

Steptoe Street, Richland, WA – Tri-City Railroad (TCRY)

Diagnostic Meeting Notes – Thursday, January 26, 2017

A diagnostic meeting was held on-site at the above reference crossing on Thursday, January 23, 2017 to review the conceptual layout for the proposed realignment of Tapteal Drive east of the crossing and the construction of Tapteal Drive west of the crossing.

Those attending the on-site meeting are shown on the attached sign-in sheet and listed below:

Pete Rogalsky – City of Richland
Jeff Peters – City of Richland
Spencer Montgomery – JUB Engineers
Rick Door – JUB Engineers

Terrel Anderson – Union Pacific Railroad
Randolph Peterson – Tri-City Railroad
Nicole Jackson – CTC, Inc.
Tim Oster – CTC, Inc.

Those who were invited but unable to attend due to conflicts:

John Haakenson – Port of Benton

John Deskins – City of Kennewick

Those who were invited but unable to attend due to a delayed flight:

Rick Wagner – BNSF Railway
Rick Van Wey – BNSF Railway

Betty Young – UTC
Paul Curl - UTC

The main purpose of the meeting was to review the proposed alternatives developed by the City and its consultants, JUB Engineers and CTC, Inc., and provided comments and/or additional recommendations for consideration.

The City provided the history of the project and the background concerning previous meetings and options that were considered prior to obtaining the services of CTC. CTC evaluated two options which included a Split-T intersection and a 4-Leg Intersection with the railroad through the center of the intersection. The City provided copies of the preferred option which is the 4-Leg Intersection (see CTC report dated January 17, 2017). Ms. Jackson provided an overview of this option along with the reasons the City and CTC believed this to be the best option for safety, as well as, efficient traffic flow through the intersection.

Union Pacific Comments:

Mr. Anderson voiced the following concerns related to this layout:

1. Motorcycles safety due to the angle of the crossing; and
2. Safety issues at a similar crossing in Arizona where the track ran through center of crossing.

In response, Ms. Jackson referenced the CTC report dated January 17, 2017, Section 4.2, which discusses this issue. The existing angle of the track with Steptoe Street does not change under the

Split-T option, and all motorcycles would cross at a severe angle, as it exists today. However, in the proposed 4-Leg intersection design, all left and right turning motorcycles would cross the track closer to a 90-degree angle, resulting in improved safety for riders.

In response to the crossing in Arizona, Ms. Jackson explained that CTC had inspected the crossing in Arizona and there are several safety improvements in our proposed plan for Steptoe Street that are not present at the crossing in Arizona. The crossing discussed is on Elliot Road (DOT# 741575S) in Tempe, Arizona. There has not been a crash at that location since 2004. The most important difference is that Elliot Road does not have gates. The crossing also has simultaneous preemption which can result in the railroad flashing-lights and automatic gates activating while the traffic signal is still displaying a green for the approach to the crossing. Also, the crossing does not have a sufficient amount of clearance time.

The proposed design plan for Steptoe Street includes the installation of railroad flashing-light signals and automatic gates on each of the approaches that will prevent vehicles from entering the intersection once the approaching train is detected. The new design will include sufficient clearance time for a vehicle that legally enters the intersection to clear the intersection prior to the arrival of the train. The railroad warning system will also provide advance preemption time which will allow the traffic signal to transfer to an all-red indication prior to the activation of the railroad flashing-light signals and lowering of the automatic gates.

After discussing these issues, Mr. Anderson was satisfied that his safety concerns have been addressed in the new design.

Tri-City Railroad Comments:

The Tri-City Railroad had a few additional concerns during the site diagnostic visit as follows:

1. Sight obstruction located in the southwest quadrant; and
2. Danger to bicyclist crossing over the track in the street due to the angle of the tracks.

In response to the sight obstruction, it was agreed that the mound of dirt located to the south and west of the track presently restricts the view of northbound motorists being able to see a train on the approach. After discussing the proposed design plan, it was agreed that the extension of Tapteal Drive through the southwest quadrant will eliminate that obstruction.

The angle of the crossing can cause issues for bicyclist and Mr. Peterson was concerned about riders in both directions but especially coming south down the hill and over the crossing at a higher rate of speed. After much discussion, it was agreed that the best solution was to divert the bicyclist onto the sidewalk which will be designed to cross the track at a 90-degree angle. This application is similar to bicycle treatment at roundabouts. The City will design an access point from the street to the sidewalk for bicyclists and advance signing directing them to the sidewalk.

After discussing these issues, Mr. Peterson was satisfied that his safety concerns will be addressed in the new design.

BNSF Comments:

BNSF indicated via email on April 18th that they had no additional comments regarding the diagnostic notes.

Group comments:

Railroad Cantilevers/Traffic Signals

The team discussed the possibility of visibility issues if the railroad cantilevers were to remain and the traffic signal indications installed on the southbound and northbound approaches. After discussing the locations of equipment, the team decided the best option was the removal of the railroad cantilevers and the installation of median gates. It was noted that the medians need to be a minimum of 10 feet wide to accommodate the median gates. This option provides railroad flashing-light signals for the two outside lanes. The interior lanes will have traffic signal indications that will be red when a train is approaching. With advance preemption, the traffic signal will provide a red indication for all approaches prior to the activation of the railroad flashing-light signals and automatic gates. This will stop all traffic prior to the crossing which will be the normal stopping location even when trains are not present. This option was decided as the final recommendation. The UTC later confirmed via email on February 23rd that it also supports the group's recommendation to remove the cantilevers and install median gates.

Pedestrian Treatments at Crossing

The proposed plan routes the sidewalks to a location where they can cross the track at a 90-degree angle. Detectable warning will be installed on each approach to the crossing. The proposed plans indicate the installation of pedestrian gates on each approach. The team discussed the need for pedestrian gates and the City stated that the current number of pedestrians using this crossing is low. However, the City did believe that the new development would increasingly generate higher volumes of pedestrians. Mr. Anderson requested that the team consider not adding the pedestrian gates based on our discussion of pedestrian activity in the area. While the installation of pedestrian gates can provide an increased safety factor, it also has some inherent problems which must be considered. The installation of pedestrian gates would also require extensive fencing to ensure pedestrians remain on path, maintenance of several more gate mechanisms (minimum of 4 for this application), the installation of an exit gate or mechanism for pedestrians to get off the tracks if the gates descend while they are crossing, and potential difficulties for bicyclist to maneuver through the fencing and gate systems. The diagnostic team agreed that while it is believed that pedestrian traffic will increase, the amount of pedestrian traffic was unclear and therefore, the diagnostic team concluded that flashing-light signals would be the proper warning devices for pedestrians at this location. The team decided to recommend the installation of railroad flashing-light signals, back lights and bells at each pedestrian approach but not to install any pedestrian automatic gates. After further discussion and consultation following the diagnostic meeting, the UTC also agreed with the approach of not installing pedestrian gates.

Crosswalks

It was mentioned that the northbound crosswalk west of the track on Tapteal Drive had an offset in the median that required pedestrians to walk several feet west while in the median. The team did not agree with this plan and requested the City redesign the crosswalk to eliminate the offset. The City agreed and will make the change to future plans.

Summary of Recommendations:

- Proceed with design of 4-Leg Intersection
- Remove railroad cantilevers and install median railroad flashing-light signals and automatic gates
- Provide railroad flashing-light signals and bells for each pedestrian approach to the crossing
- Provide detectable warning for each pedestrian approach to the crossing
- Provide access to sidewalk and advance signing for bicyclists to divert them from the street to the sidewalk so they can cross the track safely at a 90-degree angle
- Redesign the crosswalk west of the track to eliminate the offset

Reports Reference:

CTC – Review of Highway-Rail Grade Crossing Alternatives – January 17, 2017

J-U-B Engineers, Inc. – Tapteal Drive West Traffic Impact Analysis – January 2017

Attachments:

A – Diagnostic Meeting Sign-In Sheet

B – Preferred Conceptual Layout



Steptoe-Tapteal

Diagnostic Meeting

January 26, 2017

Sign-In Sheet

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