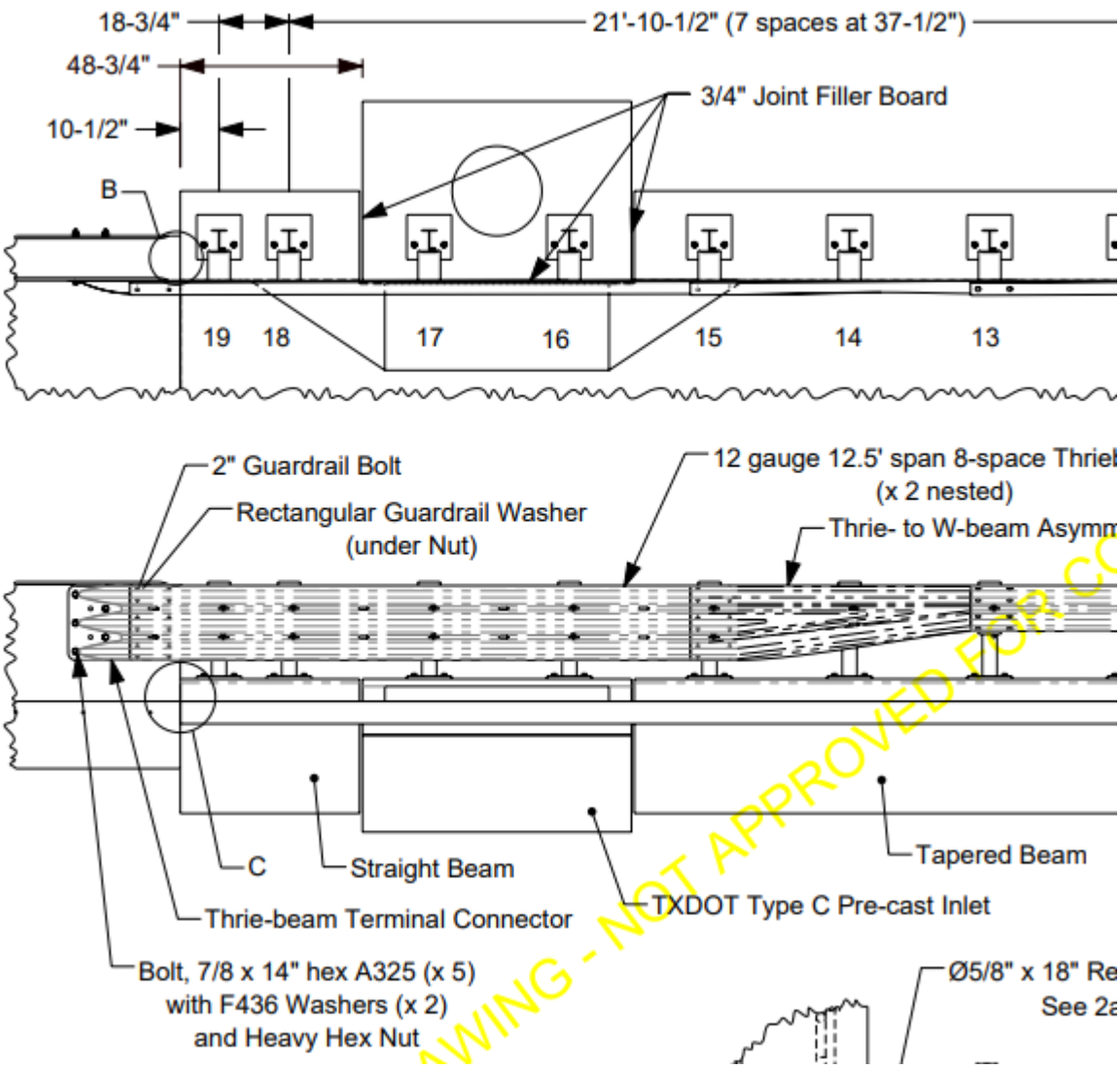
Roadside Safety Pooled Fund

Research Problem Statement

Project Title:	**MASH TL 3-20 Evaluation of a Transition with Storm Inlet (LSRB)**
Project Synopsis:	Storm Drain Inlets are meant to be free opening for discharging storm water from roadways. Such openings create a discontinuity for a roadside safety device such as a transition. Some state DOT's are considering adopting the guardrail transition developed by the Midwest Roadside Safety Facility (MwRSF) that can be used with or without a 4" (max.) tall curb and gutter configuration. However, there is some concerns about a 4" (max.) tall curb being insufficiently tall to contain the flow coming off the bridge on certain structures, and this could result in water flowing over the curb and lead to erosion issues. 

Project Goal(s):	The goal of this project is to conduct crash test a transition with storm inlet per MASH 3-20.
Project Background:	There is an interest in guidance on how to address the issue of accommodating inlets capable of handling moderate to high water flow coming off the bridge with a guardrail transition and a curb and gutter. Developing such transition would help incorporating storm drain inlet into a crashworthy transition. A proposed transition with storm inlet was simulated in an earlier pool fund project and shows promising behavior to pass MASH 3-21 and 3-20. The proposed system will be constructed and tested per MASH TL 3-21 criteria in fall 2022.
Proposed Work Plan:	1.) Task 1 – Construction of the proposed design of a transition with storm inlet  2.) Task 2 – Crash test of the system per MASH 3-20 3.) Task 3 – Report
Deliverables:	TTI researchers will provide a report documenting the simulation cases the results of the crash tests

Urgency and Expected Benefit:	In an earlier pool fund project, a design of transition with storm inlet is designed and simulated for both MASH 3-21 and MASH 3-20. However, to be fully an applicable MASH TL-3 compliant design, MASH 3-20 test also needs to be conducted. Therefore, this project is aimed to conduct MASH 3-20 test and provide Roadside Safety Pooled Fund with a MASH TL 3 compliant transition with a storm inlet design.
Problem Funding and Research Period:	**Total Estimated Cost = $70,954** **Period of Performance = 12 months**
Developer(s) of the Problem Statement:	Name: Derwood Sheppard, FL DOT Email: derwood.sheppard@dat.state.fl.us Phone: (850)414-4334