



# Meeting Notes

**Meeting:** Butte Interstate Traffic Study, IM 002(672), CN 5098 – Progress Meeting

**Date/Time:** April 16, 2008 – 9:00 am

**Location:** Butte District Conference Room

**Attendees:**

Miki Lloyd – Consultant Design Project Engineer, MDT	Lloyd Rue – FHWA
Danielle Bolan – State Traffic Engineer, MDT	Jeff Patten - FHWA
Roy Peterson – Traffic Project Engineer, MDT	Corey Lang – Project Manager, PBS&J
Jeff Ebert – Butte District Administrator, MDT	Dave Millar – Senior Engineer, PBS&J
Joe Olsen – Butte District Eng. Services Supervisor, MDT	Nathan Boone – Project Engineer, PBS&J
Joe Walsh. Butte District Projects Manager, MDT	
Lee Alt – Butte District Traffic Eng., MDT	

**Agenda Items:** See attached agenda

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**Introductions/Purpose**

- Attendees from FHWA, MDT, and PBS&J introduced themselves.
- This meeting was held as a replacement for the April teleconference. It was decided that it would be easier and more efficient to meet in person to discuss the options designs. The focus was on reviewing and screening the option designs, discussing prioritization of projects, and discussing the Draft Phase 2 Report.
- Options for each interchange that were identified in at the option development workshop in December were developed by PBS&J and sent out prior to the meeting.
- Each interchange and the associated options were discussed.

**Rocker Interchange**

- PBS&J presented and reviewed the three options carried forward from the option workshop. This included two options for R1 the roundabout option. Additionally PBS&J brought another option (R4) for discussion. R4 would slightly realign the ramps so that the ramp terminal intersections are moved closer to the bridges. Each ramp terminal intersection would be stop controlled (3-way).
- Concerns about truck turning movements and the relation to the stop bars on the cross roads were discussed for R4. After discussion on the truck issues and the overall benefits and issues associated with this option it was decided to drop it from further consideration.
- The R1A roundabout option (single roundabouts combining ramps and frontage roads on each side) was identified as the preferred option. This roundabout option does a better job of eliminating the issues associated with the closely spaced frontage roads by combining the intersections into one roundabout. R1B would only slightly improve the truck turning movement operations between the ramp terminals and the frontage roads. R1B will be dropped from further consideration.
- Discussion on the appropriateness of roundabouts at this interchange because of the high truck volumes took place. It was noted that the truck volume percentage is high, but overall this interchange still handles a relatively small volume of traffic. Additionally the proposed roundabouts would have truck aprons were deemed necessary, but the outside edge of asphalt would be a rural design (no curb and gutter) so oversized loads could still navigate each roundabout.

- After discussing the benefits and issues associated with Rocker R2 (dropping EB off-ramp onto frontage road) it was decided the benefits were no greater than the roundabout option, but the costs were significantly higher. For these reasons R2 was dropped from further consideration.
- Similarly the SPUI option (R3) was dropped from further consideration because of the extremely high costs and the urban operational characteristics in this rural area.
- Rocker Option 1A will be the only option carried forward.
- It was also decided that the continuous EB on-ramp auxiliary lane should be identified as an individual project.

### **West Butte Interchange**

- The discussions on West Butte focused on the interchange options and the mainline realignment and improvement options. The realignment of the mainline was shown as part of Options WB2 and WB3.
- Option WB1 removes the problem of the left-side off-ramp and improves the EB mainline curve radius while minimizing costs.
- Option WB2 carries such a high cost and large footprint that it was decided that it is not feasible to make West Butte a full movement high speed interchange. Option WB2 will not be carried forward.
- Design WB3 works, but it will be modified to reduce costs. It will be modified to reuse as much of the existing mainline as possible.
- It was decided that a complete realignment of the mainline between West Butte and 1-mile west of Montana Street is not feasible because of the high costs and right of way requirements. PBS&J will modify the designs to improve each direction of the mainline. The mainline improvements will include increasing the curve radii to higher speeds (i.e. – 70, 75, 80) and replacing the bridge structures.
- The question on whether a service level interchange (diamond) can be used at West Butte without reclassifying I-115. Using a service type interchange would eliminate free flowing movements that are used on system level interchanges for freeway to freeway connections. FHWA will look into the potential use of a service level interchange at a freeway to freeway connection.

### **Montana Interchange**

- Designs M1 (signal) and M2 (roundabout) are still both viable options. The access control proposed for both options will have some local property/public opposition, but it is appropriate based on safety concerns with the current configuration and interstate access requirements.
- PBS&J is still in the process of creating the exhibit for Option M1 (signal).

### **Harrison Interchange**

- Both Options H1 (SPUI) and H2 (tight diamond) will be carried forward. These options are the complete reconstruction options. Each option has a very high price tag because of the need to replace the mainline bridges and raise the mainline. Additionally, each option still has issues with the proximity to the Dewey Blvd. intersection. Particularly the H1 SPUI option because the storage for the double left turn lane in the NB direction conflicts with the Dewey intersection so there is a potential for some lane continuity issues.
- Harrison Options H3 - H6 were discussed as individual elements. Other than H5 all will be carried forward along with a new WB on-ramp option (H9). H9 will involve eliminating the Westside WB On-Ramp and forcing all WB on movements to use the loop ramp, which will be improved to meet acceleration standards (a SB left turn lane will be added on Harrison).
- Options combining these options will be created so that full options using the elements from H3-H9 can be compared against the full reconstruction options. For instance the combination of H3 & H9

will become H20, H4 & H6 will become H21, H3 & H6 will become H22, and H4 & H9 will become H23.

- PBS&J brought an alternative H3 (improve EB Loop off-ramp), which included separating the deceleration lane from the mainline and using a new independent bridge instead of widening the existing. This option was presented because it eliminates the potential vertical clearance issue of widening the existing bridge and provides a deceleration lane that is separated from the high speed mainline traffic.
- Discussion on the adequacy/design life of the mainline bridges took place. It was determined that the remaining service line should be investigated so that complete replacement of structures can adequately address in each option. MDT will look into the remaining service life and ability to seismically retrofit each structure at Nissler, Montana, Harrison and East Butte. PBS&J will also review each structure for ability to seismically retrofit.
- It was decided that option H5 (relocating WB on-ramp to Amherst Intersection) can be dropped from further consideration, because the cost associated with the ROW acquisition and the wetland mitigation would be significant.
- Option H6 will be modified to include a realigned WB off-ramp.
- Option H4 has potential sight distance issues based on the spacing of the intersection with the existing bridge and Dewey Boulevard. Pedestal signals in the SB direction will improve the sight distance to the signals, but this close spacing is a potential operational issue with this option.
- MDT requested the Synchro files for each option that is taken forward so that they can look at how the signal timing operates. Particularly on the H4 option where the EB-off ramp and Dewey Boulevard operate as a coordinated signalized intersection. PBS&J will send the Synchro files for review.

### **East Butte Interchange**

- It was decided to drop EB 1 from further consideration because it is only a partial improvement option and the high price tag and adjacent property impacts are significant. The same high speed ramp is used in EB3.
- EB3 will be modified so that the EB 15/90 to NB 15 ramp does not diverge at an angle, but through an auxiliary lane.
- Options EB2 and EB3 will be carried forward. EB2 is more of a short-term (20 yrs) plan because of the lower design speeds, and EB3 represents a future ultimate type design.
- EB4, Our Lady of the Rockies, was briefly discussed and the option does not appear to be feasible. The grade for the SB off-ramp would be between 10% and 12%. The Supreme Court ruled that no traffic should run under the I-115 structure to State Rd. Also, State Rd. is a private road that cannot be used for public purposes. This option will be dropped from further consideration.

### **Continental Interchange**

- C1 is viable option, however it does require right of way and the roundabouts offer a more feasible option because of the ability to prolong the life of the two lane over pass structure (elimination of need for left turn pocket as traffic increases). For these reasons C1 will not be carried forward for further consideration.
- Discussion on the two roundabout options C2A and C2B took place. It was decided that Option 2B (separate Westside roundabouts) would be carried forward because it can be more easily implemented as separate pieces. This option will work well as development takes place because individual roundabouts can be constructed as needed.

- C2A is a good option, but C1B gives the option to phase construction, whereas C2A does not. The cost for C2A would be higher due to the larger amount of earthwork for the roundabouts and ramps on the west side.

### **Status of Minor and Safety Type Projects**

- PBS&J presented an updated Minor and Safety Type projects. Upon reviewing this list PBS&J determined that it would be difficult to compare projects in this list to the complete interchange options because most of the projects in this list are really project elements (ITS elements, guardrail, etc.) This update includes combining minor and safety type project elements into option packages. This is particularly the case for the ITS elements, which were combined into packages for incident management, and traveler information. A total of twelve packages were identified and additional elements that can be considered individual projects or add on's to existing or proposed projects were identified.
- In the Traveler Information Package, “kiosks” should be removed. Lloyd Rue feels that kiosks are not being used much anymore and could potentially be replaced with “wireless.”

### **Discussion of Prioritization of Projects**

- Discussion took place on how to prioritize the options/projects that remain. The ultimate goal of the project is to identify projects that could be implemented by MDT or others as money becomes available. Because there will be a large spectrum of project types it was decided that the projects should be grouped into three categories: high importance, medium importance, and low importance.
- There was discussion of also utilizing some form of cost benefit analysis. This will most likely be a qualitative analysis. PBS&J will work on a methodology for discussion at the next teleconference.
- The draft of the prioritized lists will be available by the next conference call on May 9, 2008.

### **Draft Phase 2 Report**

- PBS&J handed out a Draft Phase 2 Report Outline. The only recommended change was to change “Legislative Issues” to “Institutional Issues.” This is to enable the section to cover both legislative and transportation commission related issues, and the potential reclassification of (I-115).
- PBS&J will send out a revised outline as part of the agenda for the May teleconference.

### **Schedule and Budget Update**

- The project is currently on schedule and is below the projected budget. The schedule includes submitting a draft Phase 2 Report in early June.
- The addendum to include the Nissler Interchange and complete both Phase 1 and Phase 2 analysis was not approved by MDT because of overall budget tightening. However, PBS&J indicated that the project is comfortably within budget and the Nissler interchange is such a logical piece to include in this study that two option designs will be developed and included in the Phase 2 report. A blanket statement/discussion highlighting similar deficiencies at East Butte will be used instead of completing the full phase 1 analysis. Option N1 will be improvements to the existing configuration (to improve accel/decel lengths) and N2 will be a high speed full movement interchange.
- PBS&J distributed copies of the draft Environmental scan memo.

Action Item	Responsibility	Deadline
FHWA will investigate the use of a service level interchange at a freeway to freeway connection (I-15/90 @ I-115 – West Butte)	FHWA	May 9 <sup>th</sup>
MDT will investigate the service life of bridges at Nissler, West Butte, Excelsior Montana Street, Harrison, and East Butte	MDT	May 12 <sup>th</sup>
Send MDT Synchro Files for review	PBS&J	May 5 <sup>th</sup>

Please contact **Corey Lang** with **PBS&J** at **406-599-1479** (or via email at [celang@pbsj.com](mailto:celang@pbsj.com)) if there are any changes or questions with these meeting notes. These notes will be considered final unless comments are received within seven days of distribution. Although comments will be incorporated, as appropriate, only major revisions will be redistributed.