INTRODUCTION

JMT, on behalf of PennDOT, is seeking concurrence from FHWA on the dismissal of alternatives from further study for the Eisenhower Drive Extension project in York and Adams Counties. The alternatives currently being considered include alignment alternatives 3, 4, and 5; and sub-alternatives B and C.

The following narrative provides the following.

- General project background
- Summary of methodology used to evaluate the initial alignment alternatives and the current alignment alternatives
- Explanation of the alternatives on new alignment currently being studied
- Summary of the evaluation of resources, including agricultural resources, cultural resources, section 4(f), and public opinion
- Statement of conclusions

Based on the evaluation process, and as described below, it is our recommendation to dismiss alternatives 3 and 4, and sub-alternative B from further study.

PROJECT BACKGROUND

The Eisenhower Drive Extension Project is located in York and Adams Counties. Eisenhower Drive, SR 0094 (Carlisle Street), and SR 0116 (Hanover Road, West Elm Street, Main Street, 3rd Street) are main traffic corridors which provide an east/west connection through McSherrystown and Hanover Boroughs, and Conewago and Penn Townships. These roadways exhibit congested conditions, with level of service (LOS) rated as E and F at some non-signalized intersections, and a heavy cluster of accidents, some involving pedestrians, between 2010 and 2014 along SR 0094. The project involves extending Eisenhower Drive through Conewago Township, from where it currently ends at High Street to Hanover Road (SR 0116) west of McSherrystown.

The proposed project was identified in the Hanover Area Transportation Planning Study, which was prepared for PennDOT in the spring of 1997. This study established a Recommended Transportation Improvements Program which included several key projects aimed to address the transportation needs in the area. The development of the region is consistent with the anticipated growth defined in the study and the overall needs have remained the same over the past 20 years.

Current conditions within the urbanized area do not meet minimum standards for safety, congestion, and non-motorized uses. The current roadway system within the two adjacent Boroughs functions at unacceptable levels of service. Most of the roadways have crash rates higher than the statewide average for similar roadways and crash histories that include pedestrians and fatalities. The need is therefore based on the multi-modal use of the region, inadequate capacity, significant growth from future development, and safety concerns for turning vehicles and pedestrians. As a result, PennDOT identified the needs as:

- Traffic congestion results in poor levels of service
- Poor traffic safety along SR 0116 and SR 0094
- Limited mobility and poor roadway connectivity/linkages

The primary purpose of the project is to facilitate safe and efficient multi-modal travel within the project study area to meet both current and future transportation needs of the area. Anticipated transportation improvements will reduce congestion and accommodate for planned growth throughout this portion of the region, including a reduction in impacts of truck and commuter traffic within the study area. The secondary purpose of this project is to provide a functional and modern roadway that maximizes current design criteria and promotes and enhances multi-modal connections and transportation alternatives within and surrounding the study area.

METHODOLOGY

JMT began a conceptual alternatives analysis phase by considering a variety of alternatives on new alignment, partial new alignment alternatives, as well as options to improve the existing roadway network in order to address the failing level of service (LOS) and improve safety within the study area. A total of eight conceptual alternatives were developed within the study area. The conceptual alternatives included the No-Build alternative, the TSM alternative (alternative 1), and alternatives 2 through 7 which were new and partial new alignments. In addition, JMT developed three sub-alternatives (A, B, and C) to address the tie-in location for a new alignment at the western end of the project. See the attached Figure 1, Conceptual Alignment Alternatives.

The alternatives development process for the Eisenhower Drive Extension Project included the following steps:

1. Conduct agency and public involvement
2. Identify concepts or components of concepts that will not address needs
3. Examine impacts of possible solutions on natural, socioeconomic, cultural resources, and agricultural resources
4. Evaluate engineering suitability
5. Evaluate traffic and safety considerations
6. Estimate costs of possible solutions
7. Analyze public/municipal input, impacts, costs, and engineering factors and determine which solutions, or components of solutions, are reasonable for more detailed engineering and environmental analyses

JMT evaluated the eight conceptual alternatives following the guidelines listed above. Three alternatives and one sub-alternative were dismissed from further studies in 2017 because they did not meet the project purpose and need. These included alternatives 2, 6, and 7 as well as sub-alternative A.

- Alternatives 2 and 7 were dismissed due to traffic congestion and safety concerns along the existing rural/residential routes resulting from existing residential driveway access points.
- Alternative 6 was dismissed because the combination of the at-grade rail crossing and truck traffic at the Utz factory impacted this alternatives ability to meet the traffic congestion need.

- Sub-alternative A was dismissed because of traffic congestion and safety concerns associated with increasing traffic through residential areas and requiring traffic to return to SR 0116 within an area of higher traffic congestion.

Alternatives 3, 4, 5 and sub-alternatives B and C meet the purpose and need of the project and were carried forward as new alignment alternatives.

After the conceptual alternatives phase, JMT began detailed analyses on the new alignment alternatives, a process that included data gathering, background research, and field studies. The new alignment alternatives have also been reviewed extensively with the impacted municipalities, York and Adams Counties, as well as presented to the public through an open house conducted on June 21, 2018.

ANALYSIS OF ALTERNATIVES ON NEW ALIGNMENT

The rest of this memorandum provides a summary of the impacts anticipated by the new alignment alternatives and justification for our recommendation that alternatives 3, 4, and sub-alternative B be dismissed from further study. The no-build alternative and Transportation System Management (TSM) alternative will be carried forward through the completion of the Environmental Assessment (EA); therefore, they are not discussed as a part of this dismissal narrative. The attached Figure 2 displays the new alignment alternatives 3, 4, 5 and sub-alternatives B and C.

ALTERNATIVE DESCRIPTION

Alternative 3

Beginning at the existing Eisenhower Drive and High Street intersection (located at the eastern edge of the project area), alternative 3 would travel west over the CSX rail line and continue westbound along the northern edge of the study area, intersecting with Oxford Avenue and Church Street and crossing Plum Creek. After crossing Plum Creek alternative 3 would continue southbound along the western edge of Plum Creek and intersect with Centennial Road near the existing Centennial Road and Sunday Drive intersection.

Alternative 4

Alternative 4 would travel west over the CSX rail line and continue westbound along the northern edge of the study area. East of Oxford Avenue, alternative 4 would turn southbound and cross Oxford Avenue between the existing intersections of Kindig Lane (to the south) and Edgegrove Road (to the north). Alternative 4 would then turn westbound and continue along the southern edge of the Smith farm, adjacent to residential neighborhoods to the south. After crossing Plum Creek, alternative 4

would continue westbound and intersect with Centennial Road near the existing Centennial Road and Sunday Drive intersection.

Alternative 5

Alternative 5 would travel west over the CSX rail line and quickly turn southbound to run along the eastern edge of the Sheaffer property. It would turn westbound and extend along the property line between the Sheaffer property and the Clark America (Clarks Shoe) property. Alternative 5 would continue westbound, crossing Oxford Avenue, Church Street, and Plum Creek along the southern edge of the Smith farm, adjacent to residential neighborhoods to the south. After crossing Plum Creek, alternative 5 would continue westbound and intersect with Centennial Road near the existing Centennial Road and Sunday Drive intersection.

Sub-Alternative B

Sub-alternative B would utilize existing Sunday Drive to tie the new alignment into SR 0116 west of McSherrystown. This alternative would include intersection improvements and traffic signal upgrades at the intersection of Sunday Drive and SR 0116.

Sub-Alternative C

Sub-alternative C would utilize a short stretch of the existing Sunday Drive before continuing westbound on a new alignment. Sub-alternative C would ultimately tie into SR 0116 to the east of the existing structure crossing Conewago Creek South Branch and will require either a new traffic signal or roundabout improvements at the intersection with existing SR 0116.

ALTERNATIVE IMPACTS

As part of the new alignment alternatives analysis, JMT assessed impacts associated with aquatic resources, agricultural resources, cultural resources, hazardous materials, community resources, and property disposition. In addition, JMT sought feedback from municipal and county leaders and input from the general public for each of the alternatives and sub-alternatives.

Potential aquatic resource impacts, hazardous material impacts, right-of-way impacts, and property displacements are similar across each of the three new alignment alternatives. See the attached Table 1, Preliminary Alternatives Impact Matrix. Alternatives 4 and 5 would have 1 acre of impacts to aquatic resources, primarily as a result of crossing Plum Creek and impacting the associated wetland area, while alternative 3 would result in 0.2 acres of impacts to aquatic resources. Each alternative would impact four hazardous sites identified as High Risk and two hazardous sites identified as Medium Risk. Property displacements are also similar for each alternative. Alternatives 3 and 4 would result in three displacements while alternative 5 would result in four displacements.

Table 1 illustrates that the new alignment alternatives similarly affect aquatic resources, hazardous material sites, right-of-way impacts, and property displacements; these impacts are not the subject of this alternative's dismissal narrative. However, preliminary analyses have indicated that the impacts to

agricultural resources, cultural resources, and Section 4(f) properties vary among the new alignment alternatives and sub-alternatives and are therefore the basis for our alternative dismissal recommendations.

Agricultural Resources

JMT identified agricultural resources in the project area through background data, secondary sources from county and state databases, and project area field views. We are currently performing an agricultural assessment of the study area. Agricultural resources identified, to date, include agricultural security areas and preserved farmland (farm parcels currently enrolled in the Adams County Agricultural Land Preservation Program).

Six (6) farm parcels within the project study area are designated as Agricultural Security Areas. This includes all of the farms west of Oxford Avenue. In addition, a majority of the Smith Farm, which is divided by Church Street, is protected by the Adams County Agricultural Land Preservation Program. The only portion of the Smith Farm not included in the program is a 120'-wide corridor of land located along the southern edge of the property. See the attached Figure 3, Agricultural Resources.

Table 1 shows that each preliminary alignment alternative would impact Agricultural Security Areas (ASA). Alternative 3 would bisect three farm properties currently designated as Agricultural Security Areas and would have the largest impact in terms of acreage. Alternative 3 would also have the largest impact to preserved agricultural land, by bisecting the two parcels of the Smith farm which are included in the Adams County Agricultural Land Preservation Program. By comparison, alternative 4 bisects one farm parcel (not designated as ASA) and 5 would not bisect any farms designated as Agricultural Security Areas. Alternative 4 in terms of acreage is somewhat higher than alternative 5, but both would have less impact in terms of acreage, in comparison to alternative 3. Also, alternatives 4 and 5 would have minimal to no impact to preserved farmland areas. Our recommendations to dismiss alternative 4 and sub-alternative B are not based on agricultural resources impacts.

Cultural Resources

JMT reviewed the study area and determined that there is moderate-to-high potential for intact archaeological resources throughout the study area. Archaeologists completed the Phase I/II archaeological testing on sub-alternative C and the alignment shared by alternatives 4 and 5; and is currently testing the rest of alternative 5. Should JMT identify a site and recommend it eligible for listing in the NRHP, Phase III data recovery or alternative mitigation will be carried out as appropriate. Because the presence of and impact to archaeological resources is not yet known and because archaeological sites are rarely Section 4(f) properties, the following cultural resources analysis is limited to impacts on above-ground resources.

JMT identified above-ground cultural resources through a reconnaissance survey of the entire study area and an intensive-level determination of eligibility study for properties that had potential for significance. As a result of these studies, JMT identified eight historic resources in the study area that

are eligible for or listed in the National Register of Historic Places (NRHP); four would be directly impacted by the preliminary alignment alternatives. Alignment alternatives 3, 4, and 5 would all impact the Poist Chapel Farm (currently owned by Bare Development LP), the Devine Chapel Farm (currently owned by Smith Real Estate Holdings LLC), and the Gettysburg Railroad (currently owned by CSX). Sub-alternatives B and C would impact the Hostetter Farm (currently owned by William D Epley et al). See the attached Figure 4, Cultural Resources.

Each preliminary alignment alternative would impact four historic resources. Alternative 3 would bisect the agricultural fields on both the Poist Chapel Farm and the Devine Chapel Farm properties. Alternative 4 would bisect the agricultural fields on the Poist Chapel Farm property and travel along the edge of the Devine Chapel Farm. Alternatives 3 and 4 would separate the farmsteads from large portions of historically associated agricultural fields, which would adversely affect the characteristics that make these resources eligible for the NRHP and result in a determination of *historic property adversely affected*. Alternative 5 would also impact both the Poist Chapel and Devine Chapel Farm properties, but it would not bisect either resource. Alternative 5 would travel along the southern edge of both resources and would likely result in a determination of *historic property not adversely affected.*

Sub-alternative B would impact the Hostetter Farm if the connection between the new alignment and Sunday Drive requires right-of-way from the historic resource. Impacts caused by sub-alternative B would be minimal and would not adversely affect the historic resource. Sub-alternative C would have a greater impact on the Hostetter Farm, but it would not bisect significant portions of associated farmland from the rest of the farm. Design is still underway and JMT is looking at all possible ways to minimize impacts to the resource in an effort to avoid an adverse effect.

Alternatives 3 and 4 have the potential to adversely affect cultural resources. JMT believes that the magnitude of impact (when compared to alternative 5) supports our recommendation that alternatives 3 and 4 be dismissed from further study. Sub-alternative C has a greater potential for impacting the Hostetter Farm than sub-alternative B, but JMT is currently refining the alignment to minimize impacts so that neither sub-alternative results in a finding of adverse effect. Our recommendation to dismiss sub-alternative B is not based on cultural resources impacts.

Section 4(f)

The preliminary alignment alternatives overlap with four Section 4(f) properties, all of which are historic resources (listed above). According to Section 4(f), FHWA must either determine that project impacts are *de minimis* or undertake an individual Section 4(f) evaluation. For Section 4(f) historic properties, a *de minimis* use is only possible if the Section 106 outcome is a finding of *no effect* or *no adverse effect*. JMT reviewed the preliminary alignment alternatives and found that only alternative 5 has the potential to have *de minimis* impacts. As described above, alternatives 3 and 4 would likely result in a finding of *adverse effect*, thus triggering the need for an individual Section 4(f) evaluation.

In an individual Section 4(f) evaluation, FHWA is required to select a feasible and prudent total avoidance alternative, if one exists. If there are no feasible and prudent avoidance alternatives, FHWA would need to select the alternative that exhibits least overall harm to the Section 4(f) properties and ensure that all efforts to minimize harm to the Section 4(f) property has occurred. Based on preliminary considerations of the potential impacts to 4(f) resources, JMT anticipates that there would be no feasible and prudent avoidance alternative to alternatives 3 and 4 (alternative 5 would result in a de minimis use and would not require a total avoidance alternative).

Also based on preliminary considerations of the potential impacts to Section 4(f) resources, JMT anticipates that alternative 5 would exhibit less overall harm to Section 4(f) resources than alternatives 3 and 4, thus supporting our recommendation that alternatives 3 and 4 be dismissed from further study. Sub-alternative C has a greater potential for impacting the Hostetter Farm than sub-alternative B, but JMT is currently refining the alignment to minimize impacts so that the use would be *de minimis*. Our recommendation to dismiss sub-alternative B is not based on Section 4(f) impacts.

Public Opinion

PennDOT presented the No-Build alternative, the TSM alternative and the new alignment alternatives and sub-alternatives to the public at an open house, which was held on June 21, 2018. The District and consultant team provided the public with an opportunity to complete a project survey that solicited their opinions and preferences for an alternative. Below is a summary of the results from the public response.

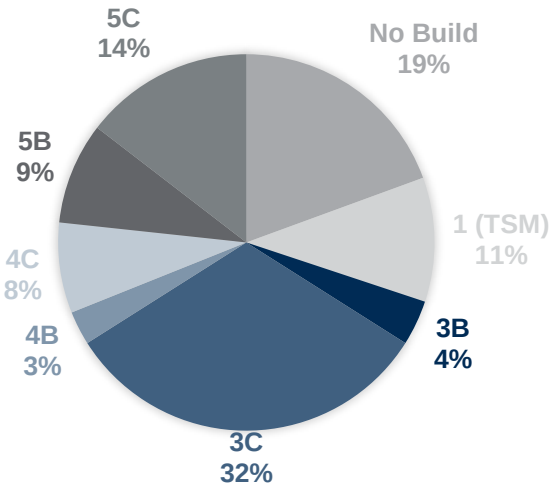


Figure 5. Public Open House Results

The survey results were mixed; preference appeared to be split between the northern-most alignment, alternative 3, and the two southern alignments, alternatives 4 and 5. Among the public that filled out the survey, there was a clear division between those who did not want to split farmland and those who did not want the new roadway close to existing residential neighborhoods. The results favored sub-alternative C (54%) versus sub-alternative B (16%).

Coordination has been on-going over the past two years with municipal and county staff and elected officials. This has primarily included Conewago and Penn Townships, McSherrystown and Hanover Boroughs, and Adams County. Others who were also included in the updates were Oxford, Union, and Mt. Pleasant Township, as well as York County. JMT and PennDOT used these meetings to provided project updates and gathered thoughts and opinions from municipal and county leaders related to the preliminary alignment alternatives. A consensus amongst this group is that they prefer alternative 5 and sub-alternative C over the other alignment options. The following is a summary of the input received through our coordination with the municipal and county leaders.

- Adams County and Conewago Township expressed concern about the impacts that alternative 3 would have on the agricultural resources. Specifically, the negative impact on two farms, one of which includes preserved farmland, resulting from alternative 3 bisecting these farms.
- Conewago Township does not want commercial development along an extension of Eisenhower Drive, within the areas currently zoned agricultural and residential. They expressed concern that splitting tracts of land, as alternative 3 does, would increase the chance for the future development of these parcels.
- Adams County and Conewago Township dislike two elements of alternative 4. The first is the angle of intersection of the proposed alternative 4 and Oxford Avenue. The second is the potential impact on residential properties resulting from headlights shining directly into the existing residential neighborhood west of Oxford Avenue.
- The collective group expressed opposition to sub-alternative B. The primary concern is the negative impacts, both congestion and safety, of increasing traffic along Sunday Drive adjacent to two residential neighborhoods whose primary access into/out of their development is along Sunday Drive. Sub-alternative B would result in an increase in future traffic volume from 7,700 vehicles per day to 11,000 vehicles per day, when compared to sub-alternative C.

CONCLUSION

Based on the detailed resource evaluations, input from the local community, and coordination with representatives from FHWA, JMT, on behalf of PennDOT, recommends dismissing new alignment alternatives 3 and 4 and sub-alternative B from further studies.

JMT provides the following justification for dismissing these alternatives:

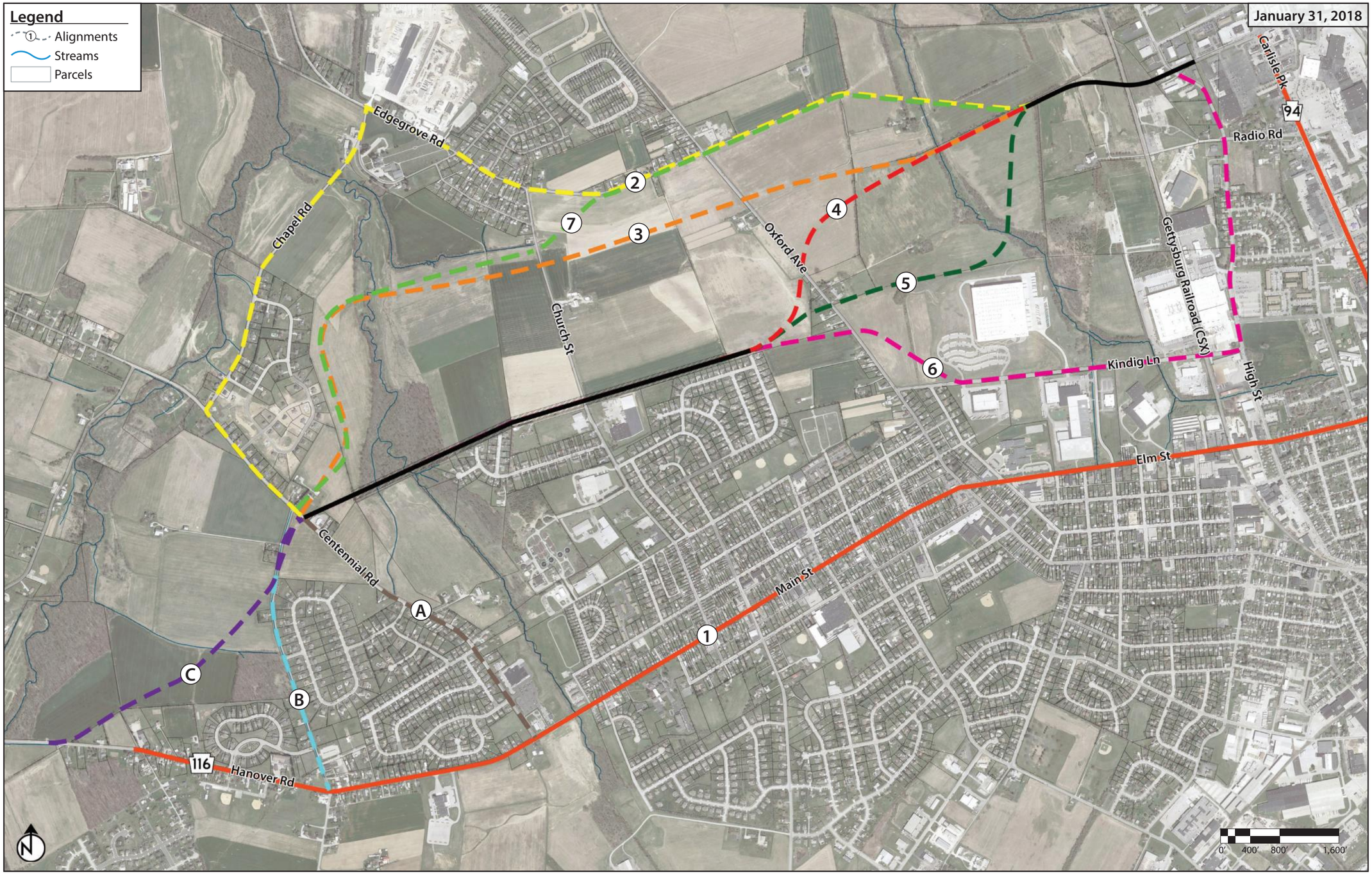
- **Alternative 3.** Alternative 3 would result in larger impacts to both Agricultural Security Areas and preserved farmland, as compared to Alternative 5. In addition, alternative 3 would bisect these

agricultural resources, resulting in divided agricultural operations. Alternative 3 would also bisect two NRHP-eligible resources. The result would likely be a finding of adverse effect on both resources. Alternative 3 clearly displays the most potential for impacts to historic resources, Section 4(f) resources, and agricultural resources. Because other alternatives exist that minimize impacts to these resources, it is our professional opinion that the farmlands assessment process would require a less impactful alternative and that the Section 4(f) evaluation would show that alternative 3 would not be selected as the alternative with least overall harm. Additionally, the public, specifically the municipal and county staff and elected officials, oppose alternative 3.

- **Alternative 4**. Alternative 4 would bisect one NRHP-eligible resource. The result would likely be a finding of adverse effect for this resource. Alternative 4 demonstrates similar impacts as alternative 3, though to a slightly lesser degree. However, the impacts are still large, especially when compared to alternative 5. Also, the public support for alternative 4 is minimal from the municipal and county level, as well as the general public.
- **Sub-alternative B**. There is evidence of public opposition to sub-alternative B based on feedback received from public involvement activities. The source of opposition is the anticipated increase in traffic along Sunday Drive. Sub-alternative B would increase traffic volumes along Sunday Drive by 3,300 vehicles per day and require significant improvements at the intersection of Sunday Drive and Race Horse Road. Based on this concern, in addition to concerns raised by the municipal and county staff and elected officials, JMT is also recommending that this sub-alternative be dismissed from further study.

As a result, PennDOT is seeking concurrence that alignment alternatives 3 and 4, and sub-alternative B be dismissed from further studies.

Figure 1 - Conceptual Alignment Alternatives



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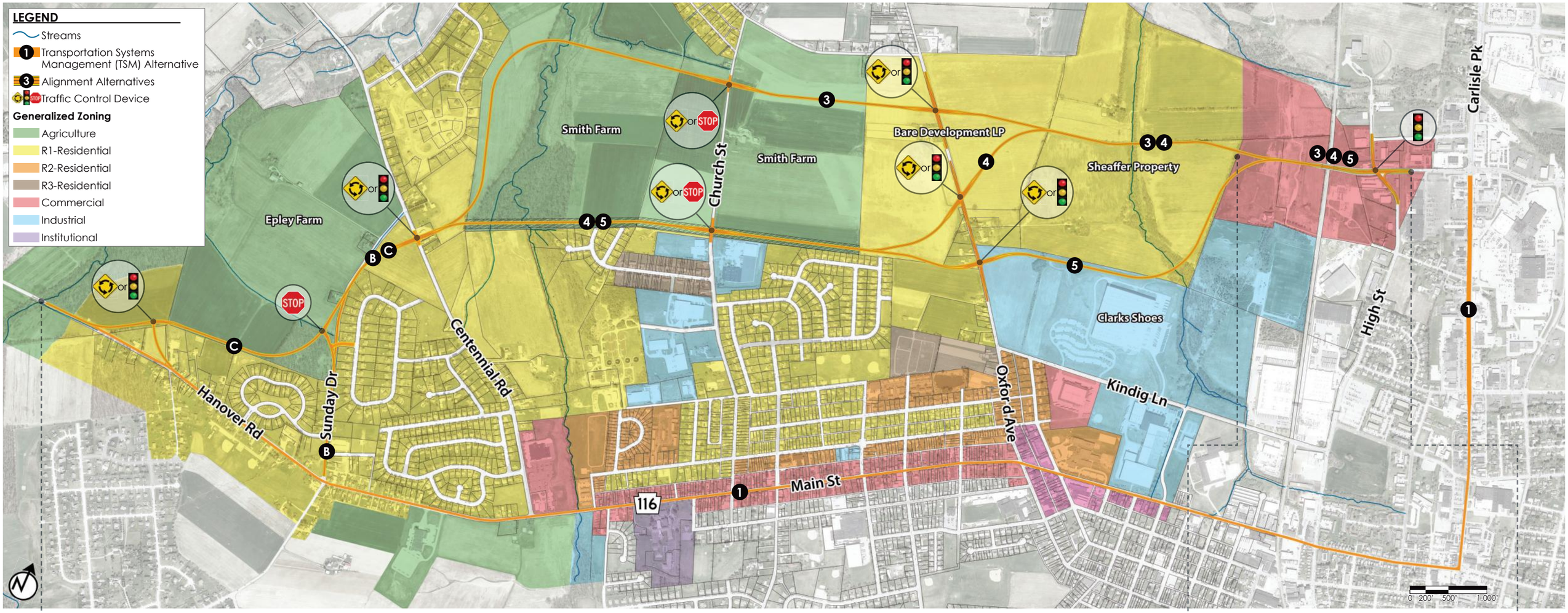
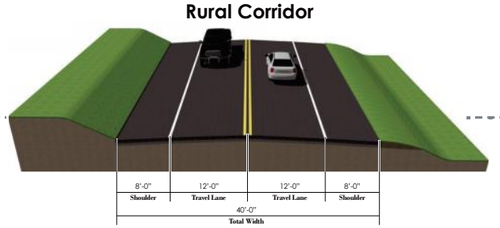
JMT

EISENHOWER DRIVE
EXTENSION PROJECT

ALIGNMENT ALTERNATIVES



Rural Corridor



Suburban Center Corridor

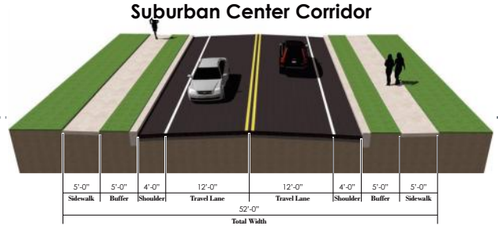


Figure 2 - December 4, 2018

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Table 1 – Preliminary Alternatives Impact Matrix – January 2019

	Alternative #			
	1 (TSM)	**3**	**4**	**5**
Aquatic Resource Impacts				
Wetlands (Acres)	0.0	0.2	1.0	1.0
Streams (# of Crossings)	0.0	3	4	4
Agricultural Resource Impacts				
General Description	The TSM alternative would avoid direct impacts to agricultural resources.	Alt. 3 would bisect 3 properties and impact a fourth that are active farmlands and/or zoned agricultural. This alt. has the highest impact on both Preserved Farmland and ASAs.	Alt. 4 would bisect 1 property and impact three additional properties that are active farmlands and/or zoned agricultural. This alt. has minimal impact on Preserved Farmland.	Alt. 5 does not bisect any active farmlands/properties zoned agricultural but does impact 4 properties that are active farmlands and/or zoned agricultural. This alt. has minimal impact on Preserved Farmland.
Preserved Farmland (Acres)	0.0	12.3	1.0*	1.0*
Agricultural Security Areas (Acres)	0.0	16.3	10.3	9.0
Cultural Resource Impacts				
General Description	The TSM would impact two properties identified as Historic Resources but would likely result in no adverse affect of the resources.	Alt. 3 would bisect agricultural fields on two properties identified as Historic Resources, separating the farmstead from a portion of the resource. This would likely result in an adverse affect on these farms. This alt. would impact two additional Historic Resources but would likely result in a no adverse affect.	Alt. 4 would bisect agricultural fields on one property identified as a Historic Resource, separating the farmstead from a portion of the resource. This would likely result in an adverse affect on the farm. This alt. would impact three additional Historic Resources but would likely result in a no adverse affect.	Alt. 5 would impact four Historic Resources but would not bisect any of the resources and would likely result in a no adverse affect on all of the resources.
Aboveground Historic Structures (Resources/Acres)	2 / 3.4	4 / 11.5	4 / 12.7	4 / 8.6
Hazardous Waste	TBD	Alt. 3 impacts four sites identified as High Risk and two identified as Medium Risk. Each of these six sites are recommended for further evaluation thru completion of a Phase I ESA. All of the High Risk sites but 1, were directly impacted by Miller Chemical fire/spill.	Alt. 4 impacts four sites identified as High Risk and two identified as Medium Risk. Each of these six sites are recommended for further evaluation thru completion of a Phase I ESA. All High-Risk sites but 1, were directly impacted by Miller Chemical fire/spill.	Alt. 5 impacts four sites identified as High Risk and two identified as Medium Risk. Each of these six sites are recommended for further evaluation thru completion of a Phase I ESA. All of the High Risk sites, except 1, were directly impacted by Miller Chemical fire/spill.
Displacements	Approx. 30-35. Majority of displacement are the result of widening of SR 0094 to 5 lanes.	3	3	4
Public Opinion				
Municipal / County Leaders	Not supported by the municipallies or counties; primariliy due to the impacts / displacements required along SR 0094.	Not supported. Primary concerns are from Conewago Twp. and Adams Co. Concerns include impact / split preserved farmland and not consistent with existing zoning.	Adams Co. favored either Alternative 4 or 5. Conewago Twp. was not supportive of this alternative. The reasons included splitting up of farmland and poor intersection agle with Oxford Avenue.	Each of the municipalities and counties were all supportive of Alternative 5.
Public Open House Response	Not heavily supported by the general public. Received 11% of the votes for the the preferred alternative.	Received 36% (32% (3B) + 4% (3C)) of the votes for the preferred alternative.	Received 11% (8% (4B) + 3% (4C)) of the votes for the preferred alternative.	Received 23% (9% (5B) + 14% (5C)) of the votes for the preferred alternative.
Project Cost (Million $)				
Construction / Right-of-Way / Total	$11–13 I $14-16 I **$25-29**	$29-32 I $9-10 I **$38-42**	$28-31 I $9-10 I **$37-41**	$29-31 I $9-10 I **$38-42**

* Preserved Farmland Impacts are a result of temporary grading impacts. The goal for thes alternatives, if selected, would be adjust the alignment/grading to result in zero impacts to Preserved Farmlands.

EISENHOWER DRIVE EXTENSION PROJECT

AGRICULTURAL RESOURCES

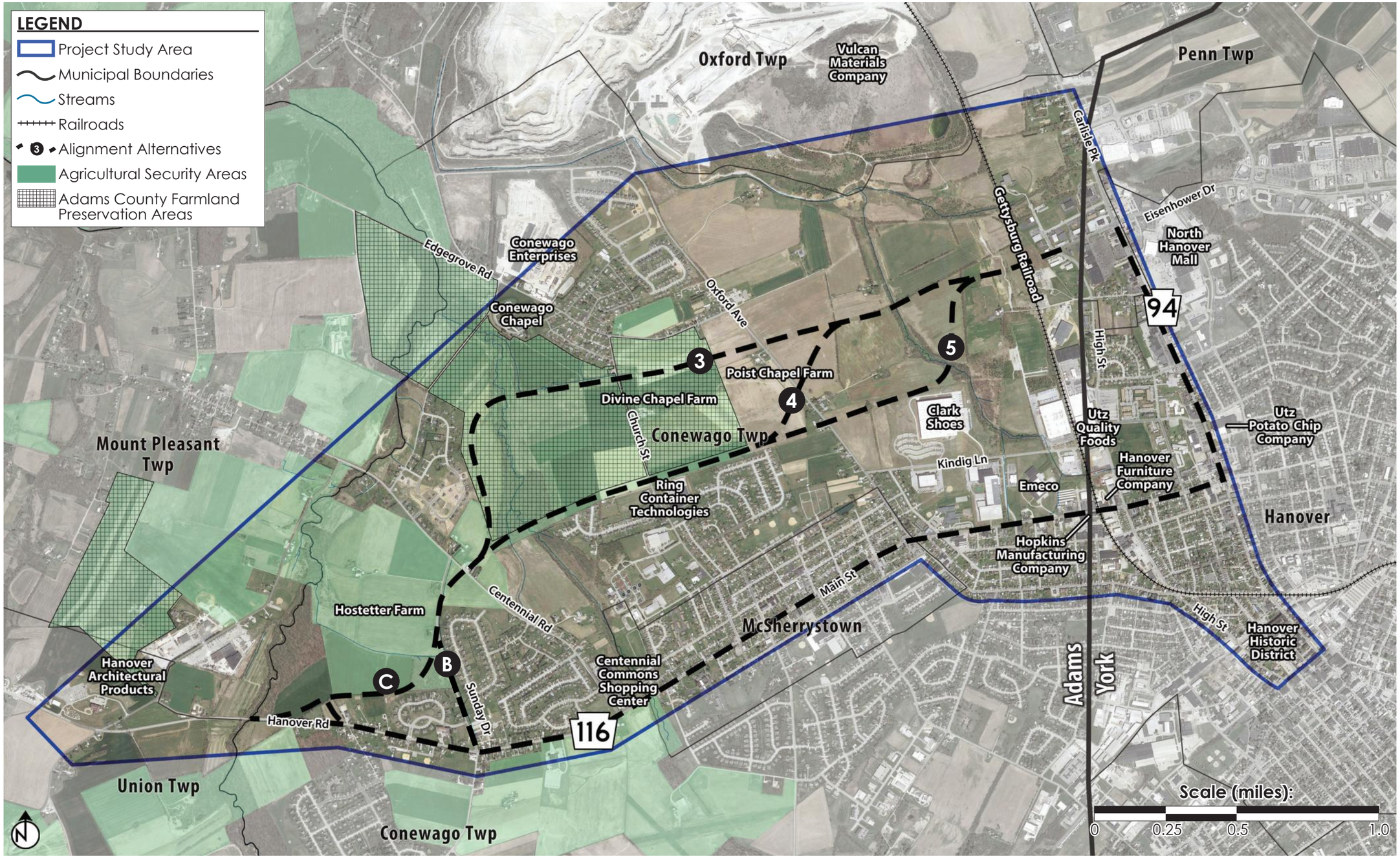

Figure 3 - October 17, 2018

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EISENHOWER DRIVE EXTENSION PROJECT

CULTURAL RESOURCES

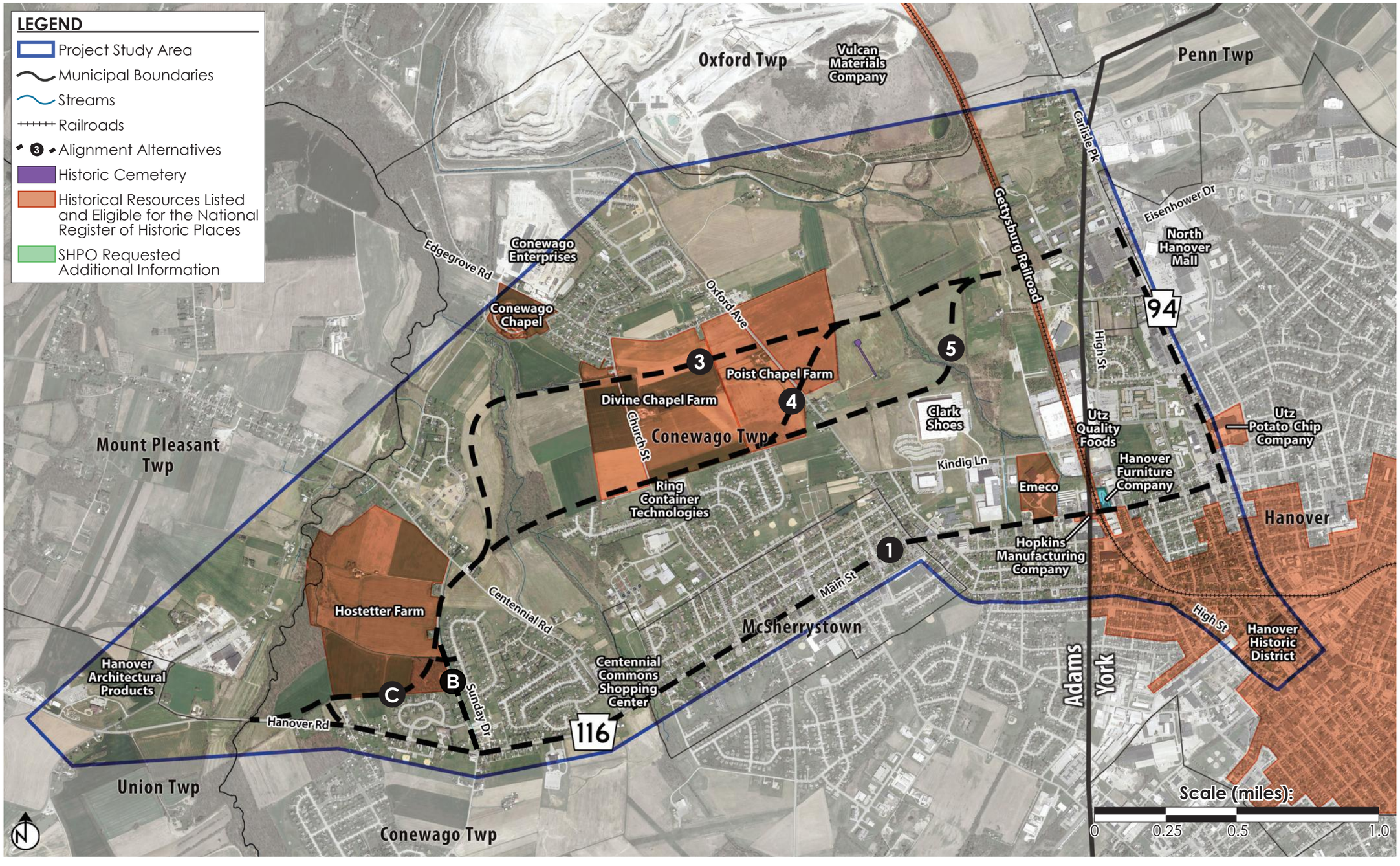

Figure 4 - October 17, 2018