

PM Academy, Module 3 - Minor Design
Submitted Questions and Follow-up Responses

#	Question	Response
1	Is there a manual that goes along with this training? Also, how can we see Module 1 and Module 2?	<p>A manual has not been specifically generated as part of this training. FDOT is in the process of updating the Project Management Guide which can be found here - https://www.fdot.gov/designsupport/pm/resourcepage. This page also contains links to additional webinars related to project management.</p> <p>The posting of Module 1 and 2 recordings is under discussion, but pdf handouts are available.</p>
2	Is the 3R Report required in all districts?	Districts have different 3R Report requirements. Please coordinate with the FDOT project manager to determine the District's specific requirements regarding 3R Reports.
3	Hi - when evaluating the most recent 5-years of crash data, are we using 5 full years of crash data + the current year to date crashes? For example would a crash evaluation today use 1/1/2017-1/25/2022 crash data. Please clarify, thanks!	Yes, that is correct. Specifically for Design Variations and Exceptions documentation, FDM 122.4 states, "review and evaluation of the most recent 5 years of crash data from the current date of analysis."
4	Why can't we see Brandi's screen??	A copy of the PowerPoint presentation will be provided to all attendees.
5	Does D2 specify the reliability % that should be used depending on the type of facility/project?	District Two does not specify the Reliability (%R). Please refer to FDOT's Flexible Pavement Design Manual (https://www.fdot.gov/roadway/PM/publications.shtm), Section 2.2.1 and Table 5.2. It is recommended that designers start by using the higher end of the %R range.
6	Have dealt with a project recently where resilient modulus discrepancy played major role in reconsideration of pavement design. any recommendations re: number of soil samples, sample location, etc. to ascertain accurate M(r)?	The Design Resilient Modulus is provided to District Two by the State Materials Office. If you have reason to believe that there are discrepancies, please coordinate with the District Pavement Design Engineer (Belqis Majboor) and District Pavement Materials Engineer (Mike Horst) as well as the State Materials Office for additional evaluation.
7	When calculating ESAL's, how do you determine when to use interpolation vs growth rate?	Traffic information is provided by the District Two Planning Office. Projects in urbanized areas develop traffic using the regional travel demand models, which collects existing AADT and develops opening and design year AADT. Therefore, the ESAL calculation method would use either existing/design year AADTs (interpolation) or enter the AADTs (existing, opening, mid-year, and design years). Outside of an urbanized area, existing AADT would be collected and a historical growth rate would be applied to develop the design year AADT using the existing traffic only (extrapolation) method.

8	The state Materials office has been mentioned several times...District 2 has their own Materials office that provides all of this information. Do the other Districts not have their own Materials offices?	Each District has a dedicated District Materials Office. Districts 4 & 6 and 1 & 7 share a District Materials Office. Pavement information comes from the State Materials Office and District Materials Office, which is why both were mentioned in the training.
9	How do you take a quantity of the Variably Milled pavement? Is it just based on the average mill depth?	All milling is paid for as an average depth in units of SY. For variable milling, select the average that most closely matches your project conditions.
10	Many Districts are moving to 3D Design and modeling for cross slope correction and overbuild Quantities. This requires the full DTM. Is D2 considering going this route in the near future?	Previously, District Two's approach to 3D modeling needs was based on the specific project needs. Generally, minor design projects did not require the use of 3D modeling. However, with the recent change to Borrow Excavation, Truck Measure pay item 120-2-2, earthwork will now need a 3D model to calculate the plan quantity. This means more of our minor design projects will require 3D modeling.
11	Is there material to help us understand what type of crashes are attributed to super or cross slope deficiencies?	The long form crash reports are reviewed and an engineering judgement is made based on that review. It is subjective and up to the engineer to make that attributable determination. Below is some general guidance to assist in the review. <i>Steep cross slopes typically result in run off the road, side-swipe, or wall/object crashes when drivers run off the road.</i> <i>Flat cross slopes typically result in rear end or run off the road crashes related to hydroplaning due to the inability of water to leave the roadway.</i> <i>Steep supers result in head-on, run off the road (fixed object and rollovers) and sideswipe type crashes.</i> <i>Flat supers result in some hydroplaning, so rear end, side swipes, and run off the roads are more common.</i>
12	Perhaps a refresher for everyone on the difference between a Variance and Exception?	A Design Exception is needed when criteria related to AASHTO's 10 controlling elements are not met. Please refer to FDM 122.2.1 for a list of these controlling elements. A Design Variation is needed when FDOT's criteria are not met on any/all design elements, beyond the controlling 10 elements, found in FDOT guidance. Please refer to FDM 122.2.2 for additional details.
13	Is the minimum length of [cross slope] correction of 1000' a D2 preference? This used to be in the FDM/PPM but no longer is. Brandi?	The 1000' mentioned at the training was a general rule of thumb and not a preference. The intention was to note that any short segments (generally 1000' or less) of cross slope correction need to be reviewed for constructability concerns. The presentation handout was updated to remove the 1000' reference and only notate the constructability awareness.
14	When doing cross slope correction, I've been told that overbuild, by spec., cannot be used for the structural calculation as a conservative approach. However, if there is a situation where the correction causes the need for a large amount of overbuild, for example 5-6", and leaves behind a small amount of existing structural pavement, is there any consideration to counting the overbuild at the minimum depth? If we have to go back and add the required structural course on top of the large overbuild areas, a large amount of extra pavement will be used and add considerable cost to the project. I understand this is approach is meant to be conservative but does D2 ever deviate from it?	This would need to be addressed on a project specific basis. Please coordinate with the District Pavement Design Engineer (Belqis Majboor) and District Pavement Materials Engineer (Mike Horst) to discuss special situations.
15	Brad Bradley: re. non-compliant sidewalks and driveways in a RRR project. PM should at least consider sidewalk/driveway correction/improvement if practicable. See New language in FDM 114... number 13.	Thank you for the clarifying comment. The commenter is referring to the new FDM language found in Section 114.3.2.4, item 13 as provided by Roadway Design Bulletin 22-01 (released January 27, 2022).

16	Is there any training available for Lane Closure Analysis?	Lane closure analysis training is not currently available. FDM 241 discusses Lane Closure Analysis. An Excel spreadsheet can be found at the following link: http://www.motadmin.com/ttc-resources.aspx . If you hover over the red triangle inside the spreadsheet, additional information on the inputs is provided.
17	For guardrail, the FDM requires pipe rail for steel posts when sidewalks and/or shared use paths are <= 4' from the posts. However, pipe rail is not permitted within the LE, LT and LA segments. Is this because these segments have not been crash tested with pipe rail?	As explained within Richard Stepp's training "MASH Roadside Barriers - Design Lessons Learned" (https://www.fdot.gov/roadway/training/pres19) at approximately the 19th minute, pipe rail must terminate outside of the end treatments and approach transitions (LE, LT, LA, and crash cushions) per Standard Plans Instructions Part E and Standard Plans (Sheet 22 of 24). Pipe rail being a metal pipe could become a spearing hazard for vehicles that crash into an end treatment or approach terminal. A video of a vehicle crashing into an approach terminal within Derwood Sheppard's training "Guardrail: How It Works!" (https://www.fdot.gov/roadway/training/pres20) can be found at approx. the 26th minute. As you can see within this video, pipe rail could act as a spearing hazard if it were to be constructed within this area.
18	Will 3D Model negotiations for minor projects be addressed in this presentation?	3D modeling will be discussed more in Module 4, Major Design, but this is certainly a great question and topic that was brought up by question #10. For minor design projects, 3D modeling negotiations will be on a project specific basis (please see the response to question #10 for additional details). FDOT is working to further update the staff hour guidelines.
19	Where can we find a "Project Management Schedule" containing the milestones, meetings, tasks, etc. that are needed for these kinds of projects?	Each project will have an initial schedule assigned to it based on the preliminary scope and review by the FDOT project manager. During negotiations, this schedule is further refined as the scope is finalized. There is a Scheduling webinar available on FDOT's Project Management website at the following link: https://www.fdot.gov/designsupport/pm/resourcepage (scroll about halfway down the page and click on the "Webinar" link to the right of "Schedule Management, Scheduling Basics").