Be Super: Transform Philly Through Technology and Collaboration —



Presented by:

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Collaborations

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corey@codeforphilly.org

OUR VISION

We believe that government can work *for* the people, *by* the people in the 21st century. A strong, diverse civic tech community is key to driving the culture change that is both possible and necessary to make that vision a reality.

We're a **Volunteer-driven** community of coders, designers, and involved citizens from all walks of life who work together to develop websites, apps, and other tech tools for the greater good. *Together* we empower **passionate** people in Philly to make real, positive change in their City using tech, data, and the collaborative process—**today**.



OUR COMMUNITY

Who we are:

coders, designers, mappers, talkers, thinkers, makers, analyzers and do-gooders--we're civic hackers

What we do:

using tech and data we build a community of learning while improving our home, making Philadelphia into the city we know it can be

How we're making a difference:

our work creates an atmosphere of engagement through collaboration; the relationships we have built and continue to grow breed mutual trust for meaningful impact

HOW WE DO

Weekly Workshops:

Every week we host an open workshop to start or work on new projects, learn about us, and meet new people

- welcome and engage new members
- pair people with projects
- focus talent to make impact and create mutual value
- build community

Quarterly Hackathons: Annual Programs:

thematically focused from Program (osmp 2015): health to democracy. Solution prototypes live on at CfP weekly workshops

- fresh project ideas
- collaborate with new agencies
- demonstrate demand around data
- opportunity for corporate sponsors to give back

Signature hackathons are Open Source Mentorship

- co-run with Girl <u>Develop It</u>
- opportunity to work with new partner orgs and develop existing relationships
- extend community and increase diversity
- evaluate current programming and stimulate growth



RIDE, RECORD. REIMAGINE YOUR ROUTES.

Code for Philly Project Team:

Corey Acri Lloyd Emelle Kathryn Killebrew



CyclePhilly

CyclePhilly is a smartphone app for recording your bicycle trips. Data from the app can be used by regional transportation planners in the Philadelphia area to make Philly a better place to ride.



Core CyclePhilly Team



Corey Acri - Product Manager/Designer More Info



Lloyd Emelle - Prolific builder of things.

More Info



Kathryn Killebrew - Turns data into vivid digital landscapes.

More Info

Contact Us: support@CyclePhilly.org





The Issue



· Issue

 Philadelphia is a great place to bike but routes seemed inefficient

Existing Research Methods Limited

- Traffic count data
- Surveys
- Census Data







Solution



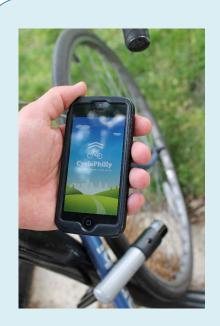
A better way to determine how cyclists are moving through the Philadelphia region







Smartphone App



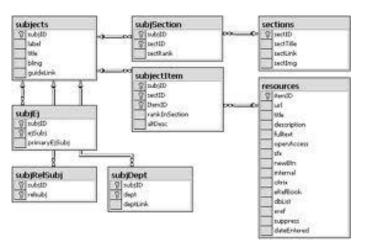






Website

Database





Partnerships

















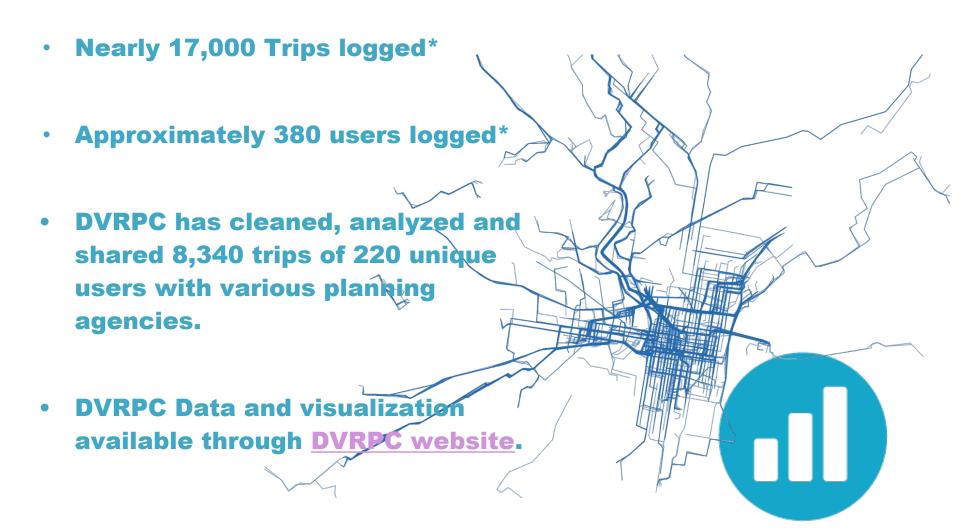




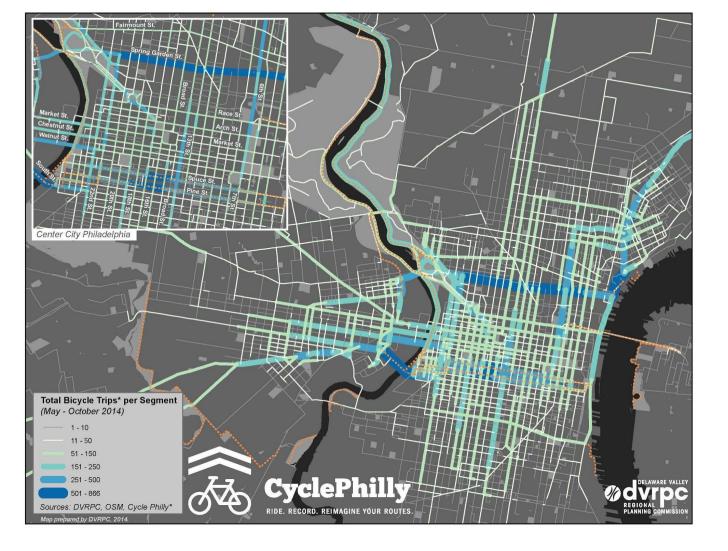
Results Since May 2014

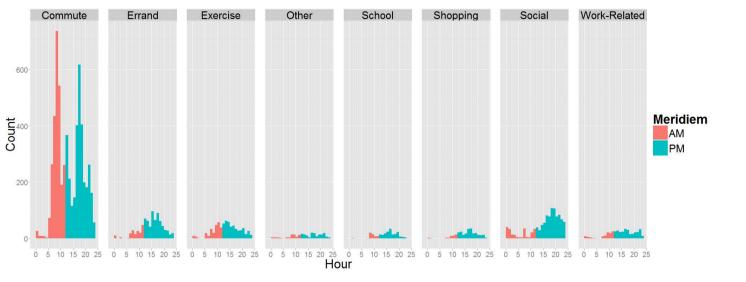


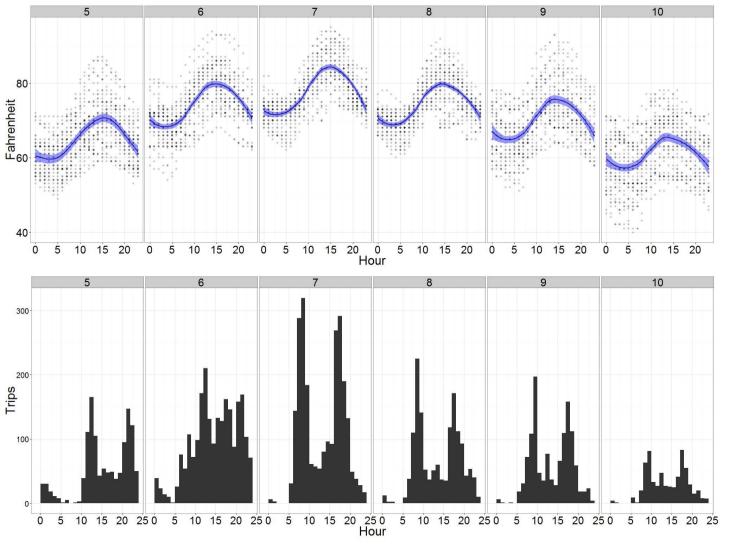


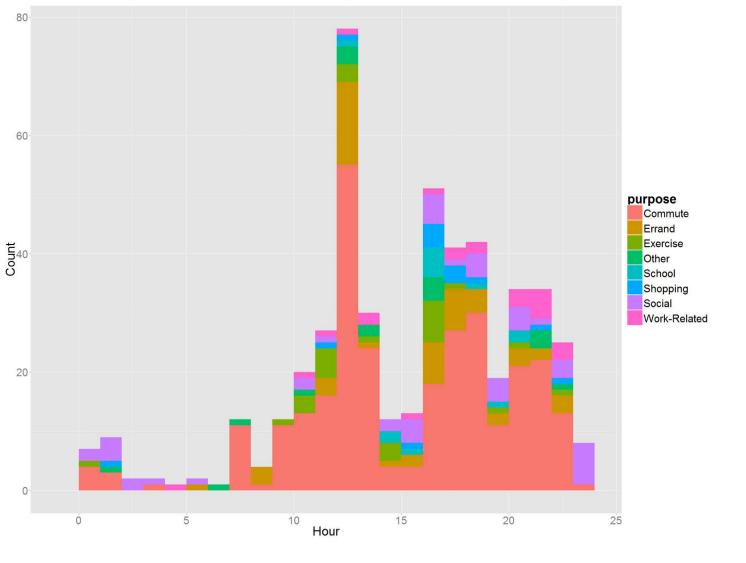


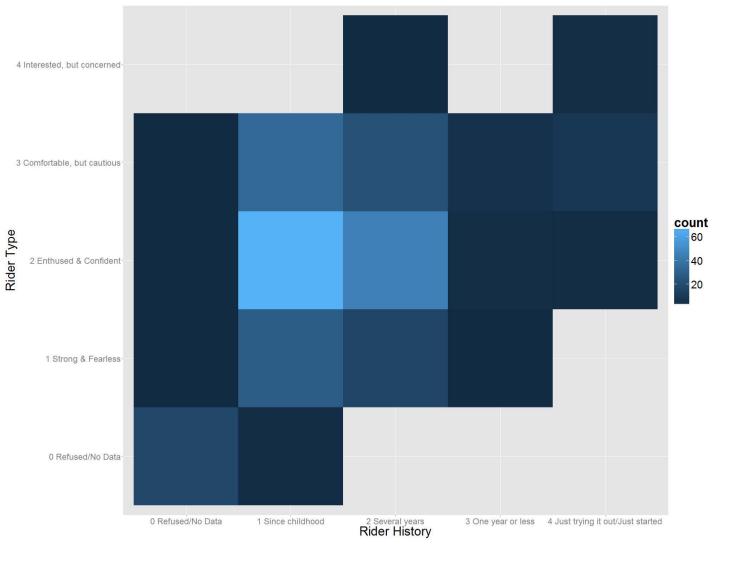
^{*}raw data collected not unique trips or user data.













Final Thoughts

Be Clear
Be Simple
Be Flexible

Be Super!





More Resources

- DVRPC Map and Analyzed Data Sources
- CyclePhilly.org
- CodeforAmerica.org
- CodeforPhilly.org
- Designing CyclePhilly
- CyclePhilly: How an App, A Tap and an App Might Change Philadelphia for the Better
- CyclePhilly app giving transportation planners a handle on region's bikers

GoPhillyGo.org Multi-modal Trip Planner

A Clean Air Council project Funded by the William Penn Foundation

John Branigan jbranigan@azavea.com Kathryn Killebrew kkillebrew@azavea.com





advanced spatial analysis on the web



Purpose¹

- Introduce cultural and natural sites in the region
- Provide point to point directions focusing on sustainable transportation

Open Source Software

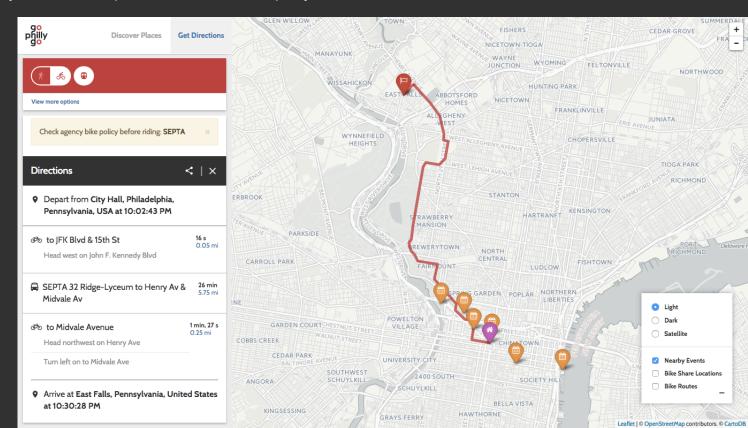
- OpenTripPlanner
 - Started in Portland several years ago w/ OpenPlans now Conveyal
 - Yielded GTFS standard
 - Relies on OpenStreetMap

github.com/azavea/cac-tripplanner/

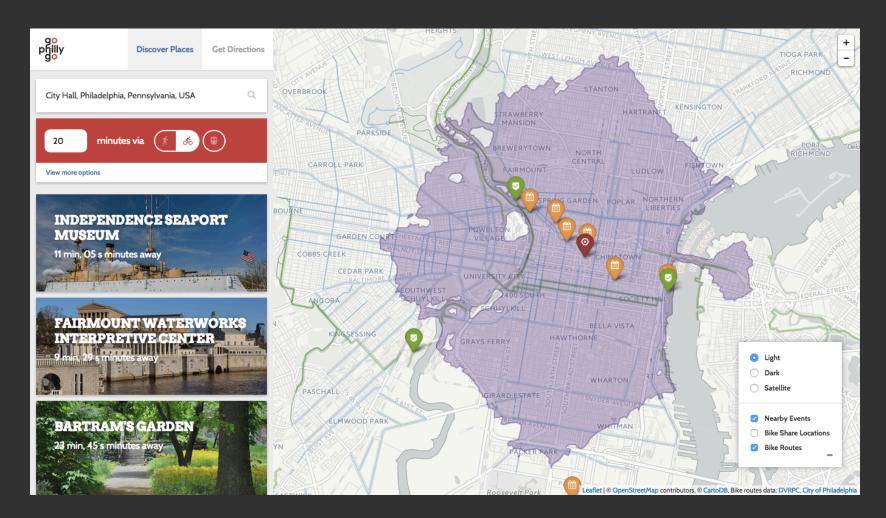
Road network data from OpenStreetMap



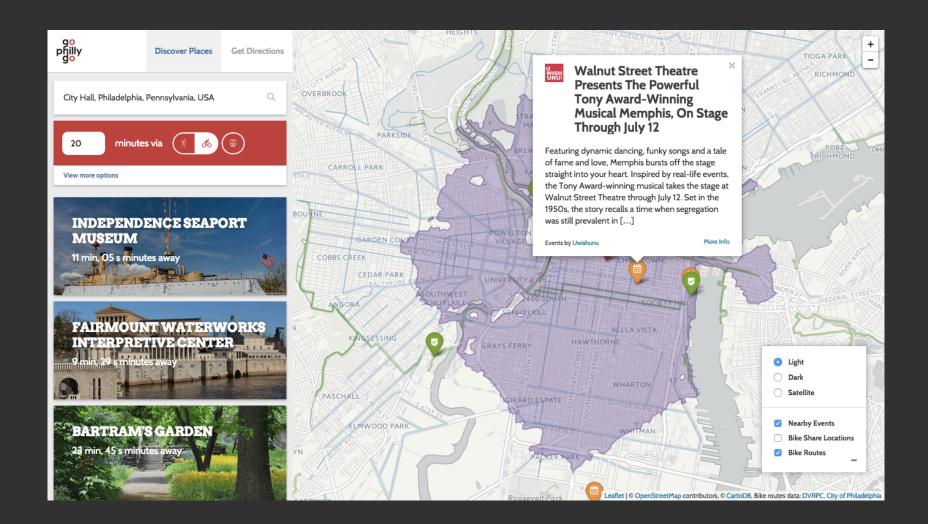
- Transit schedule data (GTFS) from
 - SEPTA
 - NJ Transit
 - DART
 - PATCO (with help from Kathryn)



 Bicycle trail and street infrastructure from DVRPC and City of Philadelphia

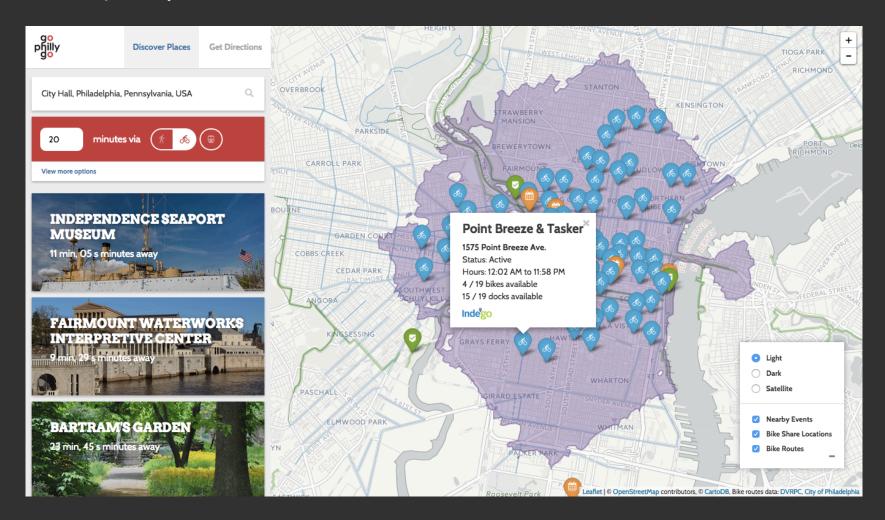


Event information from UWISHUNU



Open Data

 Bike Share locations from City of Philadelphia (via B-Cycle)



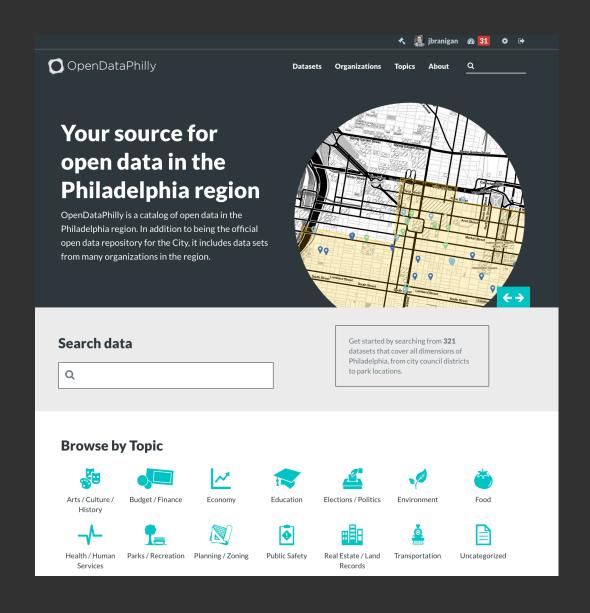
Open Data

USGS elevation data



Open Data

- Local
- Community-based
- Community-driven
- Sustainable



OpenStreetMap is a free map of the world that may be edited by anyone.

It contains data about things like roadways, places of interest, and footpaths.

Data from OpenStreetMap is used by OpenTripPlanner to build its graph of paths, and determine things used for weighting route options, like whether a street has a bike lane or a sidewalk along it.

OpenStreetMap is built by a community of mappers that contribute and maintain data about roads, trails, cafés, railway stations, and much more, all over the world.



Local Knowledge

OpenStreetMap emphasizes local knowledge. Contributors use aerial imagery, GPS devices, and low-tech field maps to verify that OSM is accurate and up to date.



Community Driven

OpenStreetMap's community is diverse, passionate, and growing every day. Our contributors include enthusiast mappers, GIS professionals, engineers running the OSM servers, humanitarians mapping disaster-affected areas, and many more. To learn more about the community, see the user diaries, community blogs, and the OSM Foundation website.

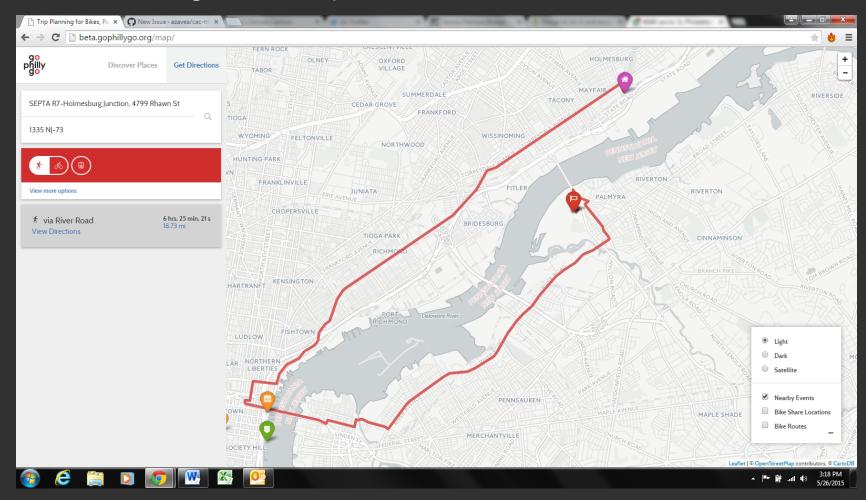


Open Data

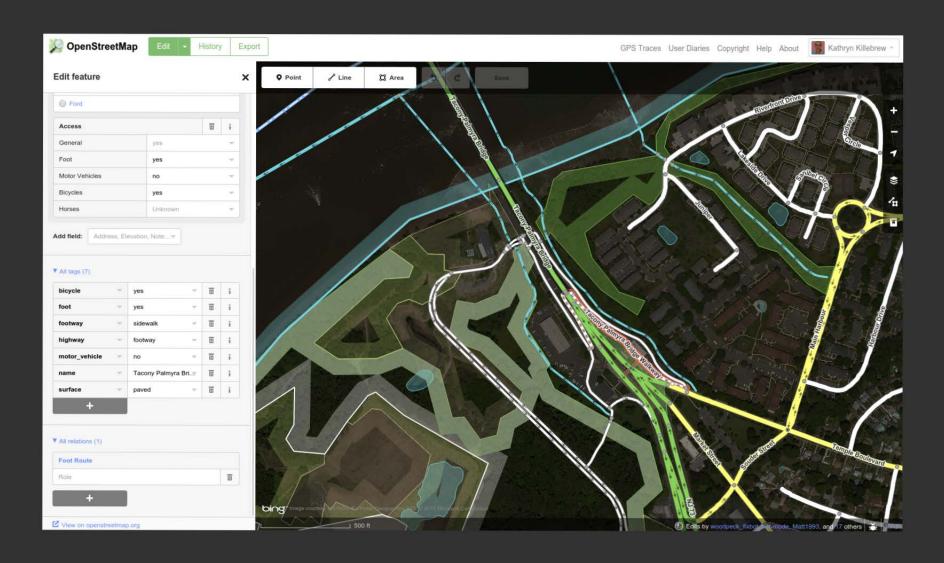
OpenStreetMap is *open data*: you are free to use it for any purpose as long as you credit OpenStreetMap and its contributors. If you alter or build upon the data in certain ways, you may distribute the result only under the same licence. See the Copyright and License page for details.

Editing OSM to add bike acces to Palmyra Bridge

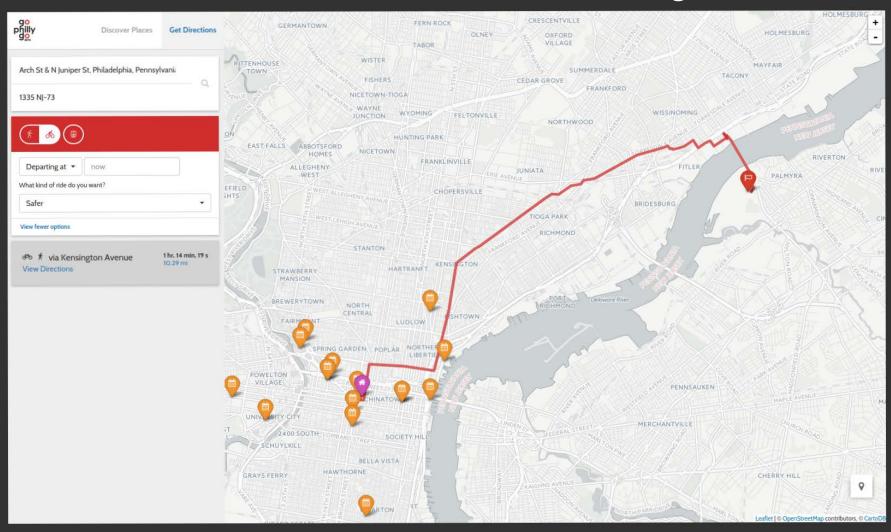
Before editing, OpenTripPlanner would route bicycle trips across the bridge, because OSM did not have the footpaths needed to get on and off the bridge walkway.



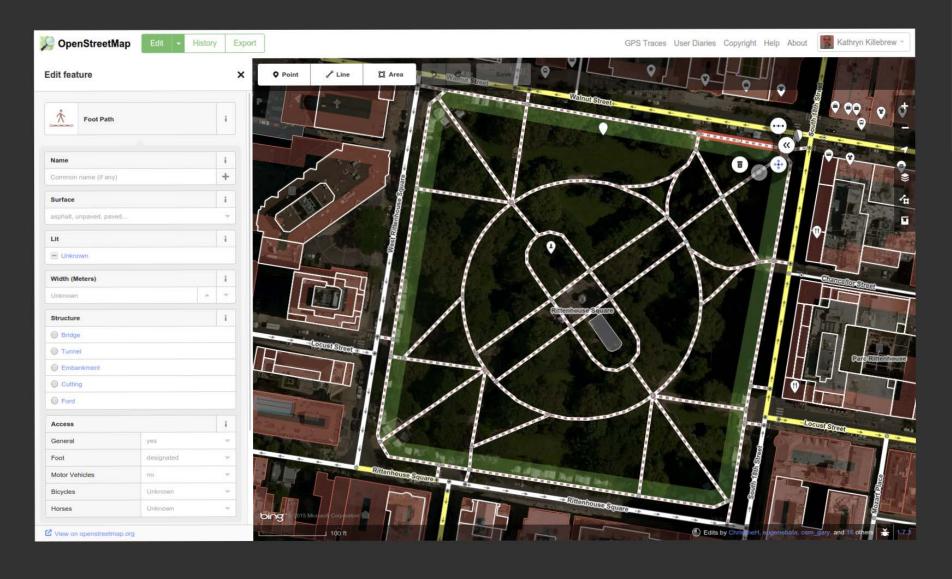
Bridge access footpath added to OSM



After edit, OTP routes over bridge



Editing bike access to footpaths



Downloading OSM from Geofabrik

GEOFABRIK downloads

Download OpenStreetMap data for this region:

US Northeast

[one level up]

Commonly Used Formats

- us-northeast-latest.osm.pbf, suitable for Osmium, Osmosis, imposm, osm2pgsql, mkgmap, and others. This file was last modified 13 hours ago and contains all OSM data up to 2015-09-07T21:22:02Z. File size: 627 MB; MD5 sum: ed10474220dbdd2d6e17be5a53b208fa.
- · us northeast latest.shp.zip is not available for this region.

Other Formats and Auxiliary Files

- us-northeast-latest.osm.bz2, yields OSM XML when decompressed; use for programs that cannot process the .pbf format. This file was last modified 1 day ago. File size: 1008 MB; MD5 sum: 6d7a7a07t2555cab4745d564e191ed46.
- · poly file that describes the extent of this region.
- . .osc.gz files that contain all changes in this region, suitable e.g. for Osmosis updates
- · raw directory index allowing you to see and download older files

Sub Regions

See list of US states under North America.

Otawa

Otawa

Mari

Toropta

Prestuyana

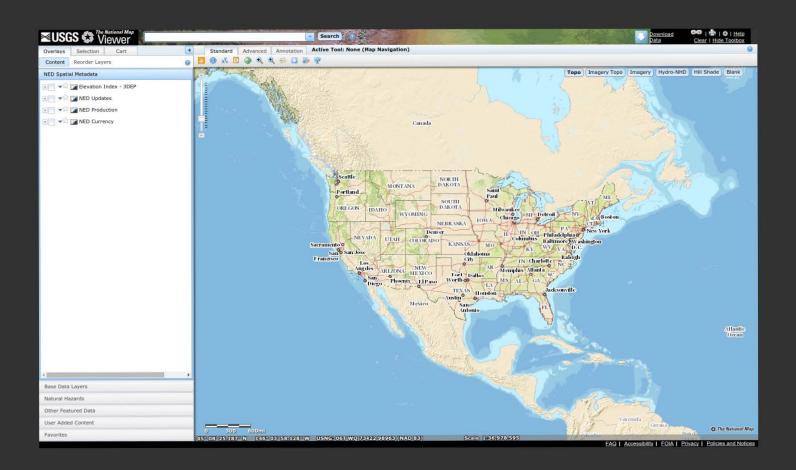
Washington

Data/Maps Copyright 2015 Geofabrik GmbH and OpenStreetMap Contributors | Map tiles: Creative Commons BY-SA 2.0 Data: ODbL

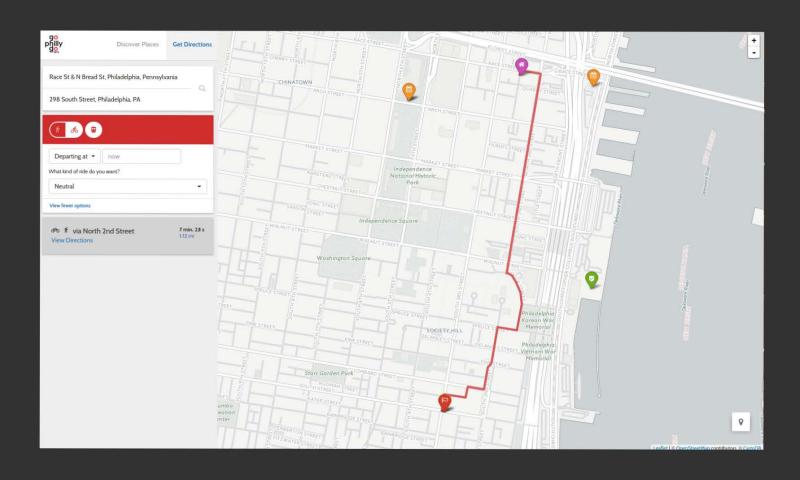
Mot what you were looking for? Geofabrik is a consulting and software development firm based in Karlsruhe, Germany specializing in OpenStreetMap services. We're happy to help you with data preparation, processing, server setup and the like. Check out our web site and contact us if we can be of service.

Nicht das Richtige dabei? Die Geofabrik ist ein auf OpenStreetMap spezialisiertes Beratungs- und Softwareentwicklungsunternehmen in Karlsruhe. Gern helfen wir Ihnen bei der Datenaufbereitung, Datenkonvertierung, Serverinstallation und ähnlichen Aufgaben. Besuchen Sie unsere Webseite und sprechen Sie mit uns. wenn wir Ihnen helfen können.

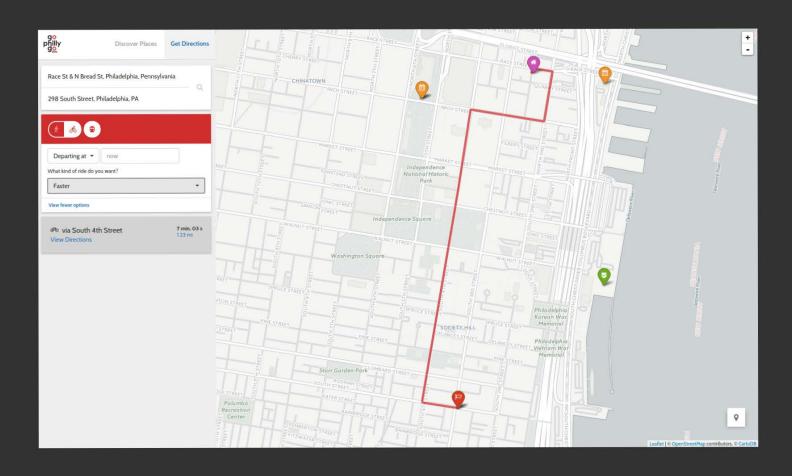
National Elevation Dataset



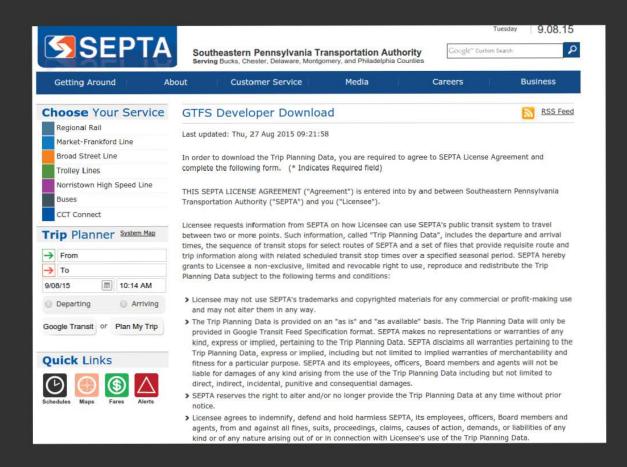
Bike routing options (neutral)



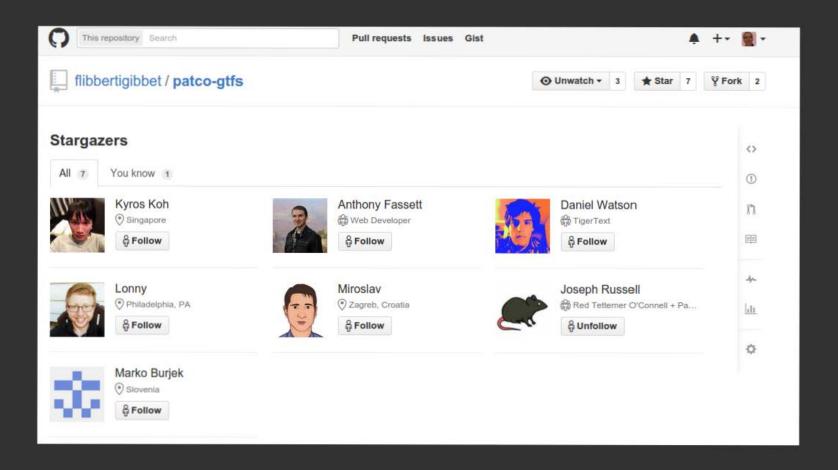
Bike routing options (safer)



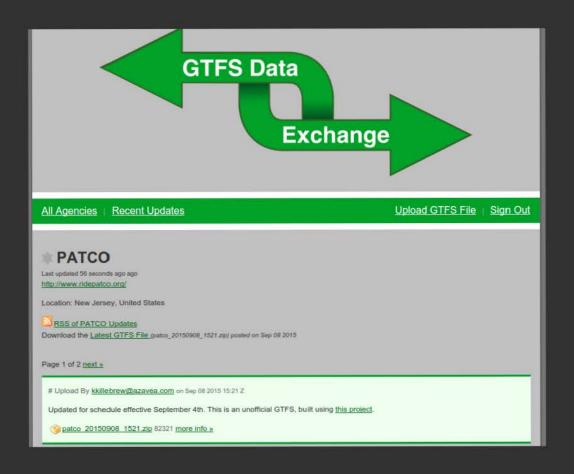
Downloading GTFS



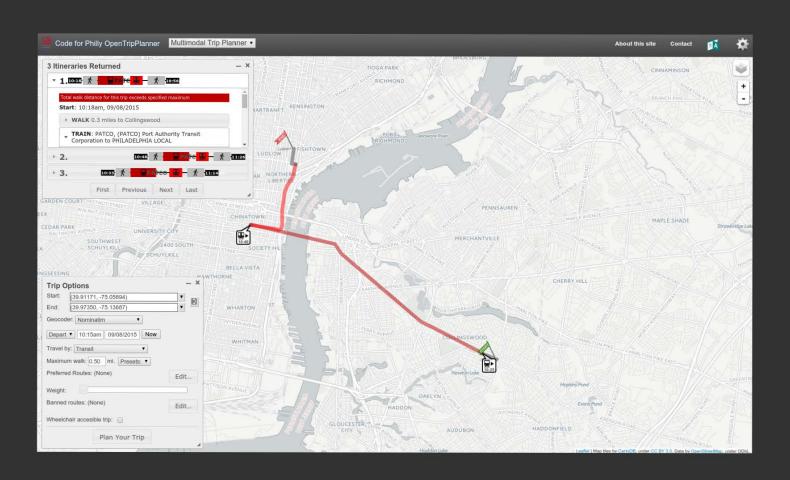
Making a PATCO GTFS



GTFS Data Exchange repository



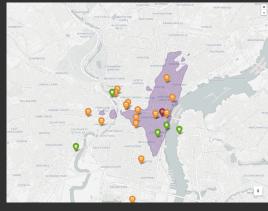
OpenTripPlanner User Interface



Isochrones (travel sheds)

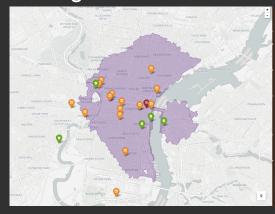
Walking

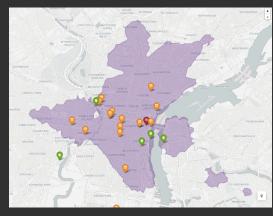




Walking + Transit

Biking





Biking + Transit

GoPhillyGo.org Multi-modal Trip Planner

A Clean Air Council project Funded by the William Penn Foundation

John Branigan jbranigan@azavea.com Kathryn Killebrew kkillebrew@azavea.com





DVRPC Safety Programs September 9th, 2015





Office of Safety and Congestion Management

Today's presentation:

- The safety program
- Crash data we rely on and how it's used
- Coordinating with partner agencies to improve transportation safety in the region

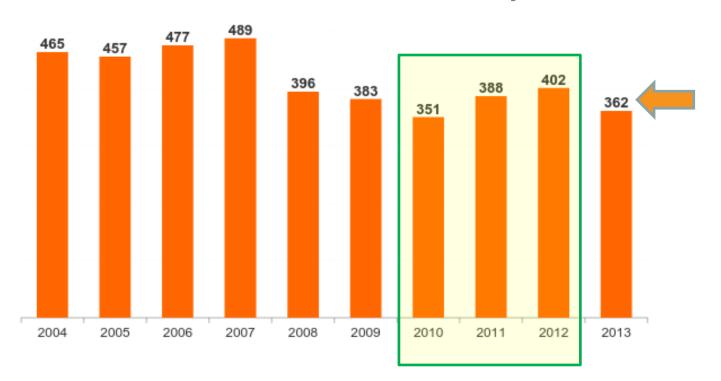


Why Have a Safety Program?

The 2015 Transportation Safety Action Plan addresses the eight key emphasis areas that are contributing factors in 97% of fatalities in the Delaware Valley, and 88% of the injuries.



Total Crash Fatalities in the Delaware Valley Over Time



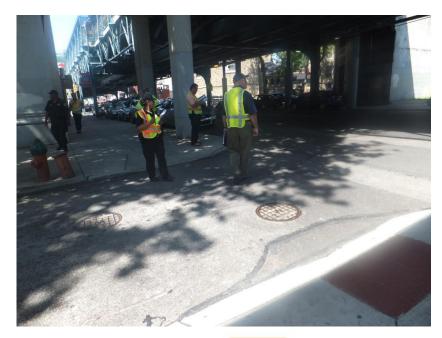
Regional Fatality Trend Compared to National Fatality Trend



Building a Safety Program

A Successful Safety Program Must Be:

- Data-driven
- Responsive to partners' needs
- Collaborative
- Focused
- Emphasizes low cost imp.
 where possible
- Includes decision makers from all levels





FY 2016 Transportation Safety and Security

- Regional Safety Task Force (RSTF) / Transportation Safety Action Plan
 - Partnership of multimodal agencies and organizations that work together to improve transportation safety through implementation of the Transportation Safety Action Plan
- Safety Symposia
- RSTF Project Pipeline Process
- Crash Data Management System
 - Crash data provide a starting point in selecting locations for focused work, and support projects within and outside of DVRPC, including HSIP implementation
 - Data Navigator: http://www.dvrpc.org/asp/DataNavigator/default.aspx
- US 130 Pedestrian and Bicyclist Safety Study, Phase II
 - Phase II of crash data-driven project focused on safety and mobility improvements for walking and biking
- Safety Project Implementation Assistance
 - Work with partners at the state and county levels to advance safety projects proposed in previous safety studies (RSAs, CCSAP, etc.), or at locations identified through a data-driven process (HSM, HSIP)
- Special Studies & Coordination Efforts
- Security Planning





Where does this data come from?

1. State databases

- PA Crash Data Analysis Retrieval Tool (CDART)
- NJ Plan4Safety
 Download free: http://www.state.nj.us/transportation/refdata/accident/

2. Police reports

- Narratives
- Diagrams

3. Other data sources/products

- PA Crash Facts & Statistics
- NJ State Police, NJDOT Crash Records
- Fatality Analysis Reporting System (FARS)



Crash Data Considerations

All crash data comes from the police reporting form:

- New Jersey NJTR1
- Pennsylvania AA 500

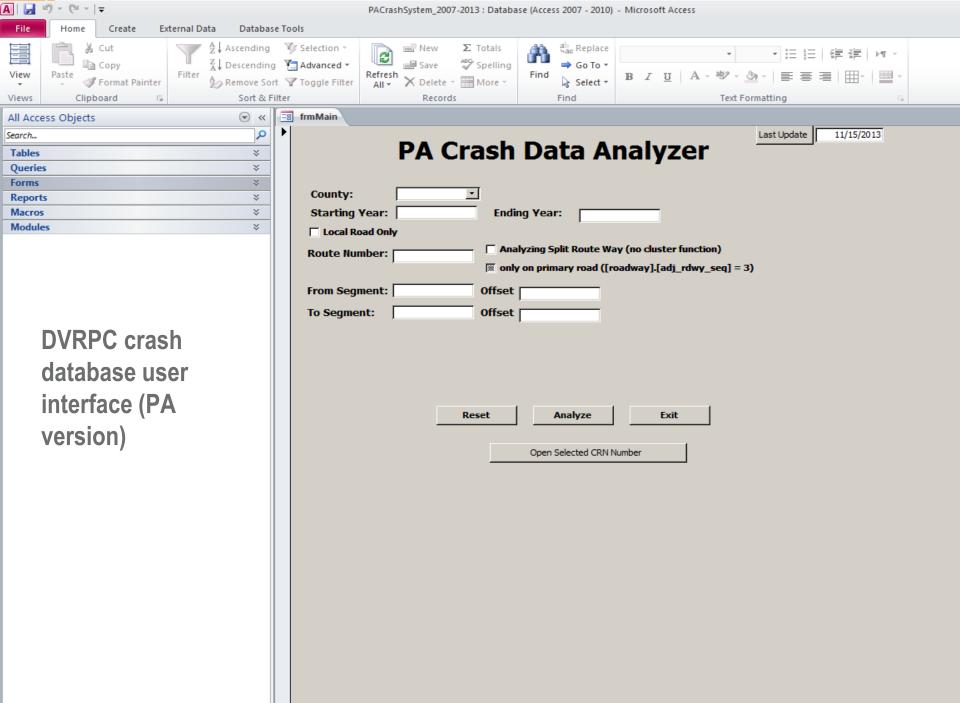
Reportable crashes definitions:

- New Jersey: all non-injury crashes where officer determines that \$500 damage to property has occurred
- Pennsylvania: a vehicle must require towing from the scene for crash to be considered reportable.

Non-reportable crashes:

- Not in either database
- More useful in PA than in NJ





NJDOT crash records web page



Site Index | Search: NJ Home NJDOT

NJDOT

NJDOT Home 💌	About NJDOT 💌	NJcommuter.com •	Community Programs -	Reference / Links 🗢
Engineering -	In the Works	Capital Program 💌	Freight, Air and Water	Doing Business •

Crash Records

Crash Records
Crash Detail Summary
2001 - Current Raw Data
Accident Table
Driver Table
Vehicle Table
Pedestrian Table
Occupant Table
1997 - 2000 Raw Data
Raw Data Overview
Key To Raw Data
Crash Code List New NJTR-1 Form (pdf 875k)
NJTR-1 Form 2001-2005 (pdf 147k)
1997 - 2000
Police Resources
County and Municipal Codes (xls 67k)
Hospital Code (pdf 22k)
Insurance Resources MVC Insurance Code List
NJ Insurance Fraud Info.
Insurance Company Phone Directory
Additional Statistics
Contact Us

Crash Records

Crash Record Summaries

Please read through these notes regarding the information on this site.

- Please be advised that additional Crash Records for Year 2014 will be added to the website when processed.
- Please be advised that the 2001-2006 is now using a new format and you must download the new NJTR-1 Form along with the new tables in order to format your data correctly.

Crash Records & Statistics	Years
Total Crash Records by County Statewide	2000 to 2014 (pdf 64k)
Total Injury Crashes by County Statewide	2001 to 2014 (pdf 63k)
Total Fatal Crashes by County Statewide	2001 to 2014 (pdf 64k)
Crash Rates / By State / Interstate Routes	2003 to 2014 (pdf 84k)
Cell Phone Statistics	2002 to 2014 (pdf 273k)
New Jersey Crash Statistics (excludes Private & US Government Property and State/County Parks and Institutions)	2000 to 2014 (pdf 46k)
Statewide Crash Rates by Cross Section Geometry	2005 to 2013 (pdf 79k)

Crash Rate Reports By Year

You will need Adobe Acrobat Reader to view the PDF files which is available at our State Adobe Access Page.

Select Year

Crash Description Types & Locations

Years

New Jersey Department of Transportation Bureau of Safety Programs Crash Summary

NJDOT crash summary by road type

Crash Summary For County Road System

For calendar year 2014

Total Crashes: 72331

Severity	Count	% of Total	Intersection	Count	% of Total
Fatal	143	0.20%	At Signalized	11825	16.35%
Injury - Maj	322	0.45%	At Unsignalized	19477	26.93%
Injury - Mod	3022	4.18%	Between Intersections	41002	56.69%
Injury - Min	15094	20.87%	Railroad Crossing	27	0.04%
Property Damage	53750	74.31%			

			Surface Condition	Count	% of Total
Collision Type	Count	% of Total	Dry	54657	75.57%
Same Dir- Rear End	23453	32.42%	Wet Surface	12332	17.05%
Same Dir- Sideswipe	8950	12.37%	Snow	2575	3.56%
Angle	13487	18.65%	Ice	2024	2.80%
Head On	2683	3.71%	Unknown	250	0.35%
Parked Vehicle	4339	6.00%	Other	493	0.68%
Left Turn / U Turn	2945	4.07%			
Backing	1695	2.34%			
Encroachment	277	0.38%			
Overturned	378	0.52%	Light	Count	% of Total
Fixed Object	7851	10.85%	Day	51530	71.24%
Animal	3205	4.43%	Dusk	1970	2.72%
Pedestrian	1339	1.85%	Night	17614	24.35%
Pedalcycle	606	0.84%	Dawn	876	1.21%
Non-Fixed Object	397	0.55%	Unknown	341	0.47%
Railcar - Vehicle	5	0.01%			
Unknown	18	0.02%			
Other	703	0.97%			

Crash Summary Report

DVRPC NJ crash summary

County:	SRI: 00000130	Start MP:	30.48 End MP: 55.31	From Yr:	2009	To Yr: 2013
Total Crashes:	4836 <u>Total Fa</u>	talities (people kille	ed): 29 <u>Total People:</u>	13421		
Severity Fatal	count 29	% of Total 0.60%	Intersection Not at Intersection		count 3152	% of Total 65.18%
Injury - Maj Injury - Mod	36 223	0.74% 4.61%	At Intersection		1684	34.82%
Injury - Min Property Damage	1287 3261	26.61% 67.43%				
Severity (person) Unknown	count 18		Surface Condition Dry		<u>count</u> 3698	% of Total 76,47%
Killed Incapacitated	29 43		Wet Snowy		975 110	20.16%
Moderate Injury Complaint of Pain	281 1963		lcy Other		46 3	0.95% 0.06%
Collision type Same Direction (Rear E	count	% of Total 38.05%	Light		count	% of Total
Same Direction (Side St	wipe) 1301	26.90%	Day		3326	68.78%
Right Angle Opposite Direction (Hea	587 id-On, 22	12.14% 0.45%	Dusk Night		97 1326	2.01% 27.42%
Opposite Direction (Side Struck Parked Vehicle	e 3 18		Dawn Unknown		76 2	1.57% 0.04%
Left Turn/U Turn Backing	114 33		4.F-381802/F30030		-	ATTACA AND
Encroachment	14	0.29%				
Overturned Fixed Object	31 656					
Animal Pedestrian	71 60	1.47% 1.24%				
Pedalcyclist Non-fixed Object	29 42					
Other	15					

RoosBlvd 6001 Local SW

1/1/2008 to 12/31/2012 Date Range:

Area of (In County 67 On State Route 6001(S) Between Segment 0141 Offset 0 and Segment 0331 Offset 1638)

Interest:





MONTHO	F YE	AR														DAY OF	WEEK							
	J	AN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC				SUN	MON	TUE	WED	THR	FRI	SAT	
CRASHES	3	48	66	59	58	60	56	65	53	56	47	68	81	717	a	RASHES	87	107	106	100	87	101	129	717
PCT		7%	9%	8%	8%	8%	8%	9%	7%	8%	7%	9%	11%	100%	_	PCT	12%	15%	15%	14%	12%	14%	18%	100%
HOUR OF	DAY																							
	00	0	1 0	2 0	3 04	1 05	06	07	08	09	10	11 1	2 13	14	15	16	17	18	19	20 2	1 22	23	99	
CRASHES	28	1	6 2	8	9 9	11	17	26	30	28	36	37 3	5 44	38	42	43	31	32	29	31 1	9 33	41	24	717
FCT	4%	29	6 49	6 19	6 1%	2%	2%	4%	4%	4%	5%	5% 5	% 6%	5%	6%	6%	4%	4%	4% 4	% 39	6 5%	6%	3%	100%

YEAR		
	CRASHES	PC
2008	112	16%
2009	128	18%
2010	154	21%
2011	165	23%
2012	158	22%
TOTAL	717	100%

į.	CRASHES	PCT	
REAR END	262	37%	
ANGLE	235	33%	
HIT FIX OBJ	81	11%	
SAME DIR SS	52	7%	
PEDESTRIAN	43	6%	
HEAD ON	18	3%	
OPP DIR SS	17	2%	
NON COLL	8	1%	
BACKING	1	0%	
TOTAL	717	100%	

	CRASHES	PCT
FATAL	11	2%
MAJOR	12	2%
MODERATE	95	13%
MINOR	285	40%
UNK SEVERITY	154	21%
UNK IF INJURED	7	1%
PDO	152	21%
	1	0%
TOTAL	717	100%

SEVERITY COUNT	
	PERSONS
FATALITIES	12
MAJOR	14
MODERATE	122
MINOR	469
UNK SEVERITY	335
UNK IF INJURED	110

	ACTIONS	PC
NO CONTRIBUTING ACTION	647	399
UNKNOWN	197	129
OTHER IMPROPER DRIVING	101	6
IMPROPER/CARELESS TURN	94	6
TOO FAST FOR CONDITION	86	5
TAILGATING	77	5
RUNNING RED LIGHT	74	4
SUDDEN SLOWING/STOP	67	4
SPEEDING	57	3
CARELESS PASS/LN CHNG	42	3
DRIVER WAS DISTRACTED	38	29
TURN FROM WRONG LANE	33	2
CTHERS	159	109
TOTAL	1672	100

	VEHICLES	PCT
AUTOMOBILE	973	67%
SUV	206	14%
SMALL TRUCK	90	6%
VAN	80	6%
BUS	34	2%
LARGE TRUCK	26	2%
MCTORCYCLE	17	1%
UNK VEHICLE	12	1%
PEDALCYCLE	6	0%
TOTAL	1444	100%

	CRASHES	PCT
DRY	585	82%
WET	115	16%
SLUSH	4	1%
SNOW	4	1%
ICE	3	0%
ICE PATCH	3	0%
OTHER	1	0%
SND/GRVL	1	0%
WATER	1	0%
TOTAL	717	100%

ILLUMINATION			WEATHER		
	CRASHES	PCT		CRASHES	PCT
DAYLIGHT	427	60%	CLEAR	615	86%
STREET LIGHTS	267	37%	RAIN	80	11%
DAWN	7	1%	SNOW	14	2%
DARK	6	1%	FOG	3	0%
DUSK	4	1%	OTHER	2	0%
UNK LIGHTING	4	1%	RAIN/FOG	1	0%
	1	0%	SLEET	1	0%
OTHER	1	0%	UNK	1	0%
TOTAL	717	100%	TOTAL	717	100%

	FACTORS	PCT
NONE	637	86%
UNKNOWN	28	4%
SLIPPERY ICE/SNOW	24	3%
OTHER WEATHER COND	13	2%
OTHER ENVIR FACTOR	9	1%
OTHER RDWY FACTOR	7	1%
CBSTACLE ON RDWY	5	1%
GLARE	4	1%
SUBSTANCE ON RDWY	4	1%
SUDDEN WEATHER COND	4	1%
ANIMAL IN RDWY	3	0%
WINDY CONDITIONS	3	0%
OTHERS	3	0%
TOTAL	744	100%

PennDOT crash summary from **CDART**

Year Range: 2008 to 2012

Area of: In County On Route From /0	To /	Q
YEAR	Crash	
2008	151	149
2009	199	199
2010	237	229
2011	246	23%
2012	232	229
Total	1065	- 337
COLLISION TYPE	Crash	
Non collision	14	15
Rear-end	420	399
Head-on	22	25
Rear-to-rear (Backing)	1	09
Angle	255	249
Sideswipe (same dir.)	87	89
Sideswipe (Opposite dir.)	16	29
Hit fixed object	191	189
Hit pedestrian	56	59
Other or Unknown	3	09
Total	1065	
SEVERITY LEVEL	Crash	
Not injured	244	
Killed	24	29
Major injury	26	29
Moderate injury	140	139
Minor injury	407	1000
Injury/ Unknown Severity	206	
Unknown	18	
Total	1065	
SERVERITY COUNT	Person	
Fatalities	26	1%
Total Injur	1301	
Major	29	1%
Moderate	183	5%
Minor	695	20%
UNK Severity	391	11%
Not Injury	2115	81%
Total	3442	
ENVIR/ROADWAY FACTORS	Cresh	
None	1965	859
Windy conditions	5	15
Sudden weather condition	7	15
Other weather conditions	33	35
Deer in roadway	1	05
Obstacle on roadway	9	19
Other animal in roadway		
Glare	5 47	09
Slippery road conditions (I		49
Substances on roadway	4	09
Polholes TOD Obstanted	1	09
TCD Obstructed		09
Other roadway factor	14	19
Other environmental factor	9	15

Unknown Total	44 1255	4%
ROAD CONDITION	Crash	
70.71 (17.6 (18.0	832	78%
Dry Wet	200	19%
Snow covered	200	1%
Slush	6	19
lce	6	19
ce Patches	9	19
Water – standing or moving	1	0%
Other	2	0%
Total	1065	4.5
WEATHER	Crush	
No adverse conditions	872	82%
Rain	153	149
Sied (hall)	4	09
Snow	25	29
Foc	2	09
Rain and tog	1	09
Other	5	09
Unknown	3	09
Total	1065	
ILLUMINATION	Crash	
	1	09
Daylight	609	579
Dark - no street lights	15	13
Dark - street lights	412	399
Dusk	11	19
Dawn	13	13
Dark – unknown roadway	3	09
Other	1 1065	09
Total		
DRIVER ACTIONS	Actions	
No contributing action	1199	44%
Driver was distracted	75	39
Driving using hand-held phone	11	09
Driving using hands-free phone	1	09
Making illegal U-turn	1	09
Making improper or careless turn	92	34
Turning from wrong lane	35	15
Proceeding w/o dearence after stop	18	19
Running stop sign	76	31
Running red light	16	19
Failure to respond to TCD Telligating	139	59
Laigating Sudden slowing or stopping	95	31
State is storing at stopping lilegally stopped on road	8	08
Careless passing or lane change	78	31
Driving the wrong way on 1-way street	4	09
Careless or illegal backing on roadway	15	19
Driving on the wrong side of roadway	4	09
Making improper entrance to highway	11	01
Making improper exit from highway	6	01
Careless parking or unperking	2	05
Over or under compensation at curve	14	19
Speeding	100	49
Driving too fast for conditions	145	59

Failure to maintain proper speed	55	2%
Driver fleeing police (police chase)	1	0%
Driver inexperienced	44	2%
Failure to use specialized equipment	63	2%
Affected by Physical Condition	147	5%
Other improper driving actions Unknown	268	10%
Total	2729	10.29
VEHICLE TYPE	Vehicles	
1. Program (2. 0.2. 20.	73	3%
Automobile	1428	84%
Motorcycle	29	195
Bus	56	3%
Small truck	155	7%
Large truck	48	2%
suv	295	13%
Van	129	6%
Unicycle, bicycle or tricyc	10	0%
Unknown vehicle Total	18 2234	1%
MONTH	Crash	
JAN	64	8%
FEB	91	9%
MAR	97	9%
APR	96	9%
MAY	95	9%
JUN	73	7%
JUL	78	7%
AUG	84	8%
SEP	92	9%
OCT	75	7%
NOV	90	6%
DEC	110	10%
Total	1065	
Day of Week	Crash	
SUN	147	14%
MON	153	14%
TUE	167	16%
WEC THR	138 131	13%
FRI	139	13%
SAT	190	18%
Total	1065	10.71
H en	Count	
Hour of Day	Crash 39	494
00	23	2%
02	44	4%
03	31	3%
04	21	2%
05	22	2%
06	35	3%
07	44	4%
08	39	4%
09	32	3%
10	51	5%

DVRPC PA crash summary

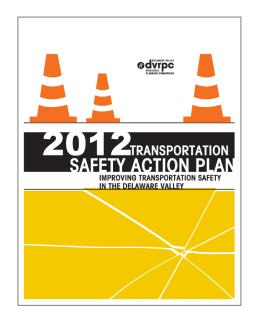
Here's How We Use This Data

- Plans
- Projects
- Data and analysis requests (internal and external)
- Data products



2014 Update - Transportation Safety Action

- Data-driven focused on key emphasis areas
- Collaborative
- Coordinated and consistent with NJ and PA SHSP's
- Considers existing safety programs and presents new strategies to improve safety





The Process – Data Analysis

Analysis of Crashes in the Delaware Valley

- American Association of State Highway and Transportation Officials (AASHTO) -Strategic Highway Safety Plan (2004)
- Data analysis of 17 safety emphasis areas in search of fatal-crash contributing factors
- Baseline analysis for the 2014 update of the SAP

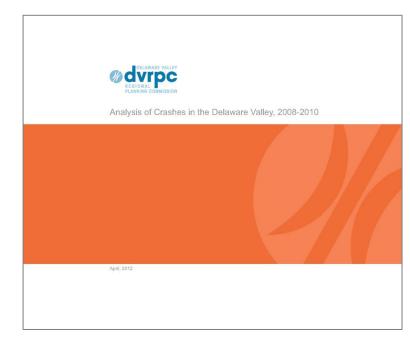


Table A-4: Crash Severity by Emphasis Area by State, 2010-2012 Average

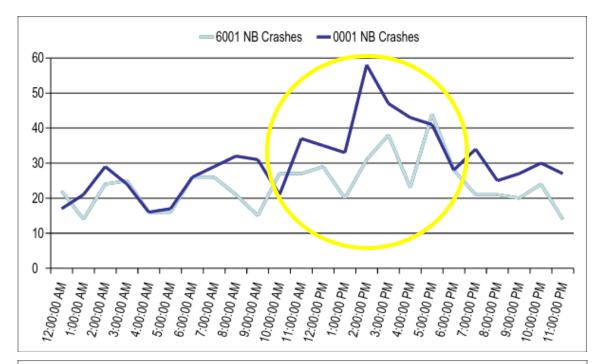
		Penn ylvania							New Jersey		
AASHTO#	Emphasis Area	Crashes	Cra C. S		that Caused	that Caused	Crashes		nat Caused:	% of Crashes that Caused	% of Crashes that Caused
1	Institute a Conducted Disease I issues	5005	Injury	Fatality	Injuries	Fatalities	0040	Injury	Fatality	Injuries	Fatalities
	Institute a Graduated Driver's License	5995	3024	29	50%	0.5%	8643	2309	16	27%	0.2%
2	Ensure Drivers Licensed/Competent	415	247	3	59%	0.6%	933	321	2	34%	0.3%
3	Sustain Proficiency in Older Drivers	4733	2888	39	61%	0.8%	7365	1964	26	27%	0.4%
4	Curb Aggressive Driving	19305	10747	126	56%	0.7%	15180	4647	40	31%	0.3%
5	Reduce Impaired Driving	2669	1420	73	53%	2.7%	1824	735	21	40%	1.1%
6	Keep Drivers Alert (Distracted Driving)	3806	2004	11	53%	0.3%	24005	6102	42	25%	0.2%
7	Increase Driver Safety Awareness										
8	Increase Seat Belt Use/Air Bag Effectiveness	3783	2712	74	72%	2.0%	1064	532	22	50%	2.1%
9	Make Walking/Street Crossing Easier	2320	2257	58	97%	2.5%	706	583	27	83%	3.8%
10	Ensure Safer Bicycle Travel	717	711	5	99%	0.7%	364	298	3	82%	0.8%
11	Improve Motorcycle Safety	907	821	43	90%	4.7%	509	382	14	75%	2.8%
12	Make Truck Travel Safer	1293	676	17	52%	1.3%	3374	582	16	17%	0.5%
13	Increase Safety Enhancements in Vehicles										
14	Reduce Vehicle-Train Crashes	39	33	0	85%	0.0%					
15	Keep Vehicles on the Roadway	9205	4108	94	45%	1.0%	3897	1487	39	38%	1.0%
16	Minimize Consequence of Leaving Roadway	7671	3243	77	42%	1.0%	7624	2167	40	28%	0.5%
17	Improve Design/operation of Intersections	15732	9910	71	63%	0.4%	10635	3654	32	34%	0.3%
18	Reduce Head-on/Across Median Crashes	1436	936	20	65%	1.4%	677	305	3	45%	0.4%
19	Design Safer Work Zones	398	204	4	51%	1.1%	1701	404	6	24%	0.3%
20	Enhance EMS to Increase Survivability										
21	Improve Data/Decision Support Systems										
22	Create More effective Processes/Safety Management Systems (SMS)										

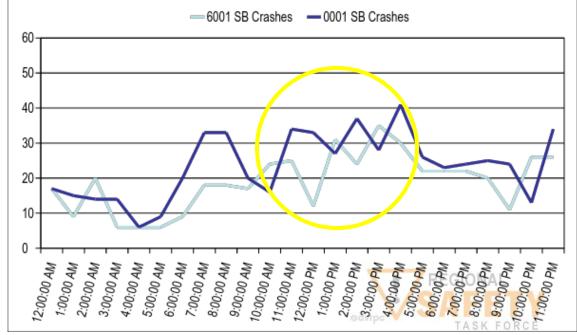


Crash Frequency by Time of Day and Route

	6001 NB	0001 NB
Total	597	755
Max	44	58
Min	14	16
Median	24	29

	6001 SB	0001 SB
Total	471	588
Max	35	41
Min	6	6
Median	20	24

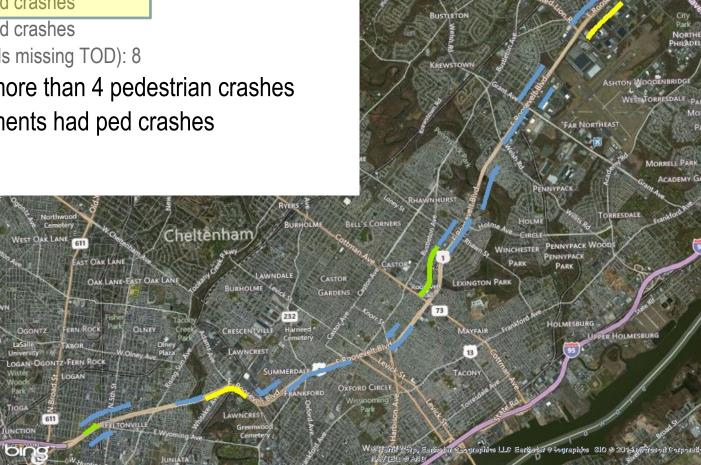




Segment Analysis: Pedestrian Crashes by Time Period **Analysis**

- Time periods and totals (all route segments)
 - 5am-9am: 17 ped crashes
 - 10am-1pm: 17 ped crashes
 - 2pm-5pm: 28 ped crashes
 - 6pm-10pm: 30 ped crashes
 - 11pm-4am: 20 ped crashes
 - Null_Time (records missing TOD): 8
- No segment had more than 4 pedestrian crashes
- Aprx. 60% of segments had ped crashes

Ped Crashes by Segment and Time Period		
Blue	1 crash	
Green	2 crashes	
Yellow	3 crashes	
Red	4 crashes	
map:	5AM-1PM all segments	





North Maple Avenue (CR 607) Road Safety Audit

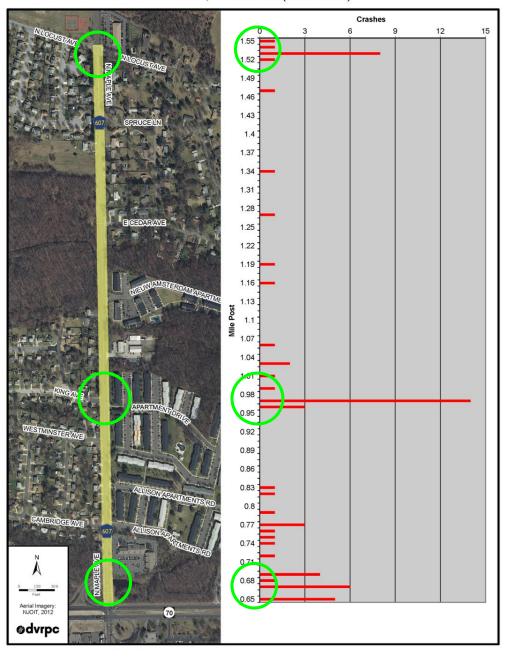
Evesham Township, NJ

Friday, July 19, 2013





Crash Frequency by Mile Post: North Maple Avenue (CR 607) 0.9 Miles, 64 Crashes (2009-2011)



Cluster #1

- North side of NJ 70 intersection
- 16 crashes

Cluster #2

- Vicinity of King Ave intersection
- 18 crashes

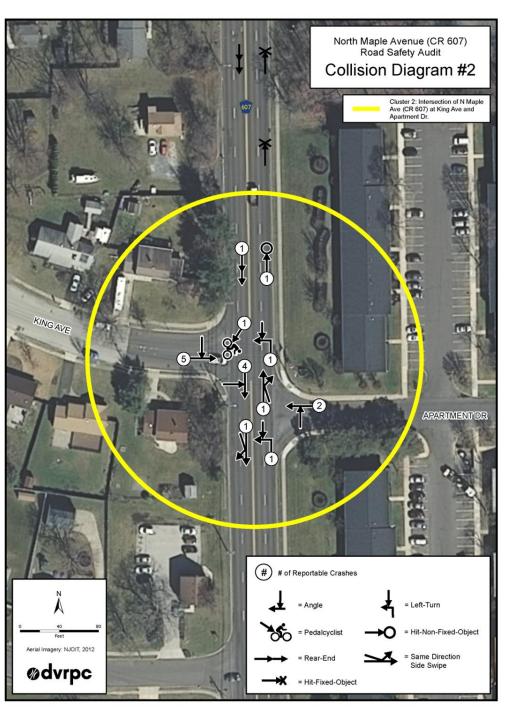
Cluster #3

- South side of N. Locust Ave intersection
- 11 crashes

Observation

- 70% of the crash total included in the three clusters
- Cluster #2 = 28%





Observations

- 18 crashes
- Predominant collision type = right angle (61%)
- Predominant pre-crash actions = "going straight ahead"
- 9 crashes involved drivers entering
 N. Maple Ave from King Ave EB
- Crashes spiked to 11 in 2010



Web-maps / Products

US 130 Pedestrian and Bicyclist Safety Study: 130 web-map

NJ Local Safety Program - Highway Safety Improvement Program (HSIP) HSIP-eligible locations

PennDOT 6-0 Safety Webmap (HSIP)

<u>District 6-0</u>

DVRPC Interactive Maps
County and Municipal Crash Trends

DVRPC Data Navigator
Crash Data by MCD, county





Thank you!

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