



Delaware Valley
Regional Planning
Commission

JUNE 2007

ALLEGHENY AVE

Road Safety Audit

Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency that provides continuing, comprehensive and coordinated planning to shape a vision for the future growth of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties, as well as the City of Philadelphia, in Pennsylvania; and Burlington, Camden, Gloucester and Mercer counties in New Jersey. DVRPC provides technical assistance and services; conducts high priority studies that respond to the requests and demands of member state and local governments; fosters cooperation among various constituents to forge a consensus on diverse regional issues; determines and meets the needs of the private sector; and practices public outreach efforts to promote two-way communication and public awareness of regional issues and the Commission.



Our logo is adapted from the official DVRPC seal, and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole, while the diagonal bar signifies the Delaware River. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey.

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The crash data used in this report was provided by the Pennsylvania Department of Transportation for the Delaware Valley Regional Planning Commission's traffic safety related transportation planning and programming purposes only. The raw data remains the property of the Pennsylvania Department of Transportation and its release to third parties is expressly prohibited without the written consent of the Department.

ALLEGHENY AVENUE ROAD SAFETY AUDIT

1.0 BACKGROUND

This project represents the coordination of the Delaware Valley Regional Planning Commission's (DVRPC) Planning Work Program and Pennsylvania Department of Transportation (PennDOT) District 6 Safety Plan. DVRPC's planning work program includes a Road Safety Audit Program. All state departments of transportation are required to develop a Strategic Highway Safety Plan (SHSP) in order to draw on safety funds according to SAFETEA-LU, the federal transportation legislation. In Pennsylvania each district is required to have a Safety Plan to be incorporated in the state's SHSP. In PennDOT's District 6 Safety Plan several corridors are identified under Section 148 Planned Safety Projects eligible for Highway Safety Improvement Program funding. This was an opportunity to analyze corridors which were already on the plan and eligible for dedicated funding.

Whereas, the goal of this project is to improve and promote transportation safety on the region's roadways while maintaining mobility, the main objective is to address the safe operation of the roadway and ensure a high level of safety for all road users. The road safety audit program is conducted to generate improvement recommendations and countermeasures for roadway segments demonstrating a history of, or potential for a high incidence of motor vehicle crashes. The emphasis is placed on identifying low cost, quick turnaround safety projects to address the issues where possible but will not exclude the more complex projects.

1.1 The Audit

Prior to the road safety audit activities on site, DVRPC collected, reviewed and analyze data (video roadway under different conditions, traffic volume data, turning movement counts, maps, aerial photographs, previous traffic reports and crash data). Using the crash data, crash clusters were identified and mapped for several locations along Allegheny Avenue. These locations were the main focus of the road safety audit.

The Road Safety Audit was conducted on April 5, 2007 (Pre-Audit Meeting); April 6, 2007 (Field View); and April 9, 2007 (Post-Audit Meeting).

The Pre-Audit meeting involved the definition of road safety audit and how it differs from a corridor study process; the required steps of an audit; presentation of the corridor issues and an exchange of ideas and knowledge of the roadway. Two videos showing the corridor under day and night time conditions were also shown.

The field view involved the audit team which was made up of federal, state, and local officials and other stakeholders walking the corridor and identifying transportation safety problems. See **Appendix A** for list of audit team members.

The post-audit meeting was spent discussing the findings from the field view and determining priorities.

1.2 Overview of the Study Area

The study area is approximately 5 miles of Allegheny Avenue between Ridge and Aramingo Avenues in the City of Philadelphia; see **Appendix B** for *Study Area Map*. Allegheny Avenue is functionally classified as an urban minor arterial and runs in a west to east direction. It traverses the city from the Schuylkill River in the west via Ridge Avenue to the Delaware River in the east via North Delaware Avenue. The land use in the corridor is a mixture of residential, commercial, light industrial, institutions and storage. As a result, there is a high volume of pedestrian traffic.

The physical character of the study corridor is distinctly different east and west of Sedgley Avenue. East of Sedgley Avenue, Allegheny Avenue has three lanes, one travel lane in each direction with a center left turn lane. There are opposing left turn lanes at intersections. The traffic signals in this section of the corridor are on overhead mast arms along with street name signs. West of Sedgley Avenue, the roadway is two lanes, one travel lane in each direction with left turn lanes at some intersections. West of Broad Street, with the exception of Henry Avenue/Hunting Park Avenue intersection traffic signals are post mounted. These signals do not have pedestrian heads.

The disparity in the physical character of the corridor is translated in the traffic volumes, as shown in the *Traffic Count Map* in **Appendix B**. In 2004, the average annual daily traffic was approximately 20,000 vehicles between 2nd and Front Streets, whereas in the same year approximately 7,000 vehicles were recorded for the location between 22nd and Broad Streets. The speed limit along the corridor is 30MPH. There are 108 intersections in the study area, of which 38 are signalized. Of the signalized intersections two are 5-legged intersections and one is 6-legged with complicated geometry.

There are bike lanes in both directions throughout the corridor. Parking is permitted curbside in most locations on both sides of the street. Sidewalks of varying width and varying condition are available throughout the corridor.

Southeastern Pennsylvania Transportation Authority (SEPTA) bus Route 60 serves the length of the study corridor. Average daily boardings for this service in 2005 were 12,148. The weekday boardings are higher. During the peak period this bus runs 4 minute headway. There are bus stops at most intersections along the corridor, the majority of which are located near-side. In addition to the Route 60 bus, there are multiple other transit services that operate in this corridor. There are 17 bus routes which crosses Allegheny Avenue in a north-south direction. The Regional Rail R6 line serves a

station on 22nd Street, half block north of Allegheny Avenue. The Broad Street Subway has a station at Allegheny Avenue and Broad Street and the Market-Frankford Line has a station at Kensington Avenue and Allegheny Avenue.

1.3 Crash Data

According to PennDOT's crash data there were 376 reportable crashes between 2003 and 2005. Reportable crashes are crashes which may result in a fatality, injury and/or property damage rendering the vehicle disabled, requiring it be towed from the scene. A comprehensive analysis of the crash data is shown in **Appendix C**. Of the reportable crashes, there were 113 crashes in 2003 (30%); 135 crashes in 2004 (36%); and 128 crashes in 2005 (34%). The months of May, July, and October had the highest number of crashes; 43, 45, and 42 respectfully. The winter months (December through March) had the fewest reportable number of crashes averaging 24. Angle (104), rear end (99), and hit pedestrians (86) crashes represented 77% of the 376 reportable crashes. There was one fatal crash resulting from the reportable crashes during the study period, 341 injury crashes of varying levels of severity and 34 property damage only crashes. The majority of the crashes occurred during fair weather (81%), dry road surface conditions (79%), and daytime (61%) conditions.

2.0 FINDINGS AND RECOMMENDATIONS

The following represents the findings and recommendations of the Allegheny Avenue Road Safety Audit.

Corridor-wide Issues

<u>CORRIDOR WIDE ISSUES</u>	<u>LEVEL OF EFFORT REQUIRED</u>	<u>POTENTIAL SAFETY BENEFIT</u>	<u>COMMENTS</u>
<p>Sidewalks</p> <ul style="list-style-type: none"> • Sidewalks are cracked and rutted • Tree roots dislodge sidewalk pavement • Remnants of removed sign posts (tripping hazards) • Inappropriate slope and location of curb ramps • Ramps do not have truncated domes and are not even with the roadway pavement in sections • Many ramps do not align with crosswalk • Construction blocks sidewalk 	<p>Low Low Low Medium Medium Medium Low</p>	<p>High High High High High High High</p>	<p>The maintenance of sidewalks are the responsibility of the property owner but the onus is on the City of Philadelphia that they comply with set standards</p> <p>Most ramps along the corridor are not appropriate for the wheelchair-bound disabled or the sight impaired</p> <p>Sidewalks were closed due to construction without the proper signage or pedestrian accommodations</p>
<p>Signs</p> <ul style="list-style-type: none"> • Regulatory and warning signs are faded • Street name signs especially those in the western section of the corridor are too small and not easily readable • Signs are needed to complement "no parking" pavement markings 	<p>Low Low Low</p>	<p>High High High</p>	<p>Installing appropriate signage is a low cost quick turnaround project which can have high safety benefits</p> <p>Correctly locating appropriate signage is necessary to achieve the maximum safety benefit.</p>

<u>CORRIDOR WIDE ISSUES</u>	<u>LEVEL OF EFFORT REQUIRED</u>	<u>POTENTIAL SAFETY BENEFIT</u>	<u>COMMENTS</u>
at bus stops and intersections • School Zones are not defined • “Share the Road” signs are not appropriate • Existing “Bicycle Lane” signs are not to MUTCD specification Signs (continued) • “School Crossing” signs missing arrows or “Ahead” • In the 3 lane section of the corridor “Left Lane Must Turn Left” signs are misplaced • Trees block signs	Low	High	Beginning and end of school zones should be defined with proper signs
	Low	N/A	
	Low	High	“Share the Road” signs are not appropriate because there is a designated bike lane
	Low	High	
	Low	High	
	Low	High	Trim trees as appropriate or relocate signs
Debris/Trash • Trash and debris on sidewalks • Debris observed in bike lanes • Debris observed in drainage grates	Low	High	Keeping bike lanes and sidewalks clean will keep these road users in their designated areas. Blocked drains can cause flooding and problems for road users
Parking • Motor vehicle double park – blocking bike lane and portions of the adjacent lane • Motor vehicles are parked in bus stop designated areas • Motor vehicles are parked too close to the intersection • Motor vehicles are parked in “no parking zones”	Low	High	Illegal parking is an enforcement issue. This is prevalent throughout the corridor.
	Low	High	Vehicles parked at the curb too close to the intersection obscure sight lines of motorists entering the intersection especially at un-signalized intersections
	Low	High	
	Low	High	

<u>CORRIDOR WIDE ISSUES</u>	<u>LEVEL OF EFFORT REQUIRED</u>	<u>POTENTIAL SAFETY BENEFIT</u>	<u>COMMENTS</u>
<ul style="list-style-type: none"> • Cars observed parked on sidewalk in several locations • Parked vehicles limit the visibility of pedestrians in the crosswalk to motorists 	<p>Low</p> <p>Low</p>	<p>High</p> <p>High</p>	<p>Vehicles illegally parked at the intersections and on sidewalks are detrimental to the safety of pedestrians</p>
<p>Traffic Signals West of Broad Street</p> <ul style="list-style-type: none"> • Post mounted <p>Traffic signals (continued)</p> <ul style="list-style-type: none"> • Traffic signals not visible behind large vehicles • Some are awkwardly located and hardly visible to motorists • Too many signals • Pedestrian heads are missing • Signals blocked by trees 	<p>High</p> <p>Low</p>	<p>High</p> <p>High</p>	<p>Upgrade signals and mount overhead with pedestrian heads</p> <p>Evaluate the need for all existing signals during upgrade</p> <p>Trim trees as appropriate to improve visibility</p>
<p>Street Lighting</p> <ul style="list-style-type: none"> • Missing at intersections, bridges and overpasses 	<p>Medium</p>	<p>Medium</p>	
<p>Crosswalks</p> <ul style="list-style-type: none"> • Pavement markings are faded • Poor visibility • Crosswalks are missing • Vehicles are parked in the crosswalk 	<p>Low</p>	<p>High</p>	<p>Crosswalk striping should be continental style for enhanced visibility to motorists</p> <p>Due to the high pedestrian traffic in the corridor crosswalks should be at all side streets</p> <p>Inlet grates in the crosswalk presents</p>

<u>CORRIDOR WIDE ISSUES</u>	<u>LEVEL OF EFFORT REQUIRED</u>	<u>POTENTIAL SAFETY BENEFIT</u>	<u>COMMENTS</u>
<ul style="list-style-type: none"> Inlet grates are in crosswalks 			a safety issue for everyone especially the disabled
Access Management <ul style="list-style-type: none"> Some retail/commercial establishments do not have defined access and egress points 	Medium	Medium	Defined access and egress points for motorist will be beneficial because they reduce potential automobile/pedestrian conflict points
Buses <ul style="list-style-type: none"> Pick up/drop off passengers in the travel lane instead of the designated bus stop location 	Low	Medium	Curb buses. Passengers are on the curb instead of the roadway – safer environment Consider building bulb-outs at bus stops where the roadway is 60 feet or wider. This would enhance pedestrian visibility and safety and is a viable solution to illegal parking in bus zones
One Way Cross Streets <ul style="list-style-type: none"> Higher volumes Speeding Pedestrian signal head missing 	Low	High	Examples are 2 nd , 5 th , 6 th , and Front Streets. Install speed limit sign and investigate the application of red light running cameras

Location Specific Issues

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>LEVEL OF EFFORT REQUIRED</u>			<u>POTENTIAL SAFETY BENEFIT</u>		
		Low	Med	High	Low	Med	High
Ridge Avenue Intersection							
<ul style="list-style-type: none"> No crosswalk on the north side of the Allegheny/Ridge Avenues intersection over Ridge Avenue 	<ul style="list-style-type: none"> Add continental style crosswalk to the southbound approach on Ridge Avenue 	X					X
<ul style="list-style-type: none"> Due to the geometry of the intersection Allegheny Avenue traffic approaching the intersection has the potential to enter Ridge Avenue without slowing. Because of the slope of Ridge Avenue sight distance can be an issue for motorists 	<ul style="list-style-type: none"> Add “No Turn on Red” sign Square off the intersection to cause traffic to slow to make the right turn on to Ridge Avenue 	X					X
<ul style="list-style-type: none"> Overhead signal head for Allegheny Avenue is mounted on the same mast arm as the Ridge Avenue signal head. As a result Allegheny Avenue signal head is misaligned 	<ul style="list-style-type: none"> Re-align signal head with lanes 	X					X
Between 32nd Street and Henry Avenue							
<ul style="list-style-type: none"> The entrance to <i>Pep Boys</i> consists of their entire frontage across the sidewalk 	<ul style="list-style-type: none"> Access management – establish defined entrance and exit points 		X			X	
Allegheny/Hunting Park/Henry Avenues Intersection							
<ul style="list-style-type: none"> Henry Avenue approach, long crosswalk over six lanes; no indication when to cross roadway 	<ul style="list-style-type: none"> Install pedestrian signal head with countdown 		X				X
<ul style="list-style-type: none"> No “School Crossing” signs (except on Allegheny Ave.) 	<ul style="list-style-type: none"> Install “School Crossing” signs at all legs of the intersection given school located at the intersection 	X				X	

SAFETY ISSUE	REMEDIAL STRATEGY	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
		Low	Med	High	Low	Med	High
Allegheny/Hunting Park/Henry Avenues Intersection (continued)							
<ul style="list-style-type: none"> No pedestrian signal heads 	<ul style="list-style-type: none"> Install pedestrian signal heads at all crosswalks 		X				X
<ul style="list-style-type: none"> The “No Left Turn” sign located between 30th Street and Hunting Park is confusing to Hunting Park motorists headed westbound 	<ul style="list-style-type: none"> Realign sign for Henry Avenue motorist only 	X					X
<ul style="list-style-type: none"> Traffic signal at the intersection malfunctions (green and red at the same time) 	<ul style="list-style-type: none"> City of Philadelphia engineers assured the audit team this issue was given priority 	X					X
	<ul style="list-style-type: none"> Given the intersection’s complicated geometry and width, the feasibility of a roundabout should be investigated. 		X				X
28th Street Intersection							
<ul style="list-style-type: none"> Crosswalk at this location is not easily visible to motorists 	<ul style="list-style-type: none"> Upgrade crosswalks to continental style 	X					X
<ul style="list-style-type: none"> Curb ramp and crosswalk on the west corner of the intersection across Allegheny Avenue are awkwardly aligned due to the location of fire hydrant 	<ul style="list-style-type: none"> Re-align curb ramp with crosswalk by moving both to the west of their current location. Alternatively, remove crosswalk and allow crossing only at the east side crosswalk. 	X					X
<ul style="list-style-type: none"> Abandoned fire box pole is obstructing the curb ramp on the north side of the intersection 	<ul style="list-style-type: none"> Remove abandon fire box pole 	X					X
Between 27th Street and N. Bailey Street							
<ul style="list-style-type: none"> Cars parked curb side in a “no parking zone” 	<ul style="list-style-type: none"> Work with Philadelphia Police and Philadelphia Parking Authority to enforce “no parking zones” 	X				X	

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>LEVEL OF EFFORT REQUIRED</u>			<u>POTENTIAL SAFETY BENEFIT</u>		
		Low	Med	High	Low	Med	High
Between 27th Street and 26th Street							
<ul style="list-style-type: none"> Motor vehicles are illegally parked in front of SEPTA Bus Depot 	<ul style="list-style-type: none"> Work with SEPTA and Philadelphia Police to resolve this issue 	X				X	
<ul style="list-style-type: none"> SEPTA buses exit the Depot from angle doors closest to 26th Street with difficulty making right turns 	<ul style="list-style-type: none"> Work with SEPTA to provide alternate exit for vehicles 	X				X	
Fox Street Intersection							
<ul style="list-style-type: none"> Crosswalks are fading 	<ul style="list-style-type: none"> Re-stripe crosswalks in the continental style 	X					X
<ul style="list-style-type: none"> Given the intersection's awkward geometry, there is confusion navigating the intersection. There is a high volume of turning movements. Intersection is difficult for bicyclists to negotiate. High volume truck route. 	<ul style="list-style-type: none"> Intersection needs an in-depth study 		X			X	
22nd Street Intersection							
<ul style="list-style-type: none"> Gas station on the southwest corner has three access points on Allegheny Avenue. Access points lead into bus stop. There are also two access points to this property on 22nd Street. Additionally, there are parked vehicles on Allegheny Avenue between these driveways. This interferes with motorist sight distance exiting the property 	<ul style="list-style-type: none"> Close the access points closest to the intersection on both Allegheny Avenue and 22nd Street. Clearly define driveways to minimize motor vehicle/pedestrian conflict; and delineate sidewalk with curbs. (access management) Eliminate parking in the area using "no parking" signs to inform motorists 	X					X
			X				X
		X					X

SAFETY ISSUE	REMEDIAL STRATEGY	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
		Low	Med	High	Low	Med	High
22nd Street Intersection (continued)							
<ul style="list-style-type: none"> On the northeast corner KFC Restaurant has no defined driveways 	<ul style="list-style-type: none"> Clearly define driveways to minimize motor vehicle/pedestrian conflict; and delineate sidewalk with curbs. (access management) 		X				X
Between 21st Street and 17th Street							
<ul style="list-style-type: none"> No traffic signal between 21st Street and 17th Street as a result there is speeding in this section of the corridor 	<ul style="list-style-type: none"> Work with City of Philadelphia Police to enforce the speed limit 		X				X
<ul style="list-style-type: none"> Bridges between 19th and 17th Streets needs lighting 	<ul style="list-style-type: none"> Install lighting under bridges in this area. 		X			X	
17th Street Intersection							
<ul style="list-style-type: none"> There are no pedestrian signal heads at this intersection. 	<ul style="list-style-type: none"> There is an elementary school on the northwest corner of the intersection; installing pedestrian signal heads at this location should be given priority 		X				X
<ul style="list-style-type: none"> Pedestrian timing on this signal appears to be too short 	<ul style="list-style-type: none"> Re-evaluate the signal timing 	X					X
15th Street Intersection							
<ul style="list-style-type: none"> There are no pedestrian signal heads at this intersection. 	<ul style="list-style-type: none"> There is an elementary school one block away from the intersection; installing pedestrian signal heads at this location should be given priority 	X					X

SAFETY ISSUE	REMEDIAL STRATEGY	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
		Low	Med	High	Low	Med	High
Broad Street Intersection							
<ul style="list-style-type: none"> Large number of bus passengers with no shelter 	<ul style="list-style-type: none"> Build bus shelter which could be combined with shelter for subway stairs on the northeast and southwest corners of the intersection 		X			X	
<ul style="list-style-type: none"> Wide intersection with no pedestrian refuge island. There are no pedestrian signal heads. Need pedestrian fence along the median to prevent jaywalking. Red light running may be an issue 	<ul style="list-style-type: none"> <i>PennDOT is currently working on improvement for this intersection</i> 						
Germantown Avenue Intersection							
<ul style="list-style-type: none"> Confusion with alignment and traffic control approaching Germantown Avenue on Sedgley Street westbound 	<ul style="list-style-type: none"> Place advance directional sign and lane designation – <i>“Allegheny Avenue Traffic Keep Right”</i> 	X					X
<ul style="list-style-type: none"> There are no pedestrian signal heads 	<ul style="list-style-type: none"> There is a school at the intersection; installing pedestrian signal heads at this location should be given priority 	X					X
<ul style="list-style-type: none"> No pedestrian crossing over Germantown Avenue along eastbound Allegheny Avenue 	<ul style="list-style-type: none"> Landscape the triangle to shorten crossing distance 	X					X

SAFETY ISSUE	REMEDIAL STRATEGY	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
		Low	Med	High	Low	Med	High
Sedgley Street vicinity							
<ul style="list-style-type: none"> Motorist traveling eastbound on Sedgely Street towards Allegheny Avenue are going down slope. The crosswalk is in the right turn slip ramp which is also on a curve. Therefore pedestrians in the crosswalk are not visible to approaching motorist from a distance 	<ul style="list-style-type: none"> Install an advance “pedestrian ahead” sign on Sedgely Street west of the intersection for eastbound motorists 	X					X
<ul style="list-style-type: none"> Confusion due to roadway configuration Double arrow pavement marking adds to confusion 	<ul style="list-style-type: none"> Install clear advance directional signage Remove pavement marking and use directional signage 	X X					X X
<ul style="list-style-type: none"> Cars parked in right lane westbound (in front of business, approaching Sedgley Street) force vehicles to use bike lane, and cover directional pavement markings 	<ul style="list-style-type: none"> Post “No Parking” signs and work with City of Philadelphia Police to enforce it. 	X					X
<ul style="list-style-type: none"> No warning signs for bridge structure westbound 	<ul style="list-style-type: none"> Place reflective signs on bridge structure 	X					X
Between Glenwood Avenue and Franklin Street							
<ul style="list-style-type: none"> Westbound motorists speed going down incline and into the curve; making it difficult to stay in their travel lane 	<ul style="list-style-type: none"> Install “reduce speed curve ahead” sign east of the curve. Install centerline rumble-strip 	X					X

SAFETY ISSUE	REMEDIAL STRATEGY	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
		Low	Med	High	Low	Med	High
6th Street Intersection							
<ul style="list-style-type: none"> Faded pavement markings over the bridge 	<ul style="list-style-type: none"> Re-stripe pavement markings 	X					X
Between 5th Street and 3rd Street							
<ul style="list-style-type: none"> Sidewalk and bike lane closed due to construction with no advance signs indicating closure 	<ul style="list-style-type: none"> City of Philadelphia should enforce policies requiring contractors to install and maintain "closure" signs 	X					X
2nd Street Intersection							
<ul style="list-style-type: none"> Heavy left turn movement in the AM peak and heavy pedestrian activity at intersection. Signals do not have pedestrian signal heads 	<ul style="list-style-type: none"> Install pedestrian signal heads (man/hand or countdown) 	X					X
Howard Street Intersection							
<ul style="list-style-type: none"> "Left Lane Must Turn Left" is located on the far side of the intersection 	<ul style="list-style-type: none"> Install sign in advance of the intersection 	X					X
Front Street Intersection							
<ul style="list-style-type: none"> Between Front and A – cars parked on the sidewalks 	<ul style="list-style-type: none"> Work with City of Philadelphia Police to enforce illegal parking 	X					X
<ul style="list-style-type: none"> High volume of left turn movement from Allegheny Avenue to Front Street result in delays of through traffic 	<ul style="list-style-type: none"> More in-depth study required to investigate the potential for a protected left turn phase 		X				X
A Street Intersection							
<ul style="list-style-type: none"> High volume of left turn movement from Allegheny Avenue to A Street result in delays of through traffic 	<ul style="list-style-type: none"> More in-depth study required to investigate the potential for a protected left turn phase 		X				X

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>LEVEL OF EFFORT REQUIRED</u>			<u>POTENTIAL SAFETY BENEFIT</u>		
		Low	Med	High	Low	Med	High
Between Kip Street and B Street							
<ul style="list-style-type: none"> Flashing speed limit/school sign is located directly in front of school 	<ul style="list-style-type: none"> Relocate signs in advance of school or install "School Zone" signs 	X					X
Between Rosehill Street and C Street							
<ul style="list-style-type: none"> Daycare center – priority location for pedestrian improvements 	<ul style="list-style-type: none"> Improve pedestrian amenities 	X					X
Boudinot Street Intersection							
<ul style="list-style-type: none"> "Left Lane Must Turn Left" is located at the intersection 	<ul style="list-style-type: none"> Install sign in advance of the intersection 	X					X
Between D Street and Rorer Street							
<ul style="list-style-type: none"> Pavement markings missing for center turn lane 	<ul style="list-style-type: none"> Re-stripe center turn lane 	X					X
<ul style="list-style-type: none"> School AM drop off and PM pick-up causes traffic congestion 	<ul style="list-style-type: none"> Work with school district to institute "Walking School Bus". Investigate "Safe Routes to School" program which may provide safer walking routes for school children Work with City of Philadelphia Police for traffic enforcement in front of the school during these times 		X				X
Rorer Street Intersection							
<ul style="list-style-type: none"> Flashing speed limit/school sign is located directly in front of school 	<ul style="list-style-type: none"> Relocate signs in advance of school or install "School Zone" signs 	X					X

SAFETY ISSUE	REMEDIAL STRATEGY	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
		Low	Med	High	Low	Med	High
Kensington Avenue Intersection							
<ul style="list-style-type: none"> Eastbound Allegheny Avenue channelized right turn lane onto Kensington Avenue is used as a through lane. SEPTA buses do this also after picking up passengers on the northeast corner of the intersection 	<ul style="list-style-type: none"> Move bus stop to far side of intersection – bus can then remain in through lane and not misuse the right turn only lane. Provide bus shelter 	X					X
<ul style="list-style-type: none"> Heavy pedestrian volumes, jaywalking 	<ul style="list-style-type: none"> Install pedestrian fencing at the intersection to channel pedestrians to the crosswalk or other pedestrian control 		X				X
<ul style="list-style-type: none"> The westbound and eastbound approaches to the intersection are wide 	<ul style="list-style-type: none"> Install pedestrian refuge island between the through and right turn lane 		X				X
<ul style="list-style-type: none"> Traffic on Kensington Avenue tend to run the red light due to the configuration of the intersection – takes longer for this traffic to clear the intersection 	<ul style="list-style-type: none"> Re-evaluate the timing of the signal Add an all red phase to the signal timing Long Term – redesign the intersection 	X				X	X
<ul style="list-style-type: none"> Lighting under the rail bridge is inadequate 	<ul style="list-style-type: none"> Improve the lighting under the bridge 		X			X	
<ul style="list-style-type: none"> Crosswalks pavement markings are fading 	<ul style="list-style-type: none"> Re-stripe pavement markings 	X					X
Walgreens Pharmacy Driveway							
<ul style="list-style-type: none"> Driveway not defined 	<ul style="list-style-type: none"> Make the driveway pavement different from sidewalk – identifiable by motorists and pedestrians Sign driveway for “No Left Turn” 	X					X

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>LEVEL OF EFFORT REQUIRED</u>			<u>POTENTIAL SAFETY BENEFIT</u>		
		Low	Med	High	Low	Med	High
Frankford Avenue Intersection							
<ul style="list-style-type: none"> High pedestrian volumes 	<ul style="list-style-type: none"> Improve pedestrian amenities – bus shelter, pedestrian man/hand or countdown signal heads 	X					X
Between Tulip Street and Aramingo Avenue							
<ul style="list-style-type: none"> High pedestrian volumes due to commercial activity and the hospital 	<ul style="list-style-type: none"> Improve pedestrian amenities – bus shelter, pedestrian man/hand or countdown signal heads 	X					X

3.0 CONCLUSION

As discussed earlier, the road safety audit program is conducted to generate improvement recommendations and countermeasures for roadway segments demonstrating a history of, or potential for a high incidence of motor vehicle crashes. The safety issues identified during the audit and documented in this report along with recommended strategies should improve the overall safety of Allegheny Avenue. These remedial strategies can be implemented as time and budget limitations permit. Additionally, many of the strategies identified can be implemented through routine maintenance. There are some areas which the audit team thought required further study for example the intersections of A Street/Allegheny Avenue and Fox Street/Allegheny Avenue.

Engineering strategies alone cannot effectively address the traffic safety issues identified along Allegheny Avenue; enforcement and education is a necessary component to address the human behavioral aspects to effectively reduce the number of crashes in the study area.

APPENDIX A
Audit Team

Allegheny Avenue Road Safety Audit

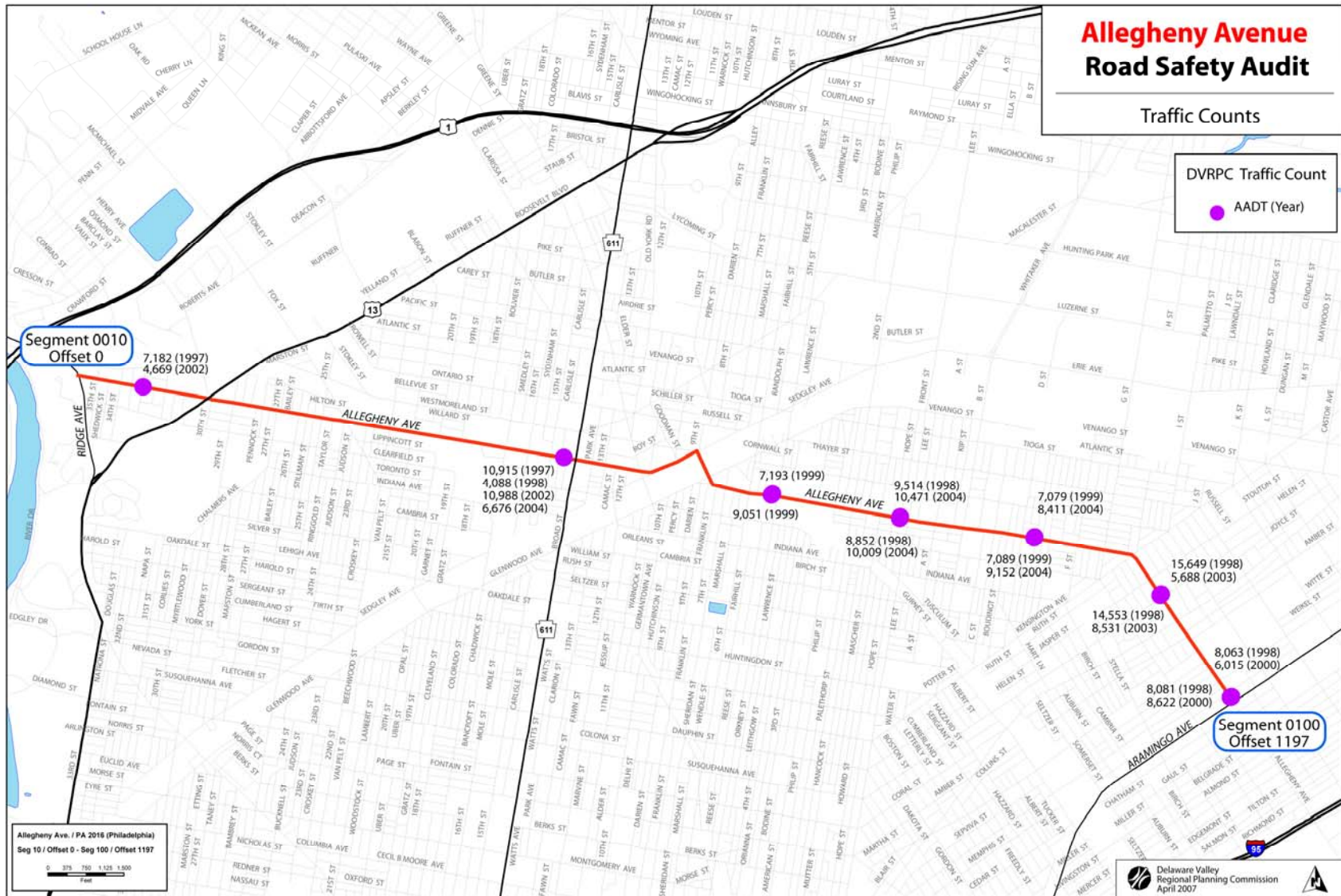
Audit Team

Name	Organization	Pre Audit Meeting	Field Audit	Post Audit Meeting
Rosemarie Anderson	Delaware Valley Regional Planning Commission	X	X	X
John Boyle	Greater Philadelphia Bicycle Coalition	X	X	X
Larry Bucci	Pennsylvania Department of Transportation	X	X	X
Paul Carafides	Delaware Valley Regional Planning Commission		X	
Michael Castellano	Federal Highway Administration	X		
Sgt Doreen Dean	City of Philadelphia Police Department	X	X	X
Jim Dellipriscoli	SEPTA	X	X	X
Charles Denny	City of Philadelphia Streets Department	X		X
David Dlugosz	City of Philadelphia Streets Department	X	X	X
Carmine Fiscina	Federal Highway Administration	X	X	
James Johnson	Delaware Valley Regional Planning Commission		X	X
Brendan Lee	School District of Philadelphia	X		
Richard Marquis	Federal Highway Administration	X		
Sgt. John McGrath	City of Philadelphia Police Department	X	X	
Regina Moore	Delaware Valley Regional Planning Commission	X	X	X
Kevin Murphy	Delaware Valley Regional Planning Commission	X	X	X
Tony Pannullo	Pennsylvania Department of Transportation	X	X	X
Sgt. William Rodgers	City of Philadelphia Police Department	X	X	X
Matthew Walker	Allegheny West Foundation	X	X	X
Mark Washington	City of Philadelphia Streets Department	X	X	X

APPENDIX B

Maps





APPENDIX C

Traffic Data

Road Safety Audit - 2007**Allegheny Avenue - Corridor wide Crash Summary, 2003 - 2005**

Year Range:	2003	to	2005	Area of: In County	67 On Route	2016
Between Segment	10	Offset	0	and Segment	100	1197 On Side Ind:
Between Segment	11	Offset	0	and Segment	101	1204 On Side Ind:

COLLISION TYPE

Non collision	3	1%
Rear-end	99	26%
Head-on	38	10%
Rear-to-rear (Backing)	3	1%
Angle	104	28%
Sideswipe (same dir.)	19	5%
Sideswipe (Opposite dir.)	11	3%
Hit fixed object	11	3%
Hit pedestrian	86	23%
Other or Unknown	2	1%
Total	376	

SEVERITY LEVEL

Not injured	34	9%
Killed	1	0%
Major injury	14	4%
Moderate injury	52	14%
Minor injury	207	55%
Injury/ Unknown Severity	54	14%
Unknown	14	4%
Total	376	

SEVERITY COUNT

Fatalities:	2	
Major	15	
Moderate	69	
Minor	338	
UNK Severity	91	
UNK If Injured	94	

ENVIR/ROADWAY FACTORS

Glare	3	1%
None	312	83%
Other animal in roadway	1	0%
Other roadway factor	2	1%
Other weather conditions	12	3%
Slippery road conditions	12	3%
Sudden weather	3	1%
Unknown	25	7%
Windy conditions	5	1%
Work Zone Related	1	0%
Total	376	

ROAD CONDITION

Dry	298	79%
Wet	66	18%
Snow covered	1	0%
Slush	3	1%
Ice	4	1%
Other	2	1%
Unknown (expired)	2	1%
Total	376	

WEATHER

No adverse conditions	304	81%
Rain	57	15%
Sleet (hail)	2	1%
Snow	5	1%
Rain and fog	2	1%
Other	2	1%
Unknown	4	1%
Total	376	

ILLUMINATION

Daylight	229	61%
Dark – no street lights	5	1%
Dark – street lights	121	32%
Dusk	13	3%
Dawn	1	0%
Dark – unknown roadway	4	1%
Other	1	0%
Unknown (expired)	2	1%
Total	376	

VEHICLE TYPE

Automobile	594	82%
Motorcycle	14	2%
Bus	15	2%
Small truck	33	5%
Large truck	11	2%
SUV	18	2%
Van	16	2%
Other type special veh	1	0%
Unicycle, bicycle or	14	2%
Unknown vehicle	5	1%
Total	721	

DRIVER ACTIONS

Driver was distracted	36	7%
Driving using hand-held phone	7	1%
Driving using hands-free phone	1	0%
Making illegal U-turn	6	1%
Making improper or careless turn	35	7%
Turning from wrong lane	3	1%
Proceeding w/o clearance after stop	10	2%
Running stop sign	7	1%
Running red light	31	6%
Failure to respond to TCD	5	1%
Tailgating	11	2%
Sudden slowing or stopping	14	3%
Illegally stopped on road	1	0%
Careless passing or lane change	15	3%
Passing in no passing zone	3	1%
Driving the wrong way on 1-way stre	1	0%
Careless or illegal backing on roadw	4	1%
Driving on the wrong side of roadwa	6	1%
Making improper entrance to highwa	5	1%
Careless parking or unparking	3	1%
Over or under compensation at curv	1	0%
Speeding	14	3%
Driving too fast for conditions	21	4%
Failure to maintain proper speed	4	1%
Driver fleeing police (police chase)	6	1%
Driver inexperienced	8	2%
Affected by Physical Condition	7	1%
Other improper driving actions	65	13%
Unknown	182	36%
Total	512	

Road Safety Audit - 2007
Allegheny Avenue - Corridor wide Crash Summary, 2003 - 2005

Year Range:	2003	to	2005	Area of: In County	67	On Route	2016
Between Segment	10	Offset	0	and Segment	100	Offset	1197 On Side Ind: 1
Between Segment	11	Offset	0	and Segment	101	Offset	1204 On Side Ind: 2

YEAR

2003	2004	2005	Total
113	135	128	376
30%	36%	34%	

MONTH

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
24	22	24	33	43	28	45	34	26	42	29	26	376
6%	6%	6%	9%	11%	7%	12%	9%	7%	11%	8%	7%	

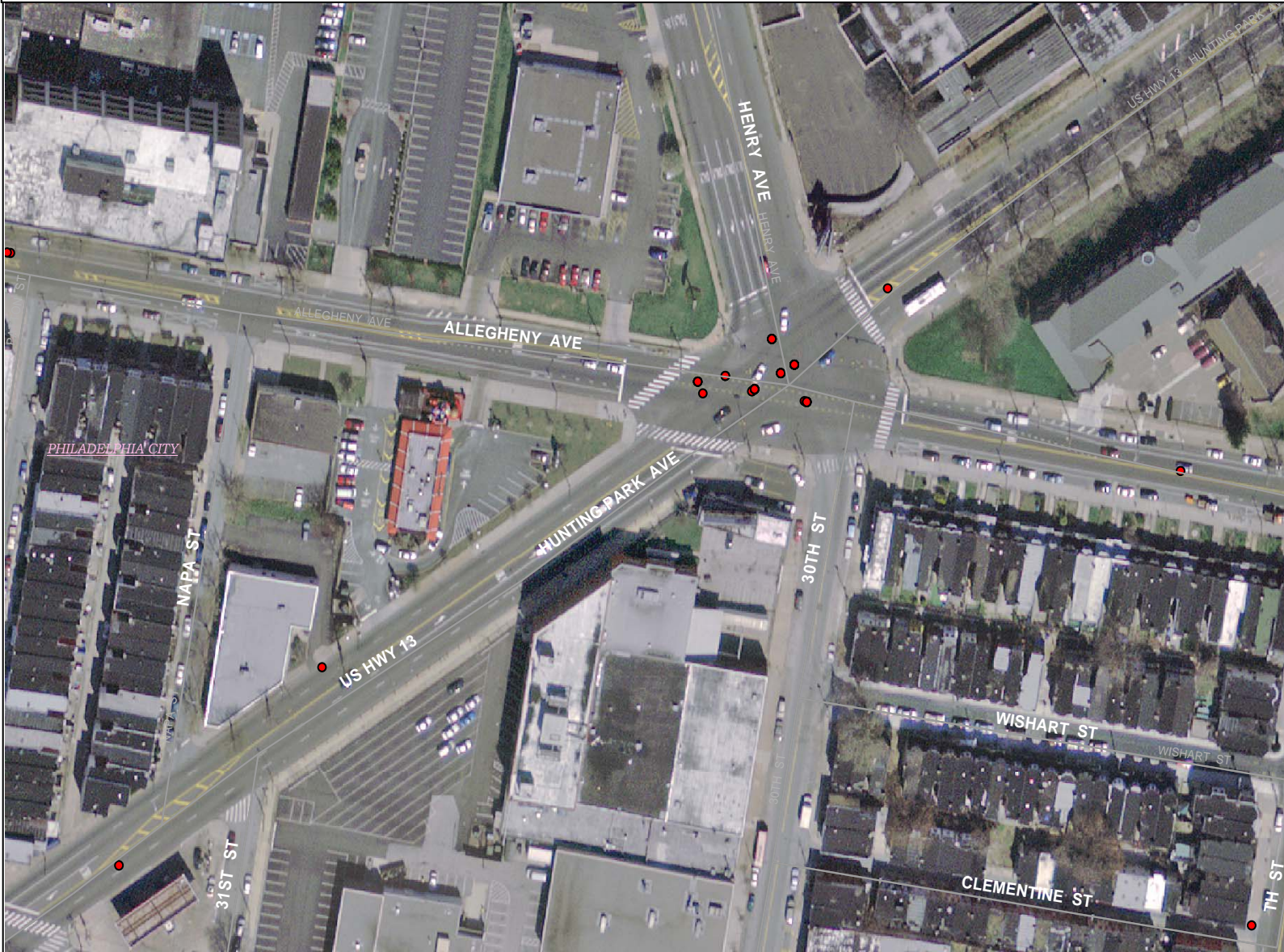
Day of Week

SUN	MON	TUE	WED	THR	FRI	SAT	Total
51	58	48	47	46	72	54	376
14%	15%	13%	13%	12%	19%	14%	

Hour of Day

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	99
7	10	15	7	5	4	5	3	14	17	11	11	16	18	17	30	21	27	32	15	22	16	15	18	8	12
2%	3%	4%	2%	1%	1%	1%	1%	4%	5%	3%	3%	4%	5%	5%	8%	6%	7%	9%	4%	6%	4%	4%	5%	2%	3%

1. Allegheny Ave. at Hunting Park Ave. and Henry Ave.
 Segment 10, Offset 2566 to Segment 20, Offset 0



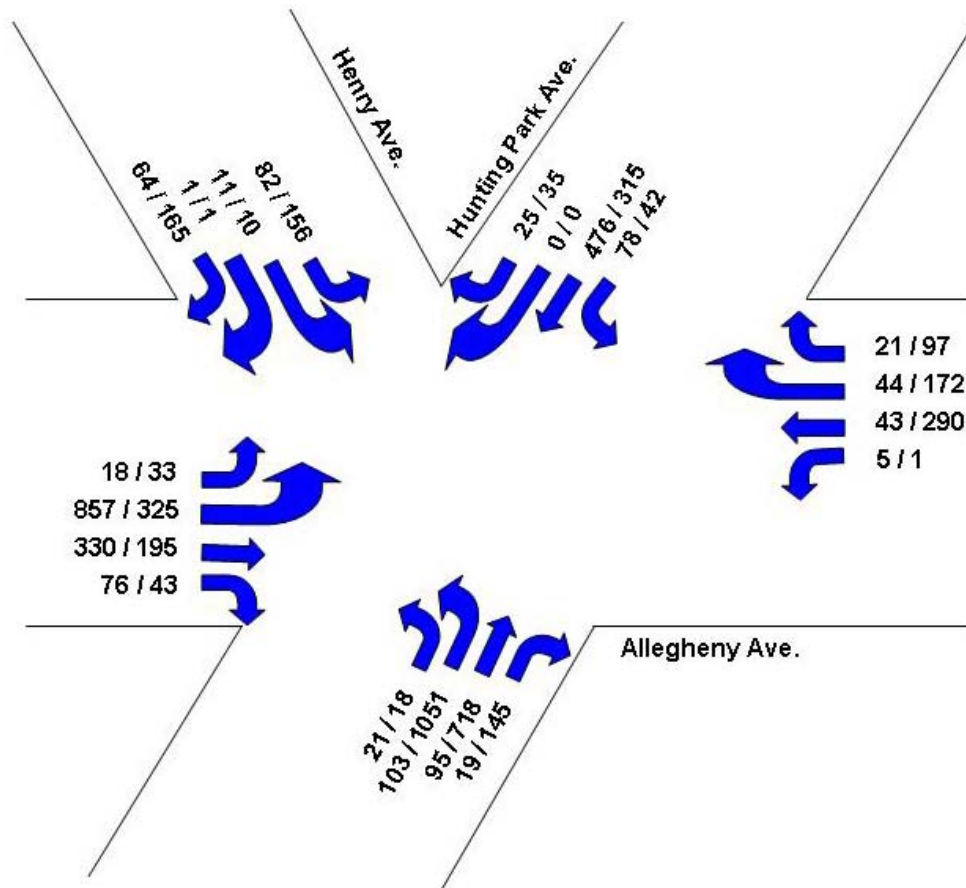
COLLISION TYPE	
Rear-end	2
Head-on	2
Angle	5
Hit pedestrian	2
Total	11
ILLUMINATION	
Daylight	4
Dark – no street lights	1
Dark – street lights	6
Total	11
WEATHER	
No adverse conditions	8
Rain	1
Sleet (hail)	1
Rain and fog	1
Total	11
SEVERITY COUNT	
Fatalities	0
Injuries	12

Allegheny Ave, Hunting Park Ave, and Henry Ave Existing Peak Hour Turning Movement Counts AM / PM

Peak Hours

AM: 8:00 – 9:00

PM: 5:00 – 6:00



2. Allegheny Ave. at 29th St.
 Segment 20, Offset 333 to Segment 20, Offset 448



COLLISION TYPE	
Rear-end	1
Head-on	3
Angle	5
Total	9
WEATHER	
No adverse conditions	7
Rain	2
Total	9
ILLUMINATION	
Daylight	7
Dark – street lights	1
Dusk	1
Total	9
SEVERITY COUNT	
Fatalities	0
Injuries	16
UNK If Injured	2

3. Allegheny Ave. at 22nd St.
 Segment 30, Offset 809 to Segment 30, Offset 1010

COLLISION TYPE	
Rear-end	2
Head-on	6
Hit pedestrian	2
Other or Unknown	1
Total	11
WEATHER	
No adverse conditions	9
Rain	1
Unknown	1
Total	11
ILLUMINATION	
Daylight	6
Dark – street lights	3
Dusk	1
Dark – unknown	1
Total	11
SEVERITY COUNT	
Fatalities	0
Injuries	12
UNK Severity	1
UNK If injured	3

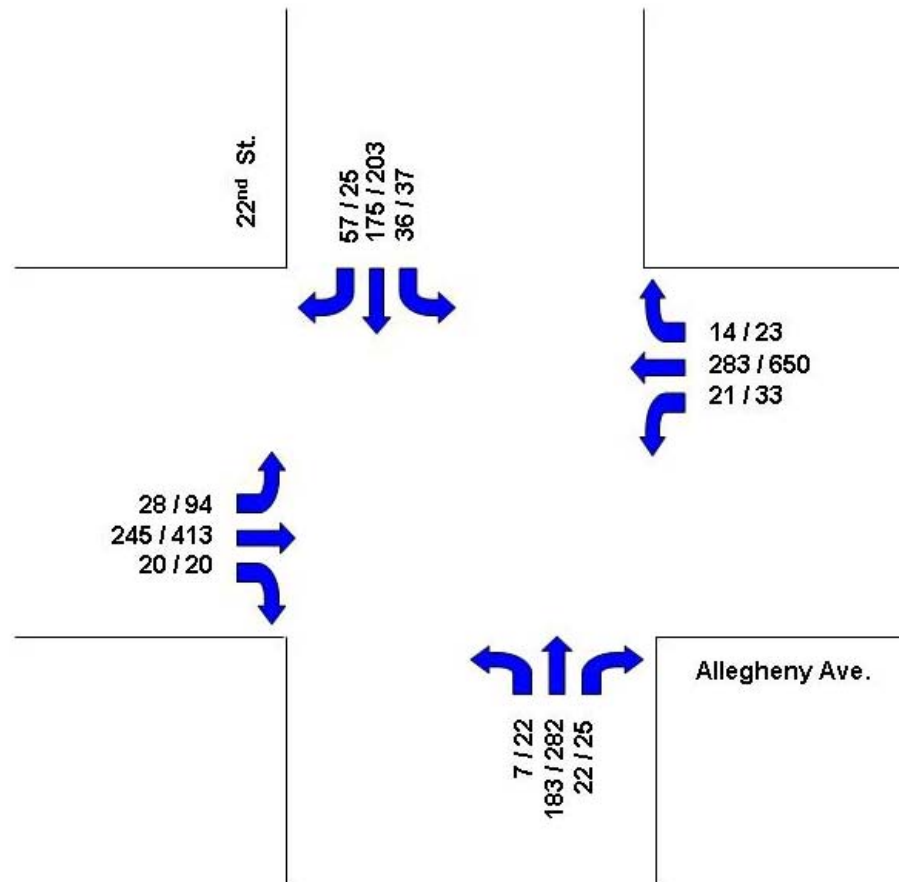


Allegheny Ave. and 22nd St. Existing Peak Hour Turning Movement Counts AM / PM

Peak Hours

AM: 8:00 – 9:00

PM: 4:15 – 5:15



4. Allegheny Ave. at 21st St.
 Segment 30, Offset 1363 to Segment 30, Offset 1364



COLLISION TYPE	
Rear-end	4
Head-on	1
Angle	8
Total	13
ILLUMINATION	
Daylight	9
Dark – street lights	4
Total	13
WEATHER	
No adverse conditions	9
Rain	4
Total	13
SEVERITY COUNT	
Fatalities	0
Injuries	22
UNK Severity	2
UNK If Injured	4

5. Allegheny Ave. at 17th St.
 Segment 40, Offset 486 to Segment 40, Offset 563



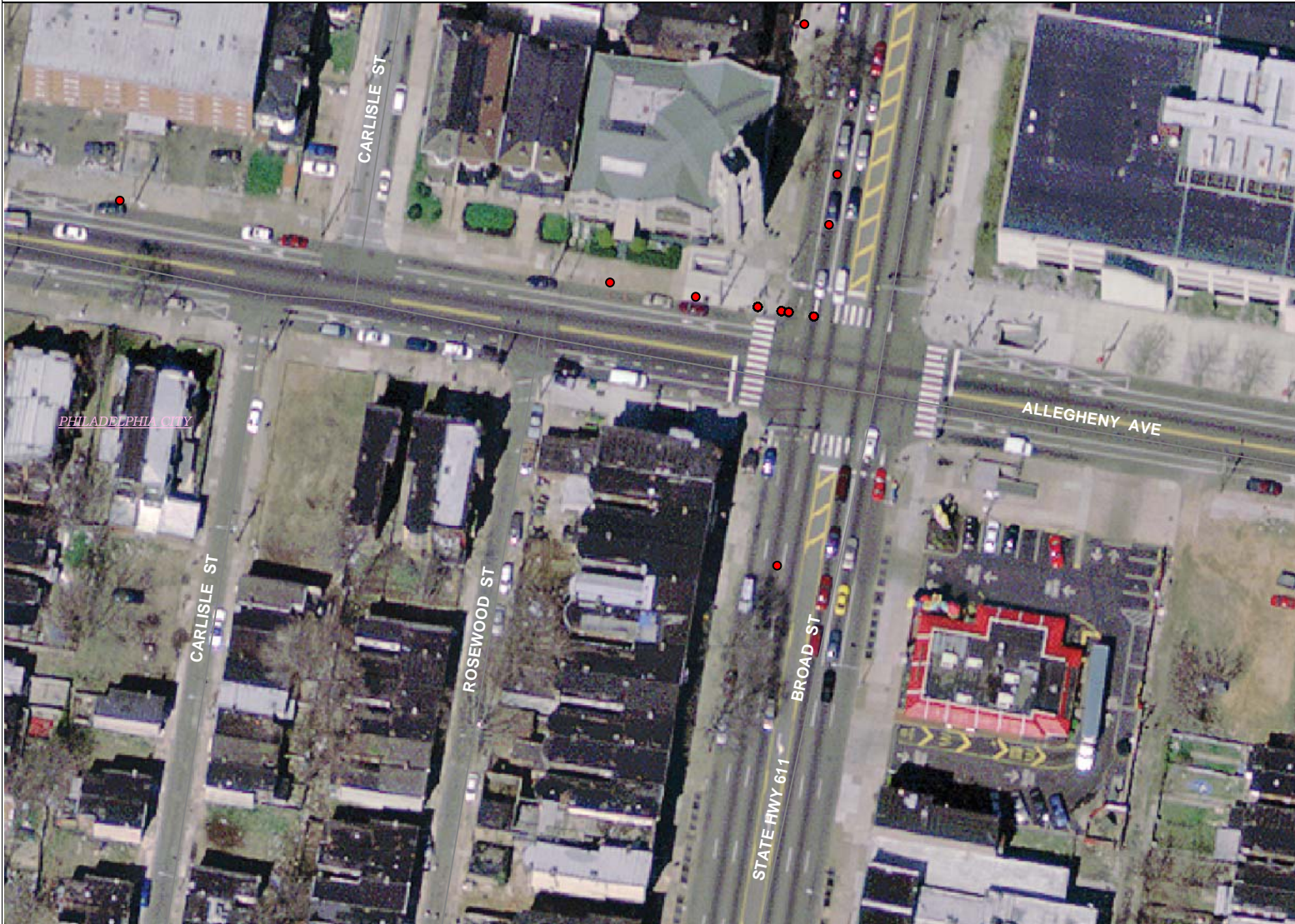
COLLISION TYPE	
Rear-end	1
Head-on	2
Angle	5
Sideswipe (same dir)	1
Sideswipe (opposite dir)	1
Hit pedestrian	2
Total	12
ILLUMINATION	
Daylight	7
Dark – no street lights	1
Dark – street lights	4
Total	12
WEATHER	
No adverse conditions	11
Rain	1
Total	12
SEVERITY COUNT	
Fatalities	0
Injuries	10
UNK Severity	5

6. Allegheny Ave. at 15th St.
 Segment 40, Offset 1447 to Segment 40, Offset 1577



COLLISION TYPE	
Rear-end	1
Head-on	1
Angle	5
Hit pedestrian	2
Total	9
ILLUMINATION	
Daylight	5
Dark – street lights	4
Total	9
WEATHER	
No adverse conditions	9
Total	9
SEVERITY COUNT	
Fatalities	0
Injuries	9
UNK Severity	3
UNK If Injured	4

7. Allegheny Ave. at Broad St.
 Segment 40, Offset 1840 to Segment 40, Offset 1936



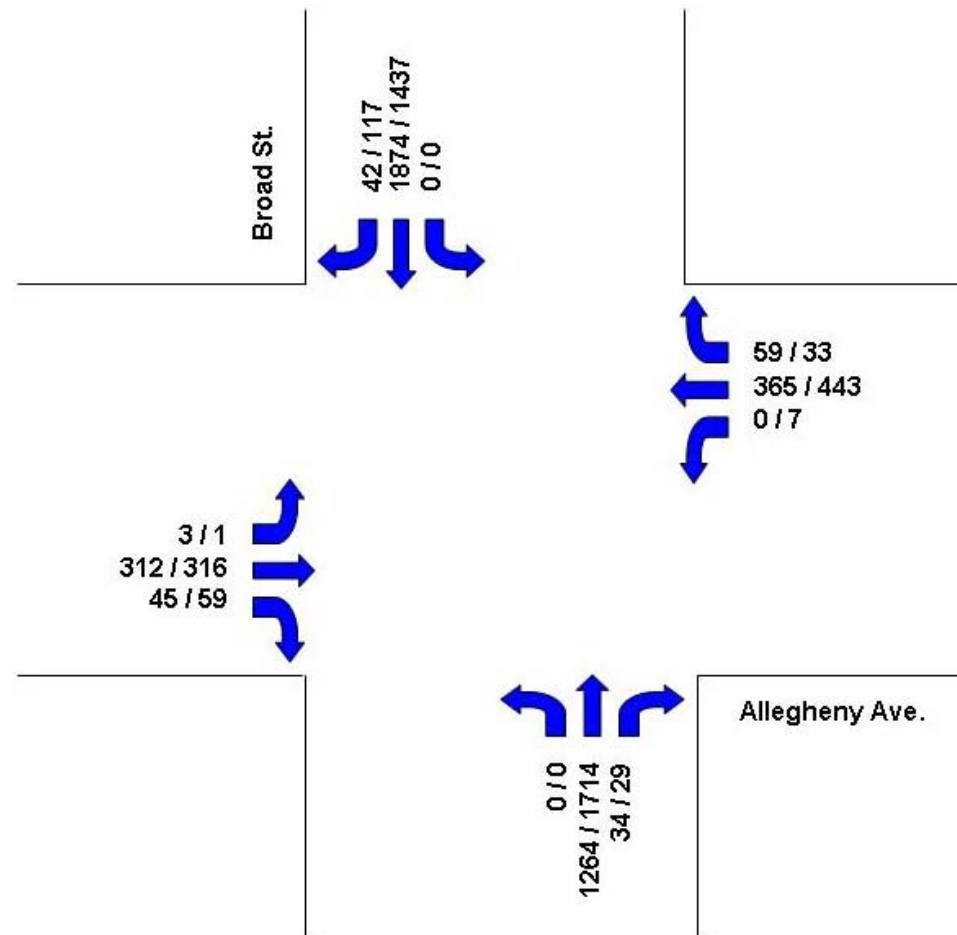
COLLISION TYPE	
Non collision	1
Rear-end	10
Rear-to-rear (backing)	1
Angle	3
Hit pedestrian	10
Total	25
ILLUMINATION	
Daylight	15
Dark – street lights	6
Dusk	2
Dawn	1
Dark – unknown	1
Total	25
WEATHER	
No adverse conditions	16
Rain	9
Total	25
SEVERITY COUNT	
Fatalities	2
Injuries	33
UNK Severity	5
UNK If Injured	9

Allegheny Ave. and Broad St. Existing Peak Hour Turning Movement Counts AM / PM

Peak Hours

AM: 7:15 – 8:15

PM: 4:45 – 5:45



8. Allegheny Ave. from Germantown Ave. to 11th St.
 Segment 40, Offset 3276 to Segment 50, Offset 0



COLLISION TYPE	
Rear-end	2
Head-on	3
Angle	5
Sideswipe (opposite dir)	1
Hit pedestrian	2
Other or Unknown	1
Total	14
ILLUMINATION	
Daylight	9
Dark – street lights	3
Dark – unknown	1
Other	1
Total	14
WEATHER	
No adverse conditions	11
Rain	3
Total	14
SEVERITY COUNT	
Fatalities	0
Injuries	26
UNK Severity	1
UNK If Injured	4

9. Allegheny Ave. at 2nd St. (vicinity)
 Segment 70, Offset 286 to Segment 70, Offset 362



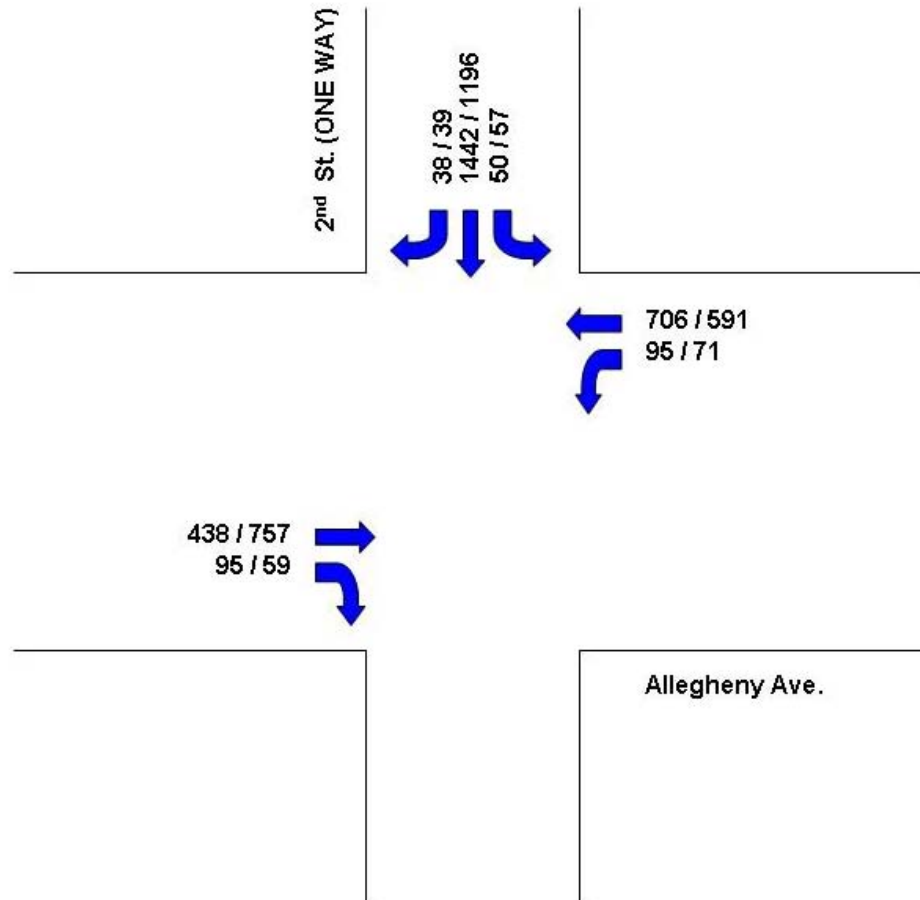
COLLISION TYPE	
Rear-end	5
Angle	5
Sideswipe (same dir)	1
Hit pedestrian	8
Total	19
ILLUMINATION	
Daylight	5
Dark – no street lights	1
Dark – street lights	11
Unknown (expired)	2
Total	19
WEATHER	
No adverse conditions	14
Rain	3
Unknown	2
Total	19
SEVERITY COUNT	
Fatalities	0
Injuries	19
UNK Severity	1
UNK If Injured	6

Allegheny Ave. and 2nd St. Existing Peak Hour Turning Movement Counts AM / PM

Peak Hours

AM: 7:30 – 8:30

PM: 4:45 – 5:45



10. Allegheny Ave. at Front St.
 Segment 70, Offset 1465 to Segment 70, Offset 1513



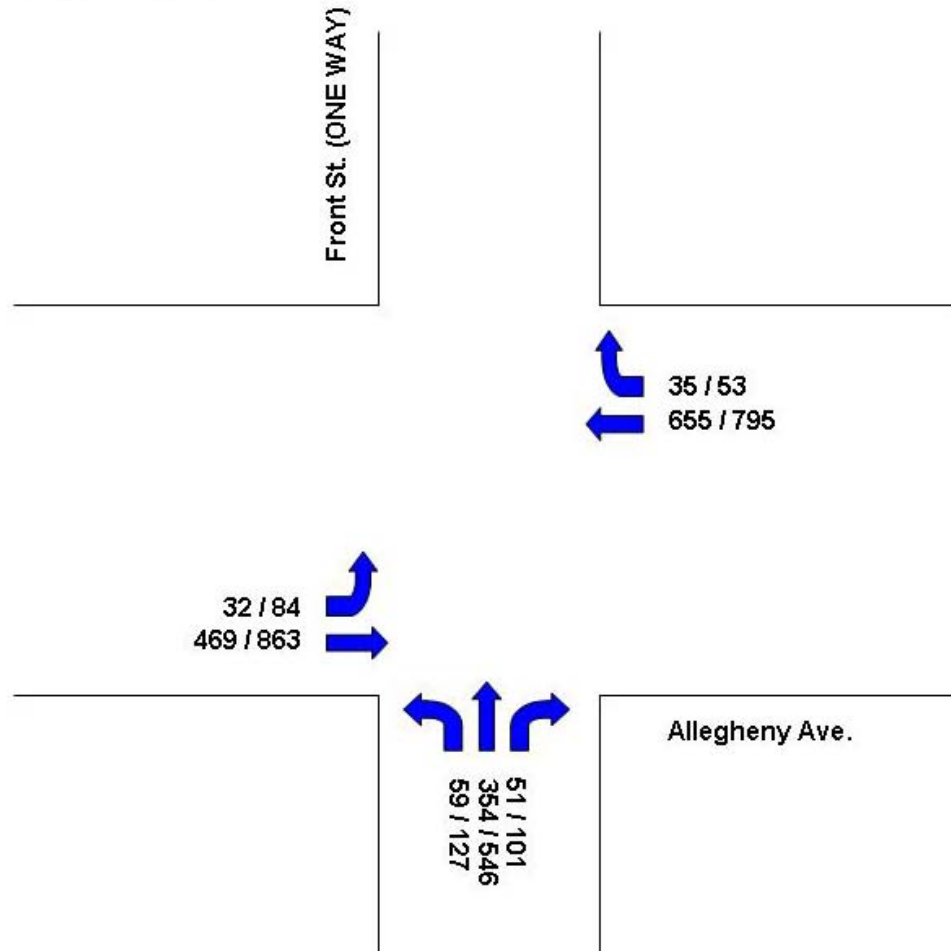
COLLISION TYPE	
Rear-end	1
Head-on	1
Angle	1
Sideswipe (same dir)	2
Hit pedestrian	7
Total	12
ILLUMINATION	
Daylight	8
Dark – street lights	3
Dark – unknown roadway	1
Total	12
WEATHER	
No adverse conditions	10
Rain	2
Total	12
SEVERITY COUNT	
Fatalities	0
Injured	12
UNK Severity	1
UNK If Injured	4

Allegheny Ave. and Front St. Existing Peak Hour Turning Movement Counts AM / PM

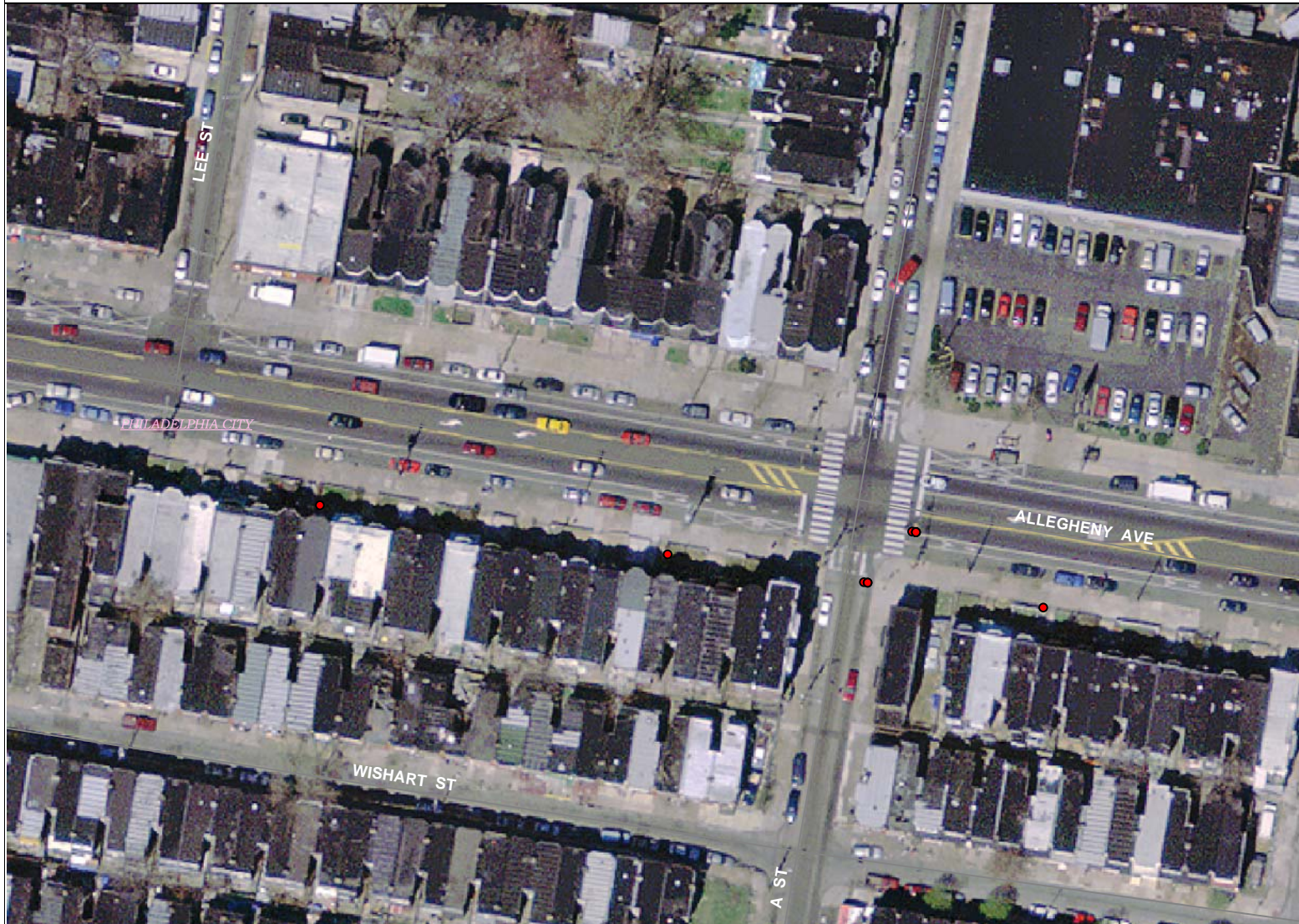
Peak Hours

AM: 7:30 – 8:30

PM: 5:00 – 6:00



11. Allegheny Ave. from Lee St. to A St.
 Segment 70, Offset 1722 to Segment 70, Offset 2109



COLLISION TYPE	
Rear-end	4
Angle	1
Hit pedestrian	4
Total	9
ILLUMINATION	
Daylight	6
Dark – street lights	2
Dusk	1
Total	9
WEATHER	
No adverse conditions	8
Rain	1
Total	9
SEVERITY COUNT	
Fatalities	0
Major	14
UNK If Injured	1

12. Allegheny Ave. from Ella St. to Rosehill St.
 Segment 70, Offset 2275 to Segment 80, Offset 99



COLLISION TYPE	
Rear-end	4
Head-on	2
Angle	2
Sideswipe (same dir)	2
Hit fixed object	2
Hit pedestrian	3
Total	15
ILLUMINATION	
Daylight	10
Dark – street lights	5
Total	15
WEATHER	
No adverse conditions	13
Rain	2
Total	15
SEVERITY COUNT	
Fatalities	0
Major	11
UNK Severity	7
UNK If Injured	7

13. Allegheny Ave. from Boudinot St. to D St.
 Segment 80, Offset 854 to Segment 80, Offset 1174



COLLISION TYPE	
Rear-end	4
Angle	1
Sideswipe (same dir)	1
Hit pedestrian	3
Total	9
ILLUMINATION	
Daylight	5
Dark – street lights	3
Dusk	1
Total	9
WEATHER	
No adverse conditions	8
Rain	1
Total	9
SEVERITY COUNT	
Fatalities	0
Injuries	10
UNK Severity	4
UNK If Injured	1

14. Allegheny Ave. from Rorer St. to E St.
 Segment 80, Offset 1448 to Segment 80, Offset 1727



COLLISION TYPE	
Rear-end	1
Head-on	2
Angle	3
Sideswipe (same dir)	1
Hit pedestrian	3
Total	10
ILLUMINATION	
Daylight	5
Dark - street lights	5
Total	10
WEATHER	
No adverse conditions	9
Rain	1
Total	10
SEVERITY COUNT	
Fatalities	0
Injuries	16
UNK Severity	1
UNK If Injured	6

15. Allegheny Ave. at F St.
 Segment 80, Offset 2278 to Segment 80, Offset 2487



COLLISION TYPE	
Rear-end	3
Angle	3
Hit pedestrian	5
Total	11
ILLUMINATION	
Daylight	8
Dark – street lights	3
Total	11
WEATHER	
No adverse conditions	10
Snow	1
Total	11
SEVERITY COUNT	
Fatalities	0
Injuries	13
UNK If Injured	1

16. Allegheny Ave. at G St.
 Segment 80, Offset 2781 to Segment 90, Offset 98



COLLISION TYPE	
Rear-end	4
Angle	2
Sideswipe (opposite dir)	1
Hit pedestrian	2
Total	9
ILLUMINATION	
Daylight	6
Dark – street lights	2
Dusk	1
Total	9
WEATHER	
No adverse conditions	7
Rain	2
Total	9
SEVERITY COUNT	
Fatalities	0
Injuries	10
UNK Severity	2
UNK If Injured	0

17. Allegheny Ave. from Potter St. to Kensington Ave.
 Segment 90, Offset 355 to Segment 90, Offset 852



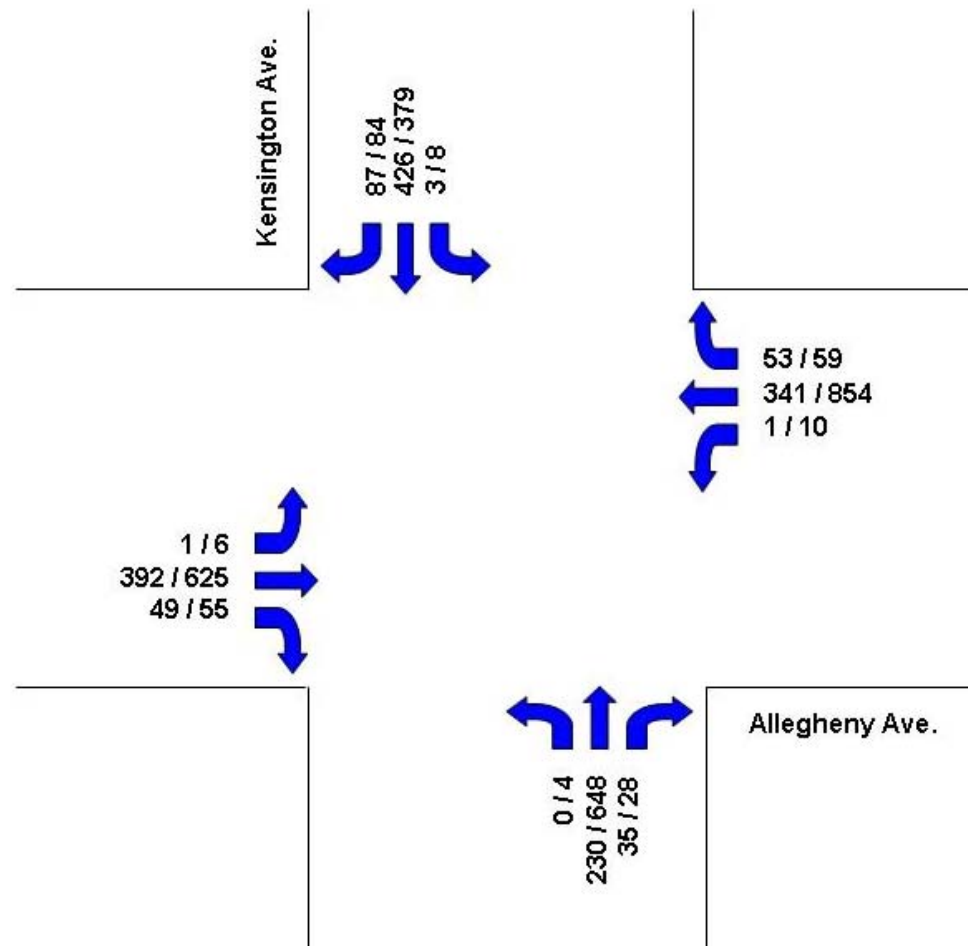
COLLISION TYPE	
Rear-end	6
Head-on	2
Rear-to-rear (backing)	1
Angle	2
Sideswipe (same dir)	4
Sideswipe (opposite dir)	1
Hit pedestrian	8
Total	24
ILLUMINATION	
Daylight	12
Dark – no street lights	1
Dark – street lights	9
Dusk	2
Total	24
WEATHER	
No adverse conditions	18
Rain	3
Snow	1
Other	1
Unknown	1
Total	24
SEVERITY COUNT	
Fatalities	0
Injuries	26
UNK Severity	9
UNK If Injured	3

Allegheny Ave. and Kensington Ave. Existing Peak Hour Turning Movement Counts AM / PM

Peak Hours

AM: 7:45 – 8:45

PM: 3:15 – 4:15



18. Allegheny Ave. at Frankford Ave.
 Segment 90, Offset 2131 to Segment 90, Offset 2133



COLLISION TYPE	
Rear-end	3
Head-on	1
Angle	4
Sideswipe (same dir)	1
Hit pedestrian	1
Total	10
ILLUMINATION	
Daylight	5
Dark – street lights	5
Total	10
WEATHER	
No adverse conditions	8
Rain	1
Snow	1
Total	10
SEVERITY COUNT	
Fatalities	0
Injuries	9
UNK Severity	2
UNK If Injured	2

19. Allegheny Ave. at Aramingo Ave.
 Segment 100, Offset 1197 to Segment 100, Offset 1202



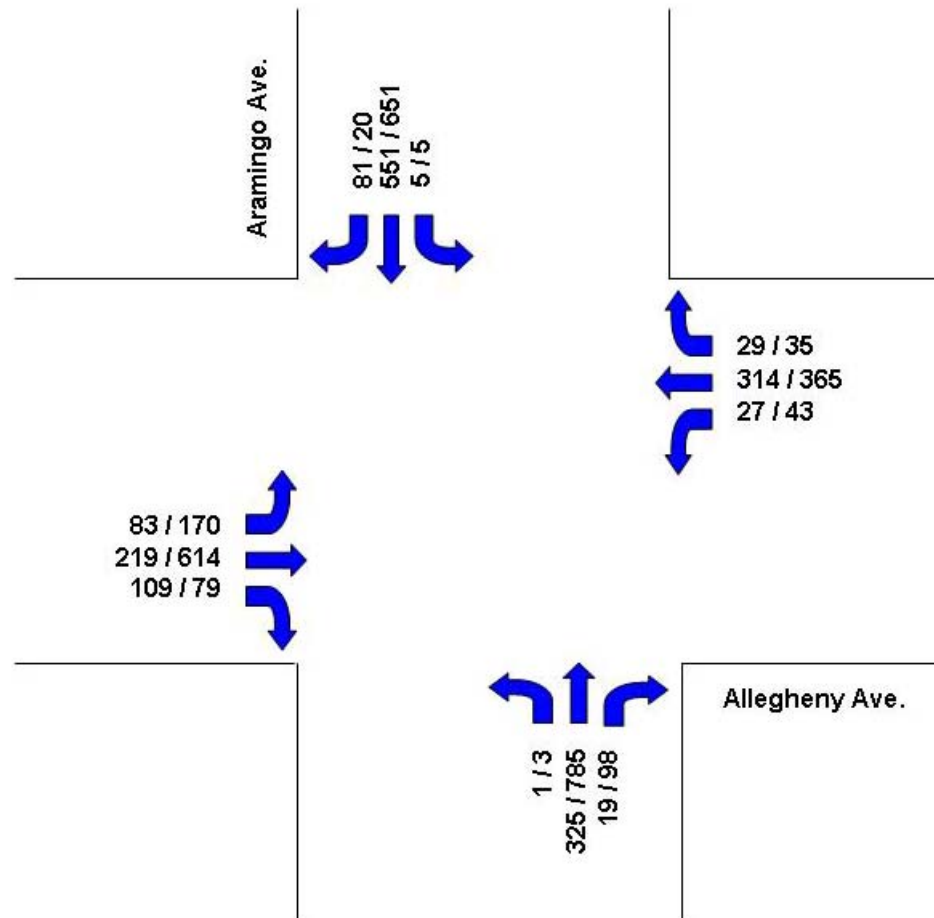
COLLISION TYPE	
Rear-end	2
Head-on	2
Angle	2
Sideswipe (opposite dir)	1
Hit pedestrian	4
Total	11
ILLUMINATION	
Daylight	6
Dark – street lights	5
Total	11
WEATHER	
No adverse conditions	10
Sleet (hail)	1
Total	11
SEVERITY COUNT	
Fatalities	0
Injuries	11
UNK Severity	3
UNK If Injured	5

Allegheny Ave. and Aramingo Ave. Existing Peak Hour Turning Movement Counts AM / PM

Peak Hours

AM: 7:45 – 8:45

PM: 4:15 – 5:15



APPENDIX D

Photo Log

SIGNAGE

Street name sign faded



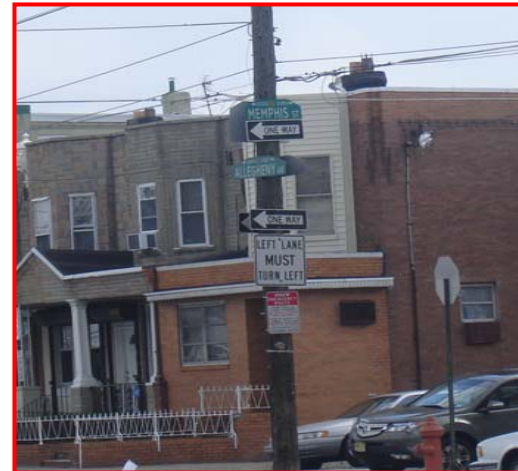
“Share the Road” signs are not appropriate



“School crossing” signs missing arrows or “Ahead”



In 3 lane section of corridor “Left Lane Must Turn Left” signs misplaced

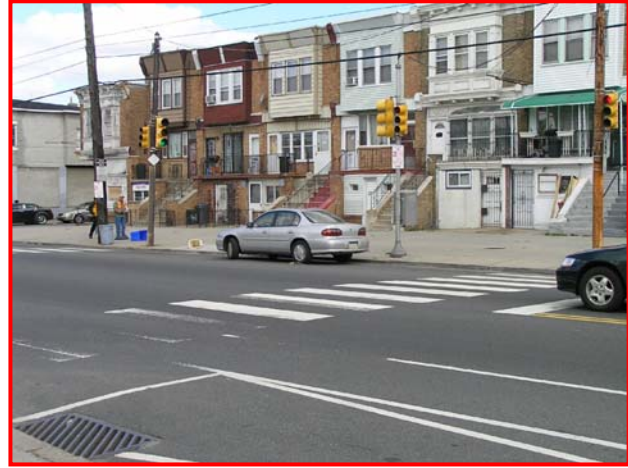


PARKING

Vehicles parked in WB travel lane approaching Sedley St.



Vehicle parked between crosswalks at 26th St.



Vehicles parked illegally in front of SEPTA Bus Depot between 26th and 27th St.



Vehicles are parked in bus stop designated areas



SIDEWALKS

Sidewalks are cracked and rutted, vehicle parked on sidewalk



Construction blocks sidewalk



Tree roots dislodge sidewalk pavement



Curb ramp – not ADA compliant, uneven with roadway pavement



SIDEWALKS

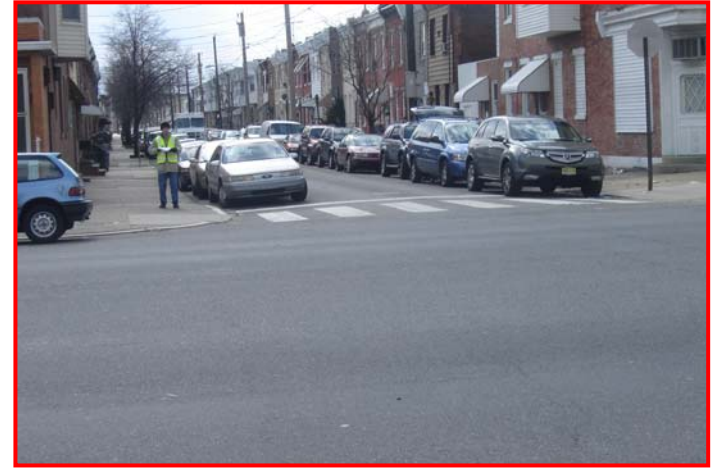


CROSSWALKS

Missing crosswalk on side street



Vehicle parked in crosswalk



Drainage inlet grate located in the crosswalk



Faded crosswalk markings

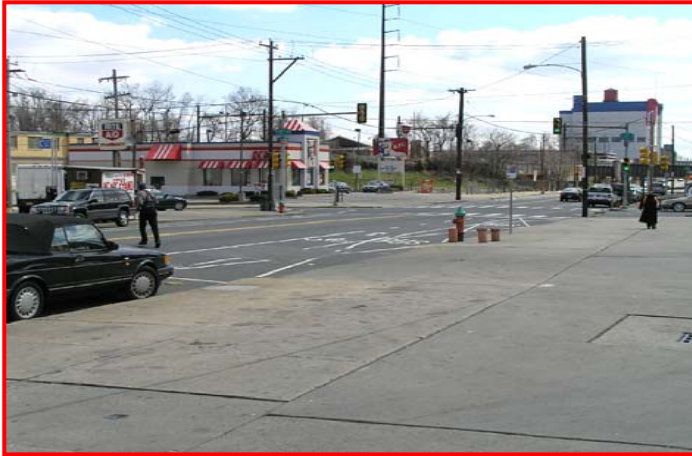


CROSSWALKS



ACCESS MANAGEMENT

Gas station at 22nd Street needs access management



Driveways too close at intersection

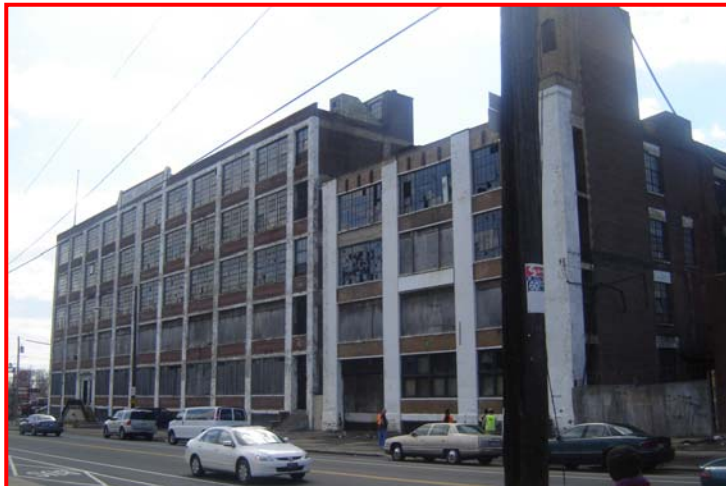


ENVIRONMENT

Trash and debris in sidewalk and drainage grates



Inadequate lighting under bridge



ALLEGHENY/HUNTING PARK/HENRY AVENUES

At Henry Ave approach long crosswalk over 6 lanes; no indication when to cross roadway



“No Left Turn” sign located between 30th St. and Hunting Park Ave. is confusion



BROAD STREET

Wide intersection with no pedestrian refuge island



Large number of bus passengers with no shelter



SEDGLEY STREET VICINITY

Confusion due to roadway configuration and double arrow pavement marking adds to the confusion



Eastbound Sedgley Street towards Allegheny Avenue crosswalk not visible to approaching motorists from a distance.



KENSINGTON AVENUE

Heavy pedestrian volumes, jaywalking; lighting underneath bridge inadequate; crosswalk pavement markings are faded



Traffic on Kensington Ave. tend to run the red light due to the configuration of the intersection

Allegheny Avenue Road Safety Audit Team



APPENDIX E

Checklist

CHECKLIST

Audit Team Member _____

GENERAL ISSUES

<u>Item #</u>	<u>Description</u>	<u>Check</u>	<u>Comments</u>
1 Drainage	Do drainage items seem to be adequate?		
	Are drainage items clear of debris?		
2 Landscaping	Is landscaping in accordance with guidelines (sight distance, clearances etc.)		
3 Public Utilities	Are boxes, poles, and/or posts located in a safe position?		
	Do the above items interfere with sight distance?		
4 Access Management	Are there locations where access management is problematic?		
5 Lighting	Is lighting needed in specific locations?		

ALIGNMENT AND CROSS SECTION

<u>Item #</u>	<u>Description</u>	<u>Check</u>	<u>Comments</u>
1 Visibility	Are sight distances adequate for the speed of traffic on Allegheny Ave?		
	Is adequate sight distance provided at intersections?		

2 Driver expectation	Are there any sections of the roadway which may cause driver confusion such as:		
	a. Is alignment of roadway clearly defined?		
	b. Are crossroads or hidden driveways properly signed along corridor?		
	c. Are bicycle lanes clearly defined?		
	d. Do streetlight and tree lines conform with the road alignment?		
3 Widths	Are all the traffic lanes and roadway widths adequate?		

INTERSECTIONS

<u>Item #</u>	<u>Description</u>	<u>Check</u>	<u>Comments</u>
1 Location	Are there any roadside objects nearby which would intrude on driver's line of sight?		
	Are the intersections adequate for all vehicular movements?		
2 Controls	Are pavement markings and intersection control signing satisfactory?		
	Are there any pedestrian signals		
3 Signage	Is the intersection appropriately signed?		
	Are there advance warning signs		

	indicating the intersection?		
	Are signs appropriately located and of the appropriate size?		
4 Layout	Is the intersection layout obvious to all users?		
	Is the alignment of curbs satisfactory?		
	Are turning radii and tapers appropriate?		
	Are driveways located at the near the intersections?		
5 Visibility, sight distance	Is sight distance adequate for all movements and all users?		
6 Transit	Are there bus stops located near the intersections?		
	a. If so are the bus stops near side or far side?		
7 Turn Lanes	Do the turning lanes have sufficient storage?		
	Are there locations where a left turn lane needs to be provided?		

TRAFFIC SIGNALS

<u>Item #</u>	<u>Description</u>	<u>Check</u>	<u>Comments</u>
1 Signal Operation	Are traffic signals operating correctly? (Example clearance time)		

2 Visibility	Are traffic signals clearly visible to approaching motorists?		
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PEDESTRIANS

<u>Item #</u>	<u>Description</u>	<u>Check</u>	<u>Comments</u>
1 Land Use Factors	Are there schools, transit stations or other pedestrian generators nearby?		
2 Sidewalks	Are sidewalks continuous throughout the corridor?		
	Are the sidewalks in good conditions (uneven, cracked, etc.)?		
	Are the sidewalks wide enough to accommodate persons using mobility aides?		
3 Facilities at Intersections	Are crosswalks provided at intersections?		
	Are the pedestrian ramps adequate?		
	Is there any pedestrian refuge islands needed at key intersections?		
	Are there pedestrian signals located at intersections?		
	Is the intersection clearly delineated for the visually impaired?		
4 Around	Is there a school zone?		

Schools	Is a school crossing provided?		
	Are there appropriate advance warning signs provided?		
	Are crossing guards on duty when school is beginning and ending?		
5 Allegheny Ave.	Is the speed limit appropriate for all road users?		
	Is there on street parking that would impede pedestrian visibility?		
	Are there safety concerns for pedestrian crossings at unsignalized intersection?		
6 Lighting	Is the sidewalk adequately lit for pedestrians to see and feel safe?		
	Are there dark places or hiding places which represent a personal security issue?		
	Are the pedestrian crosswalks adequately lit for pedestrians and motorists?		
7 Fencing	Are there locations where a fence should be provided?		
8 Visibility and Sight Distance	Are pedestrians waiting to cross visible to motorists?		
	Can pedestrians see approaching vehicles?		
	Are there temporary or permanent obstructions near crosswalks (parked vehicles, vegetation, fences, etc.)		

BICYCLISTS

<u>Item #</u>	<u>Description</u>	<u>Check</u>	<u>Comments</u>
	Are there share the road signs posted?		
	Is the road surface of suitable quality for bicyclists?		
	Are drainage grates bicycle friendly?		
	Are parked vehicles an obstruction to bicyclists?		
	Is the bicycle lane continuous?		

TRANSIT

<u>Item #</u>	<u>Description</u>	<u>Check</u>	<u>Comments</u>
1 Buses	Are bus stops located at the far side or near side of the intersection?		
	Are bus stops signed appropriately?		
	Are bus stop locations near existing driveways?		
	Are there adequate waiting areas for		

	pedestrians around bus stops (shelter or bench)?		
	Are bus stop locations safe for passengers boarding and unboarding the bus?		
	Is fencing needed at transit facilities?		
	Are vehicles illegally parked at bus stops?		

ON STREET PARKING

<u>Item #</u>	<u>Description</u>	<u>Check</u>	<u>Comments</u>
1 Parking	Are there time parking restriction signs posted?		
	Does parking obstruct bicycle or through lane traffic?		
	Is parking located at the edge of intersections which could cause conflict for right turning traffic?		
	Does parking obstruct vehicular or pedestrian movement?		

SIGNAGE, PAVEMENT MARKINGS, DELINEATION AND LIGHTING

<u>Item #</u>	<u>Description</u>	<u>Check</u>	<u>Comments</u>
1 Signage	Are there signs missing from key locations?		
	Are signs easy to understand?		

	Are the correct signs used for each situation, and is each sign necessary?		
	Are signs effective for all likely conditions (i.e. day, night, oncoming headlights etc)?		
	Are there locations where there is sign clutter?		
	Are all necessary regulatory, warning, and direction signs (including detours) in place? Are they conspicuous?		
	Are they redundant?		
	Are traffic signs in their correct locations, and properly positioned with respect to lateral clearance and height?		
	Are signs placed so as to restrict sight distance, particularly for vehicles?		
	Do signs supports conform to guidelines?		
2 Pavement Markings and Delineation	Does existing pavement markings need to be re-painted?		
	Have raised pavement markers been installed?		
	Are pavement markings easily visible and effective for all likely conditions (i.e. at night, day, inclement weather etc.)?		
	Are guide posts correctly placed, clean, and visible?		
3 Lighting	Is appropriate lighting installed at intersections, pedestrian and bicycle crossings?		

	Are the appropriate types of poles used for all locations and correctly installed?		
	Are all locations free of any lighting which may conflict visually with signs?		

PAVEMENT

<u>Item #</u>	<u>Description</u>	<u>Check</u>	<u>Comments</u>
1 Pavement defects	Is the pavement free of defects (i.e. excessive roughness, potholes) which could result in safety problems?		
2 Ponding	Is the pavement free of areas where ponding may occur resulting in a safety problem?		

APPENDIX E

Response Sheet

Allegheny Avenue Road Safety Audit

Corridor-wide Issues

<u>CORRIDOR WIDE ISSUES</u>	<u>Solution</u>	<u>Decision</u> <u>Agree/Reject</u>	<u>Planned</u> <u>Completion</u> <u>Date</u>	<u>Comments</u>
<p>Sidewalks</p> <ul style="list-style-type: none"> • Sidewalks are cracked and rutted • Tree roots dislodge sidewalk pavement • Remnants of removed sign posts (tripping hazards) • Inappropriate slope and location of curb ramps • Ramps do not have truncated domes and are not even with the roadway pavement in sections • Many ramps do not align with crosswalk • Construction blocks sidewalk 	<p>The maintenance of sidewalks are the responsibility of the property owner but the onus is on the City of Philadelphia that they comply with set standards</p> <p>Most ramps along the corridor are not appropriate for the wheelchair-bound disabled or the sight impaired</p> <p>Sidewalks were closed due to construction without the proper signage or pedestrian accommodations</p>			
<p>Signs</p> <ul style="list-style-type: none"> • Regulatory and warning signs are faded • Street name signs especially those in the western section of the corridor are too small 	<p>Installing appropriate signage is a low cost quick turnaround project which can have high safety benefits</p> <p>Correctly locating appropriate</p>			

<u>CORRIDOR WIDE ISSUES</u>	<u>Solution</u>	<u>Decision</u> Agree/Reject	<u>Planned</u> <u>Completion</u> <u>Date</u>	<u>Comments</u>
<p>and not easily readable</p> <ul style="list-style-type: none"> • Signs are needed to complement “no parking” pavement markings at bus stops and intersections <p>Signs (continued)</p> <ul style="list-style-type: none"> • School Zones are not defined • “Share the Road” signs are not appropriate • Existing “Bicycle Lane” signs are not to MUTCD specification • “School Crossing” signs missing arrows or “Ahead” • In the 3 lane section of the corridor “Left Lane Must Turn Left” signs are misplaced • Trees block signs 	<p>signage is necessary to achieve the maximum safety benefit.</p> <p>Beginning and end of school zones should be defined with proper signs</p> <p>“Share the Road” signs are not appropriate because there is a designated bike lane</p> <p>Trim trees as appropriate or relocate signs</p>			
<p>Debris/Trash</p> <ul style="list-style-type: none"> • Trash and debris on sidewalks • Debris observed in bike lanes • Debris observed in drainage grates 	<p>Keeping bike lanes and sidewalks clean will keep these road users in their designated areas. Blocked drains can cause flooding and problems for road users</p>			

<u>CORRIDOR WIDE ISSUES</u>	<u>Solution</u>	<u>Decision</u> Agree/Reject	<u>Planned</u> <u>Completion</u> <u>Date</u>	<u>Comments</u>
<p>Parking</p> <ul style="list-style-type: none"> • Motor vehicle double park – blocking bike lane and portions of the adjacent lane • Motor vehicles are parked in bus stop designated areas <p>Parking (continued)</p> <ul style="list-style-type: none"> • Motor vehicles are parked too close to the intersection • Motor vehicles are parked in “no parking zones” • Cars observed parked on sidewalk in several locations • Parked vehicles limit the visibility of pedestrians in the crosswalk to motorists 	<p>Illegal parking is an enforcement issue. This is prevalent throughout the corridor.</p> <p>Vehicles parked at the curb too close to the intersection obscure sight lines of motorists entering the intersection especially at un-signalized intersections</p> <p>Vehicles illegally parked at the intersections and on sidewalks are detrimental to the safety of pedestrians</p>			
<p>Traffic Signals West of Broad Street</p> <ul style="list-style-type: none"> • Post mounted • Traffic signals not visible behind large vehicles 	<p>Upgrade signals and mount overhead with pedestrian heads</p>			

<u>CORRIDOR WIDE ISSUES</u>	<u>Solution</u>	<u>Decision Agree/Reject</u>	<u>Planned Completion Date</u>	<u>Comments</u>
<ul style="list-style-type: none"> • Some are awkwardly located and hardly visible to motorists • Too many signals • Pedestrian heads are missing • Signals blocked by trees 	<p>Evaluate the need for all existing signals during upgrade</p> <p>Trim trees as appropriate to improve visibility</p>			
<p>Street Lighting</p> <ul style="list-style-type: none"> • Missing at intersections, bridges and overpasses 				
<p>Crosswalks</p> <ul style="list-style-type: none"> • Pavement markings are faded • Poor visibility <p>Crosswalks (continued)</p> <ul style="list-style-type: none"> • Crosswalks are missing • Vehicles are parked in the crosswalk • Inlet grates are in crosswalks 	<p>Crosswalk striping should be continental style for enhanced visibility to motorists</p> <p>Due to the high pedestrian traffic in the corridor crosswalks should be at all side streets</p> <p>Inlet grates in the crosswalk presents a safety issue for everyone especially the disabled</p>			
<p>Access Management</p> <ul style="list-style-type: none"> • Some retail/commercial establishments do not 	<p>Defined access and egress points for motorist will be beneficial because they</p>			

<u>CORRIDOR WIDE ISSUES</u>	<u>Solution</u>	<u>Decision Agree/Reject</u>	<u>Planned Completion Date</u>	<u>Comments</u>
<p>have defined access and egress points</p>	<p>reduce potential automobile/pedestrian conflict points</p>			
<p>Buses</p> <ul style="list-style-type: none"> • Pick up/drop off passengers in the travel lane instead of the designated bus stop location 	<p>Curb buses. Passengers are on the curb instead of the roadway – safer environment Consider building bulb-outs at bus stops where the roadway is 60 feet or wider. This would enhance pedestrian visibility and safety and is a viable solution to illegal parking in bus zones</p>			
<p>One Way Cross Streets</p> <ul style="list-style-type: none"> • Higher volumes • Speeding • Pedestrian signal head missing 	<p>Examples are 2nd, 5th, 6th, and Front Streets. Install speed limit sign and investigate the application of red light running cameras</p>			

Location Specific issues

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>Decision Agree/Reject</u>	<u>Planned Completion Date</u>	<u>Comments</u>
Ridge Avenue Intersection				
<ul style="list-style-type: none"> No crosswalk on the north side of the Allegheny/Ridge Avenues intersection over Ridge Avenue 	<ul style="list-style-type: none"> Add continental style crosswalk to the southbound approach on Ridge Avenue 			
<ul style="list-style-type: none"> Due to the geometry of the intersection Allegheny Avenue traffic approaching the intersection has the potential to enter Ridge Avenue without slowing. Because of the slope of Ridge Avenue sight distance can be an issue for motorists 	<ul style="list-style-type: none"> Add “No Turn on Red” sign Square off the intersection to cause traffic to slow to make the right turn on to Ridge Avenue 			
<ul style="list-style-type: none"> Overhead signal head for Allegheny Avenue is mounted on the same mast arm as the Ridge Avenue signal head. As a result Allegheny Avenue signal head is misaligned 	<ul style="list-style-type: none"> Re-align signal head with lanes 			
Between 32nd Street and Henry Avenue				
<ul style="list-style-type: none"> The entrance to <i>Pep Boys</i> consists of their entire frontage across the sidewalk 	<ul style="list-style-type: none"> Access management – establish defined entrance and exit points 			
Allegheny/Hunting Park/Henry Avenues Intersection				
<ul style="list-style-type: none"> Henry Avenue approach, long crosswalk over six lanes; no indication when to cross roadway 	<ul style="list-style-type: none"> Install pedestrian signal head with countdown 			

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>Decision Agree/Reject</u>	<u>Planned Completion Date</u>	<u>Comments</u>
<ul style="list-style-type: none"> • 				
<ul style="list-style-type: none"> • No "School Crossing" signs (except on Allegheny Ave.) • 	<ul style="list-style-type: none"> • Install "School Crossing" signs at all legs of the intersection given school located at the intersection 			
Allegheny/Hunting Park/Henry Avenues Intersection (continued)				
<ul style="list-style-type: none"> • . No pedestrian signal heads 	<ul style="list-style-type: none"> • Install pedestrian signal heads at all crosswalks 			
<ul style="list-style-type: none"> • The "No Left Turn" sign located between 30th Street and Hunting Park is confusing to Hunting Park motorists headed westbound 	<ul style="list-style-type: none"> • Realign sign for Henry Avenue motorist only 			
<ul style="list-style-type: none"> • Traffic signal at the intersection malfunctions (green and red at the same time) 	<ul style="list-style-type: none"> • City of Philadelphia engineers assured the audit team this issue was given priority 			
	<ul style="list-style-type: none"> • Given the intersection's complicated geometry and width, the feasibility of a roundabout should be investigated. 			
28th Street Intersection				
<ul style="list-style-type: none"> • Crosswalk at this location is not easily visible to motorists 	<ul style="list-style-type: none"> • Upgrade crosswalks to continental style 			
<ul style="list-style-type: none"> • Curb ramp and crosswalk on the west corner of the intersection across Allegheny Avenue are awkwardly aligned 	<ul style="list-style-type: none"> • Re-align curb ramp with crosswalk by moving both to the west of their current location. Alternatively, remove crosswalk 			

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>Decision Agree/Reject</u>	<u>Planned Completion Date</u>	<u>Comments</u>
due to the location of fire hydrant	and allow crossing only at the east side crosswalk.			
<ul style="list-style-type: none"> Abandoned fire box pole is obstructing the curb ramp on the north side of the intersection 	<ul style="list-style-type: none"> Remove abandon fire box pole 			
Between 27th Street and N. Bailey Street				
<ul style="list-style-type: none"> Cars parked curb side in a “no parking zone” 	<ul style="list-style-type: none"> Work with Philadelphia Police and Philadelphia Parking Authority to enforce “no parking zones” 			
Between 27th Street and 26th Street				
<ul style="list-style-type: none"> Motor vehicles are illegally parked in front of SEPTA Bus Depot 	<ul style="list-style-type: none"> Work with SEPTA and Philadelphia Police to resolve this issue 			
<ul style="list-style-type: none"> SEPTA buses exit the Depot from angle doors closest to 26th Street with difficulty making right turns 	<ul style="list-style-type: none"> Work with SEPTA to provide alternate exit for vehicles 			
Fox Street Intersection				
<ul style="list-style-type: none"> Crosswalks are fading 	<ul style="list-style-type: none"> Re-stripe crosswalks in the continental style 			
<ul style="list-style-type: none"> Given the intersection’s awkward geometry, there is confusion navigating the intersection. There is a high volume of turning movements. 	<ul style="list-style-type: none"> Intersection needs an in-depth study 			

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>Decision</u> Agree/Reject	<u>Planned</u> <u>Completion</u> <u>Date</u>	<u>Comments</u>
<p>Intersection is difficult for bicyclists to negotiate. High volume truck route.</p>				
22nd Street Intersection				
<ul style="list-style-type: none"> Gas station on the southwest corner has three access points on Allegheny Avenue. Access points lead into bus stop. There are also two access points to this property on 22nd Street. Additionally, there are parked vehicles on Allegheny Avenue between these driveways. This interferes with motorist sight distance exiting the property 	<ul style="list-style-type: none"> Close the access points closest to the intersection on both Allegheny Avenue and 22nd Street. Clearly define driveways to minimize motor vehicle/pedestrian conflict; and delineate sidewalk with curbs. (access management) Eliminate parking in the area using “no parking” signs to inform motorists 			
22nd Street Intersection (continued)				
<ul style="list-style-type: none"> On the northeast corner KFC Restaurant has no defined driveways 	<ul style="list-style-type: none"> Clearly define driveways to minimize motor vehicle/pedestrian conflict; and delineate sidewalk with curbs. (access management) 			
Between 21st Street and 17th Street				
<ul style="list-style-type: none"> No traffic signal between 21st Street and 17th Street as a result there is speeding in this 	<ul style="list-style-type: none"> Work with City of Philadelphia Police to enforce the speed limit 			

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>Decision</u> <u>Agree/Reject</u>	<u>Planned</u> <u>Completion</u> <u>Date</u>	<u>Comments</u>
section of the corridor				
<ul style="list-style-type: none"> Bridges between 19th and 17th Streets needs lighting 	<ul style="list-style-type: none"> Install lighting under bridges in this area. 			
17th Street Intersection				
<ul style="list-style-type: none"> There are no pedestrian signal heads at this intersection. 	<ul style="list-style-type: none"> There is an elementary school on the northwest corner of the intersection; installing pedestrian signal heads at this location should be given priority 			
<ul style="list-style-type: none"> Pedestrian timing on this signal appears to be too short 	<ul style="list-style-type: none"> Re-evaluate the signal timing 			
15th Street Intersection				
<ul style="list-style-type: none"> There are no pedestrian signal heads at this intersection. 	<ul style="list-style-type: none"> There is an elementary school one block away from the intersection; installing pedestrian signal heads at this location should be given priority 			
Broad Street Intersection				
<ul style="list-style-type: none"> Large number of bus passengers with no shelter 	<ul style="list-style-type: none"> Build bus shelter which could be combined with shelter for subway stairs on the northeast and southwest corners of the intersection 			

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>Decision</u> Agree/Reject	<u>Planned</u> <u>Completion</u> <u>Date</u>	<u>Comments</u>
<ul style="list-style-type: none"> • Wide intersection with no pedestrian refuge island. • There are no pedestrian signal heads. • Need pedestrian fence along the median to prevent jaywalking. • Red light running may be an issue 	<ul style="list-style-type: none"> • <i>PennDOT is currently working on improvement for this intersection</i> 			
Germantown Avenue Intersection				
<ul style="list-style-type: none"> • Confusion with alignment and traffic control approaching Germantown Avenue on Sedgley Street westbound 	<ul style="list-style-type: none"> • Place advance directional sign and lane designation – <i>“Allegheny Avenue Traffic Keep Right”</i> 			
<ul style="list-style-type: none"> • There are no pedestrian signal heads 	<ul style="list-style-type: none"> • There is a school at the intersection; installing pedestrian signal heads at this location should be given priority 			
<ul style="list-style-type: none"> • No pedestrian crossing over Germantown Avenue along eastbound Allegheny Avenue 	<ul style="list-style-type: none"> • Landscape the triangle to shorten crossing distance 			
Sedgley Street vicinity				
<ul style="list-style-type: none"> • Motorist traveling eastbound on Sedgely Street towards 	<ul style="list-style-type: none"> • Install an advance “pedestrian ahead” sign on Sedgely Street 			

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>Decision</u> Agree/Reject	<u>Planned</u> <u>Completion</u> <u>Date</u>	<u>Comments</u>
<p>Allegheny Avenue are going down slope. The crosswalk is in the right turn slip ramp which is also on a curve. Therefore pedestrians in the crosswalk are not visible to approaching motorist from a distance</p>	<p>west of the intersection for eastbound motorists</p>			
<ul style="list-style-type: none"> • Confusion due to roadway configuration • Double arrow pavement marking adds to confusion 	<ul style="list-style-type: none"> • Install clear advance directional signage • Remove pavement marking and use directional signage 			
<ul style="list-style-type: none"> • Cars parked in right lane westbound (in front of business, approaching Sedgley Street) force vehicles to use bike lane, and cover directional pavement markings 	<ul style="list-style-type: none"> • Post “No Parking” signs and work with City of Philadelphia Police to enforce it. 			
<ul style="list-style-type: none"> • No warning signs for bridge structure westbound 	<ul style="list-style-type: none"> • Place reflective signs on bridge structure 			
Between Glenwood Avenue and Franklin Street				
<ul style="list-style-type: none"> • Westbound motorists speed going down incline and into the curve; making it difficult to stay in their travel lane 	<ul style="list-style-type: none"> • Install “reduce speed curve ahead” sign east of the curve. Install centerline rumble-strip 			

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>Decision</u> Agree/Reject	<u>Planned</u> <u>Completion</u> <u>Date</u>	<u>Comments</u>
6th Street Intersection				
<ul style="list-style-type: none"> Faded pavement markings over the bridge 	<ul style="list-style-type: none"> Re-stripe pavement markings 			
Between 5th Street and 3rd Street				
<ul style="list-style-type: none"> Sidewalk and bike lane closed due to construction with no advance signs indicating closure 	<ul style="list-style-type: none"> City of Philadelphia should enforce policies requiring contractors to install and maintain "closure" signs 			
2nd Street Intersection				
<ul style="list-style-type: none"> Heavy left turn movement in the AM peak and heavy pedestrian activity at intersection. Signals do not have pedestrian signal heads 	<ul style="list-style-type: none"> Install pedestrian signal heads (man/hand or countdown) 			
Howard Street Intersection				
<ul style="list-style-type: none"> "Left Lane Must Turn Left" is located on the far side of the intersection 	<ul style="list-style-type: none"> Install sign in advance of the intersection 			
Front Street Intersection				
<ul style="list-style-type: none"> Between Front and A – cars parked on the sidewalks 	<ul style="list-style-type: none"> Work with City of Philadelphia Police to enforce illegal parking 			
<ul style="list-style-type: none"> High volume of left turn movement from Allegheny Avenue to Front Street result in delays of through traffic 	<ul style="list-style-type: none"> More in-depth study required to investigate the potential for a protected left turn phase 			
A Street Intersection				
<ul style="list-style-type: none"> High volume of left turn 	<ul style="list-style-type: none"> More in-depth study required to 			

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>Decision Agree/Reject</u>	<u>Planned Completion Date</u>	<u>Comments</u>
movement from Allegheny Avenue to A Street result in delays of through traffic	investigate the potential for a protected left turn phase			
Between Kip Street and B Street				
<ul style="list-style-type: none"> Flashing speed limit/school sign is located directly in front of school 	<ul style="list-style-type: none"> Relocate signs in advance of school or install "School Zone" signs 			
Between Rosehill Street and C Street				
<ul style="list-style-type: none"> Daycare center – priority location for pedestrian improvements 	<ul style="list-style-type: none"> Improve pedestrian amenities 			
Boudinot Street Intersection				
<ul style="list-style-type: none"> "Left Lane Must Turn Left" is located at the intersection 	<ul style="list-style-type: none"> Install sign in advance of the intersection 			
Between D Street and Rorer Street				
<ul style="list-style-type: none"> Pavement markings missing for center turn lane 	<ul style="list-style-type: none"> Re-stripe center turn lane 			
<ul style="list-style-type: none"> School AM drop off and PM pick-up causes traffic congestion 	<ul style="list-style-type: none"> Work with school district to institute "Walking School Bus". Investigate "Safe Routes to School" program which may provide safer walking routes for school children Work with City of Philadelphia 			

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>Decision Agree/Reject</u>	<u>Planned Completion Date</u>	<u>Comments</u>
	Police for traffic enforcement in front of the school during these times			
Rorer Street Intersection				
<ul style="list-style-type: none"> Flashing speed limit/school sign is located directly in front of school 	<ul style="list-style-type: none"> Relocate signs in advance of school or install "School Zone" signs 			
Kensington Avenue Intersection				
<ul style="list-style-type: none"> Eastbound Allegheny Avenue channelized right turn lane onto Kensington Avenue is used as a through lane. SEPTA buses do this also after picking up passengers on the northeast corner of the intersection 	<ul style="list-style-type: none"> Move bus stop to far side of intersection – bus can then remain in through lane and not misuse the right turn only lane. Provide bus shelter 			
<ul style="list-style-type: none"> Heavy pedestrian volumes, jaywalking 	<ul style="list-style-type: none"> Install pedestrian fencing at the intersection to channel pedestrians to the crosswalk or other pedestrian control 			
<ul style="list-style-type: none"> The westbound and eastbound approaches to the intersection are wide 	<ul style="list-style-type: none"> Install pedestrian refuge island between the through and right turn lane 			
<ul style="list-style-type: none"> Traffic on Kensington Avenue tend to run the red light due to the configuration of the intersection – takes longer for 	<ul style="list-style-type: none"> Re-evaluate the timing of the signal Add an all red phase to the signal timing 			

<u>SAFETY ISSUE</u>	<u>REMEDIAL STRATEGY</u>	<u>Decision</u> <u>Agree/Reject</u>	<u>Planned</u> <u>Completion</u> <u>Date</u>	<u>Comments</u>
this traffic to clear the intersection	<ul style="list-style-type: none"> • Long Term – redesign the intersection 			
<ul style="list-style-type: none"> • Lighting under the rail bridge is inadequate 	<ul style="list-style-type: none"> • Improve the lighting under the bridge 			
<ul style="list-style-type: none"> • Crosswalks pavement markings are fading 	<ul style="list-style-type: none"> • Re-stripe pavement markings 			
Walgreens Pharmacy Driveway				
<ul style="list-style-type: none"> • Driveway not defined 	<ul style="list-style-type: none"> • Make the driveway pavement different from sidewalk – identifiable by motorists and pedestrians • Sign driveway for “No Left Turn” 			
Frankford Avenue Intersection				
<ul style="list-style-type: none"> • High pedestrian volumes 	<ul style="list-style-type: none"> • Improve pedestrian amenities – bus shelter, pedestrian man/hand or countdown signal heads 			
Between Tulip Street and Aramingo Avenue				
<ul style="list-style-type: none"> • High pedestrian volumes due to commercial activity and the hospital 	<ul style="list-style-type: none"> • Improve pedestrian amenities – bus shelter, pedestrian man/hand or countdown signal heads 			

Title of Report: ALLEGHENY AVENUE ROAD SAFETY AUDIT – CITY OF PHILADELPHIA

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Geographic Area Covered:

The study area includes Allegheny Avenue in City of Philadelphia from Ridge Avenue to Aramingo Avenue.

Key Words:

Road, safety, audit, potential, fatalities, injuries, reportable, crashes, issues, strategies, coordination, engineering, enforcement, education, prioritize, intersection, signalized, mast arm, speed limit, traffic volumes, pedestrian, PennDOT, stakeholders, audit team, sidewalk, bike lane, center turn lane, parking, transit, sight distance, clear zone, geometry, access management, pavement markings, signs.

ABSTRACT: This is a documentation of the process and findings of the Allegheny Avenue Road Safety Audit (RSA) undertaken by Delaware Valley Regional Planning Commission (DVRPC) in conjunction with Pennsylvania Department of Transportation (PennDOT). The RSA was done over three days in April 2007. The goal of the audit is to generate improvement recommendations and countermeasures for roadway segments demonstrating a history of, or potential for a high incidence of motor vehicle crashes. The emphasis is placed on identifying low cost, quick turnaround safety projects to address the issues where possible. The roadway studied is identified in the Safety Plan for PennDOT District 6. Allegheny Avenue is a dense urban environment with high pedestrian volumes and dense transit network.

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