NATIONAL TRANSPORTATION SAFETY BOARD
Investigative Hearing
Managing Safety on Passenger Railroads: Amtrak Overspeed Derailment – DuPont, Washington; and CSX and Amtrak Train Collision – Cayce, South Carolina.

GROUP	D
EXHIBIT	
9	

Agency / Organization

Washington State Department of Transportation

Title

Summary of Lakewood Subdivision-Tacoma, WA

Washington State
Department of Transportation

Summary of the Lakewood Subdivision
Tacoma, Washington

Petition to Modify FRA Docket No. 1999-6404 to Allow Talgo Series VI Articulated Trainsets to Operate on the Lakewood Subdivision

June 2017

Petition to Allow Talgo Series VI Articulated Trainsets to Operate on the Lakewood Subdivision

The Washington State Department of Transportation and Amtrak propose to re-route Amtrak long-distance and Amtrak *Cascades* trains away from the Puget Sound coastline between Tacoma and Olympia, Washington to a 20.7 mile inland route owned by Sound Transit known as the Lakewood Subdivision. FRA Docket No. 1999-6404 – 'Grandfathering of Certain Passenger Equipment for Use on Specified Rail Lines' permits the use of Talgo Series VI articulated trainsets on the trackage of the Union Pacific Railroad and the BNSF Railway between Eugene, Oregon and the United States/Canadian border near Blaine, Washington. The Lakewood Subdivision was not included as one of the specified rail lines listed in FRA Docket No. 1999-6404. This document is intended to provide the necessary information to the Federal Railroad Administration to add the Lakewood Subdivision as a specified rail line where Talgo Series VI articulated trainsets can operate in revenue service.

Lakewood Subdivision Summary

The Lakewood Subdivision is a 20.7 mile main line railroad corridor primarily owned by the Central Puget Sound Regional Transit Authority (Sound Transit), with the southern section owned by BNSF Railway. The subdivision connects to the BNSF Railway's Seattle Subdivision at BNSF milepost 38.2X on the north and BNSF milepost 24.7 on the south.

The Lakewood Subdivision is an existing railroad corridor that has been upgraded in three separate phases by Sound Transit and the Washington State Department of Transportation (WSDOT) using a combination of regional, state, and federal funds. The first phase upgraded the tracks and signals for Sound Transit's *Sounder* commuter rail operations between TR Junction and the Tacoma Dome Station. *Sounder* commuter rail operations began on this segment of the Lakewood Subdivision in September 2000. The second phase of track, signal, bridge, and road crossing upgrades occurred between Tacoma Dome Station and Lakewood, with *Sounder* service to Lakewood starting in October 2012. The third phase of upgrades between Lakewood and Nisqually Junction including tracks, signals and roadway crossings will be completed in summer 2017 for the re-location of Amtrak's long-distance *Coast Starlight* and regional Amtrak *Cascades* trains.

The Lakewood Subdivision runs through incorporated and unincorporated sections of Pierce County Washington. Incorporated sections include Tacoma, Lakewood, and DuPont. The majority of the unincorporated section is occupied by US Joint Base Lewis McCord (JBLM) and Camp Murray military complexes.

Lakewood Subdivision – Infrastructure Characteristics

Table 1 below summarizes the key characteristics of the Lakewood Subdivision. The Lakewood Subdivision track charts are included in **Exhibit A**.

Table 1

Characteristic	Description
Length of Subdivision	20.7 miles
Number of Tracks	Combination of single and double track segments
Weight of Rail (per three foot segment)	132 to 136 lbs.
Ties	Combination of concrete and wood treated ties
Signal System	Centralized Traffic Control/Positive Train Control
Dispatching	BNSF Railway, Fort Worth, Texas
Maximum Grade	2.85% (Pacific Avenue to Chandler Street)
Maximum Curvature	8 degrees, 22 minutes at Milepost 19.8

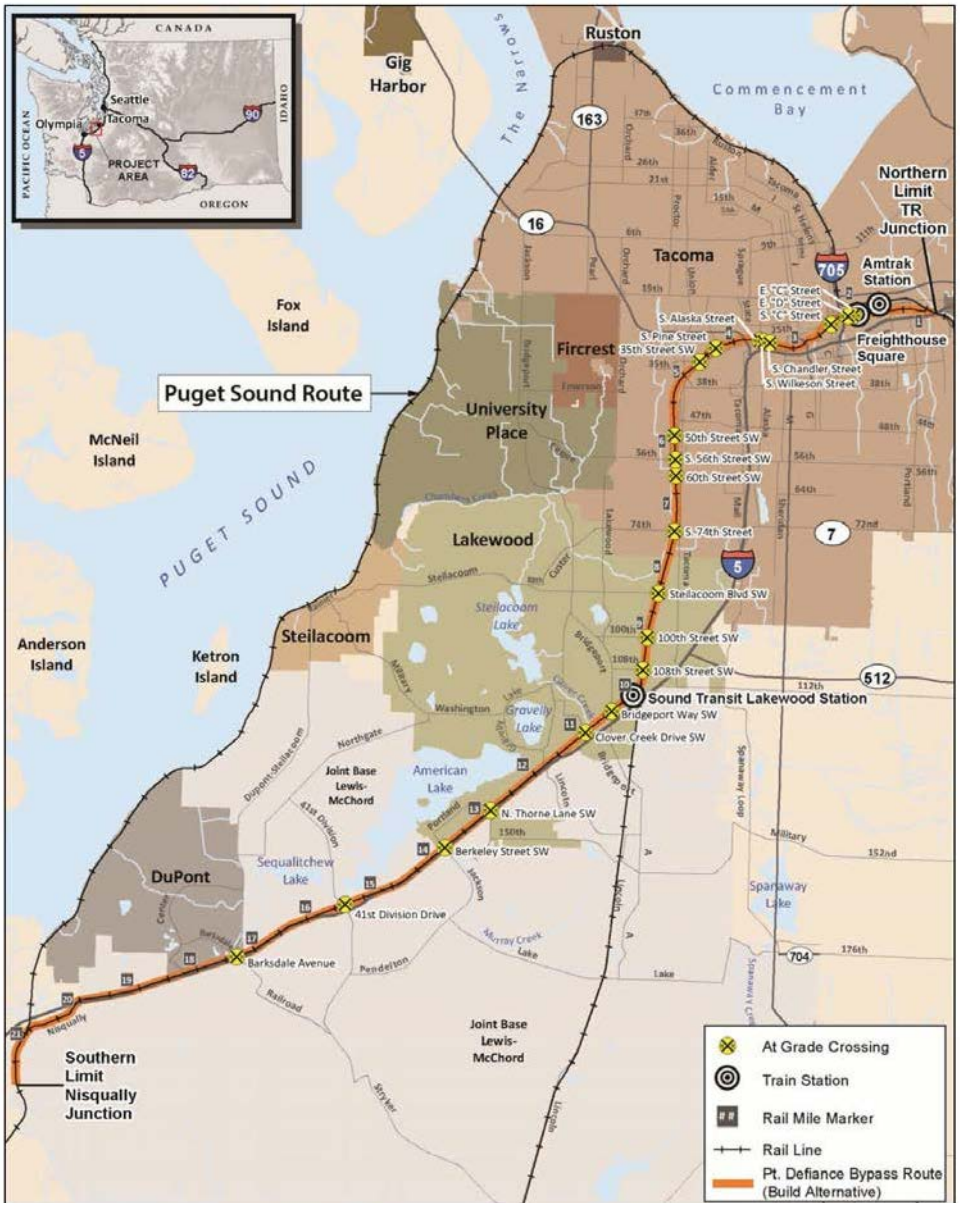
There are 21 public crossings and one private crossing (1) on the Lakewood Subdivision. These crossings are listed below in Table 2, going from north to south. The map on Page 2 shows their location on the Lakewood Subdivision.

Table 2

Roadway Crossing	Type	Crossing Protection
East D Street	Public	Signals and Gates
East C Street	Public	Signals and Gates
South C Street	Public	Signals and Gates
J Street	Private	None
South Chandler Street	Public	Signals and Gates
South Wilkeson Street	Public	Signals and Gates
South Alaska Street	Public	Signals and Gates
South Pine Street	Public	Signals and Gates
35th Street Southwest	Public	Signals and Gates
50th Street Southwest	Public	Signals and Gates
South 56th Street Southwest	Public	Signals and Gates
60th Street Southwest	Public	Signals and Gates
South 74th Street	Public	Signals and Gates
Steilacoom Boulevard Southwest	Public	Signals and Gates
100th Street Southwest	Public	Signals and Gates
108th Street Southwest	Public	Signals and Gates
Bridgeport Way Southwest	Public	Signals and Gates
Clover Creek Drive SW	Public	Signals and Gates
North Thorne Lane Southwest	Public	Signals and Gates
Berkeley Street Southwest	Public	Signals and Gates
41st Division Drive	Public	Signals and Gates
Barksdale Avenue	Public	Signals and Gates

Note: J Street is an unused private crossing that is protected by a gate adjacent to South Tacoma Way.

Lakewood Subdivision Roadway Crossings



Railroad Dispatching

All rail traffic on the Lakewood Subdivision, including Tacoma Rail, BNSF, *Sounder*, and Amtrak, is dispatched by BNSF Railway Co. from Fort Worth, Texas.

Train Speeds on the Lakewood Subdivision

The maximum train speed for Talgo Series VI articulated trainsets operating on the Lakewood Subdivision will be 79 mph. The speed zones for freight, conventional passenger trains (*Sounder* and Amtrak's *Coast Starlight*) and Talgo equipment are listed on the Lakewood Subdivision track charts included in **Exhibit A**.

Route Miles and Rail Traffic Volumes

The re-routing of Amtrak's *Coast Starlight* and regional Amtrak *Cascades* trains away from the Puget Sound coastline and onto the Lakewood Subdivision reduces the distance travelled by each Amtrak passenger train operating between Seattle and Portland by nearly six miles per one way trip, from 186 miles to 180 miles. The re-routing away from the Puget Sound coastline will place the Amtrak trains on a rail line that has the same number of intercity/commuter trains that operate on the BNSF Seattle Subdivision between Tacoma and Seattle and significantly fewer freight trains than the Puget Sound coastline route.

Table 3
***Sounder* and Amtrak Train Volumes on the Lakewood Subdivision**

Service	May 2017	Fall 2017
Sounder Weekdays Tacoma – Seattle	8 per weekday	8 per weekday
Sounder Weekdays Lakewood – Seattle	14 per weekday	18 per weekday
Sounder Special events trains	4 per month – Sundays	4 per month – Sundays
Amtrak *Cascades* – daily	None	12 per day
Amtrak Coast Starlight – daily	None	2 per day

As a result of the fall 2017 re-location, Amtrak passenger trains, including Talgo Series VI articulated trainsets used in Amtrak *Cascades* service, will no longer share the railroad with Union Pacific and BNSF freight trains operating on the Puget Sound coastline route.

Table 4
Freight Rail Traffic – BNSF Puget Sound Coastline Route Vs. Lakewood Subdivision

Route	Number of Freight Trains
Puget Sound Coastline Route between BNSF MP 38.2X and MP 24.7	31 per day
Lakewood Subdivision	2 per day to 2 per week

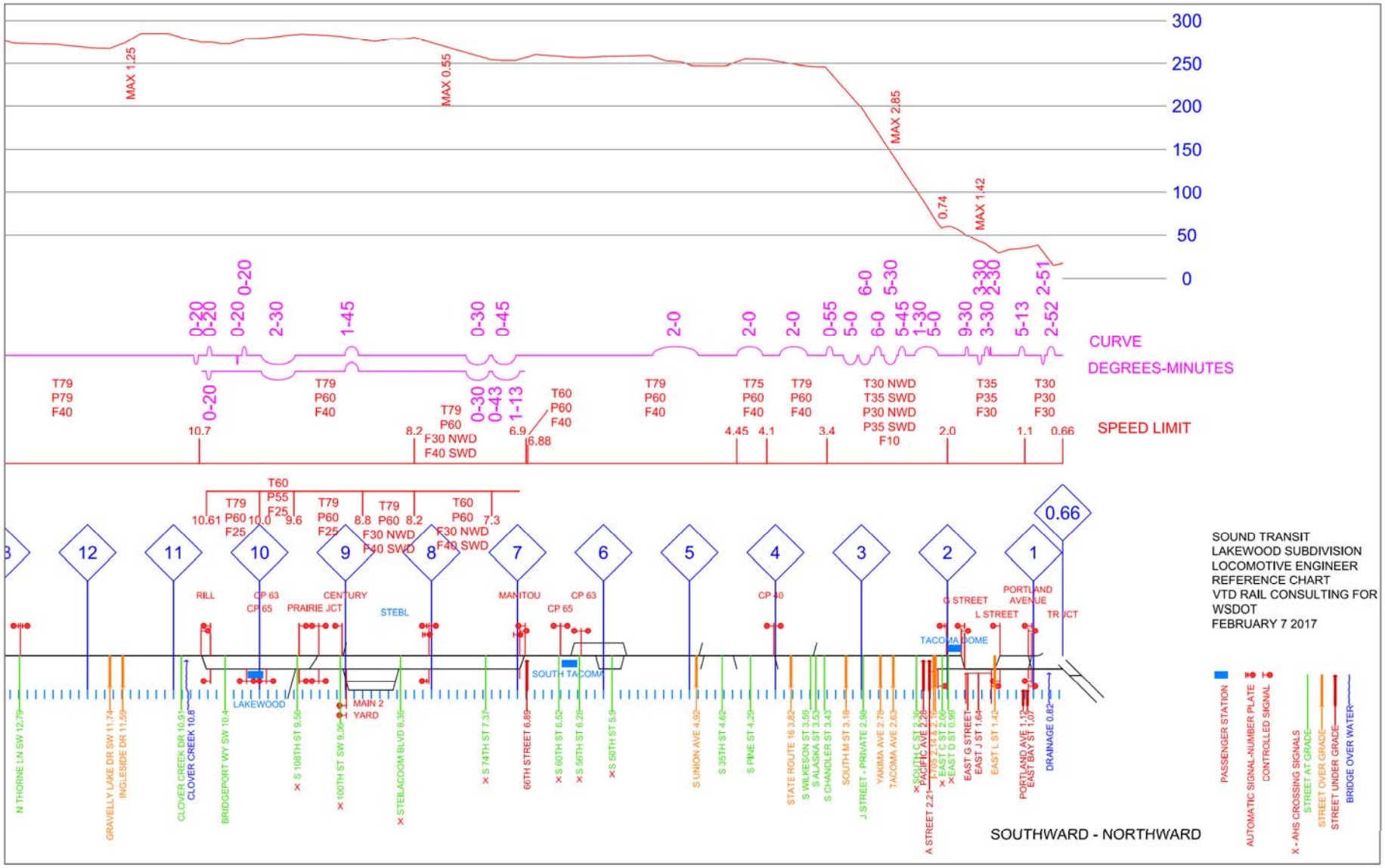
The BNSF Seattle Subdivision route along Puget Sound between Tacoma and Nisqually carries approximately 31 freight trains per day *(Source*: *Washington State Rail Plan, Technical Note 3a: Freight Rail Demand, Commodity Flows and Volumes 2010).* The Lakewood Subdivision carries as many as two freight trains per day on some portions of the subdivision to as few as two freight trains per week on the other portions of the subdivision. BNSF operates intermittent freight trains on the Point Defiance Bypass route to serve military transportation needs at JBLM. Based on this freight traffic data, the Talgo Series VI articulated trainsets will experience an over 90 percent decrease in the number of freight trains encountered each day when re-locating to the Lakewood Subdivision and away from the Puget Sound coastline route.

Any increase in freight train use of the Lakewood Subdivision in the future would be subject to the terms of the operating agreement between Sound Transit, Tacoma Rail, WSDOT, and Amtrak. There are no plans at this time to increase freight train use on the route.

Amtrak *Cascades* Trainset Consist Configuration

Amtrak *Cascades* Series VI articulated trainsets continue to operate in the same configuration used since the mid-1990s. The consists include a 12 or 13-car Talgo Series VI articulated trainset with a locomotive on one end a non-powered control unit on the other end.

EXHIBIT A
Lakewood Subdivision Track Charts



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Lakewood Subdivision Track Charts