

**WHATCOM COUNTY  
PUBLIC WORKS DEPARTMENT**

**Jon Hutchings**  
Director



**Joseph P. Rutan, P. E.**  
County Engineer/Assistant Director  
322 N. Commercial Street, Ste. 301  
Bellingham, WA 98225-4042  
Phone: (360) 778-6210  
Fax: (360) 778-6211

May 29, 2018

FRA Associate Administrator  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590

**RECEIVED**

**JUN 21 2018**

**WASH. UT. & TP. COMM**

**AMENDMENT to  
Public Authority Application to Federal Railroad Administration  
(Ref: THR 000000440001)  
Whatcom County, Washington-  
Yacht Club Rd., DOT #084796F M.P. 89.37 Quiet Zone**

**I. Project Update**

Whatcom County submitted a Public Authority Application to Federal Railroad Administration on June 1, 2016 (Federal Application). In this application Whatcom County proposed install Mountable Median with Reflective Traffic Channelization Devices (mountable median) on both approaches of the aforementioned at-grade railway crossing. On the easterly approach a full 100 feet of mountable median was able to be installed and qualified as a Supplemental Safety Measure (SSM). On the westerly approach only 35 feet was able to be installed due to the close proximity of an intersecting road thus making this an Alternative Safety Measure (ASM). This application proposal was approved by the FRA (approval letter attached).

Next, Whatcom County submitted a petition to the Washington State Utilities and Transportation Commission (UTC) for approval to construct the proposed improvements. This process allows Burlington Northern Santa Fe (BNSF), the respondent in this case, the right to an evidentiary hearing. BNSF exercised their right to an evidentiary hearing on the grounds that the mountable median did not adequately restrict traffic from circumventing the traffic gates. During the prehearing conference Whatcom County and BNSF was able to agree on a reasonable upgrade to the improvements from a mountable median to a non-mountable median with all other items remaining the same.

The County installed this agreed upon upgrade and the quiet zone was established on August 26, 2017. An exhibit of this upgrade to the safety improvements is attached to this document.

**II. Installed Safety Improvements:**

Considering safety concerns expressed by BNSF at the pre-hearing conference with UTC for the proposed safety improvements, at Yacht Club Road, the County upgraded the mountable median to a non-mountable median and is more closely described as follows:

The easterly road approach is equipped with a 6-inch tall concrete non-mountable median. The installation began within 1-foot from the existing entrance gate in its down position and extends 100-feet east along the existing double yellow centerline of Yacht Club Road. There is 3, 1-foot, or less, gap in the non-mountable median to allow for drainage of a small portion of the asphalt road. Reflective Traffic Channelization Devices with an 8-inch by 29-inch Type III Reflective Sheeting surface were installed atop the 6-inch tall concrete non-mountable median at 80-inch or less intervals.

The close proximity of the intersection on the westerly road approach of the crossing did not allow for installation the full 60-foot non-mountable median per requirement as detailed in the Federal Application. The non-mountable median was installed at 35 foot in length beginning at no more than 1-foot from the westerly gate in its down position.

In addition to the mountable median the County installed No Train Horns signs (MUTCD W10-9) at all road approaches.

### **III. Whatcom County Requested Revision**

The upgrades to the centerline medians from mountable to non-mountable have inhibited the left hand turn movements of trash/recycling trucks and fire apparatus that would have not been a factor in the original design for mountable medians. The County has improved the shoulders to assist the trucks with this movement. The trucks are still making the turn but need to utilize the improved shoulder and rolling over the last few feet, including a reflector, on the westerly 5 foot portion of the non-mountable median.

The County realizes that this will become a major maintenance effort to maintain the median, the reflector, and the gravel shoulder. This is constant rolling over of a 6-inch will also increase the wear on the trash/recycling trucks. The County would like to remove 5-feet from the westerly portion of the westerly non-mountable median, thus reducing the length from 35-feet to 30-feet.

Updated quiet zone risk index calculations are below.

### **IV. Quiet Zone Risk Index Calculation:**

The current Risk Indexes Calculator values are:

|   |           |
|---|-----------|
| Nationwide Significant Risk Threshold - | 14,723.00 |
| Risk Index with Horns -                 | 10,825.65 |
| Quiet Zone Risk Index-                  | 18,057.19 |

When using the Quiet Zone Calculator to calculate the potential risk reduction when using the SSM, (13) Non-Traversable Curb Medians with or without Channelization Devices, the Quiet Zone Risk Index is reduced by 14,445.56 to 3,611.44. It is assumed that this calculator factors the requirement in 49 CFR 222, Appendix A, Section 3(b) defining required length and adjustments for effectiveness rating. As stated in Part II of this document, 100 feet of non-mountable median was installed east of the crossing and 35 feet was installed west of the crossing. The County is proposing to remove 5 feet of the westerly 35 foot non-mountable median for a modified length of 30 feet. The prorated calculations for this revision are as follows:

|  |   |           |
|--|---|-----------|
| Required median length   | = | 160 ft.   |
| Installed median length  | = | 130 ft.   |
| Percentage installed   | = | 81.25%    |
| Percentage ASM installed   | = | 50%       |
| Effectiveness Rate   | = | 50%       |
| Risk Index w/ Horns  | = | 10,825.65 |
| Quiet Zone Risk Index  | = | 18,057.19 |
| Quiet Zone Risk Index with Modified Proposed Safety Improvements |   |           |
| 50% x 18057.19   | = | 9,028.60  |

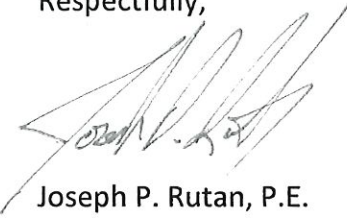
The proposed safety improvements reduce the Quiet Zone Risk Index below the existing Risk Index with Horns and below the Nationwide Significant Risk Threshold.

**V. Commitment to Implement Proposed Safety Improvements:**

The County intends to modify the already functioning safety improvements at the Yacht Club Road quiet zone crossing to accommodate trash/recycling truck turning movements. The existing quiet zone configuration provides adequate protection from the potential safety hazards that may arise in the absence of the train horn by visual indicating to motorists to proceed with caution through the crossing. This safety measure will be present at all times as a reminder to motorists of the crossing when trains are not present and as an added layer of safety when trains are present. The County commits to modifying the safety improvements that are described in this document and detailed on the plan sheet. The County's goal is to increase the safety of all motorists travelling on Whatcom County roads and this improvement satisfies that goal.

Please feel free to contact Cody Swan at 360-778-6265 or by e-mail [cswan@co.whatcom.wa.us](mailto:cswan@co.whatcom.wa.us), for additional information.

Respectfully,



Joseph P. Rutan, P.E.

County Engineer/Assistant Director

Encl: (1) U.S. DOT Crossing Inventory Form (current)  
(2) Quiet Zone Calculator  
(3) Plan Sheet of Modification  
(4) FRA Approval Letter

Cc: **Stephen Semenick**

*Manager Public Projects for WA, ID & BC*  
BNSF Railway  
2454 Occidental Avenue So Suite 2D  
Seattle, WA 98134

**Stephen M. Pugsley**

*Senior Manager – Emergency Management*  
*Emergency Management and Corporate Security*  
Amtrak  
1 South Station, 2nd Floor  
Boston, MA 02110

**Kathy Hunter**

*Deputy Assistant Director, Transportation Safety*  
Washington Utilities and Transportation Commission  
1300 S. Evergreen Park Dr. SW  
PO Box 47250  
Olympia, WA 98504-7250

**Jeffery Stewart**

*Region 8 Grade Crossing Inspector*  
U.S. Department of Transportation  
Federal Railroad Administration  
500 Broadway, Suite 240  
Vancouver, WA 98660

Cc Via Email:

Roland Middleton, Whatcom County

# U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Part I, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk \* denotes an optional field.

|   |  |  |  |
|---|--|--|--|
| <b>A. Revision Date</b><br>(MM/DD/YYYY)<br>08 / 03 / 2017 | <b>B. Reporting Agency</b><br><input checked="" type="checkbox"/> Railroad <input type="checkbox"/> Transit<br><input type="checkbox"/> State <input type="checkbox"/> Other | <b>C. Reason for Update (Select only one)</b><br><input checked="" type="checkbox"/> Change in Data <input type="checkbox"/> New Crossing<br><input type="checkbox"/> Re-Open <input type="checkbox"/> Date Change Only<br><input type="checkbox"/> Closed <input type="checkbox"/> Change in Primary Operating RR<br><input type="checkbox"/> No Train Traffic <input type="checkbox"/> Quiet Zone Update<br><input type="checkbox"/> Admin. Correction | <b>D. DOT Crossing Inventory Number</b><br><br>084796F |
|---|--|--|--|

## Part I: Location and Classification Information

|   |  |   |  |   |  |
|---|--|---|--|---|--|
| 1. Primary Operating Railroad<br>BNSF Railway Company [BNSF]  |  | 2. State<br>WASHINGTON  |  | 3. County<br>WHATCOM  |  |
| 4. City / Municipality<br><input type="checkbox"/> In<br><input checked="" type="checkbox"/> Near BELLINGHAM  |  | 5. Street/Road Name & Block Number<br>YACHT CLUB RD<br>(Street/Road Name)   *(Block Number)   |  | 6. Highway Type & No.<br>CO40670  |  |
| 7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>If Yes, Specify RR             |  |   | 8. Do Other Railroads Operate Over Your Track at Crossing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>If Yes, Specify RR<br>ATK  |   |  |
| 9. Railroad Division or Region<br><input type="checkbox"/> None NORTHWEST   |  | 10. Railroad Subdivision or District<br><input type="checkbox"/> None BELLINGHAM  |  | 11. Branch or Line Name<br><input type="checkbox"/> None PA J-US CAN BDR  |  |
| 12. RR Milepost<br>0089.389<br>(prefix)   (nnnn.nnn)   (suffix)   |  | 13. Line Segment<br>*<br>0050   |  | 14. Nearest RR Timetable Station<br>*<br>BELLINGHAM   |  |
| 15. Parent RR (if applicable)<br><input checked="" type="checkbox"/> N/A  |  | 16. Crossing Owner (if applicable)<br><input type="checkbox"/> N/A BNSF   |  | 17. Crossing Type<br><input checked="" type="checkbox"/> Public<br><input type="checkbox"/> Private   |  |
| 18. Crossing Purpose<br><input checked="" type="checkbox"/> Highway<br><input type="checkbox"/> Pathway, Ped.<br><input type="checkbox"/> Station, Ped.           |  | 19. Crossing Position<br><input checked="" type="checkbox"/> At Grade<br><input type="checkbox"/> RR Under<br><input type="checkbox"/> RR Over      |  | 20. Public Access (if Private Crossing)<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No  |  |
| 21. Type of Train<br><input checked="" type="checkbox"/> Freight<br><input checked="" type="checkbox"/> Intercity Passenger<br><input type="checkbox"/> Commuter  |  | 22. Average Passenger Train Count Per Day<br><input type="checkbox"/> Less Than One Per Day<br><input checked="" type="checkbox"/> Number Per Day 1 |  | 23. Type of Land Use<br><input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard |  |
| 24. Is there an Adjacent Crossing with a Separate Number?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No. If Yes, Provide Crossing Number |  |   | 25. Quiet Zone (FRA provided)<br><input checked="" type="checkbox"/> No <input type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused    Date Established |   |  |
| 26. HSR Corridor ID<br><input checked="" type="checkbox"/> N/A  |  | 27. Latitude in decimal degrees<br>(WGS84 std: nn.nnnnnnn) 48.6755733   |  | 28. Longitude in decimal degrees<br>(WGS84 std: -nnn.nnnnnnn) -122.4892095  |  |
| 29. Lat/Long Source<br><input type="checkbox"/> Actual <input checked="" type="checkbox"/> Estimated  |  | 30.A. Railroad Use *  |  | 31.A. State Use *   |  |
| 30.B. Railroad Use *  |  | 31.B. State Use *   |  | 30.C. Railroad Use *  |  |
| 30.D. Railroad Use *  |  | 31.C. State Use *   |  | 30.D. Railroad Use *  |  |
| 31.D. State Use *   |  | 32.A. Narrative (Railroad Use) *  |  | 32.B. Narrative (State Use) *   |  |
| 33. Emergency Notification Telephone No. (postèd)<br>800-832-5452   |  | 34. Railroad Contact (Telephone No.)<br>817-352-1549  |  | 35. State Contact (Telephone No.)<br>360-664-1262   |  |

## Part II: Railroad Information

|  |  |   |                                |  |
|--|--|---|--------------------------------|--|
| 1. Estimated Number of Daily Train Movements   |  |   |                                |  |
| 1.A. Total Day Thru Trains<br>(6 AM to 6 PM)<br>10   | 1.B. Total Night Thru Trains<br>(6 PM to 6 AM)<br>10 | 1.C. Total Switching Trains<br>0  | 1.D. Total Transit Trains<br>0 | 1.E. Check if Less Than One Movement Per Day<br>How many trains per week? <input type="checkbox"/> |
| 2. Year of Train Count Data (YYYY)<br>2013   |  | 3. Speed of Train at Crossing<br>3.A. Maximum Timetable Speed (mph) 50<br>3.B. Typical Speed Range Over Crossing (mph) From 1 to 50 |                                |  |
| 4. Type and Count of Tracks<br>Main 1    Siding 0    Yard 0    Transit 0    Industry 0   |  |   |                                |  |
| 5. Train Detection (Main Track only)<br><input type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input checked="" type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None |  |   |                                |  |
| 6. Is Track Signaled?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   |  | 7.A. Event Recorder<br><input type="checkbox"/> Yes <input type="checkbox"/> No   |                                | 7.B. Remote Health Monitoring<br><input type="checkbox"/> Yes <input type="checkbox"/> No          |

# U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) PAGE 2 D. Crossing Inventory Number (7 char.)  
084796F  
08/03/2017

## Part III: Highway or Pathway Traffic Control Device Information

|  |  |  |   |  |  |
|--|--|--|---|--|--|
| 1. Are there Signs or Signals?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  | 2. Types of Passive Traffic Control Devices associated with the Crossing |  |   |  |  |
|  | 2.A. Crossbuck Assemblies (count)<br>2                                   | 2.B. STOP Signs (R1-1) (count)<br>0  | 2.C. YIELD Signs (R1-2) (count)   | 2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> None   |  |
|  |  |  |   | <input type="checkbox"/> W10-1 _____   | <input checked="" type="checkbox"/> W10-3 2  |
|  |  |  |   | <input type="checkbox"/> W10-2 _____   | <input type="checkbox"/> W10-4 _____   |
|  |  |  |   | <input type="checkbox"/> W10-11 _____  | <input type="checkbox"/> W10-12 _____  |
| 2.E. Low Ground Clearance Sign (W10-5)<br><input type="checkbox"/> Yes (count _____)<br><input type="checkbox"/> No  |  | 2.F. Pavement Markings<br><input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope<br><input type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None   |   | 2.G. Channelization Devices/Medians<br><input checked="" type="checkbox"/> All Approaches <input type="checkbox"/> Median<br><input type="checkbox"/> One Approach <input type="checkbox"/> None                                 |  |
|  |  |  |   | 2.H. EXEMPT Sign (R15-3)<br><input type="checkbox"/> Yes<br><input type="checkbox"/> No  |  |
|  |  |  |   | 2.I. ENS Sign (I-13) Displayed<br><input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No   |  |
| 2.J. Other MUTCD Signs<br>Specify Type <u>W10-9</u><br>Specify Type _____<br>Specify Type _____  |  |  | 2.K. Private Crossing Signs (if private)<br><input type="checkbox"/> Yes <input type="checkbox"/> No                |  | 2.L. LED Enhanced Signs (List types)   |
| 3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)  |  |  |   |  |  |
| 3.A. Gate Arms (count)<br>Roadway <u>2</u><br>Pedestrian _____   |  | 3.B. Gate Configuration<br><input checked="" type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) Resistance<br><input type="checkbox"/> 3 Quad <input type="checkbox"/> Median Gates<br><input type="checkbox"/> 4 Quad |   | 3.C. Cantilevered (or Bridged) Flashing Light Structures (count)<br>Over Traffic Lane <u>0</u> <input type="checkbox"/> Incandescent<br>Not Over Traffic Lane <u>0</u> <input type="checkbox"/> LED                              |  |
|  |  |  |   | 3.D. Mast Mounted Flashing Lights (count of masts) <u>2</u><br><input type="checkbox"/> Incandescent <input type="checkbox"/> LED<br><input type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included |  |
|  |  |  |   | 3.E. Total Count of Flashing Light Pairs<br>6  |  |
| 3.F. Installation Date of Current Active Warning Devices: (MM/YYYY)<br>____/____/____ <input type="checkbox"/> Not Required  |  |  | 3.G. Wayside Horn<br><input type="checkbox"/> Yes <input type="checkbox"/> No Installed on (MM/YYYY) ____/____/____ |  | 3.H. Highway Traffic Signals Controlling Crossing<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|  |  |  |   | 3.I. Bells (count)<br>1  |  |
| 3.J. Non-Train Active Warning<br><input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input type="checkbox"/> None |  |  |   | 3.K. Other Flashing Lights or Warning Devices<br>Count <u>0</u> Specify type _____   |  |
| 4.A. Does nearby Hwy Intersection have Traffic Signals?<br><input type="checkbox"/> Yes <input type="checkbox"/> No  |  | 4.B. Hwy Traffic Signal Interconnection<br><input type="checkbox"/> Not Interconnected<br><input type="checkbox"/> For Traffic Signals<br><input type="checkbox"/> For Warning Signs   |   | 4.C. Hwy Traffic Signal Preemption<br><input type="checkbox"/> Simultaneous<br><input type="checkbox"/> Advance  |  |
|  |  |  |   | 5. Highway Traffic Pre-Signals<br><input type="checkbox"/> Yes <input type="checkbox"/> No<br>Storage Distance * _____<br>Stop Line Distance * _____   |  |
|  |  |  |   | 6. Highway Monitoring Devices (Check all that apply)<br><input type="checkbox"/> Yes - Photo/Video Recording<br><input type="checkbox"/> Yes - Vehicle Presence Detection<br><input type="checkbox"/> None                       |  |

## Part IV: Physical Characteristics

|  |  |   |  |   |  |   |  |   |  |
|--|--|---|--|---|--|---|--|---|--|
| 1. Traffic Lanes Crossing Railroad<br>Number of Lanes <u>2</u>   |  | <input type="checkbox"/> One-way Traffic<br><input checked="" type="checkbox"/> Two-way Traffic<br><input type="checkbox"/> Divided Traffic |  | 2. Is Roadway/Pathway Paved?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |  | 3. Does Track Run Down a Street?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |  | 4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| 5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____/____ Width * _____ Length * _____<br><input type="checkbox"/> 1 Timber <input type="checkbox"/> 2 Asphalt <input type="checkbox"/> 3 Asphalt and Timber <input checked="" type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal<br><input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____ |  |   |  |   |  |   |  |   |  |
| 6. Intersecting Roadway within 500 feet?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Approximate Distance (feet) <u>75</u>  |  |   |  |   | 7. Smallest Crossing Angle<br><input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90° |   |  | 8. Is Commercial Power Available? *<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                    |  |

## Part V: Public Highway Information

|  |  |  |  |  |  |   |  |  |
|--|--|--|--|--|--|---|--|--|
| 1. Highway System<br><input type="checkbox"/> (01) Interstate Highway System<br><input type="checkbox"/> (02) Other Nat Hwy System (NHS)<br><input type="checkbox"/> (03) Federal AID, Not NHS<br><input checked="" type="checkbox"/> (08) Non-Federal Aid |  | 2. Functional Classification of Road at Crossing<br><input checked="" type="checkbox"/> (0) Rural <input type="checkbox"/> (1) Urban<br><input type="checkbox"/> (1) Interstate <input type="checkbox"/> (5) Major Collector<br><input type="checkbox"/> (2) Other Freeways and Expressways<br><input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector<br><input type="checkbox"/> (4) Minor Arterial <input checked="" type="checkbox"/> (7) Local |  |  | 3. Is Crossing on State Highway System?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |   | 4. Highway Speed Limit _____ MPH<br><input type="checkbox"/> Posted <input type="checkbox"/> Statutory |  |
|  |  |  |  | 5. Linear Referencing System (LRS Route ID) *  |  | 6. LRS Milepost *   |  |  |
| 7. Annual Average Daily Traffic (AADT)<br>Year <u>2013</u> AADT <u>222</u>   |  | 8. Estimated Percent Trucks<br><u>01</u> %   |  | 9. Regularly Used by School Buses?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Average Number per Day _____ |  | 10. Emergency Services Route<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |  |  |

**Submission Information - This information is used for administrative purposes and is not available on the public website.**

Submitted by \_\_\_\_\_ Organization \_\_\_\_\_ Phone \_\_\_\_\_ Date \_\_\_\_\_

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

Cancel Change Scenario: AMEND YACH\_50989 Pre-SSM 0 SSM Risk 18,057.19 Continue

|          |               |         |                |         |           |        |
|----------|---------------|---------|----------------|---------|-----------|--------|
| Crossing | Street        | Traffic | Warning Device | Pre-SSM | SSM Risk  |        |
| 084796F  | YACHT CLUB RD | 222     | Gates          | 0       | 18,057.19 | MODIFY |

**Create New Zone**

**Manage Existing Zones**

**Log Off**

\* Only Public At Grade Crossings are listed.

Click for Supplementary Safety Measures [SSM]

Click for ASM spreadsheet: **ASM** \* Note: The use of ASMs requires an application to and approval from the FRA.

**Step by Step Instructions:**

**Step 1:** To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the MODIFY Button

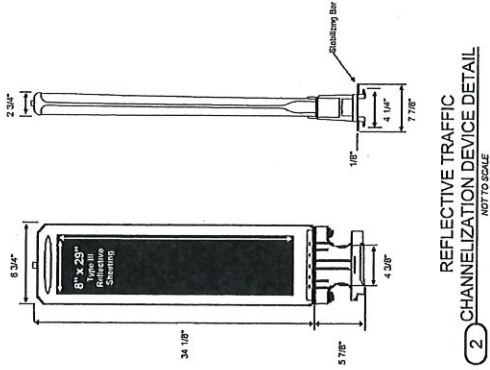
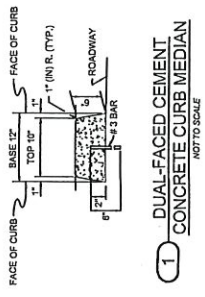
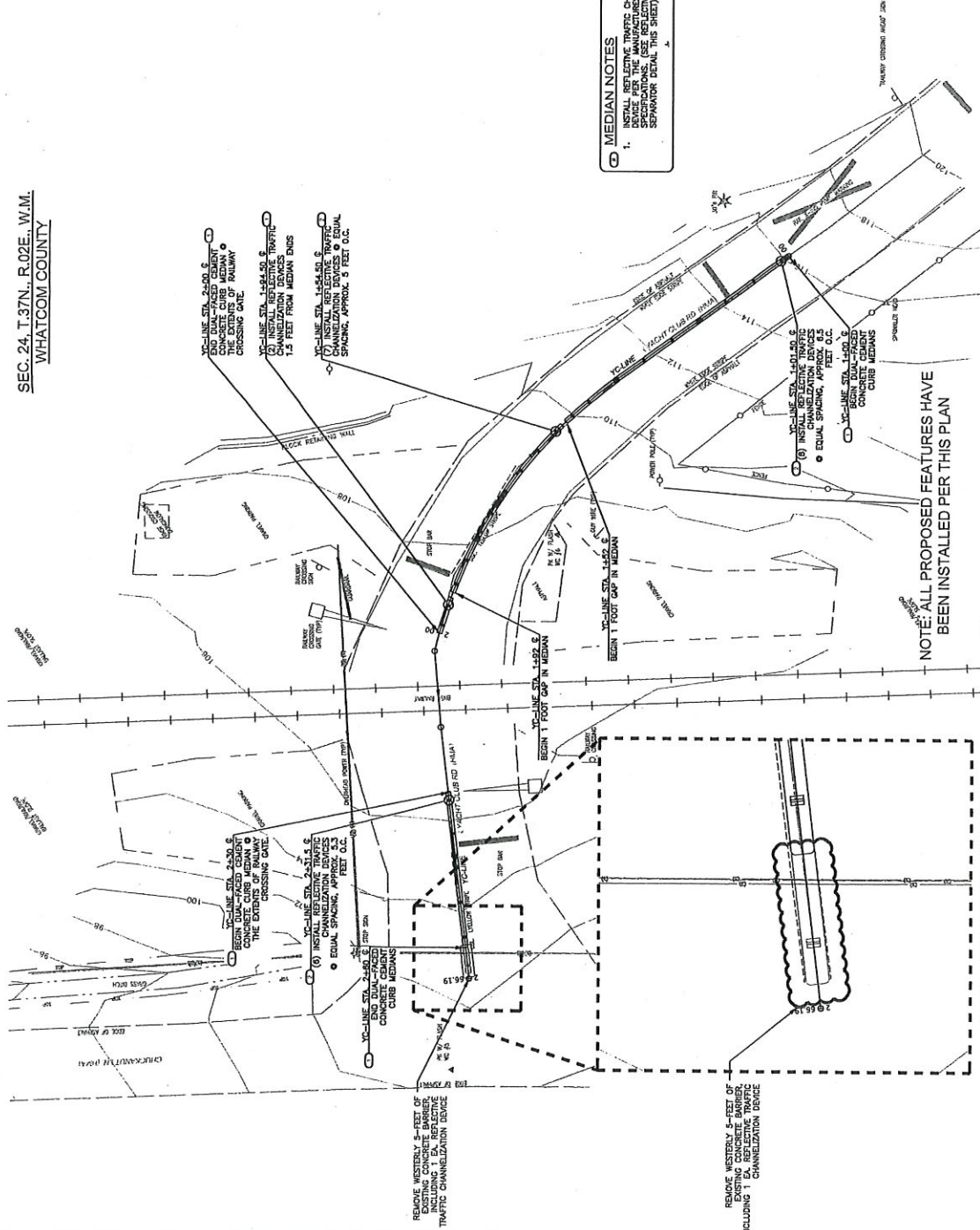
**Step 2:** Select proposed warning device or SSM. Then click the UPDATE button. To generate a spreadsheet of the values on this page, click on ASM button—This spreadsheet can then be used for ASM calculations.

**Step 3:** Repeat Step (2) until the SELECT button is shown at the bottom right side of this page. Note that the SELECT button is shown ONLY when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horn.

**Step 4:** To save the scenario and continue, click the SELECT button

|   |                  |
|---|------------------|
| Summary                                       |                  |
| <b>Proposed Quiet Zone:</b>                   | AMEND YACHT CLUB |
| <b>Type:</b>                                  | New 24-hour QZ   |
| <b>Scenario:</b>                              | AMEND YACH_50989 |
| <b>Estimated Total Cost:</b>                  | \$0.00           |
| <b>Nationwide Significant Risk Threshold:</b> | 14723 .00        |
| <b>Risk Index with Horns:</b>                 | 10825.65         |
| <b>Quiet Zone Risk Index:</b>                 | 18057.19         |
|   |                  |
|   |                  |

SEC. 24, T.37N., R.02E., W.1M.  
WHATCOM COUNTY



1. INSTALL REFLECTIVE TRAFFIC CHANNELIZATION DEVICE PER THE MANUFACTURER'S INSTRUCTIONS TO THE LANE SEPARATOR DETAIL THIS SHEET

XC-LINE STA. 2+00.0 & END DUAL-FACED CEMENT CONCRETE CURB MEDIAN TO THE EXTENTS OF RAILWAY CROSSING DATE.

XC-LINE STA. 1+64.50 & BEGIN INSTALL REFLECTIVE TRAFFIC CHANNELIZATION DEVICES 15 FEET FROM ADJACENT BINS

XC-LINE STA. 1+54.50 & BEGIN INSTALL REFLECTIVE TRAFFIC CHANNELIZATION DEVICES TO EQUAL SPACING, APPROX. 3 FEET O.C.

XC-LINE STA. 1+00.00 & BEGIN INSTALL REFLECTIVE TRAFFIC CHANNELIZATION DEVICES TO EQUAL SPACING, APPROX. 6.5 FEET O.C.

XC-LINE STA. 1+50.00 & BEGIN DUAL-FACED CEMENT CONCRETE CURB MEDIAN

NOTE: ALL PROPOSED FEATURES HAVE BEEN INSTALLED PER THIS PLAN



DETAIL OF REVISED SECTION OF CONCRETE CURB MEDIAN  
NOT TO SCALE

REMOVE WESTERLY 5'-FEET OF EXISTING CONCRETE BARRIER INCLUDING 1 EA. REFLECTIVE TRAFFIC CHANNELIZATION DEVICE

|     |      |    |                     |
|-----|------|----|---------------------|
| NO. | DATE | BY | REASON FOR REVISION |
| 1   |      |    |                     |
| 2   |      |    |                     |
| 3   |      |    |                     |
| 4   |      |    |                     |

|              |  |
|--------------|--|
| DATE:        | JULY 2017  |
| DESIGNED BY: | JOSEPH B. JUDAN, P.E.                              |
| DRAWN BY:    | JOSEPH B. JUDAN, P.E.                              |
| CHECKED BY:  | JOSEPH B. JUDAN, P.E.                              |
| FILE:        | 2714 COMMERCIAL ST. SUITE 101, MILWAUKEE, WI 53234 |

|            |          |
|------------|----------|
| SCALE:     | AS SHOWN |
| PLAN:      | AS SHOWN |
| ELEVATION: | AS SHOWN |
| CURB:      | AS SHOWN |
| DEVICES:   | AS SHOWN |
| OTHER:     | AS SHOWN |

PROJECT ENGINEER: JOSEPH B. JUDAN, P.E.  
PROJECT ENGINEER: JOSEPH B. JUDAN, P.E.

WHATCOM COUNTY DEPARTMENT OF PUBLIC WORKS  
2714 COMMERCIAL ST. SUITE 101, MILWAUKEE, WI 53234

YACHT CLUB RAILWAY CROSSING  
COUNTY ROAD-RAILROAD GRADE CROSSING IMPROVEMENT  
MOUNTABLE RAISED CURB MEDIAN EXHIBIT

PROJECT NO. 01  
SHEET NO. 01





U.S. Department  
of Transportation

**Federal Railroad  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

DEC 19 2016

Mr. Joseph P. Rutan  
County Engineer/Assistant Director  
Whatcom County Public Works Department  
322 North Commercial Street, Suite 301  
Bellingham, WA 98225-4042

**Re: THR-000000440001 (U.S. DOT National Highway-Rail Crossing Inventory Number  
084796F)**

Dear Mr. Rutan:

The Federal Railroad Administration (FRA) reviewed the public authority application you submitted on behalf of Whatcom County (County), Washington, under Title 49 Code of Federal Regulations (CFR) Section 222.39(b).

The County is seeking FRA's approval of the proposed effectiveness rate for the alternative safety measure (ASM) at the Yacht Club Road crossing. The proposed ASM at the Yacht Club Road crossing will consist of 100 feet of channelization on the east side of the crossing.<sup>1</sup> The west side of the crossing will be equipped with 35 feet of channelization due to an intersecting street within 60 feet of the gate arm. The County suggested a 15 percent reduction in risk. However, FRA has determined that an effectiveness rate of 0.59 is more appropriate due to the lengths of the channelization.

After recalculating the risk index using the revised effectiveness rate, FRA approves the County's application. FRA has determined that implementation of the proposed ASM, as described in the application, will result in a Quiet Zone Risk Index of 7,269. This index is below the Risk Index With Horns (the risk that would be present if the horns were still sounding) of 17,730.

The County may submit its Notice of Quiet Zone Establishment consistent with 49 CFR 222.43, *What notices and other information are required to create or continue a quiet zone?*, after implementation of the proposed ASM described in the application and compliance with all applicable quiet zone requirements in 49 CFR 222.25, *How does this rule affect private highway-rail grade crossings?*, 222.27, *How does this rule affect pedestrian grade crossings?*, and 222.35, *What are the minimum requirements for quiet zones?* In addition, 49 CFR 222.39(b)(1)(vi) requires the County to provide a commitment to implement the safety

---

<sup>1</sup> The County stated that approximately 20 feet from the gate arm there will be a 1-foot or less gap in the channelization to allow for drainage.

improvements it proposed in the public authority application. Thus, FRA's approval is conditioned upon implementation of the safety improvements described in the County's application.

If you have any questions or need additional information, please contact Mr. Ron Ries, Staff Director, Highway-Rail Crossing and Trespasser Programs Division, at (202) 493-6285 or [Ronald.Ries@dot.gov](mailto:Ronald.Ries@dot.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'Karl Alexy', written in a cursive style.

Karl Alexy  
Director, Office of Safety Analysis

cc: Ms. Kathy Hunter, Washington Utilities and Transportation Commission  
Ms. Elizabeth F. Klute, National Railroad Passenger Corporation  
Mr. Richard W. Wagner, BNSF Railway

Addresses:

Ms. Kathy Hunter  
Deputy Assistant Director, Transportation Safety  
Washington Utilities and Transportation Commission  
1300 S. Evergreen Park Drive, SW  
Olympia, WA 98504

Ms. Elizabeth F. Klute  
Northwest Regional Emergency Manager OR/WA/ID/MT/ND  
Emergency Management & Corporate Security  
National Railroad Passenger Corporation  
187 S Holgate Street  
Seattle, WA 98134

Mr. Richard W. Wagner  
Manager Public Projects  
BNSF Railway  
2454 Occidental Avenue, Suite 2D  
Seattle, WA 98134