



TRAFFIC PLANNING AND DESIGN, INC.

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MEETING MINUTES

*Oxford Valley Road Shared Use Path
Lower Makefield Township, Bucks County, PA,
SR 0000, Section LMT, MPMS No. 111468*

Meeting with Lower Makefield Township, August 8, 2019

Attendees: Jim Majewski
Kurt Ferguson
Greg Hucklebridge
Ken Coluzzi
Monica Tierney
Marty Rosen, Traffic Planning and Design, Inc. (TPD)
Steve Natale (TPD)

Project Information

TPD presented a brief overview of the project.

1. Marty noted the safety submission and meeting with PennDOT went well. PennDOT's only major concern was the placement of a mid-block crossing at the Community Center, as they expect that location to get little use. PennDOT recommended installing the crosswalk at either or both of the adjacent intersections of Countess Drive and Victory Drive. The community center pedestrian crossing was developed as an alternative to Roeloffs Road and not due to an identified need. It was determined to not include the Community Center Crosswalk on the PennDOT project with the understanding that the municipality still has the option to install a cross walk at that location (or the adjacent intersections) at a later date. There was further discussion whether the crosswalk needed to provide flashers at Roelofs Road. Marty noted that based on the existing speeds and sight distance, flashers would generally be recommended, but are not specifically required. The township can revisit the need for flashers at these and other crosswalk locations as the situation dictates.
2. TPD then presented a preliminary analysis of stormwater requirements and potential solutions for the project. Key highlights include:
 - a. The project will require an NPDES permit as disturbance will exceed 1.0 acre.
 - b. TPD would request a waiver (Section 173.15.A) for requiring the 2-year post development rate of runoff to not exceed the 1 year pre-development rate of

runoff. This “over-mitigation” significantly increases the amount of stormwater management measures, particularly on a linear type project, and is not required for the NPDES Permit. TPD noted the same relief was provided for the Community Center and Baseball field projects. The township agreed that this is not necessary, as utilizing meadow for the existing land cover is already providing a measure of over-mitigation.

- c. The volume requirements for this project are for the 2-year post development volume to not exceed the 2-year pre-development volume. This is the same requirement for the NPDES Permit.
- d. As a requirement of the NPDES Permit, Lower Makefield Township will need to review the stormwater management and provide a concurrence/approval letter.
- e. The trail site has several challenges for stormwater management notably that most runoff flows into existing managed systems. This requires additional analysis to ensure that water is not redirected away from a permitted stormwater management facility, as that would negatively impact the mitigation capacity the facility is required to provide. The existing basin facilities do not provide additional storage space, so this project cannot perform minor modifications to the basins to meet rate requirements. More expensive measures would be required, and the existing facilities are surrounded by landscaping and parking structures that constrain the ability to resize the facilities. TPD noted that in previous experiences, modifying existing facilities required intensive design efforts and was costly. In most cases, the superior option is to create new BMPs.
- f. Steve presented the mitigations needs for an impervious pavement trail. 1.5 to 2’ deep parallel swales, 2 infiltration facilities, and 1 detention basin would be necessary to meet all requirements. TPD’s conceptual estimate for the stormwater BMPs is approximately \$225,000.
- g. A second alternative looked at providing an underground infiltration system as mitigation. The system cost would be near \$1,000,000, and these systems usually have the highest long term maintenance costs
- h. A third alternative was to utilize a pervious pavement system for the trail. The use of this system would significantly reduce the amount of parallel swales, and eliminates some BMPs entirely. The pervious pavement will not function as a conveyor of stormwater to an underground facility, it will only be used as a means of reducing the total post construction runoff, as pervious pavement produces much less runoff than typical asphalt pavement. The estimated cost for this system would be \$145,000. This total incorporates the additional cost of the pervious pavement as compared to impervious pavement.
- i. Township officials agreed that a pervious trail makes the most sense from a cost standpoint. The township inquired what additional maintenance would be required. TPD noted the maintenance of the pervious trail is similar to the maintenance of the pervious pavement parking lot within the community center near the proposed site. The township will investigate to confirm they have suitable equipment to manage the trail.
- j. Ken Coluzzi asked if fencing would be required for the 2’ deep swales along the trail. TPD stated that the depth of less than 2’ and slope (3H:1V) would not meet any requirement to provide a railing. TPD did note that fencing would be necessary

for the basin at the intersection of Edgewood and Oxford Valley Road as it would be over 6' deep. The fence would most likely be a three rail timber post fence with mesh netting. This could be further obscured with landscaping and tree planting if so desired. It was noted that evergreen trees had recently been planted in the area of the proposed facility. TPD intends to have the area surveyed. Ideally, the proposed grading would be done to avoid most of the newly planted trees. However, the storage requirement of the BMP may require the relocation/replacement of some of the trees.

- k. A discussion ensued on the benefits of planting trees as mitigation. Steve noted a credit of 6 cf of volume mitigation can be provided for a deciduous tree, and 10 cf can be provided for an evergreen. Because the trees need to be of a specific height (6') and caliper (2"), the cost typically does not outweigh the benefit. However, The Township has been working with EADS to plant additional trees in the site area, and if trees are to be planted, it would be worthwhile to take credit for the plantings for this project. Monica to coordinate with the EADS to determine if this would be worthwhile for this project.
 - l. TPD stated the project intends to utilize the previously completed infiltration testing for the various locations in lieu of new testing, provided the testing locations are acceptably close to proposed facilities for this project. TPD requested infiltration testing locations and results from the previous projects to present to the Bucks County Conservation District (BCCD). TPD will coordinate this in a preliminary pre application discussion with BCCD. If new infiltration testing is required, it would be beneficial for the project schedule to perform this testing before the ground freezes, or the testing would have to wait until spring 2020, which could have an adverse impact on the overall project schedule.
3. Kurt requested that a brief and presentation be provided at an upcoming BOS meeting. It was determined that it would be more appropriate to have that meeting after the Pre-application meeting with the conservation district so there are no major changes going forward. This is generally expected to occur in late Fall.
 4. TPD provided Monica with a request for information that needs to be provided about the park in conjunction with the CE (Environmental) Document for the PennDOT process.
 5. Marty noted that Dan Snyder (DVRPC) should be providing reimbursement agreement information in the coming months. Per the funding requirements, he project needs to be ready to bid by August 2020 or the grant money can be forfeited. Ideally, the project will be advertised and bid before this date in order to have construction completed in 2020.
 6. TPD noted that for the inspection services, PennDOT has a contract that is setup for prequalified inspection services.
 7. TPD to provide similar example projects to township for review.
 8. There was a discussion to determine the municipal out-of-pocket cost for this project. TPD to provide a summary email that provides an update on the construction cost, design cost, and other items to the township. This summary will be provided in a supplemental memorandum.