

## Gard, Greg - DOT

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**From:** Gard, Greg - DOT  
**Sent:** Wednesday, November 18, 2020 10:55 AM  
**To:** Berghammer, Donald - DOT; Murphy, Ryan - DOT; Ly, Nguyen - DOT; Eruchalu, Benedict C - DOT  
**Cc:** Olapo, Olubunmi - DOT; Grisar, Emlynn - DOT; Robinette, James J - DOT; Dobersek, Mitzi - DOT; Grisar, Emlynn - DOT; Herrick, Richard - DOT; DOT 1320-07-03 STH 11 - CTH J RAB; Wierzchowski, Casey W - DOT; Barth, Tony - DOT  
**Subject:** RE: Final Scoping Certification | Highway Safety Improvement Program (HSIP) ID: 1320-07-73 | WIS 11 | Intersection with County J | Towns of Burlington/Dover, Racine Co., WI

Thanks Don.

I heard Bunmi was out and not sure who will be taking over as far as signatures for Final Scoping certs. Anyone have any suggestions?

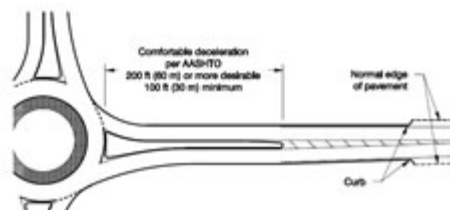
As far as the email and issues regarding the STH 33/CTH I Roundabout, Programming and planning had a discussion about this last week. The increase in costs with that project were due to a thicker pavement, base, and subbase design (Increased cost about \$220K), excavation and borrow due to the hills on CTH I ((Increased cost about \$200K) and RA Smith also added a 2.5% inflation cost to the project. The difference in splitter Islands was only approx. \$150K more for that project because they went up to approx. 400'-500' in length. So that extra \$1M wasn't just because the splitter islands were lengthened.

Additionally, as designers, we follow all the standards spelled out in the FDM design guidelines and under the new Improvement strategies, concepts and applications for a RCND20 (S-1/S-2 concept definition) "Where the Safety Certificate Document shows that existing cross sectional or geometric features are contributing to safety issues, then utilize the lowest Modernization design criteria values to acceptably meet the project purpose and need. The application of cross sectional and geometric feature improvements will begin with the use of the lower Modernization design criteria in design alternatives development" and will increase if there is a need.

According to the FDM 11-30.5.19 (and 30.5.19.1 for non-STH low volume), FHWA, NCHRP Roundabout design guidelines, "the length of the splitter islands for high-speed approaches should be a minimum of 200' in length" and "the approach curves should be gentle and become successively smaller and should be sized based on the design speed and expected speed change", which will slow the driver down as they begin to navigate the roundabout (which the minimum 200' splitter islands were implemented in our preliminary design)

### 6.8.5.3 Splitter Islands

Another effective cross-section treatment to reduce approach speeds is to use longer splitter islands on the approaches (24). Splitter islands should generally be extended upstream of the entrance line to the point at which entering drivers are expected to begin decelerating comfortably. A minimum length of 200 ft (60 m) is recommended for high-speed approaches (24). Exhibit 6-69 provides a diagram of such a splitter island design. The length of the splitter island may differ depending upon the approach speed. The use of flatter and longer tapers in advance of the splitter islands also provides additional visual cues to drivers of a change in roadway environment. The design of the roundabout entry can also provide visual cues to drivers, in that the entry curves from the splitter island block the view of the central island as drivers approach the roundabout.



- Splitter islands should extend upstream of the yield line to the point at which entering drivers are expected to begin decelerating - a minimum length of 200 feet is recommended.

Where side road roundabout approaches have posted speeds 45 mph and higher, provide a combination of alignment deflection or offset and non-superelevated curvature that spans the deceleration distance from the entry. This will produce gradual deceleration to avoid forcing all the reduction in speed to be completed through the curvature at the roundabout. The length of roundabout splitter island should be minimum 200 feet as explained in the FHWA Roundabout Guide [4]. Always verify that the side road approach and entry condition, including the roundabout splitter island, provide deflection per the design principles of FDM 11-26-30.5 to safely and effectively slow traffic.

As far as this project is concerned, PDS will have a licensed roundabout designer (Kevin Kuhlow, whom I've worked with on past projects) doing further design on this project, we assume we will have increased costs (possibly shifting the roundabout slightly to a different location, increase roadway alignment deflections flares, splitter islands, etc.) Because of this we have an extra 30% cost in our project estimates (this project has an extra \$300K) as well as percentages to cover other incidentals. We are also required to have a final pavement design for the Final Scoping certification ,which we received from Todd Peschke (linked in the Final Scoping Cert.) so we won't be running into any increases due to pavements, base, and subbase.

Finally, I'm also working with Rodrigo M. and Dan D. currently on any existing and new roundabouts to make sure we have the proper standards spelled out in the FDM and enough costs included in our preliminary designs for similar Highway Safety Improvement Program projects.

If there are any further comments, please let Ryan Murphy or I know.

Thanks,

Greg

*Greg n. Gard, Jr.*

SE Region Final Scoping– Senior Engineer: Design and Planning

### Wisconsin Department of Transportation

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**From:** Berghammer, Donald - DOT <Donald.Berghammer@dot.wi.gov>

**Sent:** Tuesday, November 17, 2020 5:13 PM

**To:** Gard, Greg - DOT <Greg.Gard@dot.wi.gov>; Murphy, Ryan - DOT <ryan.murphy@dot.wi.gov>; Ly, Nguyen - DOT <Nguyen.Ly@dot.wi.gov>; Eruchalu, Benedict C - DOT <Benedict.Eruchalu@dot.wi.gov>

**Cc:** Olapo, Olubunmi - DOT <Olubunmi.Olapo@dot.wi.gov>; Grisar, Emlynn - DOT <Emlynn.Grisar@dot.wi.gov>; Robinette, James J - DOT <James.Robinette@dot.wi.gov>; Dobersek, Mitzi - DOT <Mitzi.Dobersek@dot.wi.gov>; Grisar, Emlynn - DOT <Emlynn.Grisar@dot.wi.gov>; Herrick, Richard - DOT <Richard.Herrick@dot.wi.gov>; DOT 1320-07-03 STH 11 - CTH J RAB <DOT13200703STH11CTHJRAB@dot.wi.gov>; Wierzchowski, Casey W - DOT <Casey.Wierzchowski@dot.wi.gov>; Barth, Tony - DOT <Tony.Barth@dot.wi.gov>

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Please revise the cost estimate consistent with Art's note (attached). The splitter medians aren't long enough and the cost will be higher. We had a similar RA at 33 & I, that was significantly under budgeted for similar reasons and went from about \$1.5M to \$2.5M.

I have signed the scoping cert. I am assuming the cert can just be revised, however with the cert being a pdf, it may need to both be revised and then resigned. Let us know if this is the case.

Lastly, Bunmi is out on sick leave and may need a delegate, in case you didn't know.

<< Message: FW: Scoping Design for High Speed Approach Roundabouts >>

*Don Berghammer, P.E.*

Supervisor of Traffic Operations

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**From:** Gard, Greg - DOT <Greg.Gard@dot.wi.gov>

**Sent:** Friday, November 13, 2020 7:29 AM

**To:** Olapo, Olubunmi - DOT <Olubunmi.Olapo@dot.wi.gov>; Grisar, Emlynn - DOT <Emlynn.Grisar@dot.wi.gov>; Robinette, James J - DOT <James.Robinette@dot.wi.gov>; Dobersek, Mitzi - DOT <Mitzi.Dobersek@dot.wi.gov>; Grisar, Emlynn - DOT <Emlynn.Grisar@dot.wi.gov>; Berghammer, Donald - DOT <Donald.Berghammer@dot.wi.gov>; Herrick, Richard - DOT <Richard.Herrick@dot.wi.gov>

**Cc:** Murphy, Ryan - DOT <ryan.murphy@dot.wi.gov>; DOT 1320-07-03 STH 11 - CTH J RAB <DOT13200703STH11CTHJRAB@dot.wi.gov>; Ly, Nguyen - DOT <Nguyen.Ly@dot.wi.gov>; Eruchalu, Benedict C - DOT <Benedict.Eruchalu@dot.wi.gov>; Wierzchowski, Casey W - DOT <Casey.Wierzchowski@dot.wi.gov>; Barth, Tony - DOT <Tony.Barth@dot.wi.gov>

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Good morning everyone,

Final Scoping just finished the plan review for the subject project and is ready to move forward with hand-off to PDS.

Below is a link to the Final Scoping Certification for the subject Highway Safety Improvement Program (HSIP) roundabout project for your review and signatures.

Box Link: <https://wisdot.box.com/s/8aaphl5fnp0y2nrkwjl8ib6lorotqdf>

Nguyen Ly (PDS PM) and Ben Eruchalu (PDS Supervisor) reviewed and concurred that this document is ready for signatures.

Please review, sign (using DocuSign), and please send an email notifying me of completion by November 20, 2020 so we can move forward with the hand-off of this project to Nguyen and his consultant team.

I will need signatures from Bunmi O., Emlynn G., James R., Mitzi D. (or Don B.) and Rich H. before sending to Tony Barth for final concurrence.

Please use the links within the document for additional information about the project.

If you have any questions, please let [Ryan Murphy](#) and I know.

*\*The purpose of the Final Scope Certification (FSC) document is to establish final agreement between the Region System Planning and Operations (SPO-PLN and SPO-OPS), Project Development (PDS), Technical Services (TSS), and the Bureau of Project Development (BPD) Design Standards and Oversight Section as to the scope, schedules, and budgets of the project. The FSC also provides various Statewide Bureaus and Division Offices with information about the project. The Final Scope Certification is to be completed prior to moving a project to Life Cycle 11.*

*Projects cannot move forward without the signed FSC document.*

Thank you everyone,

Greg

*Greg n. Gard, Jr.*

*SE Region Final Scoping– Senior Engineer: Design and Planning*

**Wisconsin Department of Transportation**

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