

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

)	DOCKET NO. TR-
)	
Snohomish County Public Works)	PETITION TO RECONSTRUCT A
_____)	HIGHWAY-RAIL GRADE
Petitioner,)	CROSSING
vs.)	
)	
Eastside Community Rail,)	
Ballard Terminal Railroad Company)	
_____)	
)	
Respondents)	USDOT CROSSING NO.: 091-811X
)	

.....

Prior to submitting a Petition to **Construct** a highway-rail grade crossing and install an inter-tie between a Highway Signal and a Railroad Crossing Signal System to the Washington Utilities and Transportation Commission (UTC), State Environmental Protection Act (SEPA) requirements must be met. Washington Administrative Code (WAC) 197-11-865 (2) requires:

All actions of the utilities and transportation commission under statutes administered as of December 12, 1975, are exempted, except the following:

(2) Authorization of the openings or closing of any highway/railroad grade crossing, or the direction of physical connection of the line of one railroad with that of another;

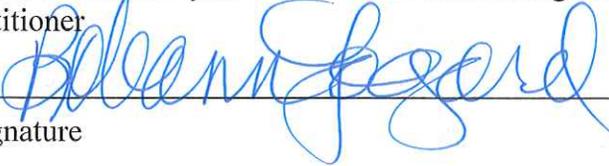
Please attach sufficient documentation to demonstrate that the SEPA requirement has been fulfilled. For additional information on SEPA requirements contact the Department of Ecology.

The Petitioner asks the Washington Utilities and Transportation Commission to approve construction or reconstruction of a highway-rail grade crossing and inter-tie the highway signal with the railroad crossing signal system.

Construction Reconstruction

Section 1 – Petitioner’s Information

Snohomish County Public Works / Bobann Fogard signing for Owen Carter (County Engineer)
Petitioner


Signature

3000 Rockefeller Ave.
Street Address

Everett WA, 98201
City, State and Zip Code

Mailing Address, if different than the street address

Brook Chesterfield, PE
Contact Person Name

(425) 388-6381, Brook.Chesterfield@SnoCo.org
Contact Phone Number and E-mail Address

Section 2 – Respondent’s Information

Eastside Community Rail, LLC
Respondent

1011 Maple Avenue
Street Address

Snohomish, WA 98290
City, State and Zip Code

Mailing Address, if different than the street address

Doug Engle
Contact Person Name

(425) 891-4223, doug.Engle@escrail.org
Contact Phone Number and E-mail Address

Section 2 – Respondent's Information

Ballard Terminal Railroad Company, LLC (Freight Operator on the Line)

Respondent

4725 Ballard Ave NW

Street Address

Seattle, WA 98107

City, State and Zip Code

Mailing Address, if different than the street address

Byron Cole

Contact Person Name

(206) 782-1447, byroncole@comcast.net

Contact Phone Number and E-mail Address

Section 3 – Proposed Crossing Location

1. Existing highway/roadway 240th St SE

2. Existing railroad Eastside Community Rail

3. Location of proposed crossing:
Located in the NW 1/4 of the SE 1/4 of Sec. 34 , Twp.27N , Range 5E _____ W.M.

4. GPS location, if known N 48 41' 11.0"; W 120 48' 39.4"

5. Railroad mile post (nearest tenth) _____ 26.82

6. City _____ n/a County: Snohomish

Section 4 – Proposed Crossing Information

1. Railroad company: Eastside Community Rail, Ballard Terminal Railroad

2. Type of railroad at crossing Common Carrier Logging Industrial
 Passenger Excursion

3. Type of tracks at crossing Main Line Siding or Spur

4. Number of tracks at crossing 1

5. Average daily train traffic, freight _____ 1 or fewer.
Authorized freight train speed 10 mph Operated freight train speed 10 mph

6. Average daily train traffic, passenger _____ 0
Authorized passenger train speed exempt Operated passenger train speed n/a

7. Will the proposed crossing eliminate the need for one or more existing crossings?
Yes _____ No X

8. If so, state the distance and direction from the proposed crossing.

9. Does the petitioner propose to close any existing crossings?
Yes _____ No X

Section 5 – Temporary Crossing

1. Is the crossing proposed to be temporary? Yes ____ No X

2. If so, describe the purpose of the crossing and the estimated time it will be needed

3. Will the petitioner remove the crossing at completion of the activity requiring the temporary crossing? Yes ____ No ____

Approximate date of removal _____

Section 6 – Current Highway Traffic Information

1. Name of roadway/highway: 240th St SE

2. Roadway classification FFC: 17 (Urban Collector) LFC: 17 (Collector Arterial-Urban)

3. Road authority: Snohomish County

4. Average annual daily traffic (AADT) 3,069

5. Number of lanes 2

6. Roadway speed 25 mph

7. Is the crossing part of an established truck route? Yes ____ No X

8. If so, trucks are what percent of total daily traffic? _____

9. Is the crossing part of an established school bus route? Yes ____ No X

10. If so, how many school buses travel over the crossing each day? _____

11. Describe any changes to the information in 1 through 7, above, expected within ten years:

 No changes to the above information is expected within the next ten years.

Section 7 – Alternatives to the Proposal

1. Does a safer location for a crossing exist within a reasonable distance of the proposed location?

Yes ____ No X

2. If a safer location exists, explain why the crossing should not be located at that site.

3. Are there any hillsides, embankments, buildings, trees, railroad loading platforms or other barriers in the vicinity which may obstruct a motorist's view of the crossing?

Yes ____ No X

4. If a barrier exists, describe:

- ◆ Whether petitioner can relocate the crossing to avoid the obstruction and if not, why not.
- ◆ How the barrier can be removed.
- ◆ How the petitioner or another party can mitigate the hazard caused by the barrier.

Per recommendations from Eastside Community Rail and the UTC, Snohomish County coordinated with the business park owner at the NE corner of the railroad crossing to relocate their wall and sign which were limiting sight distance. The wall was reconstructed and moved back to improve sight distance at the railroad crossing.

5. Is it feasible to construct an over-crossing or under-crossing at the proposed location as an alternative to an at-grade crossing?

Yes ____ No X

6. If an over-crossing or under-crossing is not feasible, explain why.

240th Street intersects Snohomish-Woodinville Road about 50 feet beyond the railroad crossing. Re-grading 240th to an overcrossing or undercrossing is not possible.

7. Does the railway line, at any point in the vicinity of the proposed crossing, pass over a fill area or trestle or through a cut where it is feasible to construct an over-crossing or an under-crossing, even though it may be necessary to relocate a portion of the roadway to reach that point?

Yes ____ No X

8. If such a location exists, state:

- ◆ The distance and direction from the proposed crossing.
- ◆ The approximate cost of construction.
- ◆ Any reasons that exist to prevent locating the crossing at this site.

9. Is there an existing public or private crossing in the vicinity of the proposed crossing?

Yes No

10. If a crossing exists, state:

- ◆ The distance and direction from the proposed crossing.
- ◆ Whether it is feasible to divert traffic from the proposed to the existing crossing.

Section 8 – Sight Distance

1. Complete the following table, describing the sight distance for motorists when approaching the tracks from either direction.

a. Approaching the crossing from East , the current approach provides an unobstructed view as follows: (North, South, East, West)

Direction of sight (left or right)	Number of feet from proposed crossing	Provides an unobstructed view for how many feet
Right	300	100
Right	200	110
Right	100	124
Right	50	200
Right	25	250
Left	300	170
Left	200	200
Left	100	200
Left	50	240
Left	25	245

b. Approaching the crossing from West , the current approach provides an unobstructed view as follows: (Opposite direction-North, South, East, West)

Direction of sight (left or right)	Number of feet from proposed crossing	Provides an unobstructed view for how many feet
Right	300	450
Right	200	450
Right	100	450
Right	50	450
Right	25	450
Left	300	410
Left	200	410
Left	100	410
Left	50	410
Left	25	410

2. Will the new crossing provide a level approach measuring 25 feet from the center of the railway on both approaches to the crossing?

Yes No

3. If not, state in feet the length of level grade from the center of the railway on both approaches to the crossing.

The proposed crossing matches the existing tracks and slopes at a 3.0% grade. The westbound approach grade varies from 3.3% to 4.3% approximately 50 ft east of the crossing. The eastbound approach grade varies from 5.0% to 13.30% approximately 50 ft west of the crossing.

4. Will the new crossing provide an approach grade of not more than five percent prior to the level grade?

Yes _____ No X_____

5. If not, state the percentage of grade prior to the level grade and explain why the grade exceeds five percent.

This project proposes to avoid future damage to the existing railroad tracks from low hanging trailers. With input from Eastside Community Rail, the 240th St SE profile has been adjusted to the grades listed below.

The westbound approaching grade is 8% on a 100' vertical curve, then flattens to 4.3% at 50' from the tracks, then flattens further to 3.3% when it is 35' from the tracks.

The eastbound approach grade is 7.0% when it is 45' from the tracks. The approach grade then increases to 13.3.0% approximately 30 feet from the tracks. The grade across the tracks is 3.0%. The short 20' vertical curve allows the approach grade to be reduced to 5.0% near the tracks.

The distance and elevation between the tracks and Snohomish-Woodinville Road parallel to the tracks is fixed, and controls the eastbound approach grade. It is not physically possible or within the scope of this project to alter the elevation of either Snohomish-Woodinville Road or the tracks. The proposed reconstruction includes the best possible combination of vertical curves to protect the tracks from damage due to long-wheelbase vehicles.

Section 9 – Illustration of Proposed Crossing Configuration

Attach a detailed diagram, drawing, map or other illustration showing the following:

- ◆ The vicinity of the proposed crossing.
- ◆ Layout of the railway and highway 500 feet adjacent to the crossing in all directions.
- ◆ Percent of grade.
- ◆ Obstructions of view as described in Section 7 or identified in Section 8.
- ◆ Traffic control layout showing the location of the existing and proposed signage.

Section 10 – Sidewalks

1. Provide the following information:

- a. Provide a description of the type of sidewalks proposed.
- b. Describe who will maintain the sidewalks.
- c. Attach a proposed diagram or design of the crossing including the sidewalks.

The existing sidewalk and curb ramps at the NE corner will be reconstructed and a 7' to 10' wide concrete sidewalk will be installed across the tracks to connect the existing curb ramps to the existing sidewalk that begins east of the tracks and continues east to the next driveway.

The existing sidewalk and curb ramps on the SE corner will be reconstructed to meet proposed grade changes. A new ADA compliant curb ramp will be installed to serve the east-west

crosswalk on Snohomish-Woodinville Road and the sidewalk will be extended to the railroad crossing. Asphalt shoulders will be constructed on both sides of 240th St SE. The existing two lane configuration will not be changed.

The sidewalks and curb ramps will be maintained by Snohomish County Public Works.

Section 11 – Proposed Warning Signals or Devices

1. Explain in detail the number and type of automatic signals or other warning devices planned at the proposed crossing, including a cost estimate for each. If requesting pre-emption include the type of train detection circuitry, sequencing and advanced preemption time, justification for the changes and its effects on current warning devices and warning times for drivers.

This crossing has an existing automatic warning system, consisting of two highway crossing assemblies with flashing lights and crossbucks. One crossing assembly has a warning bell. There are no automatic gates.

The traffic control signal at the intersection of 240th St SE and Snohomish-Woodinville Road is owned and operated by Snohomish County Public Works. It includes a railroad pre-emption circuit and is interconnected with the railroad automatic crossing system.

The existing highway crossing assemblies will be upgraded to have LED faces in all displays.

One additional flashing light assembly will be added to the existing railroad flasher on the south side of 240th. The added lights will be aimed south to be directed at drivers making the northbound to eastbound turning movement from Sno-Wood Road to 240th Street. The existing railroad preemption programming will be maintained, which includes a 'No Turn on Red' blank-out sign for the northbound to eastbound movement.

The existing railroad pre-emption system is a non-supervised system. It will be upgraded to be a supervised system.

The estimated cost of the proposed upgrades to the automatic warning system is \$5,000

2. Provide an estimate for maintaining the signals for 12 months. \$1,500 _____

3. Is the petitioner prepared to pay to the respondent railroad company its share of installing the warning devices as provided by law?

Yes X No _____

Section 12 – Traffic Signal Preemption

Complete the attached Guide for Determining Time Requirements for Traffic Signal Preemption at Highway-Rail Grade Crossings.

1. Specify simultaneous or advance preemption requested.

Advance preemption is requested.

If advance preemption, what is the preemption time.

The preemption time is 34.2 seconds. The UTC worksheet yields 29.0 seconds. Snohomish County Traffic Operations has requested adding 5.2 seconds, for a total advance preemption time of 34.2 seconds.

Section 13 – Additional Information

Provide any additional information supporting the proposal, including information such as the public benefits that would be derived from constructing a new crossing as proposed.

Per recommendations from Eastside Community Rail and the UTC, Snohomish County coordinated with the business park owner at the NE corner of the railroad crossing to relocate their wall and sign which were limiting sight distance. The wall was reconstructed and moved back to improve sight distance at the railroad crossing. See section 8 Sight Distance.

Snohomish County is in the process of acquiring R/W for the improved sight distance triangle. The R/W acquisition timeline is independent from and will not affect the construction timeline for the railroad improvements.

After discussing with Eastside Community Rail, the existing crossing profile will be adjusted in efforts to decrease future damage to the rail system. Rubber panels will be upgraded to concrete panels, providing further protection for the rails.

Pedestrian connectivity will be improved by constructing sidewalk through the railroad crossing, connecting existing pedestrian facilities on the west and east side of the crossing.

An additional flashing light assembly will be added for the northbound to eastbound turning movement, new railroad crossing advance signs will be added to Sno-Wood Road, and flashing assemblies will be upgraded to LED lights.

Section 14 – Waiver of Hearing by Respondent

Waiver of Hearing

The undersigned represents the Respondent in the petition to reconstruct a highway-railroad grade crossing.

USDOT Crossing No.: 091-811X

We have investigated the conditions at the proposed or existing crossing site. We are satisfied the conditions are the same as described by the Petitioner in this docket. We agree that a crossing be reconstructed and the highway and consent to a decision by the commission without a hearing.

Dated at _____, Washington, on the _____ day of
_____, 20 ____.

Printed name of Respondent

Signature of Respondent's Representative

Title

Name of Company

Phone number and e-mail address

Mailing address

Section 14 – Waiver of Hearing by Respondent

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Signature of Respondent's Representative

Title

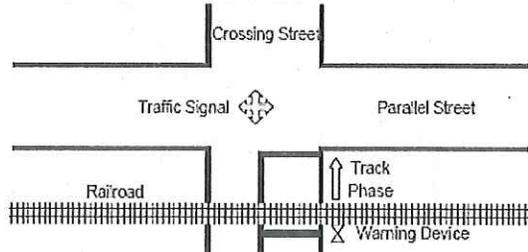
Name of Company

Phone number and e-mail address

Mailing address

City _____
 County _____
 District _____

Date Oct 30, 2014
 Completed by Jeff Rivers
 District Approval _____



Parallel Street Name
Sno-Wood Road

Crossing Street Name
240th ST SE

Railroad Eastside Community Rail
 Crossing DOT# 091-811X

Railroad Contact Doug Engle
 Phone 425.891.4223

SECTION 1: RIGHT-OF-WAY TRANSFER TIME CALCULATION

Preempt verification and response time

- | | | | |
|--|----|------------|-------------------------------|
| 1. Preempt delay time (seconds) | 1. | <u>0.0</u> | Remarks |
| 2. Controller response time to preempt (seconds) | 2. | <u>0.5</u> | Controller type: <u>170 E</u> |
| 3. Preempt verification and response time (seconds): add lines 1 and 2 | 3. | <u>0.5</u> | |

Worst-case conflicting vehicle time

- | | | | |
|---|----|------------|---------|
| 4. Worst-case conflicting vehicle phase number | 4. | <u>2</u> | Remarks |
| 5. Minimum green time during right-of-way transfer (seconds) | 5. | <u>0.0</u> | |
| 6. Other green time during right-of-way transfer (seconds) | 6. | <u>0.0</u> | |
| 7. Yellow change time (seconds) | 7. | <u>4.0</u> | |
| 8. Red clearance time (seconds) | 8. | <u>1.2</u> | |
| 9. Worst-case conflicting vehicle time (seconds): add lines 5 through 8 | 9. | <u>5.2</u> | |

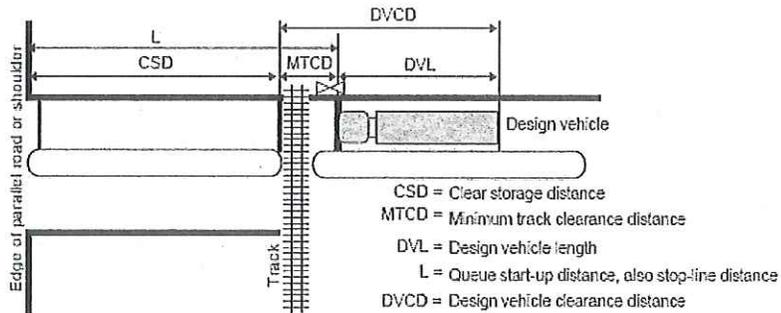
Worst-case conflicting pedestrian time

- | | | | |
|---|-----|------------|---------|
| 10. Worst-case conflicting pedestrian phase number | 10. | <u>4</u> | Remarks |
| 11. Minimum walk time during right-of-way transfer (seconds) | 11. | <u>0.0</u> | |
| 12. Pedestrian clearance time during right-of-way transfer (seconds) | 12. | <u>0.0</u> | |
| 13. Vehicle yellow change time, if not included on line 12 (seconds) | 13. | <u>4.5</u> | |
| 14. Vehicle red clearance time, if not included on line 12 (seconds) | 14. | <u>1.2</u> | |
| 15. Worst-case conflicting pedestrian time (seconds): add lines 11 through 14 | 15. | <u>5.7</u> | |

Worst-case conflicting vehicle or pedestrian time

- | | | |
|--|-----|------------|
| 16. Worst-case conflicting vehicle or pedestrian time (seconds): maximum of lines 9 and 15 | 16. | <u>5.7</u> |
| 17. Right-of-way transfer time (seconds): add lines 3 and 16 | 17. | <u>6.2</u> |

SECTION 2: QUEUE CLEARANCE TIME CALCULATION



		Remarks
18.	Clear storage distance (CSD, feet)	18. 45.0
19.	Minimum track clearance distance (MTCD, feet)	19. 38.0
20.	Design vehicle length (DVL, feet)	20. 74.0
		Design vehicle type: <u>60 TON LOWBOY</u>
21.	Queue start-up distance, L (feet): add lines 18 and 19	21. 83
		Remarks
22.	Time required for design vehicle to start moving (seconds): calculate as $2+(L+20)$	22. 6.2
23.	Design vehicle clearance distance, DVCD (feet): add lines 19 and 20	23. 112
24.	Time for design vehicle to accelerate through the DVCD (seconds)	24. 17.8 Read from Figure 2 in Instructions.
25.	Queue clearance time (seconds): add lines 22 and 24	25. 24.0

SECTION 3: MAXIMUM PREEMPTION TIME CALCULATION

		Remarks
26.	Right-of-way transfer time (seconds): line 17	26. 6.2
27.	Queue clearance time (seconds): line 25	27. 24.0
28.	Desired minimum separation time (seconds)	28. 4.0
29.	Maximum preemption time (seconds): add lines 26 through 28	29. 34.2

SECTION 4: SUFFICIENT WARNING TIME CHECK

		Remarks
30.	Required minimum time, MT (seconds): per regulations	30. 6.0
31.	Clearance time, CT (seconds): get from railroad	31. 0.0
32.	Minimum warning time, MWT (seconds): add lines 30 and 31	32. 6.0
33.	Advance preemption time, APT, if provided (seconds): get from railroad ...	33. 0.0
34.	Warning time provided by the railroad (seconds): add lines 32 and 33	34. 6.0
35.	Additional warning time required from railroad (seconds): subtract line 34 from line 29, round up to nearest full second, enter 0 if less than 0	35. 29.0

If the additional warning time required (line 35) is greater than zero, additional warning time has to be requested from the railroad. Alternatively, the maximum preemption time (line 29) may be decreased after performing an engineering study to investigate the possibility of reducing the values on lines 1, 5, 6, 7, 8, 11, 12, 13 and 14.

Remarks: Snohomish County Traffic Ops recommends adding time to account for yellow + all-red phases, which are 5.2 sec.
So final total preemption time is 33.2 sec.

SECTION 5: TRACK CLEARANCE GREEN TIME CALCULATION (OPTIONAL)

Preempt Trap Check

36. Advance preemption time (APT) provided (seconds): 36. **0.0** Line 33 only valid if line 35 is zero.
37. Multiplier for maximum APT due to train handling 37. **0.0** See Instructions for details.
38. Maximum APT (seconds): multiply line 36 and 37 38. **0.0** Remarks
39. Minimum duration for the track clearance green interval (seconds) 39. **15.0** For zero advance preemption time
40. Gates down after start of preemption (seconds): add lines 38 and 39 40. **15.0**
41. Preempt verification and response time (seconds): line 3 41. **0.5** Remarks
42. Best-case conflicting vehicle or pedestrian time (seconds): usually 0 42. **0.0**
43. Minimum right-of-way transfer time (seconds): add lines 41 and 42 43. **0.5**
44. Minimum track clearance green time (seconds): subtract line 43 from line 40 44. **14.5**

Clearing of Clear Storage Distance

45. Time required for design vehicle to start moving (seconds), line 22 45. **6.2**
46. Design vehicle clearance distance (DVCD, feet), line 23 46. **112** Remarks
47. Portion of CSD to clear during track clearance phase (feet) ... 47. **45** CSD* in Figure 3 in Instructions.
48. Design vehicle relocation distance (DVRD, feet): add lines 46 and 47 48. **157**
49. Time required for design vehicle to accelerate through DVRD (seconds) 49. **21.2** Read from Figure 2 in Instructions.
50. Time to clear portion of clear storage distance (seconds): add lines 45 and 49 50. **27.4**
51. Track clearance green interval (seconds): maximum of lines 44 and 50, round up to nearest full second 51. **28**

SECTION 6: VEHICLE-GATE INTERACTION CHECK (OPTIONAL)

52. Right-of-way transfer time (seconds): line 17 52. **6.2**
53. Time required for design vehicle to start moving (seconds), line 22 53. **6.2**
54. Time required for design vehicle to accelerate through DVL (on line 20, seconds) 54. **14.5** Read from Table 3 in Instructions.
55. Time required for design vehicle to clear descending gate (seconds): add lines 52 through 54 55. **26.9** Remarks
56. Duration of flashing lights before gate descent start (seconds): get from railroad 56. **5.0** Remarks
57. Full gate descent time (seconds): get from railroad 57. **10.0** Remarks
58. Proportion of non-interaction gate descent time 58. **0.52** Read from Figure 5 in Instructions.
59. Non-interaction gate descent time (seconds): multiply lines 57 and 58 59. **5.2**
60. Time available for design vehicle to clear descending gate (seconds): add lines 56 and 59 60. **10.2**
61. Advance preemption time (APT) required to avoid design vehicle-gate interaction (seconds):
 subtract line 60 from line 55, round up to nearest full second, enter 0 if less than 0 61. **17.0**



Snohomish County

Public Works

Engineering Services

June 6, 2016

Betty Young
Rail Safety Transportation Planning Specialist
Washington Utilities and Transportation Commission
PO Box 47250
Olympia, WA 98504-7250

3000 Rockefeller Ave., M/S 607
Everett, WA 98201-4046
(425) 388-6537
www.snoco.org

Dave Somers
County Executive

Dear Ms. Young,

The completed Petition to reconstruct a Highway-Rail Grade Crossing for the upcoming Snohomish County Public Works project at 240th Street SE and Snohomish-Woodinville Road (DOT Crossing no. 091-811X) is enclosed.

Snohomish County proposes reconstructing the roadway profile for the 240th St SE railroad crossing, with the objective of alleviating damage to the railroad tracks from low-hanging vehicles. The existing rubber crossing surface will be removed, and a reinforced cement concrete crossing will be installed, which will also help protect the tracks. New sidewalk will be installed on the north side of 240th Street to connect existing sidewalk on the west side of the tracks to existing sidewalk on the east side of the tracks. New sidewalk will also be installed on the south side of 240th Street west of the tracks. Asphalt shoulders will be installed on the north and south sides of 240th Street.

Sight distance for westbound motor vehicles travelling along 240th Street will be improved to current standards with the purchase of Right of Way along the frontage of the Wellington Hills Business Campus, which is north of 240th St SE and east of the railroad tracks.

The existing railroad flasher assemblies will be upgraded to LED lights and relocated behind the new sidewalk. Additionally a third pair of flashing lights will be added to the flasher on the south side of 240th Street. This pair of flashing lights will be aimed south to provide additional notice to drivers traveling north on Snohomish-Woodinville Road. Empty conduit will be installed under 240th Street to allow for the future installation of the wires needed for motorized gates. At this time motorized gates will not be installed. The existing lane configuration of 240th St is two lane two way traffic. No additional travel lanes will be added. The railroad track class is 'excepted class', limiting train speeds to 10 mph. According to the US DOT Technical Working Group Guidance for Selection of Traffic Control Devices, the only recommended active devices for this situation are flashers. The adjacent traffic signal system is interconnected with the railroad warning flasher control system, and during railroad preemption the traffic signal will turn green for 240th Street, allowing queued vehicles to clear the tracks. We believe for these reasons motorized crossing gates are not warranted at this time.

Snohomish County Public Works would like to request that Eastside Community Rail and Ballard Terminal Railroad grant a Waiver of Hearing which will allow the County to move forward with this project.

Respectfully,

Brook Chesterfield, P.E

Attachments:
UTC Petition (USDOT Crossing No. 091-811X)

