



City of Seattle
Department of Transportation

March 30, 2010

Austin Pratt
Bridge Administration Commander (OAN)
13th Coast Guard District
915 – 2nd Avenue, Room 3510
Seattle, Washington 98174-1067

Dear Mr. Pratt,

In accordance with the Code of Federal Regulations, under Title 33, Chapter 1, Section 117.35, "Temporary change to drawbridge operating schedule," the City of Seattle requests a temporary long-term change to bridge operations for the lower Spokane Street Swing Bridge, as follows:

- Bridge openings for vessel transits upon 72-hrs advance notice, on weekdays between 3:00 p.m. and 6:00 p.m.

Bridge openings outside of the Monday-Friday PM peak hours would remain unchanged.

The change in the drawbridge operating schedule is requested to go into effect on Monday, May 17, 2010, or as close to that date as practicable, and to remain in effect until June, 2011. The temporary change to the drawbridge operating schedule is made necessary by the widening of the Spokane Viaduct which connects West Seattle with downtown Seattle and Interstate 5. The viaduct is being widened on its north side which necessitates removing and replacing entrance and exit ramps. The entrance ramp that connects First Avenue South with the Spokane Viaduct will be demolished on or about May 17, 2010 – this is the specific construction event that necessitates a change in bridge operations, as explained below.

Reasons for Expediting this Request

Site constraints that came to light during the early phases of construction necessitated changes in construction sequencing. As soon as the Seattle Department of Transportation (SDOT) learned of the site constraints and the change in construction plans, the agency began to work on mitigation plans. We alerted the U.S. Coast Guard (USCG) to the possible need to change the bridge operating schedule in January, 2010. Working with the Port of Seattle, we have discussed this matter with the affected waterway users, as well as with maritime labor interests.

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Under the circumstances, we are requesting that the USCG expedite its review of this request, to allow the changes to bridge operations to begin May 17, 2010.

Effect on Motor Vehicle Traffic

Bridge openings average 12 minutes each, with a range from 3 minutes to 43 minutes during the PM peak period. When the lower Spokane Street Swing Bridge opens for vessel traffic, the additional volumes of the detoured transit and commuter traffic will quickly overwhelm surface streets and signal operations in the area, particularly from 3:00 p.m. to 6:00 p.m. Even with the requested bridge opening restrictions, travel times along this corridor will become unpredictable as the day progresses due to building volumes and increasing delay. To illustrate this, SDOT has chosen the SW Spokane Street/SW Delridge Way/SW Chelan Street/West Marginal Way SW intersection to quantify the impacts of the closure. Currently, this intersection operates at a level of service (LOS) D with an average weekday off-peak delay of 43 seconds per vehicle, similar to the weekday PM peak period delays of 44 seconds per vehicle.

For this analysis we are using our most recent twenty-four hour/seven day traffic counts for the First Avenue westbound on-ramp. The counts show vehicle volumes building from early morning, with AM peak volumes of 500 vehicles, to the afternoon, with PM peak volumes of 1,040 vehicles.

We are also using our current 2009 traffic volumes and signal timing plans for the SW Spokane Street/SW Delridge Way/SW Chelan Street/West Marginal Way SW intersection and signal operation analysis:

	<u>Off-Peak LOS / Delay</u>	<u>PM Peak LOS / Delay</u>
Existing Conditions	D / 43 sec/veh	D / 44 sec/veh
With Detoured Traffic	F / 116 sec/veh	F / 170 sec/veh

The ramp closure will reduce level of service along the low-level Spokane Street bridge corridor to LOS F, without openings. Delay will increase during the PM peak period to almost 3 minutes per vehicle (without closure). Every time the bridge opens, the delays and back up will increase. Moreover, drivers will experience a platoon effect where delays associated with bridge openings will disrupt traffic for an hour or more after the opening has been completed (because of the lag time associated with each vehicle in the system).

Any possible detours require circuitous pre-planning by commuters. Detour routes to West Seattle include accessing the high-rise West Seattle Bridge from I-5, or re-routing to the First Avenue South Bridge (the 16 Avenue S/South Park Bridge may close in June, 2010). The length and travel time involved with each of these detours indicates that commuters are unlikely to re-route, and will continue onto the lower level swing bridge. We have estimated that approximately 30 percent of the PM peak volumes will find alternate routes.

When the on-ramp closes on May 17, the additional volumes of detoured traffic will create a constant level of congestion even without bridge openings. This congestion will affect commuter and general purpose traffic, along with all industrial access in the area. Freight transportation to and from the Duwamish Industrial and Harbor Island Industrial areas will be caught in the same delay. The restrictions to bridge openings that we are requesting are critical to maintaining a manageable, though high, level of congestion.

Effect on Transit

Seven King County Metro Transit routes use the First Avenue westbound on-ramp to serve West Seattle; a total of 27 buses transit the corridor during the PM peak period (see attachment), carrying 5,940 passengers daily. More importantly the buses are part of networked routes that on other legs of their journey carry another 11,000 riders daily to and through North Seattle. In other words, delays and unpredictable travel times across the West Seattle Bridge will affect approximately 17,000 transit users daily. SDOT and King County Metro have determined that there is no feasible alternate route for transit. Factors in this determination include non-availability of comparable connecting infrastructure, local rider impacts in the re-route area, and the need to continue to provide service to major Seattle population and employment centers.

Effect on Waterway Operations

We used SDOT's 2009 Bridge Tenders' Logs that document every bridge opening requested by a vessel passing. Fifty-one weeks of data were used to compare the number of bridge openings to the number of openings that occurred during the requested restriction period. This comparison should show the level of impact to the vessel community.

We had 1,040 weekday bridge openings for vessel traffic. Of those, 157 occurred during the requested restriction time period. Those vessels comprise approximately 15 percent of the total weekday vessel trips through the bridge; this translates into approximately two to three service interruptions a week during the requested PM peak restriction.

During our March 19, 2010 meeting with the port, vessel operators, marine pilots, and maritime labor, the waterway operators explained the congested nature of the waterway. They explained how some commercial vessel traffic, for example most Alaska-bound barge traffic, is not draft-dependent and can operate without regard to water depth or tides. Other businesses, for example aggregate and bulk materials haulers may be restricted to passage during high tides. Vessel captains plan departure and arrival times using the tides as one major constraint. If a vessel cannot transit during high tide, the cost of the operation disruption can quickly reach unacceptable levels. The waterway operators also said that those types of callings are scheduled in advance and with proper coordination, the vessel operators could operate under a rule where they would be required to give reasonable advance notice. (Coordination could be provided by marine pilots or the USCG.)

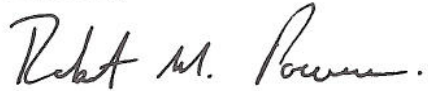
Review of tide tables shows that high tide coincides with the PM traffic peak period on over 90 days over the next 13 months. Review of the bridge tender logs shows that, over a 51-week period, 31 vessels of over 5,000 Gross Register Tonnage (GRT) transited during the PM peak period. We believe that with appropriate advanced notice, we can make drivers and commuters aware of bridge openings and encourage them to use less convenient routes, thus mitigating both the effects of the construction project and the bridge openings. During the period of the advance notice, SDOT would: (a) notify key partners such as King County Metro and Washington State DOT; (b) issue press releases and other public communications (SDOT Blog, SDOT Twitter); and (c) utilize active traffic management tools, such as posting messages on the large Digital Message Signs that have recently been installed along the Spokane Viaduct and connecting roadways. (These signs largely face in-bound, not out-bound motorists. With advance notice, we will be able to notify in-bound drivers of the PM peak period bridge openings.)

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Our proposal seeks to balance all the transportation needs in the corridor – marine, transit, freight, and general-purpose vehicles. We believe it is in the broad economic interest of the Seattle region.

Thank you for your consideration of this request.

Sincerely,

A handwritten signature in cursive script that reads "Robert M. Powers".

Robert M. Powers, P.E.
Deputy Director
Seattle Department of Transportation

Attachments:

- Code of Federal Regulations, 33CFR117.35
- City of Seattle Traffic Count Data
- Syncro 7 Signal Optimization Reports
- Transit Routes Using the Spokane St. corridor
- Participants in the March 19, 2010 roundtable discussion
- City of Seattle 2009 Lower Spokane Street Swing Bridge Tenders Logs