

3.4 Project and Scenario Development

Several candidate projects and scenarios were evaluated within the 2040 LRTP. Accomplishing this entailed several successive steps that ultimately lead to the selection of a preferred scenario with a specific package of projects and programmatic recommendations.

- Step 1 – Candidate Identification
- Step 2 – Candidate Pre-Screening
- Step 3 – Candidate Prioritization
- Step 4 – Financial Constraint
- Step 5 – Scenario Definitions

Step 1 – Candidate Identification

The initial list of candidate projects and needs for the Erie County 2040 LRTP was compiled directly from existing plans, an extensive background document review, and the overall stakeholder outreach and public engagement processes.

During this initial step, all input from all sources was compiled without regard to cost, feasibility, long range plan applicability, or other limiting factors. Instead, the goals were simply to “listen” to the various perspectives throughout the county, develop a comprehensive first-cut of the ideas or issues being expressed, and identify trends or common themes within the overall set of findings. As a result of these efforts, over 550 initial problems or concerns were identified.

Step 2 – Candidate Pre-Screening

Step 2 of project list development pre-screened the initial list of 500 candidates in cooperation with the Erie MPO, reducing the effective starting point for project evaluation to less than 300 candidates.



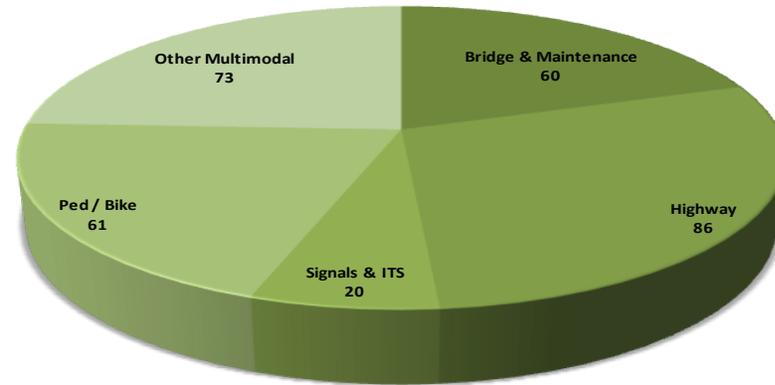
Notable sources for identifying the initial set of over 550 projects, issues, or ideas included:

- Erie County's 2011 TIP, 2011 Twelve Year Plan, and 2007 LRTP
- Up-to-date screening of each municipality's local comprehensive plan, completed by the municipalities themselves using PennDOT's Level 1 Screening Worksheets
- Numerous targeted study reviews, including sources such as PennDOT's Regional Operations Plan, the 2009 Erie Waterfront Master Plan, or the 2006 EMTA Service Planning Study.
- Targeted stakeholder outreach, including feedback from Erie County's Economic Development Committee, Public Safety partners, or local pedestrian / bicycle / trail advocate groups.
- General public engagement, including feedback from the public meetings, public officials meetings, and online public survey, as well as project driving tours throughout Erie County.

Pre-screening in Step 2 reduced the number of initial candidates to approximately 300. Following various line-item groupings, 80 of these were retained for follow-up rating through Decision Lens in Step 3. The pre-screening aimed to:

- Review the initial list to remove already-completed or soon-to-be-completed projects (typically recorded from older plans or studies), as well as concerns not applicable for a long range transportation plan or its available funding sources.
- Separate "projects" versus "needs", and group similar or duplicate issues into one candidate project.
- Identify and group potential line-item projects.

Exhibit 3.4.1 - Pre-Screened Project Breakdown (300+ Candidates)



The majority of the remaining 300 candidates were further assessed and grouped under pre-existing line-items (i.e., typical state bridge, local bridge, or maintenance & betterment projects), under designated funding categories for transit or airport projects, or under newly proposed general programs such as an Erie County Traffic Signal Improvement Program or various Ped / Bike Prioritization Programs. When categorized in this manner, 80 non-system-preservation projects or studies were retained for rating through Decision Lens.

Step 3 - Candidate Prioritization

Step 3 formally began the rating process through Decision Lens for the 80 non-system-preservation candidates remaining from the initial project list. This step included applying the project evaluation criteria and weighting factors established by the Erie MPO in Decision Lens to develop project-specific scores to rank and prioritize the list.

Step 4 – Financial Screening

Introducing fiscal constraint into the ranked project list was accomplished by first developing Rough-Order-of-Magnitude (ROM) costs for each project candidate, and then financially screening the cumulative costs of selected projects in comparison to the estimated revenue (Chapter 3.2). Simplifying assumptions for this exercise were:

- 90% of the applicable revenues were immediately dedicated to roadway and bridge maintenance by way of line-items, leaving a discretionary revenue pool of just over \$210 million (net present value).
- Projected TIP revenues through 2011 and 2012 were removed under the assumption that these funds were already dedicated to ongoing or imminent projects, reducing the discretionary revenue pool to just over \$197 million.
- For each of the 80 candidate projects, their corresponding ROM costs were assumed to be funded only through the appropriate revenue categories. All funding categories were utilized with the exception of the 90% maintenance funds and dedicated HSIP or Rail / Highway Safety funds that were held in reserve for future allocation by PennDOT.
- Beginning with the highest ranked project and moving down the list, the corresponding ROM costs were “subtracted” from the appropriate revenue categories until the available discretionary revenue pool was depleted.

The initial pass of the financial screening process resulted in 56 of the 80 candidate projects being retained. These 56 projects formed the basis for Scenario 1, the future baseline conditions.

Alternate Futures:

In addition to the three major project-based scenarios, two alternate future scenarios were reviewed to assess potential changes in funding or land use assumptions:

***TFAC Alternate:** represents an alternative future that would build additional projects with added funding that the governor’s Transportation Funding Advisory Commission (TFAC) would make available, while assuming that Federal Funds remain constant with the Future Baseline assumptions. It is assumed that any additional TFAC funds would be allocated directly by PennDOT and likely to high-priority maintenance issues.*

***Inland Port Alternate:** represents an alternative future that modified employment and land use to reflect a future Inland Port Development. General employment increases were assumed in the Albion / Cranesville area, at the former Hammermill / International Paper site in Erie, and at select interchanges along I-79 and I-90 in the western parts of the county (i.e., to represent interchange area development such as truck stops, restaurants, etc.).*



Step 5 – Scenario Packages

In order to evaluate the selected projects as a system and determine how well they meet the plan’s performance measures on a network level, fiscally constrained scenarios that included various project assumptions were evaluated through the County’s updated Travel Demand Model (TDM). This approach allows the plan to capitalize on the individual project merits reflected in the Decision Lens rankings while also being performance-based from a systems perspective using the TDM output. It also satisfies PennDOT’s LRTP guidance for successful plans by “Considering Multiple Futures.” Based specifically on the needs and recurring themes identified throughout the Erie County planning process, the following scenarios were considered:

- **2010 Baseline:** reflects the 2010 base year conditions using 2010 census data and base year land use, traffic volume, and road network assumptions within the calibrated TDM.
- **2040 No-Build:** reflects 2040 future year conditions using the future land use and employment projections and no additional changes to the transportation infrastructure, aside from the 2011-2012 TIP projects.
- **2040 Scenario 1 – Future Baseline:** reflects 2040 future year conditions with the assumed completion of the 56 projects initially retained from the Decision Lens rankings based on current funding projections.
- **2040 Scenario 2 – Operations Focus:** modifies the Future Baseline scenario with a policy emphasis on operational improvements such as traffic signal upgrades and targeted intersection improvements. Fiscal constraint in terms of project selection was maintained by dropping several lower-ranked projects from Scenario 1 in order to shift approximately 20% of the discretionary revenues to operations-focused projects. This strategy shifted approximately \$12 million to line-item signal improvements and \$30 million to targeted intersection improvements (or roughly the top 15 most congested intersections).
- **2040 Scenario 3 – Multimodal Focus:** modifies the Future Baseline scenario with a policy emphasis on multimodal bicycle, pedestrian, and transit enhancements. Fiscal constraint in terms of project selection was maintained by dropping several lower-ranked projects from Scenario 1 in order to shift approximately 20% of the discretionary revenues to multimodal-focused projects. This strategy shifted approximately \$22 million to line-item pedestrian / bicycle / trail improvements and \$20 million to transit service enhancements.

Exhibit 3.4.2 - Candidate Project Rankings (Per Decision Lens) and Scenario Inclusion

Project Candidate	Project Description	2040 No-Build w/ 2011-2012 TIP	2040 Scenario 1 Future Baseline	2040 Scenario 2 Operations Focus	2040 Scenario 3 Multimodal Focus
Bayfront Parkway Multimodal Transportation and Land Use Improvement & Prioritization Study	Refinement and prioritization of previous study outcomes to address existing congestion and potential development along Bayfront Pkwy, including roundabouts, ped xings, trail feasibility, and signing		✓	✓	✓
City of Erie Traffic Signals Project (PA 290 / 12th St)	Signal upgrades and timing improvements along PA 290 / Bayfront Connector / 12th Street from I-79 to I-90, including I-90 Detour Route scenarios		✓	✓	✓
City of Erie Traffic Signals Project (PA 5)	Signal upgrades and timing improvements along PA 5 through Millcreek Twp and City of Erie		✓	✓	✓
City of Erie Traffic Signals Project (US 19 / Peach St)	Signal upgrades and timing improvements along US 19 / Peach Street		✓	✓	✓
City of Erie Traffic Signals Project (US 20 / 26th St)	Signal upgrades and timing improvements along US 20 / 26th Street, including I-90 Detour Route scenarios		✓	✓	✓
At-Grade RR Crossing Improvements (Northeast Boro)	Improve RR signals and gate crossings within Northeast Boro		✓	✓	✓
Millcreek Area Traffic Operations Study / Zuck Rd and W 38th St	Area-wide Traffic Operations Study along Zuck Rd (Zimmerly to US 20) and W 38th St (Pittsburgh Ave to PA 832) to address turn lane needs, lane restriping, and traffic signal improvements		✓	✓	✓
US 6N Study Improvements / US 6N Angling Rd to Maple Dr 3-Lane Section	Convert US 6N to a "3-Lane" between the intersections of Angling Rd and Maple Dr w/ pedestrian improvements, traffic signals and/or roundabouts		✓	✓	✓
Erie County Traffic Signal Improvement Program	Improve vehicular and pedestrian signal timings and upgrade equipment, pedestrian indications, and related infrastructure countywide, including implementation of a countywide signal removal plan			✓✓	
City of Erie Traffic Signals Project (SR 4016 / 38th St)	Signal upgrades and timing improvements along 38th Street		✓	✓	✓
US 20 / Girard Corridor Study	Corridor operations and traffic / pedestrian study along US 20 through Girard Twp / Girard Boro, including intersections at Westgate Dr, Birchdale Dr / Daggett Rd, Elk Park Rd		✓	✓	✓
US 6N Study Improvements / US 6N & PA 99 Intersection	Construct NB dual left-turn lanes and WB dual thru-lanes on approach to the US 6N / PA 99 intersection in Edinboro and modify related signal operations		✓	✓	✓
US 6N Study Improvements / US 6N Fry Rd to Angling Rd 3-Lane Section w/ Multi-Use Trail	Construct US 6N as a 3-Lane Section between Fry Rd and Angling Rd to include a center left-turn lane and adjacent multi-use path / sidewalk		✓	✓	✓
Wesleyville Boro Traffic Operations Study	Study of Wesleyville congestion and operations, including Buffalo Road US 20 Improvements, upgrades at Station Rd (SR 0430) and Water St (SR 4027), streetscaping, and parking		✓	✓	✓
I-79 / US 20 Interchange	Improve geometry and lane utilization along US 20 in the vicinity of the I-79 interchange ramps and Crescent Drive, including possible widening WB to Crescent Drive		✓	✓	✓
I-90 / US 19 / Peach St Interchange	Widening of US 19 and the reconfiguration of the interchange of US 19 (Peach Street) w/ I-90	✓	✓	✓	✓
12th Street Streetscaping Improvements	Streetscaping improvements along 12th Street through downtown Erie		✓	✓	✓
At-Grade RR Crossing Improvements (Erie West Side)	Construct a grade-separated railroad x-ing on Erie's west side (Pittsburgh Ave, Greengarden Rd or Raspberry St)		✓	✓	✓
US 19 Corridor Improvements	Implement safety related improvements (turn lanes, speed reduction, improved site distance) along US 19 through Summit Twp, Waterford Twp, and Waterford Boro		✓	✓	✓
Inland Port Traffic Impact Study	Evaluation of traffic & safety impacts and mitigation alternatives in western Erie County as related to future Inland Port development and addressing PA 18, I-90, US 20, US 6N, and Conneaut Port Access		✓	✓	✓

✓ = Candidate project Included in scenario; ✓✓ = Candidate project newly added to Scenario (vs. Scenario 1 Future Baseline); ✗ = Candidate project newly removed from Scenario (vs. Scenario 1 Future Baseline)



Exhibit 3.4.2 - Candidate Project Rankings (Per Decision Lens) and Scenario Inclusion (cont'd)

Project Candidate	Project Description	2040 No-Build w/ 2011-2012 TIP	2040 Scenario 1 Future Baseline	2040 Scenario 2 Operations Focus	2040 Scenario 3 Multimodal Focus
US 20 / Girard Township Improvements	Correct inadequate drainage and add turning lane on US 20 (Safety Concerns): Seg 280 to 300		✓	✓	✓
US 6N Study Improvements / US 6N & Angling Rd Roundabout	Construct new roundabout at US 6N / Angling Rd in Edinboro		✓	✓	✓
US 6 / Sciota St Access Improvements	Improve safety and address concerns / complaints for access from industrial park traffic to US 6 at Sciota St, including geometric improvements to the intersection and possible traffic signal installation		✓	✓	✓
PA 8 / Pine Ave / Parade St & 28th St Improvements	Add turn lanes at PA 8 / Pine Ave / Parade St & 28th St		✓	✓	✓
Peach St / US19- Kuntz-38th	Add sidewalks, curb ramps, and short retaining wall on US 19 (Peach St) from Kuntz Road to 38th Street	✓	✓	✓	✓
City of Erie Traffic Operations Prioritization Plan	Re-assess corridor access management, circulation, operations, and prioritized improvements city-wide w/ a focus on W 12th Street and Bayfront Parkway		✓	✓	✓
Local Bridge Line-Item	Local Bridge Rehab / Replacement throughout Erie County w/ prioritization through the County		✓	✓	✓
US 20 Harborcreek RR Underpass	Improve, widen, or reconfigure US 20 connections beneath RR through Harborcreek				
Maintenance & Betterment Line-Item / Local Fed Aid Rt	Local Federal Aid Route Maintenance & Betterment w/ prioritization through the County		✓	✓	✓
US 6N Study Improvements / PA 99 / Chestnut St / Waterford St Roundabout	Construct new roundabout at PA 99 / Chestnut St / Waterford St in Edinboro		✓	✓	✓
US 6N & PA 98 Improvements	Address safety and congestion concerns at US 6N & RT 98 Intersection		✓	✓	✓
US 19 / Peach St & Kuntz Rd (SR 4026) Improvements	Intersection/Geometric Improvements to the intersection of Peach St and Kuntz Rd		✓	✓	✓
US 6 Mill Village RR Underpass	Lower roadway to improve drainage and sight distance on US 6 (W Center Street) at Mill Village RR Underpass over French Creek Tributary and improve / increase clearance	✓	✓	✓	✓
SR 4027 / Lawrence Parkway	Highway Reconstruction of SR 4027 (Lawrence Parkway) from Buffalo Rd. to East Lake Rd. Lawrence Park Twp. & Wesleyville Boro. Reconstruct to 36 ft. & Improve Intersection & Signal		✓	✓	✓
PA 5 / 12th St & Parade St Improvements	Add turning lanes at Parade St & 12th St		✓	✓	✓
US 19 / Peach Street Widening: Section A06 / Robison Rd to Oliver Rd	Widen SR 19 (Peach Street) from Robison Road (SR 4024) to Oliver Road (SR 4008)		✓	✓	✓
I-79 / Interchange Road Interchange	Add a thru-lane to WB Interchange Rd @ I-79 SB Ramps, and a left-turn lane to EB Interchange Rd @ I-79 NB Ramps		✓	✗	✗
State Bridge Line-Item	State Bridge Rehab / Replacement throughout Erie County w/ prioritization through PennDOT		✓	✓	✓
Erie County Traffic Signal Pre-emption Program	Installation or replacement of signal emergency pre-emption sensors and related equipment		✓	✓	✓
US 6N / SR 3006: Fry Road	Improvements at SR 3006 (US 6N) intersection with Washington Town Blvd to 500' east, including left-turn lane, minor grade adjustment, widen, resurface, paved shoulders, drainage, & pavement on Fry Road	✓	✓	✓	✓

✓ = Candidate project Included in scenario; ✓✓ = Candidate project newly added to Scenario (vs. Scenario 1 Future Baseline); ✗ = Candidate project newly removed from Scenario (vs. Scenario 1 Future Baseline)

Exhibit 3.4.2 - Candidate Project Rankings (Per Decision Lens) and Scenario Inclusion (cont'd)

Project Candidate	Project Description	2040 No-Build w/ 2011-2012 TIP	2040 Scenario 1 Future Baseline	2040 Scenario 2 Operations Focus	2040 Scenario 3 Multimodal Focus
I-90 and I-79 Traffic Surveillance Project	CCTV Installation at I-90 & I-79, I-79 & 12th St, I-90 & US 19, I-90 & I-86, I-79 & US 6)		✓	✓	✓
US 19 / Peach Street Widening: Townhall Rd to Robison Rd	Widening of US 19 (Peach St) from Townhall Rd (SR 4022) to Robison Rd (SR 4024) for the addition of a center left-turn lane and access mgmt improvements		✓	✗	✓
Maintenance & Betterment Line-Item / State Rt	State Route Maintenance & Betterment throughout Erie County w/ prioritization through PennDOT		✓	✓	✓
US 6N Springfield Twp RR Underpass	Reconstruction of the RR underpass along US 6N to improve / increase clearance to adequate safety / design standards and eliminate obstructions to commercial traffic		✓	✓	✓
Ped / Bike Prioritization Program / Bayfront Trails	Establish a prioritized ped / bike / trail network along the Bayfront Parkway and study the feasibility of existing and future improvements, key corridors, special facility design, and maintenance				✓✓
City of Erie DMS Project	DMS Installation at I-90 EB Approaching I-86, I-79 NB Approaching 12th Street)		✓	✓	✓
Ped / Bike Prioritization Program / Erie Metro Area	Establish a prioritized ped / bike / trail network within the Erie Metro Area and study the feasibility of existing and future improvements, key corridors, special facility design, and maintenance				✓✓
PA 98 Betterment Program	PA 98 Betterment Program: Resurface PA 98 from PA 832 (Fairview Twp) south to County line (Elk Creek Twp) & improve shoulder for bike/access & address drainage issues: Seg 10 to 200		✓	✓	✓
US 19 Waterford Improvements	Improvements along US 19 (Waterford Pike) through Waterford, including two intersections of US 19 / PA 97, streetscaping, and parking	✓	✓	✓	✓
Corry Interstate Connectivity	Study and improve access to/from Corry and I-79, I-90, and the City of Erie		✓	✓	✗
US 19: Townhall Rd Improvements	Realignment of Townhall Road to Dorn Road to create a single plus intersection along US 19	✓	✓	✓	✓
US 6N Study Improvements / US 6N & Scotland Rd Intersection	Construct WB left-turn lane along US 6N w/ access to Scotland Rd / Edinboro Univ		✓	✗	✓
At-Grade RR Crossing Improvements (Springfield Twp)	Improve RR signal and gate crossings within Springfield Twp (Huntley Rd, Elmwood Rd, Scott Rd, Ellis Rd, and Pond Rd)		✓	✗	✗
Sterrettania Rd Improvements	Improvements to Sterrettania Road: 38th Street to 26th Street		✓	✗	✗
Ped / Bike Prioritization Program / Erie County	Establish a prioritized ped / bike / trail network for Erie County's outlying municipalities and study the feasibility of existing and future improvements, key corridors, special facility design, and maintenance				✓✓
SR 3008 / Crane Rd: Cranesville Boro Improvements	Improve and extend roads within the industrial district corridor; Crane Rd (SR 3008): Reconnect with Gage Rd w/ Railroad Crossing				
Park & Ride Facility (BMI / West Side)	Construction of Park & Ride facility at 12th St and Lincoln Ave adjacent to Bayfront Pkwy to accommodate downtown commuters and waterfront special events		✓	✓	✓
US 19 Access Management Plan	Develop and implement a multi-municipal US 19 access management plan spanning Summit Twp, Waterford Twp, and Waterford Boro		✓	✓	✓
US 6 Bike Route Improvements	Feasibility study to improve safety and facilities for bicycle travel along US 6 entering Corry, including potential local route realignment from US 6 to SR 2018 (Elgin Rd / Lovell Rd)				
Freight Rail Improvements Study	Study feasibility of freight service improvements, including intermodal rail ramp, new and existing rail-served industrial property development, rail access to Port of Erie, rail sidings, freight transfer, etc.				

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Exhibit 3.4.2 - Candidate Project Rankings (Per Decision Lens) and Scenario Inclusion (cont'd)

Project Candidate	Project Description	2040 No-Build w/ 2011-2012 TIP	2040 Scenario 1 Future Baseline	2040 Scenario 2 Operations Focus	2040 Scenario 3 Multimodal Focus
Passenger Rail Improvements Study	Study feasibility of passenger service improvements, including Amtrak service to Cleveland, new service to Pittsburgh, high-speed rail between Chicago and NY, and local Amtrak station amenities				
Presque Isle Bike/Ped Access Improvements	Greenway & Bike/Ped Improvements from 6th Street to Presque Isle State Park in Millcreek Township				
US 20 / Manchester to Milfair Turn Lane	Create continuous left turn lane on Route 20 from Milfair Road to Manchester Rd		✓	✗	✗
US 20 / Crayton Rd Safety Improvements	Safety / sight Distance Issues at PA 20 and Crayton Rd		✓	✗	✗
Harborcreek I-90 to US 20 Connectivity	Improve connections between I-90 and US 20 through Harborcreek to alleviate projected stresses and safety concerns identified by the local comprehensive plan (e.g., Hannon, Saltsman, or other rural roads)				
US 6N Study Improvements / Upgrades to Fry Rd & Crane Rd	Roadway and shoulder upgrades along SR 3008 / Crane Rd (Fry Rd to PA 99), T-448 / Fry Rd (US 6N to Crane Rd), intersection improvements at SR 3008 / PA 99, and possible Angling Rd swap				
Lexington Rd RR Underpass	Reconstruction of the RR underpass and related RR bridge along Lexington Rd (SR 3015) just south of Bowmanstown Rd to improve existing height restriction (9'-11")				
Transit Service Expansion Program	Update system-wide transit service study and investigate feasibility of future route or service expansion to park & rides, career centers, universities, city & outlying areas, and intermodal links				✓✓
Bus Shelter Enhancement Program	Improve and/or add bus shelters, heated shelters, bus stop signage, related ADA accessibility or amenities strategically system-wide, including at Universities, outlying areas, and Hub Routes				
Seaway Trail Design Guidelines and Construction Programming Study	Establish a design theme for the Seaway Trail road infrastructure including bridge parapets, guide rails, signage, etc., and refine, advance, and prioritize projects from the 2005 Seaway Trail Mgmt Plan				
SR 531: Depot Road	Widen SR 531 (Depot Rd) from I-90 to SR 20				
EMTA AITS	EMTA Automated Information Traveler System (Phase 1 and Phase 2)				
EMTA AVLS	EMTA Automated Vehicle Location System (Phase 1 and Phase 2)				
Park & Ride Expansion Program	Expand and/or add new park & ride facilities w/ service via regular transit routes / hours with potential priority sites at PSU Behrend and US 6N Wal-Mart				
Route 6 Heritage Corridor	Completion of various improvements along the Route 6 Heritage Corridor including scenic pull-offs, access improvements to adjacent amenities, multimodal projects				
SR 4024 / Robison Rd Corridor Study	Corridor analysis / study to determine preferred alignments for proposed corridor extension from Old Waterford Rd to PA 8, including ROW preservation				
SR 4026 / S Hill Rd Improvements	South Hill Road: Kuntz Road to Cherry Street				
Welcome Center Traveler Information	Installation of traveler and weather information displays or kiosks at NW PA Welcome Centers along I-79 at Erie Co / Crawford Co border; I-90 at PA / OH border; and I-90 at PA / NY Border				
I-79 / Old State Road Interchange	New interchange at I-79 and Old State Rd				
EMTA Operations Facility	Construction of a central operations facility to house EMTA and LIFT administrative offices and fleet garages (14th St from French St to Parade St)				
OTHER PROJECT: Millfair Road Railroad Overpass Project	Millfair Rd from SR 20 to SR 5 Millcreek and Fairview Twp New Bridge (w/ at-grade crossing removal), roadway rehabilitation including signal upgrades at SR 20 and SR 5 intersections	✓	✓	✓	✓
OTHER PROJECT: Abury Road Improvement Project	SR 4009 (Asbury Road) from 12th to 26th Street, Millcreek Twp Clearance of CSX/NS RR Bridges, drainage improvements, resurfacing, paved shoulders, sidewalks & pavement mkg	✓	✓	✓	✓
OTHER PROJECT: Targeted Intersection Improvements	Intersection geometric improvements, turn lanes, signals, etc., at 15 most congested locations countywide			✓✓	

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