



Department of Transportation

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Petition No. (_____)

2022

CITY OF MADISON, WI

PETITION FOR ALTERATION OF TWO AT-GRADE CROSSING AND EXEMPTION AT TWO AT-GRADE CROSSINGS

In conjunction with AECOM, the City of Madison has put together this petition to bring forward to the Office of the Commissioner of Railroads. We have provided full support to move forward with the design of this transit improvement project. Through the preliminary design we have worked with the Wisconsin Department of Transportation regarding the alteration and exemption requests outlined below and received concurrence on each of the requests. The project is projected to be let in late 2022, with construction starting early 2023 and continuing through mid-2024. All project work at all railroad crossings planned to be completed by the end of 2024.

The project affects the following four railroad crossings:

- Near University Avenue and Babcock Drive (391729G) – Widen westbound street and change lane markings and geometry of sidewalk
- Near Campus Drive and Randall Avenue (391728A) – Change geometry of northbound right turn lane
- Near East Washington Avenue and Dickinson Street (177841G) – Change lane markings and make exempt
- Near East Washington Avenue and First Street (177313F) – Change lane markings and make exempt

The alterations and exemption of the railroad crossings will promote public safety and convenience as the current corridor will be used for the City of Madison Bus Rapid Transit (BRT) route. BRT is a high frequency bus route that will improve reliability and reduce travel times, aided in part by the designation of transit lanes throughout most of the corridor. Buses are proposed at 15-minute intervals for most of the day, with two BRT routes overlapping in the central area, including at the three railroad crossings. This means a bus would cross the at-grade crossings on East Washington and University Avenue every 7.5-minutes in both directions.

University Avenue and Campus Drive, two public streets in the City of Madison, cross the tracks of the Wisconsin & Southern Railroad (WSOR) at-grade, crossing number 391729G. Please provide a ruling on the proposed alteration. Please provide a determination on cost apportionment for the crossing surface

replacement, anticipating that the full crossing surface would be replaced during this project's construction timeline. The crossing is currently designated as exempt. Existing crossing length for westbound traffic is approximately 114' with pavement width varying approximately 41'-46'. Existing warning devices include overhead lights, post mounted warning lights, traffic signals, and two post mounted yield signs for the bike path crossing. The road crossing is proposed to be widened approximately 2.5 feet to the north in order to accommodate a westbound transit only lane. An existing railroad sign with warning lights will be impacted by the widening, along with one signal pole. The westbound bike lanes will also be eliminated in order to limit the impacts at this crossing. The existing bicycle path will be realigned to cross the railroad tracks at approximately 45 degrees, an improvement recommended through coordination with WSOR as the existing path has an acute angle making it challenging for bicyclists to cross. As such the two existing yield signs need to be relocated to the new path crossing location. The City of Madison recommends that WSOR be responsible for 100% of the replacement costs for the existing crossing surface length, and the project will be 100% responsible for the widened portion. This results in an approximate cost breakdown of 3% City funded and 97% WSOR funded. The City of Madison recommends the impacted signal poles be replaced with the BRT project, and WSOR relocate the post mounted railroad sign with warning lights as well as the two post mounted yield signs for the bike path. The City of Madison recommends the path realignment be constructed as part of the BRT project, except for the crossing surface which is recommended to be constructed by WSOR.

Randall Avenue, a public street in the City of Madison, crosses the tracks of the WSOR at-grade, crossing number 391728A. Please provide a ruling on the proposed alterations and adequacy of warning devices. Existing crossing length for the right turn lane is approximately 27' with pavement width approximately 20'. Existing warning devices include gates with warning lights as well as traffic signals. The crash history indicates the lights and gates have operated reliably, with no reports of malfunctioning equipment documented in the reviewed crash reports. The Randall Avenue railroad crossing has operational concerns dealing with unnecessary weaving downstream of the intersection where eastbound buses need to merge right across traffic coming from northbound Randall Avenue. This condition is to be mitigated by realigning the right turn lane onto Campus Drive almost perpendicular to Campus Drive. The realignment will eliminate weaving by preventing northbound general purpose vehicles from turning directly into the proposed transit lane east of the intersection. Realigning the right turn lane would also keep pedestrians and vehicular traffic within the field of vision of turning vehicles and would moderately increase the storage between the railroad crossing and the stop bar. There are no proposed operational changes, with the crossing remaining a gated right turn lane crossing and right turning traffic remaining governed by the traffic signal. The northbound right turn currently allows, and will continue to allow right turns on red, which will help prevent unnecessary queueing across the rail crossing. Lane width at crossing remains at 18'. Gates to remain in same location. The traffic signals will be realigned for the new turn lane alignment with the BRT project. The City of Madison recommends realigning the northbound right turn lane as shown within Appendix F.

East Washington Avenue (US Highway 151) in the City of Madison crosses the tracks of the WSOR at-grade, crossing numbers 177313F near First Street and 177841G near Dickinson Street. In accordance with Sections 195.285 of the Wisconsin Statutes, the City of Madison requests OCR approval to place exempt signs at these crossings for vehicles identified in Section 356.45 of the Wisconsin Statutes. Please also provide a ruling on the proposed alteration expected after the transit improvement project. Existing crossing length is approximately 140' with pavement width approximately 86' near Dickinson Street. Existing crossing length is approximately 112' with pavement width varying approximately 96'-100' near First Street. Existing warning devices include gates with warning lights, none of which will be altered. A transit lane is proposed in each direction by converting the existing left-most lane from general purpose to bus only, and restricting parking during peak periods in the existing parking and bike lane to accommodate traffic volumes during peak hours. This change will remove the auxiliary stopping lane during peak periods. The crash history contains many rear end collisions near the railroad crossings. The concern is that high levels of rear-end crashes will continue near the railroad crossings due to the elimination of the auxiliary stopping lane during peak hours, and that the

frequent stopping of the BRT vehicles will cause unnecessary delay and possible onboard injuries. The crash history indicates the lights and gates have operated reliably, with no reports of malfunctioning equipment documented in the reviewed crash reports. A summary of existing crossing data includes (train data from US DOT Crossing Inventory Forms):

Location on US HWY 151	U.S. DOT Crossing #	Highway Posted Speed Limit (MPH)	AADT (Yr) (Truck %)	Estimated # of Trains	Typical Speed Range (MPH)
Near First Street	177313F	30 MPH	51,300 (2018) (8%)	4 (Switching)	5-20
Near Dickinson Street	177841G	30 MPH	51,950 (2019) (8%)	6	5-10

The restriping to allow for the transit lane will remove the outside combined bike and parking lane in peak hours. The City anticipates widening the sidewalk on the north side of East Washington to mitigate these affects which would allow connectivity within the City's bike network. This work would be completed after the transit project.

The project will also include transit signal priority (TSP) for the BRT buses. TSP operates unless other forms of preemption are triggered, meaning the existing railroad-signal coordination will not be modified and trains and emergency vehicles will have priority over buses.

The anticipated funding for the project includes federal, state and local sources as outlined in the FTA's Small Starts Project Development Rating (Attachment H).

The following are attachments filed as part of the petition for additional information and justification on the proposed work:

- Attachment A: Crash Data (Ex.-City of Madison-Cechvala-1-1.pdf)
- Attachment B: Traffic Data (Ex.-City of Madison-Cechvala-1-2.pdf)
- Attachment C: Sight Distances (Ex.-City of Madison-Cechvala-1-3.pdf)
- Attachment D: Typical Sections (Ex.-City of Madison-Cechvala-1-4.pdf)
- Attachment E: US DOT Crossing Inventory Forms (Ex.-City of Madison-Cechvala-1-5.pdf)
- Attachment F: Draft of Proposed Work (Ex.-City of Madison-Cechvala-1-6.pdf)
- Attachment G: City of Madison Approval of Roadway Geometry (Ex.-City of Madison-Cechvala-1-7.pdf)
- Attachment H: Madison East-West BRT Small Starts Project Development Rating (Ex.-City of Madison-Cechvala-1-8.pdf)

Sincerely,



Thomas W. Lynch, PE, PTOE, PTP, AICP
Director of Transportation
City of Madison