TRANSPORTATION PLAN

A key aspect of transportation planning is effective coordination between the different government agencies responsible for maintaining the various parts of the transportation infrastructure. In the planning area, these include the Reading Area Transportation Study (RATS), the Pennsylvania Department of Transportation (PennDOT), Berks County, and the planning area municipalities.

As part of the process of preparing this transportation chapter, the RATS FFY 2017-2040 Long Range Transportation Plan (LRTP) was reviewed and considered. This section of the plan will focus on the local transportation infrastructure. Details on the PennDOT owned infrastructure can be found in the RATS Transportation Improvement Program (TIP) and the LRTP.

Penn and 6th Avenue in West Reading

RATS is the regional transportation planning organization for the Reading, Pennsylvania metropolitan area. The Reading Metropolitan Planning Organization (MPO) covers all of Berks County. Working with PennDOT and the Federal Highway Administration (FHWA), RATS facilitates and is responsible for prioritizing approximately $80 million annually to advance transportation improvement projects throughout the county. PennDOT, South Central Transportation Authority (SCTA), and the 72 municipalities in the County are responsible for project implementation.

ROADS

As shown below the municipalities in the planning area have nearly 170 miles of roads and streets to maintain. The streets and roads owned by the municipalities are part of the Pennsylvania State Liquid Fuels Programs that provides state payments to the municipalities for road maintenance and reconstruction based on population and miles of roads meeting PennDOT specifications. However, the Liquid Fuels funds comprise only a small part of the municipal maintenance budgets and do not cover the cost of long-term maintenance and reconstruction.

Shown below is a comparison of the liquid fuels allocations in 2012 and 2017. The amount of money allocated to each municipality increased and overall, LFF increased 33% Streets and roads owned and maintained by both municipalities are in good condition. The municipalities will focus on continued maintenance, including resurfacing, and monitor the need to correct specific drainage problems and add shoulders based on available funding. Paving projects are scheduled annually based on street/road condition and available funding.

Net Liquid Fuels Allocations Comparison by Municipality 2012 & 2017						
2012 (inf. Adj.)			2017			
Municipality	Miles	Dollars	Municipality	Miles	Dollars	% Increase
Sinking Spring	9.91	$78,673	Sinking Spring	9.91	$105,255	33.8%
Spring	98.39	$606,951	Spring	99.58	$814,413	34.2%
West Reading	10.6	$82,725	West Reading	10.6	$110,744	33.9%
Wyomissing	50.89	$265,443	Wyomissing	50.89	$353,654	33.2%
TOTAL	**169.79**	**$1,033,792**	**TOTAL**	**170.98**	**$1,384,066**	33.9%

Source: PennDOT Bureau of Municipal Services MLF Allocations Report, 2012 & 2017

Figures 14 through 17 show the federal functional classifications assigned to roads in the area. The functional classification of a roadway may change over time based on changing traffic conditions. Classification of a road is based on an analysis of the volume of traffic using the facility, the type of trip provided, the length of trip, and the speed of the trip.

Arterials provide the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control. These roads are typically classified as principal arterials (sub-grouped by Interstate, Freeway/ Expressway, and other principal arterials) and minor arterials. Examples of roads of this type in the area include Routes 222 and 422 and 422 Business (Penn Avenue).

Collectors provide a lower level of service at a slower speed. They provide service for shorter distances by collecting traffic from local roads and connecting them with arterials. Collectors are classified as major collectors and minor collectors. These roads provide access to individual properties and serve short distance, low speed trips. Examples include Mountain Home Road and Woodrow Avenue in Sinking Spring Borough, Reading Avenue/Hill Avenue in West Reading Borough, Reading and Grandview Boulevards, Cambridge Avenue, and part of Woodland Road in Wyomissing Borough, and Old Fritztown and Wheatfield Roads in Spring Township.

Average Annual Daily Traffic (AADT) is the total number of vehicles traveling on a road on an average day. Annual average daily traffic (AADT) volumes provide an overview of the traffic flow in the municipalities for planning purposes. An important point to remember is that AADT does not reflect daily and seasonal traffic volumes that can far exceed AADT. The proportionate increase in daily and seasonal counts can be significant. PennDOT conducts traffic counts on state roads, and the counts provide the means to assess the overall traffic conditions in the area. Figures 14 through 17 illustrate 2014 AADT on area roadways. The heaviest traveled roads are the arterials in the area, namely the Warren Street Bypass, the West Shore Bypass, Penn Avenue and Shillington Road/State Route 724.

Roadway surfaces in the area are mostly comprised of paved surface roadways. Of the paved surface roadways, pavements are either asphalt or concrete. PennDOT assesses pavement surface conditions using a variety of metrics that include International Roughness Index (IRI). IRI measures pavement roughness in terms of the number of inches per mile that a laser, mounted in a specialized van, jumps as it is driven along highway – the lower the IRI, the smoother the ride. Since PennDOT uses IRI in its pavement condition performance measures, Figures 18 through 21 show the condition of pavement on state roads in the area.

Bridges

The topography and hydrology of the area provide ample recreational activities and commercial activities, but also create a transportation challenge to move people and freight over them in Berks County. Overall, the bridges in the planning area are in good shape. In 2017, there are 69 bridges in the area, with the majority (51 bridges) owned and maintained by PennDOT. The entities responsible for the other 18 bridges are described below. These bridges are those that require inspections – state bridges longer than eight feet and local bridges longer than 20 feet. Figures 18 through 21 show the approximate location of bridges in the area.

Ownership of Non-PennDOT Bridges in the Planning Area

Owner	# of Bridges
Berks County	4
Spring Township	4
Spring/Lower Heidelberg townships	3
West Reading Borough	2
Wyomissing Borough	2
Private Owner	1
Spring/South Heidelberg townships	1
Spring/Norfolk Southern Railroad	1
Total	**18**

Source: PennDOT

As the area's bridges continue to age and deteriorate, it is sometimes necessary to close bridges unexpectedly due to problems revealed during routine inspections. Bridges closed to traffic are those structures deemed

unsafe to carry any type of traffic. As of 2017, there are two closed bridges in the planning region – the historic Wertz's Covered Bridge (open to pedestrian traffic only) and a privately owned bridge on Reedy Road.

Load posting a bridge is required by the National Bridge Inspection Standards when a bridge is not capable of safely carrying a legal load. If a bridge is deemed deficient, officials will post a maximum load for the bridge. Bridges may be posted for other load-capacity restrictions including speed and number of vehicles permitted on the bridge. There are four (4) load-posted bridges in the area.

Structurally deficient bridges are characterized by deteriorated conditions of the major components of a bridge. This may include cracked concrete, the bridge deck, the support structure, or the entire bridge itself. A "structurally deficient" (SD) designation does not imply that a bridge is unsafe. However, such bridges typically require significant maintenance to remain in service and will eventually require major rehabilitation or replacement to address the underlying deficiency. There are eight (8) such bridges in the area.

A functionally obsolete bridge does not meet current design standards. Examples include a bridge that is too narrow, has inadequate under-clearances, has insufficient load-carrying capacity, is poorly aligned with the roadway, or can no longer adequately service today's traffic. Functionally obsolete does not mean the bridge is unsafe or necessarily structurally deficient. It means that the bridge is showing its age and should be upgraded or replaced to improve its function. The area has 17 such bridges in the planning area, most owned by PennDOT.

The table below shows the bridges of most concern in the planning area because Berks County or municipalities own them and they are either functionally obsolete or structurally deficient as of September 2017.

Bridges of Local Concern

Bridge	Location	Built	Reconstructed	Municipality	Length	Deck Width	Bridge Area	Issue
Wyomissing Boulevard	South of Parkside Drive North	1931	-	Berks County	50	100	5,000	Structurally Deficient
Wertz's Covered Bridge	Tulpehocken Road	1869	1985	Berks County	200	17	3,400	Functionally Obsolete
Dwight Street	North of Cleveland Avenue	1932	-	Spring Township/Norfolk Southern	137	49	6,713	Structurally Deficient
Paper Mill Road	West of Route 222	1968	-	Spring/Lower Heidelberg townships	55	43	2,365	Structurally Deficient
Prendergast Road	West of Van Reed Road	1989	-	Spring Township	22	24	528	Functionally Obsolete
Parkview Road	Third Avenue Extension	1961	-	West Reading Borough	117	54	6,318	Structurally Deficient

Source: PennDOT

CONGESTED CORRIDORS

Traffic congestion results in loss of time, increased fuel consumption, decreased air quality, and hindrance to economic development. The individual, social, economic, and environmental impacts and costs due to transportation congestion go well beyond the less efficient movement of people and goods. Economic development and quality of life improve when areas of traffic congestion are corrected.

RATS developed a Congestion Management Process (CMP) in May 2016 that included an examination of the 38 most congested corridors in the County. These corridors were ranked using both a Travel Time Index (TTI) and the Average Annual Daily Trips (AADT) in that corridor. Please note that these rankings are not a definitive account of congestion along the network or a representation of prioritizing one corridor over another for improvements. Rather, it is an introduction to useful data and highlights the bottlenecks and most congested segments in the planning area. Figures 22 through 24 show the area's congested corridors. The rankings shown on the maps represent where the corridor is ranked countywide. Given that a significant amount of job centers, retail and traffic generators are in the planning area as detailed in the Economy section of this plan, there are a significant number of congested corridors. As discussed in future projects, PennDOT is exploring

improvements at the #1 ranked congested corridor in the planning area and several other corridors shown below have proposed or planned improvements.

Most Congested Corridors Ranked by Travel Time and Daily Traffic in the Suburban Berks Planning Area				
County Rank	SBJCP Rank	Corridor	Peak TTI	Max AADT
2	1	U.S. 222 Business (U.S. 222 Merge to U.S. 422 West Shore Bypass)	4.42	22,310
3	2	U.S. 422 Business (U.S. 222 Merge to U.S. 422 Interchange)	3.61	23,473
4	3	U.S. 422 Business (Penn Street Bridge to U.S. 422 Merge)	3.36	21,904
7	4	PA 724 (Sinking Spring to U.S. 222 Business)	2.38	14,301
8	5	U.S. 422 (Lebanon County to U.S. 222 Merge)	2.27	21,347
13	6	SR 3023 (State Hill Road)	1.96	20,801
15	7	U.S. 222 (U.S. 422 Merge to U.S. 222 Business Merge)	1.92	74,847
22	8	SR 3021 (Paper Mill Road)	1.60	18,002
25	9	SR 3055 (Van Reed Road)	1.57	12,307
29	10	U.S. 422 (West Shore Bypass)	1.44	78,134
30	11	PA 12 (Warren Street Bypass)	1.44	59,132
38	12	U.S. 222 (Lancaster County to U.S. 422 Merge	1.03	44,135

Source: 2016 Reading Area Transportation Study Congestion Management Process

Parking

Penn Avenue is the “downtown” for commerce and day-to-day activities in the planning area. In Penn Avenue, especially in West Reading and Wyomissing is home to many offices, retail stores, restaurants, and numerous community events coupled with residential land uses. In short, the planning region has this downtown with a great need for parking on a daily basis that experiences heavy demand on occasions. This demand sparks the question — is there a need for a new parking facility/structure? For years, both boroughs have managed parking demand with traditional strategies, including time limits, enforcement, and signage. However, as the growth and prosperity of Penn Avenue has advanced rapidly in recent years, the parking pressures on Penn Avenue are growing. Ultimately, parking can influence economic prosperity. The boroughs have the ability to enhance and support its businesses, retail activity, restaurant diversity, and residential property values by managing parking demand and supply.

At a minimum, the boroughs of West Reading and Wyomissing should consider a Penn Avenue Parking Study to provide a comprehensive and accurate view of parking activity and issues in the corridor. This report would focus on accommodating future growth and parking in a fiscally responsible manner.

Walking and Biking

Walking is an enjoyable and low-cost form of transportation. The pedestrian infrastructure in the planning area, consisting largely of sidewalks, crossing treatments, and shared-use paths and trails, is a fundamental part of its transportation system, connecting people not only to destinations, but also to other transportation modes such as transit and driving.

In January 2007, Spring Township adopted the “Township of Spring Greenways and Trails Plan” which has and will continue to guide the development of greenways and trails throughout the Township and the surrounding communities. The Township has already identified and marked three (3) trail systems which connect ten (10) parks, six (6) school facilities, three (3) municipal facilities and two (2) libraries. One of the trails crosses into Wyomissing Borough and connects to the Penn State Berks Campus and Berks County’s Gring’s Mill Recreation Area. This connection allows trail users access to the Union Canal Towpath Trail which leads to the extensive

trail system at Blue Marsh Lake. The Township continues to plan for easement acquisitions as they may become available in the southern region of the Township where rural roads are not as conducive for pedestrian traffic.

The boroughs have a well-connected grid street pattern that allows for good pedestrian connections. Outside the boroughs, in Spring Township, the road network has a more irregular pattern with small residential streets feeding into larger arterials, which are typically high speed and high traffic volume corridors. There are areas with curvilinear and cul-de-sac style development that do not provide connections to neighboring streets. A number of Spring Township's older neighborhoods lack sidewalks, as they were built to reflect a more rural feel. In some areas, where traffic volumes and speeds are low, the lack of formal pedestrian facilities does not reduce the ability to walk. In fact, some neighborhood residents prefer having streets without sidewalk facilities.

The municipalities should recognize that demand for walkable neighborhoods is increasing and it is changing where people want to live and what they are looking for when purchasing a home. People of all ages are recognizing the benefits of living in a place where they can walk to nearby shops, recreation, restaurants and public transportation. The benefits are many – convenience, reduced time spent driving and the health benefit of building walking into your day. But more than that, being walkable may be a major factor in the community being economically competitive.

In recent years local realtors have been experiencing more and more interest from potential homebuyers on the walkability of the neighborhoods they are interested in. Because of this many realtor websites and multiple listing services include this information. One useful tool in determining the walkability of a particular neighborhood can be found at: www.walkscore.com. This website uses a proprietary algorithm to calculate walkability scores on a scale of 1 to 100, with 100 being the best score. To put it into perspective, a walkability score of 70 – 89 is considered "very walkable" and a score of 90 – 100 is considered "a walker's paradise."

As one would assume, the walkability score for West Reading Borough is quite high at 88 because of all of the entertainment, restaurants and shopping located within the Borough. When calculated for the other municipalities it's harder to determine a score. This is because the score bases its calculation on a specific address entered into the system, so depending on where in the township or borough that address is located the score could be rather high or low. Although there are some limitations, this is a useful tool to determine how pedestrian friendly a community is and potentially use it to come up with ways to improve walkability when considered with other projects or plans.

The area has a rather robust trail system. While each municipality may not have their own identified trails, residents are able to easily access a trail network located in a neighboring community. An example of which would be the Wyomissing trail network that is interwoven throughout their park system. This network provides recreational opportunities for residents of both the Borough and surrounding areas. Although the majority of this trail system is located with the Borough of Wyomissing it provides connectivity to regional trail systems like the Schuylkill River Trail and the County's Union Canal Trail. Figures 25 through 28 show the location of trails throughout the region as well as areas of the municipalities that have sidewalks.

Transit

Public transportation forms a key component of the Berks County transportation system. Public transportation is provided by both non-profit and profit organizations, supplying fixed route, and demand response services.

The principal provider of public transportation services in Berks County is the South Central Regional Transit Authority (SCTA). This authority oversees two divisions: the Berks Area Regional Transit Authority (BARTA) that serves Berks County and the Red Rose Transit Authority (RRTA) that serves Lancaster County.

The BARTA fixed route services 32 Berks County municipalities and carries approximately 3.1 million passengers annually. Operating six days a week, with a fleet of 57 buses, it services 30 bus shelters and more than 1,000 bus stops on 21 routes over 1.6 million route miles. According to BARTA, 42% of those trips are work related, followed by 23% for shopping and 14% for personal business. The majority of riders (64%) are between 18-44 years of age, and most are female (58%) and most do not have a valid driver's license (68%).

There are several active bus routes in the planning area as highlighted below. Route 16 that serves Broadcasting Square had the second highest ridership in 2016 and saw a nearly 7% increase in ridership on the route from 2015-2016. Route 15 that serves the Berkshire Mall had the 4th highest ridership overall but saw a 3% decrease between 2015-2016.

BARTA Fixed Ridership In Numbers of Annual Riders by Route				
Route	**2014-2015**	**2015-2016**	**# Change**	**% Change**
Route 1 - Temple	470,604	451,671	-18,933	-4.0%
Route 16 - Broadcasting Square	321,153	342,105	20,952	6.5%
Route 4 -10th & 11th Street	354,891	322,144	-32,747	-9.2%
Route 15 - Berkshire Mall	236,105	228,848	-7,257	-3.1%
Route 14 - Wernersville	230,105	219,363	-10,742	-4.7%
Route 18 - Schuylkill Avenue	198,907	194,871	-4,036	-2.0%
Route 8 - Reiffton/Birdsboro	132,566	140,659	8,093	6.1%
Route 10 - Brookline	149,860	131,251	-18,609	-12.4%
Route 19 - Riverside/Cotton St.	142,825	125,865	-16,960	-11.9%
Route 3 - Kutztown Road	128,591	122,396	-6,195	-4.8%
Route 17 - Glenside	120,905	110,916	-9,989	-8.3%
Route 11 - Mohnton Via Shillington	109,517	107,307	-2,210	-2.0%
Route 5 - Albright College	88,522	84,983	-3,539	-4.0%
Route 7 - Pennside	89,995	80,814	-9,181	-10.2%
Route 20 - Hamburg	93,407	80,375	-13,032	-14.0%
Route 12 - Lincoln Park Via Reading Hospital	64,354	60,383	-3,971	-6.2%
Route 9 - Grill Via Kenhorst	52,090	50,159	-1,931	-3.7%
Route 22 - East Penn	24,703	26,174	1,471	6.0%
Route 2 - Fairgrounds Square	5,967	5,072	-895	-15.0%
Route 21 - Morgantown	5,632	4,707	-925	-16.4%
Route 6- Crosstown	10,125	849	-9,276	-91.6%
Route 23- Vanity Fair	*	449	449	100.0%
Total Ridership	**3,030,824**	**2,891,361**	**-139,463**	**-4.6%**

Source: South Central Transit Authority (SCTA)

Future Major Road and Bridge Projects

The Reconstruction of the West Shore Bypass - MPMS #63192 and 78814

The US 422 West Shore Bypass constitutes the most significant maintenance need facing the planning region and Berks County. The project extends through the City of Reading, West Reading Borough, Wyomissing Borough, Cumru Township, and Exeter Township in Berks County. The road currently carries traffic ranging from 46,000 vehicles per day on the eastern side to nearly 80,000 vehicles per day on the western end. This highway serves as the principal arterial through the urban area and provides the primary regional access to the City of Reading. This highway was originally constructed in 1964 and there are some sections of original pavement while others have seen some overlay. Safety and capacity issues exist at the interchanges at North Wyomissing Boulevard, Penn Street/Penn Avenue, Lancaster Avenue, and I-176. The section also contains seven (7) bridges in need of significant repairs or replacement. Five (5) of these are currently designated as Structurally Deficient.

The study phase was completed and identified over $650 million in improvements required to bring the corridor

up to current design standards and to accommodate future traffic growth. Initial phases of this program are included for a design that is more detailed in the near term for the segment extending from SR 12 to just east of I-176 with the actual reconstruction of this five (5) mile section scheduled to begin in 2022. The final section extending east to Perkiomen Avenue remains a candidate project at this time.

Phases 2-4 of the Sinking Spring Revitalization Plan

The development of the Spring Market Center on Penn Avenue completed Phase One of the project in 2010. The Borough is currently working on Phase Two of the project that realigns the intersection of Penn, Columbia and Cacoosing avenues to relieve traffic congestion and facilitate better truck movements to and from the Sunoco Logistics tank farm on Columbia Avenue. Phase Three constructs a new street parallel and south of Penn Avenue from Columbia Avenue east to the Phase 4 project that brings Shillington Road (724) west to create a realigned intersection of Shillington Road (Route 724), Penn and Mull avenues.

Widening and Alignment of State Hill Road

Currently an unfunded candidate project in the RATS FFY 2017-2040 Long Range Transportation Plan, this project would widen State Hill Road in Wyomissing and Spring Township from Woodland Drive to Colony Drive. The width of State Hill Road varies significantly in this particular segment. This project is under consideration for addition to the 2019 RATS Transportation Improvement Program.

Safety Improvements for the Route 222 ramp to Route 422 East

Due to several serious crashes in this corridor due to traffic stacking in the thru lanes, PennDOT has engaged an engineer to evaluate safety improvements on Route 222 south of the Broadcasting Road interchange. General concepts include a new, dedicated stacking lane for traffic exiting 222 onto the ramp to Route 422 and signage to alert motorists of stopped traffic ahead.

Intersection Improvements at Van Reed Road and Dwight Street

This proposed project would add a left turn lane on Van Reed Road to better accommodate school traffic.

Safety

Maintaining a safe transportation system is essential to sustaining and enhancing the quality of life for Berks County residents. Deaths and injuries resulting from traffic crashes are a public health concern and impact local communities with medical costs, lost wages, insurance costs, taxes, police, fire, and emergency medical services, legal and court costs, and property damage.

As part of its safety program, PennDOT collects traffic crash data for the entire state and reports data at the state, county, and municipal level. For the purposes of this plan, county crash data for Berks County was analyzed. Motor vehicle crashes generally involve multiple contributing factors that may be related to drivers, the roadway, or the vehicle(s) involved, thus making transportation safety a multidisciplinary concern.

Berks County has a significant amount of crashes – 4,902 in 2016 alone - ranking seventh in the state in the number of overall crashes and ninth in the number of fatal crashes that year. Shown below is the County's crash trend from 2012-2016.

Berks County Crashes by Type Between 2012 and 2016

Type	2012	2013	2014	2015	2016	Total	# Change	% Change
Fatal	50	42	33	39	35	**199**	-15	-30.0%
Injury	2,204	2,094	1,994	2,115	2,067	**10,474**	-137	-6.2%
Property Damage Only	2,489	2,458	2,592	2,678	2,800	**13,017**	311	12.5%
Total	**4,743**	**4,594**	**4,619**	**4,832**	**4,902**	**13,956**	159	3.4%

Source: PennDOT, Pennsylvania Crash Facts and Statistics

Over the last five years, there have been over 3,200 crashes in the planning area, with the majority occurring on state roads. Most crashes are Property Damage Only (PDO), where no injuries or fatalities result. With the exception of Sinking Spring, each municipality saw a Year-Over-Year increase in the number of crashes.

Vehicle Crashes in the Planning Area - 2012-2016				
Year	Fatal	Injury	PDO	Total
2012	1	259	344	604
2013	3	262	378	643
2014	4	238	385	627
2015	0	265	406	671
2016	2	284	412	698
Total	10	1,308	1,925	3,243

Source: PennDOT, Pennsylvania Crash Facts and Statistics

Crashes by Municipality - 2012-2016									
Sinking Spring					Spring Township				
Year	Fatal	Injury	PDO	Total	Year	Fatal	Injury	PDO	Total
2012	0	21	36	57	2012	0	117	158	275
2013	0	21	26	47	2013	1	106	184	291
2014	1	9	37	47	2014	1	91	188	280
2015	0	14	38	52	2015	0	123	163	286
2016	0	12	25	37	2016	2	130	161	293
Total	1	77	162	240	Total	4	567	854	1,425
West Reading					Wyomissing				
Year	Fatal	Injury	PDO	Total	Year	Fatal	Injury	PDO	Total
2012	0	30	24	54	2012	1	91	126	218
2013	1	36	43	80	2013	1	99	125	225
2014	0	53	38	91	2014	2	85	122	209
2015	0	45	65	110	2015	0	83	140	223
2016	0	52	49	101	2016	0	90	177	267
Total	1	216	219	436	Total	4	448	690	1,142

Source: PennDOT, Pennsylvania Crash Facts and Statistics

DRIVING BEHAVIORS

Unsafe driving behavior plays a significant role in crashes in Berks County. Aggressive driving and speeding are major factors, with distracted driving a growing and significant contributor to crashes. Of note, crashes because of distracted driving in Berks County began to rise with the mass adoption of smartphones in the early-mid 2000s. Listed below are the top driving behaviors that contribute to crashes in the planning area.

Crashes where Aggressive Driving Contributed - 2012-2016						
Municipality	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Sinking Spring	10	7	7	2	2	28
Spring	23	36	23	15	28	125
West Reading	4	12	10	10	9	45
Wyomissing	38	39	44	20	33	174
Total	**75**	**94**	**84**	**47**	**72**	**372**
Alcohol Related Crashes - 2012-2016						
Municipality	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Sinking Spring	4	6	7	6	5	28
Spring	31	25	22	25	38	141
West Reading	6	6	9	7	6	34
Wyomissing	8	16	12	16	14	66
Total	**49**	**53**	**50**	**54**	**63**	**269**
Crashes where Distracted Driving Contributed - 2012-2016						
Municipality	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Sinking Spring	19	11	13	14	10	67
Spring	78	80	85	89	72	404
West Reading	8	17	18	24	23	90
Wyomissing	37	43	41	47	49	217
Total	**142**	**151**	**157**	**174**	**154**	**778**
Crashes where Speeding Contributed - 2012-2016						
Municipality	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Sinking Spring	1	1	2	1	0	5
Spring	8	8	5	6	12	39
West Reading	0	5	3	1	3	12
Wyomissing	9	13	5	10	18	55
Total	**18**	**27**	**15**	**18**	**33**	**111**
Crashes where Tailgating Contributed - 2012-2016						
Municipality	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Sinking Spring	1	2	2	3	1	9
Spring	17	7	16	13	13	66
West Reading	7	9	10	10	14	50
Wyomissing	15	31	20	23	23	112
Total	**40**	**49**	**48**	**49**	**51**	**237**

Source: PennDOT, Pennsylvania Crash Facts and Statistics

AT-RISK DRIVERS

At-risk drivers include older drivers (65+) and young drivers (16-17). Older drivers are in crashes at a higher rate than young drivers are in the area. The rise of elderly drivers on the road coupled with their higher crash rates suggests that safety programming targeted towards the elderly driver is needed.

Crashes by At-Risk Drivers (Age 16)						
Municipality	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Sinking Spring	1	0	0	1	0	2
Spring	11	10	0	8	7	36
West Reading	0	0	0	1	0	1
Wyomissing	3	2	0	3	3	11
Total	**15**	**12**	**0**	**13**	**10**	**50**
Crashes by At-Risk Drivers (Age 65-74)						
Municipality	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Sinking Spring	10	5	4	12	3	34
Spring	23	29	23	41	35	151
West Reading	4	9	13	11	13	50
Wyomissing	28	24	31	29	46	158
Total	**65**	**67**	**71**	**93**	**97**	**393**
Crashes by At-Risk Drivers (75+)						
Municipality	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Sinking Spring	4	4	3	5	3	19
Spring	18	23	21	16	20	98
West Reading	2	5	6	4	4	21
Wyomissing	25	25	21	15	26	112
Total	**49**	**57**	**51**	**40**	**53**	**250**

Source: PennDOT, Pennsylvania Crash Facts and Statistics

VULNERABLE ROAD USERS (VRUs)

Vulnerable road users are those that are using the road without a vehicle surrounding them for protection. Most commonly, these are pedestrians, bicyclists, and motorcyclists in Berks County. Of the three types of VRUs, pedestrians have been involved in the most crashes in the planning area.

Crashes Involving Pedestrians						
Municipality	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Sinking Spring	1	1	1	1	1	5
Spring	5	3	4	4	4	20
West Reading	8	3	7	9	7	34
Wyomissing	1	5	5	2	5	18
Total	**15**	**12**	**17**	**16**	**17**	**77**
Crashes Involving Bicycles						
Municipality	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Sinking Spring	0	0	0	0	0	0
Spring	3	1	2	1	1	8
West Reading	0	2	2	1	2	7
Wyomissing	2	4	0	2	0	8
Total	**5**	**7**	**4**	**4**	**3**	**23**
Crashes Involving Motorcycles						
Municipality	**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Sinking Spring	0	1	0	2	0	3
Spring	4	8	5	6	2	25
West Reading	2	0	1	3	4	10
Wyomissing	1	6	4	5	2	18
Total	**7**	**15**	**10**	**16**	**8**	**56**

Source: PennDOT, Pennsylvania Crash Facts and Statistics

WHERE CRASHES OCCUR

Figure 30 shows where crashes have occurred in the last three years (2014-2016.) As expected, the majority of crashes that happen in the region occur on the most heavily travelled roadways. There were six crashes in the planning area that involved a fatality. While any accident involving a fatality is something you want to try to eliminate, from looking at the data there is no one location that has a higher frequency of fatal crashes over another.

FREIGHT

Trucks move a great majority of freight (in terms of both tonnage and value) within and through Berks County, illustrating the importance of the county's highway network. From Berks County, business can reach more than 35% of the United States population and 50% of Canadian customers within a one-day drive. While the bridges and local roads in the planning area are important in the movement of freight, some are strategically more important than others, namely Routes 222 and 422. These state roads carry substantial amounts of freight from the local generators and connect the area with the Berks county market.

The Norfolk Southern (NS) and East Penn (ESPN) railroads operate in the planning area. The Norfolk Southern Harrisburg and Reading lines run through the planning area with a junction of those two lines near Wyomissing behind "The Works" entertainment facility. The NS trains can notably be seen crossing through Sinking Spring as it travels east through Wyomissing and West Reading. The East Penn Railroad operates their Lancaster Northern line in and around Sinking Spring and it interconnects with the Norfolk Southern Harrisburg line in Reading.

Intermodal Connector

The intermodal connectors of the National Highway System (NHS) are the first and last miles of roadway used by truckers to travel between the national highway system and identified ports, terminals, and hubs. These portions of public roads have a minimum average of 100 trucks entering and exiting such facility per day. The planning area has such a connector. The PA10L Intermodal Connector, located in Sinking Spring, is 1.4 miles long and connects the tank farm in the Borough with Route 422. The route of the connector is east on Mountain Home Road (SR 3012) to Columbia Avenue (SR 3016) or Woodrow Road, proceeding north to US Route 422.

Road-Rail Crossings

A railroad at-grade crossing is an intersection where a roadway crosses railroad tracks at the same level (grade). At-grade crossings can also have significant impacts on the transportation network. The “gate-down delay” creates delays caused when passing trains block the crossing. In addition, grade crossings can reduce road capacity. The uneven surfaces at grade crossings require vehicles to cross at lower speeds, and passing trains can preclude coordinating nearby traffic signals as they pass through that area.

There are 342 rail/road intersections in Berks County, 210 of which are at-grade crossings. The Sinking Spring area has 24 rail crossings (19 at grade) serving Norfolk Southern (NS) and the East Penn Railroad (ESPN). West Reading has 8 crossings (1 at grade) all serving Norfolk Southern and Wyomissing has 7 crossings (no at-grade) all serving Norfolk Southern. The annual average daily trips (AADT) on roadways with at-grade crossings in Berks County are typically below 5,000 vehicles in Berks County. However, in the planning area, the crossings at Vinemont Road (8,933 vehicle AADT), Fritztown Road (7,351 vehicle AADT), Montello Road (6,934 vehicle AADT) and Columbia Avenue (5,808 vehicle AADT) exceed that threshold.

Berks County Road/Rail Crossings with > 5,000 ADT			
Railroad	**Municipality**	**Street**	**2016 AADT**
Norfolk Southern	Reading	11th Street	16,413
Norfolk Southern	Cumru	Route 724	11,026
East Penn Railroad	Boyertown	Philadelphia Ave.	10,345
East Penn Railroad	Sinking Spring	Vinemont Rd.	8,933
Reading/Blue Mountain	Shoemakersville	Route 61	8,930
Norfolk Southern	Reading	Kutztown Road	8,611
Norfolk Southern	Reading	Franklin Street	7,885
Reading/Blue Mountain	Leesport	Lee Street	7,522
Reading/Blue Mountain	Leesport	Wall Street	7,522
East Penn Railroad	Sinking Spring	Fritztown Road	7,351
East Penn Railroad	Sinking Spring	Montello Road	6,934
Norfolk Southern	Blandon	Main Street	6,595
Norfolk Southern	Reading	Rockland Street	6,153
Norfolk Southern	Sinking Spring	Columbia Ave.	5,808
Norfolk Southern	Reading	7th/Chestnut Sts.	5,661
Norfolk Southern	Amity	Main Street	5,333
Norfolk Southern	Douglass	West High Street	5,094
Norfolk Southern	Douglass	Ben Franklin Hwy.	5,083
Norfolk Southern	Lyons	Kemp Street	5,002

Source: Federal Railroad Administration, Office of Safety Analysis

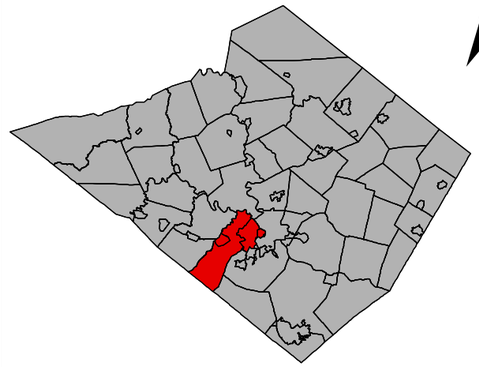
GOALS

- The municipalities in the planning region should have a “united voice” to vote or petition legislators for the benefit of transportation issues within the Region and communicate unified requests for improvements to RATS through the TIP and LRTP.
- The municipalities should pursue preliminary technical evaluation of identified priorities and share recommendations with the appropriate municipalities and agencies. The analysis may determine that a project is not feasible before cost is incurred.
- The municipalities should collaborate on a regional basis to focus limited funding on the most effective solutions and to maximize the potential for cost sharing and savings.
- Review municipal ordinances for parking standards and amend as necessary to ensure parking requirements are both appropriate and flexible.
- The municipalities should consider a joint parking study that identifies present and future needs and proposes short and long-term solutions.
- Each municipality should implement low-cost safety improvements where such measures provide an immediate impact on safety.
- The municipalities should ensure future development does not create detrimental access issues, increase congestion, or create safety problems.
- Consider more specific access management strategies for growth areas and designated roadways or corridors.
- Communicate with the operators of commercial and industrial facilities regarding issues with regular truck movements and designated routes.
- Coordinate with Norfolk Southern to maximize the utility of the rail line in spurring appropriate economic development within the planning area, including coordination of land use planning, in conjunction with the rail line.
- Consider the development of a regional trail/pedestrian/bicycle plan that provides guidance for an interconnected system of pedestrian improvements between the municipalities.
- Ensure municipal subdivision and land development ordinances contain requirements for sidewalks in appropriate locations.
- Encourage the addition of sidewalks within the planning area especially where there are missing links or where sidewalks would facilitate appropriate connections to existing or future neighborhoods and destinations (such as schools, parks, recreation facilities, major job generators, or shopping centers).
- Communicate with SCTA\BARTA regarding future bus routes, shuttles, and other transit opportunities.

FIGURE 14

Sinking Spring, Spring, West Reading, Wyomissing
Joint Comprehensive Plan Update: September 2018

Functional Classification



Legend

- Interstate
- Principal Arterial- Freeways and Expressways
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- 412 Traffic Volumes
- Streams and Water Bodies
- Roads
- Railroads
- Municipal Boundaries

Source data: Berks County Planning Commission GIS, Berks County GIS/IS, Berks County Mapping, Berks DES, PennDOT

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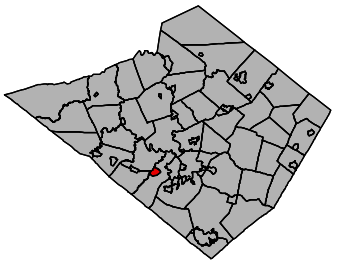
0 0.75 1.5 Miles

FIGURE 15

Sinking Spring, Spring, West Reading, Wyomissing Joint Comprehensive Plan Update September 2018

Sinking Spring Borough Functional Classification



Legend

- Interstate
- Principal Arterial- Freeways and Expressways
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- 412 Traffic Volumes
- Streams and Water Bodies
- Roads
- Railroads
- Municipal Boundaries

Source data:
Berks County Planning Commission GIS, Berks County Mapping, Berks County GIS/IS, Berks DES, PennDOT

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0 500 1,000 Feet

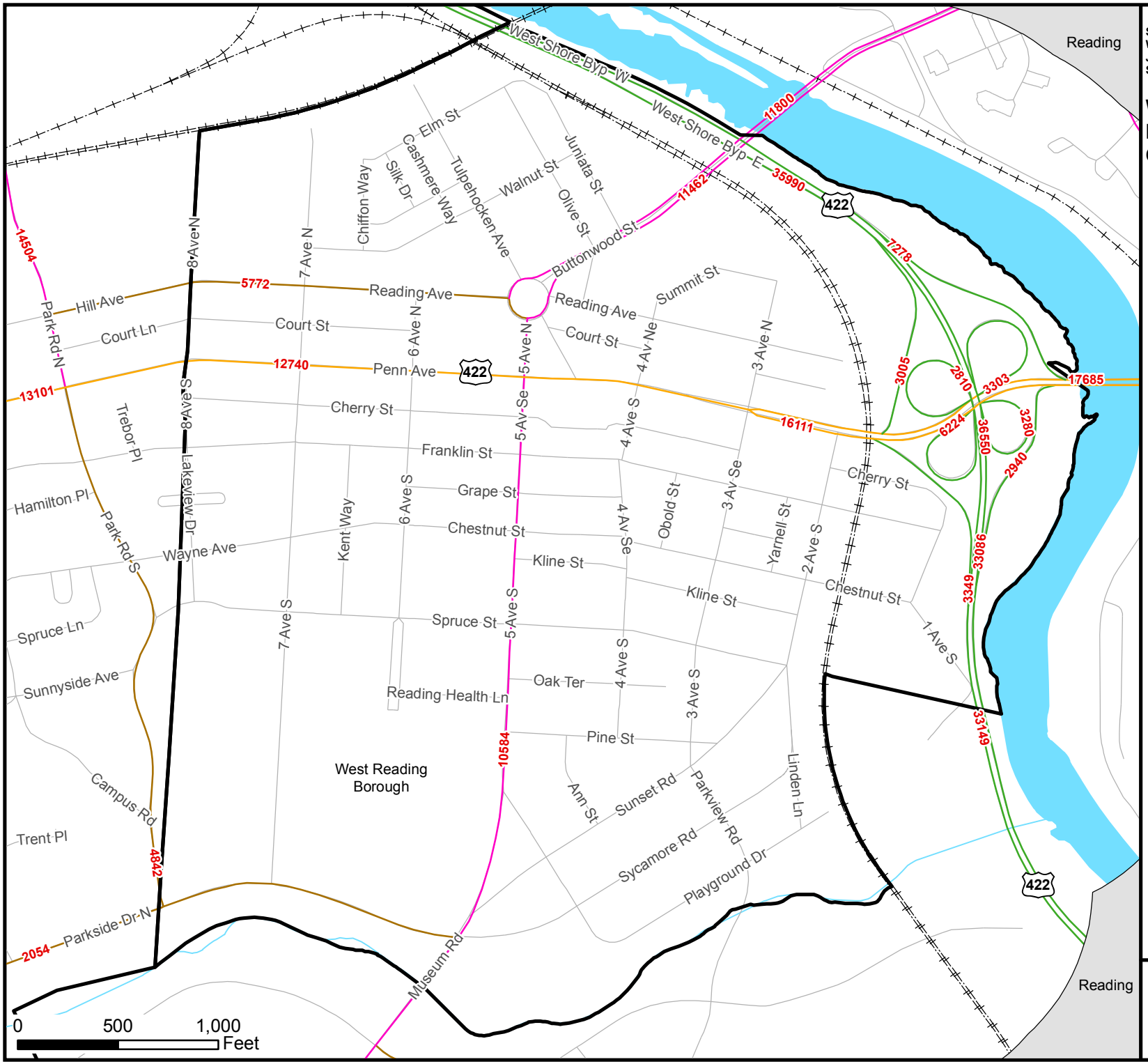
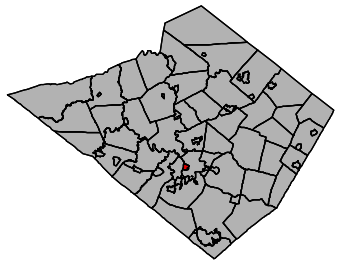


FIGURE 16

Sinking Spring, Spring,
West Reading, Wyomissing
Joint Comprehensive Plan Update
September 2018

West Reading Borough Functional Classification



Legend

- Interstate
- Principal Arterial- Freeways and Expressways
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- 412 Traffic Volumes
- Streams and Water Bodies
- Roads
- Railroads
- Municipal Boundaries

Source data:
Berks County Planning Commission GIS, Berks County Mapping, Berks County GIS/IS, Berks DES, PennDOT

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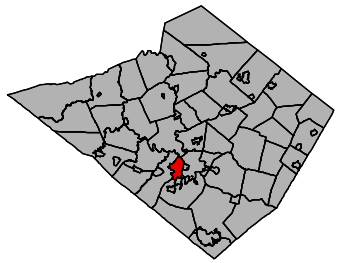
FIGURE 17

Sinking Spring, Spring, West Reading, Wyomissing Joint Comprehensive Plan Update
September 2018

Wyomissing Borough Functional Classification



Legend

- Interstate
- Principal Arterial- Freeways and Expressways
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- 412 Traffic Volumes
- Streams and Water Bodies
- Roads
- Railroads
- Municipal Boundaries

Source data:
Berks County Planning Commission GIS, Berks County Mapping, Berks County GIS/IS, Berks DES, PennDOT

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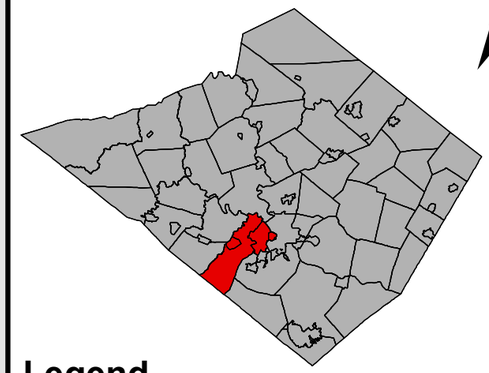
FIGURE 18

Sinking Spring, Spring, West Reading, Wyomissing
Joint Comprehensive Plan Update: September 2018

Bridge and Pavement Condition



N

Legend

- State-Owned Bridges
- County-Owned Bridges
- Municipal-Owned Bridges
- Privately-Owned Bridges
- Railroad-Owned Bridges
- Posted Bridges
- Red: Closed Bridges
- Orange: Structurally Deficient Bridges
- Blue: Functionally Obsolete Bridges
- Green: No Restrictions
- Streams and Water Bodies
- Roads
- Railroads
- Municipal Boundaries

Pavement Conditions

- Excellent
- Fair
- Good
- Poor

0 0.75 1.5 Miles

Source data: Berks County Planning Commission GIS, Berks County GIS/IS, Berks County Mapping, Berks DES, PennDOT September 13, 2017 and July 18, 2017

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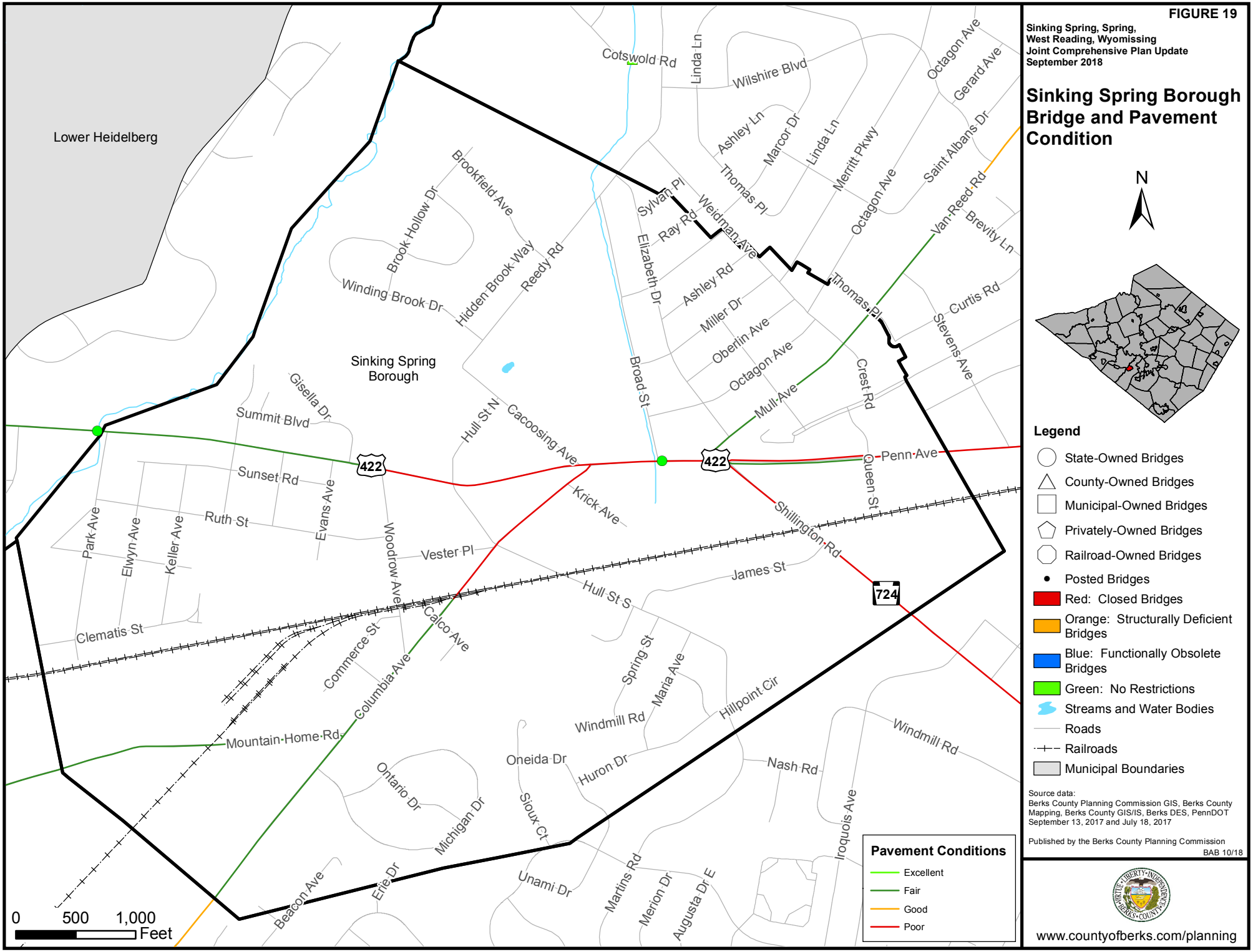

FIGURE 19

Sinking Spring, Spring, West Reading, Wyomissing
Joint Comprehensive Plan Update
September 2018

Sinking Spring Borough Bridge and Pavement Condition

N

Legend

- State-Owned Bridges
- County-Owned Bridges
- Municipal-Owned Bridges
- Privately-Owned Bridges
- Railroad-Owned Bridges
- Posted Bridges
- Red: Closed Bridges
- Orange: Structurally Deficient Bridges
- Blue: Functionally Obsolete Bridges
- Green: No Restrictions
- Streams and Water Bodies
- Roads
- Railroads
- Municipal Boundaries

Source data:
Berks County Planning Commission GIS, Berks County Mapping, Berks County GIS/IS, Berks DES, PennDOT
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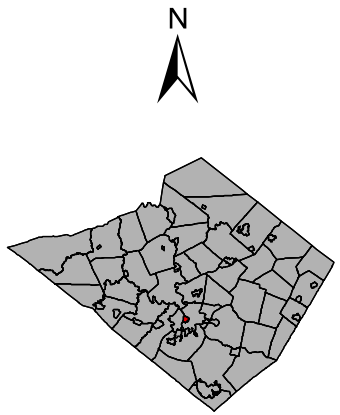
FIGURE 20

Sinking Spring, Spring, West Reading, Wyomissing
Joint Comprehensive Plan Update
September 2018

West Reading Borough Bridge and Pavement Condition



Legend

- State-Owned Bridges
- County-Owned Bridges
- Municipal-Owned Bridges
- Privately-Owned Bridges
- Railroad-Owned Bridges
- Posted Bridges
- Red: Closed Bridges
- Orange: Structurally Deficient Bridges
- Blue: Functionally Obsolete Bridges
- Green: No Restrictions
- Streams and Water Bodies
- Roads
- Railroads
- Municipal Boundaries

Pavement Conditions

- Excellent
- Fair
- Good
- Poor

Source data:
Berks County Planning Commission GIS, Berks County Mapping, Berks County GIS/IS, Berks DES, PennDOT
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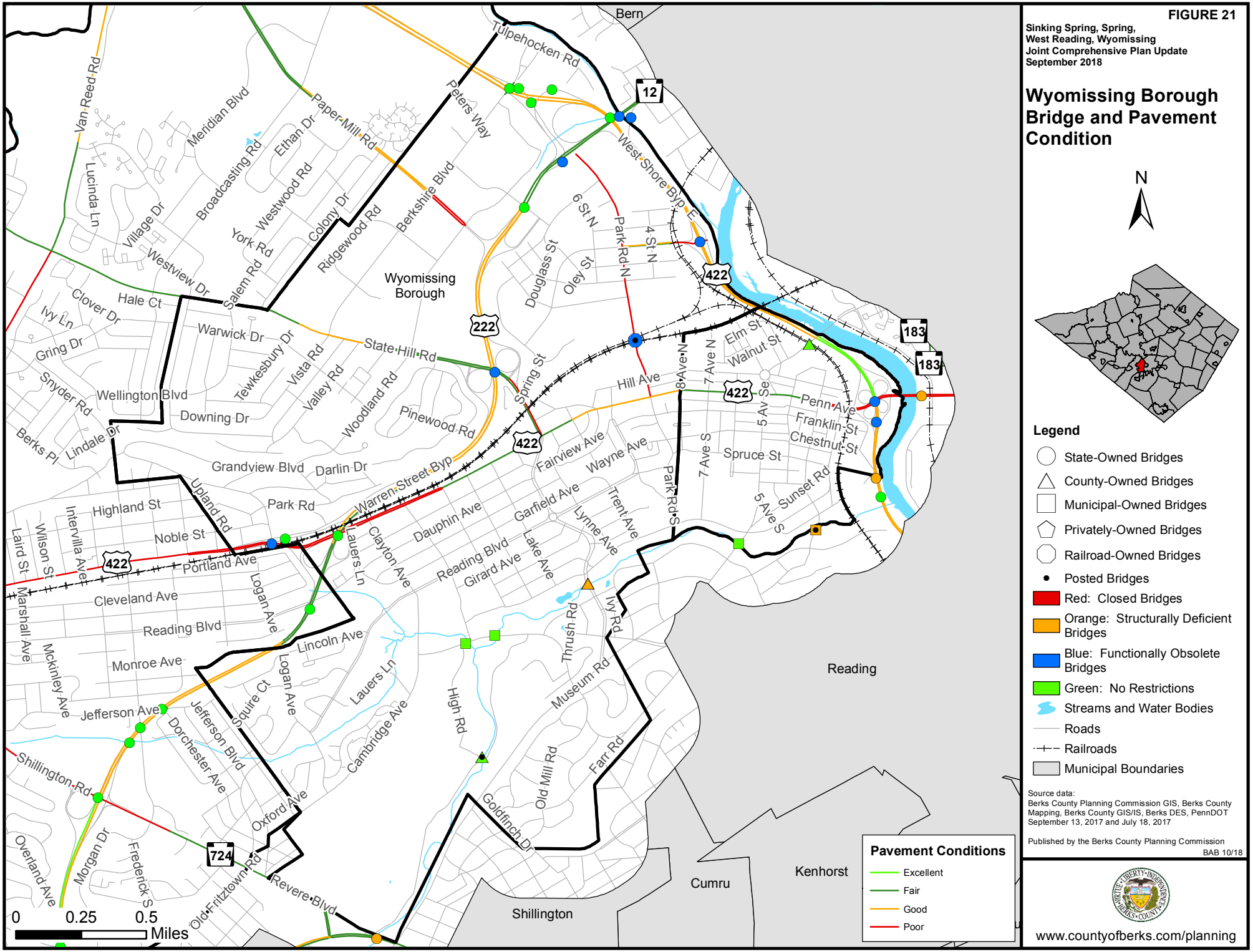

FIGURE 21

Sinking Spring, Spring,
West Reading, Wyomissing
Joint Comprehensive Plan Update
September 2018

Wyomissing Borough Bridge and Pavement Condition

N

Legend

- State-Owned Bridges
- County-Owned Bridges
- Municipal-Owned Bridges
- Privately-Owned Bridges
- Railroad-Owned Bridges
- Posted Bridges
- Red: Closed Bridges
- Orange: Structurally Deficient Bridges
- Blue: Functionally Obsolete Bridges
- Green: No Restrictions
- Streams and Water Bodies
- Roads
- Railroads
- Municipal Boundaries

Pavement Conditions

- Excellent
- Fair
- Good
- Poor

Source data:
Berks County Planning Commission GIS, Berks County Mapping, Berks County GIS/IS, Berks DES, PennDOT
September 13, 2017 and July 18, 2017

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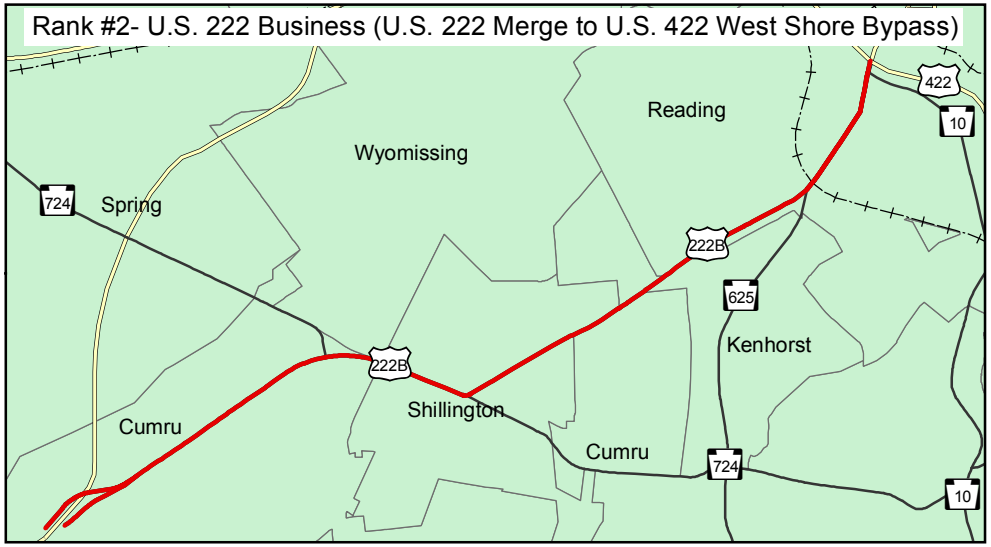
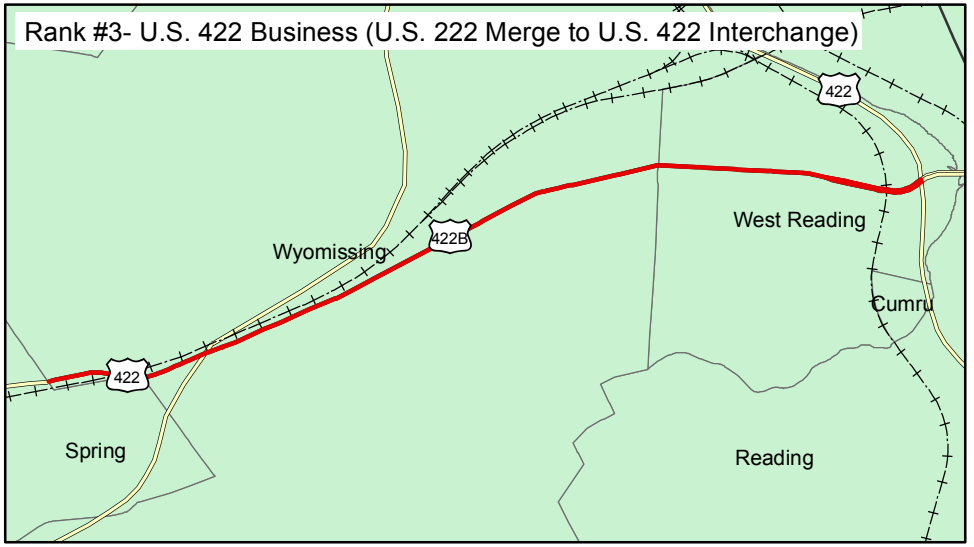
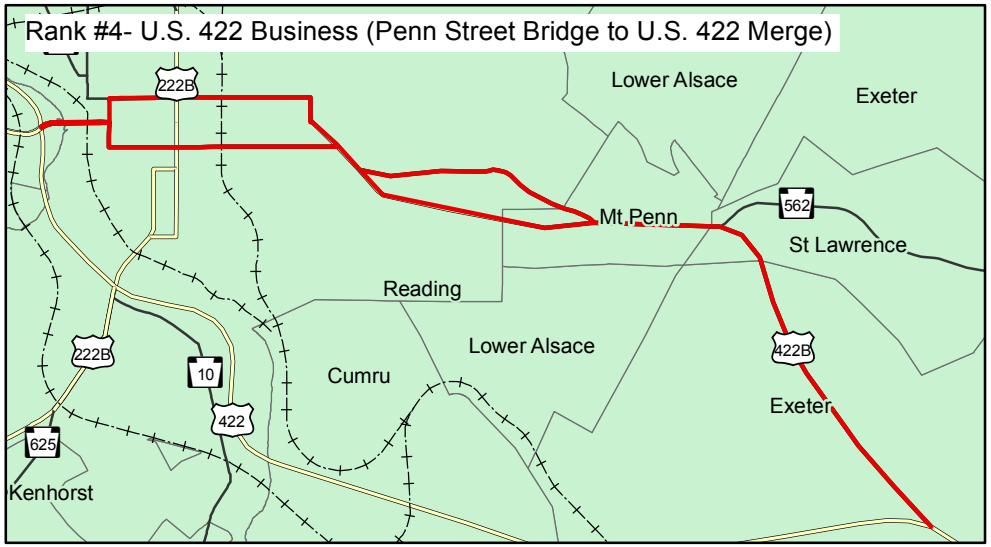
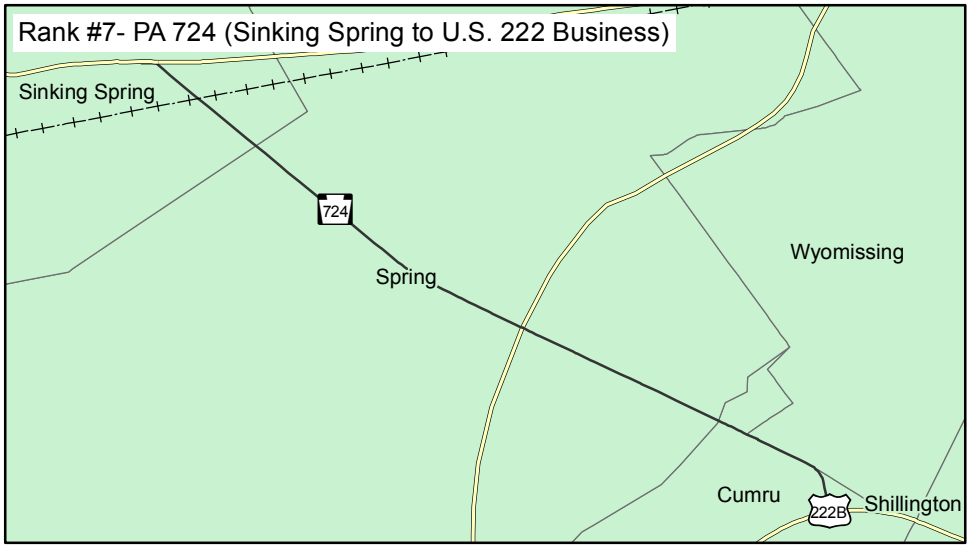
FIGURE 22

Suburban Berks Joint Comprehensive Plan Congested Corridors Based on Travel Time and Volume









Congestion Management Corridor
Railroads
Interstate
US Route
State Route
Municipal Boundaries

Source: Berks County Planning Commmission GIS, Berks County Mapping, Berks County GIS, Berks DES, PennDOT, RATS 2016 Congestion Management Process

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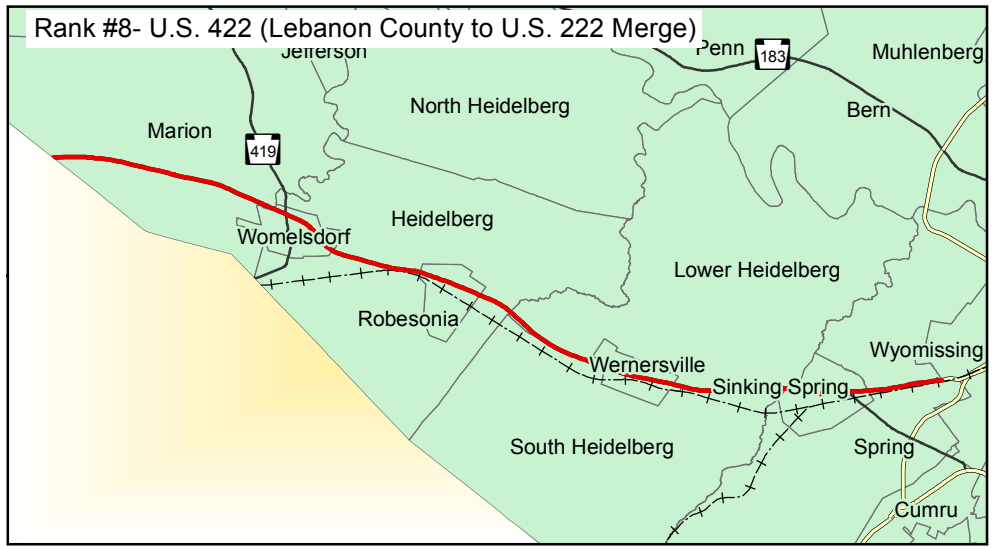
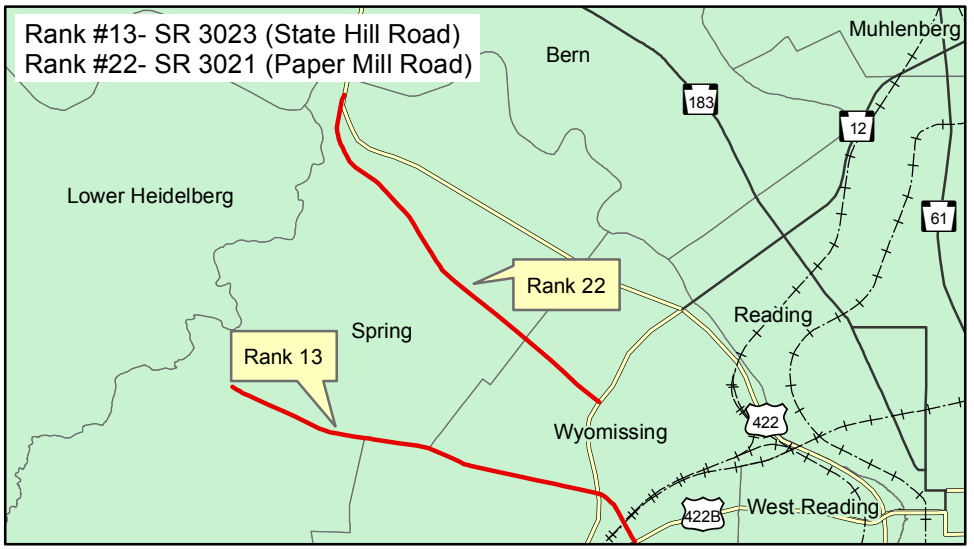
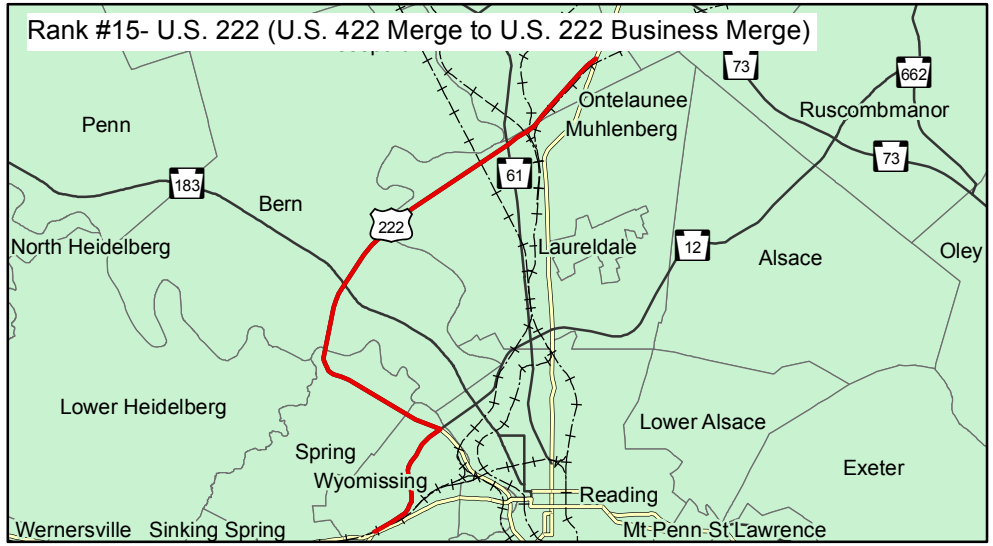
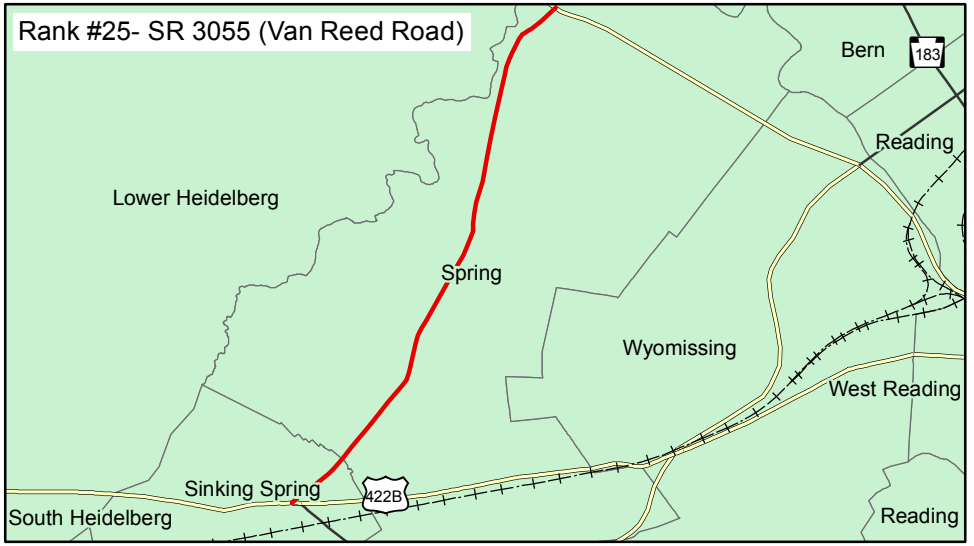
FIGURE 23

Suburban Berks Joint Comprehensive Plan Congested Corridors Based on Travel Time and Volume









Congestion Management Corridor
Railroads
Interstate
US Route
State Route
Municipal Boundaries

Source: Berks County Planning Commmission GIS, Berks County Mapping, Berks County GIS, Berks DES, PennDOT, RATS 2016 Congestion Management Process

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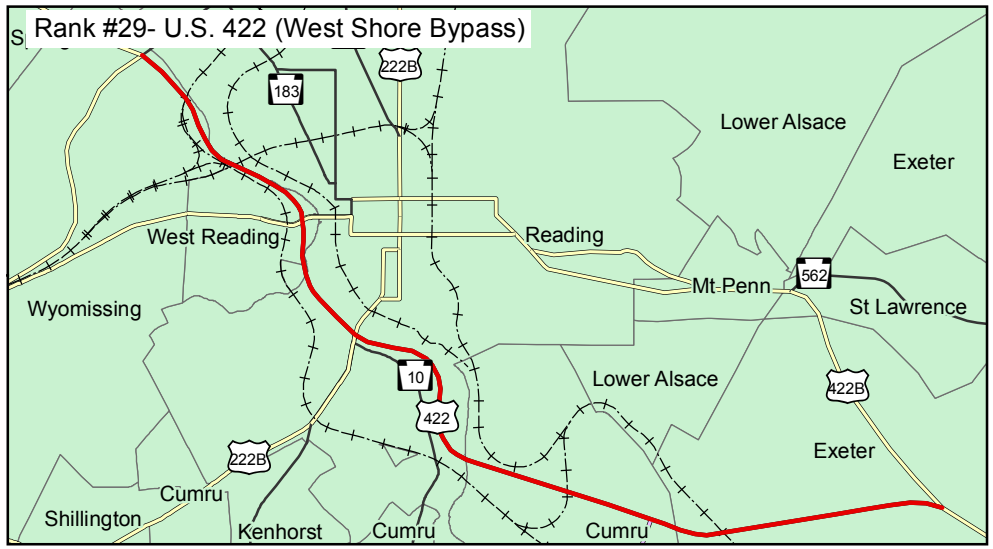
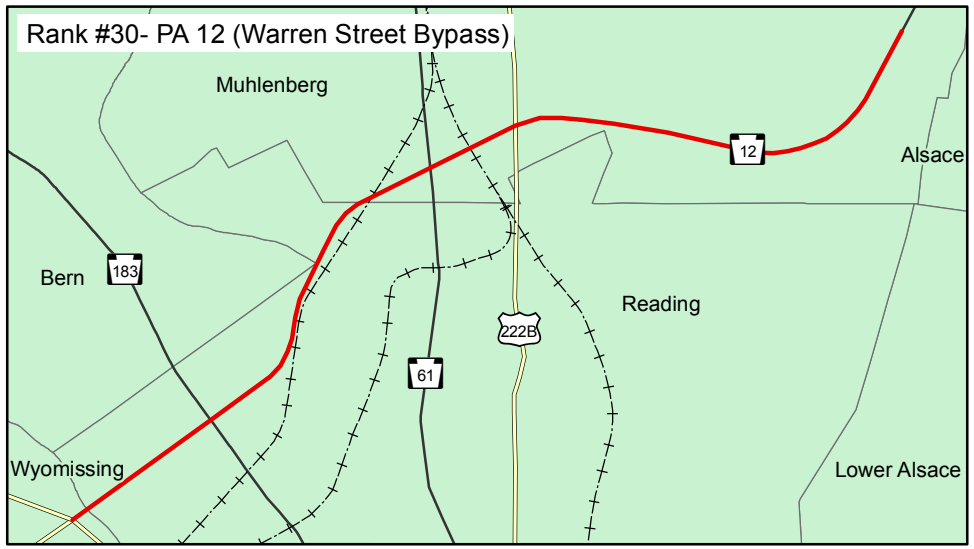
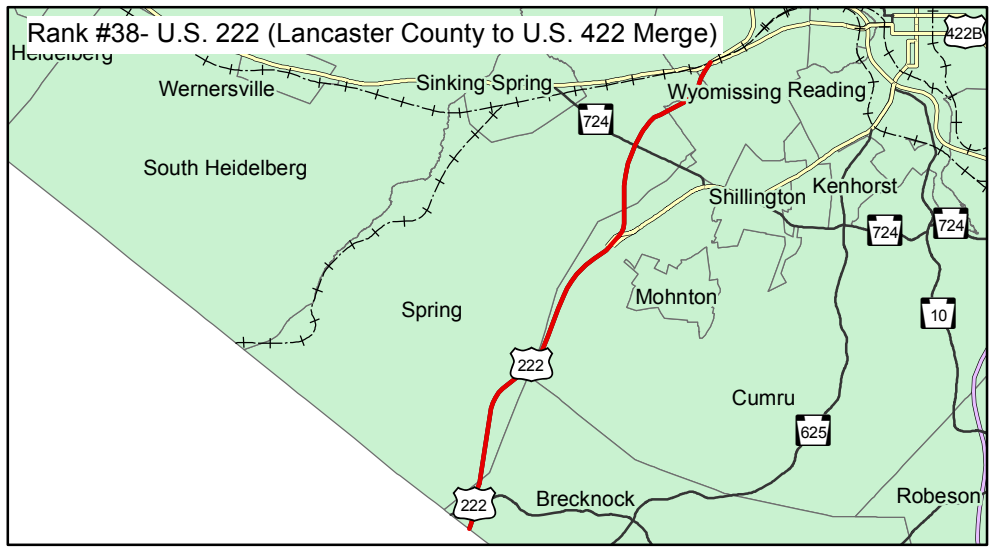
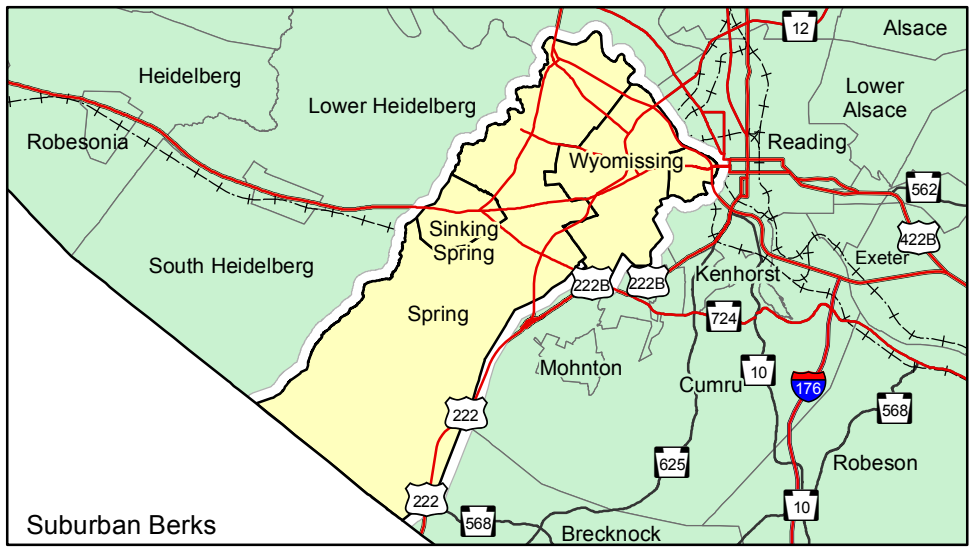
FIGURE 24

Suburban Berks Joint Comprehensive Plan Congested Corridors Based on Travel Time and Volume









N

Congestion Management Corridor
Railroads
Interstate
US Route
State Route
Municipal Boundaries

Source: Berks County Planning Commmission GIS, Berks County Mapping, Berks County GIS, Berks DES, PennDOT, RATS 2016 Congestion Management Process

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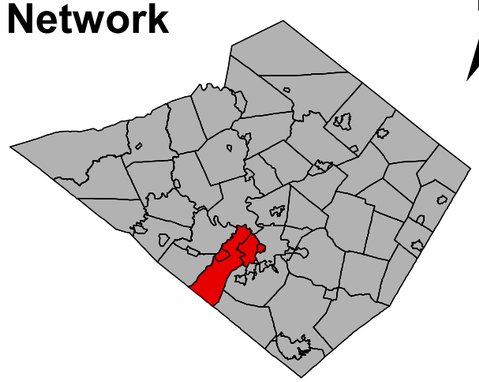
FIGURE 25

Sinking Spring, Spring, West Reading, Wyomissing
Joint Comprehensive Plan Update: September 2018

National Highway System and Sidewalk / Trail Network



N

Legend

- National Highway System
- BARTA Routes
- Sidewalk Network
- Trail Network
- Streams and Water Bodies
- Roads
- Railroads
- Municipal Boundaries

Source data: Berks County Planning Commission GIS, Berks County GIS/IS, Berks County Mapping, Berks DES

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0 0.75 1.5 Miles

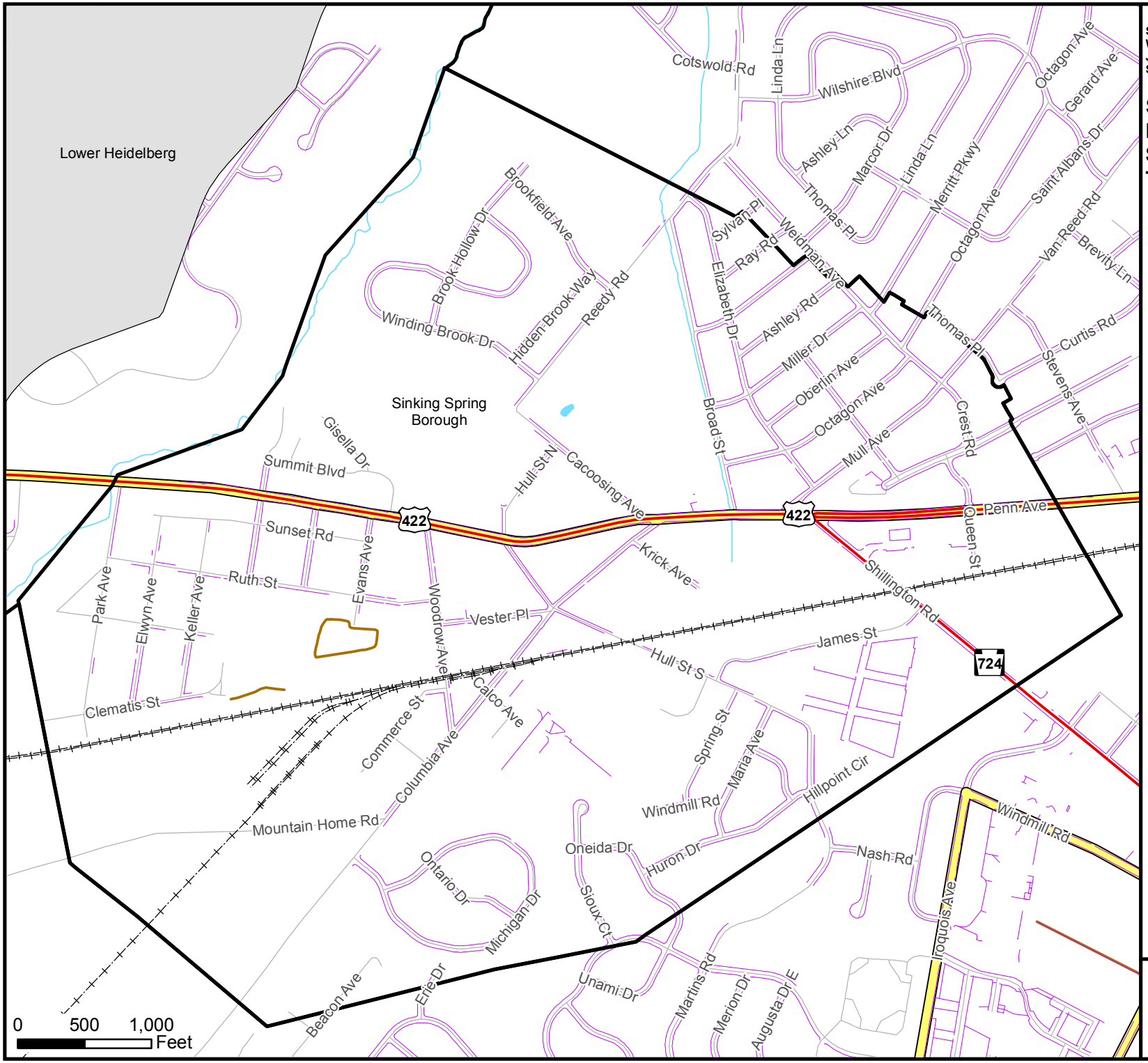
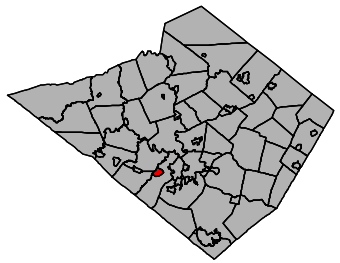


FIGURE 26

Sinking Spring, Spring, West Reading, Wyomissing Joint Comprehensive Plan Update September 2018

Sinking Spring Borough National Highway System and Sidewalk / Trail Network

N



Legend

- National Highway System
- BARTA Routes
- Sidewalk Network
- Trail Network
- Streams and Water Bodies
- Roads
- Railroads
- Municipal Boundaries

Source data:
Berks County Planning Commission GIS, Berks County Mapping, Berks County GIS/IS, Berks DES

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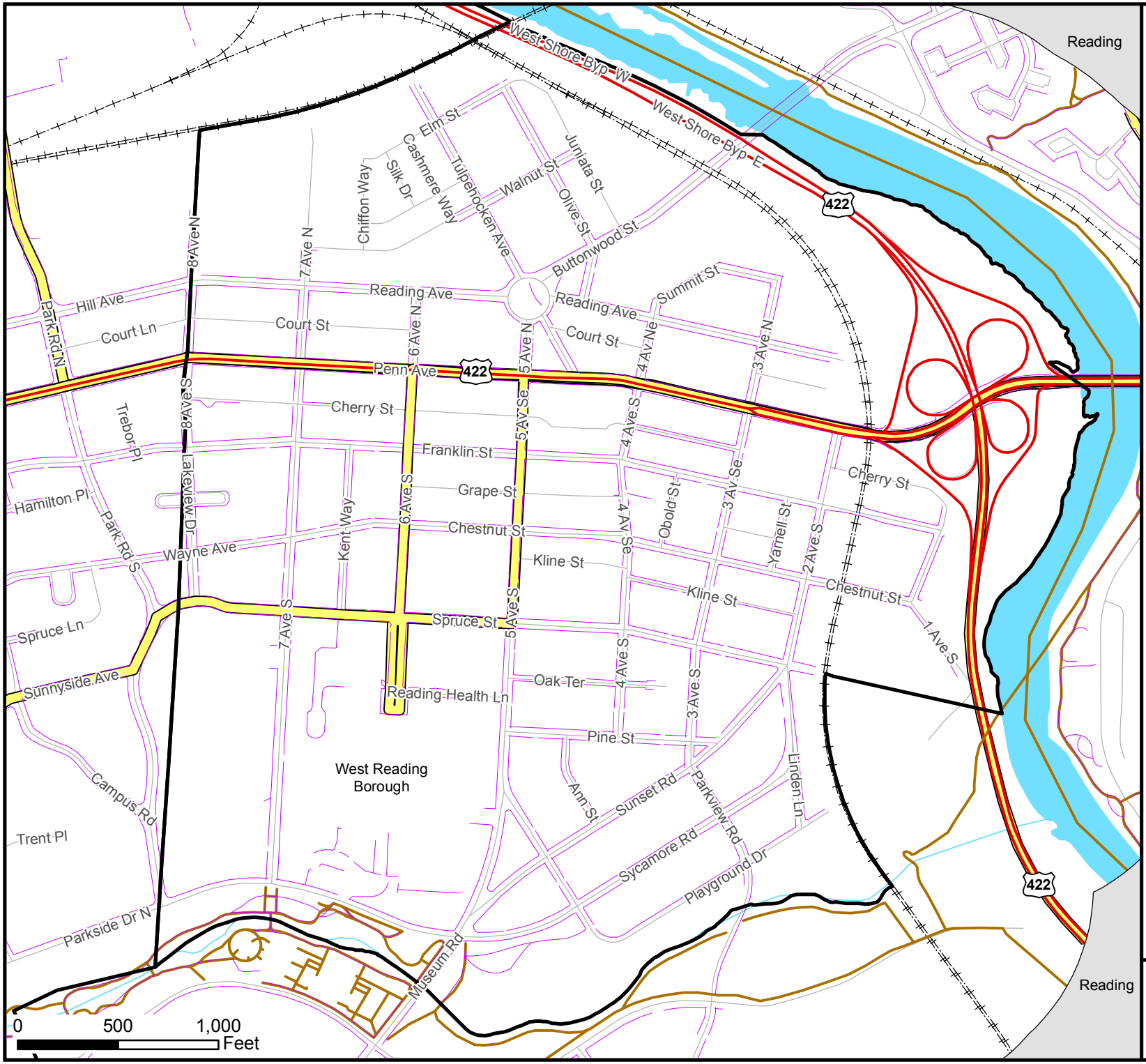
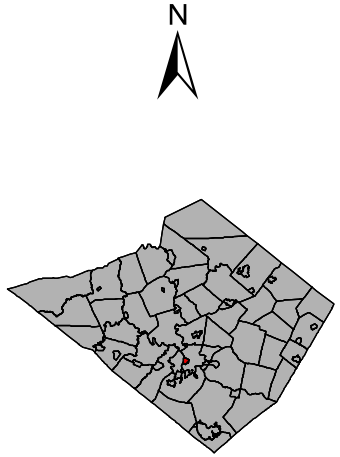
FIGURE 27

Sinking Spring, Spring,
West Reading, Wyomissing
Joint Comprehensive Plan Update
September 2018

West Reading Borough National Highway System and Sidewalk / Trail Network





Legend

- National Highway System
- BARTA Routes
- Sidewalk Network
- Trail Network
- Streams and Water Bodies
- Roads
- Railroads
- Municipal Boundaries

Source data:
Berks County Planning Commission GIS, Berks County Mapping, Berks County GIS/IS, Berks DES, PennDOT

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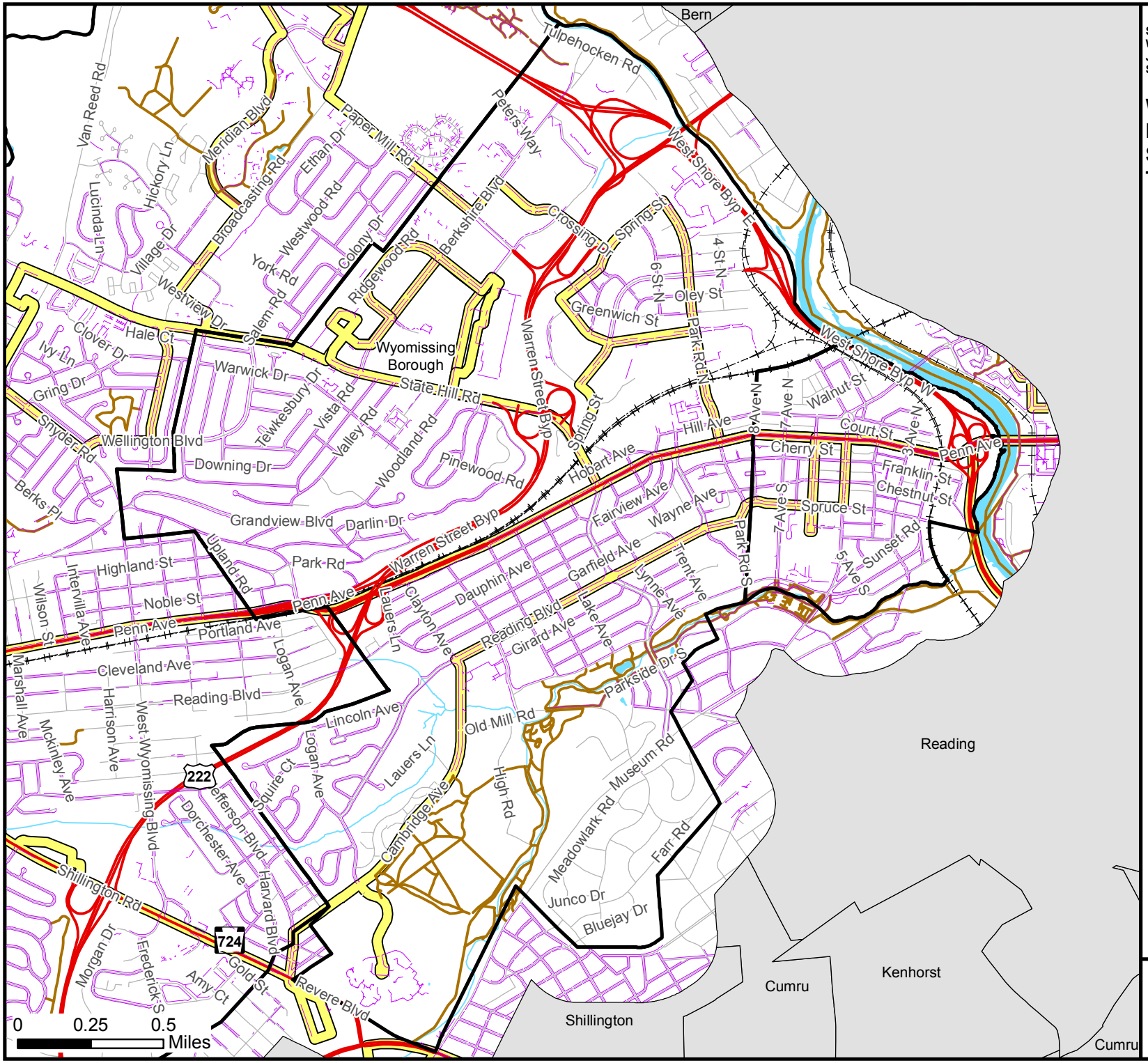
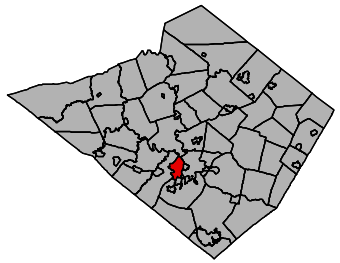


FIGURE 28

Sinking Spring, Spring,
West Reading, Wyomissing
Joint Comprehensive Plan Update
September 2018

Wyomissing Borough National Highway System and Sidewalk / Trail Network

N



Legend

- National Highway System
- BARTA Routes
- Sidewalk Network
- Trail Network
- Streams and Water Bodies
- Roads
- Railroads
- Municipal Boundaries

Source data:
Berks County Planning Commission GIS, Berks County Mapping, Berks County GIS/IS, Berks DES

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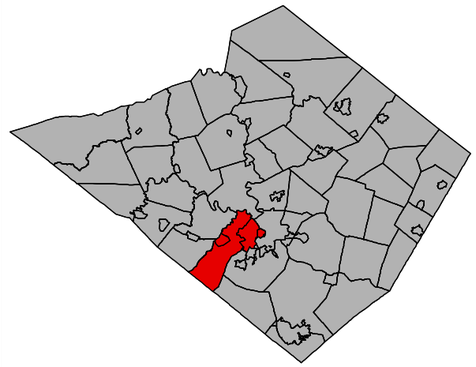
FIGURE 29

Sinking Spring, Spring, West Reading, Wyomissing
Joint Comprehensive Plan Update: September 2018

Transportation Improvement Projects



Legend

- Bridge Project
- Highway Project
- Highway Project
- Streams and Water Bodies
- US Route
- State Route
- Roads
- Railroads
- Municipal Boundaries

* Includes sites identified by surveys conducted from one or more of the following groups: Pennsylvania Historic Museum Commission, Berks Nature, George Meiser and local historical societies.

Source data: Berks County Planning Commission GIS, Berks County GIS/IS, Berks County Mapping, Berks DES

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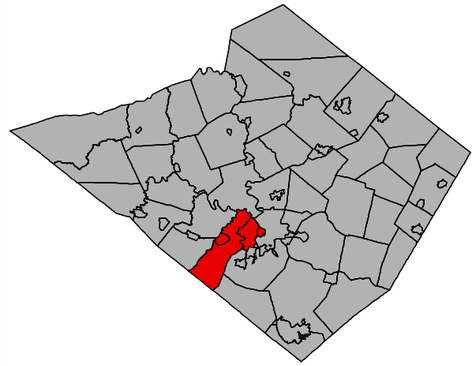
FIGURE 30

Sinking Spring, Spring, West Reading, Wyomissing
Joint Comprehensive Plan Update: September 2018

Municipal Crash Data 2014-2016



Legend

- Fatal Crashes
- Injury Crashes
- Damage Crashes
- Streams and Water Bodies
- US Route
- State Route
- Roads
- Railroads
- Municipal Boundaries

Source data: Berks County Planning Commission GIS, Berks County GIS/IS, Berks County Mapping, Berks DES, PennDOT

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0 0.75 1.5 Miles