

MEMORANDUM

To: Mr. Phil Williams
Title: City of Edmonds, Public Works Director
From: Edward Koltonowski 
Subject: Cherry Point Coal Export Facility Rail Operations-City of Edmonds; GTC #11-036
Date: May 22, 2012

This memorandum is to identify some of the possible rail impacts associated with transport of coal to the proposed Cherry Point Facility affecting the City of Edmonds and its access roads. It identifies the potential impacts on the City's downtown core area of Main Street, access to the WSDOT Ferry Terminal, as well as several key approach roads to the City, such as Dayton Street to the south.

The purpose of this preliminary report is to provide City leaders and interested stakeholders with information that may be useful as the City prepares comments on the scope of the Cherry Point Environmental Impact Statement. We understand the City may wish to conduct additional data collection and modeling and hope that this preliminary research provides some baseline data to help understand possible impacts and the issues involved in assessing any proposed mitigation.

1. Project Description and Expected Delays

We understand a terminal capable of exporting 48 million tons of coal per year is proposed north of Bellingham. GTC understands that the probable route of the coal delivery trains for Cherry Point would be from Wyoming/Montana, through Spokane, along the Columbia River and then up from the south from Seattle north to Bellingham and then to Cherry Point, along the Burlington Northern Santa Fe mainline. The route follows the rail tracks that run north-south directly through the west part of the City of Edmonds, Washington.

According to the applicant's *Project Information Document* (Feb. 2011), full build out of the coal export facility would result in 9 full northbound trains along this line a day, which equates to 18 train trips a day; however, nothing in the project materials specifies a maximum. The 18 trains per day round trip could be increased if export capacity of the proposed port were expanded in the future. Some return trains may return over the Stevens Pass route, bypassing Edmonds, but the railroad and project proponent have not provided details on anticipated traffic or routing. Each train may be over 1.5 miles long, which at 50 miles per hour would mean approximately 3-4 minutes between train approach warning/gate closure and ultimate gate opening. At 35 miles per hour it could take approximately 6-7 minutes to clear a crossing as the siding near this area is rated for 35mph. The 18 trains per day would equate to approximately one additional coal train every 1.3 hours, all day long, in addition to existing train traffic. Thus, train crossing delays in Edmonds can be estimated to increase with an additional train every *every 1.3 hours*, if train trips were evenly spaced throughout the day and night, at between 3-4 minutes and 6-7 minutes depending on if they are having to use sidings or not. Also the proximity of siding for AMTRAK or Freight near a crossing can have a double impact. As a waiting train leaves the siding it has to accelerate up to speed taking longer to cross and still triggers the crossing arm for the nearby street crossing ahead. Thus it can mean the crossing arm is triggered before waiting queues are cleared from the last train and therefore have continual impact for over 10 minutes.

2. Affected Crossings

The BNSF rail way tracks bisect the western waterfront area of Edmonds (including the State Ferry terminal and beaches) from the east side of Edmonds that includes the downtown business core and residential area. The City of Edmonds only has two roads (Dayton Street and Main Street) connecting its downtown business core/residential areas to the waterfront area, both of which are directly affected by the proposed increase of rail traffic and both crossings are all at grade/gate controlled.. Due to these constraints, our preliminary review indicated that the additional trains from the Cherry Point operations could have a potential significant impact on the commercial district and quality of life for the City residence. Of primary concern are potential backups onto main street and likely drop in level of service on city streets and emergency response, thus affecting future development potential along the waterfront.

3. Analysis of Potential Impacts

We have the following comments based on preliminary research:

Due to a speed restriction approach warning, train travel through Edmonds downtown means the barriers are down for approximately 3-4 minutes (over 200 seconds) for the larger (over one mile long) freight trains. This is the equivalent of 2-3 continuous red lights cycles in a row for a normal signal on Main or Dayton. Note: The proximity of siding for AMTRAK/commuter train or Freight near a crossing can have a double impact. As a waiting train leaves the siding it has to accelerate up to speed taking longer to cross and still triggers the crossing arm for a street crossing ahead. Thus it can mean the crossing arm is triggered before waiting queues are cleared from the last train and therefore have continual impact for over 10 minutes. With the long coal trains, increased use of sidings as train volume increases the impacts to the States Ferry service. This cumulative impact should be reviewed in any environmental impact review of the coal trains.

1. The Institute of Traffic Engineers identifies an average delay of over 80 seconds as level of service F. The City's standard for arterial roadway operation is LOS D, i.e. allowing only 55 seconds as the worst delay for normal conditions and LOS C for collectors (Dayton). The addition of 16-18 trains per day would call into question whether the City can maintain its adopted LOS D standard and LOS C standard for these intersections. This may be central to future concurrency determinations by the City affecting future development projects.
2. The City's comprehensive plan chapter 4 identifies both Dayton and Main crossing as a walkway and bike lane crossing for the pedestrian and bike plans. The plan has identified a high priority of better connecting the downtown to the waterfront through increased pedestrian and bicycle access. The short, medium and long bike routes identified in the City's plan all run parallel to the rail line in the Main Street area. An additional crossing from non-motorized traffic has also been identified in the City plan. Unless this crossing is grade separated the 16-18 additional trains for the Cherry Point facility would make any such additional crossing more dangerous/complicated. A May pedestrian count recorded over 200 pedestrian movements in just an hour at the Main Street/Railway Avenue crossing intersection. A potential mitigation for the additional freight traffic may be to assist in the construction of a non motorized grade separated crossing for the downtown area. Given the geography and configuration of the Ferry Terminal, it would likely be very challenging to create a grade separated crossing at Main Street.
3. Railway Avenue is a major transit hub for the city with 7 different transit routes connecting with the waterfront and AMTRAC/Sounder station. Transit crosses Dayton and Main with all the routes. The impact to community transit by the 16-18 additional trains for the Cherry Point facility should be assessed and mitigated.
4. With the increase in number of long coal trains at the waterfront and ferry access crossing, there are no alternative east-west grade separated crossings as the east-west route becomes degraded with the increased coal trains. This is a particular issue during summer peaks, with the beaches and ferry route. Mitigation could be a grade separated crossing to the waterfront similar to many other jurisdictions, but it may require a complete relocation and rebuild of the Ferry Terminal, and would likely involve significant expense. Note the prior plans to relocate the Ferry Terminal have been put on hold indefinitely with 20-30 year timeframes being discussed. The 2005 Edmond Crossing FEIS

identified the need for relocation with projected train increases that did not even foresee the Coal train increase. Additionally the Cities plans to unify the downtown and waterfront could be significantly hampered without the relocation or grade separated crossings particularly with the projected increase in freight trains.

5. There is a probable issue concerning emergency services response times, in a scenario where the only reliable east-west crossing between the waterfront to the west and the services area to the east is Dayton and Main which are closed at the same time when a freight train crosses. Adding 16-18 additional trains per day to service Cherry Point could tip the balance at a critical time when emergency responses are needed. Given the fact that the Main Street crossing is the only egress from the Ferry Terminal, this will create additional concerns in the context of emergencies that occur either on the ferries or where ambulances utilize the ferry crossing. The increased residential and commercial plans along the waterfront as well as existing ferry and scuba diving activities will all increase further future emergency vehicle response needs to the other side of the tracks.
6. Within the last 5 years there have been 4 accidents at the Main Street crossings including two gate collisions.
7. Already today the presence of a long freight train during the peak hours creates separation from the Cities waterfront amenities and businesses. The Cities annual counts show over 6,000 daily trips crossing Main Street and US DOT federal crossing information shows over 8,500 daily trips cross the Dayton tracks on an average day know that summer peak volumes are considerably bigger. Therefore the rail crossings in the city have nearly 15,000 daily vehicles crossing a day. With the additional coal trains that will likely take a minimum of 3-4 minutes to cross (without accounting for delays or slower train speeds) the cumulative additional delay to drivers is potentially significant. Any environmental review of rail line impacts should study this current condition and likely increased impact, including costs to mitigate the effects. One form of mitigation is to create grade-separation, with either a tunnel or a bridge. The City may wish to request that mitigation as part of the environmental review process for Cherry Point.
8. Puget Sound communities within the Sound Transit service area, the State, and the Federal Government have recently invested heavily in improved passenger train services for the north end. Freight traffic on the rail line between Seattle and Everett (and transiting Edmonds) could increase from the approximately 40 a day (based on US DOT crossing inventory Information) to 50-55 with the Cherry Point proposal which would exceed their existing 45 trains per day capacity per the States 2009 report. Under BNSF's policy, it is our understanding that freight deliveries are not scheduled to the same on-time reliability demands of passenger trains but can still take precedence over passenger rail under certain circumstances. The City may wish to analyze the degree to which increasing freight traffic is expected to adversely affect the reliability of existing passenger rail schedules and also whether it will diminish opportunities to expand passenger rail particularly for the reverse commute that was originally analyzed for the Sounder commuter rail. With Sound Transit proposing the preferred alternative for the North Corridor transit EIS as the I-5 alignment instead of the SR-99 alignment it will become even more imperative to the City to preserve this existing rail corridor for passenger service. The City may wish to comment on whether the Cherry Point proposal affects the conclusions in those studies. It should also ensure that the public investments in passenger rail capacity in this corridor are being protected.

Also the States 2006 "statewide *Rail Capacity and System Needs* study" identifies a key issue affecting that access to local business as follows:

The Railroads Are Focusing on High-Volume and Long-Haul Services, But the State's Industrial and Agricultural Shippers Also Need Low Volume and Short-Haul Services.

Long-haul intermodal container trains and long-haul unit grain trains moving to and from Washington State's ports are the least complex and the most profitable for the Class I railroads to operate. As a result, the railroads have reoriented their operations to

accommodate this business. But many Washington State shippers are low-volume carload shippers who generate only a few dozen carloads a week or a month, and they are being priced out of the rail market.

So a key question may be whether this interstate traffic from the coal trains will have the impact of reducing the availability of local rail spur business necessary to local businesses such as Boeing and its suppliers. These issues should be analyzed as part of a comprehensive economic and environmental impact analysis that should be demanded conducted before this project goes forward.

9. The Washington State 2010-2030 Freight Rail Plan published by WSDOT in December 2009 identified that the rail line in this area in 2008 had a capacity of 60 trains per day (Exhibit 3-9). The existing use of the line is 40-45 trains per day based on the US DOT inventory reports that were accessed in 20011. The state plan shows that it hopes to increase that capacity to 80 trains per day; however, the design and cost of the specific improvements needed to do that were not available at the time of this report's completion. Additional study and inquiry should be conducted to determine whether federal or state funding is committed to expand the capacity of the BNSF freight system, sufficient to allow the projected additional 16-18 trains per day and still leave adequate capacity for freight and expanded commuter services.
10. The Cherry Point applicant and its advocates argue that the coal train activity will only bring train activity back up to the level it was before the economic recession of 2007/2008, and therefore there is no impact. In our judgment, this conclusion is not supportable, because as soon as the economic recovery really starts to take hold, those previous train activities will also pick up, as well as vehicular traffic on the roads. At that point, even greater impacts will begin to accumulate. Additional work is needed to obtain reliable information concerning pre-recession and historic train levels, the length of trains and delay times. Reliable projections of train and road traffic during economic recovery are critical to obtaining realistic estimates of delays and impacts. Assumptions from the past should be regarded critically.
11. Train delays at crossings are often eliminated by constructing grade separation, which allows traffic to pass over or under railroad tracks. While grade separation is desirable, these improvements are typically multi-million dollar solutions. This is likely to be particularly true in Edmonds, based on a brief review of the multi-modal station plans. We recommend that local jurisdictions provide regulating authorities with detailed assessments of mitigation and funding necessary to alleviate the impacts that will results from the additional 16-18 trains per day serving the Cherry Point export facility.

4. Conclusions

This analysis of possible rail line impacts associated with the increase of up to 18 trains per day serving the Cherry Point Coal export facility is preliminary and is intended to illustrate some of the potential problems and areas deserving detailed study during the SEPA review for the facility. This preliminary analysis suggests potentially severe consequences for the City's transportation plan and improvements, with increases in risk of accidents, impacts to the City's levels of service, ability to provide effective emergency response times, waterfront/downtown unification plans, State Ferry route impacts and possible interference with local freight delivery systems important to the City's economic recovery.