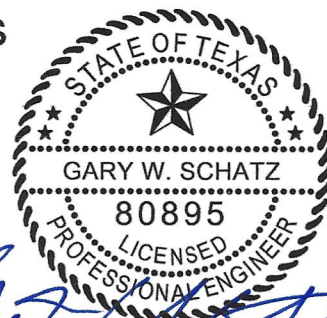


Texas A&M University Quiet Zone College Station, Texas

Public Authority Application

Submitted by
Texas A&M University
Transportation Services
College Station, Texas

April 13, 2021



Gary W. Schatz, P.E., P70E, PTP
Mobility Planning & Engineering, LLC
TBPE Firm No. 19852

**Texas A&M University Quiet Zone
College Station, Texas**

Public Authority Application - Project Summary

April 13, 2021

The “Texas A&M University Quiet Zone” is being established on the basis of “Public Authority Application to FRA” in accordance with §222.39 (b)(1).

The intent of the project is to restrict the use of train horns within the project limits for 24 hours per day, all days of the week.

The project incorporates four public at-grade crossings of Union Pacific Railroad along the Navasota Subdivision. The total length of the project is approximately 1.7 miles. There are no exclusive cyclist or pedestrian crossings within the project limits. There is one grade-separated crossing within the project limits. These crossing are listed below.

Texas A&M University Quiet Zone
College Station, Texas
Railroad Crossing Location Summary

| DOT No. | Location | Type of Crossing | | Jurisdiction |
|----------------|----------------------------------------|-------------------------|--------|------------------------------------------------------------------------|
| 743209X | UPRR at F&B Road | At-Grade | Public | City of Bryan Texas A&M University |
| 743210S | UPRR at FM 60 / University Drive | Grade Separated | Public | City of College Station Texas Department of Transportation |
| 743211Y | UPRR at Old Main Drive | At-Grade | Public | Texas A&M University |
| 743212F | UPRR at John Kimbrough Boulevard | At-Grade | Public | Texas A&M University |
| 743215B | UPRR at FM 2347 / W. George Bush Drive | At-Grade | Public | City of College Station Texas Department of Transportation |

The quiet zone will be established by implementing Supplemental Safety Measures (SSMs), Alternative Safety Measures (ASMs), or Wayside Horns at all crossings to reduce the Quiet Zone Risk Index (QZRI) to at or below the Risk Index with Horns (RIWH).

Other required information may be found in the following appendices:

- Appendix A – Grade Crossing Inventory Forms
- Appendix B – Diagnostic Team Reviews
- Appendix C – Notice of Intent Responses and Comments
- Appendix D – Presentation and Discussion of Mitigation Strategies
- Appendix E – Quiet Zone Calculations

The Public Authority for the project is Texas A&M University. The Point of Contact for the project is:

Peter Lange, Associate Vice President
Transportation Services
Texas A&M University
1250 TAMU
College Station, Texas 77843-1250
979.845.9700
plange@tamu.edu

Appendix A

Grade Crossing Inventory Forms

Information currently on file and correct is shown in **BLUE**

New, revised or updated information is presented in **RED**

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, Parts I and II, 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.

| | | | |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| A. Revision Date (MM/DD/YYYY) 01/15/2021 | B. Reporting Agency <input type="checkbox"/> Railroad <input type="checkbox"/> Transit <input type="checkbox"/> State <input checked="" type="checkbox"/> Other | C. Reason for Update (Select only one) <input type="checkbox"/> Change in Data <input type="checkbox"/> New Crossing <input type="checkbox"/> Closed <input type="checkbox"/> Re-Open <input type="checkbox"/> Date Change Only <input type="checkbox"/> No Train Traffic <input checked="" type="checkbox"/> Quiet Zone Update <input type="checkbox"/> Change in Primary Operating RR <input type="checkbox"/> Admin. Correction | D. DOT Crossing Inventory Number 743209X |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|

Part I: Location and Classification Information

| | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Primary Operating Railroad USDAO PACIFIC RAILROAD CO (UP) | | 2. State TEXAS | | 3. County BRAZOS | |
| 4. City/Municipality <input checked="" type="checkbox"/> In <input type="checkbox"/> Near BRYAN | | 5. Street/Road Name & Block Number F&B ROAD (Street/Road Name) *(Block Number) | | 6. Highway Type & No. ST 0000 | |
| 7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR | | | 8. Do Other Railroads Operate Over Your Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR | | |
| 9. Railroad Division or Region <input type="checkbox"/> None HOUSTON | | 10. Railroad Subdivision or District <input type="checkbox"/> None NAVASOTA SUB | | 11. Branch or Line Name <input checked="" type="checkbox"/> None | |
| 12. RR Milepost (prefix) (nnn.nnn) (suffix) 0074.380 | | | | | |
| 13. Line Segment * | | 14. Nearest RR Timetable Station * | | 15. Parent RR (if applicable) <input checked="" type="checkbox"/> N/A | |
| 16. Crossing Owner (if applicable) <input type="checkbox"/> N/A UP | | | | | |
| 17. Crossing Type <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private | | 18. Crossing Purpose <input checked="" type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped. | | 19. Crossing Position <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over | |
| 20. Public Access (if Private Crossing) <input type="checkbox"/> Yes <input type="checkbox"/> No | | 21. Type of Train <input checked="" type="checkbox"/> Freight <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter | | 22. Average Passenger Train Count Per Day <input type="checkbox"/> Transit <input type="checkbox"/> Shared Use Transit <input type="checkbox"/> Tourist/Other <input type="checkbox"/> Less Than One Per Day <input type="checkbox"/> Number Per Day 0 | |
| 23. Type of Land Use <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard | | | | | |
| 24. Is there an Adjacent Crossing with a Separate Number? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Provide Crossing Number | | | 25. Quiet Zone (FRA provided) <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 <input checked="" type="checkbox"/> N/A | | 27. Latitude in decimal degrees 30.6243309 (WGS84 std: nn.nnnnnn) | | 28. Longitude in decimal degrees -96.3568163 (WGS84 std: -nnn.nnnnnn) | |
| 29. Lat/Long Source <input checked="" type="checkbox"/> Actual <input type="checkbox"/> Estimated | | | | | |
| 30.A. Railroad Use * | | 31.A. State Use * | | | |
| 30.B. Railroad Use * | | 31.B. State Use * | | | |
| 30.C. Railroad Use * | | 31.C. State Use * STATE PHONE # UPDATED - DATE UPDATED: 2018-08-16 | | | |
| 30.D. Railroad Use * | | 31.D. State Use * | | | |
| 32.A. Narrative (Railroad Use) * | | 32.B. Narrative (State Use) * | | | |
| 33. Emergency Notification Telephone No. (posted) 800-848-8715 | | 34. Railroad Contact (Telephone No.) 402-544-3721 | | 35. State Contact (Telephone No.) 512-416-2635 | |

Part II: Railroad Information

| | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------|
| 1. Estimated Number of Daily Train Movements | | | | |
| 1.A. Total Day Thru Trains (6 AM to 6 PM) 8 | 1.B. Total Night Thru Trains (6 PM to 6 AM) 7 | 1.C. Total Switching Trains 0 | 1.D. Total Transit Trains 0 | 1.E. Check if Less Than One Movement Per Day How many trains per week? <input type="checkbox"/> |
| 2. Year of Train Count Data (YYYY) 2020 | | 3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 30 3.B. Typical Speed Range Over Crossing (mph) From 15 to 30 | | |
| 4. Type and Count of Tracks Main 2 Siding 0 Yard 0 Transit 0 Industry 0 | | | | |
| 5. Train Detection (Main Track only) <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None | | | | |
| 6. Is Track Signaled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | 7.A. Event Recorder <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | 7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 01/15/2021 PAGE 2 D. Crossing Inventory Number (7 char.) 743209X

Part III: Highway or Pathway Traffic Control Device Information

| | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 1. Are there Signs or Signals? <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) <u>0</u> | | 2.B. STOP Signs (R1-1) (count) <u>0</u> | 2.C. YIELD Signs (R1-2) (count) | 2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> None | |
| | | | | <input checked="" type="checkbox"/> W10-1 <u>4</u> | <input type="checkbox"/> W10-3 _____ |
| | | | | <input checked="" type="checkbox"/> W10-2 <u>2</u> | <input type="checkbox"/> W10-4 _____ |
| 2.E. Low Ground Clearance Sign (W10-5) <input type="checkbox"/> Yes (count _____) <input checked="" type="checkbox"/> No | | 2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input checked="" type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None | | 2.G. Channelization Devices/Medians <input type="checkbox"/> All Approaches <input type="checkbox"/> Median <input type="checkbox"/> One Approach <input checked="" type="checkbox"/> None | 2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2.J. Other MUTCD Signs Specify Type <u>RB-8</u> Count <u>2</u> Specify Type _____ Count _____ Specify Type _____ Count _____ | | | 2.K. Private Crossing Signs (if private) <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) Roadway <u>4</u> Pedestrian _____ | 3.B. Gate Configuration <input checked="" type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) <input type="checkbox"/> 3 Quad Resistance <input type="checkbox"/> 4 Quad <input type="checkbox"/> Median Gates | 3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane <u>0</u> <input type="checkbox"/> Incandescent Not Over Traffic Lane <u>0</u> <input type="checkbox"/> LED | | 3.D. Mast Mounted Flashing Lights (count of masts) <u>2</u> <input type="checkbox"/> Incandescent <input checked="" type="checkbox"/> LED <input checked="" type="checkbox"/> Back Lights Included <input checked="" type="checkbox"/> Side Lights Included | 3.E. Total Count of Flashing Light Pairs <u>10</u> |
| 3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) ____/____/____ <input checked="" type="checkbox"/> Not Required | | 3.G. Wayside Horn <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Installed on (MM/YYYY) ____/____/____ | | 3.H. Highway Traffic Signals Controlling Crossing <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 3.I. Bells (count) <u>4</u> |
| 3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input checked="" type="checkbox"/> None | | | | 3.K. Other Flashing Lights or Warning Devices Count <u>0</u> Specify type _____ | |
| 4.A. Does nearby Hwy Intersection have Traffic Signals? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 4.B. Hwy Traffic Signal Interconnection <input type="checkbox"/> Not Interconnected <input checked="" type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs | 4.C. Hwy Traffic Signal Preemption <input type="checkbox"/> Simultaneous <input checked="" type="checkbox"/> Advance | 5. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Storage Distance * _____ Stop Line Distance * _____ | 6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input checked="" type="checkbox"/> None | |

Part IV: Physical Characteristics

| | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Traffic Lanes Crossing Railroad Number of Lanes <u>3</u> <input type="checkbox"/> One-way Traffic <input checked="" type="checkbox"/> Two-way Traffic <input type="checkbox"/> Divided Traffic | 2. Is Roadway/Pathway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 5. Crossing Surface (on Main Track, multiple types allowed) <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 <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____ | | | |
| 6. Intersecting Roadway within 500 feet? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Approximate Distance (feet) <u>45</u> | | 7. Smallest Crossing Angle <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90° | 8. Is Commercial Power Available? * <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

Part V: Public Highway Information

| | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input type="checkbox"/> (03) Federal AID, Not NHS <input checked="" type="checkbox"/> (08) Non-Federal Aid | 2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input checked="" type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local | | 3. Is Crossing on State Highway System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 4. Highway Speed Limit <u>30</u> MPH <input checked="" type="checkbox"/> Posted <input type="checkbox"/> Statutory |
| 7. Annual Average Daily Traffic (AADT) Year <u>2019</u> AADT <u>7,306</u> | 8. Estimated Percent Trucks <u>0.82</u> % | 9. Regularly Used by School Buses? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Average Number per Day <u>10</u> | 10. Emergency Services Route <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 PETER LAJOE Organization TEXAS A&M UNIV. Phone 979-845-9700 Date 1/15/2021

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.

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, Parts I and II, 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.

| | | | |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| A. Revision Date (MM/DD/YYYY) 01/15/2021 | B. Reporting Agency <input type="checkbox"/> Railroad <input type="checkbox"/> Transit <input type="checkbox"/> State <input checked="" type="checkbox"/> Other | C. Reason for Update (Select only one) <input type="checkbox"/> Change in Data <input type="checkbox"/> New Crossing <input type="checkbox"/> Closed <input type="checkbox"/> Re-Open <input type="checkbox"/> Date Change Only <input type="checkbox"/> Change in Primary Operating RR <input type="checkbox"/> No Train Traffic <input checked="" type="checkbox"/> Quiet Zone Update <input type="checkbox"/> Admin. Correction | D. DOT Crossing Inventory Number 7432105 |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|

Part I: Location and Classification Information

| | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Primary Operating Railroad UNION PACIFIC RAILROAD CO (UP) | | 2. State TEXAS | | 3. County BRAZOS | |
| 4. City / Municipality <input checked="" type="checkbox"/> In COLLEGE STATION <input type="checkbox"/> Near | | 5. Street/Road Name & Block Number FM 60 / UNIVERSITY DRIVE (* Block Number) | | 6. Highway Type & No. FM 0060 | |
| 7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR | | | 8. Do Other Railroads Operate Over Your Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR | | |
| 9. Railroad Division or Region <input type="checkbox"/> None HOUSTON | | 10. Railroad Subdivision or District <input type="checkbox"/> None NAVASOTA SUB | | 11. Branch or Line Name <input checked="" type="checkbox"/> None | |
| 12. RR Milepost 0073.590 (prefix) (nnnn.nnn) (suffix) | | | | | |
| 13. Line Segment * | | 14. Nearest RR Timetable Station * | | 15. Parent RR (if applicable) <input type="checkbox"/> N/A | |
| 16. Crossing Owner (if applicable) <input type="checkbox"/> N/A | | | | | |
| 17. Crossing Type <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private | | 18. Crossing Purpose <input checked="" type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped. | | 19. Crossing Position <input type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input checked="" type="checkbox"/> RR Over | |
| 20. Public Access (if Private Crossing) <input type="checkbox"/> Yes <input type="checkbox"/> No | | 21. Type of Train <input checked="" type="checkbox"/> Freight <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter | | 22. Average Passenger Train Count Per Day <input type="checkbox"/> Less Than One Per Day <input type="checkbox"/> Number Per Day 0 | |
| 23. Type of Land Use <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard | | | | | |
| 24. Is there an Adjacent Crossing with a Separate Number? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Provide Crossing Number | | | 25. Quiet Zone (FRA provided) <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 <input checked="" type="checkbox"/> N/A | | 27. Latitude in decimal degrees 30.6155195 (WGS84 std: nn.nnnnnn) | | 28. Longitude in decimal degrees -96.3487769 (WGS84 std: -nnn.nnnnnn) | |
| 29. Lat/Long Source <input checked="" type="checkbox"/> Actual <input type="checkbox"/> Estimated | | | | | |
| 30.A. Railroad Use * | | 31.A. State Use * | | | |
| 30.B. Railroad Use * | | 31.B. State Use * | | | |
| 30.C. Railroad Use * | | 31.C. State Use * STATE PHONE# UPDATED-DATE UPDATED 2018 08-16 | | | |
| 30.D. Railroad Use * | | 31.D. State Use * | | | |
| 32.A. Narrative (Railroad Use) * | | 32.B. Narrative (State Use) * | | | |
| 33. Emergency Notification Telephone No. (posted) 800-848-8715 | | 34. Railroad Contact (Telephone No.) 402-544-3721 | | 35. State Contact (Telephone No.) 512-416-2635 | |

Part II: Railroad Information

| | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------|
| 1. Estimated Number of Daily Train Movements | | | | |
| 1.A. Total Day Thru Trains (6 AM to 6 PM) 8 | 1.B. Total Night Thru Trains (6 PM to 6 AM) 7 | 1.C. Total Switching Trains 0 | 1.D. Total Transit Trains 0 | 1.E. Check if Less Than One Movement Per Day How many trains per week? <input type="checkbox"/> |
| 2. Year of Train Count Data (YYYY) 2020 | | 3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 30 3.B. Typical Speed Range Over Crossing (mph) From 15 to 30 | | |
| 4. Type and Count of Tracks Main 1 Siding 0 Yard 0 Transit 0 Industry 0 | | | | |
| 5. Train Detection (Main Track only) <input type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input checked="" type="checkbox"/> None | | | | |
| 6. Is Track Signaled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | 7.A. Event Recorder <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | 7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

U. S. DOT CROSSING INVENTORY FORM

| | | |
|-------------------------------------------------|--------|-------------------------------------------------------|
| A. Revision Date (MM/DD/YYYY) <u>01/15/2021</u> | PAGE 2 | D. Crossing Inventory Number (7 char.) <u>7432105</u> |
|-------------------------------------------------|--------|-------------------------------------------------------|

Part III: Highway or Pathway Traffic Control Device Information

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

Part IV: Physical Characteristics

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

Part V: Public Highway Information

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--|
| 1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input checked="" type="checkbox"/> (03) Federal Aid, Not NHS <input type="checkbox"/> (08) Non-Federal Aid | | 2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input checked="" type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local | | | 3. Is Crossing on State Highway System? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | 4. Highway Speed Limit <u>40</u> MPH <input checked="" type="checkbox"/> Posted <input type="checkbox"/> Statutory | |
| 5. Linear Referencing System (LRS Route ID) * | | | | | | | | |
| 6. LRS Milepost * | | | | | | | | |
| 7. Annual Average Daily Traffic (AADT) Year <u>2016</u> AADT <u>31,348</u> | | 8. Estimated Percent Trucks <u>5.0</u> % | | 9. Regularly Used by School Buses? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Average Number per Day <u>10</u> | | 10. Emergency Services Route <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | |

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

Submitted by PETER LANGE Organization TEXAS A&M UNIV. Phone 979.845.9700 Date 1/15/21

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.

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, Parts I and II, 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.

| | | | |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| A. Revision Date (MM/DD/YYYY) 01/15/2021 | B. Reporting Agency <input type="checkbox"/> Railroad <input type="checkbox"/> Transit <input type="checkbox"/> State <input checked="" type="checkbox"/> Other | C. Reason for Update (Select only one) <input type="checkbox"/> Change in Data <input type="checkbox"/> New Crossing <input type="checkbox"/> Closed <input type="checkbox"/> Re-Open <input type="checkbox"/> Date Change Only <input type="checkbox"/> Change in Primary Operating RR <input type="checkbox"/> No Train Traffic <input checked="" type="checkbox"/> Quiet Zone Update <input type="checkbox"/> Admin. Correction | D. DOT Crossing Inventory Number 743211 Y |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|

Part I: Location and Classification Information

| | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Primary Operating Railroad UNION PACIFIC RAILROAD CO. (UP) | | 2. State TEXAS | | 3. County BRAZOS | |
| 4. City / Municipality <input checked="" type="checkbox"/> In <input type="checkbox"/> Near COLLEGE STATION | | 5. Street/Road Name & Block Number OLD MAIN DRIVE * (Block Number) | | 6. Highway Type & No. ST 0000 | |
| 7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR | | | 8. Do Other Railroads Operate Over Your Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR | | |
| 9. Railroad Division or Region <input type="checkbox"/> None HOUSTON | | 10. Railroad Subdivision or District <input type="checkbox"/> None NAVASOTA SUB | | 11. Branch or Line Name <input checked="" type="checkbox"/> None | |
| 12. RR Milepost 6073.300 (prefix) (nnnn.nnn) (suffix) | | | | | |
| 13. Line Segment * | | 14. Nearest RR Timetable Station * | | 15. Parent RR (if applicable) <input checked="" type="checkbox"/> N/A | |
| 16. Crossing Owner (if applicable) <input type="checkbox"/> N/A UP | | 17. Crossing Type <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private | | 18. Crossing Purpose <input checked="" type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped. | |
| 19. Crossing Position <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over | | 20. Public Access (if Private Crossing) <input type="checkbox"/> Yes <input type="checkbox"/> No | | 21. Type of Train <input checked="" type="checkbox"/> Freight <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter | |
| 22. Average Passenger Train Count Per Day <input type="checkbox"/> Less Than One Per Day <input checked="" type="checkbox"/> Number Per Day 0 | | 23. Type of Land Use <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard | | 24. Is there an Adjacent Crossing with a Separate Number? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Provide Crossing Number | |
| 25. Quiet Zone (FRA provided) <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 <input checked="" type="checkbox"/> N/A | | 27. Latitude in decimal degrees 30.6123202 (WGS84 std: nn.nnnnnnn) | |
| 28. Longitude in decimal degrees -96.3458556 (WGS84 std: -nnn.nnnnnnn) | | 29. Lat/Long Source <input checked="" type="checkbox"/> Actual <input type="checkbox"/> Estimated | | 30.A. Railroad Use * | |
| 30.B. Railroad Use * | | 30.C. Railroad Use * | | 30.D. Railroad Use * | |
| 31.A. State Use * | | 31.B. State Use * | | 31.C. State Use * STATE PHONE # UPDATED - DATE UPDATED 2018-08-14 | |
| 31.D. State Use * | | 32.A. Narrative (Railroad Use) * | | 32.B. Narrative (State Use) * | |
| 33. Emergency Notification Telephone No. (posted) 800-846-8715 | | 34. Railroad Contact (Telephone No.) 402-544-3721 | | 35. State Contact (Telephone No.) 512-416-2635 | |

Part II: Railroad Information

| | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------|
| 1. Estimated Number of Daily Train Movements | | | | |
| 1.A. Total Day Thru Trains (6 AM to 6 PM) 8 | 1.B. Total Night Thru Trains (6 PM to 6 AM) 7 | 1.C. Total Switching Trains 0 | 1.D. Total Transit Trains 0 | 1.E. Check if Less Than One Movement Per Day How many trains per week? <input type="checkbox"/> |
| 2. Year of Train Count Data (YYYY) 2020 | | 3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 30 3.B. Typical Speed Range Over Crossing (mph) From 15 to 30 | | |
| 4. Type and Count of Tracks Main 1 Siding 0 Yard 0 Transit 0 Industry 0 | | | | |
| 5. Train Detection (Main Track only) <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None | | | | |
| 6. Is Track Signaled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | 7.A. Event Recorder <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | 7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 01/15/2021 PAGE 2 D. Crossing Inventory Number (7 char.) 7432114

Part III: Highway or Pathway Traffic Control Device Information

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

Part IV: Physical Characteristics

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| 1. Traffic Lanes Crossing Railroad Number of Lanes <u>3</u> <input type="checkbox"/> One-way Traffic <input checked="" type="checkbox"/> Two-way Traffic <input type="checkbox"/> Divided Traffic | 2. Is Roadway/Pathway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 4. Is Crossing illuminated? (Street lights within approx. 50 feet from nearest rail) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____/____ Width * _____ Length * <u>100</u> <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 <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____ | | | |
| 6. Intersecting Roadway within 500 feet? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Approximate Distance (feet) <u>60</u> | | 7. Smallest Crossing Angle <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90° | 8. Is Commercial Power Available? * <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

Part V: Public Highway Information

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input type="checkbox"/> (03) Federal Aid, Not NHS <input checked="" type="checkbox"/> (08) Non-Federal Aid | | 2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input checked="" type="checkbox"/> (7) Local | | 3. Is Crossing on State Highway System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 4. Highway Speed Limit System? <u>30</u> MPH <input type="checkbox"/> Posted <input checked="" type="checkbox"/> Statutory |
| 7. Annual Average Daily Traffic (AADT) Year <u>2019</u> AADT <u>4,104</u> | | 8. Estimated Percent Trucks <u>0.32</u> % | 9. Regularly Used by School Buses? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Average Number per Day <u>10</u> | | 10. Emergency Services Route <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 PETER LANGE Organization TEXAS A&M UNIV. Phone 979-845-9700 Date 1/15/21

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.

U. S. DOT CROSSING INVENTORY FORM

| | | |
|-------------------------------------------------|--------|-------------------------------------------------------|
| A. Revision Date (MM/DD/YYYY) <u>01/15/2021</u> | PAGE 2 | D. Crossing Inventory Number (7 char.) <u>743212F</u> |
|-------------------------------------------------|--------|-------------------------------------------------------|

Part III: Highway or Pathway Traffic Control Device Information

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. Are there Signs or Signals? <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) <u>0</u> | | 2.B. STOP Signs (R1-1) (count) <u>0</u> | 2.C. YIELD Signs (R1-2) (count) _____ | 2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> None | | |
| | | | | <input checked="" type="checkbox"/> W10-1 <u>2</u> | <input type="checkbox"/> W10-3 _____ | |
| | | | | <input checked="" type="checkbox"/> W10-2 <u>2</u> | <input type="checkbox"/> W10-4 _____ | |
| 2.E. Low Ground Clearance Sign (W10-5) <input type="checkbox"/> Yes (count _____) <input checked="" type="checkbox"/> No | 2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input checked="" type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None | | 2.G. Channelization Devices/Medians <input checked="" type="checkbox"/> All Approaches <input checked="" type="checkbox"/> Median <input type="checkbox"/> One Approach <input type="checkbox"/> None | | 2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| 2.J. Other MUTCD Signs Specify Type <u>RB-8</u> Count <u>1</u> Specify Type _____ Count _____ Specify Type _____ Count _____ | | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 2.K. Private Crossing Signs (if private) <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) Roadway <u>2</u> Pedestrian _____ | 3.B. Gate Configuration <input checked="" type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) Resistance <input type="checkbox"/> 3 Quad <input type="checkbox"/> Median Gates | 3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane <u>0</u> <input type="checkbox"/> Incandescent Not Over Traffic Lane <u>0</u> <input type="checkbox"/> LED | | 3.D. Mast Mounted Flashing Lights (count of masts) <u>2</u> <input type="checkbox"/> Incandescent <input checked="" type="checkbox"/> LED <input checked="" type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included | 3.E. Total Count of Flashing Light Pairs <u>4</u> | |
| 3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) ____/____/____ <input checked="" type="checkbox"/> Not Required | | 3.G. Wayside Horn <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Installed on (MM/YYYY) ____/____/____ | | 3.H. Highway Traffic Signals Controlling Crossing <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 3.I. Bells (count) <u>2</u> | |
| 3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input checked="" type="checkbox"/> None | | | | 3.K. Other Flashing Lights or Warning Devices Count <u>0</u> Specify type _____ | | |
| 4.A. Does nearby Hwy Intersection have Traffic Signals? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 4.B. Hwy Traffic Signal Interconnection <input type="checkbox"/> Not Interconnected <input checked="" type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs | 4.C. Hwy Traffic Signal Preemption <input type="checkbox"/> Simultaneous <input checked="" type="checkbox"/> Advance | 5. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Storage Distance * _____ Stop Line Distance * _____ | | 6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input checked="" type="checkbox"/> None | |

Part IV: Physical Characteristics

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| 1. Traffic Lanes Crossing Railroad Number of Lanes <u>5</u> <input type="checkbox"/> One-way Traffic <input checked="" type="checkbox"/> Two-way Traffic <input type="checkbox"/> Divided Traffic | 2. Is Roadway/Pathway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____/____ Width * _____ Length * <u>80</u> <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 <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____ | | | |
| 6. Intersecting Roadway within 500 feet? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Approximate Distance (feet) <u>75</u> | | 7. Smallest Crossing Angle <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90° | 8. Is Commercial Power Available? * <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

Part V: Public Highway Information

| | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input type="checkbox"/> (03) Federal AID, Not NHS <input checked="" type="checkbox"/> (08) Non-Federal Aid | 2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input checked="" type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local | | 3. Is Crossing on State Highway System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 4. Highway Speed Limit System? <u>30</u> MPH <input checked="" type="checkbox"/> Posted <input type="checkbox"/> Statutory |
| 7. Annual Average Daily Traffic (AADT) Year <u>2019</u> AADT <u>12,651</u> | 8. Estimated Percent Trucks <u>0.31</u> % | 9. Regularly Used by School Buses? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Average Number per Day <u>10</u> | | 10. Emergency Services Route <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 PETER LANGE Organization TEXAS A&M UNIV. Phone 979-845-9700 Date 1/15/21

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.

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, Parts I and II, 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.

| | | | |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| A. Revision Date (MM/DD/YYYY) <u>01/15/2021</u> | B. Reporting Agency <input type="checkbox"/> Railroad <input type="checkbox"/> Transit <input type="checkbox"/> State <input checked="" type="checkbox"/> Other | C. Reason for Update (Select only one) <input type="checkbox"/> Change in Data <input type="checkbox"/> New Crossing <input type="checkbox"/> Closed <input type="checkbox"/> Re-Open <input type="checkbox"/> Date Change Only <input type="checkbox"/> Change in Primary Operating RR <input type="checkbox"/> No Train Traffic <input checked="" type="checkbox"/> Quiet Zone Update <input type="checkbox"/> Admin. Correction | D. DOT Crossing Inventory Number <div style="font-size: 24pt; font-weight: bold;">743215B</div> |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|

Part I: Location and Classification Information

| | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Primary Operating Railroad <u>UNION PACIFIC RAILROAD CO (UP)</u> | | 2. State <u>TEXAS</u> | | 3. County <u>BRAZOS</u> | |
| 4. City/ Municipality <input checked="" type="checkbox"/> In <u>COLLEGE STATION</u> <input type="checkbox"/> Near | | 5. Street/Road Name & Block Number <u>GEORGE BUSH DRIVE</u> (Street/Road Name) * (Block Number) | | 6. Highway Type & No. <u>FM 2347</u> | |
| 7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR | | | 8. Do Other Railroads Operate Over Your Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR | | |
| 9. Railroad Division or Region <input type="checkbox"/> None <u>HOUSTON</u> | | 10. Railroad Subdivision or District <input type="checkbox"/> None <u>NAVASOTA SUB</u> | | 11. Branch or Line Name <input checked="" type="checkbox"/> None | |
| 12. RR Milepost <u>0072.630</u> (prefix) (nnn.nnn) (suffix) | | 13. Line Segment * | | | |
| 14. Nearest RR Timetable Station * | | 15. Parent RR (if applicable) <input checked="" type="checkbox"/> N/A | | 16. Crossing Owner (if applicable) <input type="checkbox"/> N/A <u>UP</u> | |
| 17. Crossing Type <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private | 18. Crossing Purpose <input checked="" type="checkbox"/> Highway <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped. | 19. Crossing Position <input checked="" type="checkbox"/> At Grade <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over | 20. Public Access (if Private Crossing) <input type="checkbox"/> Yes <input type="checkbox"/> No | 21. Type of Train <input checked="" type="checkbox"/> Freight <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter | 22. Average Passenger Train Count Per Day <input type="checkbox"/> Less Than One Per Day <input type="checkbox"/> Number Per Day <u>0</u> |
| 23. Type of Land Use <input type="checkbox"/> Open Space <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input checked="" 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Provide Crossing Number | | | 25. Quiet Zone (FRA provided) <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 <input checked="" type="checkbox"/> N/A | | 27. Latitude in decimal degrees <u>30.6045185</u> (WGS84 std: nn.nnnnnn) | | 28. Longitude in decimal degrees <u>-96.3393146</u> (WGS84 std: -nnn.nnnnnn) | |
| 29. Lat/Long Source <input checked="" type="checkbox"/> Actual <input type="checkbox"/> Estimated | | 30.A. Railroad Use * | | | |
| 30.B. Railroad Use * | | 30.C. Railroad Use * | | | |
| 30.D. Railroad Use * | | 30.E. Railroad Use * | | | |
| 31.A. State Use * | | | 31.B. State Use * | | |
| 31.C. State Use * | | | 31.D. State Use * | | |
| 32.A. Narrative (Railroad Use) * | | | 32.B. Narrative (State Use) * | | |
| 33. Emergency Notification Telephone No. (posted) <u>800-848-0715</u> | | 34. Railroad Contact (Telephone No.) <u>402-544-3721</u> | | 35. State Contact (Telephone No.) <u>512-416-2635</u> | |

Part II: Railroad Information

| | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------|
| 1. Estimated Number of Daily Train Movements | | | | |
| 1.A. Total Day Thru Trains (6 AM to 6 PM) <u>8</u> | 1.B. Total Night Thru Trains (6 PM to 6 AM) <u>7</u> | 1.C. Total Switching Trains <u>0</u> | 1.D. Total Transit Trains <u>0</u> | 1.E. Check if Less Than One Movement Per Day How many trains per week? <input type="checkbox"/> |
| 2. Year of Train Count Data (YYYY) <u>2020</u> | | 3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) <u>30</u> 3.B. Typical Speed Range Over Crossing (mph) From <u>15</u> to <u>30</u> | | |
| 4. Type and Count of Tracks Main <u>1</u> Siding <u>0</u> Yard <u>0</u> Transit <u>0</u> Industry <u>0</u> | | | | |
| 5. Train Detection (Main Track only) <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None | | | | |
| 6. Is Track Signaled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | 7.A. Event Recorder <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | 7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 01/15/2021 PAGE 2 D. Crossing Inventory Number (7 char.) 743215B

Part III: Highway or Pathway Traffic Control Device Information

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

Part IV: Physical Characteristics

| | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Traffic Lanes Crossing Railroad Number of Lanes <u>5</u> <input type="checkbox"/> One-way Traffic <input checked="" type="checkbox"/> Two-way Traffic <input type="checkbox"/> Divided Traffic | 2. Is Roadway/Pathway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____/____ Width * _____ Length * <u>156</u> <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 <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____ | | | |
| 6. Intersecting Roadway within 500 feet? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Approximate Distance (feet) <u>40</u> | | 7. Smallest Crossing Angle <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90° | |
| 8. Is Commercial Power Available? * <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | |

Part V: Public Highway Information

| | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------|--|
| 1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input checked="" type="checkbox"/> (03) Federal AID, Not NHS <input type="checkbox"/> (08) Non-Federal Aid | | 2. Functional Classification of Road at Crossing <input type="checkbox"/> (0) Rural <input checked="" type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input checked="" type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local | | 3. Is Crossing on State Highway System? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | 4. Highway Speed Limit System? _____ MPH <input type="checkbox"/> Posted <input type="checkbox"/> Statutory | |
| 5. Linear Referencing System (LRS Route ID) * | | | | 6. LRS Milepost * | | | |
| 7. Annual Average Daily Traffic (AADT) Year <u>2019</u> AADT <u>27,146</u> | | 8. Estimated Percent Trucks <u>0.78</u> % | | 9. Regularly Used by School Buses? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Average Number per Day <u>13</u> | | 10. Emergency Services Route <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |

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

Submitted by PETER LANGE Organization TEXAS A&M UNIV. Phone 979-845-9700 Date 1/15/21

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.

Appendix B

Diagnostic Team Review (Diagnostic Inspection)

Appendix B
Texas A&M University Quiet Zone
College Station, Texas
Diagnostic Team Review
(Diagnostic Inspection)

April 13, 2021

A diagnostic inspection overview and discussion was conducted on August 13, 2019 at the Doug Pitcock '49 Texas A&M Hotel and Conference Center, located on Texas A&M University's campus in College Station, Texas. This day-long event brought together representatives from these organizations and entities:

- Union Pacific Railroad Company (UP)
- Federal Railroad Administration, Region V
- Texas Department of Transportation
- Texas A&M University (TAMU)
- Texas A&M Transportation Institute
- City of Bryan, TX
- City of College Station, TX
- Brazos County, TX
- Bryan/College Station Metropolitan Planning Organization
- Alfred Benesch & Company (UP contractor)
- CTC Incorporated (UP contractor)
- Mobility Planning & Engineering, LLC (TAMU quiet zone consultant)

The following day, August 14, 2019, participants conducted a field review of the five crossings under consideration.

Presentation materials, handouts, sign-in sheets, notes and recommendations were compiled and shared with all attendees following the conclusion of the diagnostic inspection. Additionally, a summary of discussions and agreements was prepared and submitted to all stakeholders for review and comment.

A consensus of comments was compiled and shared with all participants and is presented in the following pages.



Mobility Planning & Engineering, LLC
4335 Hazepoint Drive
Katy, Texas 77494
TBPE Firm No. F-19852

Date: October 22, 2019
By: Gary W. Schatz, P.E., PTOE, PTP
Project: TAMU Railroad Quiet Zone
MP&E Project No. 2019-010
Subject: Quiet Zone Diagnostic Inspection
Summary of Discussions and Agreements

A handwritten signature in blue ink, appearing to read 'Gary W. Schatz', is written over the 'By:' line of the document.

Attachments: As Stated

A quiet zone diagnostic inspection was held August 13-14, 2019. The first day was held at the Texas A&M Hotel and Conference Center, College Station, TX. The second day was in the field at each crossing being considered for inclusion in the quiet zone.

Entities represented included:

- Texas A&M University (TAMU)
- Union Pacific Railroad (UP)
- Federal Railroad Administration (FRA)
- City of College Station (COCS)
- City of Bryan (COB)
- Texas Department of Transportation (TxDOT)
- Brazos County
- Mobility Planning & Engineering, LLC
- CTC, Inc.
- Alfred Benesch & Co.

Copies of the sign-in sheets are attached.

The intent of the project is to restrict the use of train horns within the project limits for 24 hours per day, all days of the week. The quiet zone will be established by implementing Supplemental Safety Measures (SSMs), Alternative Safety Measures (ASMs), or Wayside Horns at all crossings to reduce the Quiet Zone Risk Index (QZRI) to at or below the Risk Index with Horns (RIWH).

The project incorporates four public at-grade crossings of Union Pacific Railroad along the Navasota Subdivision. The total length of the project is approximately 1.7 miles. There are no pedestrian or cyclist only crossings within the project limits. There is one grade-separated crossing within the project limits.

October 22, 2019

RE: TAMU Railroad Quiet Zone Diagnostic Inspection
Summary of Discussion and Agreements



Page 2

General Information:

- Only UP has trackage rights.
- Texas A&M University will be the Public Authority for the quiet zone. TAMU has been granted authority to fund all necessary improvements. Negotiation of shared funding will be considered on a per crossing basis.
- Melinda DuBay with UP will develop and provide updated grade crossing inventory forms to TAMU for all crossings for inclusion in the NOI.
- Originally, the project was to include a fifth crossing, Holleman Drive (DOT No. 745037Y). As a TxDOT-sponsored crossing safety project is in the design stages, the diagnostic inspection team decided to remove the crossing from the project and allow it to proceed separately by COCS following completion of the safety project.
- While not necessarily shown on the attached conceptual designs, all crossings will be upgraded with required pavement markings and signage, to include W10-9p (“No Train Horn”) plaques that will be installed below W10-1 (Grade Crossing Advance Warning) signs following issuance of the Notice of Establishment.
- As part of due diligence for safety, each entity responsible for operations and maintenance of the traffic signals along Wellborn Road will develop updated railroad preemption worksheets in accordance with TxDOT’s Form 2304 - *Guide For Determining Time Requirements For Traffic Signal Preemption At Highway-Rail Grade Crossings*. These forms will be submitted to TxDOT and UP for review. Once approved, traffic signal timing and phasing will be revised accordingly by the owning agency. Copies will be provided to TAMU for inclusion in the Notice of Establishment.
- Where provided, sidewalks are to cross the tracks as close to 90 degrees as possible. Install detectable warnings a minimum of 12 feet from near rail on all sidewalk approaches to the crossing. Edge of sidewalks must be a minimum of 2 feet from edge of railroad panel on both sides.
- Edge of street must be a minimum of 2 feet from edge of railroad panels on both sides of street.
- Robert Travis with TxDOT’s Rail Highway Section indicated any updated crossing inventory information should be sent to him and he will forward it to FRA. Additionally, Mr. Travis advised that any improvements for the quiet zone along TxDOT’s roads are the cost of the local agency and not TxDOT.

October 22, 2019

RE: TAMU Railroad Quiet Zone Diagnostic Inspection
Summary of Discussion and Agreements



Page 3

Specific Crossings:

DOT No. 743215B – UPRR @ FM 2347 / W. George Bush Drive
Train Horn Mitigation Strategy: Wayside Horns

The crossing protection equipment includes bells, flashing lights and gates, a GCP 3000 controller with constant warning time devices, and power-out indicators.

Construction of a grade-separated crossing is in preliminary engineering with construction anticipated to begin within the next four to six years. As an interim measure, wayside horns will be installed to replace the locomotive horns. Due to curvature of the track and trees along the inside of the curve north of the crossing, train crews may not be able to see at an adequate distance the wayside horn's status indicator; thus, an auxiliary wayside horn status indicator located north of the crossing may be required. This issue will be assessed during the design phase of the project and its resolution will be included in the Public Authority Application (PAA).

To address documented instances of cyclists and pedestrians using the existing crossing surface as a crosswalk, track panels will be reconfigured to present significant gaps in the planking in order to strongly discourage this behavior. To encourage better travel choices by cyclists and pedestrians, sidewalks, shared use paths, cross walks, curb ramps, pedestrian signals, signal timing and phasing, intersection geometry, and signing and markings will be revised to better facilitate accessible, safer, and more efficient crossing of Wellborn Road and the eastern leg of FM 2347 / W. George Bush Drive.

Bells will be added to the existing median gate assemblies to provide a more audible warning above ambient traffic noise levels to cyclists and pedestrians of an approaching train. All required signage and pavement markings will be installed.

A conceptual design of the proposed crossing improvements is attached.

TAMU Work to be completed:

- Fund the design and implementation of all trackside improvements.
- Fund the design and implementation of all street side improvements.
- Fund the design, procurement, installation, and maintenance of wayside horn equipment.

UP Work to be completed:

- Collaborate on design and implementation of crossing improvements.
- Remove and reset existing track panels.
- Install new track panels for new pedestrian crossings outside of gate assemblies.
- Install wayside horn interconnection circuit.
- Install bells on existing median gate assemblies.

TxDOT Work to be completed:

- Collaborate on design and implementation of crossing improvements.

COCS Work to be completed:

- Collaborate on design and implementation of crossing improvements.
- Develop and implement revised signal timing and phasing plans to support pedestrian improvements.
- Implement revised railroad preemption timing and phasing plans as determined by reviewed and approved TxDOT Form 2304.

DOT No. 743212F – UPRR @ John Kimbrough Boulevard
Train Horn Mitigation Strategy: SSM – Gates with Channelization

The crossing protection equipment includes bells, flashing lights and gates, a GCP 3000 controller with constant warning time devices, and power-out indicators.

This concept of mitigation includes reconfiguration of John Kimbrough to provide an 11 ft. wide median and 11 ft. wide vehicular travel lanes. A median greater than ten feet in width measured face of curb to face of curb is required to accommodate the installation of median island gates. Median gates will be installed within the new median, eliminating the need for excessively long gate arms for the eastbound approach. UP may participate in funding some percentage of the improvements as they allow for the installation of the necessary median island gates. What results is a Supplemental Safety Measure (SSM) as the median between the gates and Wellborn Road will be 60 feet long.

All pedestrian crossings of the tracks will be eliminated and fencing installed along the edge of the adjacent parking lot (Lot 61) to mitigate possible scofflaw behavior. This fence will tie into the existing fence running parallel to the tracks. Cyclists and pedestrians will be rerouted to the existing underpass located south of John Kimbrough Boulevard. Sidewalks, shared use paths, curb ramps, cross walks, pedestrian signals, and signs and markings will be removed or modified to implement this concept. Landscaping will be installed to further discourage travel by cyclists and pedestrians along the former sidewalk areas.

A conceptual design of the proposed crossing improvements is attached.

TAMU Work to be completed:

- Fund the design and implementation of all street side improvements.
- Possibly through partnering agreement, fund the design and implementation of all trackside improvements.

UP Work to be completed:

- Collaborate on design and implementation of crossing improvements.
- Design and implement all trackside improvements.

TxDOT Work to be completed:

- Collaborate on design and implementation of crossing improvements.

COCS Work to be completed:

- Collaborate on design and implementation of crossing improvements.
- Develop and implement revised signal timing and phasing plans to support pedestrian improvements.
- Implement revised railroad preemption timing and phasing plans as determined by reviewed and approved TxDOT Form 2304.

DOT No. 743210S - UPRR over SH 60 / University Drive
Train Horn Mitigation Strategy: Not Applicable – Grade Separated

This crossing is being included in the inventory of all crossings within the limits of the quiet zone; however, it is not included in any quiet zone calculations and no work by any parties is required.

DOT No. 743211Y - UPRR @ Old Main Drive
Train Horn Mitigation Strategy: ASM – Channelization with Gates

The crossing protection equipment includes bells, flashing lights and gates, a GCP 4000 controller with constant warning time devices, and power-out indicators.

The diagnostic inspection revealed that the existing conditions will support implementation of a quiet zone via an Alternative Safety Measure (ASM). Curb heights are adequate; however, the median between the gate arms and Wellborn Road is only 46 feet long, which is shorter than the minimum required length of 60 feet. Thus the only work needed is the design and installation of the required signing and pavement markings.

A conceptual design of the proposed crossing improvements is attached.

TAMU Work to be completed:

- Fund the design and implementation of all street side improvements (signing and pavement markings).

UP Work to be completed:

- None.

COCS Work to be completed:

- Implement revised railroad preemption timing and phasing plans as determined by reviewed and approved TxDOT Form 2304.

October 22, 2019

RE: TAMU Railroad Quiet Zone Diagnostic Inspection
Summary of Discussion and Agreements



Page 6

DOT No. 743209X - UPRR @ F&B Road
Train Horn Mitigation Strategy: ASM – Gates with Channelization

The crossing protection equipment includes bells, flashing lights and gates, a GCP 4000 controller with constant warning time devices, and power-out indicators.

The diagnostic inspection revealed the existing roadway has adequate width to implement raised medians up to three feet wide. Thus the method of quiet zone implementation will be via an Alternative Safety Measure (ASM). The median between the gate arms of Track 2 and Wellborn Road can be at most 20 feet long, shorter than the minimum required length of 60 feet.

The existing speed limit along F&B Road is 45 MPH. A field traffic engineering assessment suggests the speed limit should be no more than 30 MPH. TAMU committed to lowering the speed limit along F&B Road to 30 MPH so as to comply with 49 CFR §222.9 which limits the use of non-mountable medians to roadways with speed limits equal to or less than 40 MPH.

Conversations with other entities within TAMU revealed that the roadway serving the fuel tanks can be fully closed at F&B Road, and access provided by extending the northern end of the roadway to Finfeather Road. This detail is not included in the conceptual design due to limited space.

A continuous median will extend westward from the gates of Track 1 a distance of 120 feet. A median will extend between the gates of Track 1 and Track 2. The existing driveway serving UP's maintenance-of-way area will be maintained; however, it will become right in/right out access only due to the raised median.

All crossing of the tracks by cyclists and pedestrians will occur along a new shared use path on the south side of F&B Road. This shared use path will eventually extend to Agronomy Road under a separate effort. Existing sidewalks will be modified so as to not suggest other travel paths.

The diagnostic inspection also revealed the roadway grades approaching the crossings were such that high-centering by low ground clearance vehicles was possible. Installation of W10-5 (Low Ground Clearance Grade Crossing) sign with W10-5p ("Low Ground Clearance") educational plaque and W16-5P or W16-6P (Supplemental Arrow) plaques will be included in the signing and markings plans.

A conceptual design of the proposed crossing improvements is attached.

TAMU Work to be completed:

- Fund the design and implementation of all street side and trackside improvements.

October 22, 2019

RE: TAMU Railroad Quiet Zone Diagnostic Inspection
Summary of Discussion and Agreements



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UP Work to be completed:

- Collaborate on design and implementation of crossing improvements.
- Install new track panels for new pedestrian crossings outside of gate assemblies.

COB Work to be completed:

- Collaborate on design and implementation of crossing improvements.
- Implement revised railroad preemption timing and phasing plans as determined by reviewed and approved TxDOT Form 2304.

Sign In Sheets

**Texas A&M University and City of Bryan Railroad Quiet Zones
Diagnostic Inspection Overview and Discussion**

August 13, 2019, 11:00 AM – 5:00 PM

Texas A&M Hotel and Conference Center, Hullabaloo Room

| Name | Company | Phone | Email |
|-------------------|--------------|----------------------------------------|--------------------------|
| Douglas Williams | TAMU | 979 845-9700 | dg-williams@tamu.edu |
| Andrew Hudanish | BENESCI | 832-702-0449 | AHUDANISH@BENESCI.COM |
| Peter Lange | TAMU | 845-9700 | PLange@tamu.edu |
| Jane Schneider | TAMU | 845-6917 | jane.schneider@tamu.edu |
| GARY SCHATZ | MPFE | 713. 591.5626 | gschatz@mpfe.com |
| Tim Oster | CTC | 817-713-5899 | toster@ctcinc.com |
| JOHN JENNINGS | UES | 979-229-0760 | Jjennings@tamu.edu |
| DAN RUDGE | BCSMPD | 979-260-5298 | drudge@bcsmppd.org |
| Jerry Strawser | TAMU | 979-862-7777 | JSTRAWSER@TAMU.EDU |
| Karen Bigley | TAMU | 979-845-4453 | bigleyk@tamu.edu |
| DOUGLAS WOODS | UPRR | 852 ²⁸¹ 350 7609 | DGWOODS@UP.COM |
| Maurice Maness | Tx DOT | 979-778-9654 | maurice.maness@txdot.gov |
| Chris Meyer | TAMU SASE | 979-845-1362 | c-m-meyer@tamu.edu |
| JAMES SMITH | COCS | 979-764-3877 | jsmith@cstx.gov |
| Thomas Lindheimer | COCS | 979-764-3862 | tlindheimer@cstx.gov |
| Michael Holmes | COCS | " | mholmes@cstx.gov |
| Andrew Holick | TxDOT | 979-778-9759 | Andrew.holick@txdot.gov |
| Melissa Hatton | " | 979 778 9729 | Melissa.Hatton " " |

**Texas A&M University Railroad Quiet Zone
Diagnostic Inspection**

August 14, 2019, 7:00 AM – 12:30 PM

Texas A&M Hotel and Conference Center, then field

| Name | Company | Phone | Email |
|-------------------|----------|-----------------------|-----------------------------------|
| GARY SCHATZ | WPRE | 713 591-5626 | gatz@abilityplanningattorneys.com |
| Chris Meyer | TAMU | 979 845-1362 | cm-meyer@tamu.edu |
| JAMES SMITH | COCS | 979 764-3877 | jsmith@cstx.gov |
| Doug Williams | TAMU | 979 845-9700 | doug-williams@tamu.edu |
| Melissa Hatton | TxDOT | 979 778-9729 | Melissa.Hatton@txdot.gov |
| RYAN JONES | FRA | 281-382- 2461 | ryan.c.jones@dot.gov |
| ANDREW HUDANISA | BENESCH | 832-702-0449 | AHUDANISA@BENESCH.COM |
| Peter Lange | TAMU | 845-9700 | plange@tamu.edu |
| Austin Morris | TAMU | 2104260721 | amorris@tamu.edu |
| M DuBay | UP | 402544-3992 | msdubay@up.com |
| DOUG WOODS | UP | 2813507609 | DGWOODS@UP.COM |
| Tim Oster | CTC | 8177135899 | toster@ctcinc.com |
| COOK | FRA | | |
| Maurice Maness | TxDOT | 979-778-9654 | maurice.maness@txdot.gov |
| Robert Travis | TxDOT | 512 416 2635 92896 | robert.travis@txdot.gov |
| Andrew Carmical | UP | 217-823 6896 | AjCarmic@up.com |
| Thomas Lindheimer | COCS | | tlindheimer@cstx.gov |
| CHRIS PROVAZEK | COCS | | chprovazek@cstx.gov |
| Karen Bigley | TAMU | 979 845 4453 | bigleyk@tamu.edu |
| Sam Vernon | CO Bryan | 979 209 5015 | svernon@bryantx.gov |
| Eddie Lorato | CO B | 979-218-2362 | mlorato@bryantx.gov |

Conceptual Designs of Proposed Crossing Improvements

TAMU Quiet Zone Improvements

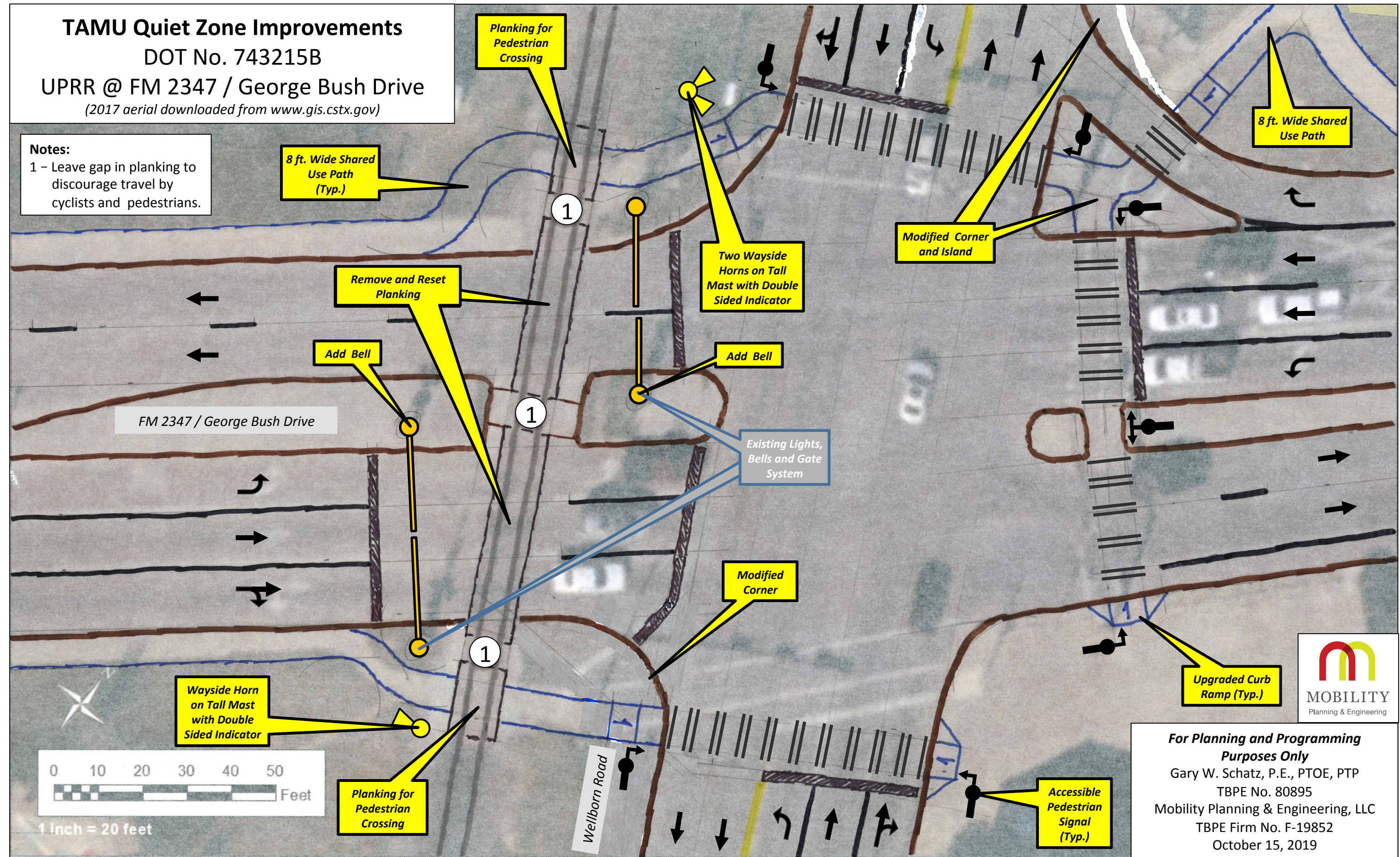
DOT No. 743215B

UPRR @ FM 2347 / George Bush Drive

(2017 aerial downloaded from www.gis.cstx.gov)

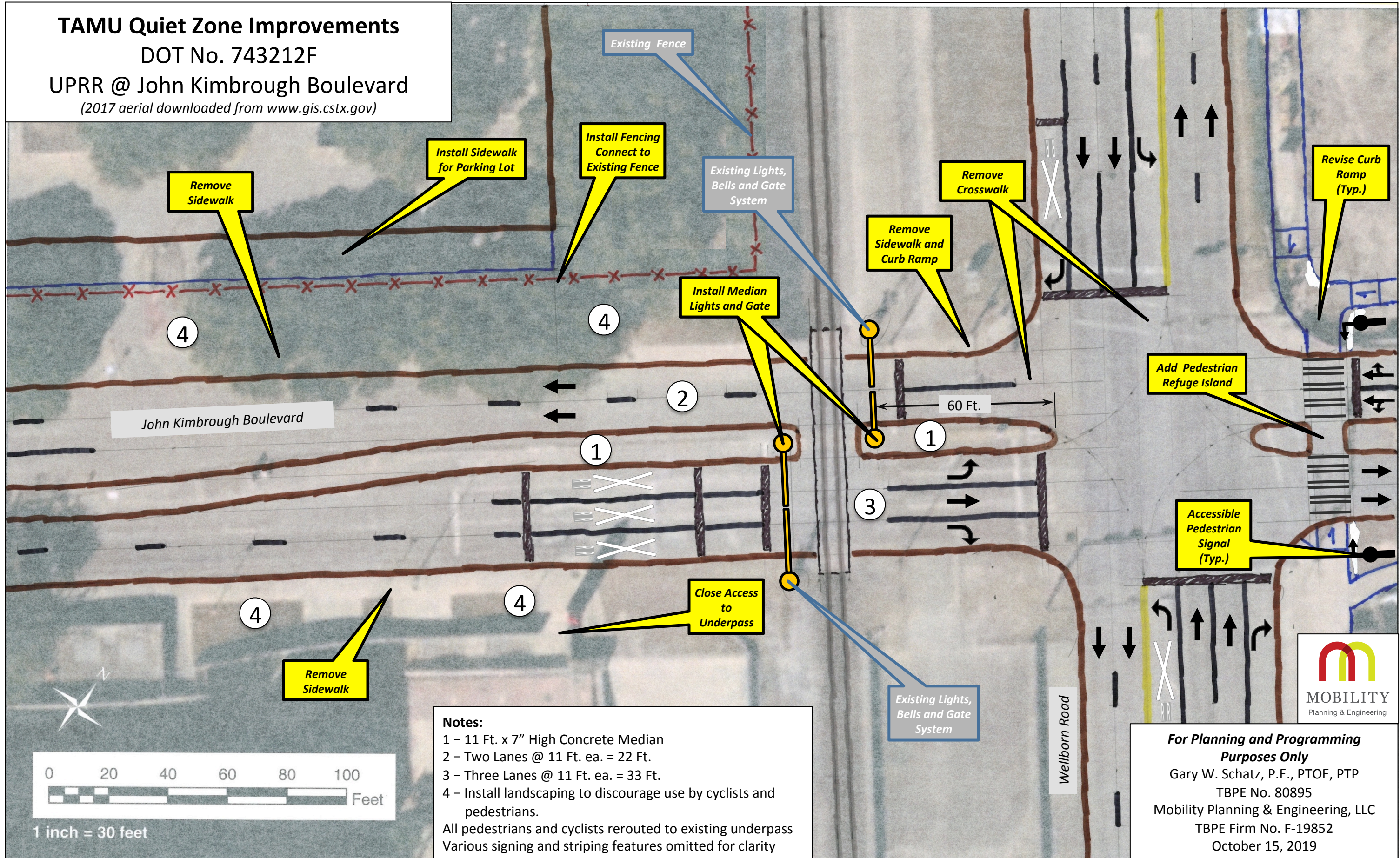
Notes:

1 - Leave gap in planking to discourage travel by cyclists and pedestrians.



For Planning and Programming Purposes Only
Gary W. Schatz, P.E., PTOE, PTP
TBPE No. 80895
Mobility Planning & Engineering, LLC
TBPE Firm No. F-19852
October 15, 2019

TAMU Quiet Zone Improvements
 DOT No. 743212F
 UPRR @ John Kimbrough Boulevard
 (2017 aerial downloaded from www.gis.cstx.gov)



Notes:
 1 - 11 Ft. x 7" High Concrete Median
 2 - Two Lanes @ 11 Ft. ea. = 22 Ft.
 3 - Three Lanes @ 11 Ft. ea. = 33 Ft.
 4 - Install landscaping to discourage use by cyclists and pedestrians.
 All pedestrians and cyclists rerouted to existing underpass
 Various signing and striping features omitted for clarity

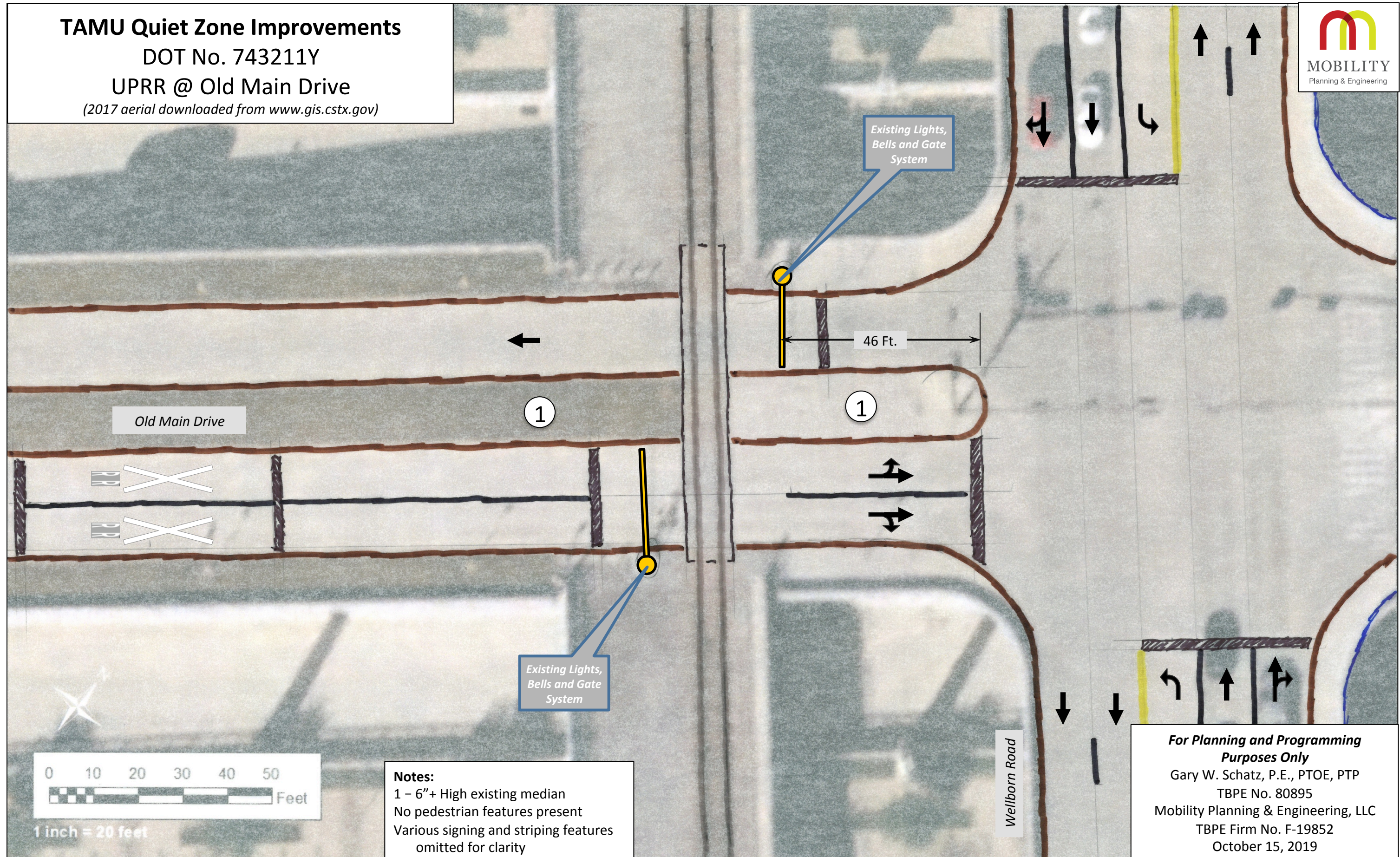
For Planning and Programming Purposes Only
 Gary W. Schatz, P.E., PTOE, PTP
 TBPE No. 80895
 Mobility Planning & Engineering, LLC
 TBPE Firm No. F-19852
 October 15, 2019

TAMU Quiet Zone Improvements

DOT No. 743211Y

UPRR @ Old Main Drive

(2017 aerial downloaded from www.gis.cstx.gov)



Notes:
1 - 6"+ High existing median
No pedestrian features present
Various signing and striping features omitted for clarity

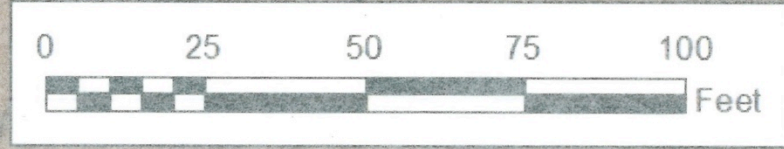
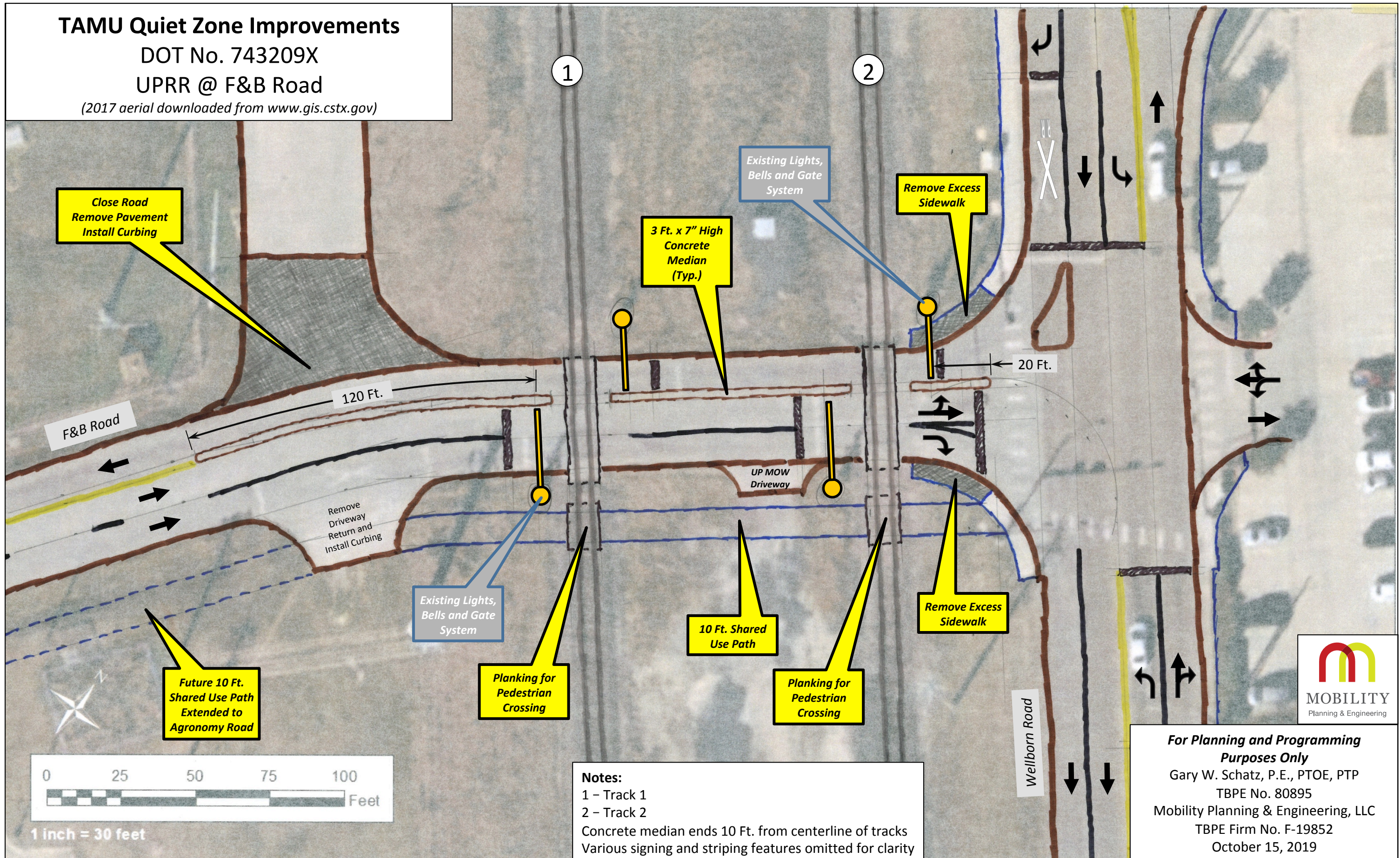
For Planning and Programming Purposes Only
Gary W. Schatz, P.E., PTOE, PTP
TBPE No. 80895
Mobility Planning & Engineering, LLC
TBPE Firm No. F-19852
October 15, 2019

TAMU Quiet Zone Improvements

DOT No. 743209X

UPRR @ F&B Road

(2017 aerial downloaded from www.gis.cstx.gov)



1 inch = 30 feet

Notes:

- 1 - Track 1
- 2 - Track 2
- Concrete median ends 10 Ft. from centerline of tracks
- Various signing and striping features omitted for clarity



For Planning and Programming Purposes Only
 Gary W. Schatz, P.E., PTOE, PTP
 TBPE No. 80895
 Mobility Planning & Engineering, LLC
 TBPE Firm No. F-19852
 October 15, 2019

Appendix C

Notice of Intent (NOI) Responses and Comments

Appendix C
Texas A&M University Quiet Zone
College Station, Texas

Notice of Intent (NOI) Responses and Comments

April 13, 2021

In accordance with §222.43(a)(1), a written Notice of Intent (NOI) to establish a quiet zone along the Navasota Sub was issued on October 25, 2019. The NOI was sent certified mail, return receipt requested, to the following persons or entities:

Mr. Karl Alexy
Associate Administrator for Railroad Safety
& Chief Safety Officer
Federal Railroad Administration
1200 New Jersey Avenue, SE
Washington, DC 20590

Carolyn E. Cook
Regional Manager
Federal Railroad Administration – Region V
PO Box 152168
Austin, TX 78715-2168
512.282.8412

Robert H. Travis, P.E.
Rail Highway Section Director
Texas Department of Transportation
Rail Division
125 E. 11th Street
Austin, TX 78701-2483
512.416.2635

Lance W. Simmons, P.E.
District Engineer
Texas Department of Transportation
Bryan District
2591 N. Earl Rudder Freeway
Bryan, TX 77803
979.778.9611

Prarthana Banerji, P.E.
County Engineer
Brazos County Road & Bridge
2617 SH 21 W
Bryan, TX 77803
979.822.2127

Melinda S. DuBay
Manager I – Engineering / Public Projects
Union Pacific Railroad
1400 Douglas St., MS910
Omaha, NE 68179
402.544.3992

James Smith, P.E.
Project Manager, Capital Projects
City of College Station
PO Box 9960
College Station, TX 77842
979.764.3690

W. Paul Kaspar, P.E., CFM
City Engineer
City of Bryan
300 S. Texas Avenue
Bryan, Texas 77803
979.209.5030

A copy of the return receipt received from each entity is available upon request.

Two entities provided comments, Union Pacific Railroad (UP) and Federal Railroad Administration - Region V (FRA-V). A copy of UP's response and a copy of FRA-V's response is presented later in this appendix.

Below is a summary of the comments provided by UP. Texas A&M University's responses to UP's comments are in ***bold italics***.

Introduction:

"Please recognize that UP is of the opinion that sounding the locomotive horn at highway-rail grade crossings enhances safety whereas QZs increase risk to motorists, pedestrians and trespassers. Train horns are intended to alert the motoring and pedestrian public to train movement."

The statement is acknowledged without action.

"At a minimum, safety treatments should be implemented at each crossing which can include supplemental safety measures (SSMs) and/or ASMs."

The request is acknowledged. The quiet zone will be established following the recommendations of the diagnostic inspection team and safety improvements will be made at all at-grade crossings. Additionally, all protocols required by 49 CFR Part 222 for the establishment of a railroad quiet zone will be followed.

DOT 743209X F&B Road:

"UP acknowledges the Public Authority's plans to implement non-traversable concrete medians as ASMs at this crossing. The median on the westbound approach is planned to be approximately 20 feet in length and on the eastbound approach the median is planned to be a minimum of 60 feet in length."

The statement is accurate and acknowledged.

"There is a driveway cut in the southwest quadrant, but no connecting roadway. The Public Authority is urged to remove this driveway. Any future development to extend the driveway to a roadway will be treated as an intersection which would require amendment to the QZ and potentially compromise continuation of the QZ."

The request is acknowledged. The driveway cut is being removed as part of the quiet zone safety improvements.

“It is noted that both tracks at this crossing are protected by separate warning devices. The FRA Rule 49 CFR 234 Subpart F, Highway-Rail and Pathway Crossing Inventory Reporting, may treat these tracks as two separate crossings with unique DOT numbers. UP will perform necessary research with the FRA and report back to the Public Authority with any findings that may affect the crossing.”

The statement is acknowledged. As of the date of this document, a second DOT crossing number has not been established. Should one be assigned, appropriate revisions to all future quiet zone documents will occur.

“A shared-use path is planned parallel to the roadway on the south side. The path will cross the tracks as close as possible to 90 degrees and detectable warning will be installed for pedestrians. It was agreed by the diagnostic team that existing flashing lights and bells would be adequate for pedestrian warning with no further pedestrian recommendations.”

The statement is accurate and acknowledged.

“The NOI references additional revisions to existing sidewalks at the signalized intersection of F&B and Wellborn Roads, but detailed plans were not provided. UP requests the opportunity to review the plans for these revisions and reserves the right to comment further.”

The request is acknowledged. As construction drawings are developed for all crossings, copies will be provided to UP for review and comment.

DOT 743211Y Old Main Drive:

“UP acknowledges the existing non-traversable concrete medians at this crossing will be submitted as ASMs in the FRA application. The median on the westbound approach is shown on the NOI plans as 46 feet in length and the median on the eastbound approach is over 100 feet in length. The diagnostic team noted that pedestrian and cyclist activity is minimal at this crossing due to an adjacent underpass that provides grade-separated connectivity. No further pedestrian treatments were recommended by the diagnostic team.”

The statement is accurate and acknowledged.

DOT 743212F John Kimbrough Boulevard:

“UP acknowledges the Public Authority's plans to implement non-traversable concrete medians as SSMs at this crossing. The NOI plans indicate the median on the westbound approach will be 60 feet in length and the existing median on the eastbound approach exceeds 100 feet in length. Median gates are also planned for both approaches.”

The statement is accurate and acknowledged.

“The Public Authority plans to eliminate or modify all current pedestrian approaches and treatments to the crossing. Fencing along the edge of the adjacent parking lot in the northwest quadrant and landscaping is planned to discourage pedestrians and cyclists from travel along the sidewalk approaches that are removed. Pedestrians and cyclists will be re-routed to the existing underpass on the south side of the crossing.”

The statement is accurate and acknowledged.

“Once the final plans are prepared for the safety treatments at this crossing, UP requests a copy and reserves the right to comment further.”

The request is acknowledged. As construction drawings are developed for all crossings, copies will be provided to UP for review and comment.

DOT 743215B W. George Bush Drive:

“UP acknowledges the Public Authority’s plan to install a wayside horn system to provide warning on each approach to the crossing. Current pedestrian and cyclist treatments will be modified and enhanced to encourage safe and proper use of the crossing.”

The statement is accurate and acknowledged.

“Track curvature and vegetation along the train approaches must be addressed during the wayside horn design phase.”

The request is acknowledged. A supplemental trackside signal advising wayside horn functionality to southbound train crews will be installed an appropriate distance to the north of the crossing.

Once the final plans are prepared for the safety treatments at this crossing, UP requests a copy and reserves the right to comment further.”

The request is acknowledged. As construction drawings are developed for all crossings, copies will be provided to UP for review and comment.

Other Comments:

“UP affirms all crossings within the proposed QZ are equipped with flashing lights, gates, bells, constant warning time devices and power out indicators.”

The information is appreciated and will be included in the quiet zone documentation.

“During the construction process, sufficiency of illumination at each of the crossings should be addressed.”

The request is acknowledged. While each crossing has adequate streetlighting present, the construction contractor will be directed to provide additional site lighting when working at night.

“All traffic signals that are interconnected with the crossing warning devices must be tested for the adequacy of preemption timing.”

The request is acknowledged. The owning entity of the traffic signals will be requested to provide documentation of adequate preemption timing and its implementation prior to the establishment of the quiet zone. Procedures outlined in Texas Department of Transportation (TxDOT) Form 2304 - Guide for Determining Time Requirements for Traffic Signal Preemption at Highway-Rail Grade Crossings (latest version) will be followed and the results presented to the quiet zone pre-establishment diagnostic team for review and comment. Final documentation acceptable to the diagnostic team will be included in the Notice of Establishment.

“Pertaining to medians, the curb face nearest to the crossing should be straight, not rounded, and start ten feet from the center point of the nearest track. The squared-off median face should be parallel to the track for the full width of the median. No taper is necessary if the median curb face starts at 10 feet from center of nearest track. The length of a median is determined by measuring from the gate arm in down position to the end of the median extending away from the crossing and at the last point where the height is a minimum of six inches. The height for the entire length of a non-traversable median must remain a minimum of six inches for the duration of the QZ. Roadway maintenance projects such as resurfacing have the potential to compromise the height of a median. This should be taken into consideration when planning the height of a median. Non-traversable medians may no longer be compliant as an ASM or SSM if the height is less than six inches anywhere along the length of the median. The Railroad(s) could resume sounding of the horn for non-compliant ASMs or SSMs. Please refer to the criteria in Appendix A of the Rule that addresses the requirements for a median to qualify as an SSM.”

The statement is acknowledged. The design will incorporate the stated parameters.

“Upon completion of all plans set forth in the NOI and recommendations by the diagnostic team, a Notice of Establishment (NOE) to implement the QZ must be provided by certified mail to:

all railroads operating over the public highway-rail grade crossing(s) within the QZ;

the highway or traffic control or law enforcement authority having jurisdiction over vehicular traffic at grade crossings within the QZ;

the landowner having control over any private crossings within the QZ;

the State agency responsible for highway and road safety;

the State agency responsible for grade crossing safety; and

the FRA Associate Administrator.

The NOE will serve as notice that all safety measures comply with the Rule and plans submitted with the NOI have been implemented. A final pre-implementation inspection will be performed prior to issuing the train orders to cease sounding of the horn. Please allow sufficient time for this inspection when designating the QZ start date.”

The request is acknowledged. Notification will be provided to all named entities. A pre-implementation diagnostic inspection will be scheduled to occur prior to issuance of the Notice of Establishment.

“Qualifying for a new QZ under § 222.39(b) of the Rule will require current Annual Average Daily Traffic Count (AADT) data for use in the QZ Calculator. Please ensure the AADT data in the FRA National Inventory database has been updated within the last three years at the time the Notice of Establishment (NOE) is issued.”

The request is acknowledged. Updated traffic counts will be conducted prior to the development of the Notice of Intent and the collected data will be included in that document.

“Please be aware the trains operating in the proposed QZ are within the limits of an advanced technology system called Positive Train Control (PTC). To assist with internal notifications and PTC preparation efforts, UP respectfully requests 60 days advance notice of the planned QZ establishment. This communication can be made by email or phone in advance of the NOE mailing.”

The request is acknowledged. The quiet zone establishment date will be negotiated with UP as part of the development and issuance of the Notice of Establishment.

“UP encourages an awareness program to educate the community about QZs and what to expect. Although trains will cease routine sounding of the horn at grade crossing(s) within the QZ, there are numerous situations when sounding of the horn will be required. For example, an engineer will exercise discretion to sound the horn for safety purposes when pedestrians or workers are in proximity of the crossing(s) and when necessary to comply with any other train operating rules.”

The request is acknowledged. Texas A&M University will share information to help with education and management of expectations.

“Prior to establishing the new QZ, each approach to the grade crossing(s) must be equipped with an advance warning sign advising users that train horns are not sounded at the crossing(s). These signs must conform to the standards contained in the MUTCD. Additionally, all pavement markings should be inspected to be in good condition for both day and night visibility.”

The request is acknowledged. All signing and markings will be in new or like new condition at the beginning of the establishment of the quiet zone. The “No Train Horn” signs will be installed according to 49 CFR 222 and the Texas Manual on Uniform Traffic Control Devices (TMUTCD).

“To insure timely response, please forward all QZ notifications by certified mail to the address below.

Union Pacific Railroad
Attn: Engineering Public Projects
Quiet Zone Establishment
1400 Douglas Street MS910
Omaha, NE 68179:

The request is acknowledged. The Notice of Establishment will be forwarded to this address and to all required parties as required by §222.43(a)(1).

“UP encourages notification of any changes to the proposed QZ plan to allow further review and comment. If you have questions, please contact me at (402) 544-3992 or msdubay@up.com.”

The request is acknowledged. We are grateful for the proactive and encouraging partnership we have enjoyed while working with Melinda DuBay.

Below is a summary of the comments provided by FRA-V. Texas A&M University's responses to UP's comments are in ***bold italics***.

Introduction:

"I may have missed it but I never saw anywhere and I checked the NOI what the basis for the establishment will be so I assume it is going to be a "Public Authority Application to FRA (222.39 (b)(1)" since it contains ASMs. This Basis reference should be included in future communication."

The request is acknowledged with regret for the oversight. The quiet zone is being established through Public Authority Application. Clarifying language will be included in this document and future documents as appropriate.

"I took the liberty of yellow underlining some things in the UP comments:"

The effort is acknowledged, and the highlighting was helpful to better understanding the comments offered.

F&B Road (DOT 743209X)

"I note that the design graphics don't show closing the driveway pad on the side where the pedestrian pathway is going to be enhanced. It will need to be closed unless an engineering argument is constructed in the request for approval. If this pad is strictly for the purpose of allowing bicycles on the street to access the ped crossing than I think you can make that argument in the project approval plan."

The request is acknowledged. The driveway pad is being removed as part of the quiet zone safety improvements.

"I see that there should be two DOT numbers for the 2 track crossing here since there are two sets of independent gates and lights. Currently, there is no second DOT number in the FRA Inventory. This is a relatively new guidance for Inventory purposes."

The statement is acknowledged. As of the date of this document, a second DOT crossing number has not been established. Should one be assigned, appropriate revisions to all future quiet zone documents will occur.

Old Main ST (DOT 743211Y) – nothing to add

The review effort is gratefully acknowledged.

John Kimbrough RD (DOT 743212F)- nothing to add

The review effort is gratefully acknowledged.

George Bush (DOT 743215B) – nothing to add

The review effort is gratefully acknowledged.

Other Comments:

“Medians – please note UP’s standards mentioned in their comments for median curbs nearest the tracks. We have had a few instances of Cities tapering the median on the approach side and that should not be done unless you have a lot more distance than the required 100 feet or 60 feet with intersection.”

The statement is acknowledged. The design will incorporate the stated parameters.

“SUGGESTION: BTW - You are allowed (but not required) to give a quiet zone a name such as:

West Campus or
Bryan-College Station or
George Bush Quiet Zone.

WHY? A name can help communication about issues in quiet zones when there are multiple QZs in an area.”

The suggestion is acknowledged. The name of this quiet zone is Texas A&M University Quiet Zone. We regret that such designation was not clearly made in the NOI. We have included definitive language in this document and will continue to do so in future documents as appropriate.

NOI Review Response Received from Union Pacific Railroad (UP)



December 24, 2019

UP QZ #: TX041006

Peter Lange
Associate Vice President
Transportation Services
Texas A&M University
1250 TAMU
College Station, TX 77843-1250

Subject: Notice of Intent to Establish a Quiet Zone
Texas A&M University, College Station, Texas – UP Navasota Subdivision

Dear Mr. Lange:

Union Pacific (UP) is in receipt of the Texas A&M University (Public Authority) Notice of Intent (NOI) postmarked October 25, 2019 to create a new quiet zone (QZ) at the crossings listed below. The QZ is proposed to be created in accordance with 49 CFR § 222.39(b), public authority application to the Federal Railroad Administration (FRA) for alternative safety measures (ASMs).

Proposed Quiet Zone

| DOT | Crossing Type | Milepost | Street Name |
|---------|---------------|----------|--------------------------------|
| 743209X | Public | 74.38 | F&B Road |
| 743211Y | Public | 73.30 | Old Main Drive |
| 743212F | Public | 73.10 | John Kimbrough Boulevard |
| 743215B | Public | 72.63 | FM 2347 (W. George Bush Drive) |

Please recognize that UP is of the opinion that sounding the locomotive horn at highway-rail grade crossings enhances safety whereas QZs increase risk to motorists, pedestrians and trespassers. Train horns are intended to alert the motoring and pedestrian public to train movement. At a minimum, safety treatments should be implemented at each crossing which can include supplemental safety measures (SSMs) and/or ASMs.

A diagnostic was performed on August 14, 2019, attended by representatives from the Public Authority, FRA, Texas DOT, City of College Station, Brazos County, UP, CTC and Alfred Benesch & Co. (consultants for UP), and Mobility Planning & Engineering (consultant for the PA). The minutes from this diagnostic were provided to all attendees.

UP has reviewed the NOI per the requirements outlined in the Train Horn Rule 49 CFR Part 222 (Rule) and comments as follows.

1. DOT 743209X F&B Road

UP acknowledges the Public Authority's plans to implement non-traversable concrete medians as ASMs at this crossing. The median on the westbound approach is planned to be approximately 20 feet in length and on the eastbound approach the median is planned to be a minimum of 60 feet in length.

UP notes that Finfeather Road intersects F&B Road in the northwest quadrant of the crossing and is planned for closure. There is a driveway cut in the southwest quadrant, but no connecting roadway. The Public Authority is urged to remove this driveway. Any future development to extend the driveway to a roadway will be treated as an intersection which would require amendment to the QZ and potentially compromise continuation of the QZ.

It is noted that both tracks at this crossing are protected by separate warning devices. The FRA Rule 49 CFR 234 Subpart F, Highway-Rail and Pathway Crossing Inventory Reporting, may treat these tracks as two separate crossings with unique DOT numbers. UP will perform necessary research with the FRA and report back to the Public Authority with any findings that may affect the crossing.

A shared-use path is planned parallel to the roadway on the south side. The path will cross the tracks as close as possible to 90 degrees and detectable warning will be installed for pedestrians. It was agreed by the diagnostic team that existing flashing lights and bells would be adequate for pedestrian warning with no further pedestrian recommendations.

The NOI references additional revisions to existing sidewalks at the signalized intersection of F&B and Wellborn Roads, but detailed plans were not provided. UP requests the opportunity to review the plans for these revisions and reserves the right to comment further.

2. DOT 743211Y Old Main Drive

UP acknowledges the existing non-traversable concrete medians at this crossing will be submitted as ASMs in the FRA application. The median on the westbound approach is shown on the NOI plans as 46 feet in length and the median on the eastbound approach is over 100 feet in length. The diagnostic team noted that pedestrian and cyclist activity is minimal at this crossing due to an adjacent underpass that provides grade-separated connectivity. No further pedestrian treatments were recommended by the diagnostic team.

3. DOT 743212F John Kimbrough Boulevard

UP acknowledges the Public Authority's plans to implement non-traversable concrete medians as SSMS at this crossing. The NOI plans indicate the median on the westbound approach will be 60 feet in length and the existing median on the eastbound approach exceeds 100 feet in length. Median gates are also planned for both approaches.

The Public Authority plans to eliminate or modify all current pedestrian approaches and treatments to the crossing. Fencing along the edge of the adjacent parking lot in the northwest quadrant and landscaping is planned to discourage pedestrians and cyclists from travel along the sidewalk approaches that are removed. Pedestrians and cyclists will be re-routed to the existing underpass on the south side of the crossing. Once the final plans are prepared for the safety treatments at this crossing, UP requests a copy and reserves the right to comment further.

4. DOT 743215B W. George Bush Drive

UP acknowledges the Public Authority's plan to install a wayside horn system to provide warning on each approach to the crossing. Track curvature and vegetation along the train approaches must be addressed during the wayside horn design phase. Current pedestrian and cyclist treatments will be modified and enhanced to encourage safe and proper use of the crossing. Once the final plans are prepared for the safety treatments at this crossing, UP requests a copy and reserves the right to comment further.

5. Other Comments

- UP affirms all crossings within the proposed QZ are equipped with flashing lights, gates, bells, constant warning time devices and power out indicators.
- During the construction process, sufficiency of illumination at each of the crossings should be addressed.
- All traffic signals that are interconnected with the crossing warning devices must be tested for the adequacy of preemption timing.
- Pertaining to medians, the curb face nearest to the crossing should be straight, not rounded, and start ten feet from the center point of the nearest track. The squared-off median face should be parallel to the track for the full width of the median. No taper is necessary if the median curb face starts at 10 feet from center of nearest track.

The length of a median is determined by measuring from the gate arm in down position to the end of the median extending away from the crossing and at the last point where the height is a minimum of six inches.

The height for the entire length of a non-traversable median must remain a minimum of six inches for the duration of the QZ. Roadway maintenance projects such as resurfacing have the potential to compromise the height of a median. This should be taken into consideration when planning the height of a median. Non-traversable medians may no longer be compliant as an ASM or SSM if the height is less than six inches anywhere along the length of the median. The Railroad(s) could resume sounding of the horn for non-compliant ASMs or SSMs. Please refer to the criteria in Appendix A of the Rule that addresses the requirements for a median to qualify as an SSM.

- Upon completion of all plans set forth in the NOI and recommendations by the diagnostic team), a Notice of Establishment (NOE) to implement the QZ must be provided by certified mail to:
 - all railroads operating over the public highway-rail grade crossing(s) within the QZ;
 - the highway or traffic control or law enforcement authority having jurisdiction over vehicular traffic at grade crossings within the QZ;
 - the landowner having control over any private crossings within the QZ;
 - the State agency responsible for highway and road safety;
 - the State agency responsible for grade crossing safety; and
 - the FRA Associate Administrator.

The NOE will serve as notice that all safety measures comply with the Rule and plans submitted with the NOI have been implemented. A final pre-implementation inspection will be performed prior to issuing the train orders to cease sounding of the horn. Please allow sufficient time for this inspection when designating the QZ start date.

- Qualifying for a new QZ under § 222.39(b) of the Rule will require current Annual Average Daily Traffic Count (AADT) data for use in the QZ Calculator. Please ensure the AADT data in the FRA National Inventory database has been updated within the last three years at the time the Notice of Establishment (NOE) is issued.
- Please be aware the trains operating in the proposed QZ are within the limits of an advanced technology system called Positive Train Control (PTC). To assist with internal notifications and PTC preparation efforts, UP respectfully requests **60 days advance notice** of the planned QZ establishment. This communication can be made by email or phone in advance of the NOE mailing. To learn more about PTC, please visit the UP webpage at the address below.

https://www.up.com/media/media_kit/ptc/about-ptc/index.htm

- UP encourages an awareness program to educate the community about QZs and what to expect. Although trains will cease routine sounding of the horn at grade crossing(s) within the QZ, there are numerous situations when sounding of the horn will be required. For example, an engineer will exercise discretion to sound the horn for safety purposes when pedestrians or workers are in proximity of the crossing(s) and when necessary to comply with any other train operating rules.
- Prior to establishing the new QZ, each approach to the grade crossing(s) must be equipped with an advance warning sign advising users that train horns are not sounded at the crossing(s). These signs must conform to the standards contained in the MUTCD. Additionally, all pavement markings should be inspected to be in good condition for both day and night visibility.

To insure timely response, please forward all QZ notifications by certified mail to the address below.

Union Pacific Railroad
Attn: Engineering Public Projects
Quiet Zone Establishment
1400 Douglas Street MS910
Omaha, NE 68179

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UP encourages notification of any changes to the proposed QZ plan to allow further review and comment. If you have questions, please contact me at (402) 544-3992 or msdubay@up.com.

Sincerely,



Melinda DuBay
Manager I
Engineering-Public Projects

cc: Karl Alexy-FRA Associate Administrator for Safety

by email:

Carolyn Cook-FRA
Robert Travis-TXDOT
Prarthana Banerji-Brazos County
James Smith-City of College Station
W. Paul Kaspar-City of Bryan
Doug Woods-UP
Ivan Jaime-UP

**NOI Review Response Received from Federal Railroad
Administration (FRA) – Region V**

RE: TX041006 Texas A&M Notice of Intent to Establish a Quiet Zone

Cook, Carolyn (FRA) <carolyn.cook@dot.gov>

Mon 1/6/2020 12:55 PM

To: Melinda S. DuBay <MSDUBAY@UP.COM>; Peter Lange <plange@tamu.edu>

Cc: Robert.Travis@txdot.gov <Robert.Travis@txdot.gov>; pbanerji@brazoscountytexas.gov <pbanerji@brazoscountytexas.gov>; Paul Kaspar <pkaspar@bryantx.gov>; James Smith <jsmith@cstx.gov>; Gary Schatz <gary@mobilityplanningmatters.com>; Paul D. Rathgeber <PAULRATHGEBER@UP.COM>; Douglas G. Woods <DGWOODS@up.com>; IJAIME UP.COM <IJAIME@UP.COM>; toster@ctcinc.com <toster@ctcinc.com>; Rooke Jackson <rjackson@ctcinc.com>; Payne, James (FRA) <James.Payne@dot.gov>; Jones, Ryan C (FRA) <ryan.c.jones@dot.gov>; Toye, Inga (FRA) <inga.toye@dot.gov>; Chappell, Debra (FRA) <Debra.Chappell@dot.gov>

📎 1 attachments (1,014 KB)

UP comments NOI_College Station_ 2019-12-24 NOI Resp.pdf;

Dear Colleagues,

I just reviewed UP Comments on the NOI for the proposed quiet zone.

I may have missed it but I never saw anywhere and I checked the NOI what the basis for the establishment will be so I assume it is going to be a “**Public Authority Application to FRA (222.39 (b)(1))**” since it contains ASMs. This **Basis** reference should be included in future communication.

I took the liberty of yellow underlining some things in the UP comments:

F&B Road (DOT 743209X)

I note that the design graphics don't show closing the driveway pad on the side where the pedestrian pathway is going to be enhanced. It will need to be closed unless an engineering argument is constructed in the request for approval. If this pad is strictly for the purpose of allowing bicycles on the street to access the ped crossing than I think you can make that argument in the project approval plan.

Also I see that ***there should be two DOT numbers for the 2 track crossing*** here since there are two sets of independent gates and lights. Currently, there is no second DOT number in the FRA Inventory. This is a relatively new guidance for Inventory purposes.

Old Main ST (**DOT 743211Y**) – nothing to add

John Kimbrough RD (**DOT 743212F**)- nothing to add

George Bush (**DOT 743215B**) – nothing to add

Medians – please note UP's standards mentioned in their comments for median curbs nearest the tracks. We have had a few instances of Cities tapering the median on the approach side and that should not be done unless you have a lot more distance than the required 100 feet or 60 feet with intersection..




SUGGESTION: BTW - You are allowed (but not required) to give a quiet zone a name such as:

- West Campus or
- Bryan-College Station or
- George Bush Quiet Zone.

- WHY? A name can help communication about issues in quiet zones when there are multiple QZs in an area.

From: Melinda S. DuBay [mailto:MSDUBAY@UP.COM]
Sent: Tuesday, December 24, 2019 3:55 PM
To: Peter Lange <plange@tamu.edu>
Cc: Cook, Carolyn (FRA) <carolyn.cook@dot.gov>; Robert.Travis@txdot.gov;
pbanerji@brazoscountytexas.gov; Paul Kaspar <pkaspar@bryantx.gov>; James Smith
<jsmith@cstx.gov>; Gary Schatz <gary@mobilityplanningmatters.com>; Paul D. Rathgeber
<PAULRATHGEBER@UP.COM>; Douglas G. Woods <DGWOODS@up.com>; IJAIME UP.COM
<IJAIME@UP.COM>; toster@ctcinc.com; Rooke Jackson <rjackson@ctcinc.com>
Subject: TX041006 Texas A&M Notice of Intent to Establish a Quiet Zone

Good afternoon - attached is Union Pacific's response to Texas A&M's notice of intent to establish a quiet zone.
Happy holiday wishes to everyone!

[Melinda DuBay](#) | Manager I - Public Projects - Engineering | [Union Pacific Railroad](#) | [1400 Douglas Street - MS910](#) | Omaha, NE 68179 USA
 : W 402.544.3992 C 402.598.4981 |  : 402.997.4398 |  : msdubay@up.com

**

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December 24, 2019

UP QZ #: TX041006

Peter Lange
Associate Vice President
Transportation Services
Texas A&M University
1250 TAMU
College Station, TX 77843-1250

Subject: Notice of Intent to Establish a Quiet Zone
Texas A&M University, College Station, Texas – UP Navasota Subdivision

Dear Mr. Lange:

Union Pacific (UP) is in receipt of the Texas A&M University (Public Authority) Notice of Intent (NOI) postmarked October 25, 2019 to create a new quiet zone (QZ) at the crossings listed below. The QZ is proposed to be created in accordance with 49 CFR § 222.39(b), public authority application to the Federal Railroad Administration (FRA) for alternative safety measures (ASMs).

Proposed Quiet Zone

| DOT | Crossing Type | Milepost | Street Name |
|---------|---------------|----------|--------------------------------|
| 743209X | Public | 74.38 | F&B Road |
| 743211Y | Public | 73.30 | Old Main Drive |
| 743212F | Public | 73.10 | John Kimbrough Boulevard |
| 743215B | Public | 72.63 | FM 2347 (W. George Bush Drive) |

Please recognize that UP is of the opinion that sounding the locomotive horn at highway-rail grade crossings enhances safety whereas QZs increase risk to motorists, pedestrians and trespassers. Train horns are intended to alert the motoring and pedestrian public to train movement. At a minimum, safety treatments should be implemented at each crossing which can include supplemental safety measures (SSMs) and/or ASMs.

A diagnostic was performed on August 14, 2019, attended by representatives from the Public Authority, FRA, Texas DOT, City of College Station, Brazos County, UP, CTC and Alfred Benesch & Co. (consultants for UP), and Mobility Planning & Engineering (consultant for the PA). The minutes from this diagnostic were provided to all attendees.

UP has reviewed the NOI per the requirements outlined in the Train Horn Rule 49 CFR Part 222 (Rule) and comments as follows.

1. DOT 743209X F&B Road

UP acknowledges the Public Authority's plans to implement non-traversable concrete medians as ASMs at this crossing. The median on the westbound approach is planned to be approximately 20 feet in length and on the eastbound approach the median is planned to be a minimum of 60 feet in length.

UP notes that Finfeather Road intersects F&B Road in the northwest quadrant of the crossing and is planned for closure. There is a driveway cut in the southwest quadrant, but no connecting roadway. The Public Authority is urged to remove this driveway. Any future development to extend the driveway to a roadway will be treated as an intersection which would require amendment to the QZ and potentially compromise continuation of the QZ.

It is noted that both tracks at this crossing are protected by separate warning devices. The FRA Rule 49 CFR 234 Subpart F, Highway-Rail and Pathway Crossing Inventory Reporting, may treat these tracks as two separate crossings with unique DOT numbers. UP will perform necessary research with the FRA and report back to the Public Authority with any findings that may affect the crossing.

A shared-use path is planned parallel to the roadway on the south side. The path will cross the tracks as close as possible to 90 degrees and detectable warning will be installed for pedestrians. It was agreed by the diagnostic team that existing flashing lights and bells would be adequate for pedestrian warning with no further pedestrian recommendations.

The NOI references additional revisions to existing sidewalks at the signalized intersection of F&B and Wellborn Roads, but detailed plans were not provided. UP requests the opportunity to review the plans for these revisions and reserves the right to comment further.

2. DOT 743211Y Old Main Drive

UP acknowledges the existing non-traversable concrete medians at this crossing will be submitted as ASMs in the FRA application. The median on the westbound approach is shown on the NOI plans as 46 feet in length and the median on the eastbound approach is over 100 feet in length. The diagnostic team noted that pedestrian and cyclist activity is minimal at this crossing due to an adjacent underpass that provides grade-separated connectivity. No further pedestrian treatments were recommended by the diagnostic team.

3. DOT 743212F John Kimbrough Boulevard

UP acknowledges the Public Authority's plans to implement non-traversable concrete medians as SSMS at this crossing. The NOI plans indicate the median on the westbound approach will be 60 feet in length and the existing median on the eastbound approach exceeds 100 feet in length. Median gates are also planned for both approaches.

The Public Authority plans to eliminate or modify all current pedestrian approaches and treatments to the crossing. Fencing along the edge of the adjacent parking lot in the northwest quadrant and landscaping is planned to discourage pedestrians and cyclists from travel along the sidewalk approaches that are removed. Pedestrians and cyclists will be re-routed to the existing underpass on the south side of the crossing. Once the final plans are prepared for the safety treatments at this crossing, UP requests a copy and reserves the right to comment further.

4. DOT 743215B W. George Bush Drive

UP acknowledges the Public Authority's plan to install a **wayside horn system** to provide **warning on each approach to the crossing**. Track curvature and vegetation along the train approaches must be addressed during the wayside horn design phase. Current pedestrian and cyclist treatments will be modified and enhanced to encourage safe and proper use of the crossing. Once the **final plans** are prepared for the safety treatments at this crossing, **UP requests a copy and reserves the right to comment further.**

5. Other Comments

- UP affirms all crossings within the proposed QZ are equipped with flashing lights, gates, bells, constant warning time devices and power out indicators.
- During the construction process, sufficiency of **illumination** at each of the crossings should be addressed.
- All **traffic signals that are interconnected with the crossing warning devices** must be tested for the adequacy of preemption timing.
- Pertaining to medians, the **curb face nearest to the crossing should be straight, not rounded, and start ten feet from the center point of the nearest track. The squared-off median face should be parallel to the track for the full width of the median.** No taper is necessary if the median curb face starts at 10 feet from center of nearest track.

The length of a median is determined by measuring from the gate arm in down position to the end of the median extending away from the crossing and at the last point where the height is a minimum of six inches.

The height for the entire length of a non-traversable median must remain a minimum of six inches for the duration of the QZ. Roadway maintenance projects such as resurfacing have the potential to compromise the height of a median. This should be taken into consideration when planning the height of a median. Non-traversable medians may no longer be compliant as an ASM or SSM if the height is less than six inches anywhere along the length of the median. The Railroad(s) could resume sounding of the horn for non-compliant ASMs or SSMs. Please refer to the criteria in Appendix A of the Rule that addresses the requirements for a median to qualify as an SSM.

- Upon completion of all plans set forth in the NOI and recommendations by the diagnostic team), a **Notice of Establishment (NOE)** to implement the QZ must be provided by certified mail to:
 - all railroads operating over the public highway-rail grade crossing(s) within the QZ;
 - the highway or traffic control or law enforcement authority having jurisdiction over vehicular traffic at grade crossings within the QZ;
 - the landowner having control over any private crossings within the QZ;
 - the State agency responsible for highway and road safety;
 - the State agency responsible for grade crossing safety; and
 - the FRA Associate Administrator.

The NOE will serve as notice that all safety measures comply with the Rule and plans submitted with the NOI have been implemented. A final pre-implementation inspection will be performed prior to issuing the train orders to cease sounding of the horn. Please allow sufficient time for this inspection when designating the QZ start date.

- Qualifying for a new QZ under § 222.39(b) of the Rule will require current Annual Average Daily Traffic Count (AADT) data for use in the QZ Calculator. Please ensure the AADT data in the FRA National Inventory database has been updated within the last three years at the time the Notice of Establishment (NOE) is issued.
- Please be aware the trains operating in the proposed QZ are within the limits of an advanced technology system called Positive Train Control (PTC). To assist with internal notifications and PTC preparation efforts, UP respectfully requests 60 days advance notice of the planned QZ establishment. This communication can be made by email or phone in advance of the NOE mailing. To learn more about PTC, please visit the UP webpage at the address below.

https://www.up.com/media/media_kit/ptc/about-ptc/index.htm

- UP encourages an awareness program to educate the community about QZs and what to expect. Although trains will cease routine sounding of the horn at grade crossing(s) within the QZ, there are numerous situations when sounding of the horn will be required. For example, an engineer will exercise discretion to sound the horn for safety purposes when pedestrians or workers are in proximity of the crossing(s) and when necessary to comply with any other train operating rules.
- Prior to establishing the new QZ, each approach to the grade crossing(s) must be equipped with an advance warning sign advising users that train horns are not sounded at the crossing(s). These signs must conform to the standards contained in the MUTCD. Additionally, all pavement markings should be inspected to be in good condition for both day and night visibility.

To insure timely response, please forward all QZ notifications by certified mail to the address below.

Union Pacific Railroad
Attn: Engineering Public Projects
Quiet Zone Establishment
1400 Douglas Street MS910
Omaha, NE 68179

*** REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK ***

UP encourages notification of any changes to the proposed QZ plan to allow further review and comment. If you have questions, please contact me at (402) 544-3992 or msdubay@up.com.

Sincerely,



Melinda DuBay
Manager I
Engineering-Public Projects

cc: Karl Alexy-FRA Associate Administrator for Safety

by email:

Carolyn Cook-FRA
Robert Travis-TXDOT
Prarthana Banerji-Brazos County
James Smith-City of College Station
W. Paul Kaspar-City of Bryan
Doug Woods-UP
Ivan Jaime-UP

Appendix D

Presentation and Discussion of Mitigation Strategies

Appendix D
Texas A&M University Quiet Zone
College Station, Texas
Discussion of Mitigation Strategies

April 13, 2021

The following narratives and drawings document the technical references and engineering judgement used to determine and apply the specified mitigation strategies to the railroad crossings associated with this proposed quiet zone. All references to the quiet zone rules and regulations refer to 49 CFR Parts 222 and 229, *Use of Locomotive Horns at Highway-Rail Grade Crossings; Amended Final Rule* dated September 18, 2006.

In the state of Texas, the implementation of traffic control devices is governed by the *Texas Manual on Uniform Traffic Control Devices* (TMUTCD). This document, which is authorized by Texas Transportation Code §544.001 and issued by the Texas Department of Transportation, is based on and closely parallels the Federal Highway Administration's *Manual on Uniform Traffic Control Devices* (MUTCD).

Where the quiet zone rules and regulations reference the MUTCD, the corresponding reference in the TMUTCD was reviewed to determine whether the traffic control devices proposed for this project were in compliance with both documents. In no case was a conflict or discrepancy noted, thus the proposed traffic control devices comply with both the MUTCD and the TMUTCD. For the purpose of brevity and consistency with the quiet zone rules and regulations, any reference to the MUTCD in this document shall be assumed to also reference the corresponding portion of the TMUTCD.

**Texas A&M University Quiet Zone
College Station, Texas
Discussion of Mitigation Strategies**

April 13, 2021

| DOT No. | Location | Type of Crossing | | Treatment | CFR Cite |
|----------------|----------------------------------------|-------------------------|--------|----------------------------------------------------------------------|----------------------|
| 743209X | UPRR at F&B Road | At-Grade | Public | Alternative Safety Measure (ASM): Gates with Channelization Devices | 222, App. B, I.A. |
| 743210S | UPRR at FM 60 / University Drive | Grade Separated | Public | Not Applicable | 222, App. C, II.A.2. |
| 743211Y | UPRR at Old Main Drive | At-Grade | Public | Alternative Safety Measure (ASM): Gates with Channelization Devices | 222, App. B, I.A. |
| 743212F | UPRR at John Kimbrough Boulevard | At-Grade | Public | Supplemental Safety Measure (SSM): Gates with Channelization Devices | 222, App. A, A.3. |
| 743215B | UPRR at FM 2347 / W. George Bush Drive | At-Grade | Public | Wayside Horns | §222.59, 222, App. E |

**Texas A&M University Quiet Zone
College Station, Texas
Discussion of Mitigation Strategies**

April 13, 2021

**Location: UPRR at F&B Road
DOT 743209X**

Mitigation Strategy: Channelize approaching traffic to prevent gate-end runaround
Mitigation Classification: Alternative Safety Measure (ASM)

At the crossing, F&B Road is an existing three lane roadway: two lanes eastbound and one lane westbound. No sidewalks or bike lanes are present. Traffic data was collected via 24-hour video surveillance with the following results:

Date of Count: April 9, 2019 (Tuesday)
24 Hour Volume – 7,306 vehicles
School Buses - 10
Trucks - 60 (0.82%)
Pedestrians - 54
Cyclists – 78

The existing crossing protection equipment includes bells, flashing lights and gates, a GCP 4000 controller with constant warning time devices, and power-out indicators. The intersection of F&B Road and Wellborn Road is signalized with railroad preemption interconnection.

To reduce the potential for gate-end run around, channelizing devices in the form of traffic islands with non-traversable curbs as prescribed in §222.A.3 will be installed. The method of quiet zone implementation will be via a Modified SSM for two reasons: the proposed median between the gate arms of Track 2 and Wellborn Road is shorter than the minimum required length of 60 feet, and the gate assemblies for the two separate crossings function independently of each other.

Drawings showing the recommended improvements appear at D-6 and D-7.

The existing speed limit along F&B Road is 45 MPH. A field traffic engineering assessment suggests the speed limit should be no more than 30 MPH. TAMU committed to lowering the speed limit along F&B Road to 30 MPH so as to comply with 49 CFR §222.9 which limits the use of non-mountable medians to roadways with speed limits equal to or less than 40 MPH. This reduced speed limit will be implemented in advance of establishment of the quiet zone.

The roadway serving the fuel tanks will be fully closed at F&B Road, and access provided by extending the northern end of the roadway to Finfeather Road. The existing driveway return located just west of Track 1 will be removed and closed with curbing.

A continuous median will extend westward from Track 1 a distance of 106 feet. A median of 80 feet in total length will be constructed between Track 1 and Track 2, beginning 10 feet from the center of each track. A 20 feet long raised median beginning 10 feet from the center of Track 2 will extend eastward towards Wellborn Road. The existing driveway serving UP's maintenance-of-way area will be maintained; however, it will become right in/right out access only due to the raised median.

To provide an alternative travel route for cyclists and pedestrians other than the roadway of F&B Road, a new shared use path will be constructed along the south side of F&B Road and pass behind the existing gate arms and cantilever weights. Separate crossing planking will be installed for the new shared use path, which will eventually extend westward to Agronomy Road under a separate effort. Existing sidewalks at Wellborn Road will be modified so as to not suggest other travel paths. As the new shared use path is located approximately 11.5 feet south of F&B Road, it is not considered to be a separate at-grade crossing.

The diagnostic inspection also revealed the roadway grades approaching the crossings were such that high centering by low ground clearance vehicles was possible. Installation of W10-5 (Low Ground Clearance Grade Crossing) sign with W10-5p ("Low Ground Clearance") educational plaque and W16-5P or W16-6P (Supplemental Arrow) plaques will be included in the signing and markings plans.

While for inventory purposes the two crossings are listed as a single crossing, they are 100 feet apart (measured center of track to center of track) and their gate arms function independently of each other. Thus, the effectiveness rate will be calculated for two separate crossings and then combined to represent a single crossing with two tracks.

Track 1:

For motorists eastbound along F&B Road, a non-traversable raised median will extend 101 feet westward from the gate arm for Track 1, satisfying the requirements for a Supplemental Safety Measure (SSM) using non-traversable curbs. This mitigation strategy is believed to be consistent with the intent of §222.A.3 and thus is considered to have an effectiveness rate of 0.80.

For motorists westbound along F&B Road, a non-traversable raised median will extend 76.5 feet eastward from the gate arm for Track 1. The length of this median is limited by the presence of Track 2. For this approach, the effectiveness factor is a proration of the minimum required raised median length (100 feet) to the actual raised median length, which is calculated to be $76.5 \text{ ft.} / 100 \text{ ft.} \times 0.80 = 0.61$. Because the proposed improvement does not satisfy the definition of an SSM, it is classified as an Alternative Safety Measure (ASM).

Track 2:

For motorists eastbound along F&B Road, a non-traversable raised median will extend 74.5 feet westward from the gate arm for Track 2. The length of this median is limited by the presence of Track 1. For this approach, the effectiveness factor is a proration of the minimum required raised median length (100 feet) to the actual raised median length, which is calculated to be $74.5 \text{ ft.} / 100 \text{ ft.} \times 0.80 = 0.60$. Because the proposed improvement does not satisfy the definition of an SSM, it is classified as an ASM.

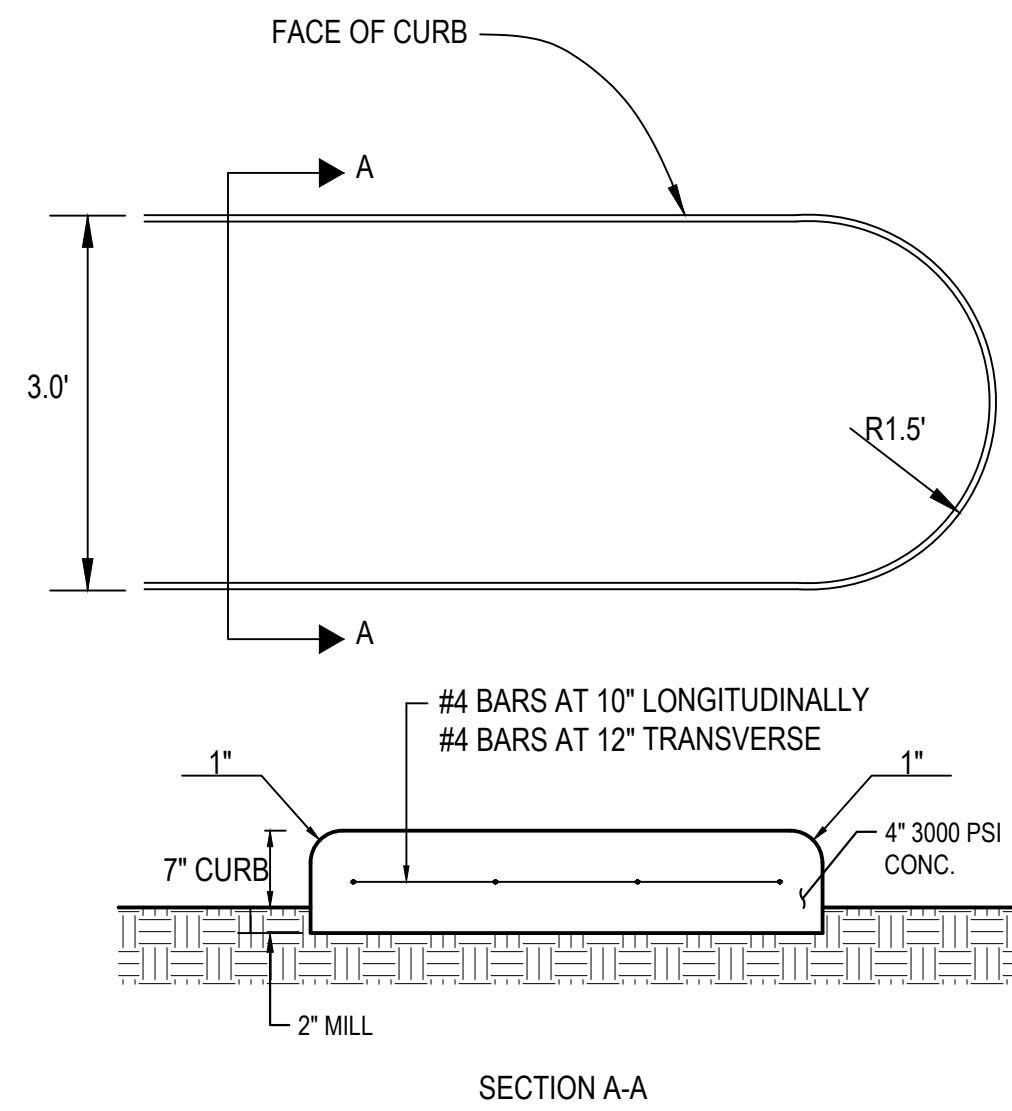
For motorists westbound along F&B Road, a non-traversable raised median will extend 15.0 feet eastward from the gate arm for Track 2. The length of this median is limited by the presence of Wellborn Road. Where a roadway is within 100 feet of a crossing, the minimum required median length for an SSM is reduced to 60 feet. For this approach, the effectiveness factor is a proration of the minimum required raised median length to the actual raised median length, which is calculated to be $15 \text{ ft.} / 60 \text{ ft.} \times 0.80 = 0.20$. Additionally, because the proposed improvement does not satisfy the definition of an SSM, it is classified as an ASM.

Because not all of the safety improvements can be classified as SSMs, the safety improvements as a whole are thus considered an ASM. The effectiveness rate for the crossing as a whole is the average of the effectiveness rate for the proposed improvements along each approach, which is:

$$(0.80 + 0.61 + 0.60 + 0.20) / 4 = \underline{\mathbf{0.55}}$$

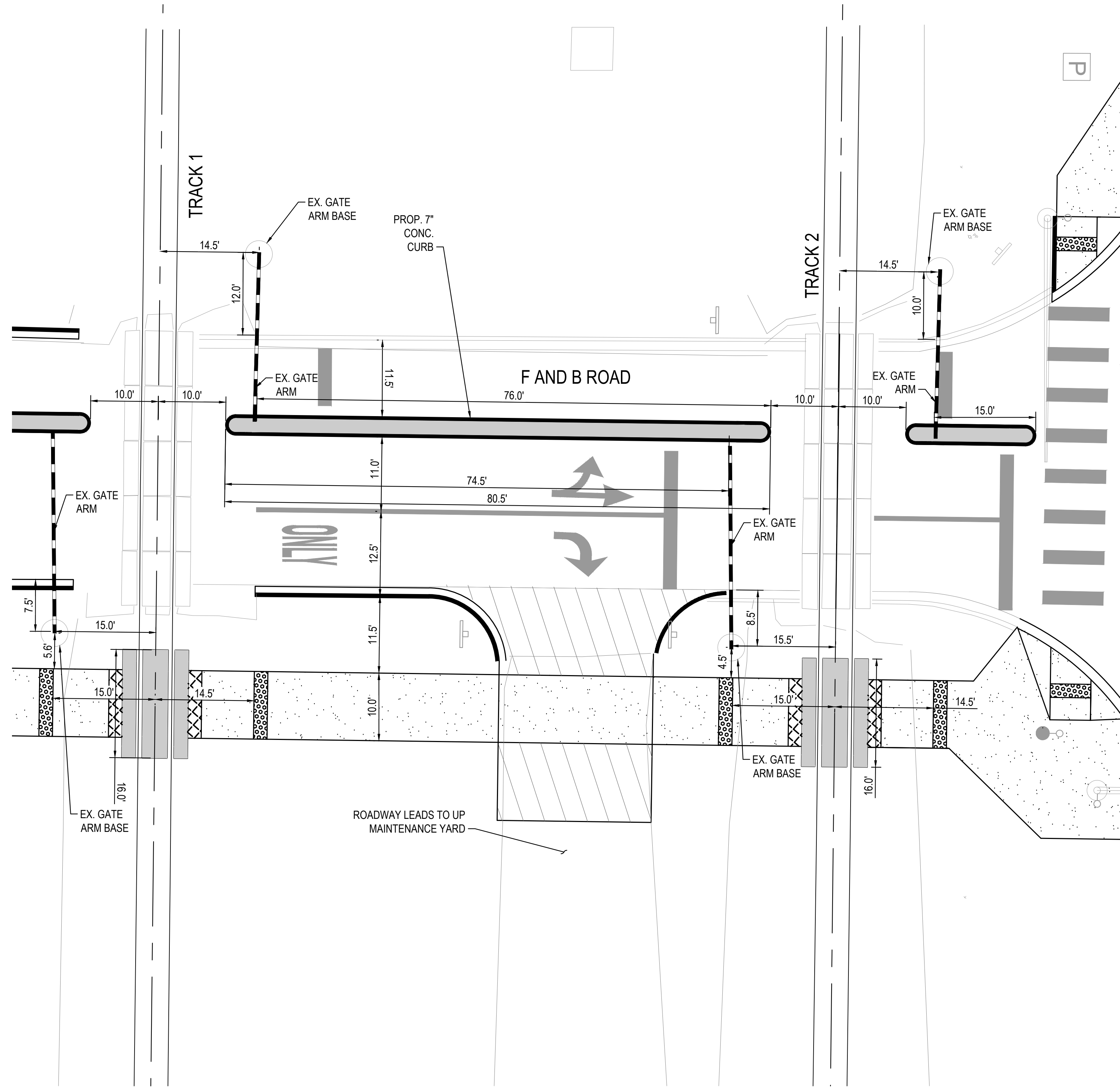
In accordance with §222.35(b)(1) and Part 8 of the MUTCD, all required crossing safety equipment, signing and markings shall be in place prior to the filing of the Notice of Quiet Zone Establishment. In accordance with §222.35(c)(1), the supplemental warning sign “No Train Horn” (W10-9) shall be installed below the advance railroad warning signs (W10-1) immediately prior to the date of the establishment of the quiet zone. In accordance with §222.35(d)(1) the automatic bells shall be maintained in working condition after the quiet zone is established.

Plotted By: Lawrence, Timothy Sheet Set: KHA Layout: INSET April 01, 2021 02:25:28pm K:\FTW_TPTO\066079319_TAMU_QZ\CADD\EXHIBIT\RR Completed Project Exhibits\VP-PAVING PLAN_F AND B.dwg
 This document, together with the concepts and details presented herein, is intended only for the specific purpose and subject for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

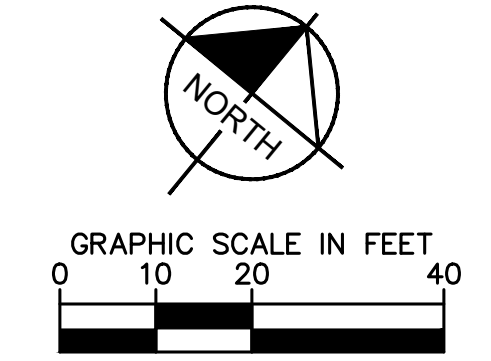


MONOLITHIC MEDIAN DETAIL

N.T.S.



F AND B RAILROAD DIMENSION CONTROL



LEGEND

- PROPOSED CONCRETE MEDIAN / RR PANEL
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SOD MOW STRIP W/ 6" TOPSOIL (2 TYP.)
- PROPOSED ACCESSIBLE RAMP
- 30' LIGHT POLE
- PROPOSED CURB & GUTTER
- DETECTABLE WARNING STRIP 2' WIDE

| No. | REVISIONS | DATE | BY |
|-----|-----------|------|----|
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| | | | |
| | | | |

Kimley»Horn
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 TEXAS REGISTERED ENGINEERING FIRM F-928
 2800 SOUTH TEXAS AVENUE, SUITE 201
 BRYAN, TX 77802
 PHONE: 979-775-0995
 WWW.KHILE-HORN.COM



4/01/2021

| | |
|-------------|------------|
| KHA PROJECT | 066079319 |
| DATE | MARCH 2021 |
| SCALE | AS SHOWN |
| DESIGNED BY | KHA |
| DRAWN BY | KHA |
| CHECKED BY | DLS |

PROPOSED QUIET ZONE
 IMPROVEMENTS UPRR AT
 F&B ROAD
 DOT: 743209X

DESIGN & CONSTRUCT
 QUIET ZONES
 PREPARED FOR
 TEXAS A&M UNIVERSITY
 COLLEGE STATION, TEXAS
 FSP # 2019-07296

SHEET NUMBER
 D-7

811 Know what's below.
 Call before you dig.

CAUTION!!
 EXISTING UNDERGROUND UTILITIES IN THE AREA
 CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE
 HORIZONTAL AND VERTICAL LOCATION OF ALL
 UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR
 SHALL BE RESPONSIBLE FOR ANY REPAIRS TO
 EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING
 CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE
 ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

**Location: UPRR at FM 60 / University Drive
DOT 743210S**

Mitigation Strategy: Existing grade-separated crossing
Mitigation Classification: Not Classified

At the crossing, FM 60 / University Drive is a four-lane highway with a raised non-traversable median.

The crossing is grade-separated with FM 60 / University Drive going under UPRR. As the quiet zone process addresses at-grade crossings, photographs and drawings of the underpass are omitted.

As this is an existing grade-separated crossing, in accordance with App. C.B.3. it is not included in the quiet zone risk mitigation calculations and no risk mitigation factor is offered.

**Location: UPRR at Old Main Drive
DOT 743211Y**

Mitigation Strategy: Channelize approaching traffic to prevent gate-end runaround
Mitigation Classification: Modified Supplemental Safety Measure (Modified SSM)

At the crossing, Old Main Drive is an existing three lane roadway: two lanes eastbound and one lane westbound. No sidewalks or bike lanes are present. Traffic data was collected via 24-hour video surveillance with the following results:

Date of Count: April 9, 2019 (Tuesday)
24 Hour Volume – 4,104 vehicles
School Buses - 10
Trucks - 13 (0.32%)
Pedestrians - 8
Cyclists – 4

The existing crossing protection equipment includes bells, flashing lights and gates, a GCP 4000 controller with constant warning time devices, and power-out indicators. The intersection of Old Main Drive and Wellborn Road is signalized with railroad preemption interconnection.

The intersection was reconstructed in 2013 and detailed to be “quiet zone ready”. To reduce the potential for gate-end run around, channelizing devices in the form of traffic islands with non-traversable curbs as prescribed in §222.A.3 were installed. The diagnostic inspection found all non-traversable curbing to be at least six inches in height; in fact, most measurements were in the 6 ½” to 7” range. An underpass immediately south of the crossing is provided for cyclists and pedestrians.

Drawings showing the recommended improvements appear at D-11 and D-12.

For motorists eastbound along Old Main Drive, a non-traversable raised median extends approximately 495 feet westward from the gate arm, which exceeds the minimum requirement for 100 feet and satisfies the requirements for an SSM using non-traversable curbs. This mitigation strategy is believed to be consistent with the intent of §222.A.3 and thus is considered to have an effectiveness rate of 0.80.

For motorists westbound along Old Main Drive, a non-traversable raised median extends eastward 46 feet from the gate arm. The length of this median is limited by the presence of Wellborn Road. Where a roadway is within 100 feet of a crossing, the minimum required median length for an SSM is reduced to 60 feet. For this approach, the effectiveness factor is a proration of the minimum required raised median length to the actual raised median length, which is calculated to be $46 \text{ ft.} / 60 \text{ ft.} \times 0.80 = 0.61$. Additionally, because the proposed improvement does not satisfy the definition of an SSM, it is classified as an ASM.

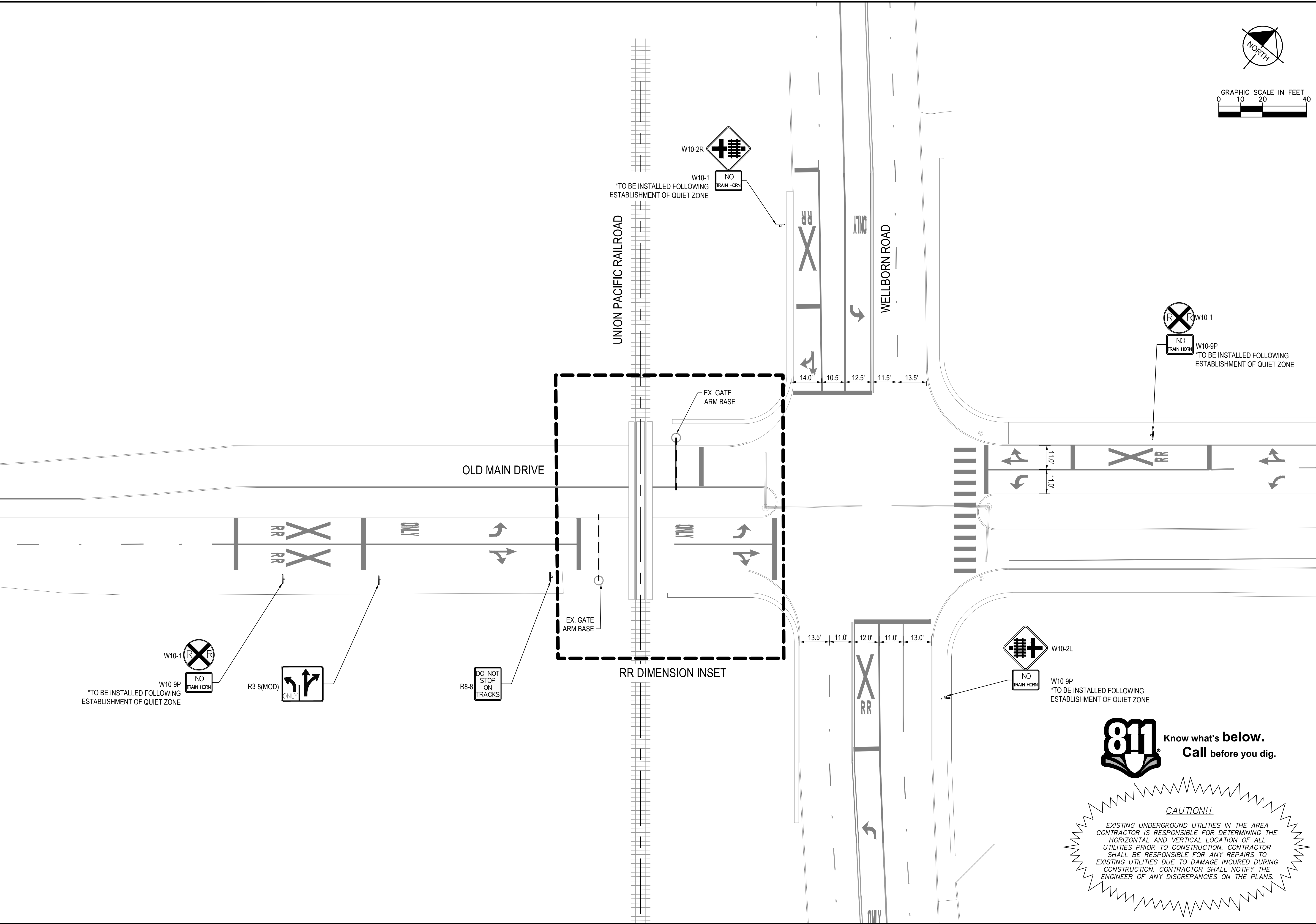
Because not all of the safety improvements can be classified as SSMs, the safety improvements as a whole are thus considered an ASM. The effectiveness rate for the crossing

as a whole is the average of the effectiveness rate for the proposed improvements along each approach, which is:

$$(0.80 + 0.61) / 2 = \underline{\mathbf{0.70}}$$

In accordance with §222.35(b)(1) and Part 8 of the MUTCD, all required crossing safety equipment, signing and markings shall be in place prior to the filing of the Notice of Quiet Zone Establishment. In accordance with §222.35(c)(1), the supplemental warning sign “No Train Horn” (W10-9) shall be installed below the advance railroad warning signs (W10-1) immediately prior to the date of the establishment of the quiet zone. In accordance with §222.35(d)(1) the automatic bells shall be maintained in working condition after the quiet zone is established.

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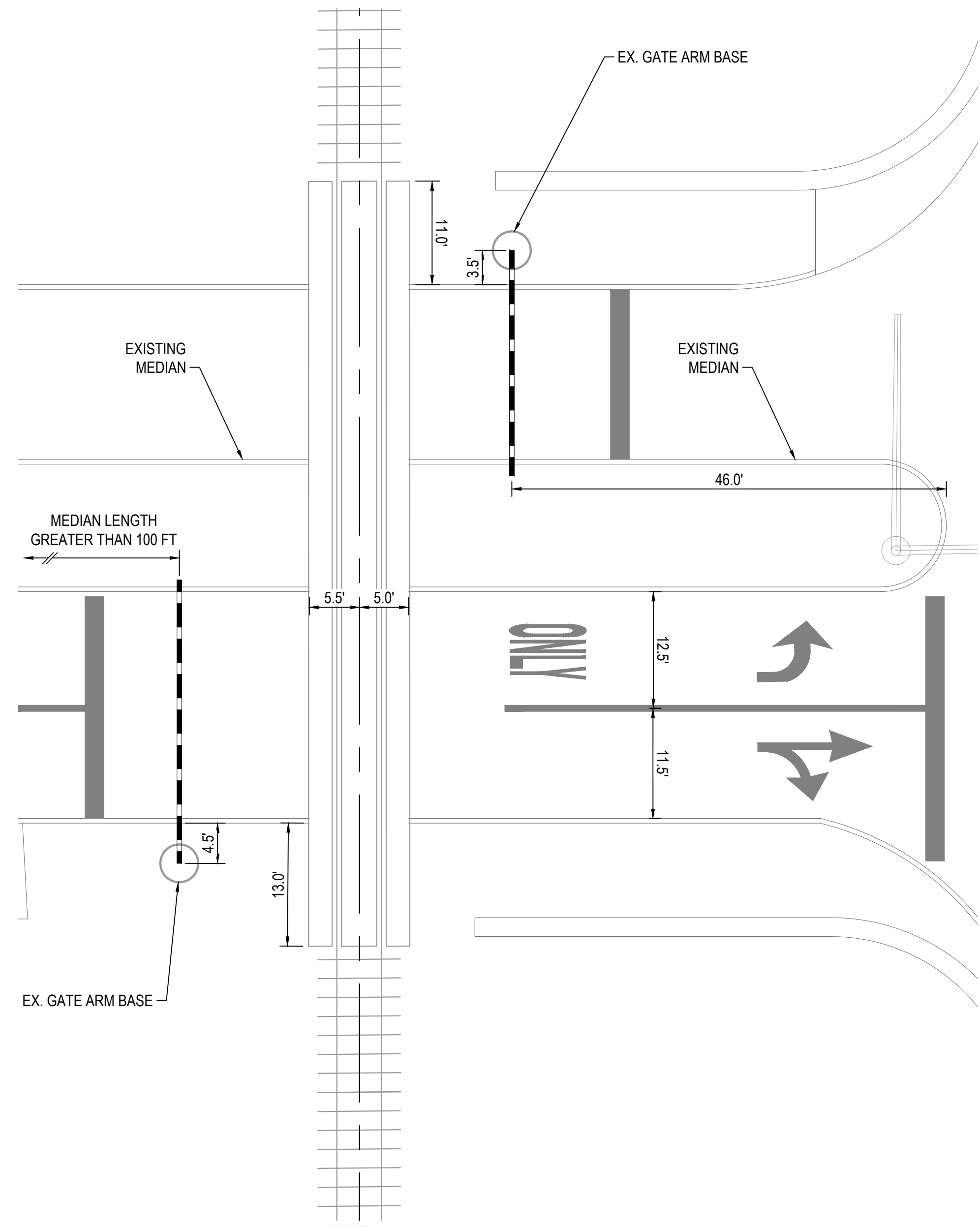
811 Know what's below.
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CAUTION!!

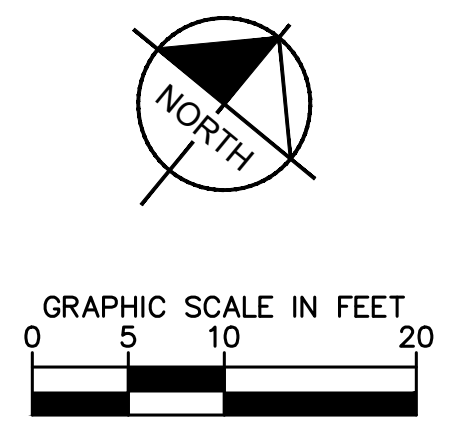
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| DESIGN & CONSTRUCT QUIET ZONES PREPARED FOR TEXAS A&M UNIVERSITY COLLEGE STATION, TEXAS FSP # 2019-07296 | PROPOSED QUIET ZONE IMPROVEMENTS UPRR AT OLD MAIN DRIVE DOT: 7432114 | | | KHA PROJECT 066079319 |
| | SHEET NUMBER D-11 | | | KHA DATE MARCH 2021 |
| KIMLEY-HORN AND ASSOCIATES, INC. TEXAS REGISTERED ENGINEERING FIRM F-928 2800 SOUTH TEXAS AVENUE, SUITE 201 BRYAN, TX 77802 PHONE: 979-775-0995 WWW.KHILE-HORN.COM | | J. CHRIS HARRIS 04859 LICENSED PROFESSIONAL ENGINEER | | SCALE AS SHOWN |
| Kimley-Horn | | 4/01/2021 | | DESIGNED BY KHA |
| REVISIONS | | No. | | DRAWN BY KHA |
| DATE | | BY | | CHECKED BY DLS |

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OLD MAIN RAILROAD DIMENSION INSET



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| | | | | | | | | | | | | | | |
| SHEET NUMBER D-12 | | | | | | | | | | | | | | |

**Location: UPRR at John Kimbrough Boulevard
DOT 743212F**

Mitigation Strategy: Channelize approaching traffic to prevent gate-end runaround
Mitigation Classification: Supplemental Safety Measure (SSM)

At the crossing, John Kimbrough Boulevard is an existing five lane roadway: three lanes eastbound and two lanes westbound. Sidewalks are present, and striped shoulders serve as ad hoc bike lanes. Traffic data was collected via 24-hour video surveillance with the following results:

Date of Count: April 9, 2019 (Tuesday)
24 Hour Volume – 12,651 vehicles
School Buses - 10
Trucks - 39 (0.31%)
Pedestrians - 310
Cyclists – 33

The existing crossing protection equipment includes bells, flashing lights and gates, a GCP 3000 controller with constant warning time devices, and power-out indicators. The intersection of John Kimbrough Boulevard and Wellborn Road is signalized with railroad preemption interconnection.

To reduce the potential for gate-end run around, channelizing devices in the form of traffic islands with non-traversable curbs as prescribed in §222.A.3 will be installed. The method of quiet zone implementation will be via an SSM.

Drawings showing the recommended improvements appear at D-15 and D-16.

This concept of mitigation includes reconfiguration of John Kimbrough to provide an 11 ft. wide median, necessary for the installation of median island gates with lights and bells, and 11 ft. wide vehicular travel lanes. The outside curb lines will remain in their existing condition. The striped shoulders will be removed, eliminating the perception of the existence of bike lanes. Median island gates will be installed within the new median, eliminating the need for excessively long gate arms for the eastbound approach and providing additional visual warnings for approaching motorists. The median between the gates and Wellborn Road will be 60 feet long. The median west of the gates will be approximately 380 feet long. All curbing within 100 feet of the gate arms will be non-traversable curbing with a vertical height of seven inches.

The intent of the design is to eliminate to the greatest extent possible instances of cyclists and pedestrians crossing the tracks. Fencing will be installed along the edge of the adjacent parking lot (Lot 61) to mitigate possible scofflaw behavior. This fence will tie into the existing fence running parallel to the tracks. Cyclists and pedestrians will be rerouted to the existing Pickard Pass underpass located south of John Kimbrough Boulevard. Sidewalks, shared use paths, curb ramps, cross walks, pedestrian signals, and signs and markings will be removed or

modified to implement this concept. Landscaping will be installed to further discourage travel by cyclists and pedestrians along the former sidewalk areas. All existing curb cuts and driveway returns will be removed within 100 feet of the gates.

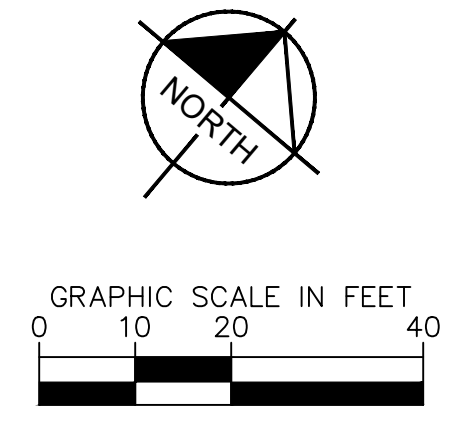
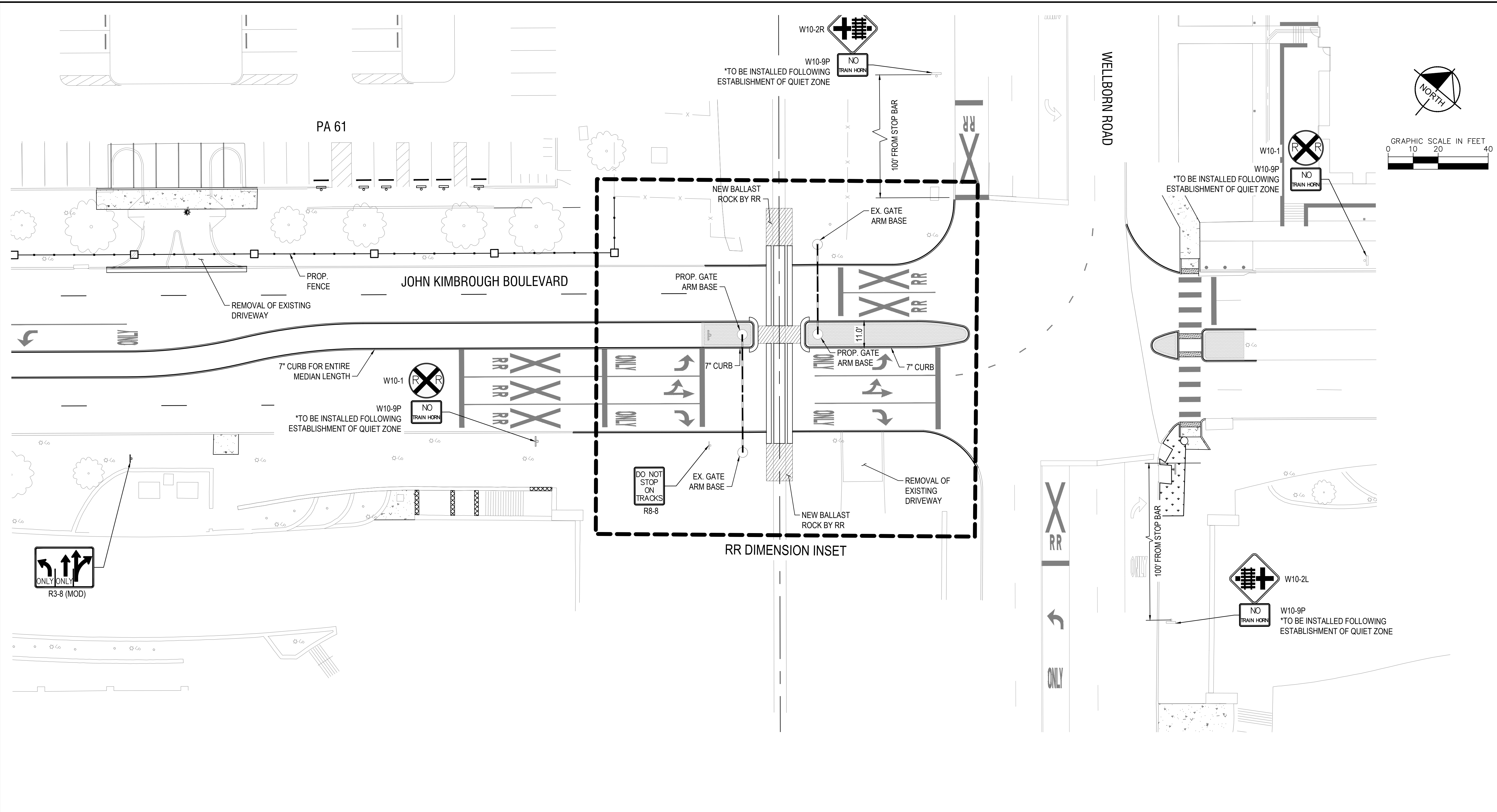
For motorists eastbound along John Kimbrough Boulevard, a non-traversable raised median will extend westward approximately 380 feet from the gate arms, satisfying the requirements for an SSM using non-traversable curbs. This mitigation strategy is believed to be consistent with the intent of §222.A.3 and thus is considered to have an effectiveness rate of 0.80.

For motorists westbound along John Kimbrough Boulevard, a non-traversable raised median will extend 60.7 feet eastward from the gate arms. The length of this median is limited by the presence of Wellborn Road. Where a roadway is within 100 feet of a crossing, the minimum required median length for an SSM is reduced to 60 feet. This mitigation strategy is believed to be consistent with the intent of §222.A.3 and thus is considered to have an effectiveness rate of 0.80.

Because all of the safety improvements can be classified as SSMs, the safety improvements as a whole are thus considered an SSM with an effectiveness rate of **0.80**.

In accordance with §222.35(b)(1) and Part 8 of the MUTCD, all required crossing safety equipment, signing and markings shall be in place prior to the filing of the Notice of Quiet Zone Establishment. In accordance with §222.35(c)(1), the supplemental warning sign “No Train Horn” (W10-9) shall be installed below the advance railroad warning signs (W10-1) immediately prior to the date of the establishment of the quiet zone. In accordance with §222.35(d)(1) the automatic bells shall be maintained in working condition after the quiet zone is established.

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LEGEND

| | |
|--|---------------------------------|
| | PROPOSED CONCRETE MEDIAN PAVERS |
| | PROPOSED CONCRETE PAVEMENT |
| | PROPOSED ASPHALT PAVEMENT |
| | PROPOSED CONCRETE SIDEWALK |
| | PROPOSED WALL |
| | PROPOSED BALLAST ROCK BY RR |
| | PROPOSED ACCESSIBLE RAMP |
| | 30' LIGHT POLE |
| | PROPOSED CURB & GUTTER |
| | PROPOSED JOINT |



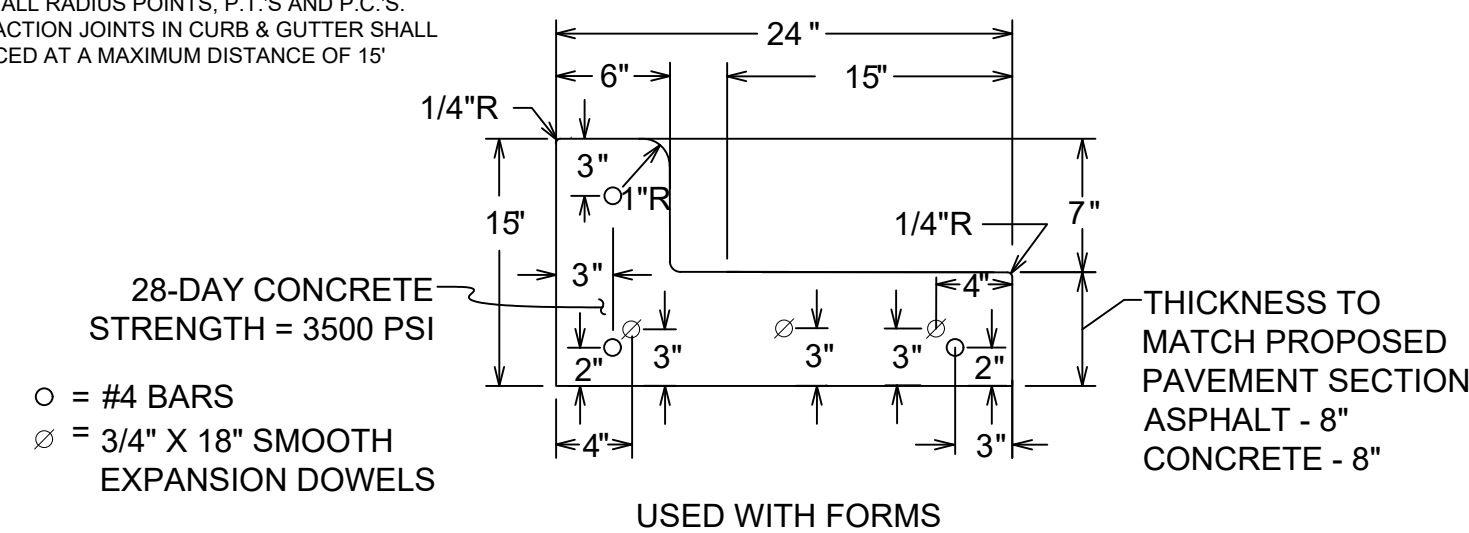
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| | | | | | | | |
| SHEET NUMBER D-15 | | No. | | REVISIONS | | DATE | BY |
| | | | | | | | |

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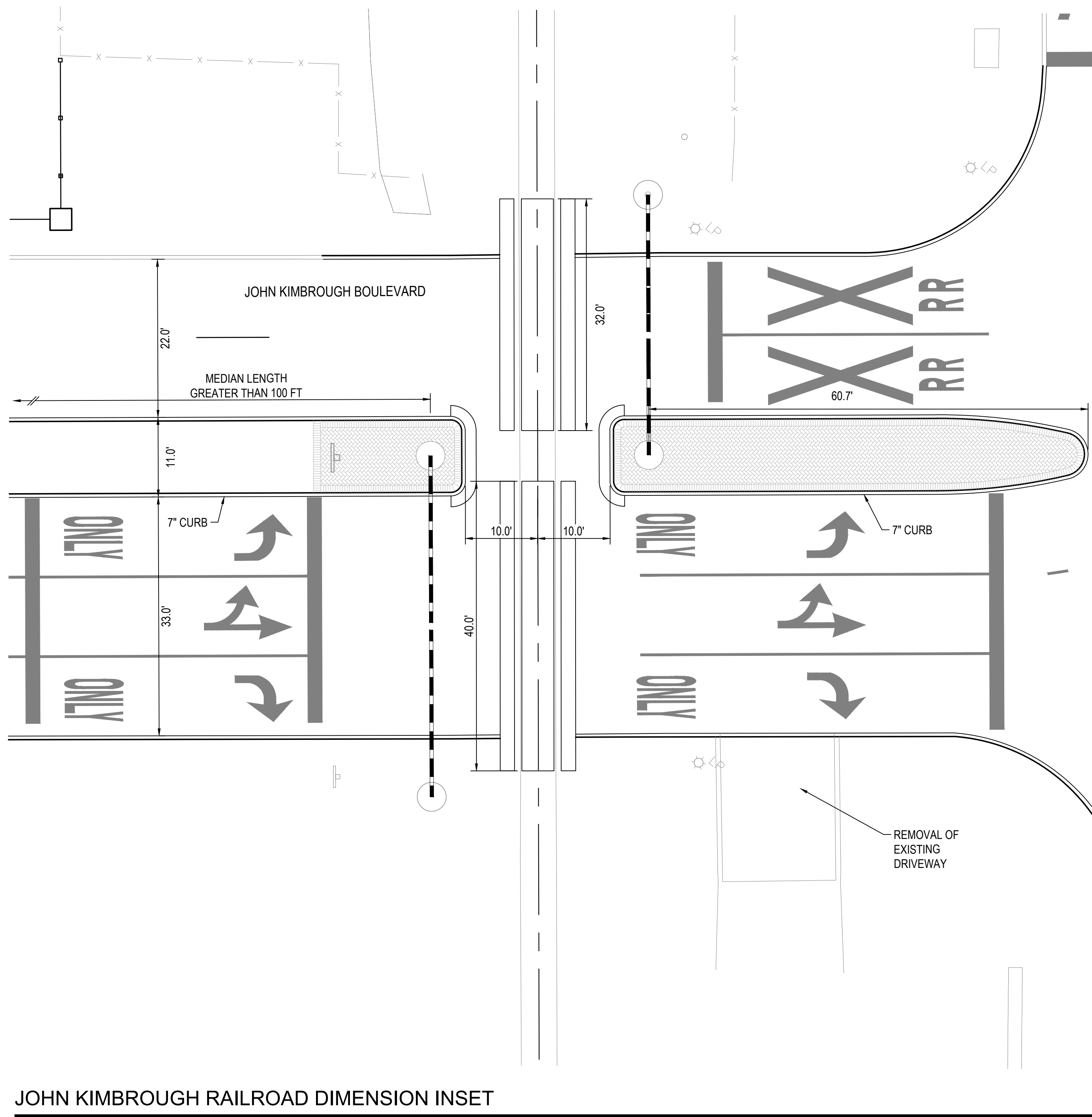
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NOTE:
 CURB SHALL BE POURED MONOLITHICALLY WITH ADJACENT CONCRETE PAVING. EXPANSION AND CONTRACTION JOINTS IN CURB & GUTTER SHALL MATCH ADJACENT CONCRETE.

WHERE ADJACENT TO ASPHALT PAVEMENT, EXPANSION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 30' APART AND AT ALL RADIUS POINTS, P.T.'S AND P.C.'S. CONTRACTION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 15' APART.



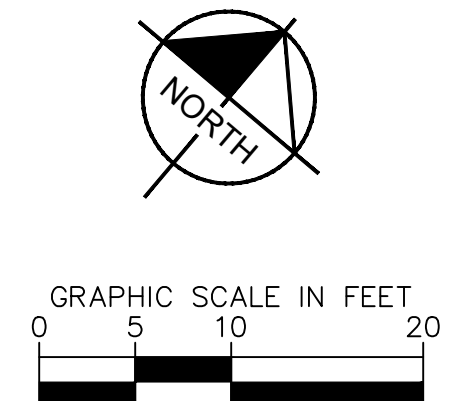
7" COMBINED CURB & GUTTER SECTION
 N.T.S.



JOHN KIMBROUGH RAILROAD DIMENSION INSET

LEGEND

- PROPOSED CONCRETE MEDIAN PAVERS
- PROPOSED CONCRETE PAVEMENT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED WALL
- PROPOSED BALLAST ROCK BY RR
- PROPOSED ACCESSIBLE RAMP
- 30' LIGHT POLE
- PROPOSED CURB & GUTTER
- PROPOSED JOINT



| <p>DESIGN AND CONSTRUCT QUIET ZONES PREPARED FOR TEXAS A&M UNIVERSITY COLLEGE STATION, TEXAS FSP # 2019-07296</p> | <p>PROPOSED QUIET ZONE IMPROVEMENTS UPRR AT JOHN KIMBROUGH BLVD DOT: 743212F</p> | | | | | | | | | | | | |
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| <p>4/01/2021</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>KHA PROJECT</td> <td>D66077084</td> </tr> <tr> <td>DATE</td> <td>NOVEMBER 2020</td> </tr> <tr> <td>SCALE</td> <td>AS SHOWN</td> </tr> <tr> <td>DESIGNED BY</td> <td>JCH</td> </tr> <tr> <td>DRAWN BY</td> <td>AGB</td> </tr> <tr> <td>CHECKED BY</td> <td>JCH</td> </tr> </table> | | KHA PROJECT | D66077084 | DATE | NOVEMBER 2020 | SCALE | AS SHOWN | DESIGNED BY | JCH | DRAWN BY | AGB | CHECKED BY | JCH |
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| DRAWN BY | AGB | | | | | | | | | | | | |
| CHECKED BY | JCH | | | | | | | | | | | | |
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| <p>SHEET NUMBER D-16</p> | | | | | | | | | | | | | |

**Location: UPRR at FM 2347 / W. George Bush Drive
DOT 743215B**

Mitigation Strategy: Wayside Horns

Mitigation Classification: One-For-One Exchange of Train Horns for Wayside Horns

At the crossing, FM 2347 / W. George Bush Drive is an existing five lane roadway: three lanes eastbound and two lanes westbound. Sidewalks are present but there are no bike facilities. Traffic data was collected via 24-hour video surveillance with the following results:

Date of Count: April 9, 2019 (Tuesday)

24 Hour Volume – 27,146 vehicles

School Buses - 13

Trucks - 213 (0.78%)

Pedestrians - 227

Cyclists – 167

The existing crossing protection equipment includes bells, flashing lights and gates including median island gates, a GCP 3000 controller with constant warning time devices, and power-out indicators. The intersection of FM 2347 / W. George Bush Drive and Wellborn Road is signalized with railroad preemption interconnection.

Construction of a grade-separated crossing is in preliminary engineering with construction anticipated to begin within the next four to six years. As an interim measure, wayside horns complying with Appendix E to Part 222 will be installed to replace the locomotive horns. Due to curvature of the track and trees along the inside of the curve north of the crossing, train crews may not be able to see at an adequate distance the wayside horn's status indicator; thus, an auxiliary wayside horn status indicator located approximately 500 feet north of the crossing will be installed.

Drawings showing the recommended improvements appear at D-19, D-20, and D-21.

To address documented instances of cyclists and pedestrians using the existing crossing surface as a crosswalk, track panels will be reconfigured to present significant gaps in the planking in order to strongly discourage this behavior. To encourage better travel choices by cyclists and pedestrians, sidewalks, shared use paths, cross walks, curb ramps, pedestrian signals, signal timing and phasing, intersection geometry, and signing and markings will be revised to better facilitate accessible, safer, and more efficient crossing of Wellborn Road and the eastern leg of FM 2347 / W. George Bush Drive.

The elevation difference between the eastern edge of the track panels and the western gutter of Wellborn Road is approximately three feet. Considering the location of the proposed curb ramps, the distance from the eastern edge of the track panel to the western gutter of Wellborn Road is about 30 feet. A straight grading of the shared use path from the edge of the track panel to the gutter would result in a running slope of 10-12%, which exceeds the maximum running slope allowed by the American with Disability Act's standards and guidelines. To

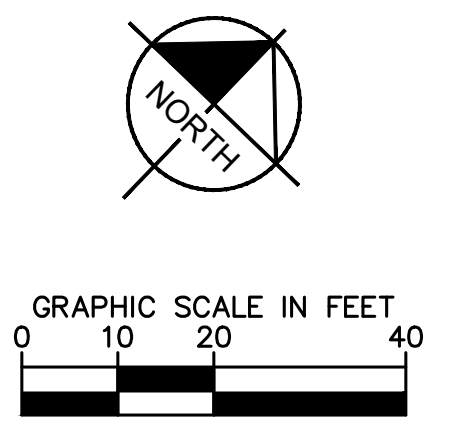
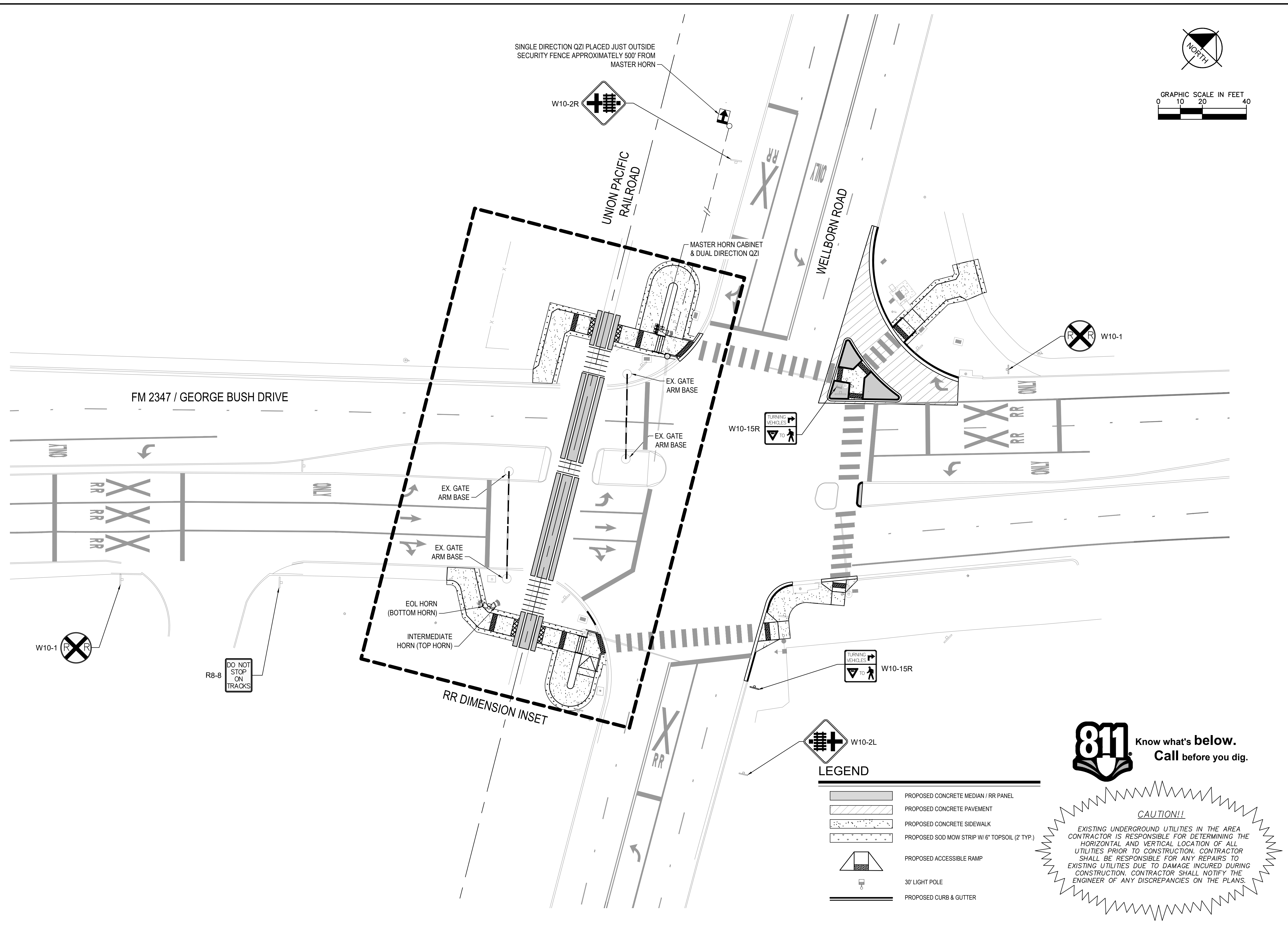
provide for the greatest accommodation for people with disabilities, switchback ramps with landings and running slopes of no greater than 5% are provided. For those who can travel steeper and more direct routes, steps with handrails will be installed between the landings located at the beginning of the switchbacks.

Bells will be added to the existing median gate assemblies to provide a more audible warning above ambient traffic noise levels to cyclists and pedestrians of an approaching train.

In accordance with §222.59(a)(2), the length of the quiet zone includes this crossing; however, the crossing shall not be considered in calculating the Quiet Zone Risk Index or Crossing Corridor Risk Index.

In accordance with §222.35(b)(1) and Part 8 of the MUTCD, all required crossing safety equipment, signing and markings shall be in place prior to the filing of the Notice of Quiet Zone Establishment. In accordance with §222.35(d)(1) the automatic bells shall be maintained in working condition after the quiet zone is established.

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LEGEND

- PROPOSED CONCRETE MEDIAN / RR PANEL
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SOD MOW STRIP W/ 6" TOPSOIL (2 TYP.)
- PROPOSED ACCESSIBLE RAMP
- 30' LIGHT POLE
- PROPOSED CURB & GUTTER

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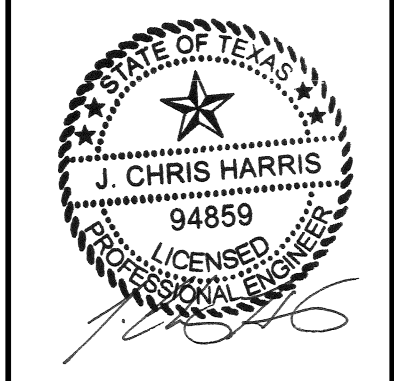
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| SCALE AS SHOWN | DRAWN BY KHA | SCALE AS SHOWN | DRAWN BY KHA |
| CHECKED BY DLS | CHECKED BY DLS | CHECKED BY DLS | CHECKED BY DLS |
| PROPOSED QUIET ZONE IMPROVEMENTS UPRR AT FM 2347W, GEORGE BUSH DRIVE DOT: 743215 B | | PROPOSED QUIET ZONE IMPROVEMENTS UPRR AT FM 2347W, GEORGE BUSH DRIVE DOT: 743215 B | |
| DESIGN & CONSTRUCT QUIET ZONES PREPARED FOR TEXAS A&M UNIVERSITY COLLEGE STATION, TEXAS FSP # 2019-07296 | | DESIGN & CONSTRUCT QUIET ZONES PREPARED FOR TEXAS A&M UNIVERSITY COLLEGE STATION, TEXAS FSP # 2019-07296 | |
| SHEET NUMBER D-19 | | SHEET NUMBER D-19 | |

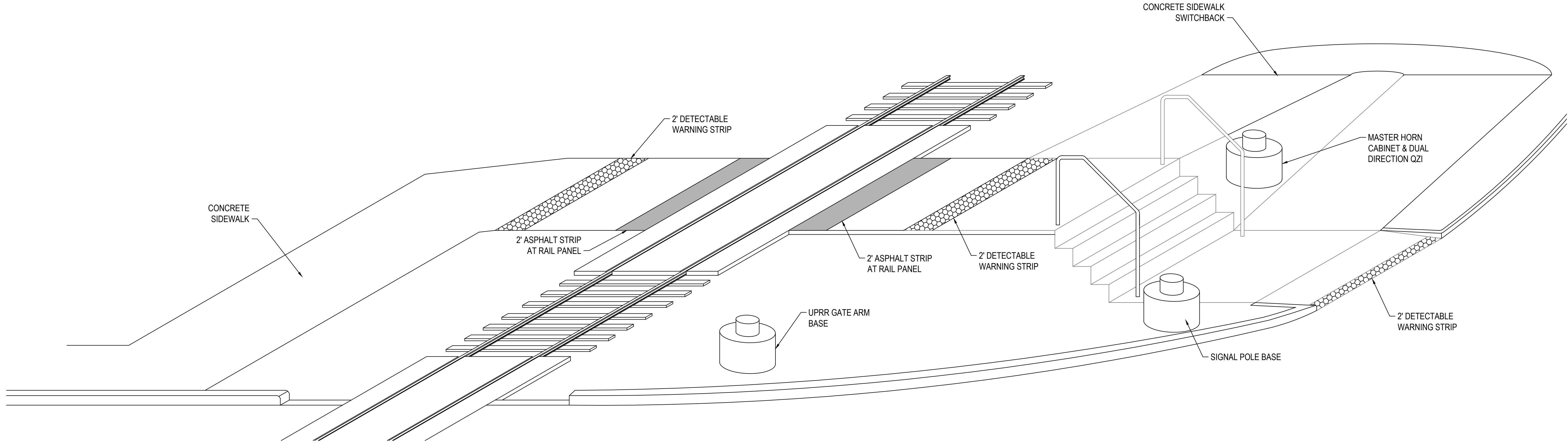
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| CHECKED BY DLS | CHECKED BY DLS | CHECKED BY DLS | CHECKED BY DLS |

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ISOMETRIC SIDEWALK SWITCHBACK

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| DATE | MARCH 2021 |
| SCALE | AS SHOWN |
| DESIGNED BY | KHA |
| DRAWN BY | KHA |
| CHECKED BY | DLS |

**PROPOSED QUIET ZONE
 IMPROVEMENTS UPRR AT
 FM 2347W. GEORGE BUSH
 DRIVE
 DOT: 743215 B**

**DESIGN & CONSTRUCT
 QUIET ZONES
 PREPARED FOR
 TEXAS A&M UNIVERSITY
 COLLEGE STATION, TEXAS
 FSP # 2019-07296**

SHEET NUMBER
 D-21

Appendix E

Quiet Zone Calculations

**Texas A&M University Quiet Zone
College Station, Texas**

Appendix E – Quiet Zone Calculations

April 13, 2021

The Texas A&M University Quiet Zone will be established by implementing Supplemental Safety Measures (SSMs) and Alternative Safety Measures (ASMs) at all crossings to reduce the Quiet Zone Risk Index to at or below the Risk Index with Horns.

The existing Risk Index without Horns was determined from FRA’s Online Quiet Zone Calculator. Current crossing data from the updated crossing inventories presented in Appendix A were used in the calculator. A printout of the online calculator’s results is shown on page E-2.

The Risk Index with Horns for each crossing was calculated by multiplying the Risk Index without Horns by 66.8%.

The estimated effectiveness rate for the proposed SSM or ASM for each crossing was determined in Appendix D.

The calculations to determine the Quiet Zone Risk Index for each crossing and for the corridor are shown on page E-3. In accordance with §222.59, George Bush Drive is not included because it will be equipped with wayside horns, and any crossing with a wayside horn is not included in the Quiet Zone Risk Index calculation.

In summary, the Quiet Zone Risk Index for F&B Road, Old Main Drive, and John Kimbrough Boulevard, considered both singularly and collectively, is less than the Risk Index with Horns:

| DOT No. | Location | Risk Index with Horns | Quiet Zone Risk Index |
|----------------|------------------------------|------------------------------|------------------------------|
| 743209X | UPRR at F&B Road | 20,914.66 | 15,698.55 |
| 743211Y | UPRR at Old Main Drive | 17,583.82 | 8,798.95 |
| 743212F | UPRR at John Kimbrough Drive | 27,390.74 | 9,137.55 |
| | Average of All Crossings | 21,963.08 | 11,211.68 |

Therefore, the basis of quiet zone establishment, reducing the Quiet Zone Risk Index to at or below the Risk Index with Horns, is satisfied.

Cancel

Change Scenario: TAMU QZ 20_63020

Continue

Create New Zone
Manage Existing Zones
Log Off

| Crossing | Street | Traffic | Warning Device | Pre-SSM | SSM | Risk | |
|----------|--------------------------|---------|----------------|---------|-----|-----------|--------|
| 743209X | F AND B ROAD | 7306 | Gates | 0 | 0 | 34,885.66 | MODIFY |
| 743211Y | OLD MAIN DRIVE | 4104 | Gates | 0 | 0 | 29,329.82 | MODIFY |
| 743212F | JOHN KIMBROUGH BOULEVARD | 12651 | Gates | 0 | 0 | 45,687.76 | MODIFY |
| 743215B | GEORGE BUSH DRIVE | 27146 | Gates | 0 | 0 | 52,635.58 | MODIFY |

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

* 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.

| Summary | |
|-----------------------------------------------|------------------|
| Proposed Quiet Zone: | TAMU QZ 20210127 |
| Type: | New 24-hour QZ |
| Scenario: | TAMU QZ 20_63020 |
| Estimated Total Cost: | \$0.00 |
| Nationwide Significant Risk Threshold: | 15488 .00 |
| Risk Index with Horns: | 24361.33 |
| Quiet Zone Risk Index: | 40634.71 |
| | |
| | |
| | |

**Texas A&M University Quiet Zone
Railroad Crossing Risk Index Calculations**

April 13, 2021

| DOT No. | Location | Type of Crossing | | Risk Index w/out Horns (1) | Risk Index w/ Horns (2) | Classification of Treatment | Proposed SSM or ASM Effectiveness Rates (3) | Quiet Zone Risk Indices |
|---------|------------------------------|------------------|--------|----------------------------|-------------------------|-----------------------------|---------------------------------------------|-------------------------|
| 743209X | UPRR at F&B Road | At-Grade | Public | 34,885.66 | 20,914.66 | ASM: Gates + Channelization | 0.55 | 15,698.55 |
| 743211Y | UPRR at Old Main Drive | At-Grade | Public | 29,329.82 | 17,583.82 | ASM: Gates + Channelization | 0.70 | 8,798.95 |
| 743212F | UPRR at John Kimbrough Drive | At-Grade | Public | 45,687.76 | 27,390.74 | SSM: Gates + Channelization | 0.80 | 9,137.55 |
| | | | | 36,634.41 | 21,963.08 | | | 11,211.68 |

Risk Index Without Horns 36,634.41

Risk Index with Horns 21,963.08

Quiet Zone Risk Index 11,211.68

Nationwide Significant Risk Threshold (a/o 01/08/2021) 15,488.00

Notes:

- (1) From FRA's online Quiet Zone Calculator
- (2) Equals Risk Index w/out Horns multiplied by 66.8%
- (3) SSM values taken from FRA Quiet Zone Rules. See Appendix D for discussion of ASM values