roundabout. It may be more of an effort to educate drivers on what to do when they are in the roundabout and an emergency vehicle is approaching.

- What about a pedestrian crossing overpass over Murphy Road at Jewell Elementary School?

- Pedestrian overpasses usually don’t get used, especially in neighborhood environments like this one. However, the project will consider the safest and most appropriate methods to address crossing of the corridor by the number of young walkers and drivers.

- Will there be sound walls?

- No

- What part of the project cost will be paid by development in the area?

- Transportation System Development charges are collected for all new developments. No additional assessments are allowed under current City code.

- Will this project reduce traffic on Reed Market?

- It will keep Reed Market in the future from getting worse. With so much new development on Murphy, not creating an extension to 15th could cause problems.

- What will the impact be to Knott and 15th?

- The project team has updated traffic data from the initial model outputs (see Technical Memorandum 5.1 and the project website). Earlier assessments showed the 15th and Knott intersection as operating poorly, but subsequent analysis shows that this intersection operates at an acceptable level in the future forecast year (2027).

- Will there be transit on Murphy in the future?

- The City anticipates that there will be and that assumption is built into the traffic model.
Written Comments

What do you like best about each alternative? What would you improve or change?

♦ Alternative A1:
  • No, 80 foot, too wide, most expensive
  • To merge with 15th will be a nightmare on 15th
  • This one is excellent, although I realize it is probably the most expensive, and it may take some property from existing owners.
  • No signals please!

♦ Alternative A2:
  • No, 70 foot, 3 lanes, next most expensive
  • I like this alternative the best! Narrower thru lanes. Improved roundabouts. Somehow, try to encourage drivers to make fewer left turns into driveways and use the roundabouts more. The narrower lanes create less impact on homes. Use utmost effort to create least impact on homes at roundabouts. I want creative – low-impact storm run-off/drainage planned for this project (slope and curb drain slots, settlement basins with plantings – (more & smaller) street lighting at intersections only.
  • To stop at 15th will create jams on 15th
  • I believe this is the best overall alternative of the 4 presented.
  • I like this best but want to see the roundabout at Country Club to be moved southeast as much as possible to lessen the adverse affect of the homes at that intersection. If you need to choose between someone’s property being taken and an old tree - take the tree and USE IT then plan 3-5 new trees!!
  • This one is excellent also, although I prefer “on-demand” signals.
  • Because of all the houses on Murphy Road, I think 3 lanes would be best. Roundabouts are a lot easier for drivers, I think.
  • I think this is the best plan. There is not a perfect plan. I like the roundabouts, they seem to keep things moving. Also during low traffic, you most likely wouldn’t have to stop at all – final savings.

♦ Alternative B:
  • 60 foot, prefer roundabouts unless dangerous for school children and pedestrians
  • Think beyond Murphy
  • Don’t like with increased traffic no center turn lane, too dangerous
  • This would not be an improvement over present ability to move traffic.
  • No signals please!

♦ Alternative C:
  • 60 foot, prefer roundabouts unless dangerous for school children and pedestrians
  • New Road no improvement at 15th improving Murphy pressures 15th
  • Don’t like with increased traffic no center turn lane, too dangerous
  • This would not be an improvement over present ability to move traffic.
  • Because of all the houses on Murphy Road, I think 3 lanes would be best. Roundabouts are a lot easier for drivers, I think.
Which alternative serves the community best?

♦ Alternative A2 seems best compromise. I much prefer roundabouts to signals. 3-12 foot traffic lanes would be sufficient for projected traffic flow while minimizing impact to adjoining homeowners.

♦ 15th has a traffic flow and 40 MPH – Murphy becomes a corridor, people using Murphy are avoiding Reed at 3rd how will 15th and Murphy handle a stop sign? Traffic back-up? It would make “sense” to do a roundabout at 15th?? Avoiding stops at key commute times.

♦ A2 – I believe roundabouts function better than traditional intersections and will greatly enhance the Murphy Road corridor.

♦ A2

♦ I feel A1 and A2 would handle future traffic best.

Do you have any other comments or questions?

♦ 15th and Murphy need more attention. It is the key to a flow of traffic on Murphy – it needs more attention.

♦ I would like to see the existing portion of Murphy Road worked on first, before the traffic increased when the extension to 15th Street is finished.

Website Comments

♦ I am responding regarding the Open House held April 5 at Bend Country Club. My preference of the 4 choices presented is A2. Reason 1: I think the road should be as wide as possible now rather than redoing the road later when unforeseen traffic has developed. 1. Future development of Ward land, 2. current developments along Brosterhous, Murphy, Parrell and 15th, 3. two new schools planned for the area will all add considerable traffic. Plus having an RR overpass will pull traffic not to mention the traffic that will gravitate to Murphy when Reed Market is being overhauled. Reason 2: I am a big fan of round-abouts. Reason 3: I like the continuous turn lane.
Technical Advisory Committee Meeting # 5  
Wednesday, April 18, 2007  
10:30 a.m. – 12:00 p.m.  
Pilot Butte Conference Room  
710 NW Wall Street, Bend

Agenda

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Presenter</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Welcome, Review of Agenda</td>
<td>Ken</td>
<td>10:30 a.m.</td>
</tr>
<tr>
<td>2.</td>
<td>TAC Discussion of Preferred Murphy Road Alternative</td>
<td>Dave</td>
<td>10:45 a.m.</td>
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<tr>
<td></td>
<td>− Discussion of Alternative A2</td>
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<td></td>
<td>− Comments from Open House #2</td>
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<td></td>
<td>− Operations at Key Intersections (Signals vs. Roundabouts)</td>
<td></td>
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<tr>
<td>3.</td>
<td>Next Steps</td>
<td>Theresa</td>
<td>11:45 a.m.</td>
</tr>
<tr>
<td></td>
<td>− Reschedule Next TAC Meeting (Currently Scheduled for May 1)</td>
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<td></td>
<td>− City Council Briefing (May 2)</td>
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<td></td>
<td>− Draft Refinement Plan</td>
<td></td>
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<tr>
<td>4.</td>
<td>Adjourn</td>
<td>Ken</td>
<td>12:00 p.m.</td>
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</tbody>
</table>
Murphy Road Corridor Study

Technical Advisory Committee Meeting # 6
Friday, September 14, 2007
10:30 a.m. – 12:00 p.m.
Pilot Butte Conference Room
710 NW Wall Street, Bend

Agenda

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Presenter</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Welcome, Review of Agenda</td>
<td>Nick</td>
<td>10:30 a.m.</td>
</tr>
<tr>
<td>2.</td>
<td>Status Update</td>
<td>Dave</td>
<td>10:45 a.m.</td>
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<tr>
<td></td>
<td>– Collection of Survey Data</td>
<td></td>
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<td></td>
<td>– Development of New Alternative (Alternative E)</td>
<td></td>
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<td></td>
<td>– Updated Alternatives Evaluation</td>
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<td></td>
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<td></td>
<td>– Coordination with Projects at Murphy’s West End</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Overview of Updated Alternatives Evaluation</td>
<td>Theresa</td>
<td>11:00 a.m.</td>
</tr>
<tr>
<td>4.</td>
<td>Next Steps</td>
<td>Dave</td>
<td>11:45 a.m.</td>
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<td></td>
<td>– City Council Briefing (Information Only, September 19)</td>
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<td>– Open House (October 11)</td>
<td></td>
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<td></td>
<td>– City Council Briefing (Consider Staff Recommended Preferred Alternative, November 7)</td>
<td></td>
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<tr>
<td>5.</td>
<td>Adjourn</td>
<td>Nick</td>
<td>12:00 p.m.</td>
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Memorandum

To: Bend City Council

From: Ken Fuller, Public Works Director
      Nick Arnis, Transportation Engineering Manager

Subject: Murphy Road Corridor Study Overview

Date: September 19, 2007

Issue:
The Murphy Road Corridor study is examining possible improvements to the roadway between Parrell Road and 15th Street. Five alternatives have been developed and two are being recommended as possible solutions. This meeting will give a general overview of the study and the alternatives; no decision will be made at this time. The public will also review the same information at an open house on October 11 and will review the two recommended alternatives. On November 7, the City Council will review public comments about the alternatives and will recommend one for implementation.

Background:
Murphy Road is located in southern Bend. The study area for this project is between SE 3rd Street on the west to SE 27th Street on the east. Murphy Road is classified as a Major Collector in the City of Bend’s Transportation System Plan (TSP) and currently exists as a two-lane roadway from SE 3rd Street to Brosterhous Road. The Burlington Northern Sante Fe (BNSF) Railroad operates in a north-south direction through the project area, between Brosterhous Road and SE 15th Street. There are rock outcroppings in the area immediately east of the railroad tracks that have been designated by the City of Bend as an Area of Special Interest (ASI).

A project website has been live since the start of the project and has received 17 comments from the site. In January 2007, about 75 people attended an open house where background information on the project was presented, including the project’s objectives, existing land use, environmental, and traffic conditions, and future traffic conditions, in addition to gathering public suggestions for improving the project. In April 2007, a second open house was
attended by 70 people. The four preliminary alternatives were presented and feedback on the alternatives, or suggestions for new alternatives, was gathered from the public. The public was asked which alternative would most benefit the corridor. A third open house is scheduled for October 11, 2007. All five alternatives will be presented and the public will be asked for their comments on the two alternatives that are recommended for implementation (Alternatives D and E). Public comments will be brought to the Council on November 7 for review and final recommendation on one preferred alternative.

Analysis:
The evaluation criteria used by the technical team and the Technical Advisory Committee (TAC) to evaluate the performance of each alternative against a broad range of important project characteristics, representing a full range of city and stakeholder values are listed below. The evaluation criteria tie back to the findings from the September 13-14, 2006 stakeholder interviews and the October 2, 2006 TAC meeting. The criteria were revised based on comments from the TAC at its November 7, 2006 meeting.

- **Congestion/Mobility criteria** – measured by the travel mobility standards (measured as a ratio of volume-to-capacity \([v/c]\)) and amount of delay on the corridor.

- **Connectivity criteria** – measured by direct and efficient access to and between origins and destinations along Murphy Road, southeastern Bend, the Parkway, and downtown; amount of out-of-direction travel; and travel times.

- **Constructability criteria** – measured by the assessment of cost efficiencies during construction; comparison of project alternative with other projects around the urban area for funding competitiveness purposes; ability to be built in phases and/or use of existing pavement; and impacts during construction.

- **Cost criteria** – measured by the order-of-magnitude cost estimates (to include design, right of way acquisition, and construction).

- **Built (Residential/Business Impacts) Environment criteria** – measured by the number of businesses and residences impacted and severity of impact; number of homes or businesses displaced; qualitative assessment of alternative’s impact on air quality and noise; and the ability to appropriately mitigate impacts.

- **Natural Environment criteria** – measured by the ability to avoid impacts to the Area of Special Interest (ASI) located immediately east of the BNSF railroad tracks, according to Exhibit C (“Upland Areas of Special Interest”) of Section 2.7.700 of the Bend Development Code.
• **Multimodal Solutions criteria** – measured by the alternative’s provision of services to users of all modes; safety and continuity of bicycle and pedestrian routes to R.E. Jewell elementary school and the future middle school and high school; directness and convenience of route; and quality of environment (in terms of grade, lighting, and drainage).

• **Safety criteria** – measured by the number of conflict points/movements; comparison of alternative against design standards; ability to divert traffic away from known safety concerns; and travel time change for emergency response times.

Five alternatives have been developed for the Murphy Road Corridor between Parrell Road and 15th Street. Three (Alternatives A-C) were presented at a TAC meeting on March 6, 2007. The fourth (Alternative D) was presented at a public open house on April 5th and a TAC meeting on April 18th. The fifth (Alternative E) was developed upon the request of the City of Bend in July 2007. All alternatives provide improvements to the existing Murphy Road corridor between Parrell Road and Brosterhous Road, as well as including an extension of Murphy Road between Brosterhous Road and 15th Street. All alternatives complete the sidewalk system between Parrell Road and 15th Street, retain and continue on-street bicycle lanes, and install a stop sign at the 15th Street intersection. A description of the five alternatives is provided below:

• **Alternative A (Continuous Three-Lane Section, Consistent with City Design Standards):** This alternative would widen Murphy Road to meet City design standards, as outlined in the City of Bend Development Code. The cross section of Murphy Road for Alternative A includes two 14’ travel lanes (one lane in each direction), a 16’ center-turn lane, and two 6’ on-street bicycle lanes, as well as 6’ planter strips and 6’ sidewalks on both sides of Murphy Road. The minimum right-of-way needed for this alternative is 80’ and since existing right-of-way is 60’, this alternative requires 10’ of right-of-way on both the north and the south of Murphy Road. Signals and left-turn lanes would be installed at Parrell Road, Country Club Road, and Brosterhous Road.

• **Alternative B (Two-Lane Section with Increased Capacity at Key Intersections):** This alternative consists of a two-lane cross section between Parrell and Brosterhous with signals at key intersections, similar to what exists today with two 12’ travel lanes (one in each direction), 6’ on-street bicycle lanes, and 6’ wide sidewalks. Signals would be installed at Parrell Road, Country Club Road, and Brosterhous Road. Between Brosterhous Road and 15th Street, Murphy Road would be comprised of two 14’ travel lanes and an extended 16’ left-turn pocket (approaching 15th Street); additionally two 6’ on-street bicycle lanes and 6’ sidewalks would be located on both sides of Murphy Road. The minimum right-of-way needed for this alternative is 48’ (less than the existing right-of-way line). An exception from
City design standards (for the section between Parrell Road and Brosterhous Road) would be needed.

- **Alternative C (Two-Lane Section with Roundabouts at Key Intersections):** Similar to Alternative B, but roundabouts would be installed instead of signals at Parrell Road, Country Club Road, and Brosterhous Road. The radius of the roundabouts is estimated to be 55’ and with entry widths of 14’ (similar to existing roundabouts in Bend). Between Brosterhous Road and 15th Street, Murphy Road would be comprised of two 14’ travel lanes and an extended 16’ left-turn pocket (approaching 15th Street); additionally two 6’ on-street bicycle lanes and 6’ sidewalks would be located on both sides of Murphy Road. An exception from City design standards (for the section between Parrell Road and Brosterhous Road) would be needed.

- **Alternative D (Reduced Width Three-Lane Section with Roundabouts at Key Intersections):** This alternative would include roundabouts at key intersections, while reducing the cross section of the roadway to minimize right-of-way acquisition between intersections. The radius of the roundabouts is estimated to be 56’ and with entry widths of 16’. From Parrell Road to Brosterhous Road, the corridor would have three 12’ travel lanes (one in each direction and a center turn lane) as well as a 6’ on-street bicycle lane and a 6’ sidewalk on both sides of Murphy Road. Between Brosterhous Road and 15th Street, Murphy Road would be comprised of two 14’ travel lanes and an extended 16’ left-turn pocket (approaching 15th Street); additionally two 6’ on-street bicycle lanes and 6’ sidewalks would be located on both sides of Murphy Road. An exception from City design standards (for the section between Parrell Road and Brosterhous Road) would be needed.

Between April and July 2007, new aerial photographs were taken and additional survey data were collected to assist in the refinement of the above alternatives. The technical team created a variation of Alternative D after this new data was available, to compare the impacts of signalized versus roundabout intersections along Murphy Road.

- **Alternative E (Reduced Width Three-Lane Section with Signals at Key Intersections):** Identical to Alternative D’s cross section, but would include signals at key intersections (Parrell Road, Country Club Road, and Brosterhous Road) instead of roundabouts. Between Parrell Road and Brosterhous Road, the corridor would have three 12’ travel lanes (one in each direction and a center turn lane). There would also be a 6’ on-street bicycle lane and 6’ sidewalk on both sides of Murphy Road through this section. Between Brosterhous and 15th Street, Murphy Road would be comprised of two 14’ travel lanes and an extended 16’ left-turn pocket (approaching 15th Street); additionally two 6’ on-street bicycle lanes and 6’ sidewalks would be located on both sides of Murphy Road. An exception
from City design standards (for the section between Parrell Road and Brosterhous Road) would be needed.

During the evaluation, the technical team, TAC, and City of Bend staff found that Alternatives D and E presented a benefit for the study area. Alternative E scored the highest in the criteria evaluation, specifically with a smaller cross section reducing the impacts to the built and natural environment, while keeping costs low. Keeping the center turn lane also increased the mobility and safety of the alternative. Alternative D scored lower because of the impacts of the roundabouts to the built environment and to the project’s cost. Access issues were also of concern for local residents. Roundabouts would also require a detour of traffic from Murphy Road during construction.

Both of these alternatives would provide the benefits of a three lane cross section but would be narrower than what is required by City design standards. However, roundabouts (as opposed to signals) provide congestion and safety improvements which warranted its advancement. Roundabouts generally decrease the severity of crashes, allow for aesthetic improvements, and meet Bend City desires to incorporate roundabouts in roadway improvements. Signals generally cost less due to a smaller size (which doesn’t require as many residential relocations), allow for traffic to travel on the road during construction, and are adequate in handling the amount of traffic projected on Murphy Road in the future.

**Recommendation:**
The City Council is not being asked for a decision at this time. The above information will be presented to the public at an open house on Thursday, October 11, 2007. Public comments about the information and the two recommended alternatives will be brought back to the Council on November 7, 2007 for their recommendation.
Meeting Summary

The City of Bend held a public open house on Thursday, October 11, 2007 at the Bend Golf and Country Club for the Murphy Road Corridor study. The main purpose of the meeting was to present five preliminary alternatives developed for the corridor and to gather feedback from the public on which alternative to recommend to the Technical Advisory Committee (TAC) and the Bend City Council. Approximately 80 people attended the open house between 4:00 p.m. and 6:00 p.m.

The project team posted a meeting announcement on the Murphy Road Corridor’s and the City of Bend’s websites and placed an ad in the Bend Bulletin for the Sunday preceding the open house (October 7, 2007). Postcards announcing the open house were sent to over 1,100 local residents, businesses, and community leaders. An email was sent to the local neighborhood association chairs, to stakeholders that were interviewed during the early phases of the project, as well as to individuals that had provided email addresses on the website or at the previous open houses.

An open house format was used at the meeting, allowing members of the public to attend at their convenience and have the opportunity to discuss the project and the five alternatives with staff members. Nick Arnis, the City of Bend Project Manager, and Dave Simmons, CH2M HILL, made two brief presentations at 4:00 p.m. and 5:00 p.m. Both presentations were followed by a question and answer session.

Attendees were encouraged to submit comments on the project by completing a comment form; these comments are attached. They were also encouraged to contribute ideas on flip charts placed around the room, however, there were no comments collected this way. The majority of the comments were received during the question and answer portion following the presentations.

The following items were on display at the open house:

- Description of open house format and how to voice comments during the evening
- Five alternatives (Alternatives A, B, C, D, and E) with graphic and textual description
- Evaluation Criteria and results of the evaluation process
Next Steps for the project

Handouts distributed at the open house included the following:

♦ Comment form
♦ Project postcard

The following comments were submitted on individual comment sheets, via the website comment form, or were offered during the question and answer period after each of the presentations.

Verbal Comments

Questions asked during the presentation sessions are listed below, followed by responses from the City of Bend and the consultant team. Questions are denoted by a diamond-shaped bullet (♦). Responses are denoted by a circle-shaped bullet (●)

♦ Why did you give up studying the extension to 27th Street?
  • Due to existing residential development, the connection would need to be further south than the current alignment of Murphy Road. It was evaluated that a southern alignment would not attract a large enough percentage of travelers to warrant this extension.

♦ Are roundabouts more efficient?
  • There are benefits to roundabouts. One of those is that if there is only one car at an intersection, they don’t need to stop, as they would at a signal.

♦ Is there less pollution and car fumes with roundabouts?
  • In theory, if fewer cars are idling there would be less pollution.

♦ Will there be medians on Murphy Road to limit access?
  • Several project alternatives (A, D, and E) include a center lane. The project team will be looking at how best to use this space. Options include a center turn lane or landscaped medians in certain sections.

♦ I am concerned with speeding in school zones. Is there any way to add speed bumps?
  • Since Murphy road is considered a collector, it is intended to move traffic. This means that calming methods like speed bumps is not typical. However, other ways to improve safety in school zones, such as providing pedestrian refuges, will be considered.

♦ The only roundabout that I can think of is near old Kenwood, but I think it is different that the alternatives you are presenting. For Murphy Road, I am concerned about kids getting from the north to the south of the street.
Since the area near Jewell Elementary is on a straight stretch of road, some concepts have been considered to increase safety, such as changing the middle lane and turning it into a pedestrian refuge/median and adding a crosswalk.

Could we save money on this project by only having the sidewalk on one side?

Yes, that would save money, but you typically find that people use both sides of the streets even if there isn’t a sidewalk. Also, the savings wouldn’t be substantial and for all alternatives except Alternative A, the sidewalk is within the existing right of way, so very little property would be taken.

If there are a lot of bicyclists and pedestrians on a street, are roundabouts safer than signals?

It depends upon the community. Since Bend has so many roundabouts, drivers are comfortable using them. Also, roundabouts tend to heighten drivers’ senses and make them more aware of pedestrians. Signals do have protected movements for pedestrians; however, roundabouts typically reduce vehicular speeds and result in fewer and less damaging injuries than stop-controlled or signalized intersections.

Why weren’t roundabouts considered on 15th Street?

Projected traffic at this intersection over our 20 year planning horizon (year 2030) does not warrant a signalized intersection or roundabout – a stop sign is expected to be sufficient. If additional traffic is anticipated in the future, a roundabout could be explored.

Aren’t roundabouts more dangerous?

The roundabouts used in these alternatives are larger than the first generation roundabouts in Bend. The City has been looking at methods to improve the design of roundabouts based on experiences from these first generation designs. Roundabouts are intended to address conflicts at intersections and they eliminate T-bone conflicts.

Would the signals be “on demand” or on a fixed sequence?

The signals would be “on demand,” meaning that vehicles driving along Murphy Road wouldn’t have to stop and wait unless there was another car at the intersection’s side streets.

What is the timeline? Where is Murphy in the City’s list of construction priorities?

Funding is a main issue. There are many corridors within the city that need to be improved. The city will need to compare the costs, benefits, and urgency of this project against others within the City.

Did the evaluation study the limited access on China Hat Road and the impacts that it will have on Murphy Road?

All future modeling included the median at China Hat Road.

Could there be a mix and match of roundabouts and signals?
• Our preference would be for a roundabout corridor or a signalized corridor.

♦ I have a house on a corner along Murphy Road. I like roundabouts since they give more of a neighborhood feeling than signals, but will you need to take property?

• Roundabouts have a larger footprint than signals. Alternatives D and E are identical except for the intersection type (Alternative D has roundabouts at intersections, Alternative E has signals at intersections). Alternative D requires more right-of-way acquisition than Alternative E.

♦ Was a right of way acquisition done?

• No, we have the footprint of the roundabout and we used aerial photographs, but we would like to study Alternatives D and E more to consider those impacts.

♦ What about the connections to the east and west? There is no way to disperse traffic at the end and we need relief to the east, since they are continuing to build there.

• We are hoping to relieve congestion soon, but really funding is an issue. We probably can’t build up only one corridor at a time, so it will be a matter of phasing and trying to maximize what we have and what we can build, such as the bridge over the railroad.

♦ Just based on what’s happened in the last six years, it doesn’t seem like there has been adequate planning. Even something built in three years will be way over due (Reed Market is already failing)?

• That is why we are having this open house tonight, to try to plan for the future.

♦ After you do this project, are you going to tear it up to put in a sewer?

• We are working with the sewer company to do more than the road and that may influence when this project is built.

♦ Is Juniper Ridge taking money away from this project?

• No.

♦ I think that there will be a lot of new traffic along Murphy with the middle and high schools and then if it is extended to 15th Street, a lot of people will take 15th and Murphy instead of Reed Market.

• The traffic models assumed that the middle and high schools would be built within the planning timeframe.

♦ When Reed Market is done, will that help Murphy?

• The improvements on Reed Market should not have an impact on Murphy Road.

♦ Could you extend the road over the railroad, without a bridge?

• No, a bridge is required to cross the railroad tracks.
Is the post office involved in this project? The reason that I ask, is that we have to cross the street to get the mail and that is dangerous with all of the traffic and future expected traffic. It would be better to have mailboxes on both sides of the street.

- That is a federal government issue and while we are trying to consolidate design, that is something that we would talk about later on during the process.

Written Comments

Questions and comments collected from the comment sheets.

Which alternative(s) should be recommended to the Bend City Council? (Check all that apply)

Alternative A: (2 in favor)
- The planter strips but I would rather have roundabouts and I have three kids that go to Jewell. Roundabouts are just more attractive and easier.
- Continuous left turn lane makes it easier for residents to get in and out of their street. However, do take more property from homeowners than Alternative E. Prefer signals. Do not like roundabouts when small radius.

Alternative B: (0 in favor)
- No responses in favor of this alternative

Alternative C: (5 in favor)
- I like roundabout option. Two lanes would be cheaper to build and slow traffic.
- Less expensive to build
- See comment below about D (Roundabouts provide safe and convenient pedestrian crossings particularly when safe haven medians are included in the design.)
- If we have save money than this.
- Roundabouts are safest and move traffic well in medium density areas. Roundabouts enhance the look of the area and conform with Bend’s westside.

Alternative D: (13 in favor)
- Roundabouts keep traffic flowing, less pollution, problem with it more cost.
- Roundabouts provide safe and convenient pedestrian crossings particularly when safe haven medians are included in the design.
- Roundabouts will help slow traffic as well as provide a true thoroughfare from 3rd to 15th on Murphy.
- The roundabouts create smooth flow for traffic. They will also slow the general traffic for the schools.
- Like roundabouts.
- Prefer the advantage of safety over footprint.
- Roundabouts!
- Roundabouts are fine with me but I would not be unhappy with lights. I think my road Tapedera will have more traffic because people will cut through to avoid the lights and maybe roundabouts.
- Prefer roundabouts for aesthetics collision reasons, and environmental.
Seems to me to be safest. My concern – though no in this plan – is school traffic in this area.

Roundabouts are great, but make them big enough for traffic to yield to emergency traffic.

A narrower roadway lowers speeds, which meshes well with roundabouts and school zone. Need roundabout at 15th because of high speeds on 15th.

Alternative E: (3 in favor)

Also like the continuous left turn lanes even though narrower than Alternative A. Prefer signals, especially at Country Club Lane for fire trucks. 50-second delay (wait) does seem too long.

Prefer signals vs. small roundabouts.

Second choice: If cost prohibits Alternative D I would go with this one sooner than later!

Do you have any other comments or questions?

I’m not happy about how close the road will be to my house.

I would suggest we add a roundabout at Murphy and 15th street. This needs to get on the CIP so it can be built fairly. Traffic will warrant this as it tries to bypass Reed Market Road.

We got an answer to our question of people cutting through Hamilton and Roats Lanes to get to Parrell from the Old Murphy (private dirt roads) the answer of course is deal with it. Thanks.

Have you considered a separated, hard surface trail along the north side of the full length of the project? Such a trail could provide safe, convenient, and attractive connections to and from schools, neighborhoods, and the commercial area along 3rd Street. Also, would provide an additional east and west trail connection to the future north/south trial east of 15th Street and to the planned CODD trail route.

D looks great!

Would like to see Bend PD step up patrols in school zone around Jewell. Increase penalties for speeders through school zones.

I absolutely support roundabouts versus traffic lights. Please no traffic light. There may be a little learning curve for some people, but the benefit far outweighs lights. Thanks.

I am definitely concerned about the Murphy Road-15th Avenue intersection and load on 15th from there to Reed Market.

I definitely do not want no left turns with median down center.

Make a number of crosswalks no matter what alternative is chosen. It is difficult to get across 3 lanes (young/old) safely if not lit with street lights/sidewalks and crossing with a push button to activate a crosswalk light! Especially with Jewell School!! Make it slow/safe!! Use better signage – flashing lights on signs, etc.

Need to treat east Bend like west Bend. Since roundabouts are on westside they should be on eastside. Also, if safety is the city’s number one priority, roundabouts are clearly safer than the alternatives. Serious consideration should be given to creating a right of way between 15th and 27th before more subdivision are approved and block all access. Since Bend ranks in top 10 of cities nationwide for percent of hybrid vehicle owners, the lower speeds of roundabout roadways mean greater fuel savings. Plug-in hybrids are coming soon. Let’s think ahead.
See the attached from Southeast Bend, Southwest Bend, and Old Farm Neighborhood Associations (see scanned and attached document).

Website Comments

Questions and comments collected from the online comment form or from emails sent directly to the project team members.

Roundabouts and landscaping are desperately needed on the east side of Bend. I would like to see a road with two lanes and the center lane for left turns and landscaping with landscaped roundabouts to beautify, slow, and calm traffic. Should I send my comments to the city councilors?

Thank you for a good meeting on Thursday. Here are some of my thoughts which I will also be passing along to Southwest Neighborhood Association and South East Neighborhood Association.

1. Build a roundabout at 15th and Murphy. 15th has a roundabout at Bear Creek and will have roundabouts at Wilson and Reed Market. I believe this will keep the continuity for the roadway. A signal at this intersection would be a break from the city's design for the 3 intersections to the north. Also, Dennis Pahlisch wants to have a roundabout as an entrance to his Bridges at Shadow Glen community. If the roundabout is part of the study and the resulting CIP, he will build half of it. I'm willing to bet he'd also place artwork in the roundabout which would be a definite plus for Southeast Bend.

2. Include a turn lane and a pedestrian crossing at Jewell. These will provide for safety of children as well as drivers.

Old Farm District Neighborhood Association board would like to request that bus turnouts be part of the plan for Murphy Road. Reasons:
1. Murphy Rd. is/will be a busy east-west corridor for Bend. Bus routes will definitely be in the corridor's future.
2. Without pre-planned bus stops, cars are forced to stop behind buses as they pick up customers (as they do in Portland). Allowing that situation to occur by default does not seem reasonable when Bend is in a planning process to avoid congestion.
3. Currently an elementary school is located on Murphy; a middle school will be built on it within 10 years and will a high school on Country Club Rd. Students will use city buses to access the middle and high school.
4. Bus turnouts give passengers a safe area for entering and exiting the bus.

I am unable to attend this next meeting but I am very interested in the project and did attended the last meeting. If you can't do the whole project at once, my recommendation would be don't worry about the existing Murphy Road, get the new part to 15th underway.

And just when do we SW residents get to hear about the frontage road that's supposed to connect to Murphy? That @$%& barrier is a huge inconvenience, making me drive two to three miles out of the way each time I want to travel to east Bend.