

Media Borough Bike Facility Implementation Plan

Media Borough Environmental Advisory Council

2015/2016 Work Effort

December 1, 2016

Purpose

Media Borough is already a bikeable place, by virtue of its well-connected grid network of streets and its density of destinations. One goal of the Environmental Advisory Council (EAC) is to further improve the bicycling environment in Media and encourage more residents to bicycle by developing an implementation plan for low-cost, short-term improvements to bicycle facilities.

The adopted version of the Borough's updated Comprehensive Plan includes concept-level recommendations for a network of in-street bicycle facilities and expanded bicycle parking.

Bicycle parking throughout the borough has recently been expanded through collaborations between borough staff, the EAC, the Delaware County TMA, and the Bike Delaware County chapter of the Bicycle Coalition of Greater Philadelphia. As a result, the focus of this plan is on in-street bicycle corridors and connections, rather than bicycle parking.

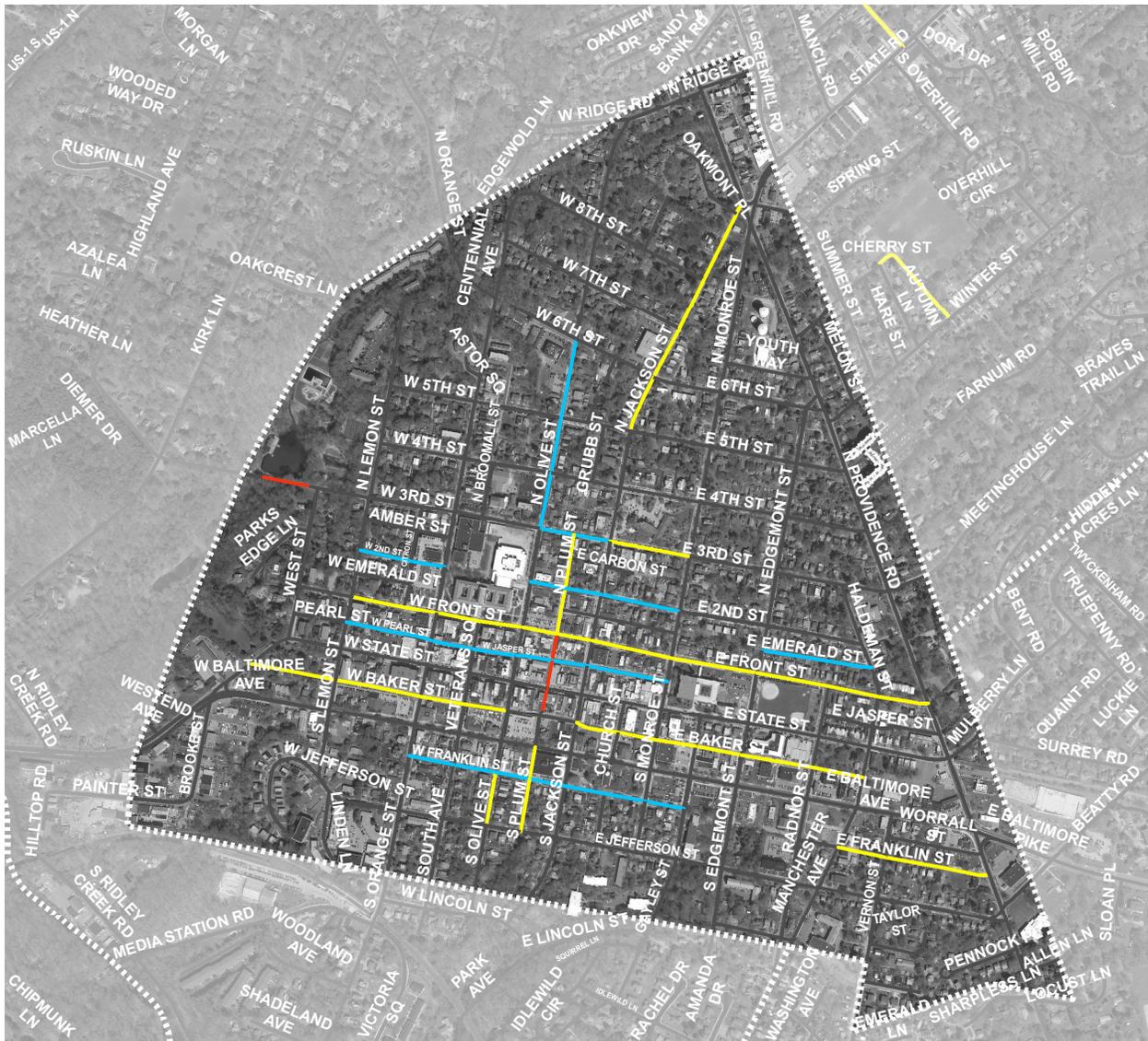


Media Street Network

The borough has more flexibility in changing pavement markings for local roadways (borough streets). Bike lanes or other in-street treatments can be created on PennDOT roadways, but under present state policy, would require the borough to obtain a Bicycle Occupancy Permit (BOP), assuming maintenance responsibility and liability for the bike facility portion of the roadway. A PennDOT evaluation is underway to revise the statewide policy to make bike facilities on state roads more viable in the future, including the pilot of a new policy in the Delaware Valley Regional Planning Commission (DVRPC) region and PennDOT District 6-0.



Data and orthophotography source: Borough of Media, 2015; DVRPC, 2010-2015



Media Borough street direction for traffic

Direction

- Two-way
- One-way south/east
- Closed to traffic
- One-way north/west

Data and orthophotography source: Borough of Media, 2015; DVRPC, 2010-2015

Street Directions in Media

The borough has a mix of one-way and two-way streets designed to disperse and calm automobile traffic. Street directions can be changed, but designing a bike facility network that blends with existing street directions is desirable.



Data and orthophotography source: Borough of Media, 2015; DVRPC, 2010-2015

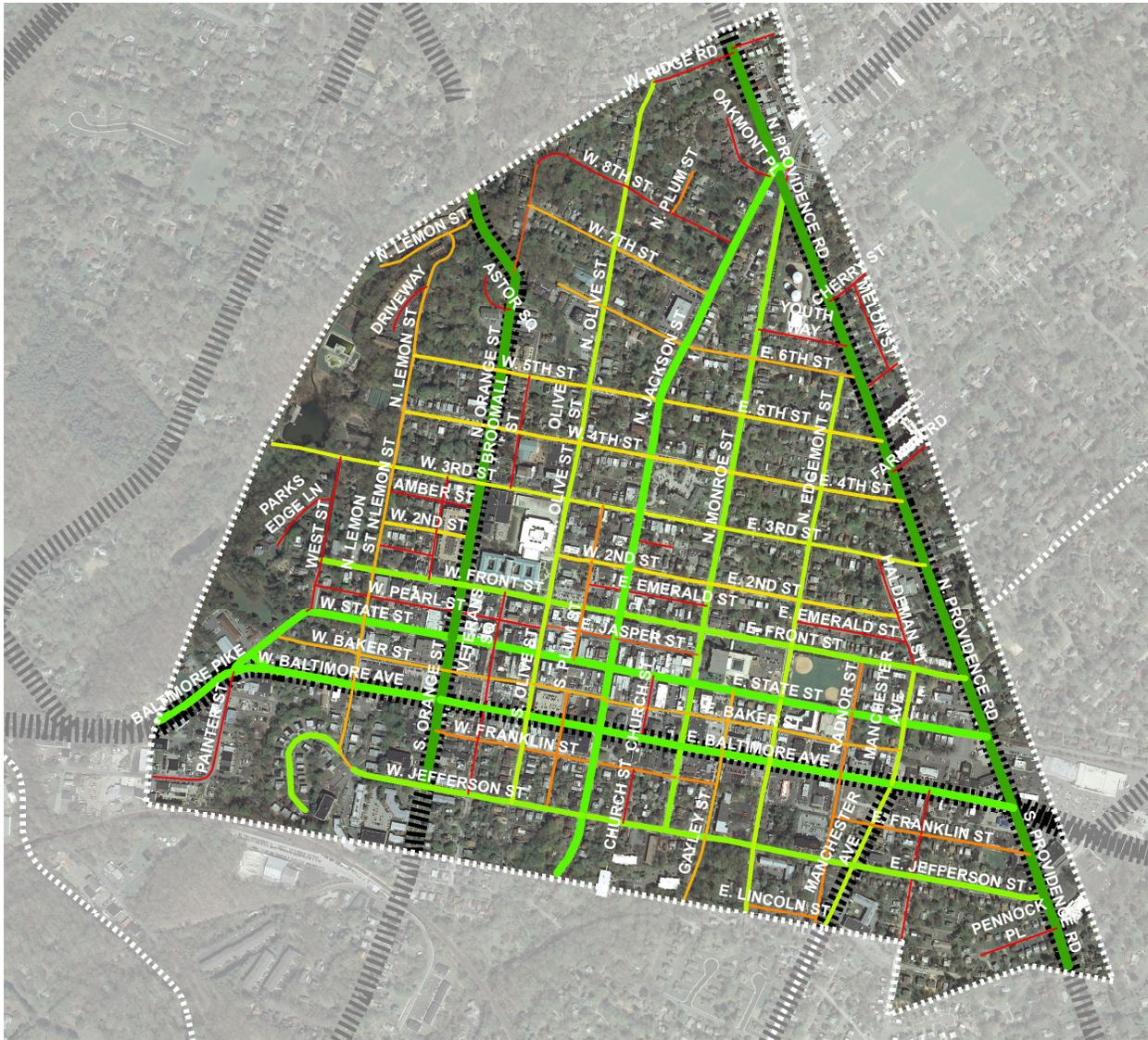
Street Slopes in/around Media Borough

Elev. change between intersections (feet)

- -52.7 - -7.0
- -6.9 - -5.0
- -4.9 - 0.0
- 0.0 - 5.0
- 5.1 - 7.0
- 7.1 - 44.5

Topography and Grade Change

As a human-powered mode of transport, bicycling is affected by topography in a way that driving is not. While avid bicyclists will be comfortable traversing a wide range of grades, in designing a bike network for “everyday cyclists,” it is important to avoid significant grade changes (hills) wherever possible.



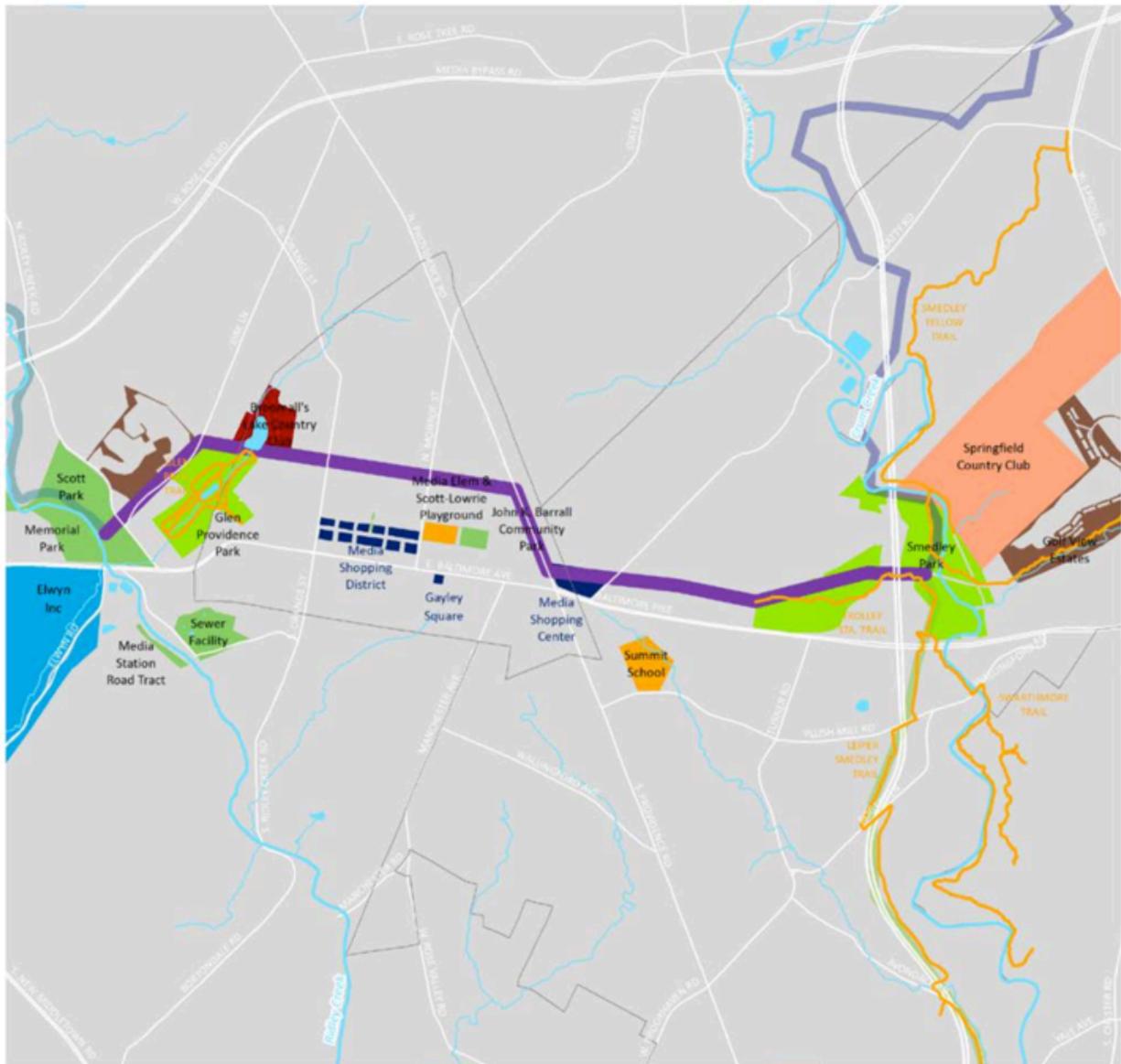
Number of survey respondents desiring bike facility, August 2015



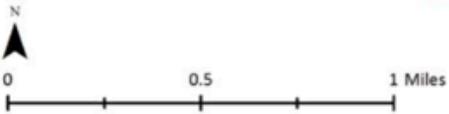
Data and orthophotography source: Borough of Media, 2015; DVRPC, 2010-2015

Summer 2015 Public Survey Summary

There was significant interest in bike facilities for most of the major roadways in the borough, with the state-owned roadways (Orange, Providence, and Baltimore) having the greatest interest—which makes sense, as these are the roadways that present the greatest safety challenges to bicyclists. However, these roadways present unique implementation challenges, owing to the BOP issue, making it desirable to find parallel roadways where possible. For full details on survey feedback, see Appendix A.



- 12 - Media-Smedley Connector Trail
- 11 - Blue Route Bikeway - Leiper-Smedley Trail
- 13 - Ridley Creek Greenway (North & South Sections)
- 15 - Blue Route Bikeway - Smedley to Darby Creek
- Existing Trails
- Federal Park
- State Park
- County Owned Land
- Municipal Owned Land
- School District Open Space and Recreation
- Institutional Property w/ Open Space
- Homeowner's Association Open Space
- Conservation Organization Protected Lands
- Cemetery
- Private and Public Golf Courses
- Private Outdoor Recreational Facility
- Indoor Recreation Facilities
- Shopping Centers



Media-Smedley Connector Trail

Delaware County's recently-adopted greenways plan includes a connector trail that would link Glen Providence Park (and the Mineral Creek area beyond) with the Leiper-Smedley Trail and other points east. This connection was only conceptually defined in the plan, and includes a routing on 3rd Street in Media—which would be challenging without modifying street directions.



Data and orthophotography source: Borough of Media, 2015; DVRPC, 2010-2015

Media Bike Plan Network

- Sharrow (2-way)
- Sharrow (1-way)
- Bike lanes
- Supplemental strategies (orange: requires more study)
- Future Trail Connections

Bike Plan Network

The network shown here was created by drawing on two rounds of public survey input, as well as input by borough staff and council. It is intended to maximize connectivity across the borough without impacting on-street parking or street directions. The proposed network, which could be installed at once or gradually, is primarily sharrow-based, since in most cases bike lanes cannot be accommodated without removing parking or travel lanes, but with supplemental strategies to further improve safety.

Plan Network Street Widths and Treatments

Street	Width	Recommended Treatment	Notes and Supplemental Strategies
PLAN NETWORK			
2nd Street	30' (two wide 15' combination travel/ parking lanes)	Bidirectional sharrows spaced no wider than every 250 feet, minimum 1 sharrow per block each direction.	
5th Street	34' (two 17' combined parking and travel lanes)	Bidirectional sharrows spaced no wider than every 250 feet, minimum 1 sharrow per block each direction.	Primary connector.
Edgmont Street	36' (two 8' parking lanes and two 10' travel lanes)	Bidirectional sharrows spaced no wider than every 250 feet, minimum 1 sharrow per block each direction.	
Front Street	33' (most constrained cross section is adjacent to courthouse: 14' diagonal pkg lane, 8' pkg lane, one 11' travel lane)	One-way sharrows spaced no wider than every 250 feet, minimum 1 sharrow per block.	Primary connector.
Haldeman Street	30' (two 7/8' parking lanes and one shared 15' bidirectional travel lane)	Bidirectional sharrows spaced no wider than every 250 feet, minimum 1 sharrow per block each direction.	
Jackson Street (South of 5th)	36' (two 8' parking lanes and two 10' travel lanes)	Bidirectional sharrows spaced no wider than every 250 feet, minimum 1 sharrow per block each direction.	Primary connector. For a more bike-friendly crossing of Baltimore Avenue, pursue in-pavement bicycle loop detectors to actuate green phase.
Jefferson Street	36' (two 8' parking lanes and two 10' travel lanes)	Bidirectional sharrows spaced no wider than every 250 feet, minimum 1 sharrow per block each direction.	Primary connector.

Street	Width	Recommended Treatment	Notes and Supplemental Strategies
Monroe Street (North of 5th)	36' (two 8' parking lanes and two 10' travel lanes)	Bidirectional sharrows spaced no wider than every 250 feet, minimum 1 sharrow per block each direction.	
Orange Street	30' typical (one 8' parking lane northbound and two 11' travel lanes); 36' from Baker to Third (two 8' parking lanes and two 10' travel lanes)	Bidirectional sharrows spaced no wider than every 250 feet, minimum 1 sharrow per block each direction.	A BOP is not be required for sharrows under present PennDOT policy, and a pilot to revise the BOP policy is underway. Coordinate with PennDOT on sharrow placement when street is resurfaced.
Providence Road	30' (two 4' marked shoulders and two 11' travel lanes)	Convert 4' marked shoulders to 4' bike lanes; fill in gaps where shoulders disappear.	Pursue high-visibility intersection treatment where Providence Road crosses Baltimore Pike. BOP would be required for bike lanes under present PennDOT policy, but a pilot to revise the policy is underway.
Radnor Street	35' (two 7/8' parking lanes and two 10' travel lanes)	Bidirectional sharrows spaced no wider than every 250 feet, minimum 1 sharrow per block each direction.	
W. State Street	40' typical (two 8' parking lanes and two 12' travel lanes)	Bidirectional sharrows spaced no wider than every 250 feet between Orange Street/trolley endpoint and new West End Gateway/Glen Providence Park entrance, minimum 1 sharrow per block each direction.	
REQUIRES FURTHER STUDY			
Neighborhood Greenways (Jefferson Street or elsewhere)	Neighborhood greenways (also known as bicycle boulevards) are created by discouraging automobile thru traffic using traffic calming, designed in a way that does not introduce new friction for bicyclists and pedestrians. This may be appropriate for Borough streets that see high volumes of non-local vehicle traffic and which are also important bicycle network connectors, like Jefferson Street. Further study would be required to identify the best locations and treatments.		

Street	Width	Recommended Treatment	Notes and Supplemental Strategies
Trail connections		In coordination with Delaware County, pursue feasibility work for connections to Leiper-Smedley Trail and to Ridley Creek/Mineral Springs via Glen Providence Park	Delaware County's proposed Media-Smedley Connector Trail.
Bicyclists' Baltimore Pike		Coordinate with Delaware County Planning Department on any westward extension of the Bicyclists' Baltimore Pike route, to include a connection to Media	

What's a sharrow?

As noted above, the most visible components of the proposed plan implementation are shared-lane pavement markings (sharrows). This is because the street widths of the affected borough roadways are such that higher-level treatments such as marked or separated bike lanes cannot be accommodated without removing on-street parking lanes, which could be highly disruptive for residents. The proposed network includes streets that are already fairly comfortable to bike on, given typical automobile traffic intensities. The proposed sharrows will endorse these streets as good places to bike, encourage more and safer bicycling by encouraging bicyclists to ride in the proper direction and outside the “door zone” of parked cars, and also make drivers aware that they should expect to see cyclists.

BICYCLE NETWORK PLAN
To get sharrows installed, a street must be in the Bicycle Network Plan.

ENCOURAGE SPECIFIC STREETS FOR BICYCLE USE
Sharrows can encourage bicyclists to use streets that have fewer conflicts than other streets. For example, 13th and 15th Streets are used as an alternative to Broad Street, which has more auto traffic.

GUIDE BICYCLISTS ALONG A BIKE ROUTE
Sharrows can be used to guide bicyclists through a confusing street pattern, or to link trails and bike lanes. Two examples are:
- Sharrows on S. 59th St which guide cyclists between the Cobbs Creek Trail & the 58th St Greenway
- The new sharrows in Memphis, Tulip, Columbia & Malborough Streets in Fishtown

GUIDE CYCLISTS AWAY FROM BUS STOPS OR MARKED CARS
Sharrows are placed 11 to 13 feet away from the curb to encourage bicyclists to ride outside of the “door zone”, where parked cars may be opening their doors, and away from the curb where buses stop. On streets with only one side of parking, sharrows direct cyclists to ride away from parked vehicles.

PROVIDE CONTINUITY
Sharrows allow the continuation of bike lanes where it is not possible to include a bike lane. Some examples are:
- 66th Ave between 10th & 12th Sts
- Berks St

FILL GAPS IN THE BIKE NETWORK
The Bicycle Network Plan identifies a network of streets & trails that bicyclists can use. Where no good streets are available for bike lanes, sharrows fill in the gaps, especially where there is demand. One example is Main Street in Manayunk.

WHERE DO SHARROWS GET PLACED & WHY?

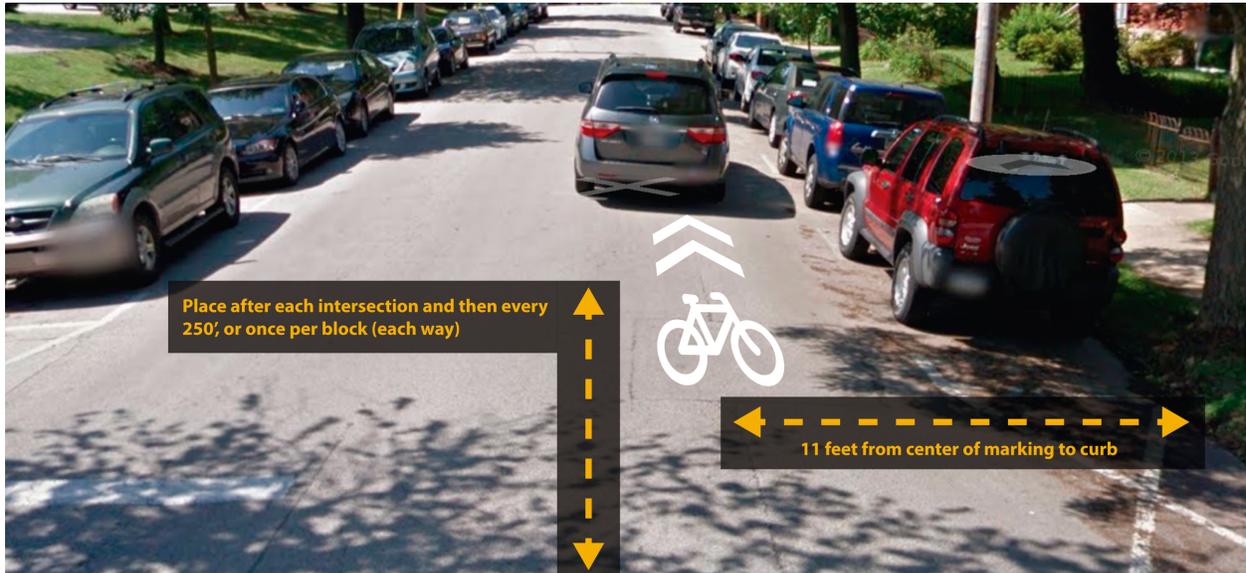
Top: This graphic from the Philadelphia Mayor’s Office of Transportation and Utilities explains how sharrows are used in the city (Source: bicyclecoalition.org)

Right: Sharrow pavement marking on a residential street in Swarthmore Borough



Details for sharrow placement

This illustration of Jackson Street between 3rd and 4th Streets shows what a standard sharrow installation would look like, and where the markings should be placed for good practice (per the 2009 Manual on Uniform Traffic Control Devices).



Neighborhood Greenway option for plan network streets where residents desire traffic calming (requires further study)

To help prioritize bicycle and pedestrian safety on borough streets where traffic calming treatments are desired, one option that should be considered in the future is to build on the proposed bike network sharrows by creating neighborhood greenways along certain corridors. Neighborhood greenways include treatments that discourage and calm thru traffic by drivers, such as speed humps and chicanes, but which are designed so as not to discourage bicyclists (by permitting bicycle thru movements where vehicle movements are restricted, for example). Given survey feedback expressing concern about automobile traffic speed and safety (e.g., stop sign compliance), neighborhood greenways are a strategy that may be appropriate for Media, and should be explored further.



Left: Seattle Neighborhood Greenway with sharrows and traffic calming island (Source: seattle.gov)

Education and outreach campaign for all road users as part of plan implementation

One fact that was made clear in the second public web survey for this plan, as well as through conversations with borough councilmembers and the borough Public Safety Committee, is that borough residents, leaders, and other stakeholders have concerns about road safety in Media, such as with respect to stop sign compliance by drivers and bicyclists, and safe crossings by pedestrians. Implementation of this bike plan provides an opportunity to educate borough residents, workers, and visitors about the new bike facilities, while also reminding them of proper road safety and etiquette for all road users.

This could take the form of distributing road safety educational materials to borough residents and students, possibly in partnership with stakeholders such as the Delaware County TMA, as well as written educational materials distributed online and in local press such as the “Town Talk.” Swarthmore Borough staff, for example, shared an educational article about sharrows in the town paper when they were introduced to borough streets. In addition, the borough police department should consider a targeted education and enforcement campaign, such as the recent “give respect, get respect” campaign in Philadelphia, where city police officers gave out warnings and educational materials to drivers, bicyclists, and pedestrians.

OUT AND ABOUT - URBAN RIDING BASICS

Hand Signals



The Basics

- A bike is a legal vehicle with the same rights and duties as a motor vehicle.
- Obey all traffic signs, signals and rights-of-way.
- Always wear your helmet.
- Wear bright colored clothing.
- Keep pant legs and shoelaces out of moving parts.
- Use a white front light and rear red light from dawn to dusk.

Riding skills

- Practice looking over your shoulder, this helps you keep an eye on traffic while keeping a straight line.
- Keep a look out for potholes, glass, puddles and opening doors.
- Leave plenty of space between you and the vehicle in front of you.

Sidewalks

- Walk your bike on the sidewalk. It's the law and riding puts you and other users in danger. Cyclists double their chances of a crash by riding on sidewalks; pedestrians and cars don't expect to see you there.

Ride with Traffic

- Make Physics Work for You: Two objects moving towards each other have a faster closing speed than two objects moving in the same direction.

Lane positioning

- Ride in the right wheel line of a lane if there is no bike lane or wide shoulder.
- Stay out of the door zone, ride 4 feet away from parked cars.
- Keep a straight line; don't swerve in an out of parked cars.



Top: Street safety brochure for bicyclists published by the Bicycle Coalition of Greater Philadelphia.

Right: "Give respect, get respect" road safety education materials from the City of Philadelphia and AAA.

Sketch Cost Estimate for Implementation of Plan Elements

INSTALLATION COSTS

Sharrows

Placed one each way about every 250', or one for each signal or stop-controlled block

- 5th Street: 12 sharrows
- Jackson Street: 14 sharrows
- Front Street: 9 sharrows
- Jefferson Street: 16 sharrows
- Egmont Street: 8 sharrows
- 2nd Street: 2 sharrows
- Haldeman Street: 4 sharrows
- Monroe Street: 8 sharrows
- Orange Street: 16 sharrows
- Radnor Street: 6 sharrows
- W. State Street: 6 sharrows
- TOTAL = 93 sharrows
- Cost: \$180 per sharrow X 101 sharrows = **\$18,180**

Bike lanes

Providence Road: Cost TBD depending on details of implementation approach; comparable to sharrows if bike lane legends are added to existing shoulders

In-pavement loop detectors with signage for two Jackson Street approaches of Baltimore Pike:

~\$10,000 each including installation = **\$20,000**

Education and enforcement campaign

Cost TBD depending on the details of the program, but could include printing and distribution costs for road safety educational materials as well as borough police staff time for a targeted enforcement campaign.

Source: Bushell, M.A., Poole, B.W., Zegeer, C.V., & Rodriguez, D.A. (2013). *Costs for Pedestrian and Bicyclist Infrastructure Improvements: A Resource for Researchers, Engineers, Planners, and the General Public*. Chapel Hill, NC: University of North Carolina, Chapel Hill, Highway Safety Research Center.

MAINTENANCE / REPLACEMENT COSTS

It bears noting that sharrow and bike lane pavement markings, like all pavement markings, will require regular replacement with recurring installation costs. Generally speaking, pavement markings, whether water-based or thermoplastic, should be expected to last up to 10 years, with replacement costs that are comparable to initial installation costs. The costs for sharrow installation noted above are likely conservative (high) for Media Borough, as they are drawn from sources that typically assume the use of third-party contractors. If the borough public works staff are able to mark sharrows, both installation and maintenance costs could be considerably lower.

APPENDIX A: First Online Survey Details and Results

Media Environmental Advisory Council (EAC)
Transportation and Land Use Subcommittee
August 2015

The survey:

- Was promoted widely online beginning June 12, 2015
 - Transition Town Media, Media Business Authority newsletter, Media Borough web site, AllThingsMediaPA blog, Bike Delaware County listserv, Media Farmers Market newsletter (and Facebook/Twitter), and on Nextdoor Media
- Received 242 responses as of July 31, 2015 (survey closed on that date)
- Was successful in reaching folks outside the bike enthusiast community:
 - 56% of respondents cycle 'occasionally' or 'never'
- Reflected broad support for bike facility improvements in Media
- Was an online survey with a convenience sample, and consequently is not necessarily representative of the views of all Media residents

Detailed results:

How often do you or someone in your household bike in Media Borough?

241 out of 242 people answered this question

1	Occasionally; maybe once a month	84 / 35%
2	Never	52 / 22%
3	Once or twice a week	50 / 21%
4	Several times a week	46 / 19%
5	Every day	9 / 4%

For what trip purposes do you bike in Media Borough (select all that apply)

242 out of 242 people answered this question

1	Exercise/recreation	174 / 72%
2	Shopping	95 / 39%
3	Social	77 / 32%
4	None	48 / 20%
5	Personal business (doctors' appointments, etc)	43 / 18%
6	Work commute	27 / 11%

What would encourage you to bike more in Media?

242 out of 242 people answered this question

1	Bike lanes or other painted bike facilities	169 / 70%
2	Better connections to regional trails	110 / 45%
3	Cycletracks or other separated bike facilities	93 / 38%
4	More bike parking in town	79 / 33%
5	More bike parking at SEPTA stations	30 / 12%
6	Nothing; I bike about as often as I want	27 / 11%

If you had to choose just one, please choose the in-street bike facility type that you think is most appropriate for Media Borough. In other words, if we are painting an in-street bike network, which type of facility should be most common?

241 out of 242 people answered this question

1	Standard Bicycle Lane	110 / 46%
2	Protected Bicycle Lane	66 / 27%
3	Buffered Bicycle Lane	36 / 15%
4	Marked Shared Lane ("Sharrow")	29 / 12%

Please choose the streets in Media Borough where you'd like to see bike facilities (as shown in question 4).

227 out of 242 people answered this question

1	Providence Road	130 / 57%
2	Orange Street	123 / 54%
3	Baltimore Ave/Pike	115 / 51%
4	Jackson Street	109 / 48%
5	State Street	102 / 45%
6	Monroe Street	100 / 44%
7	Jefferson Street	92 / 41%
8	Front Street	90 / 40%
9	Manchester Ave	80 / 35%
10	Olive Street	75 / 33%
11	Edgemont Street	71 / 31%
12	3rd Street	63 / 28%
13	2nd Street	54 / 24%
14	4th Street	52 / 23%
...	Other	425 / 187%

Other comments:

If you have any other comments, thoughts, or preferences, please share them here!

1. There should be a place for bicycle commuters to shower. Maybe there could be a special promotion for bike commuters to use showers at a local gym.
2. I would love to bike more in Media but am very anxious to do so because there's no barrier between the cars, and I just don't feel safe--especially since I have my 1 year old in tow in the back. Thanks for helping make Media a safe biking town!
3. Media needs to do this yesterday. There is no room on State Street and Balt Pike though. Protected lines, places to lock bikes. This community has the perfect attitude, demographic, and commitment/need for sustainability to make this happen.
4. We desperately need bike lanes in Media!! Just came from Europe and their bike-centric culture is the way it should be, especially in a town like Media!
5. Would like to see more pedestrian-friendly sidewalks and crosswalks, in addition to bike lanes. Need to protect our "walking" town as well to encourage residents to solicit our local businesses.
6. More mt biking trails
7. Biking around Media is fairly easy even without spending money for improvements. I suppose we could add more bike stands, but I lock mine against a poll if I can't find a stand which doesn't seem to cause a problem. Adding lanes to the majority of streets seems like a wasted effort. I do find it difficult to ride down Orange St. sometimes - a lane could be helpful there. I avoid Providence Rd. as well as State St. unless it's a quiet hour. A bike lane on State St. would add to the congestion. Some drivers can barely handle the trolley alone, much less worrying about a bike lane on the other side. For the record, I'm 29 with no kids.
8. Bike/walking path in Rosetree Park like SleightonPark
9. This is unnecessary. Biking is easy in media now. Designated bikes lanes are not needed.
10. It's hardly wide enough to walk on Providence Road; so unlikely that a bike lane would fit on this major traffic route.
11. I would like to see enforcement of traffic laws when cyclists break them. I frequently see cyclists run stop signs and red lights and fail to signal turns.
12. I live just outside borough in Middletown we desperately need bike lanes to connect to media
13. Thank you for considering this. This would be a really great addition to this great town.
14. Media is not the worst town for bike riding. You (of course) have to be cautious at stop signs and for oncoming traffic. If you have ever been to Evanston, IL.....that is about the best I have ever seen.

15. Some of the questions are overly narrow. Different types of bike lanes might be appropriate for Baltimore Pike or Providence Rd (such as a buffered lane) than for other streets, like Edgmont or Orange (where a normal bike lane might do). Signage and improved awareness may be more important than bike lanes, as space on the roads is limited, and bike lanes might not be realistic on some of the roads that I specified.
16. If there were bike routes I would feel comfortable taking my 6 year old and 2 year out on nightly rides
17. Bike trails please!
18. Study other countries and towns that have successfully achieved bike friendliness -- There are a lot of good and inspiring success stories that I've read.
19. It would be nice to have bike lanes from mansion drive to rose tree park to 252 for kids to bike to school and from rose tree park all the way to center of Media.
20. Biking works in towns if the riders are courteous too. Often cyclists don't obey the laws and it causes frustration to drivers too. Being a cyclist and driver is see both sides. Bikers need to share road and not act entitled themselves
21. Encourage bikers to use the borough streets by making them safer by designating safe spaces. More importantly enforcement is critical.
22. I would love for my family to be able to bike from Middletown to and through the borough!!!
23. Media is the ideal Borough to bike. I don't do it because people here drive like crazy. But having bike lanes would improve the situation.
24. Anything would be better than the current situation - which is nothing! Glad someone is thinking about this!!
25. The borough really needs a bike/skate park for the kids/teens/adults to use.
26. I feel Media, is too busy with businesses and highways to encourage cyclists. Too dangerous
27. BIKE SHARE?
28. Parking needs and narrow streets make Sharrows the best alternative for most streets with the exception of the "the Box". Bike lanes might be created on Jasper and Baker with north /south connectors on Manchester/Halderman and Lemon. Halderman to 2nd to Monroe to Baker completes the Box. Extending the Baker side of the box into the lots adjacent to 252 would also give access to the Acme shopping center. Bike parking facilities should be on the streets in the Box and not on State street. This would separate the pedestrian and heavy vehicular traffic from the cyclists and encourage use of the box rather than State st. Cyclists don't need to park exactly at their destinations as their "payloads" are easily carried the one block back to their bikes.

29. Please help make Media more bike friendly!
30. Seems like almost every street in Media has parking and wouldn't be wide enough to also accommodate bike lanes, hence sharrows.
31. Good luck! It would be great to be a bike friendly town.
32. We need bike lanes and parking facilities in Media!!!
33. I live in and love the borough, and I would bike here often if something could be done to protect bike riders from cars. Media police need to crack down on speeding, running red lights and other traffic violations before I'll feel comfortable with anyone in my family biking during the week. I also work less than 2 miles from the borough and I would ride my bike at least 300 days a year, but it is NOT safe to do so with no bike lane, no shoulder, and no enforcement of even the most basic of traffic rules
34. Hey
35. Ok
36. Great idea
37. I think State Street is very important and needs to be laid out in a safer manner, as currently we are caught between trolley tracks and car doors.
38. It would be great to have a bike share program - like the one that exists in Philly.
39. Please make biking in Media safe! There are so many of us that would love to ride around instead of drive.
40. The biggest detriment to bicycling in Media is the heavy traffic and the excessive speeds and failure of many drivers to observe stop signs.
41. I am from Philadelphia
42. There is a need to educate people driving cars to pay closer attention to public safety. There is way too much inattentive driving going on ... a danger to bicyclists, pedestrians and other drivers. Everyone has the right to "Arrive Alive".
43. I mostly do not ride bike in media because so hilly . I do not ride elsewhere since my son gave my bike away. He used to ride from here to phila and back on Baltimore pike at 3pm and 3pm . He used to ride to pence st over orange to rose tree rd to road to tyler. On roads without parking a bike lane would be great. We would need more parking before making bike lane where we now have parking which is why I chose shared lane image which at least reminds cars that bikes are also permitted
44. Bike lanes should not mean a loss of parking spaces. It is already very difficult to park on the street near your home if you live in the borough (especially on Jackson St near 5th and 6th).

45. I'm 72 & not likely to bike. It was discouraging when I was younger because Media is pretty hilly & many stop signs in flat areas. I used to go to the bike trail at Ridley Creek. But I'm all for "green" so I hope it works out.
46. Media's a great town. Making it more bike friendly would encourage people in the surrounding area to come and spend the day and could increase revenue.
47. It would be fantadtic to have a bike lane connecting Media to the Riddley Creek Park
48. I'm thrilled to see Media considering bike friendliness. Wherever we can is good. Please add a few bike racks on State St.
49. How about some area somewhere in media for my kids to ride their bike! We have NOWHERE to ride. They cry to take them for a bike ride all the time. They are 4 yrs old and there is no where safe at all around here.
50. It would be great if there were a way to bike from Media to the new rail to trail near Linvilla
51. id like to see a trail/route that is safe, starting on rte 352 by penn state campus and going into media borough. I would be happy to be on a committee.
52. Don't make traffic worse and increase accidents with bike lanes. Just encourage folks to uber or make parking better to reduce circling traffic.
53. I would love to ride my bike in Media but it's unsafe. Same problem in all the surrounding communities about time we addressed it. Thank you!!
54. I would bet more folks in media would use A dedicated bike trail versus the trolley line that goes to 69th St. station. Media and the surrounding townships need more sidewalks and bike trails
55. Media needs more designated bike parking along State Street, to encourage more cyclists.
56. Please approve this!
57. "Police need to issue warnings to the riders without helmets. There is on nutty woman with a child in a bike seat who rides up and down State and has no helmet on brainless head. And she is riding on State St...Of all streets in the Borough and she rides the most dangerous with her child and she has no helmet!
58. Nonsense. "
59. I live outside the borough and would love to be able to bike into Media. A marked bike lane along Orange Street and Manchester Avenue would make that possible. Currently there is no safe way for bikers to get into town.
60. I would love to have more safe ways to bike to, through and around Media. I would love to connect Media to other biking trails in Ridley Creek State Park, on Linvilla's trails and Indian

Orchard Park's trails. That way I could safely ride to work and to shopping in Media. This is great idea!

61. If parking is reduced for bike lanes then I do not want bike lanes. It is difficult enough to find parking without reducing the number of spaces in the boro.
62. There is no space on State St. for bicycles due to the trolley, parking, and narrow sidewalks. Is the idea to shut down the street to all traffic?
63. Would be nice to have Baltimore Pike from Springfield Mall into Media.
64. Please work with the surrounding townships to encourage more bike lanes that connect to Media burrough. E Rose Valley Road to Manchester is particularly inhospitable to bikers, but a prime connection to the burrough from the Rose Valley area. I'd like to see that be safer for both bikers and pedestrians.
65. Media could make the town more bikeable and set the tone for the County to be more bike friendly. Thank you.
66. Media desperately needs bike lanes - please make this a top priority. Also, we need to change the car-centric culture and foster a "share the road" mentality, and create more awareness of cyclists and their rights.
67. I live in Rose Valley. It is dangerous for bikers or walkers. I'm surprised there have not been more accidents...I guess bikers and walkers usually stay away. I would like to see sidewalks(!) and bike lanes on Manchester/Rose Valley Rd. Media is mostly a different entity but they are connected.
68. I have noticed while biking that state street is the most congested area to bike. Lanes will be great and effective though bike awareness is equally important and the sooner media drivers can see the streets as a shared space the more comfortable I will feel biking in town.
69. I have been hoping media would work towards a more bike friendly town! The cars of our non media residents drive too fast for a safe bike ride around here!
70. I would like to cycle in the Media area and let my children do so, but I am terrified by the absolute zero amount of safe space for cyclists, and we avoid cycling because it feels so perilous on these narrow streets.
71. I used to bike all around Media, Swarthmore and Wallingford as a kid. Now it is scary! the roads are too busy and the drivers too crazy. I worry about my husband and son riding the streets of Media and wish that bike lanes could be put in or at least some bike trails other than ridely creek.
72. Media is a great place to bike. It's just that sometimes the major, busy streets are unavoidable, and since I often bike with kids, I wish they were more bike friendly. Thanks for doing this!

73. Making the 3rd St. bridge easier and safer to cycle across is a priority for me.
74. Media Really needs bike lanes and a bike and ride (skating, skateboarding, etc) friendly policy!! Urgently! It is an environmental and social need!
75. Thanks for proposing these possibilities
76. Protected bike paths will allow children to safely bike in town.
77. Will a study be performed to determine how many actually bike now, and where, before money is spent for spring/summer recreational riders?
78. Thank you for allow input into these decisions.
79. Extend to upper providence!
80. It would be great if there was a lane connecting 352 and S Old Middletown Road to Media. Or at least along S Orange Street. It would also be helpful to have motorcycle and scooter parking in downtown media and at the train stations.
81. I generally have no great difficulty biking and feeling safe in Media with the notable exception of having to cross over Route 1 on Providence Road which is, in my opinion, much more hazardous than it needs to be. This would be the very first place that I would address in the Media-area. I realize it's outside the borough, but one of the best activities in the summer is the Rose Tree Festival at the Park which is almost impossible to ride a bike to without risking one's life. I should mention that while I feel experienced enough making the trip, it's when the kids are with me that it becomes a harrowing excercise. I would love to see this addressed in some way. Thanks for working on this!
82. I used to bike a lot before I moved to Delaware county. I quit because the county has old roads lacking shoulders and sidewalks. This area, including much of Media, is dangerous for pedestrians and cyclists. The WHOLE county needs modern infrastructure, not only Media. And some safe rec trails would help. Especially if they don't run under 476.

APPENDIX B: Second Online Survey Details and Results

Media Environmental Advisory Council (EAC)
Transportation and Land Use Subcommittee
August 2016

A second web survey accompanied draft plan distribution on the Borough's web site in mid-May 2016, with survey responses being collected through August 1, 2016. The survey:

- Was promoted widely online beginning May 23, 2016
 - Transition Town Media, Media Business Authority newsletter, Media Borough web site, AllThingsMediaPA blog, Bike Delaware County listserv, Media Farmers Market newsletter (and Facebook/Twitter), and on Nextdoor Media
- Received 55 responses as of August 1, 2016 (survey closed on that date) from people who reviewed the draft plan.
- Was successful in reaching folks outside the bike enthusiast community:
 - 76% of respondents cycle 'occasionally' or 'never'
- Was an online survey with a convenience sample, and consequently is not necessarily representative of the views of all Media residents

Overall:

- Respondents are supportive of improving bicycle facilities in Media. 51 respondents identified at least one thing they liked about the draft plan, and only 34 respondents identified at least one thing they did not like.
- Respondents liked the idea of future trail connections, as well as sharrows as the primary facility type and the recommendation to make crossings of Baltimore Avenue safer.
- Many respondents expressed concerns about traffic safety in the borough, partly with respect to bicyclists, but also with respect to driving and walking (e.g., stop sign adherence by drivers). This feedback, along with feedback from the borough Public Safety Committee, led to the inclusion of an education and outreach campaign as part of plan implementation.
- There were some suggestions to bring Phase II plan elements forward (especially Orange Street), and some to push Phase I elements back. These helped inform the simplified phasing in the final plan, with a handful of plan elements being recommended for further study.
- There were multiple suggestions to better connect the West End of town and Glen Providence Park with the plan's bike network; this is also reflected in the final plan.

Detailed results:

Do you:

54 out of 55 people answered this question

1	Live in Media	35 / 65%
2	Work in Media	7 / 13%
3	All of the above	6 / 11%
4	Play in Media	6 / 11%
5	None of the above	0 / 0%

How often do you or someone in your household bike in Media?

54 out of 55 people answered this question

1	Never, but I would like to	20 / 37%
2	Never, and I don't really have any interest	10 / 19%
3	Occasionally; maybe once a month	10 / 19%
4	Several times a week	7 / 13%
5	Once or twice a week	5 / 9%
6	Every day	1 / 2%
7	Never	1 / 2%

For what trip purposes do you bike in Media (select all that apply)

54 out of 55 people answered this question

1	Exercise/recreation	29 / 54%
2	None	20 / 37%
3	Shopping	20 / 37%
4	Social	15 / 28%
5	Work commute	10 / 19%
6	Personal business (doctors' appointments, etc)	9 / 17%

What do you like about the draft plan?

51 out of 55 people answered this question

1	Future trail connections	25 / 49%
2	Choice of sharrows for primary treatment (so no street parking is lost anywhere)	19 / 37%
3	Safe bike crossing of Baltimore at Jackson	19 / 37%
4	Pretty much everything!	15 / 29%
5	Phase II bike lanes and sharrows on Providence and Orange	14 / 27%
6	Choice of streets for sharrows	8 / 16%
7	Phase II idea for a neighborhood greenway on Jefferson	8 / 16%
8	Other	5 / 10%
9	Phase II idea for a contraflow connection on North Jackson	5 / 10%

What do you **NOT** like about the draft plan?

34 out of 55 people answered this question

1	Choice of streets for sharrows	10 / 29%
2	Other	9 / 26%
3	Phase II idea for a contraflow connection on North Jackson	8 / 24%
4	Choice of sharrows for primary treatment (so no street parking is lost anywhere)	5 / 15%
5	Phase II bike lanes and sharrows on Providence and Orange	5 / 15%
6	Pretty much everything!	4 / 12%
7	Phase II idea for a neighborhood greenway on Jefferson	3 / 9%
8	Future trail connections	0 / 0%
9	Safe bike crossing of Baltimore at Jackson	0 / 0%

Other comments:

Our plan is still a draft, and we want your ideas. Please tell us what we got right, what we got wrong, and if you have any other ideas for things you would definitely like to see happen (or not happen). The intention is to seek grant funding for many of these improvements, and even Phase I improvements could be implemented in phases- what should we start with? If you have a question and would like a response, please include your email address in your comment. Thank you for all your feedback!

1. Nice and simple.
2. Can the north-south Jackson Street lane for Phase 2 be on the west side of the street? Can the Jefferson Greenway be done without speed bumps? (difficult for emergency vehicles).
3. Just do it!!!
4. Bike accommodations need to be destination oriented. By leaving out Baker and Jasper streets in the plan you will have folks who want to get to businesses on State and Baltimore going to those streets to mix it up with cars and pedestrians. Bike racks and Sharrows should be on these back streets. Bike racks on State should be relocated. Edgemont and Jackson are good north/south streets. An extension of Baker to 252 and the Acme is something that should be looked at. Sharrows on Orange should be in Phase one as this is the only reasonable route to the train.
5. There should be signs like they have in Delaware that say "Cyclists may use full lane" to alert drivers that cyclists are legally entitled to ride in the street.
6. [Email address removed]
7. The Borough should convert its front-in angle parking to back-in angle parking. Back-in angle parking would improve safety for bicyclists, as motorists could see them better when backing out of spaces.
8. Crossing Providence Road at Farnum and Meetinghouse is treacherous by foot. There are numerous car/pedestrian accidents due to the poor visibility and speeding on Providence Road south to Baltimore Pike. Although I would love to use Farnum/Meetinghouse to bike into Media, crossing Providence is just too dangerous. I would not encourage biking anywhere on Providence road unless the speed limit was changed to 25 mph and enforced.
9. I like the idea of a bike plan, but I live on Radnor and I disagree with the assessment that Radnor and Jefferson are streets fit for bikes. People on these roads drive above the speed limit, routinely ignore stop signs and generally make the roads dangerous for driving and walking, let alone biking. I would rather see the borough invest money in speed bumps and other traffic calming devices on these roads before spending money to paint arrows on streets to direct more traffic onto these roads in the form of bike traffic. Not to mention, Media should be a great walking town before it's a biking town and the lack of consistent sidewalks is a real issue, another place money would be better spent. Bikers can bike these routes regardless of whether arrows are painted on the ground to direct them. People walking through the Borough however are forced to walk in the street or continuously cross the streets to get to safe sidewalks. I just don't see how this is a priority.
10. While I am sure you considered it, Safety was not mentioned. Driving safety has deteriorated lately in Media, pedestrian near-misses, etc. I think the issue of growing car traffic and deterioration of

driving courtesy (sorry, but I think it's happened) must be considered. Thank you.

11. Start on 3 Rd and Orange streets, because they will have the most impact, so people can see how good it is. Create safe cycling for kids. Maybe some of the small alleys could be "No through traffic except bicycles."
12. Bikers are disruptive and run signs all the time. Inviting more into town creates more liability. Please put stop signs in every corner - to not take them out. There should be a rhythm to the town. Removing those signs on orange street and others creates issues. This plan discusses removing additional stop signs.
13. I think this needs to be a Media Borough resident driven program. The Media residents will have to deal with and possibly pay for all the changes that will be made, all the time.(parking issues, narrower streets,maintenance costs, etc.) The non residents will be able to return to their own towns and not have to worry about these issues . Maybe the non residents should work on developing biking programs in their own communities.
14. Thank you for doing this to make Media even better and cooler. I like the safety features and using the secondary streets. Having the bike trails connect to kids' parks would be awesome too (if it doesn't already). Thank you!!
15. Get the bikes through media by using the perimeter. Please don't spend money on inviting bikes into the borough. The police are not equipped to ticket. How many tickets were issued to bikers in the last 12 months. PA law states that Bikes are considered vehicles. Don't bring in this service if we are not equipped nor wish to pay to be equipped.
16. I drive Jefferson daily. I see other drivers failing to stop at stop signs and speeding. I see zero law enforcement. How is this a good place for cyclists sharing lanes? Area residents use it as an alternative to Baltimore--a more expedient alternative. Orange Street has heavy traffic, speeding, failure to stop at signs and is narrow. It is not a safe place for bikes to share lanes. Sorry that you refuse to remove parking and car lanes. You cannot improve an unsafe situation by putting up some signs and refusing to change anything regarding parking and driving. Media residents must lose the notion that they are entitled to on-street parking right outside their front doors.
17. You are right on point about the streets being unable to pickup or sense bicyclists which makes cyclists wait for a car to pass. The cyclist then has to dismount the bike and press the pedestrian signal or wait for a car that may never come. But to limit cyclists to the crossing at Jackson and Baltimore would in reality restrict their biking options and cause a severe inconvenience for those bicyclist who normally cross at other locations, ie. Providence and Baltimore. Does putting this device in at Jackson Baltimore necessitate me to cross there potentially under penalty of law? Will the police harass bicyclists for not using the routes established by your plan? If so the plan would hinder bicycle use and allow the vehicle using citizenry to wash their hands saying, "we tried to accommodate them they just wouldn't have it". A huge problematic area is motor vehicles overcompensating for bicyclist. I have been well over the fog line and on the shoulder in many occasions when a motor vehicle operator would honk and go in their opposing lane of traffic just to avoid me for no purpose, Note Well no mention of gender affiliation. Another factor is huge amount of debris on the shoulder. This debris punctures bicycle tires and forces bicyclist to leave the shoulder and venture into the roadway. Also improper storm water drainage creates pools of water that forces the bicyclist to enter the roadway in the same manner as debris does. All this effort to

remain on the shoulder when we are permitted in the roadway all along. Perhaps informing the general motor vehicle using populace of the rights and obligations of cyclists would be a great strategy to encourage bicycle use. Thanks for listening to my rants motivated by my experiences as cycling fool. sincerely, Marc Joseph Da Fermo. I may be reached at [phone number removed] or via email at [email address removed].

18. Don't forget to include the new developments at the west end of state street in the planning. Bike route into town (Sharrows on last couple of blocks of state street). Also bike access from new apartments to train station.
19. Phase 1 plan should include shallows to/from Glen Providence park to 5th and Front streets.
20. It would be very nice to see a bike path that can connect the outer areas to Downtown Media. For example, the Orange St. area from Rose Tree Rd. to Downtown Media.
21. Widen roads or do not put plan in place. making the roads and making them narrower is not a choice.
22. Need enforcement of rolling stops at stop signs and more people using turn signals by cars and bikes. Everyone just drives or bikes like they own the place and it is dangerous in the borough!
23. I think the money for this project could be better spent elsewhere.
24. Improve quality of the sidewalks for our younger riders - either by having the borough or the resident whose sidewalk it is fix them. It can be really difficult for younger riders to get around with all the sidewalks that are damaged / in disarray.
25. Stay off the roads. It's dangerous
26. Stop sign removal should be at Monroe and Jefferson a three way intersection, not Gayley - which is a four way stop.
27. I live on Gayley Street, south of Jefferson, and I worry about the impact that removing the current stop signs from Jefferson Street will have on the safety of pedestrians and vehicles (cars OR bicycles) traveling on Gayley, particularly those attempting to cross Jefferson. Gayley Street already lacks sidewalks in this area (wish something could be done about this), forcing pedestrians to walk along the side of the road, and having stop signs on Jefferson at least ensures that traffic will have stopped/slowed prior to making a semi-blind turn onto Gayley and potentially encountering pedestrians. As for attempting to cross Jefferson, visibility of cross-traffic can sometimes be challenging due to the cars parked near the intersection, and if there are no longer stop signs, it could become very difficult to cross Jefferson (or even make a right turn off Gayley) without risking an accident. I know that this change is just a phase II option at this point, but I hope that the potential safety impacts are well-studied before implementing this change, so that the safety of pedestrians and motorists isn't compromised for the convenience of bicyclists -- how much would removal of one stop sign (out of at least a half-dozen along Jefferson Street) relieve bicyclists vs. how much would it cause other safety concerns?