



Appendices July 2023

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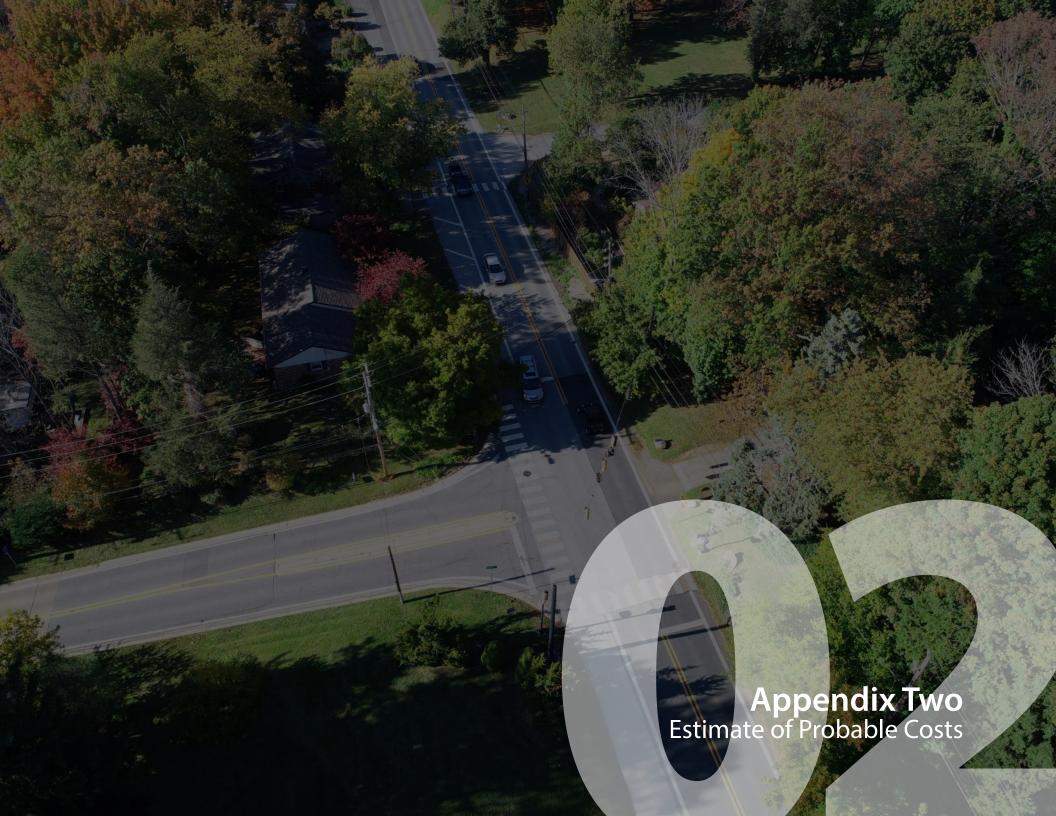


	Federal Highway Administration - Plannin	-	
		gov/env initiatives/pel/pel quest.as	
	Topic	Comments	Reference Section
1	Background:		
a.	Who is the sponsor of the PEL study? (state DOT, Local Agency, Other)		Acknowledgements / Crafting a Plan for the Ardens
b.	What is the name of the PEL study document and other identifying project information (e.g. sub-account or STIP numbers, long-range plan,	Connecting with the Ardens	
C.	Who was included on the study team (Name and title of agency representatives, consultants, etc.)?	_	Acknowledgements / Crafting a Plan for the Ardens
d.	Provide a description of the existing transportation facility within the corridor, including project limits, modes, functional classification, number of lanes, shoulder width, access control and type of surrounding	Harvey Road, Veale Road, Marsh Road	The Ardens Today
e.	Provide a brief chronology of the planning activities (PEL study) including the year(s) the studies were completed.		Crafting a Plan for the Ardens
f.	Are there recent, current, or near future planning studies or projects in the vicinity? What is the relationship of this project to those		Crafting a Plan for the Ardens
2	Methodology used:		
a.	What was the scope of the PEL study and the reason for completing it?	Project Goals / Alternatives Analysis / Preferred Alternative	Connecting with the Ardens (Full report)
b.	Did you use NEPA-like language? Why or why not?	Yes, to facilitate the continuation of project development consistent with federal standards	
c.	What were the actual terms used and how did you define them?	Project Goals, Alternatives, Locally Preferred Alternative	
d.	How do you see these terms being used in NEPA documents?	Purpose and Need statement, public engagement, alternatives, Locally Preferred Alternative	
e.	What were the key steps and coordination points in the PEL decision-making process? Who were the decision-makers and who else participated in those key steps?	Blend of Public Meetings, Community Surveys (2), and Project Steering Committee	The Public Pulse, Alternatives, Locally Preferred Alternative

	·	Purpose and Need statement, alternatives, Locally Preferred Alternative	The Public Pulse, Alternatives, Locally Preferred Alternative
3	Agency coordination:		
	Provide a synopsis of coordination with Federal, tribal, state and local environmental, regulatory and resource agencies. Describe their level of participation and how you coordinated with them.	Project Steering Committee	Alternatives, Appendices
ı	b. What transportation agencies (e.g. for adjacent jurisdictions) did you coordinate with or were involved during the PEL study?	Project Steering Committee (DelDOT, DART First State)	Acknowledgements / Crafting a Plan for the Ardens
		See Next Steps	Implementation Plan
4	Public coordination:		
;		Public Meetings, Community Surveys (2), Online videos, project website	Public Pulse
5	Purpose and Need for the PEL study:		
	a. What was the scope of the PEL study and the reason for completing it?		Connecting with the Ardens (Full report)
ı	p. Provide the purpose and need statement, or the corridor vision and transportation goals and objectives to realize that vision.	Plan Goals: -Manage vehicular travel speeds and deploy safety countermeasures -Provide enhanced pedestrian crossings -Develop a bicycle/pedestrian network to traverse through the Ardens -Enhance transit and school bus stops	Crafting a Plan for the Ardens
	What steps will need to be taken during the NEPA process to make this a project-level purpose and need statement?	See Next Steps	Implementation Plan
6	Range of alternatives:		
	 What types of alternatives were looked at? (Provide a one or two sentence summary and reference document.) 		Alternatives
	b. How did you select the screening criteria and screening process?		Alternatives

С	For alternative(s) that were screened out, briefly summarize the reasons for eliminating the alternative(s). (During the initial screenings, this generally will focus on fatal flaws.)		Alternatives
d	Which alternatives should be brought forward into NEPA and why?		Locally Preferred Alternative
е	Did the public, stakeholders, and agencies have an opportunity to comment during this process?	Yes – Public Meetings and two Community Surveys	The Public Pulse, Alternatives
f	Were there unresolved issues with the public, stakeholders, and/or agencies?		
7	Planning assumptions and analytical methods:		
a	What is the forecast year used in the PEL study?	N/A – Traffic projections/forecasts were not done as part of this initial planning phase. A supplemental capacity analysis of the Harvey Road corridor is recommended as a next step in the Implementation Plan. The horizon year will be established through coordination with DelDOT.	Implementation Plan
b	What method was used for forecasting traffic volumes?	N/A	
С	Are the planning assumptions and the corridor vision/purpose and need statement consistent with each other and with the long-range transportation plan? Are the assumptions still valid?	Yes.	Crafting a Plan for the Ardens
d	What were the future year policy and/or data assumptions used in the transportation planning process related to land use, economic development, transportation costs, and network expansion?	N/A	
8	Environmental resources (wetlands, cultural, etc.) reviewed. For each resource or group of resources reviewed, provide the following:		
а	In the PEL study, at what level of detail was the resource reviewed and what was the method of review?	Preliminary – using field views and available GIS datasets	Task 1 Report – Issues, Opportunities, and Constraints. Alternatives.
b	Is this resource present in the area and what is the existing environmental condition for this resource?	Further environmental screening is required to identify and specify impacted resources.	
С	What are the issues that need to be considered during NEPA, including potential resource impacts and potential mitigation requirements (if known)?	Further environmental screening is required to identify and specify impacted resources.	

d.	How will the planning data provided need to be supplemented during NEPA?	Further environmental screening is required to identify and specify impacted resources.	
9	the PEL study and why. Indicate whether or not they will need to be	Further environmental screening is required to identify and specify impacted resources.	
10	Were cumulative impacts considered in the PEL study? If yes, provide the information or reference where the analysis can be found.	N/A	
11	should be analyzed during NEPA.	All improvements should be sensitive to the Ardens Historic District under Section 106.	
12	study available to the agencies and the public? Are there PEL study products which can be used or provided to agencies or the public during the NEPA scoping process?	The Connecting with the Ardens plan will be posted to the Project website (hosted by WILMAPCO) as well as supplement activities via the project monitoring committee.	Implementation Plan
13		Subsequent planning/engineering efforts should continue to include robust and extensive engagement activities with the residents and leaseholders of the Ardens.	The Public Pulse



ESTIMATE OF PROBABLE COST (PRELIMINARY)

Locally Preferred Alternative - Ardens Transportation Plan

Phase:	PROJECT D	EVELO	<u>OPMENT</u>	CONSTRUCTI	<u>ON</u>	TOTAL	_
Harvey Road between Marsh Road and the Clubhouse Connection (A, C, E, G, H)	\$ 210,000	- \$	500,000	\$ 1,000,000 - \$	2,000,000	\$ 1,210,000 -	\$ 2,500,000
Harvey Road between The Sweep and Veale Road (J, M, N, O, P)	\$ 180,000	- \$	400,000	\$ 850,000 - \$	1,600,000	\$ 1,030,000 -	\$ 2,000,000
Harvey Road between Veale Road and Sconset Road (Q, R)	\$ 210,000	- \$	420,000	\$ 1,010,000 - \$	1,950,000	\$ 1,220,000 -	\$ 2,370,000
Harvey Road from Sconset Road over I-95 to Glenrock Drive (U)	\$ 500,000	- \$	800,000	\$ 2,600,000 - \$	3,700,000	\$ 3,100,000 -	\$ 4,500,000
Veale Road between Harvey Road and W. Dale Road (W, Y, Z, AA, AB, AD)	\$ 420,000	- \$	970,000	\$ 2,370,000 - \$	4,090,000	\$ 2,790,000 -	\$ 5,060,000
All SEGMENTS / PHASES	\$ 1,520,000	- \$	3,090,000	\$ 7,830,000 - \$	13,340,000	\$ 9,350,000 -	\$ 16,430,000

Notes

Does <u>not</u> include right-of-way acquisition, utilities, and construction inspection All prices are given in current dollars, as noted. No allowance for inflation is included. Mobilization % also includes construction survey, scheduling, and related services. Date: 5/12/2023

Harvey Road between Marsh Road and the Clubhouse Connection (A, C, E, G, H)

Key Elements Unit Q		Quantity	Unit Cost		Cost	
Rey Elements	Unit	Quantity	U	nit Cost		Cost
Clearing and Grubbing	LS	1	\$	85,000	\$	85,000
Excavation	CY	530	\$	90	\$	47,700
Pedestrian Path (6' asphalt)	SY	150	\$	125	\$	18,750
Sidewalk (5' Concrete)	SY	30	\$	330	\$	9,900
Barrier Curb	LF	70	\$	120	\$	8,400
Mountable Curb	LF	460	\$	75	\$	34,500
Full Depth Pavement	SY	300	\$	200	\$	60,000
Pavement Mill and Overlay	SY	700	\$	50	\$	35,000
Driveway Adjustment - Residential	EA	4	\$	7,500	\$	30,000
Drainage	LS	1	\$	135,000	\$	135,000
Final Grading and Restoration	SY	750	\$	15	\$	11,250
Landscape Replacement	LS	1	\$	34,500	\$	34,500
Linear Pavement Markings	LF	1700	\$	2	\$	3,400
High Visibility Crosswalk	LF	80	\$	60	\$	4,800
ADA Curb Ramp	EA	9	\$	12,000	\$	108,000
Signage (OH Lane Use Control)	LS	1	\$	55,500	\$	55,500
RRFB	LS	1	\$	50,000	\$	50,000
Traffic Signal Adjustment	LS	1	\$	20,000	\$	20,000
Stone Median Texturing	SY	20	\$	1,500	\$	30,000
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	2	\$	40,000	\$	80,000
			\$	-	\$	-
	•		Sub-t	otal	\$	861,700
LS = Lump Sum	%	8	Mobil	ization	\$	69,000
EA = Each	%	5	ESC		\$	44,000
LF = Linear Feet	%	12	MPT		\$	104,000
SY = Square Yards	%	25	Contir	ngency	\$	270,000
CY = Cubic Yards			Total		\$	1,348,700

Summary (2023 Dollars)

Project Development	\$210,000.00	TO	\$500,000.00
Construction	\$1,000,000.00	TO	\$2,000,000.00

Notes

Harvey Road between The Sweep and Veale Road (J, M, N, O, P)

Key Elements	Unit Quantity			Unit Cost		Cost	
ney Elements	0	Quartity		int cost		COSC	
Clearing and Grubbing	LS	1	\$	35,000	\$	35,000	
Excavation	CY	320	\$	100	\$	32,000	
Pedestrian Path (6' asphalt)	SY	160	\$	125	\$	20,000	
Sidewalk (5' Concrete)	SY	110	\$	210	\$	23,100	
Barrier Curb	LF	170	\$	80	\$	13,600	
Mountable Curb	LF	360	\$	70	\$	25,200	
Full Depth Pavement	SY	310	\$	200	\$	62,000	
Pavement Mill and Overlay	SY	810	\$	50	\$	40,500	
Driveway Adjustment - Residential	EA	2	\$	7,500	\$	15,000	
Driveway Adjustment - Commercial	EA	0	\$	25,000	\$	-	
Drainage	LS	1	\$	165,000	\$	165,000	
Final Grading and Restoration	SY	300	\$	15	\$	4,500	
Landscape Replacement	LS	1	\$	37,000	\$	37,000	
Linear Pavement Markings	LF	1500	\$	2	\$	3,000	
High Visibility Crosswalk	LF	60	\$	60	\$	3,600	
ADA Curb Ramp	EA	9	\$	12,000	\$	108,000	
Signage (OH Lane Use Control)	LS	1	\$	17,500	\$	17,500	
RRFB	LS	1	\$	-	\$	-	
Traffic Signal Adjustment	LS	1	\$	10,000	\$	10,000	
Stone Median Texturing	SY	15	\$	1,500	\$	22,500	
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	2	\$	40,000	\$	80,000	
			\$	-	\$	-	
			Sub-	total	\$	717,500	
LS = Lump Sum	%	10	Mob	lization	\$	72,000	
EA = Each	%	5	ESC		\$	36,000	
LF = Linear Feet	%	15	MPT		\$	108,000	
SY = Square Yards	%	25	Cont	ingency	\$	234,000	
CY = Cubic Yards			Tota	l	\$	1,167,500	

Summary (2023 Dollars)

Project Development	\$180,000.00	TO	\$400,000.00
Construction	\$850,000.00	ТО	\$1,600,000.00

Notes

Harvey Road between Veale Road and Sconset Road (Q, R)

Key Elements	Unit	Quantity	U	nit Cost	Cost
Clearing and Grubbing	LS	1	\$	60,000	\$ 60,000
Excavation	CY	280	\$	100	\$ 28,000
Pedestrian Path (6' asphalt)	SY	540	\$	125	\$ 67,500
Barrier Curb	LF	50	\$	175	\$ 8,750
Mountable Curb	LF	40	\$	100	\$ 4,000
Full Depth Pavement	SY	30	\$	200	\$ 6,000
Driveway Adjustment - Residential	EA	10	\$	7,500	\$ 75,000
Drainage	LS	1	\$	125,000	\$ 125,000
Final Grading and Restoration	SY	1120	\$	15	\$ 16,800
Landscape Replacement	LS	1	\$	25,000	\$ 25,000
Linear Pavement Markings	LF	700	\$	2	\$ 1,400
High Visibility Crosswalk	LF	50	\$	60	\$ 3,000
ADA Curb Ramp	EA	8	\$	12,000	\$ 96,000
Signage (OH Lane Use Control)	LS	1	\$	2,500	\$ 2,500
RRFB	LS	1	\$	-	\$ -
Traffic Signal Adjustment	LS	1	\$	70,000	\$ 70,000
Stone Median Texturing	SY	10	\$	1,500	\$ 15,000
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	6	\$	40,000	\$ 240,000
			\$	-	\$ -
			Sub-	total	\$ 843,950
LS = Lump Sum	%	10	Mobi	lization	\$ 85,000
EA = Each	%	5	ESC		\$ 43,000
LF = Linear Feet	%	15	MPT		\$ 127,000
SY = Square Yards	%	25	Conti	ngency	\$ 275,000
CY = Cubic Yards			Tota		\$ 1,373,950

Summary (2023 Dollars)

		-	
Project Development	\$210,000.00	TO	\$420,000.00
Construction	\$1,010,000,00	TO	\$1,950,000,00

Notes

Harvey Road from Sconset Road over I-95 to Glenrock Drive (U)

Key Elements	Unit	Quantity	U	nit Cost	Cost
Clearing and Grubbing	LS	1	\$	25,000	\$ 25,000
Excavation	CY	620	\$	90	\$ 55,800
Pedestrian Path (6' asphalt)	SY	0	\$	150	\$ -
Sidewalk (10' Concrete)	SY	1620	\$	140	\$ 226,800
Barrier Curb	LF	1710	\$	85	\$ 145,350
Full Depth Pavement	SY	380	\$	200	\$ 76,000
Driveway Adjustment - Residential	EA	4	\$	12,500	\$ 50,000
Drainage	LS	1	\$	250,000	\$ 250,000
Final Grading and Restoration	SY	1900	\$	15	\$ 28,500
Linear Pavement Markings	LF	6900	\$	2	\$ 13,800
High Visibility Crosswalk	LF	48	\$	60	\$ 2,880
ADA Curb Ramp	EA	4	\$	12,000	\$ 48,000
Signage	LS	1	\$	25,000	\$ 25,000
Traffic Signal Adjustment	LS	1	\$	100,000	\$ 100,000
Stone Median Texturing	SY	140	\$	750	\$ 105,000
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	2	\$	40,000	\$ 80,000
Barrier Protected Path on Bridge	LF	450	\$	1,620	\$ 729,000
			\$	-	\$ -
			Sub-	total	\$ 1,961,130
LS = Lump Sum	%	10	Mobi	lization	\$ 197,000
EA = Each	%	5	ESC		\$ 99,000
LF = Linear Feet	%	10	MPT		\$ 197,000
SY = Square Yards	%	25	Conti	ngency	\$ 614,000
CY = Cubic Yards			Tota		\$ 3,068,130

Summary (2023 Dollars)

Project Development	\$500,000.00	TO	\$800,000.00
Construction	\$2,600,000,00	TO	\$3,700,000,00

Assumes no right-of-way acquisition is needed.

Veale Road between Harvey Road and W. Dale Road (W, Y, Z, AA, AB, AD)

Key Elements	Unit	Quantity	ι	Jnit Cost	Cost
Clearing and Grubbing	LS	1	\$	235,000	\$ 235,000
Excavation	CY	900	\$	75	\$ 67,500
Pedestrian Path (6' asphalt)	SY	300	\$	110	\$ 33,000
Sidewalk (5' Concrete)	SY	1980	\$	135	\$ 267,300
Mountable Curb	LF	1230	\$	50	\$ 61,500
Full Depth Pavement	SY	460	\$	160	\$ 73,600
Driveway Adjustment - Residential	EA	18	\$	7,500	\$ 135,000
Drainage	LS	1	\$	265,000	\$ 265,000
Final Grading and Restoration	SY	2500	\$	15	\$ 37,500
Landscape Replacement	LS	1	\$	147,500	\$ 147,500
Linear Pavement Markings	LF	600	\$	2	\$ 1,200
High Visibility Crosswalk	LF	370	\$	60	\$ 22,200
ADA Curb Ramp	EA	31	\$	12,000	\$ 372,000
Signage	LS	1	\$	50,000	\$ 50,000
RRFB	LS	1	\$	-	\$ -
Traffic Signal Adjustment	LS	1	\$	-	\$ -
			\$	-	\$ -
	· · · · · · · · · · · · · · · · · · ·		Sub-	total	\$ 1,768,300
LS = Lump Sum	%	8	Mob	ilization	\$ 142,000
EA = Each	%	5	ESC		\$ 89,000
LF = Linear Feet	%	12	MPT		\$ 213,000
SY = Square Yards	%	25	Cont	ingency	\$ 554,000
CY = Cubic Yards			Tota	ı	\$ 2,766,300

Summary (2023 Dollars)

Project Development	\$420,000.00	TO	\$970,000.00
Construction	\$2,370,000.00	TO	\$4,090,000.00

Notes

A - Harvey Road Gateway Intersection Treatment (North)

Key Elements	Unit	Quantity	,	Jnit Cost	Cost
Clearing and Grubbing	LS	1	\$	30,000	\$ 30,000
Excavation	CY	290	\$	125	\$ 36,250
Pedestrian Path (6' asphalt)	SY	0	\$	150	\$ -
Sidewalk (5' Concrete)	SY	30	\$	225	\$ 6,750
Barrier Curb	LF	70	\$	80	\$ 5,600
Mountable Curb	LF	160	\$	100	\$ 16,000
Full Depth Pavement	SY	100	\$	200	\$ 20,000
Pavement Mill and Overlay	SY	370	\$	50	\$ 18,500
Driveway Adjustment - Residential	EA	0	\$	7,500	\$ -
Driveway Adjustment - Commercial	EA	0	\$	25,000	\$ -
Drainage	LS	1	\$	25,000	\$ 25,000
Final Grading and Restoration	SY	250	\$	15	\$ 3,750
Landscape Replacement	LS	1	\$	12,000	\$ 12,000
Linear Pavement Markings	LF	600	\$	2	\$ 1,200
High Visibility Crosswalk	LF	20	\$	60	\$ 1,200
ADA Curb Ramp	EA	2	\$	12,000	\$ 24,000
Signage (OH Lane Use Control)	LS	1	\$	40,000	\$ 40,000
School Flasher Relocation	LS	0	\$	-	\$ -
Traffic Signal Adjustment	LS	1	\$	10,000	\$ 10,000
Stone Median Texturing	SY	10	\$	1,500	\$ 15,000
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$	40,000	\$ -
			\$	-	\$ -
			Sub	total	\$ 265,250
LS = Lump Sum	%	10	Mob	ilization	\$ 27,000
EA = Each	%	5	ESC		\$ 14,000
LF = Linear Feet	%	20	MPT		\$ 54,000
SY = Square Yards	%	25	Cont	ingency	\$ 91,000
CY = Cubic Yards			Tota		\$ 451,250

Summary (2023 Dollars)

Project Development	\$70,000.00	TO	\$140,000.00
Construction	\$330,000.00	TO	\$590,000.00

Notes

C - Harvey Road Bioswales

Key Elements	Unit	Quantity	Unit Cost	Cost
Clearing and Grubbing	LS	1	\$ 25,000	\$ 25,000
Excavation	CY	0	\$ 125	\$ -
Pedestrian Path (6' asphalt)	SY	0	\$ 150	\$ -
Sidewalk (5' Concrete)	SY	0	\$ 225	\$ -
Barrier Curb	LF	0	\$ 80	\$ -
Mountable Curb	LF	0	\$ 100	\$ -
Full Depth Pavement	SY	0	\$ 200	\$ -
Pavement Mill and Overlay	SY	0	\$ 50	\$ -
Driveway Adjustment - Residential	EA	0	\$ 7,500	\$ -
Driveway Adjustment - Commercial	EA	0	\$ 25,000	\$ -
Drainage	LS	1	\$ 50,000	\$ 50,000
Final Grading and Restoration	SY	0	\$ 15	\$ -
Landscape Replacement	LS	0	\$ -	\$ -
Linear Pavement Markings	LF	300	\$ 2	\$ 600
High Visibility Crosswalk	LF	0	\$ 60	\$ -
ADA Curb Ramp	EA	0	\$ 12,000	\$ -
Signage	LS	1	\$ 2,500	\$ 2,500
School Flasher Relocation	LS	0	\$ -	\$ -
Traffic Signal Adjustment	LS	0	\$ -	\$ -
Stone Median Texturing	SY	0	\$ 1,500	\$ -
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	2	\$ 40,000	\$ 80,000
			\$ -	\$ -
	•		Sub-total	\$ 158,100
LS = Lump Sum	%	10	Mobilization	\$ 16,000
EA = Each	%	5	ESC	\$ 8,000
LF = Linear Feet	%	20	MPT	\$ 32,000
SY = Square Yards	%	25	Contingency	\$ 54,000
CY = Cubic Yards			Total	\$ 268,100

Summary (2023 Dollars)

Project Development	\$50,000.00	TO	\$90,000.00
Construction	\$190,000.00	TO	\$350,000.00

Notes

E - Harvey Road and Little Lane Crossing Connection Upgrades

Key Elements	Unit	Quantity	Unit Cost		Cost
Clearing and Grubbing	LS	1	\$ 15,000) \$	15,000
Excavation	CY	70	\$ 12!	\$	8,750
Pedestrian Path (4' asphalt)	SY	70	\$ 150) \$	10,500
Sidewalk (5' Concrete)	SY	0	\$ 22!	\$	-
Barrier Curb	LF	0	\$ 80) \$	-
Mountable Curb	LF	0	\$ 100) \$	-
Full Depth Pavement	SY	0	\$ 200) \$	-
Pavement Mill and Overlay	SY	10	\$ 50) \$	500
Driveway Adjustment - Residential	EA	2	\$ 7,500) \$	15,000
Driveway Adjustment - Commercial	EA	0	\$ 25,000) \$	-
Drainage	LS	1	\$ 10,000) \$	10,000
Final Grading and Restoration	SY	200	\$ 15	\$	3,000
Landscape Replacement	LS	1	\$ 2,500) \$	2,500
Linear Pavement Markings	LF	100	\$ 2	2 \$	200
High Visibility Crosswalk	LF	30	\$ 60) \$	1,800
ADA Curb Ramp	EA	2	\$ 12,000) \$	24,000
Signage	LS	1	\$ 5,000	\$	5,000
RRFB	LS	0	\$ -	\$	-
Traffic Signal Adjustment	LS	0	\$ -	\$	-
Stone Median Texturing	SY	0	\$ 1,500	\$	-
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$ 40,000) \$	-
			\$ -	\$	-
			Sub-total	\$	96,250
LS = Lump Sum	%	10	Mobilization	\$	10,000
EA = Each	%	5	ESC	\$	5,000
LF = Linear Feet	%	20	MPT	\$	20,000
SY = Square Yards	%	25	Contingency	\$	33,000
CY = Cubic Yards			Total	\$	164,250

Summary (2023 Dollars)

Project Development	\$30,000.00	TO	\$50,000.00
Construction	\$120,000.00	TO	\$220,000.00

Notes

G - Harvey Road and Orleans Road Intersection Upgrades

Key Elements	Unit	Quantity	Un	Unit Cost		Cost
Clearing and Grubbing	LS	1	\$	5,000	\$	5,000
Excavation	CY	20	\$	125	\$	2,500
Pedestrian Path (4' asphalt)	SY	0	\$	150	\$	-
Sidewalk (5' Concrete)	SY	0	\$	225	\$	-
Barrier Curb	LF	0	\$	80	\$	-
Mountable Curb	LF	90	\$	100	\$	9,000
Full Depth Pavement	SY	20	\$	200	\$	4,000
Pavement Mill and Overlay	SY	0	\$	50	\$	-
Driveway Adjustment - Residential	EA	0	\$	7,500	\$	-
Driveway Adjustment - Commercial	EA	0	\$	25,000	\$	-
Drainage	LS	1	\$	10,000	\$	10,000
Final Grading and Restoration	SY	100	\$	15	\$	1,500
Landscape Replacement	LS	0	\$	-	\$	-
Linear Pavement Markings	LF	100	\$	2	\$	200
High Visibility Crosswalk	LF	0	\$	60	\$	-
ADA Curb Ramp	EA	2	\$	12,000	\$	24,000
Signage	LS	1	\$	3,000	\$	3,000
RRFB	LS	0	\$	-	\$	-
Traffic Signal Adjustment	LS	1	\$	10,000	\$	10,000
Stone Median Texturing	SY	0	\$	1,500	\$	-
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$	40,000	\$	-
			\$	-	\$	-
			Sub-to	tal	\$	69,200
LS = Lump Sum	%	10	Mobiliz	ation	\$	7,000
EA = Each	%	5	ESC		\$	4,000
LF = Linear Feet	%	20	MPT		\$	14,000
SY = Square Yards	%	25	Conting	gency	\$	24,000
CY = Cubic Yards			Total		\$	118,200

Summary (2023 Dollars)

Project Development	\$20,000.00	TO	\$40,000.00
Construction	\$80,000.00	TO	\$160,000.00

Notes

H - Harvey Road Midblock Crossing at the Clubhouse Driveway

Key Elements	Unit	Quantity	Unit Cost	Cost
Clearing and Grubbing	LS	1	\$ 10,000	\$ 10,000
Excavation	CY	150	\$ 125	\$ 18,750
Pedestrian Path (6' asphalt)	SY	80	\$ 150	\$ 12,000
Sidewalk (5' Concrete)	SY	0	\$ 225	\$ -
Barrier Curb	LF	0	\$ 80	\$ -
Mountable Curb	LF	210	\$ 100	\$ 21,000
Full Depth Pavement	SY	180	\$ 200	\$ 36,000
Pavement Mill and Overlay	SY	320	\$ 50	\$ 16,000
Driveway Adjustment - Residential	EA	2	\$ 7,500	\$ 15,000
Driveway Adjustment - Commercial	EA	0	\$ 25,000	\$ -
Drainage and Stormwater Control Measures	LS	1	\$ 40,000	\$ 40,000
Final Grading and Restoration	SY	200	\$ 15	\$ 3,000
Landscape & Fence Replacement	LS	1	\$ 20,000	\$ 20,000
Linear Pavement Markings	LF	600	\$ 2	\$ 1,200
High Visibility Crosswalk	LF	30	\$ 60	\$ 1,800
ADA Curb Ramp	EA	3	\$ 12,000	\$ 36,000
Signage	LS	1	\$ 5,000	\$ 5,000
RRFB	LS	1	\$ 50,000	\$ 50,000
Traffic Signal Adjustment	LS	0	\$ -	\$ -
Stone Median Texturing	SY	10	\$ 1,500	\$ 15,000
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$ 40,000	\$ -
			\$ -	\$ -
			Sub-total	\$ 300,750
LS = Lump Sum	%	10	Mobilization	\$ 31,000
EA = Each	%	5	ESC	\$ 16,000
LF = Linear Feet	%	15	MPT	\$ 46,000
SY = Square Yards	%	25	Contingency	\$ 99,000
CY = Cubic Yards			Total	\$ 492,750

Summary (2023 Dollars)

Project Development	\$80,000.00	TO	\$150,000.00
Construction	\$360,000.00	TO	\$640,000.00

Notes

J - Harvey Road Midblock Crossing between The Sweep and Meadow Lane

Key Elements	Unit	Quantity	ı	Init Cost	Cost
,					
Clearing and Grubbing	LS	1	\$	10,000	\$ 10,000
Excavation	CY	180	\$	125	\$ 22,500
Pedestrian Path (6' asphalt)	SY	80	\$	150	\$ 12,000
Sidewalk (5' Concrete)	SY	80	\$	225	\$ 18,000
Barrier Curb	LF	140	\$	80	\$ 11,200
Mountable Curb	LF	210	\$	100	\$ 21,000
Full Depth Pavement	SY	180	\$	200	\$ 36,000
Pavement Mill and Overlay	SY	490	\$	50	\$ 24,500
Driveway Adjustment - Residential	EA	0	\$	7,500	\$ -
Driveway Adjustment - Commercial	EA	0	\$	25,000	\$ -
Drainage and Stormwater Control Measures	LS	1	\$	100,000	\$ 100,000
Final Grading and Restoration	SY	200	\$	15	\$ 3,000
Landscape & Fence Replacement	LS	1	\$	20,000	\$ 20,000
Linear Pavement Markings	LF	600	\$	2	\$ 1,200
High Visibility Crosswalk	LF	30	\$	60	\$ 1,800
ADA Curb Ramp	EA	6	\$	12,000	\$ 72,000
Signage	LS	1	\$	10,000	\$ 10,000
RRFB	LS	0	\$	-	\$ -
Traffic Signal Adjustment	LS	0	\$	-	\$ -
Stone Median Texturing	SY	10	\$	1,500	\$ 15,000
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$	40,000	\$ -
			\$	-	\$ -
			Sub-	total	\$ 378,200
LS = Lump Sum	%	10	Mob	lization	\$ 38,000
EA = Each	%	5	ESC		\$ 19,000
LF = Linear Feet	%	15	MPT		\$ 57,000
SY = Square Yards	%	25	Cont	ingency	\$ 124,000
CY = Cubic Yards			Tota	I	\$ 616,200

Summary (2023 Dollars)

Project Development	\$100,000.00	TO	\$190,000.00
Construction	\$450,000.00	TO	\$800,000.00

Notes

M - Harvey Road Midblock Crossing north of Veale Road

Key Elements	Unit	Quantity		Jnit Cost	Cost
Clearing and Grubbing	LS	1	\$	20,000	\$ 20,000
Excavation	CY	140	\$	125	\$ 17,500
Pedestrian Path (6' asphalt)	SY	80	\$	150	\$ 12,000
Sidewalk (5' Concrete)	SY	30	\$	225	\$ 6,750
Barrier Curb	LF	30	\$	80	\$ 2,400
Mountable Curb	LF	150	\$	100	\$ 15,000
Full Depth Pavement	SY	130	\$	200	\$ 26,000
Pavement Mill and Overlay	SY	320	\$	50	\$ 16,000
Driveway Adjustment - Residential	EA	2	\$	7,500	\$ 15,000
Driveway Adjustment - Commercial	EA	0	\$	25,000	\$ -
Drainage and Stormwater Control Measures	LS	1	\$	40,000	\$ 40,000
Final Grading and Restoration	SY	100	\$	15	\$ 1,500
Landscape & Fence Replacement	LS	1	\$	5,000	\$ 5,000
Linear Pavement Markings	LF	600	\$	2	\$ 1,200
High Visibility Crosswalk	LF	30	\$	60	\$ 1,800
ADA Curb Ramp	EA	3	\$	12,000	\$ 36,000
Signage	LS	1	\$	5,000	\$ 5,000
RRFB	LS	0	\$	-	\$ -
Traffic Signal Adjustment	LS	0	\$	-	\$ -
Stone Median Texturing	SY	5	\$	1,500	\$ 7,500
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$	40,000	\$ -
			\$	-	\$ -
	•		Sub	-total	\$ 228,650
LS = Lump Sum	%	10	Mob	ilization	\$ 23,000
EA = Each	%	5	ESC		\$ 12,000
LF = Linear Feet	%	15	MPT		\$ 35,000
SY = Square Yards	%	25	Cont	ingency	\$ 75,000
CY = Cubic Yards			Tota		\$ 373,650

Summary (2023 Dollars)

Project Development	\$60,000.00	TO	\$120,000.00
Construction	\$270,000.00	TO	\$490,000.00

Notes

P - Harvey Road Bioswales north of Veale

Key Elements	Unit	Quantity	Unit Cost	Cost
Clearing and Grubbing	LS	1	\$ 5,000	\$ 5,000
Excavation	CY	0	\$ 125	\$ -
Pedestrian Path (6' asphalt)	SY	0	\$ 150	\$ -
Sidewalk (5' Concrete)	SY	0	\$ 225	\$ -
Barrier Curb	LF	0	\$ 80	\$ -
Mountable Curb	LF	0	\$ 100	\$ -
Full Depth Pavement	SY	0	\$ 200	\$ -
Pavement Mill and Overlay	SY	0	\$ 50	\$ -
Driveway Adjustment - Residential	EA	0	\$ 7,500	\$ -
Driveway Adjustment - Commercial	EA	0	\$ 25,000	\$ -
Drainage	LS	1	\$ 25,000	\$ 25,000
Final Grading and Restoration	SY	0	\$ 15	\$ -
Landscape Replacement	LS	0	\$ 12,000	\$ -
Linear Pavement Markings	LF	300	\$ 2	\$ 600
High Visibility Crosswalk	LF	0	\$ 60	\$ -
ADA Curb Ramp	EA	0	\$ 12,000	\$ -
Signage	LS	1	\$ 2,500	\$ 2,500
School Flasher Relocation	LS	0	\$ -	\$ -
Traffic Signal Adjustment	LS	1	\$ 10,000	\$ 10,000
Stone Median Texturing	SY	0	\$ 1,500	\$ -
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	2	\$ 40,000	\$ 80,000
			\$ -	\$ -
			Sub-total	\$ 123,100
LS = Lump Sum	%	10	Mobilization	\$ 13,000
EA = Each	%	5	ESC	\$ 7,000
LF = Linear Feet	%	20	MPT	\$ 25,000
SY = Square Yards	%	25	Contingency	\$ 43,000
CY = Cubic Yards			Total	\$ 211,100

Summary (2023 Dollars)

Project Development	\$40,000.00	TO	\$70,000.00
Construction	\$150,000.00	TO	\$280,000.00

Notes

Q - Harvey Road Bioswales south of Veale

Key Elements	Unit	Quantity	U	nit Cost	Cost
Clearing and Grubbing	LS	1	\$	50,000	\$ 50,000
Excavation	CY	240	\$	125	\$ 30,000
Pedestrian Path (6' asphalt)	SY	540	\$	150	\$ 81,000
Sidewalk (5' Concrete)	SY	0	\$	225	\$ -
Barrier Curb	LF	0	\$	175	\$ -
Mountable Curb	LF	0	\$	100	\$ -
Full Depth Pavement	SY	0	\$	200	\$ -
Pavement Mill and Overlay	SY	0	\$	50	\$ -
Driveway Adjustment - Residential	EA	10	\$	7,500	\$ 75,000
Driveway Adjustment - Commercial	EA	0	\$	25,000	\$ -
Drainage	LS	1	\$	100,000	\$ 100,000
Final Grading and Restoration	SY	890	\$	15	\$ 13,350
Landscape Replacement	LS	1	\$	25,000	\$ 25,000
Linear Pavement Markings	LF	500	\$	2	\$ 1,000
High Visibility Crosswalk	LF	0	\$	60	\$ -
ADA Curb Ramp	EA	4	\$	12,000	\$ 48,000
Signage	LS	1	\$	2,500	\$ 2,500
School Flasher Relocation	LS	0	\$	-	\$ -
Traffic Signal Adjustment	LS	1	\$	30,000	\$ 30,000
Stone Median Texturing	SY	0	\$	1,500	\$ -
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	4	\$	40,000	\$ 160,000
			\$	-	\$ -
			Sub-1	total	\$ 615,850
LS = Lump Sum	%	10	Mobil	ization	\$ 62,000
EA = Each	%	5	ESC		\$ 31,000
LF = Linear Feet	%	25	MPT		\$ 154,000
SY = Square Yards	%	25	Conti	ngency	\$ 216,000
CY = Cubic Yards			Total		\$ 1,078,850

Summary (2023 Dollars)

Project Development	\$170,000.00	TO	\$330,000.00
Construction	\$800,000.00	TO	\$1,400,000.00

Notes

R - Harvey Road Gateway Intersection Treatment (South)

Key Elements	Unit	Quantity	l	Init Cost	Cost
-		-			
Clearing and Grubbing	LS	1	\$	10,000	\$ 10,000
Excavation	CY	40	\$	225	\$ 9,000
Pedestrian Path (6' asphalt)	SY	0	\$	150	\$ -
Sidewalk (5' Concrete)	SY	0	\$	225	\$ -
Barrier Curb	LF	50	\$	175	\$ 8,750
Mountable Curb	LF	40	\$	100	\$ 4,000
Full Depth Pavement	SY	30	\$	200	\$ 6,000
Pavement Mill and Overlay	SY	0	\$	50	\$ -
Driveway Adjustment - Residential	EA	0	\$	7,500	\$ -
Driveway Adjustment - Commercial	EA	0	\$	25,000	\$ -
Drainage	LS	1	\$	25,000	\$ 25,000
Final Grading and Restoration	SY	230	\$	15	\$ 3,450
Landscape Replacement	LS	0	\$	-	\$ -
Linear Pavement Markings	LF	200	\$	2	\$ 400
High Visibility Crosswalk	LF	50	\$	60	\$ 3,000
ADA Curb Ramp	EA	4	\$	12,000	\$ 48,000
Signage (OH Lane Use Control)	LS	0	\$	-	\$ -
School Flasher Relocation	LS	0	\$	-	\$ -
Traffic Signal Adjustment	LS	1	\$	40,000	\$ 40,000
Stone Median Texturing	SY	10	\$	1,500	\$ 15,000
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	2	\$	40,000	\$ 80,000
			\$	-	\$ -
			Sub-	total	\$ 252,600
LS = Lump Sum	%	10	Mobi	lization	\$ 26,000
EA = Each	%	5	ESC		\$ 13,000
LF = Linear Feet	%	20	MPT		\$ 51,000
SY = Square Yards	%	25	Cont	ingency	\$ 86,000
CY = Cubic Yards			Tota		\$ 428,600

Summary (2023 Dollars)

Project Development	\$70,000.00	TO	\$130,000.00
Construction	\$310,000.00	TO	\$560,000.00

Notes

W - Veale Midblock Crossing at West Greanbriar

Key Elements	Unit	Quantity	Unit Cost	Cost
Clearing and Grubbing	LS	1	\$ 5,000	\$ 5,000
Excavation	CY	0	\$ 125	\$ -
Pedestrian Path (4' asphalt)	SY	0	\$ 150	\$ -
Sidewalk (5' Concrete)	SY	0	\$ 225	\$ -
Barrier Curb	LF	0	\$ 80	-
Mountable Curb	LF	0	\$ 100	\$ -
Full Depth Pavement	SY	0	\$ 200	\$ -
Pavement Mill and Overlay	SY	0	\$ 50	\$ -
Driveway Adjustment - Residential	EA	0	\$ 7,500	\$ -
Driveway Adjustment - Commercial	EA	0	\$ 25,000	\$ -
Drainage	LS	1	\$ -	\$ -
Final Grading and Restoration	SY	0	\$ 15	\$ -
Landscape Replacement	LS	1	\$ 2,500	\$ 2,500
Linear Pavement Markings	LF	0	\$ 2	- \$
High Visibility Crosswalk	LF	30	\$ 60	\$ 1,800
ADA Curb Ramp	EA	2	\$ 12,000	\$ 24,000
Signage	LS	1	\$ 5,000	\$ 5,000
RRFB	LS	0	\$ -	\$ -
Traffic Signal Adjustment	LS	0	\$ -	\$ -
Stone Median Texturing	SY	0	\$ 1,500	-
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$ 40,000	-
			\$ -	\$ -
	'		Sub-total	\$ 38,300
LS = Lump Sum	%	10	Mobilization	\$ 4,000
EA = Each	%	5	ESC	\$ 2,000
LF = Linear Feet	%	20	MPT	\$ 8,000
SY = Square Yards	%	15	Contingency	\$ 8,000
CY = Cubic Yards			Total	\$ 60,300

Summary (2023 Dollars)

Project Development	\$10,000.00	TO	\$20,000.00
Construction	\$40,000.00	TO	\$80,000.00

Notes

Y - Veale Midblock Crossing near Evergreen Lane

Key Elements	Unit Quantity		U	Unit Cost		Cost	
				22.222	*	22.000	
Clearing and Grubbing	LS	1	\$	30,000	\$	30,000	
Excavation	CY	100	\$	125	\$	12,500	
Pedestrian Path (6' asphalt)	SY	300	\$	150	\$	45,000	
Sidewalk (5' Concrete)	SY	0	\$	225	\$	-	
Barrier Curb	LF	0	\$	80	\$	-	
Mountable Curb	LF	0	\$	100	\$	-	
Full Depth Pavement	SY	0	\$	200	\$	-	
Pavement Mill and Overlay	SY	0	\$	50	\$	-	
Driveway Adjustment - Residential	EA	0	\$	7,500	\$	-	
Driveway Adjustment - Commercial	EA	0	\$	25,000	\$	-	
Drainage	LS	1	\$	-	\$	-	
Final Grading and Restoration	SY	0	\$	15	\$	-	
Landscape Replacement	LS	1	\$	20,000	\$	20,000	
Linear Pavement Markings	LF	0	\$	2	\$	-	
High Visibility Crosswalk	LF	30	\$	60	\$	1,800	
ADA Curb Ramp	EA	3	\$	12,000	\$	36,000	
Signage	LS	1	\$	10,000	\$	10,000	
RRFB	LS	0	\$	-	\$	-	
Traffic Signal Adjustment	LS	0	\$	-	\$	-	
Stone Median Texturing	SY	0	\$	1,500	\$	-	
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$	40,000	\$	-	
			\$	-	\$	-	
	L.		Sub-	total	\$	155,300	
LS = Lump Sum	%	10	Mobi	lization	\$	16,000	
EA = Each	%	5	ESC		\$	8,000	
LF = Linear Feet	%	20	MPT		\$	32,000	
SY = Square Yards	%	25	Conti	ngency	\$	53,000	
CY = Cubic Yards			Tota		\$	264,300	

Summary (2023 Dollars)

Project Development	\$40,000.00	TO	\$80,000.00
Construction	\$210,000.00	TO	\$350,000.00

Notes

Z - Veale Midblock Crossing near Willow Way

Key Elements	Unit Quantity		L	Unit Cost		Cost	
		4					
Clearing and Grubbing	LS	1	\$	50,000	\$	50,000	
Excavation	CY	140	\$	160	\$	22,400	
Pedestrian Path (6' asphalt)	SY	0	\$	150	\$	-	
Sidewalk (5' Concrete)	SY	0	\$	225	\$	-	
Barrier Curb	LF	0	\$	80	\$	-	
Mountable Curb	LF	510	\$	100	\$	51,000	
Full Depth Pavement	SY	140	\$	200	\$	28,000	
Pavement Mill and Overlay	SY	0	\$	50	\$	-	
Driveway Adjustment - Residential	EA	2	\$	7,500	\$	15,000	
Driveway Adjustment - Commercial	EA	0	\$	25,000	\$	-	
Drainage	LS	1	\$	-	\$	-	
Final Grading and Restoration	SY	0	\$	15	\$	-	
Landscape Replacement	LS	1	\$	30,000	\$	30,000	
Linear Pavement Markings	LF	0	\$	2	\$	-	
High Visibility Crosswalk	LF	30	\$	60	\$	1,800	
ADA Curb Ramp	EA	3	\$	12,000	\$	36,000	
Signage	LS	1	\$	5,000	\$	5,000	
RRFB	LS	0	\$	-	\$	-	
Traffic Signal Adjustment	LS	0	\$	-	\$	-	
Stone Median Texturing	SY	0	\$	1,500	\$	-	
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$	40,000	\$	-	
			\$	-	\$	-	
	•		Sub-	total	\$	239,200	
LS = Lump Sum	%	10	Mobi	lization	\$	24,000	
EA = Each	%	5	ESC		\$	12,000	
LF = Linear Feet	%	20	MPT		\$	48,000	
SY = Square Yards	%	25	Cont	ingency	\$	81,000	
CY = Cubic Yards			Tota		\$	404,200	

Summary (2023 Dollars)

Project Development	\$70,000.00	TO	\$130,000.00
Construction	\$320,000.00	TO	\$530,000.00

Notes

AA - Veale Midblock Crossing near Willow Way

Key Elements	Unit	Quantity	Unit Cost	Cost
Clearing and Grubbing	LS	1	\$ 10,000	\$ 10,000
Excavation	CY	140	\$ 160	\$ 22,400
Pedestrian Path (6' asphalt)	SY	0	\$ 150	\$ -
Sidewalk (5' Concrete)	SY	0	\$ 225	\$ -
Barrier Curb	LF	0	\$ 80	\$ -
Mountable Curb	LF	510	\$ 100	\$ 51,000
Full Depth Pavement	SY	140	\$ 200	\$ 28,000
Pavement Mill and Overlay	SY	0	\$ 50	\$ -
Driveway Adjustment - Residential	EA	1	\$ 7,500	\$ 7,500
Driveway Adjustment - Commercial	EA	0	\$ 25,000	\$ -
Drainage	LS	1	\$ -	\$ -
Final Grading and Restoration	SY	0	\$ 15	\$ -
Landscape Replacement	LS	1	\$ -	\$ -
Linear Pavement Markings	LF	0	\$ 2	\$ -
High Visibility Crosswalk	LF	30	\$ 60	\$ 1,800
ADA Curb Ramp	EA	3	\$ 12,000	\$ 36,000
Signage	LS	1	\$ 5,000	\$ 5,000
RRFB	LS	0	\$ -	\$ -
Traffic Signal Adjustment	LS	0	\$ -	\$ -
Stone Median Texturing	SY	0	\$ 1,500	\$ -
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$ 40,000	\$ -
			\$ -	\$ -
			Sub-total	\$ 161,700
LS = Lump Sum	%	10	Mobilization	\$ 17,000
EA = Each	%	5	ESC	\$ 9,000
LF = Linear Feet	%	20	MPT	\$ 33,000
SY = Square Yards	%	25	Contingency	\$ 56,000
CY = Cubic Yards			Total	\$ 276,700

Summary (2023 Dollars)

Project Development	\$50,000.00	TO	\$90,000.00
Construction	\$220,000.00	TO	\$360,000.00

Notes

AD - Veale Road Gateway Traffic Calming

Key Elements U		Unit Quantity		Unit Cost		Cost	
Clearing and Grubbing	LS	1	\$	5,000	\$	5,000	
Excavation	CY	150	\$	125	\$	18,750	
Pedestrian Path (6' asphalt)	SY	0	\$	150	\$	-	
Sidewalk (5' Concrete)	SY	0	\$	225	\$	-	
Barrier Curb	LF	0	\$	80	\$	-	
Mountable Curb	LF	210	\$	100	\$	21,000	
Full Depth Pavement	SY	180	\$	200	\$	36,000	
Pavement Mill and Overlay	SY	0	\$	50	\$	-	
Driveway Adjustment - Residential	EA	0	\$	7,500	\$	-	
Driveway Adjustment - Commercial	EA	0	\$	25,000	\$	-	
Drainage and Stormwater Control Measures	LS	1	\$	40,000	\$	40,000	
Final Grading and Restoration	SY	200	\$	15	\$	3,000	
Landscape & Fence Replacement	LS	0	\$	20,000	\$	-	
Linear Pavement Markings	LF	600	\$	2	\$	1,200	
High Visibility Crosswalk	LF	0	\$	60	\$	-	
ADA Curb Ramp	EA	0	\$	12,000	\$	-	
Signage	LS	1	\$	5,000	\$	5,000	
RRFB	LS	0	\$	-	\$	-	
Traffic Signal Adjustment	LS	0	\$	-	\$	-	
Stone Median Texturing	SY	0	\$	1,500	\$	-	
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$	40,000	\$	-	
			\$	-	\$	-	
			Sub-	total	\$	129,950	
LS = Lump Sum	%	10	Mobi	lization	\$	13,000	
EA = Each	%	5	ESC		\$	7,000	
LF = Linear Feet	%	15	MPT		\$	20,000	
SY = Square Yards	%	25	Conti	ingency	\$	43,000	
CY = Cubic Yards			Tota	I	\$	212,950	

Summary (2023 Dollars)

Project Development	\$40,000.00	TO	\$70,000.00
Construction	\$170,000.00	TO	\$280,000.00

Notes

AE - Veale Sidewalk North Side

Key Elements	Unit	Unit Quantity		Unit Cost		Unit Cost		Cost	
Clearing and Grubbing	LS	1	\$	75,000	\$	75,000			
Excavation	CY	280	\$	100	\$	28,000			
Pedestrian Path (6' asphalt)	SY	0	\$	150	\$	-			
Sidewalk (5' Concrete)	SY	1500	\$	150	\$	225,000			
Barrier Curb	LF	0	\$	80	\$	-			
Mountable Curb	LF	0	\$	100	\$	-			
Full Depth Pavement	SY	0	\$	200	\$	-			
Pavement Mill and Overlay	SY	0	\$	50	\$	-			
Driveway Adjustment - Residential	EA	10	\$	7,500	\$	75,000			
Driveway Adjustment - Commercial	EA	0	\$	25,000	\$	-			
Drainage	LS	1	\$	125,000	\$	125,000			
Final Grading and Restoration	SY	1700	\$	15	\$	25,500			
Landscape Replacement	LS	1	\$	50,000	\$	50,000			
Linear Pavement Markings	LF	0	\$	2	\$	-			
High Visibility Crosswalk	LF	100	\$	60	\$	6,000			
ADA Curb Ramp	EA	8	\$	12,000	\$	96,000			
Signage	LS	1	\$	10,000	\$	10,000			
RRFB	LS	0	\$	-	\$	-			
Traffic Signal Adjustment	LS	0	\$	-	\$	-			
Stone Median Texturing	SY	0	\$	1,500	\$	-			
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$	40,000	\$	-			
			\$	-	\$	-			
			Sub-to	tal	\$	715,500			
LS = Lump Sum	%	10	Mobiliza	ation	\$	72,000			
EA = Each	%	5	ESC		\$	36,000			
LF = Linear Feet	%	10	MPT		\$	72,000			
SY = Square Yards	%	25	Conting	ency	\$	224,000			
CY = Cubic Yards			Total		\$	1,119,500			

Summary (2023 Dollars)

Project Development	\$170,000.00	TO	\$340,000.00
Construction	\$890,000.00	TO	\$1,450,000.00

Notes

AF - Veale Sidewalk South Side

Key Elements	Unit	Quantity	U	nit Cost	Cost
Clearing and Grubbing	LS	1	\$	60,000	\$ 60,000
Excavation	CY	90	\$	100	\$ 9,000
Pedestrian Path (6' asphalt)	SY	0	\$	150	\$ -
Sidewalk (5' Concrete)	SY	480	\$	150	\$ 72,000
Barrier Curb	LF	0	\$	80	\$ -
Mountable Curb	LF	0	\$	100	\$ _
Full Depth Pavement	SY	0	\$	200	\$ _
Pavement Mill and Overlay	SY	0	\$	50	\$ _
Driveway Adjustment - Residential	EA	5	\$	7,500	\$ 37,500
Driveway Adjustment - Commercial	EA	0	\$	25,000	\$ -
Drainage	LS	1	\$	100,000	\$ 100,000
Final Grading and Restoration	SY	600	\$	15	\$ 9,000
Landscape Replacement	LS	1	\$	25,000	\$ 25,000
Linear Pavement Markings	LF	0	\$	2	\$ -
High Visibility Crosswalk	LF	150	\$	60	\$ 9,000
ADA Curb Ramp	EA	12	\$	12,000	\$ 144,000
Signage	LS	1	\$	10,000	\$ 10,000
RRFB	LS	0	\$	-	\$ -
Traffic Signal Adjustment	LS	0	\$	-	\$ -
Stone Median Texturing	SY	0	\$	1,500	\$ -
Curbed Roadside Bioswale (50 LF x 10 LF)	EA	0	\$	40,000	\$ -
			\$	-	\$ -
	'		Sub-	total	\$ 475,500
LS = Lump Sum	%	10	Mobi	lization	\$ 48,000
EA = Each	%	5	ESC		\$ 24,000
LF = Linear Feet	%	10	MPT		\$ 48,000
SY = Square Yards	%	25	Conti	ngency	\$ 149,000
CY = Cubic Yards			Total		\$ 744,500

Summary (2023 Dollars)

Project Development	\$120,000.00	TO	\$230,000.00
Construction	\$590,000.00	TO	\$970,000.00

Notes



Connecting with the Ardens Public Meeting #1

October 25, 2022













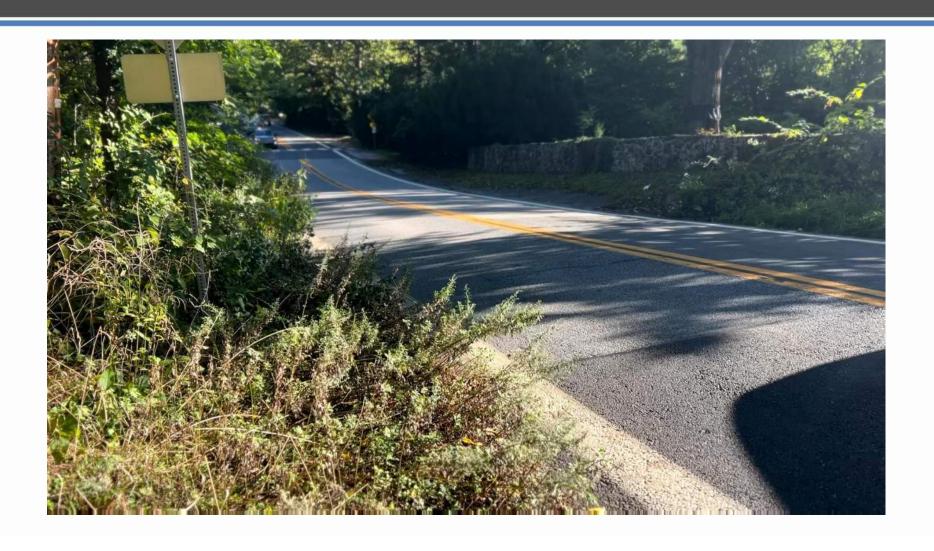




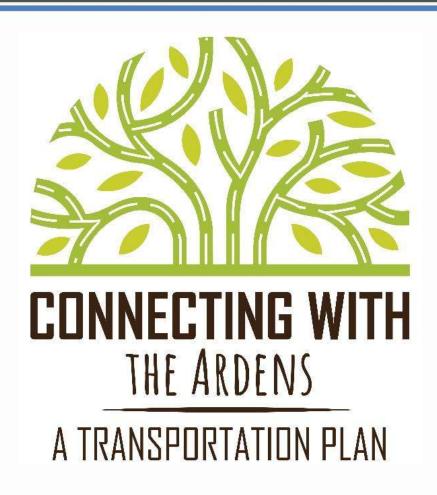








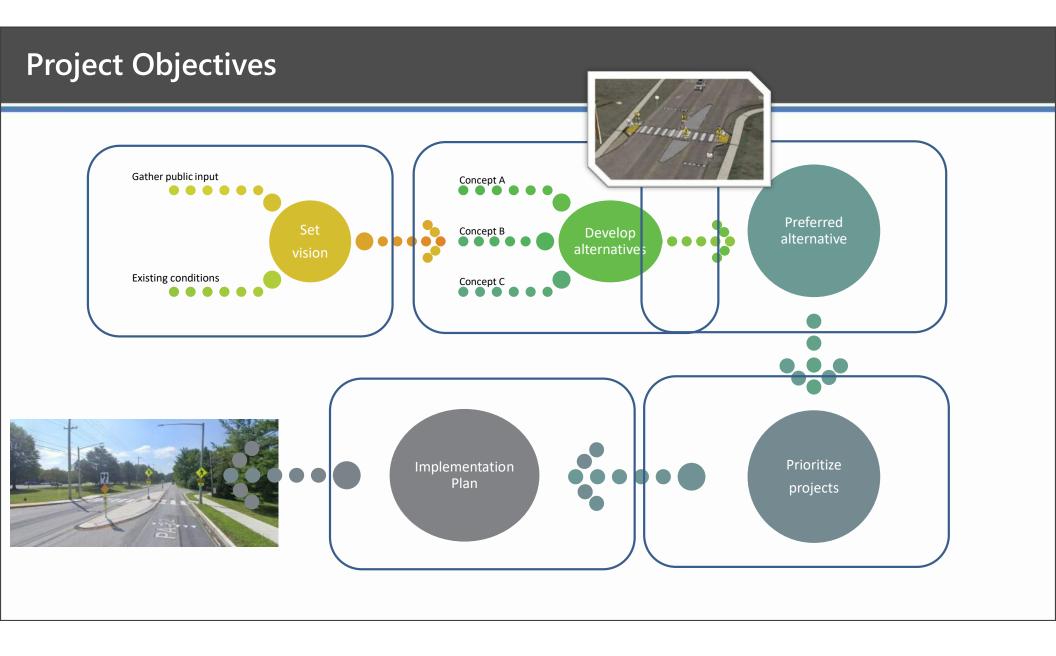




Meeting Agenda



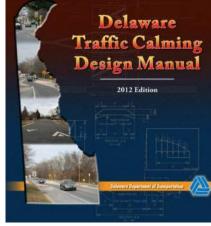




Points of Consensus – Harvey Road

- No vertical calming features
- Use of horizonal calming features
- Features will comply with DelDOT standards (mountable curb, etc)
- " Use of low-level landscaping
- Traffic calming features will be traversable for emergency vehicles, school and transit buses





MINI-ROUNDABOUT (Mifflin Road)





Ardens Walkable Community Workshop

- Monday, September 8 at the Candlelight Theatre
- About 37 attendees
- Part I: Presentation
 - Elements of a walkable community
- Part 2: Walking Audit
 - Participants survey the area
 - Identify issues and opportunities
- Part 3: Mapping Exercise
 - Group shares ideas for improving walkability





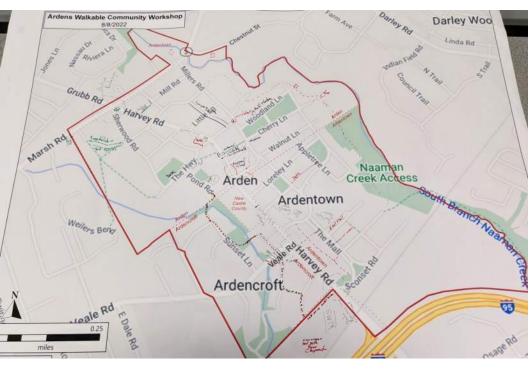


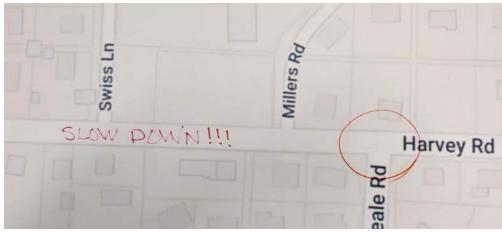


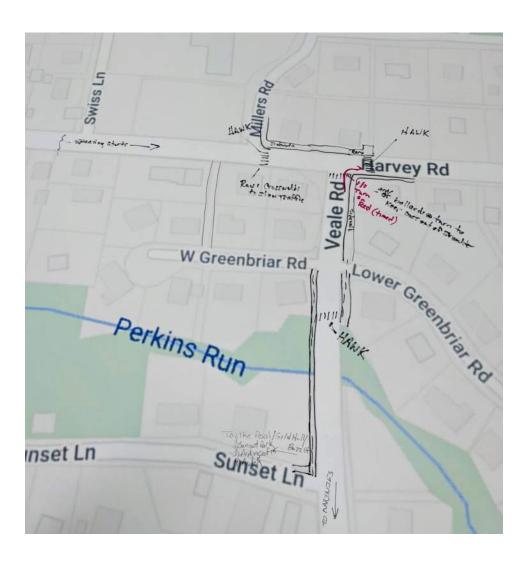








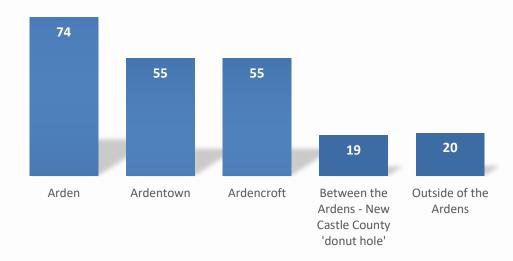


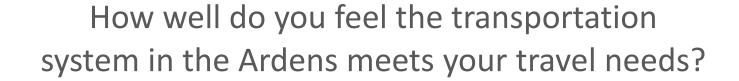


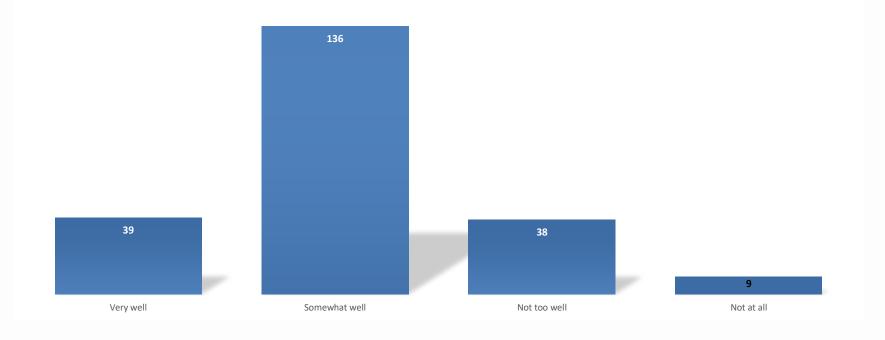
Public Online Survey Results

- " Survey Open: 8/19 to 10/8/2022
- " 20 Total Questions
- " 223 Total Responses

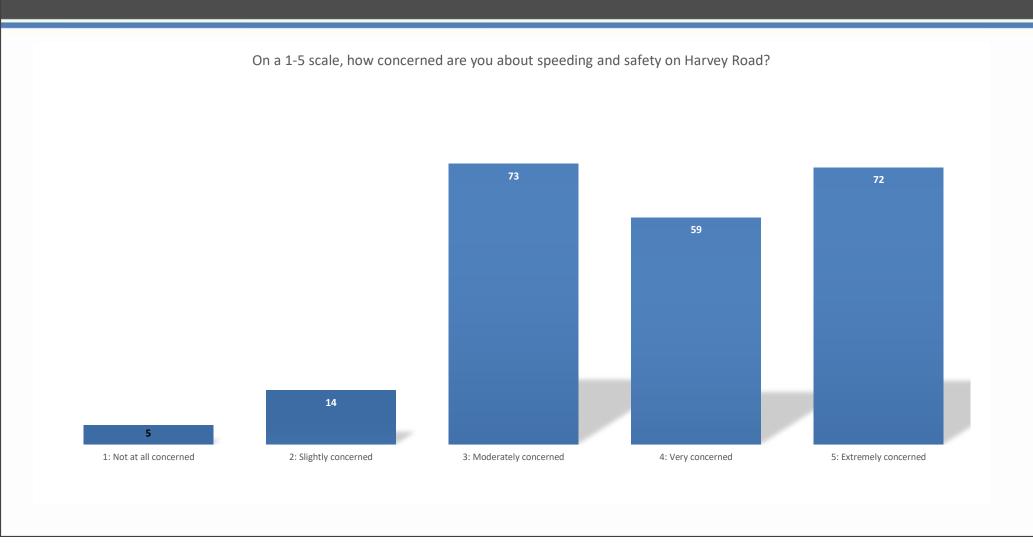
Are you a resident of...



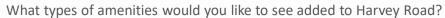


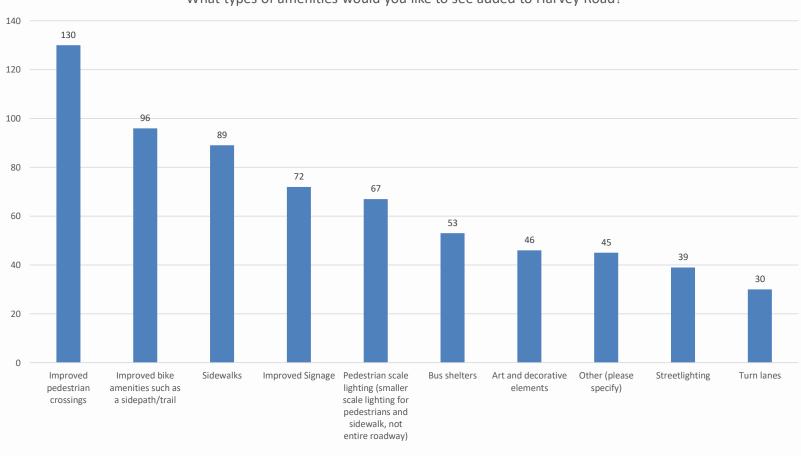


Harvey Road

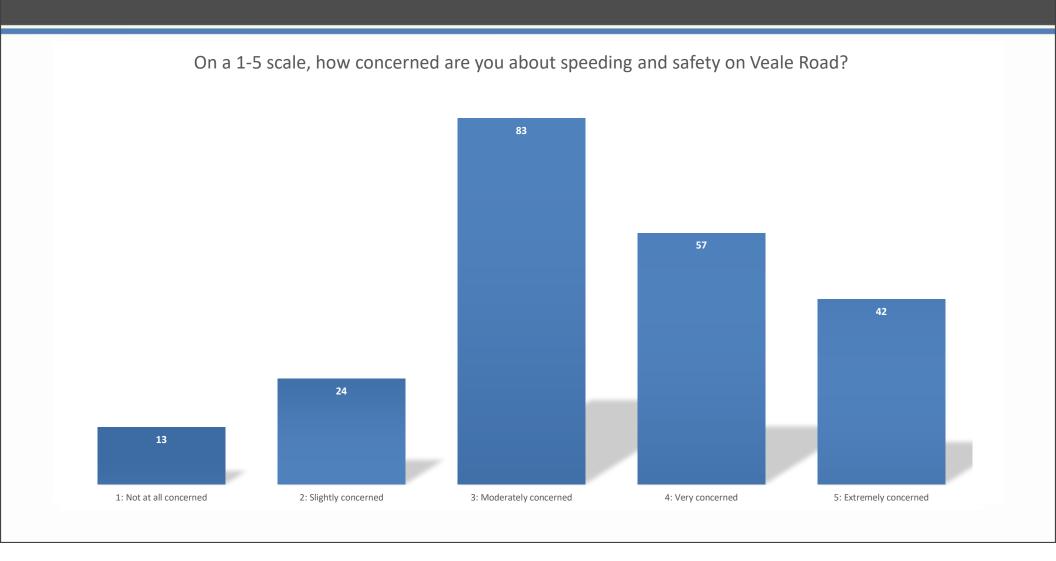


Harvey Road



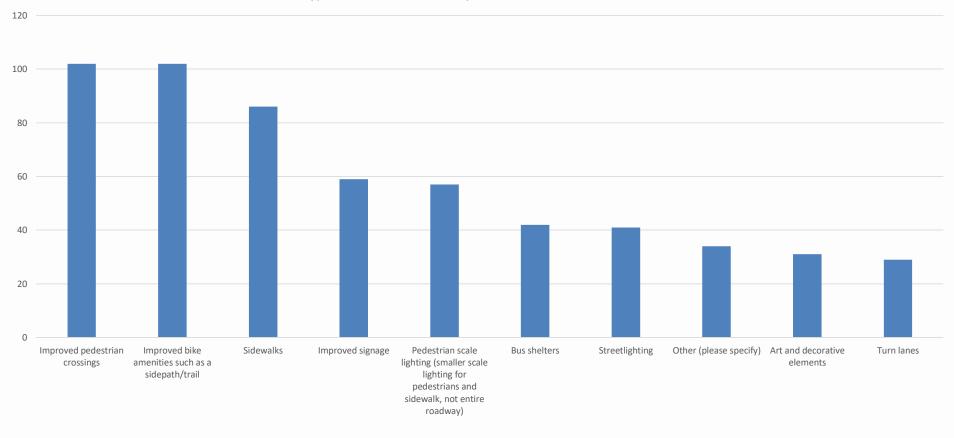


Veale Road

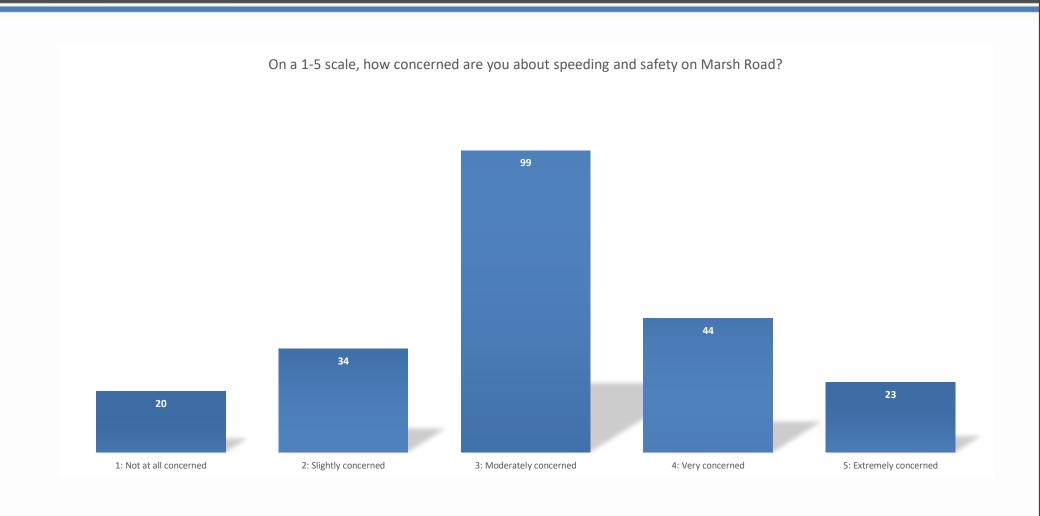


Veale Road



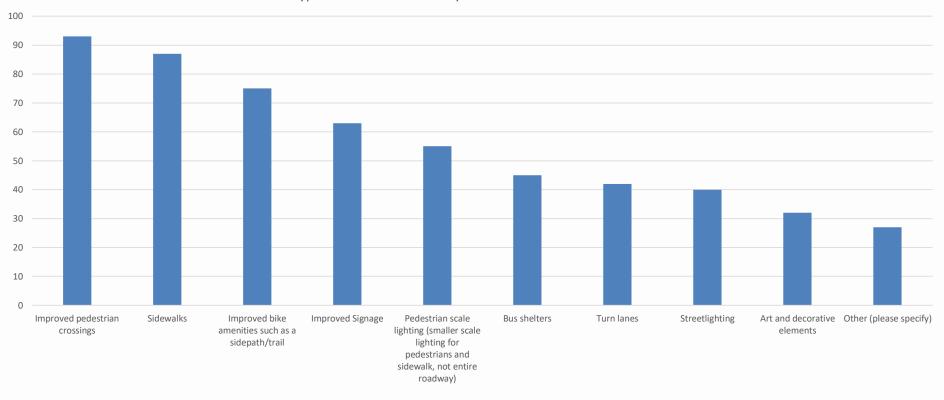


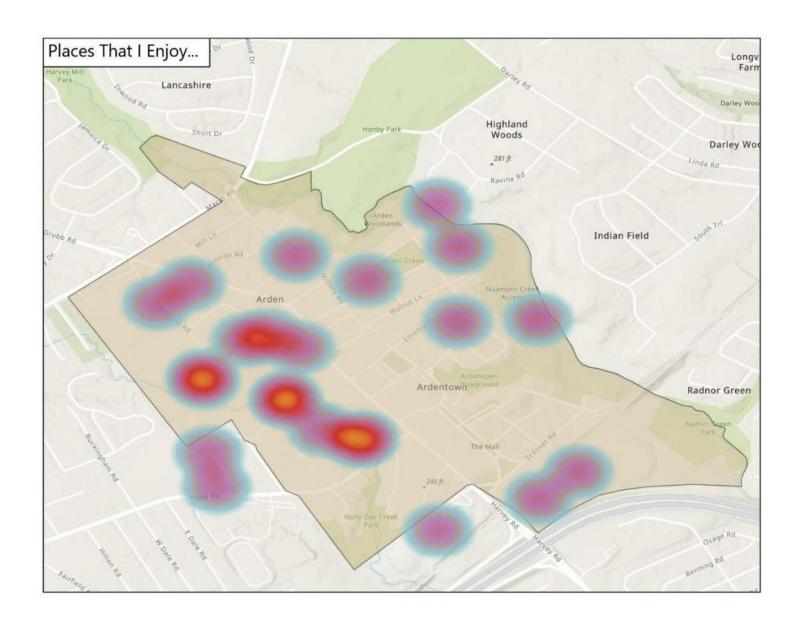
Marsh Road

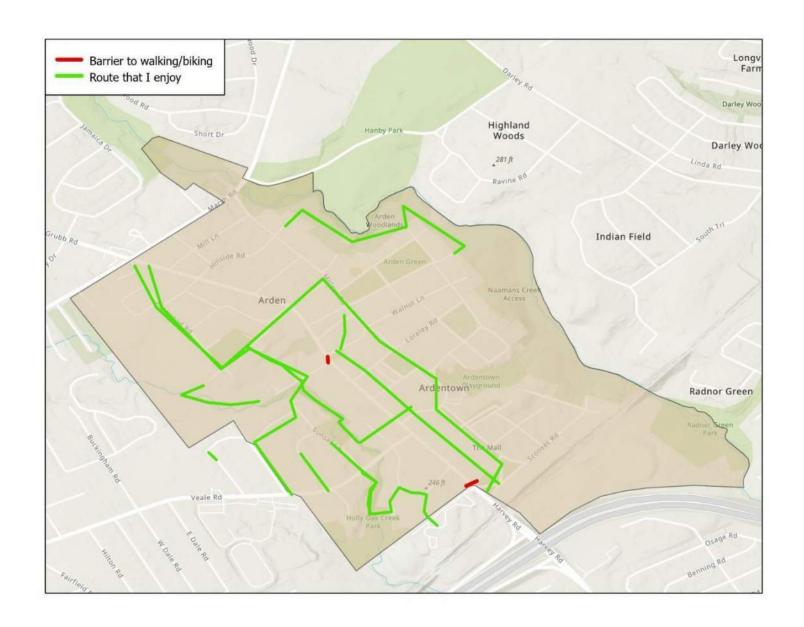


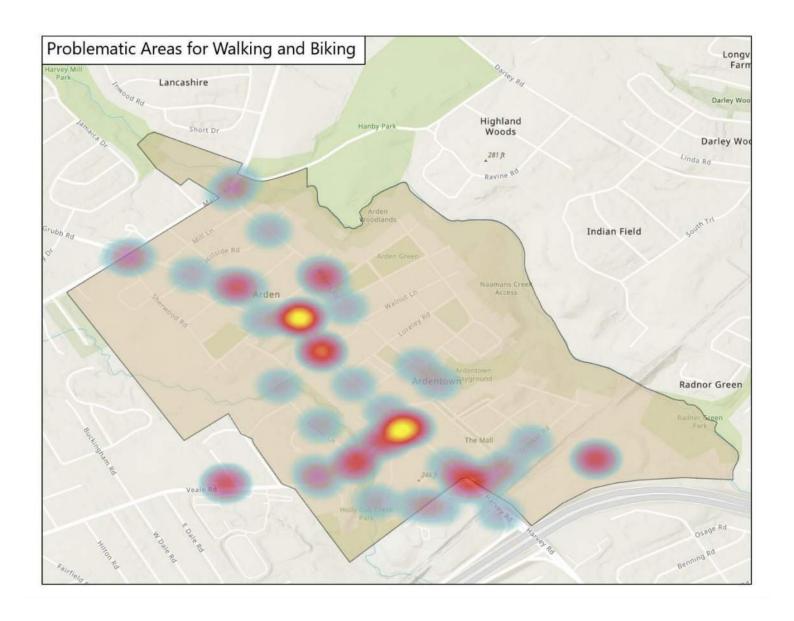
Marsh Road



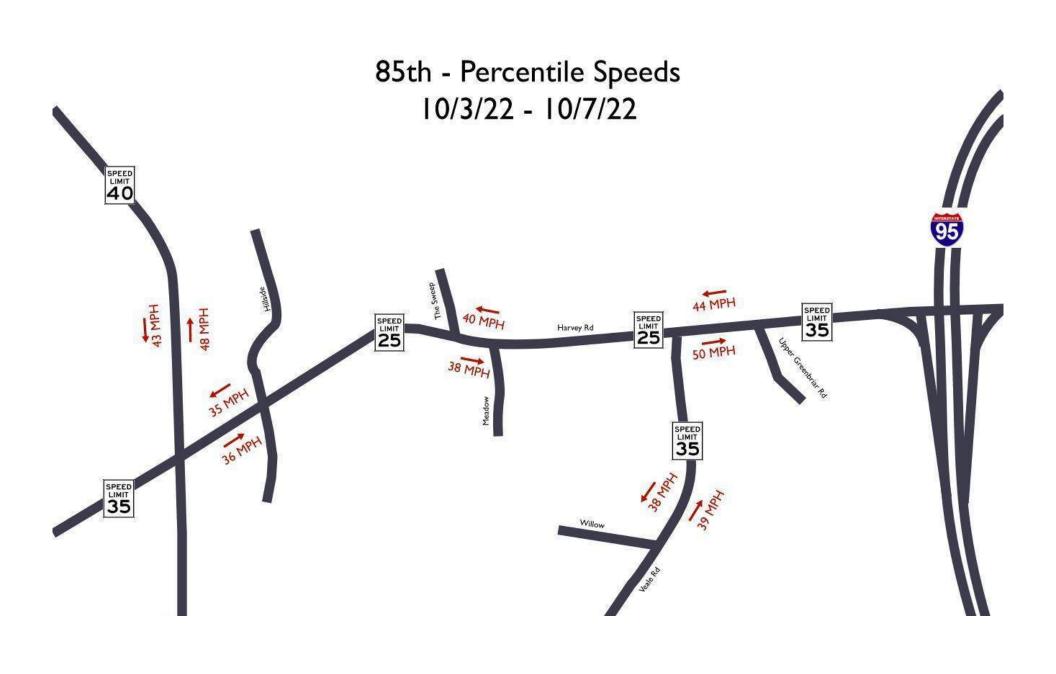














Harvey Road Corridor, Ardens Crash Summary

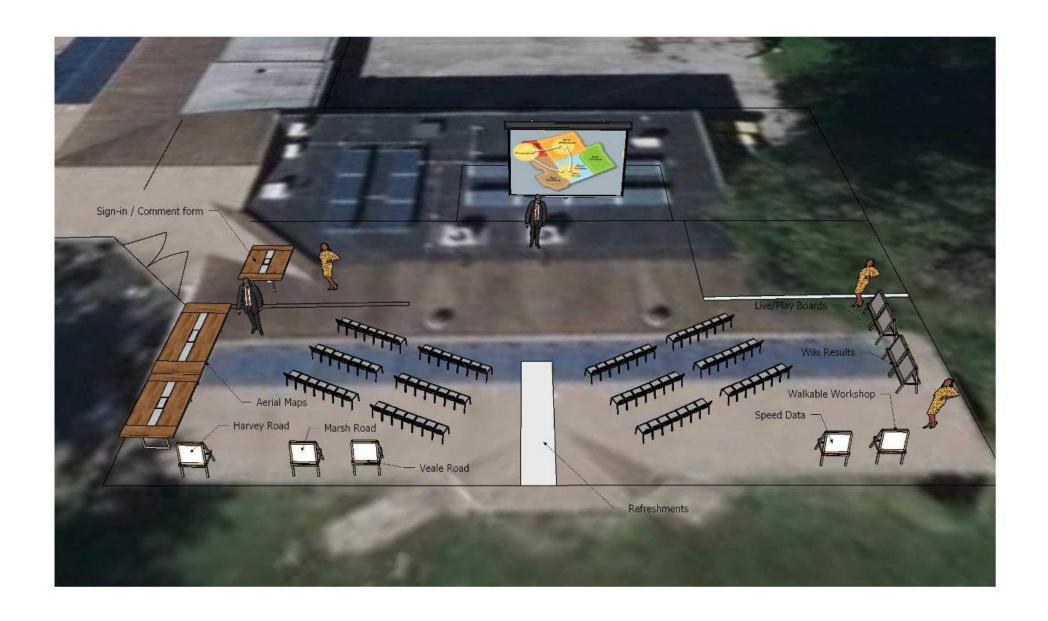
01/01/15 - 10/31/21: 107 crashes













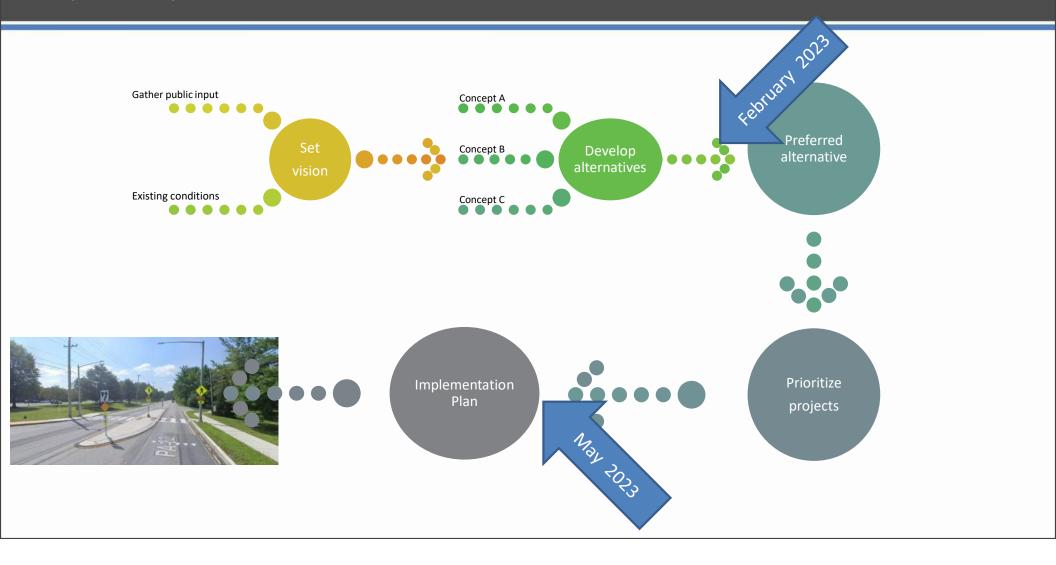


Connecting with the Ardens Comment Form

Name:
Address:
Phone:
Email:
Comments:



Project Objectives



Project Website





www.wilmapco.org/ardens/

Project Contact Information



Randy Waltermyer, AICP
Project Manager
rwaltermyer@trafficpd.com
484-325-6506 (direct)



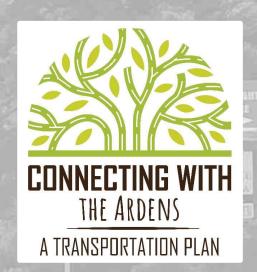
Bill Swiatek, AICP
Project Manager
bswiatek@wilmapco.org
302-737-6205 x113





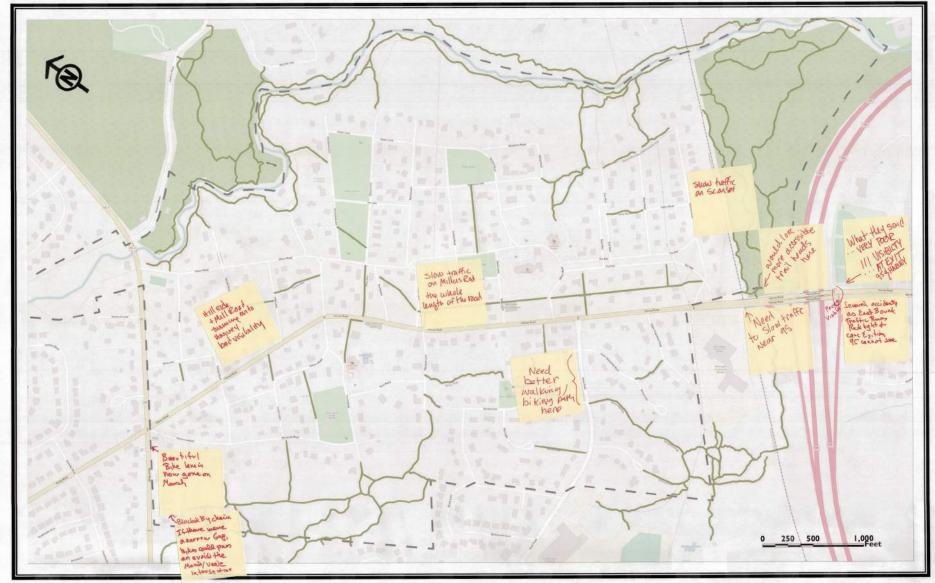


REMLINE





Ardens-Wide



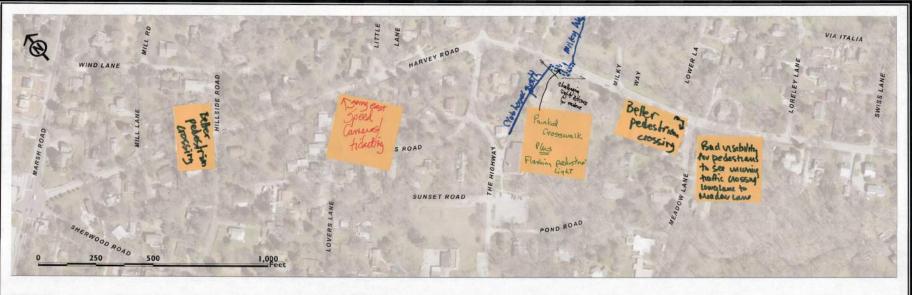


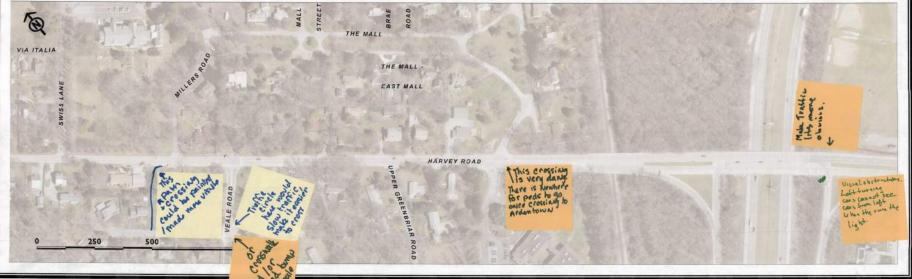






Harvey Road







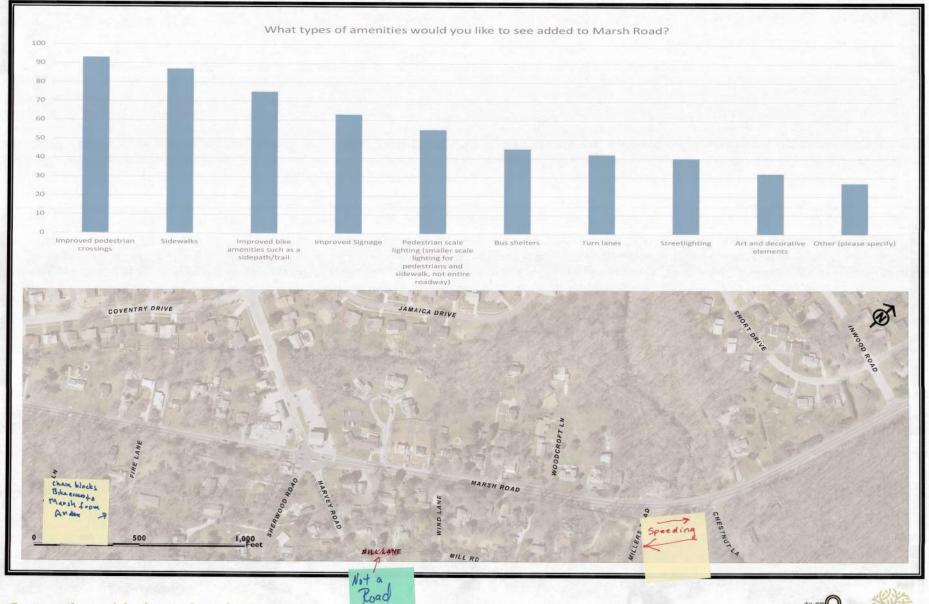
October 25, 2022 Public Meeting







Marsh Road



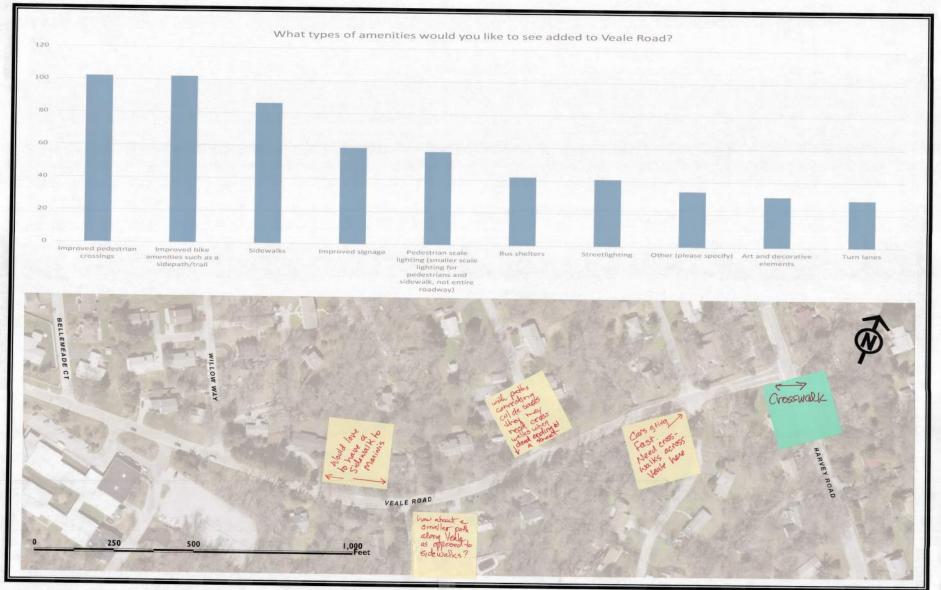
Connecting with the Ardens | A Transportation October 25, 2022 Public Meeting







Veale Road











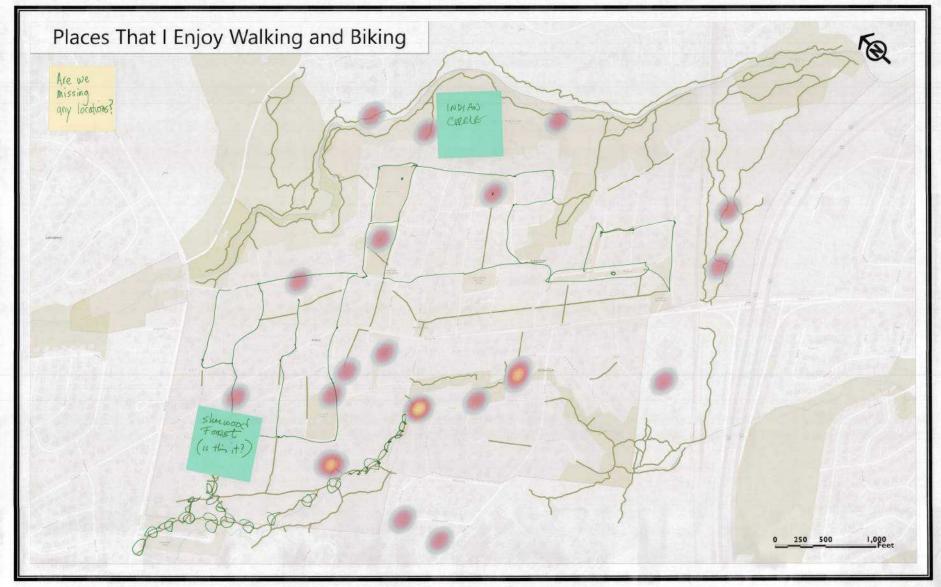
Where Do you Live?



Where Do you Play?



Wikimap Results

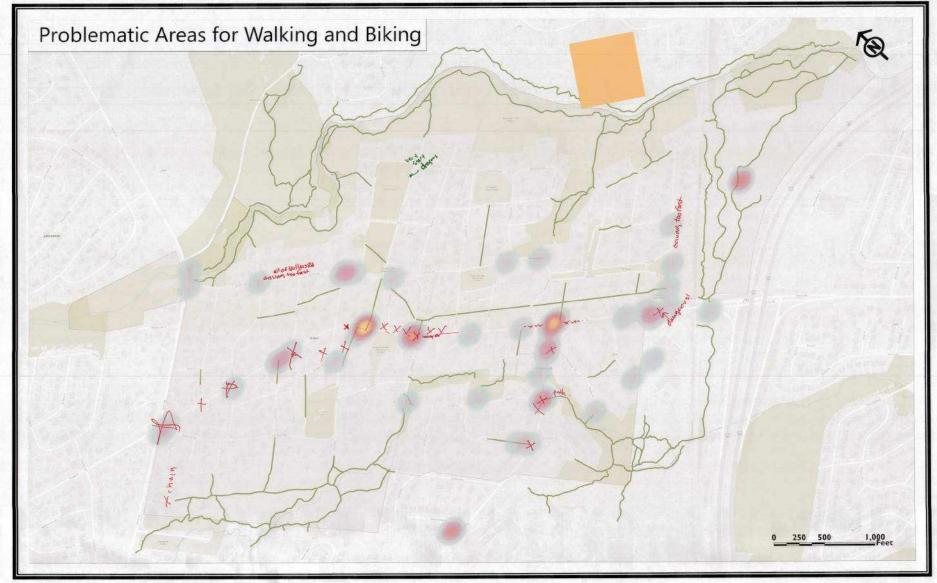








Wikimap Results





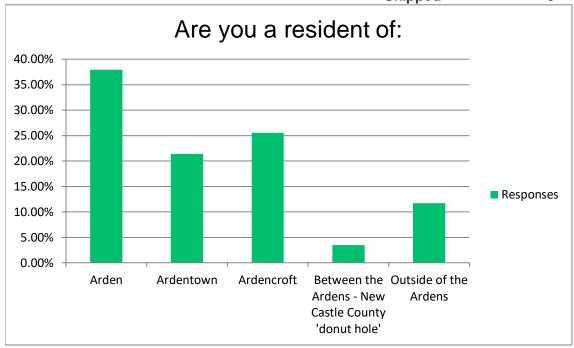






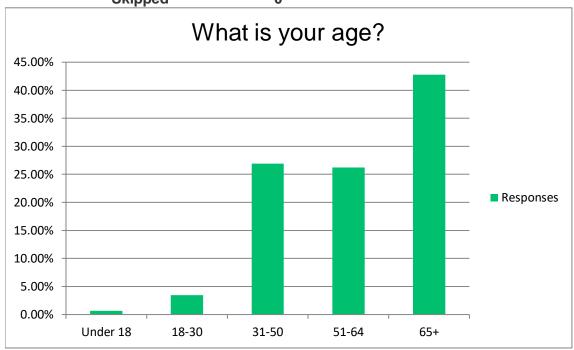
Connecting with the Ardens: A Transportation Plan Community Survey **Are you a resident of:**

Answer Choices	Response	s
Arden	37.93%	55
Ardentown	21.38%	31
Ardencroft	25.52%	37
Between the Ardens - New Castle County 'donut hole'	3.45%	5
Outside of the Ardens	11.72%	17
	Answered	145
	Skipped	0



Connecting with the Ardens: A Transportation Plan Community Survey What is your age?

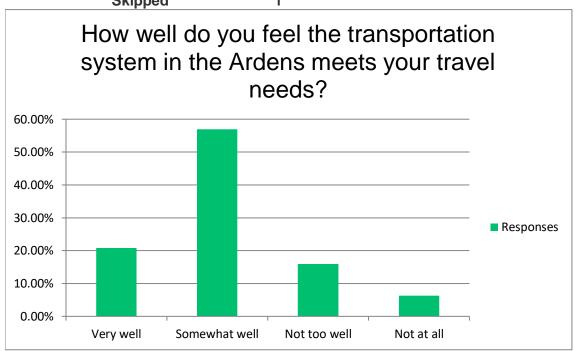
Answer Choices	Responses	
Under 18	0.69%	1
18-30	3.45%	5
31-50	26.90%	39
51-64	26.21%	38
65+	42.76%	62
	Answered	145
	Skipped	0



Connecting with the Ardens: A Transportation Plan Community Survey

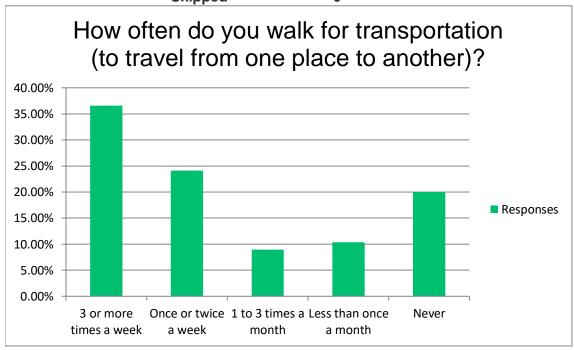
How well do you feel the transportation system in the Ardens meets your travel n

	Skipped	1
Answered		144
Not at all	6.25%	9
Not too well	15.97%	23
Somewhat well	56.94%	82
Very well	20.83%	30
Answer Choices	Responses	



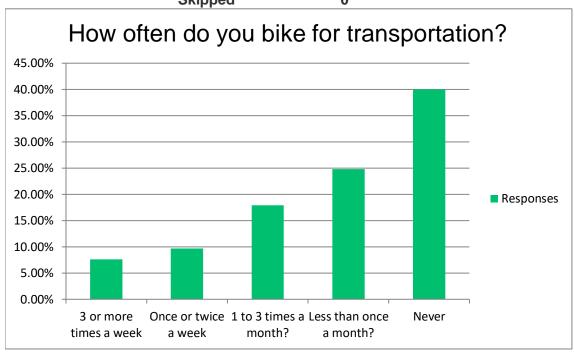
Connecting with the Ardens: A Transportation Plan Community Survey How often do you walk for transportation (to travel from one place to another)?

Answer Choices	Responses	
3 or more times a week	36.55%	53
Once or twice a week	24.14%	35
1 to 3 times a month	8.97%	13
Less than once a month	10.34%	15
Never	20.00%	29
	Answered	145
	Skipped	0



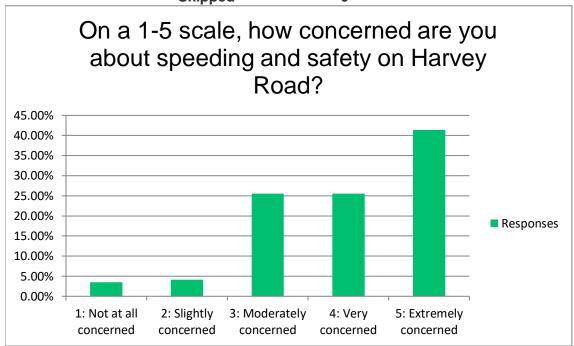
Connecting with the Ardens: A Transportation Plan Community Survey How often do you bike for transportation?

	Skipped	0
	Answered	145
Never	40.00%	58
Less than once a month?	24.83%	36
1 to 3 times a month?	17.93%	26
Once or twice a week	9.66%	14
3 or more times a week	7.59%	11
Answer Choices	Responses	



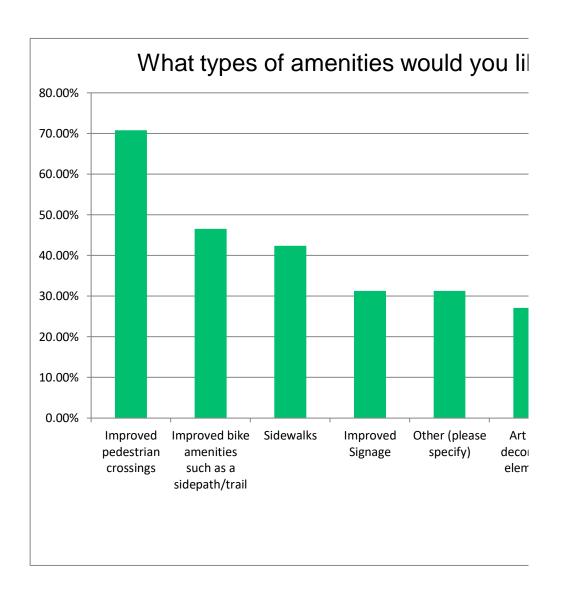
Connecting with the Ardens: A Transportation Plan Community Survey
On a 1-5 scale, how concerned are you about speeding and safety on Harvey Roa

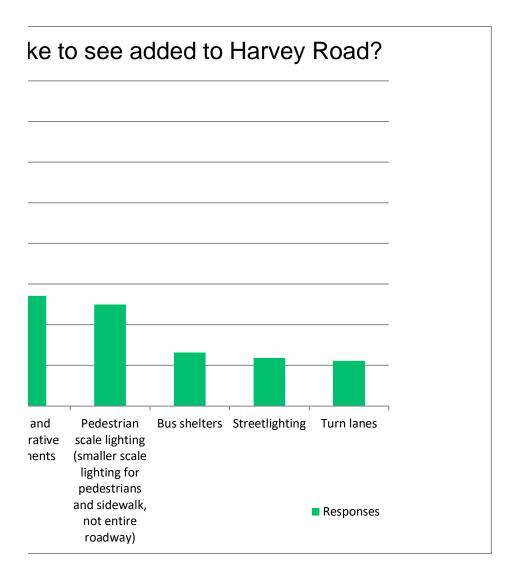
Answer Choices	Responses	
1: Not at all concerned	3.45%	5
2: Slightly concerned	4.14%	6
3: Moderately concerned	25.52%	37
4: Very concerned	25.52%	37
5: Extremely concerned	41.38%	60
	Answered	145
	Skipped	0



Connecting with the Ardens: A Transportation Plan Community Survey What types of amenities would you like to see added to Harvey Road?

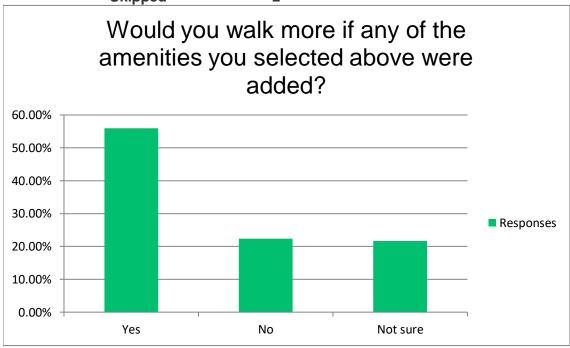
Answer Choices	Response	es
Improved pedestrian crossings	70.83%	102
Improved bike amenities such as a sidepath/trail	46.53%	67
Sidewalks	42.36%	61
Improved Signage	31.25%	45
Other (please specify)	31.25%	45
Art and decorative elements	27.08%	39
Pedestrian scale lighting (smaller scale lighting for pedestrians and	25.00%	36
Bus shelters	13.19%	19
Streetlighting	11.81%	17
Turn lanes	11.11%	16
	Answered	144
	Skipped	1





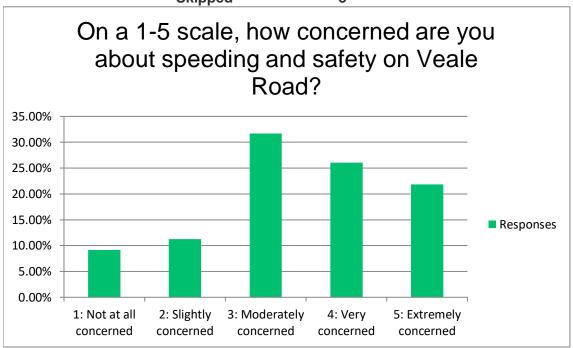
Connecting with the Ardens: A Transportation Plan Community Survey Would you walk more if any of the amenities you selected above were added?

	Skipped	2
	Answered	143
Not sure	21.68%	31
No	22.38%	32
Yes	55.94%	80
Answer Choices	Responses	



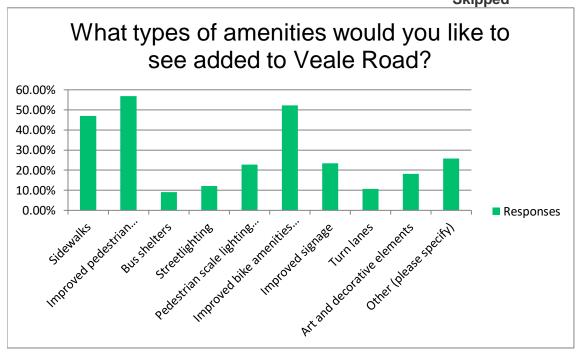
Connecting with the Ardens: A Transportation Plan Community Survey
On a 1-5 scale, how concerned are you about speeding and safety on Veale Roac

Answer Choices	Responses	
1: Not at all concerned	9.15%	13
2: Slightly concerned	11.27%	16
3: Moderately concerned	31.69%	45
4: Very concerned	26.06%	37
5: Extremely concerned	21.83%	31
	Answered	142
	Skipped	3



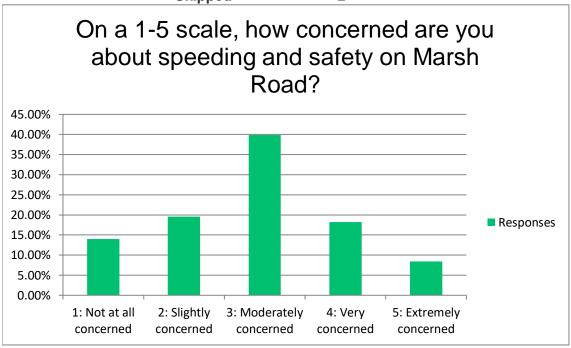
Connecting with the Ardens: A Transportation Plan Community Survey What types of amenities would you like to see added to Veale Road?

Answer Choices	Responses	
Sidewalks	46.97%	62
Improved pedestrian crossings	56.82%	75
Bus shelters	9.09%	12
Streetlighting	12.12%	16
Pedestrian scale lighting (smaller scale lighting for pedestrians and	22.73%	30
Improved bike amenities such as a sidepath/trail	52.27%	69
Improved signage	23.48%	31
Turn lanes	10.61%	14
Art and decorative elements	18.18%	24
Other (please specify)	25.76%	34
	Answered	132
	Skipped	13



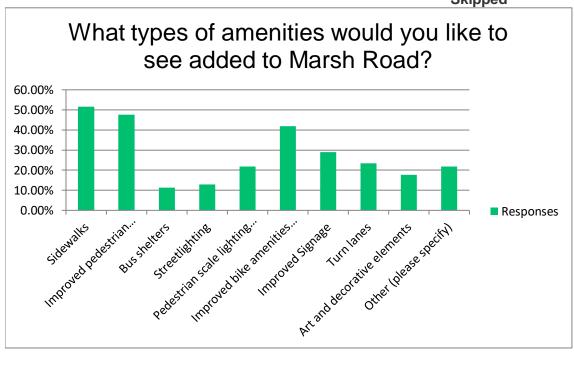
Connecting with the Ardens: A Transportation Plan Community Survey On a 1-5 scale, how concerned are you about speeding and safety on Marsh Roa

Answer Choices	Responses	
1: Not at all concerned	13.99%	20
2: Slightly concerned	19.58%	28
3: Moderately concerned	39.86%	57
4: Very concerned	18.18%	26
5: Extremely concerned	8.39%	12
	Answered	143
	Skipped	2



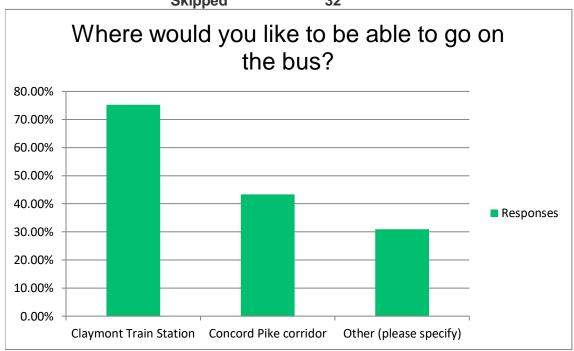
Connecting with the Ardens: A Transportation Plan Community Survey What types of amenities would you like to see added to Marsh Road?

Answer Choices	Responses	3
Sidewalks	51.61%	64
Improved pedestrian crossings	47.58%	59
Bus shelters	11.29%	14
Streetlighting	12.90%	16
Pedestrian scale lighting (smaller scale lighting for pedestrians and	21.77%	27
Improved bike amenities such as a sidepath/trail	41.94%	52
Improved Signage	29.03%	36
Turn lanes	23.39%	29
Art and decorative elements	17.74%	22
Other (please specify)	21.77%	27
	Answered	124
	Skipped	21



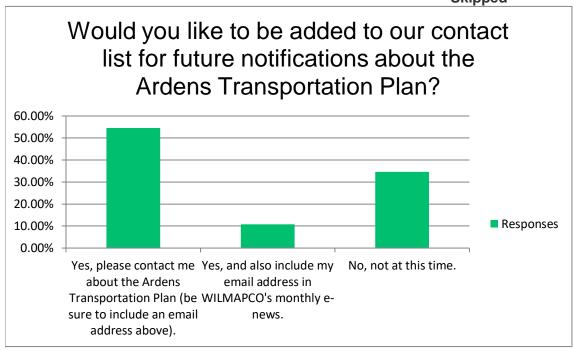
Connecting with the Ardens: A Transportation Plan Community Survey Where would you like to be able to go on the bus?

Answer Choices	Responses	
Claymont Train Station	75.22%	85
Concord Pike corridor	43.36%	49
Other (please specify)	30.97%	35
	Answered	113
	Skipped	32



Connecting with the Ardens: A Transportation Plan Community Survey Would you like to be added to our contact list for future notifications about the A

Answer Choices	Responses	
Yes, please contact me about the Ardens Transportation Plan (be s	54.62%	71
Yes, and also include my email address in WILMAPCO's monthly e	10.77%	14
No, not at this time.	34.62%	45
	Answered	130
	Skipped	15





Connecting with the Ardens Improvement Alternatives

February 15, 2023







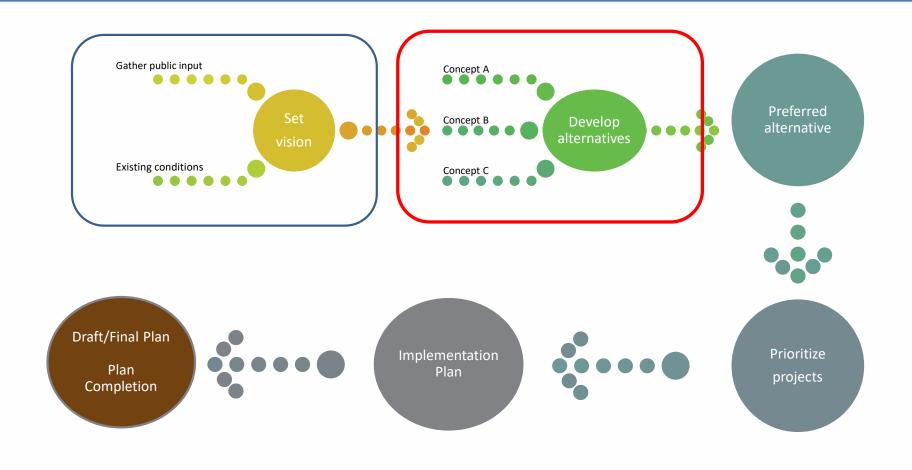








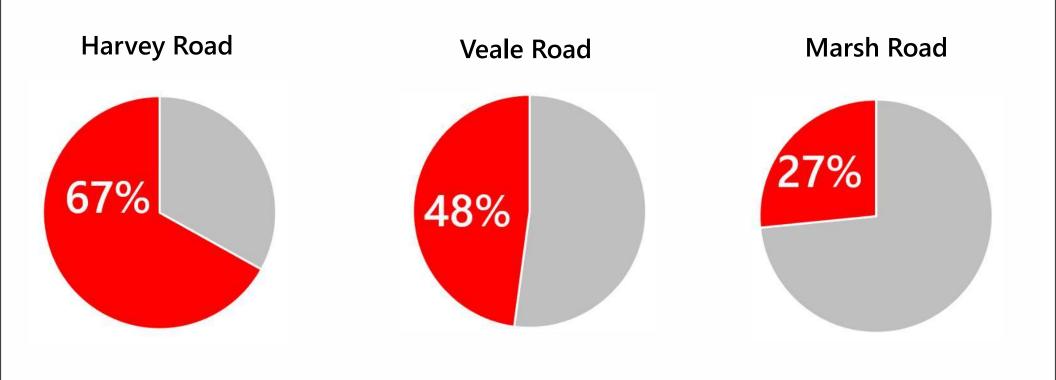
Plan Process

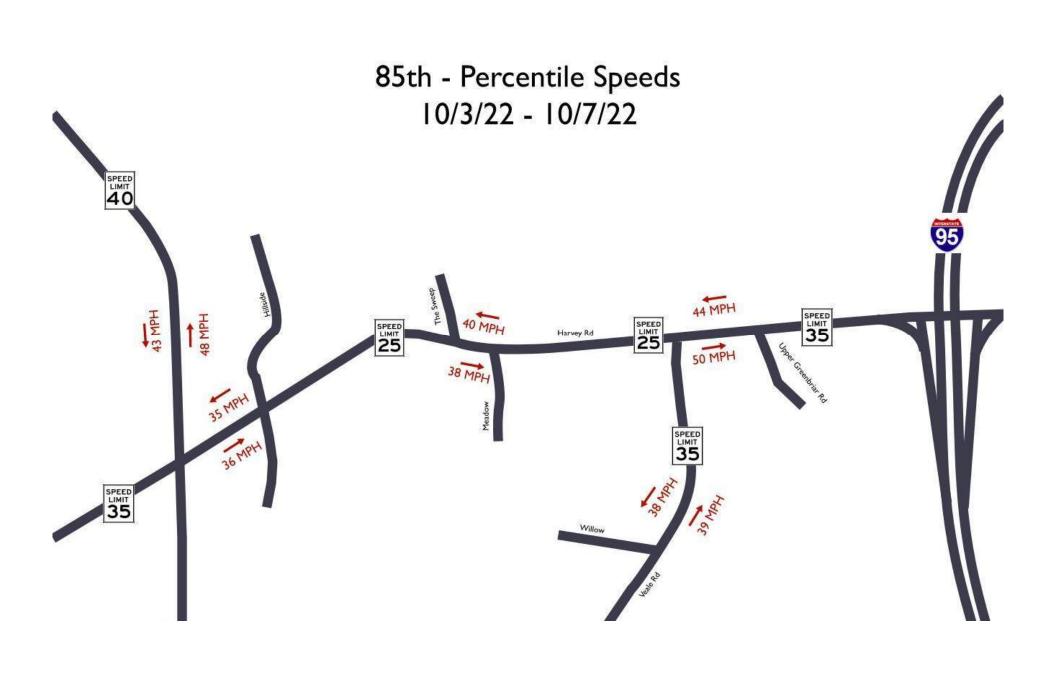


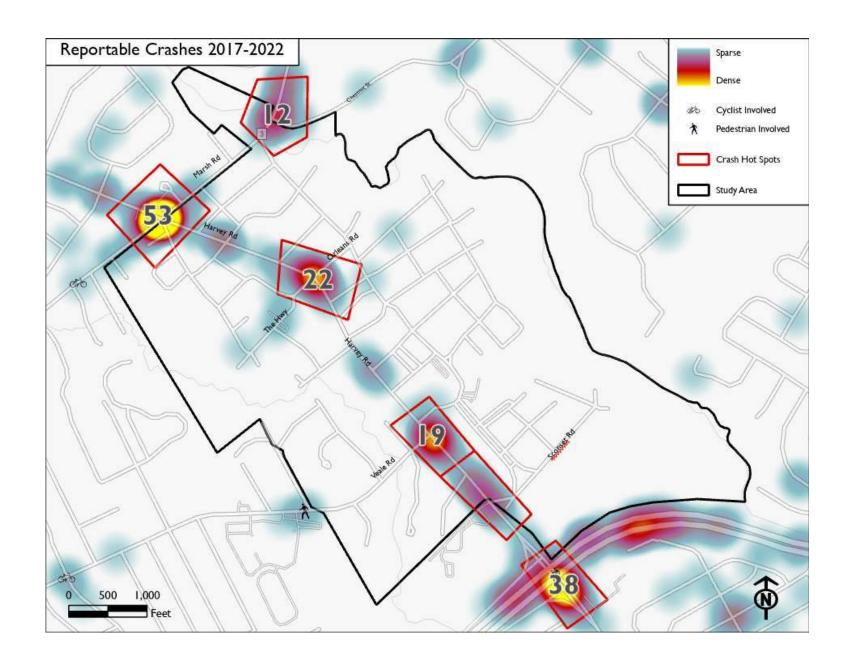


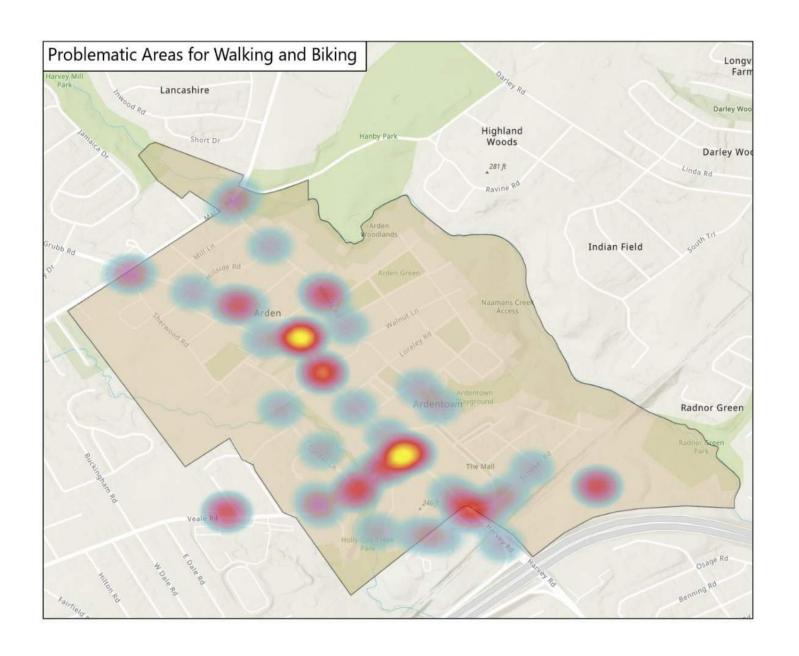
Survey #1 – Key Finding

Very or Extremely Concerned with Speeding and Safety

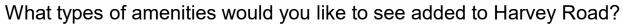


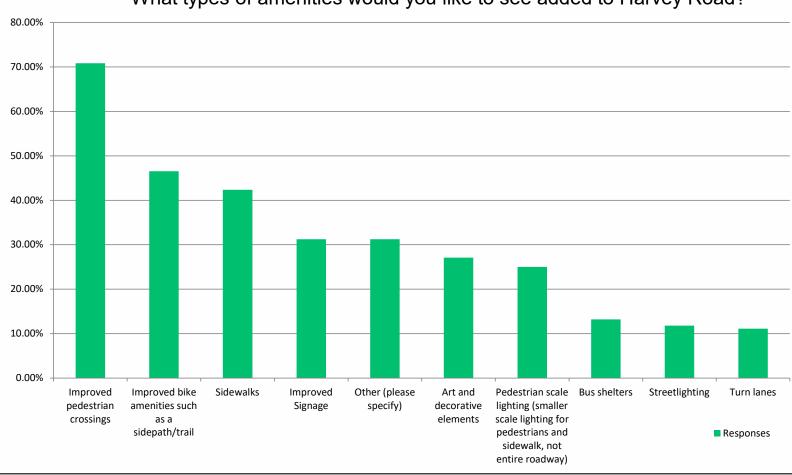






What types of amenities would you like to see?





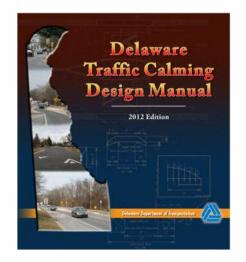
Plan Goals

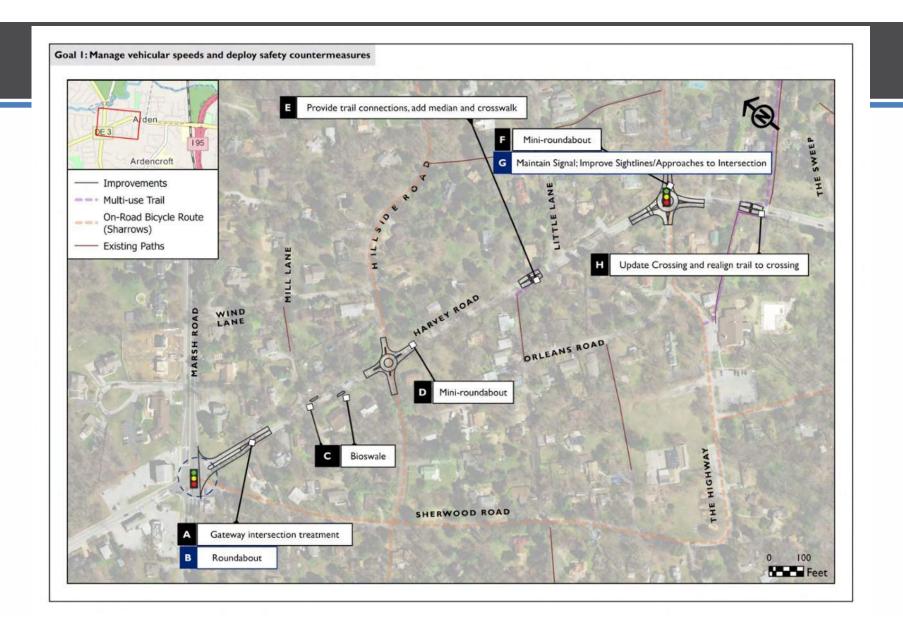
- 1) Manage vehicular travel speeds and deploy safety countermeasures
- 2) Develop a bicycle/pedestrian network to traverse through the Ardens
- 3) Provide enhanced pedestrian crossings
- 4) Enhance transit and school bus stops



Points of Consensus – Harvey Road

- » No vertical calming features
- » Use of horizonal calming features
- » Features will comply with DelDOT standards (mountable curb, etc)
- » Use of low-level landscaping
- » Traffic calming features will be traversable for emergency vehicles, school and transit buses





What is Traffic Calming?

"Traffic calming involves changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds and/or cutthrough volumes, in the interest of street safety, livability, and other public purposes."

-Institute of Transportation Engineers (ITE), Traffic Calming State-of-the Practice



Rectangular Rapid Flashing Beacon



Gateway



Bumpout



Bioswale

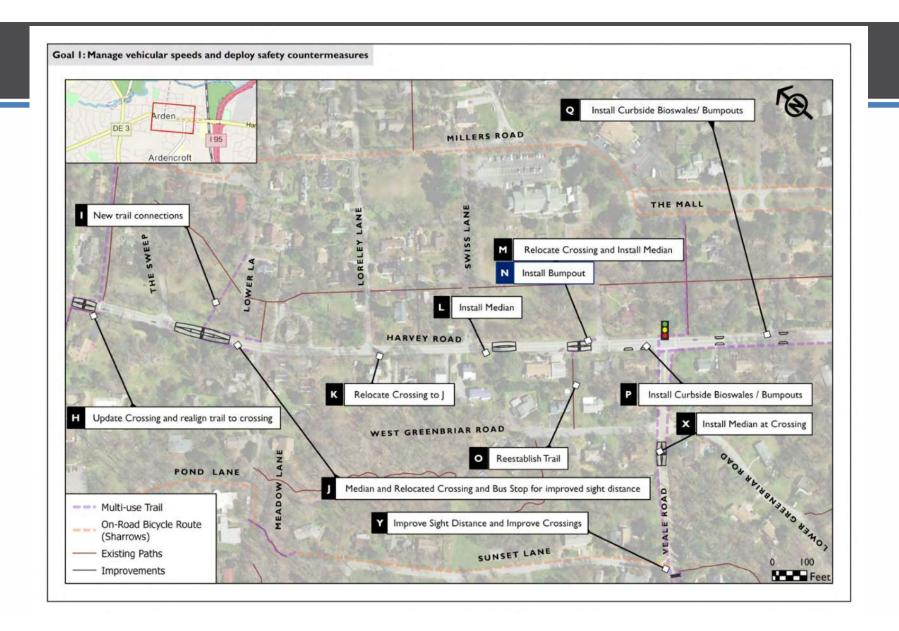


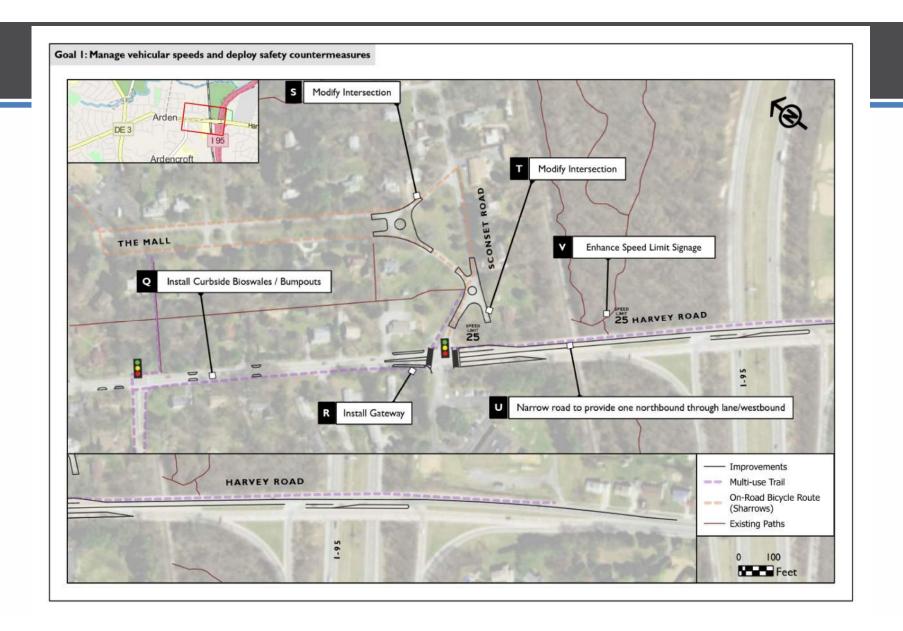
Chicane

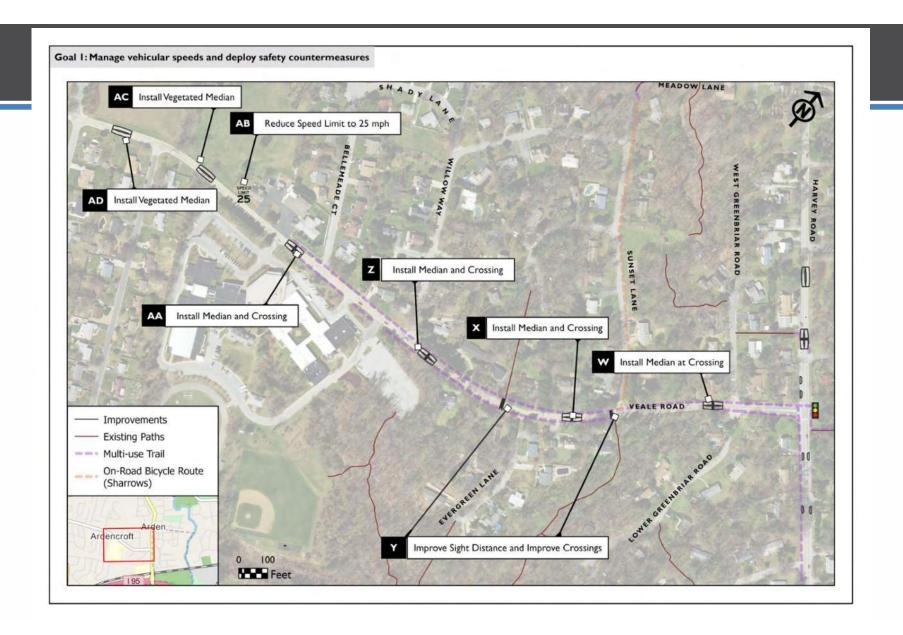


Mini-Roundabout

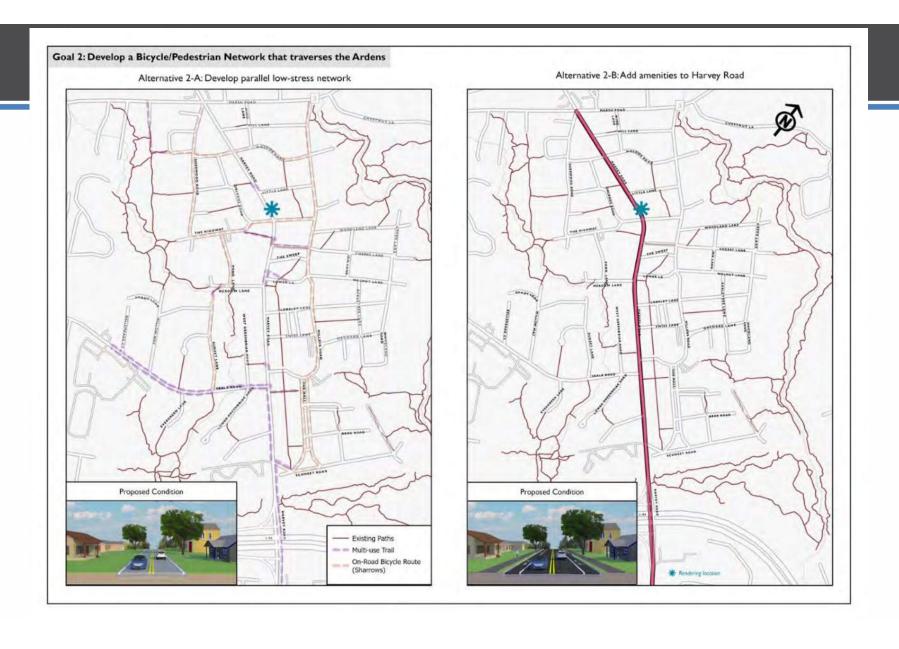














Goal 3: Provide Enhanced Pedestrian Crossings Key Crossing Locations WOODLAND LAN THE SWEEP LOWERLA



NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

Application of Pedestrian Crossing Treatments for Streets and Highways



A Synthesis of Highway Practice

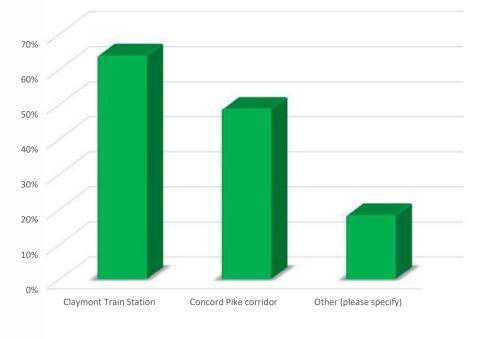
TRANSPORTATION RESEARCH BOARD
The National Academies of
SCIENCES - ENGINEERING - MEDICINE

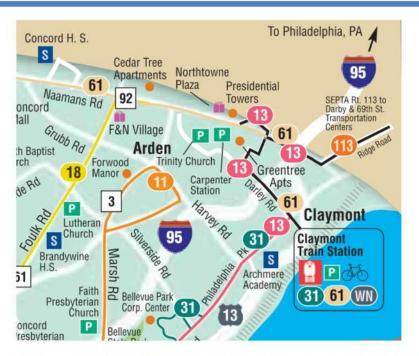
Apply guidance of NCHRP 498 and DelDOT





Where would you like to be able to go on the bus?





Delaware Transit Corporation Launches DART Connect Micro Transit Service

Delaware Transit Corporation | Department of Transportation | News | Sussex County | Date Posted: Tuesday, April 13, 2021







Meeting Objectives

- 1) Review the Alternatives
- 2) Ask Questions
- 3) Complete the Alternatives Survey
 - wilmapco.org/ardens >> Alternatives Survey
 - Direct URL >> tinyurl.com/ArdensSurvey2
 - Paper copies available this evening
- 4) Complete the Comment Form



Survey will be open until March 12th.

Moving Forward Together®





Q1 Rank the Goals

	1	2	3	4	TOTAL	SCORE
Goal A - Manage speeds and address safety	67.65%	13.73%	14.71%	3.92%		
	69	14	15	4	102	3.45
Goal B - Develop a bike/pedestrian network	15.69%	21.57%	44.12%	18.63%		
	16	22	45	19	102	2.34
Goal C - Provide enhanced pedestrian crossings	14.71%	59.80%	16.67%	8.82%		
	15	61	17	9	102	2.80
Goal D - Enhance transit/school bus stops	1.96%	4.90%	24.51%	68.63%		
	2	5	25	70	102	1.40

	STRONGLY OPPOSED	OPPOSED	NEUTRAL	SUPPORT	STRONGLY SUPPORT	NOT ENOUGH INFORMATION / UNSURE	TOTAL	WEIGHTED AVERAGE
A - Gateway (Harvey @ Marsh)	11.49% 10	3.45%	14.94% 13	25.29% 22	36.78% 32	8.05% 7	87	3.79
B - Roundabout (Harvey @ Marsh)	25.29% 22	18.39% 16	14.94% 13	13.79% 12	24.14% 21	3.45% 3	87	2.93
C - Bioswale (btwn Mill Ln and Hillside)	7.14% 6	7.14% 6	17.86% 15	27.38% 23	35.71% 30	4.76% 4	84	3.81
D - Mini- roundabout (Harvey @ Hillside)	22.09% 19	9.30% 8	8.14% 7	26.74% 23	30.23% 26	3.49%	86	3.35
E - Median/Trail Connection (btwn Lovers Ln and Little Ln)	5.81% 5	4.65% 4	19.77% 17	25.58% 22	39.53% 34	4.65% 4	86	3.93
F - Mini- roundabout (Harvey @ Orleans Rd)	23.53% 20	12.94% 11	11.76% 10	16.47% 14	34.12% 29	1.18% 1	85	3.25
G - Maintain signal / improve sight distances (Harvey @ Orleans Rd)	3.53% 3	5.88% 5	16.47% 14	30.59% 26	40.00% 34	3.53% 3	85	4.01
H - Update pedestrian crossing (Clubhouse Path)	3.57% 3	1.19% 1	14.29% 12	30.95% 26	46.43% 39	3.57% 3	84	4.20

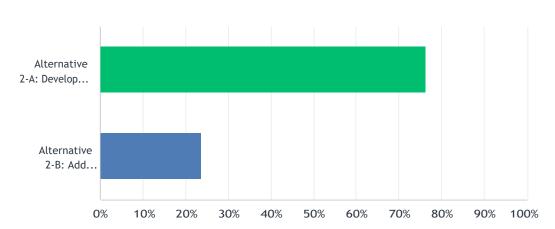
	STRONGLY OPPOSED	OPPOSED	NEUTRAL	SUPPORT	STRONGLY SUPPORT	NOT ENOUGH INFORMATION / UNSURE	TOTAL	WEIGHTED AVERAGE
I - New trail connections (btwn The Sweep and Lower Ln)	6.17% 5	7.41% 6	27.16% 22	25.93% 21	29.63% 24	3.70%	81	3.68
J - Median / Relocated crossing and bus stop (btwn Lower Ln & Meadow Ln)	9.88%	3.70%	19.75% 16	32.10% 26	29.63% 24	4.94% 4	81	3.71
K - Relocate Lorely Lane crossing to Alternative J	8.97% 7	5.13% 4	35.90% 28	19.23% 15	20.51% 16	10.26% 8	78	3.41
L - Install median (Harvey Road near Swiss Ln)	16.46% 13	10.13% 8	7.59% 6	30.38% 24	31.65% 25	3.80% 3	79	3.53
M - Relocate crossing/install median (Harvey Rd near Millers Rd)	12.50% 10	6.25% 5	11.25% 9	31.25% 25	35.00% 28	3.75% 3	80	3.73
N - Install bumpout (Harvey Rd near Millers Rd)	10.26% 8	6.41% 5	21.79% 17	23.08% 18	37.18% 29	1.28% 1	78	3.71
O - Reestablish Trail (Harvey Rd near Millers Rd)	6.33% 5	3.80%	18.99% 15	29.11% 23	41.77% 33	0.00%	79	3.96
P - Install curbside bioswale/bumpout (btwn Millers Rd & Veale Rd)	12.66% 10	3.80%	16.46% 13	29.11% 23	36.71% 29	1.27% 1	79	3.74
Q - Install curbside bioswale/bumpout (btwn Veale Rd & U. Greenbriar)	12.50% 10	5.00%	16.25% 13	28.75% 23	32.50% 26	5.00%	80	3.67

	STRONGLY OPPOSED	OPPOSED	NEUTRAL	SUPPORT	STRONGLY SUPPORT	NOT ENOUGH INFORMATION / UNSURE	TOTAL	WEIGHTED AVERAGE
R - Install Gateway (Harvey Rd @ Sconset Rd)	5.00% 4	5.00% 4	13.75% 11	26.25% 21	45.00% 36	5.00% 4	80	4.07
S - Modify intersection (southern end of The Mall)	14.29% 11	9.09% 7	27.27% 21	14.29% 11	20.78% 16	14.29% 11	77	3.21
T - Modify intersection (Sconset Rd @ The Mall)	15.58% 12	7.79% 6	33.77% 26	11.69% 9	22.08% 17	9.09% 7	77	3.19
U - Reduce Harvey Road to one-lane through the I-95 / Harvey Road interchange	12.66% 10	10.13% 8	7.59% 6	13.92% 11	40.51% 32	15.19% 12	79	3.70
V - Enhance Speed Limit Signage (Harvey Road approaching Sconset Rd)	3.80%	1.27% 1	12.66% 10	31.65% 25	45.57% 36	5.06% 4	79	4.20

	STRONGLY OPPOSED	OPPOSED	NEUTRAL	SUPPORT	STRONGLY SUPPORT	NOT ENOUGH INFORMATION / UNSURE	TOTAL	WEIGHTED AVERAGE
W - Install median/pedestrian crossing (Veale Rd @ W/L. Greenbriar)	10.67% 8	6.67% 5	5.33% 4	28.00% 21	46.67% 35	2.67%	75	3.96
X - Install median/pedestrian crossing (Veale Rd btwn Sunset/Evergreen)	9.33% 7	8.00% 6	6.67% 5	28.00% 21	42.67% 32	5.33% 4	75	3.92
Y - Improve sight distance; improving crossings (Veale Rd @ Sunset & Evergreen)	8.11% 6	4.05% 3	13.51% 10	25.68% 19	44.59% 33	4.05% 3	74	3.99
Z - Install median/pedestrian crossing (Veale Rd @ Willow Way)	10.81% 8	4.05% 3	13.51% 10	32.43% 24	35.14% 26	4.05% 3	74	3.80
AA - Install median/pedestrian crossing (Veale Rd @ Bellemeade)	12.16% 9	2.70%	25.68% 19	24.32% 18	29.73% 22	5.41% 4	74	3.60
AB - Reduce speed limit to 25 mph on Veale Rd	4.00% 3	2.67% 2	16.00% 12	25.33% 19	49.33% 37	2.67% 2	75	4.16
AC - Install vegetated median (Veale Rd east of E. Dale)	5.33% 4	5.33% 4	30.67% 23	22.67% 17	30.67% 23	5.33% 4	75	3.72
AD - Install vegetated median (Veale Rd btwn W. Dale & E. Dale)	5.48% 4	4.11%	32.88% 24	19.18% 14	32.88% 24	5.48% 4	73	3.74

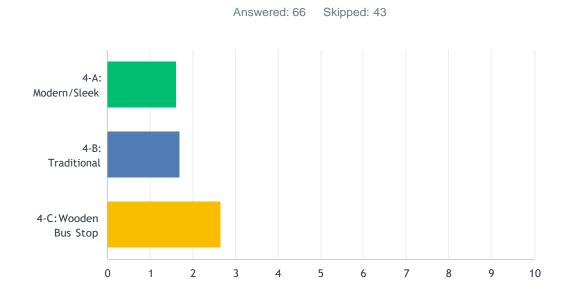
Q11 What is your preferred alternative?

Answered: 72 Skipped: 37



ANSWER CHOICES	RESPONSES	
Alternative 2-A: Develop parallel low-stress road network	76.39%	55
Alternative 2-B: Add amenities to Harvey Road	23.61%	17
TOTAL		72

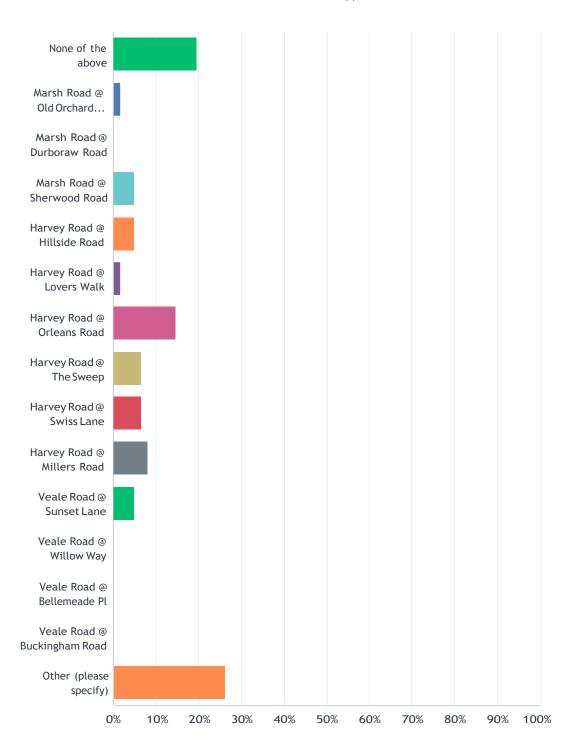
Q14 Please rank the bus shelter types by your preference.



	1	2	3	TOTAL	SCORE
4-A: Modern/Sleek	13.85%	35.38% 23	50.77% 33	65	1.63
4-B: Traditional	9.23% 6	52.31% 34	38.46% 25	65	1.71
4-C: Wooden Bus Stop	77.27% 51	12.12% 8	10.61% 7	66	2.67

Q15 Which bus stop do you feel should be the highest priority for improvement?

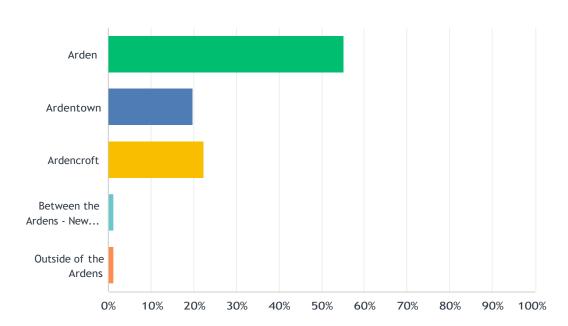




ANSWER CHOICES	RESPONSES	
None of the above	19.67%	12
Marsh Road @ Old Orchard Road	1.64%	1
Marsh Road @ Durboraw Road	0.00%	0
Marsh Road @ Sherwood Road	4.92%	3
Harvey Road @ Hillside Road	4.92%	3
Harvey Road @ Lovers Walk	1.64%	1
Harvey Road @ Orleans Road	14.75%	9
Harvey Road @ The Sweep	6.56%	4
Harvey Road @ Swiss Lane	6.56%	4
Harvey Road @ Millers Road	8.20%	5
Veale Road @ Sunset Lane	4.92%	3
Veale Road @ Willow Way	0.00%	0
Veale Road @ Bellemeade PI	0.00%	0
Veale Road @ Buckingham Road	0.00%	0
Other (please specify)	26.23%	16
TOTAL		61

Q16 Are you a resident of:

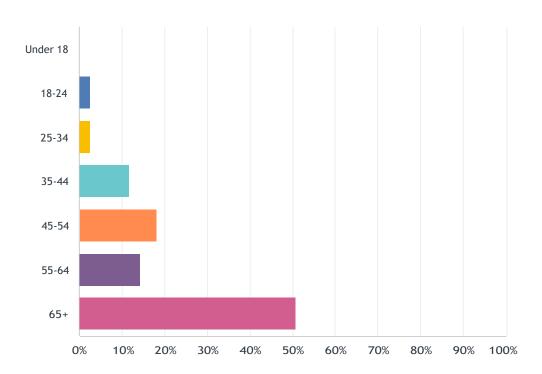




ANSWER CHOICES	RESPONSES	
Arden	55.26%	42
Ardentown	19.74%	15
Ardencroft	22.37%	17
Between the Ardens - New Castle County 'donut hole'	1.32%	1
Outside of the Ardens	1.32%	1
TOTAL		76

Q17 What is your age group?

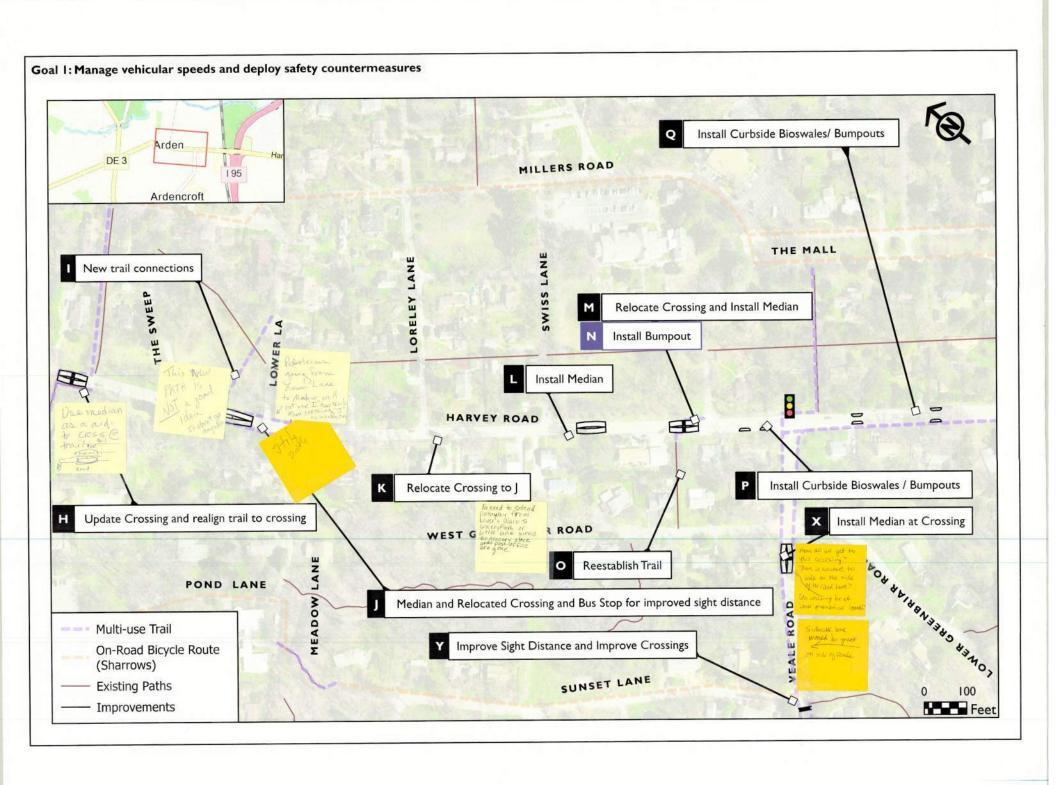
Answered: 77 Skipped: 32

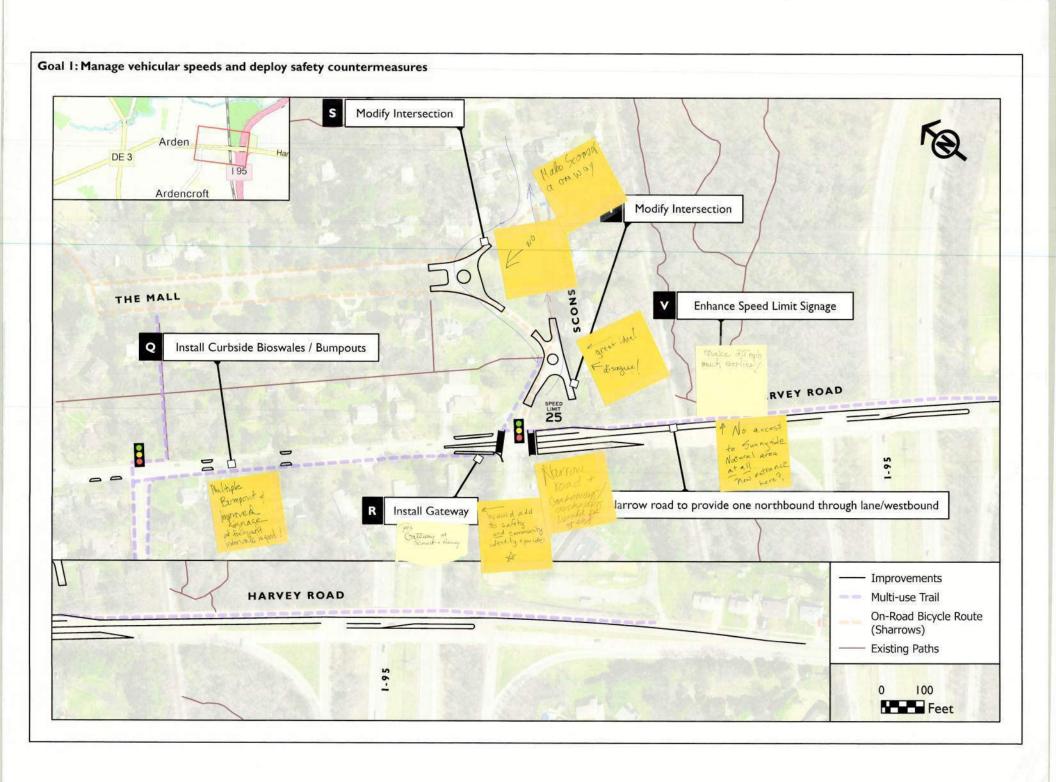


ANSWER CHOICES	RESPONSES	
Under 18	0.00%	0
18-24	2.60%	2
25-34	2.60%	2
35-44	11.69%	9
45-54	18.18%	14
55-64	14.29%	11
65+	50.65%	39
TOTAL		77



Goal I: Manage vehicular speeds and deploy safety countermeasures Provide trail connections, add median and crosswalk Arden Mini-roundabout 195 Ardencroft Maintain Signal; Improve Sightlines/Approaches to Intersection Improvements Multi-use Trail On-Road Bicycle Route (Sharrows) **Existing Paths** Update Crossing and realign trail to crossing Y ROAD WIND MARSH ROAD LANE ORLEANS ROAD Mini-roundabout Bioswale SHERWOOD ROAD Gateway intersection treatment Roundabout 100 CONCERNS Feet

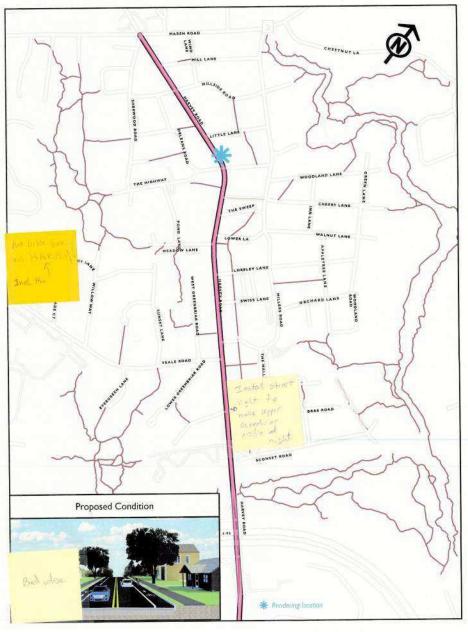




Goal I: Manage vehicular speeds and deploy safety countermeasures SHADYLA MEADOW LANE Install Vegetated Median Reduce Speed Limit to 25 mph BELLEMEADE CT WILLOW WAY Install Vegetated Median ROAD Install Median and Crossing Install Median and Crossing Install Median and Crossing 1 Install Median at Crossing VEALE ROAD Improvements **Existing Paths** Multi-use Trail DO On-Road Bicycle Route (Sharrows) Arden Ardencroft Improve Sight Distance and Improve Crossings 100 Feet 195

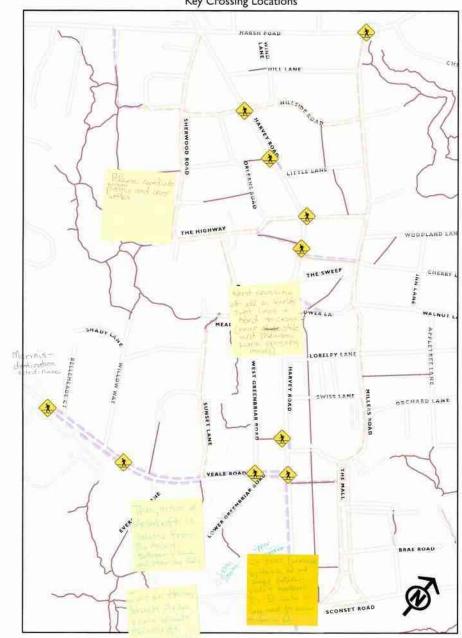
Goal 2: Develop a Bicycle/Pedestrian Network that traverses the Ardens Alternative 2-A: Develop parallel low-stress network ANE CHESTNUT LA CHERRY LANE THE SWEEP Proposed Condition Existing Paths Multi-use Trail On-Road Bicycle Route (Sharrows)

Alternative 2-B: Add amenities to Harvey Road



Goal 3: Provide Enhanced Pedestrian Crossings

Key Crossing Locations



NCHRP SYNTHESIS 498

NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

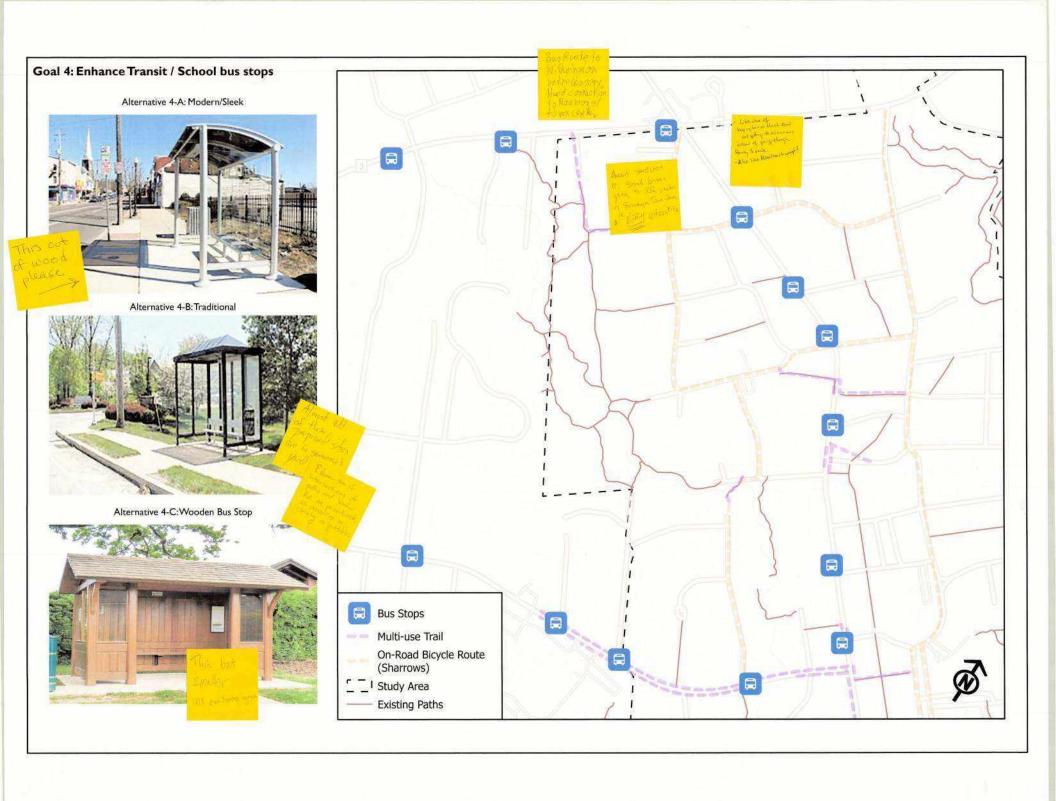
Application of Pedestrian Crossing Treatments for Streets and Highways

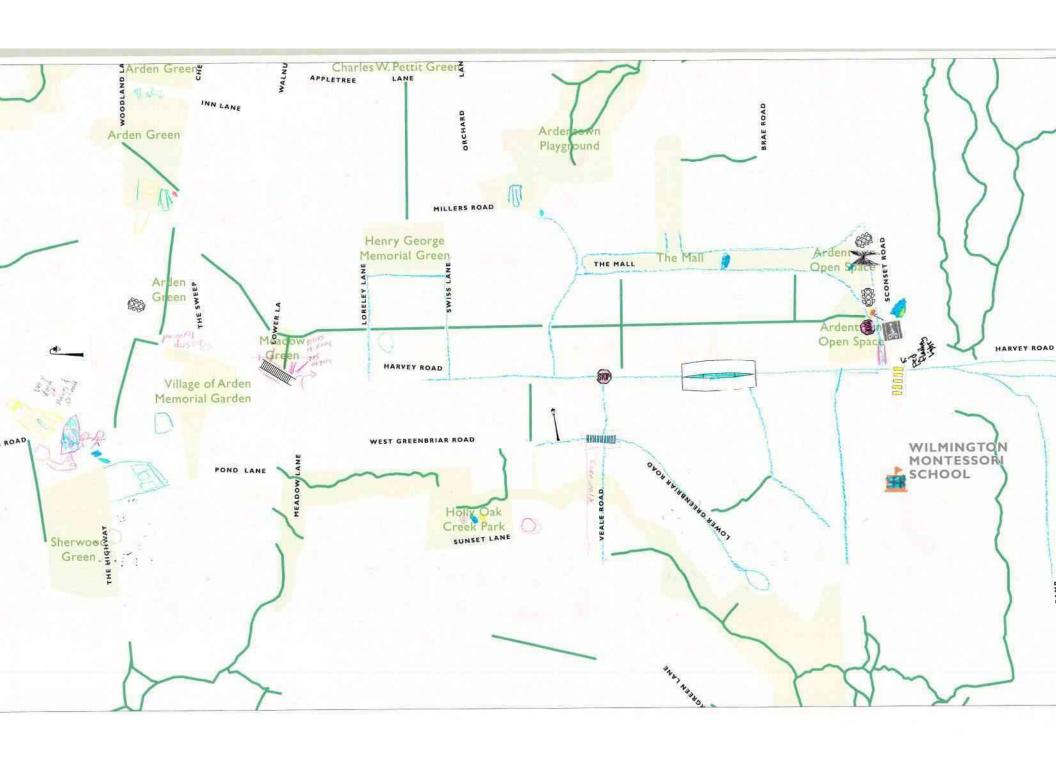


A Synthesis of Highway Practice

TRANSPORTATION RESEARCH BOARD
The National Academics of
SCIENCES ENGINEERING MEDICINE

Apply guidance of NCHRP 498 and DelDOT





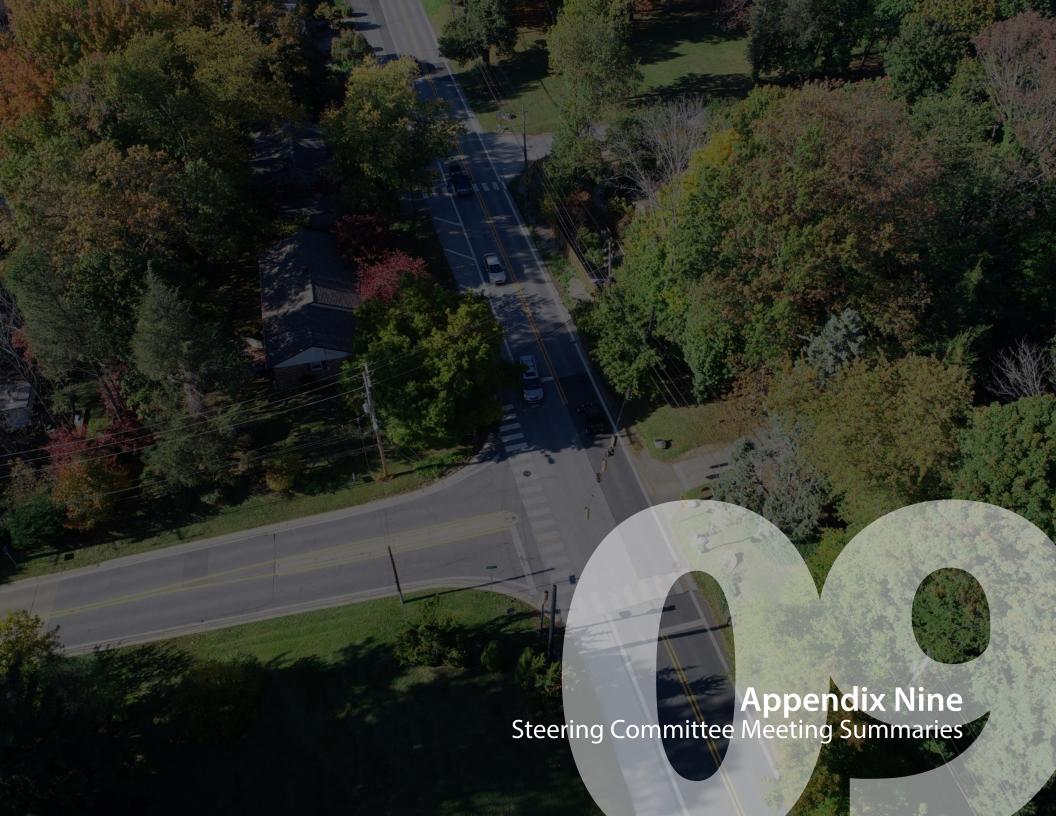
HARVEY ROAD INTEGRAL TO ARDEN'S IDENTITY

February 15, 2023

Comments given to WILMAPCO at a DelDOT/Arden meeting held at the Buzz Ware Village Center, Arden, to consider traffic and pedestrian usage of Harvey Road, Arden, Delaware.

- 1. Arden is an intentional community. Maintaining its physical footprint and the ideas underlying its design and development are critical to maintaining its identity.
- 2. Arden is over one hundred years old. In large part, its physical attributes, including road lay-out, open spaces, and leasehold lay-out have remained unchanged. Its residents share its open spaces, woodlands, and village amenities. Community organizations, concert and play venues, gilds, and ACRA summer programs are provided for the enjoyment and edification of its residents as well as for parties living outside its boundaries.
- 3. Arden provides a close-to-nature, unadorned, early twentieth century setting for its residents and visitors. Arden's road amenities are few and typically low-tech. Arden does not have sidewalks adjacent to its roads. It does not have street lamps. Initially, road margins were lined with Brandywine blue granite. Over time, some of these margins have been removed and replaced with concrete gutters. The presence of woodlands on two sides, open spaces, and a non-conforming collection of small to large dwellings adds to a sense of pause, if not relief, from more homogenous, carcentered, and fast-paced suburban settings.
- 4. Arden's cart-ways (roads), excepting Harvey Road, were designed to provide passage for pedestrians, bicyclists, and vehicular traffic. It's roads, due to being narrow and multi-use, are traffic-calming. In addition, they facilitate interaction among its residents.
- 5. Arden has remained one place, one unit, since its inception. The main artery bisecting Arden, Harvey Road, has largely remained a narrow two lane road that does not cut the village in half.
- 6. Credit should be given to those who, with insight, protected Harvey Road and the Village by eliminating north-bound access to I-95 from Harvey Road and south-bound access to Harvey Road from I-95. An I-95-Harvey Road clover leaf would have been intrusive in itself. More important, it would have set up Harvey Road to be widened to a circumstance similar to Silverside Road or worse. Critically, protecting Arden's physical integrity by protecting Harvey Road was an important element in Arden being accepted for registration on the National Register of Historic Places.
- 7. Eroding Arden's design features could unsettle, if not eliminate, its protections under Section 106 of the National Historic Preservation Act.
- 8. Much has been done by DelDOT and the Village to sign and to notice drivers on Harvey Road. At present, Harvey Road has four lights between Marsh Road and its entrance to I-95. There are stop signs at roads intersecting Harvey Road in Arden. There is a painted median. There are painted side margins. The speed limit is appropriate to a residential community. How many measures must DelDOT introduce to dampen aberrant driving behavior, including speeding? At what point does a community have to un-do itself to dampen irresponsible behavior?
- 9. Six miles from Arden, Smiths Bridge Road accesses and egresses a one lane, wooden, covered bridge over the Brandywine River. This bridge, located in New Castle County, should serve as a hallmark for the level of tolerance given to maintaining an historic and unique circumstance, a circumstance not unlike protecting the integrity of one of the country's few remaining utopian communities. Based on the Smith Bridge example, and on other examples, maintaining, and protecting, a narrow Harvey Road is within acceptable range.
- 10. Maintaining a narrow Harvey Road that is easily crossed by residents allows Arden to remain one unit. This is important. In my view, it should be controlling when considering any "improvements" to it. If anything, Harvey Road should be narrowed. Its attributes should be well maintained. Proposals, such as constructing sidewalks or bike paths along Harvey Road, are proposals that belong to another location.
- 11. Implementing certain of the proposed modifications of Harvey Road may achieve particular individuals hoped-for out-comes. It will, however, undermine, if not destroy, elements of the Arden setting that make it a home for its residents and a destination for visitors.

Arden Resident





Connecting with the Ardens

Steering Committee Meeting Summary August 16, 2022

Location: Virtual Meeting via Microsoft Teams August 16, 2022 | 12:00 pm - 1:30 pm Date | Time:

Topic: Kick-off Meeting

Attendees:

Steering Committee:

Carol Larson **WILMAPCO:** Steve Benigni Tigist Zegeye **Brooke Bovard** Bill Swiatek Ben Gruswitz Jake Thompson Randi Novakoff Matthew Rogers

Pam Politis Janna Scheflen

Stephen Ottinger (DelDOT)

Cathy Smith (DART) Cooper Bowers (DelDOT)

Steve Ottinger (DTC)

Consultant Team:

Randy Waltermyer (TPD) Abigail Meyer (TPD) Michelle Puszcz (Remline)

Meeting Presentation

Discussion:

- Introductions
- Study Schedule
 - R. Waltermyer reviewed the project schedule.
 - > The Steering Committee discussed the scheduling of the first public meeting, which is being targeted for mid-October. R. Waltermyer and B. Gruswitz would investigate dates and facility availability.
 - The Steering Committee agreed to move the scheduled meeting for December to November. R. Waltermyer will circulate a Doodle poll to establish a preferred date for November.
- Recap of 8/8 Walkable Workshop
 - J. Thompson provided a recap of the 8/8 Walkable Workshop. See slides for further details.



Project Branding / Logo

R. Waltermyer and M. Puszcz reviewed draft logos and names for the project. The Steering Committee completed a live poll to solicit preferences and opinions. M. Puszcz was tasked to refine the top two logos/names and circulate to the Steering Committee to finalize/confirm.

Community Survey and Engagement

- R. Waltermyer reviewed the draft community survey. He asked for Steering Committee review and comment by 8/12/22.
- > The Steering Committee suggested that an article or ad be drafted to run in the Ardens Newsletter. The Consultant Team agreed to draft an article explaining the project and the community survey.
- ➤ The Steering Committee noted that the Ardens Fair was scheduled for September 3rd and encouraged the community survey to be promoted at the Fair. The Consultant Team agreed to develop a poster or board to promote the community survey.

• Purpose and Need

- Specific to Harvey Road, R. Waltermyer reviewed and recommended the continued usage of the principles of consensus that were agreed upon in 1999:
 - No vertical calming features
 - Use of horizonal calming features
 - Features will comply with DelDOT standards (mountable curb, etc)
 - Use of low-level landscaping
 - Traffic calming features will be traversable for emergency vehicles, school and transit buses
- The Steering Committee endorsed these principles but stressed that the purview of this Plan is broader than Harvey Road.

Data Needs

R. Waltermyer reviewed proposed data collection locations along Harvey Road. The Steering Committee encouraged data to also be collected along Veale Road and Marsh Road. R. Waltermyer agreed to discuss possibilities for additional data collection with WILMAPCO staff.

Steering Committee

The Steering Committee discussed if additional agencies, stakeholders, or individuals should be invited to the Steering Committee. No other steering committee members were identified at this time.



•	Action	Items	/ [Next	Ste	ps
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TPD to circul	late community	/ survey; Steering	Committee to	provide edit	:s/suggestio	ns

- ☐ TPD to draft promotion of community survey for Ardens newsletter
- ☐ TPD to confirm date for Public Meeting #1
- ☐ Remline to revise and distribute final logo alternatives
- ☐ TPD to convene Doodle poll to identify best date for Steering Committee meeting #2 for mid-November

Next Meeting:

To be determined based on pending Doodle poll. Tentatively targeting mid-November.





Connecting with the Ardens

Steering Committee Meeting Summary November 15, 2022

Location: Virtual Meeting

Date | Time: November 15, 2022 | 12:00 pm – 2:00 pm

Topic: Steering Committee Meeting #2

Attendees:

Steering Committee:

Carol Larson Steve Benigni Brooke Bovard Ben Gruswitz Matthew Rogers

Cindy Cohen Lisa Wilson Riblet

Pam Politis
Cathy Smith (DART)
Cooper Bowers (DelDOT)

WILMAPCO:

Tigist Zegeye Bill Swiatek Jake Thompson Randi Novakoff

Consultant Team:

Randy Waltermyer (TPD) Louis Hufnagle (TPD) Jerry Baker (TPD) Wes Hicks (TPD)

Michelle Puszcz (Remline)

Introduction:

Randy Waltermyer (RW) began the meeting by reviewing the meeting agenda and providing an overview of the topics that will be discussed during the steering committee meeting.

Recap/reactions from Public Meeting #1

RW reviewed the results of the public meeting and time was spent reviewing each of the maps and comment boards. It was noted that much of the feedback gathered further reinforced the thoughts that have been discussed by the steering committee during the entire project.

Youth Engagement

Ben Gruswitz (BG) noted that it is important to improve the attendance of younger people to participate in the planning process.

Later in the meeting, the group revisited this discussion, discussing ideas in conjunction with the second Public Meeting. BG and Pam Politis suggested reaching out to the Ardens Theater's Young Actors Workshop. The group agreed to convene a separate call or ad hoc committee to brainstorm and discuss engagement strategies. PP, BG, Brooke Bovard, and Carol Larson voiced interest in participating in this discussion.



Additional Data Sources - Crash, speed, and pedestrian data

Crash Data: RW reviewed the crash data and explained the methodology used to review the previous five years' worth of data available. A "heat map" was created that shows the locations that stand out the most which contain the highest concentrations of crashes. There were several key hot spots that immediately stood out, mostly all occurring along Harvey Road. Harvey Road at Marsh Road was the top hot spot followed by the I-95 interchange with Harvey Road.

Speed Data and Intersection counts: A combination of tube counts as well as Mio vision (pedestrian) counts were conducted. RW discussed the locations that the counts were deployed, and time was spent discussing the methodology used to analyze the data gathered as well as the results of the findings.

Confirming Plan Goals/Objectives

RW reviewed the plan objectives and discussed if this accurately reflects the objectives of the steering committee. The objectives are:

- » Develop a bicycle/pedestrian network to traverse through the Ardens and potentially one that avoids crossing major roads like Harvey
- » Provide enhanced pedestrian crossings Identifying critical locations in need of crossing and pedestrian improvements
- » Manage vehicular travel speeds to comply with speed limits
- » Identify strategies/countermeasures to safety concerns
- » Enhance transit and school bus stops

Group discussion:

- It is also important to provide facilities at key locations to indicate to drivers to be expecting to encounter pedestrians. Currently, there are minimal facilities present that would indicate to a driver that there may be a pedestrian at several major intersections.
- » It is also important to provide context sensitive improvements that enhance the character of the villages as opposed to lining each roadway with sidewalks and looking like any other typical suburban corridor.
- » It was asked if it is possible to separate bus speed data from the rest of the data; the project team will look into this.

Preliminary Alternatives

- » Provide enhanced pedestrian crossings- Key locations for pedestrian improvements based on the data collected through counts and crash data will be identified and improvements
- » Identify strategies/countermeasures to safety concerns Context sensitive solutions are key for providing appropriate recommendations to enhance the Ardens Villages
- » Enhance transit and school bus stops Reduce vehicular trips and encourage public transit while creating a safer environment for students

The group annotated several maps with location-specific ideas and recommendations.



Project Schedule/Next Steps

The group looked at the proposed meeting schedule and discussed the timing of future meetings and events and launch dates for future surveys.

The next steering committee meeting will be on January 24th, 2023.

The second public meeting will be targeted for February 9, 2023, with a follow-up/companion survey to run through the balance of February.

Committee meetings would then be held on 3/21/23 and 4/25/23 – and a draft plan would be prepared and circulated by 5/8/2023.

The draft plan would be circulated through each of the villages' committees in May/June, with a planned acceptance in June.

Ardens Transportation Plan

Wilmington Area Planning Council (WILMAPCO)

As of 11/15/2022 **SCOPE TASKS** Jun-22 Jul-22 Aug-22 Sep-22 Oct-22 Nov-22 Dec-22 Jan-23 Feb-23 Mar-23 Apr-23 May-23 Jun-22 Task 1 Project Coordination Task 2 Project Branding Task 3 Identify Issues, Opportunities & Constraints Task 4 Host Walkable Community Workshop Task 5 Community Visioning Community Survey 9/30 10/25 Public Meeting #1 Task 6 Define Assumptions and Alternative Projects Community Survey #2 Task 7 Select Preferred Alternatives / Cost Estimate Task 8 Draft / Final Report 5/8 Plan Acceptance

Meetings:

* Coordination Meeting

Public Meeting







Connecting with the Ardens

Steering Committee Meeting Summary January 24, 2023

Location: Virtual Meeting

Date | Time: January 24, 2023 | 12:00 pm – 1:30 pm

Topic: Steering Committee Meeting #3

Attendees:

Steering Committee:WILMAPCO:Carol LarsonTigist ZegeyeSteve BenigniBill SwiatekBrooke BovardJake Thompson

Ben Gruswitz Pam Politis

Will Ryan

Matthew Rogers (NCC)

Cooper Bowers (DelDOT)

Louis Hufnagle (TPD)

Jerry Baker (TPD)

Wes Hicks (TPD)

Randi Novakoff

Consultant Team:

Introduction:

Randy Waltermyer (RW) began the meeting by reviewing the meeting agenda and providing an overview of the topics that will be discussed during the steering committee meeting.

Overview of Alternatives:

Randy Waltermyer (RW) walked the group (goal by goal) through the Consultant Team's initial alternatives. The full Steering Committee provided comments and suggestions.

See the slides mark-up for comments received.

Project Schedule:

Randy Waltermyer (RW) and the Steering Committee reviewed the project schedule, including the postcard, public survey, and public meeting on 2/15/2023.

Attachments:

Slides (with meeting mark-up)



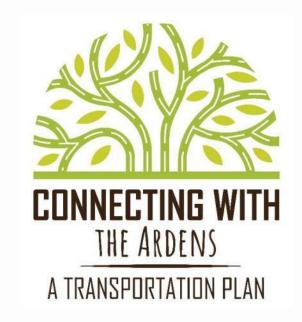
Connecting with the Ardens Steering Committee #3

January 24, 2023









Meeting Agenda

" Overview of Alternatives

12 pm – 12:20 pm

" Initial Reactions to Alternatives

12:20 pm – 12:30 pm

" Breakout Rooms (3)

12:30 pm - 12:45 pm

Breakout groups were skipped due to limited Steering Committee size.

Breakout Rooms – Report Back

12:45 pm – 1 pm

" Project Schedule/Next Steps

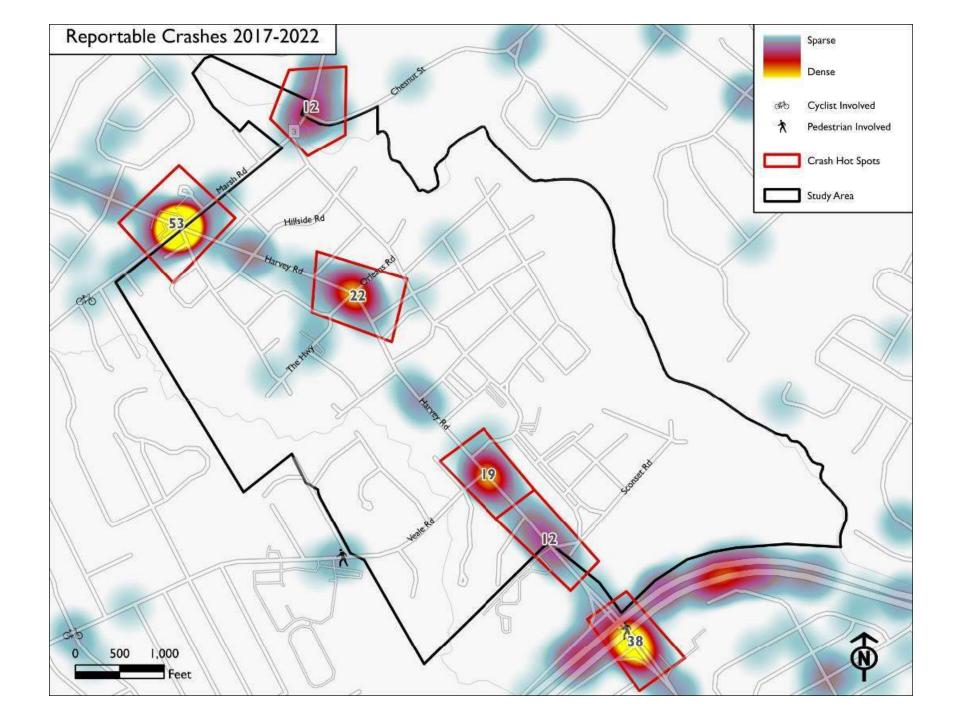
1:00 pm - 1:15 pm

Final Thoughts / Discussion

1:15 pm – 1:30 pm

Plan Goals

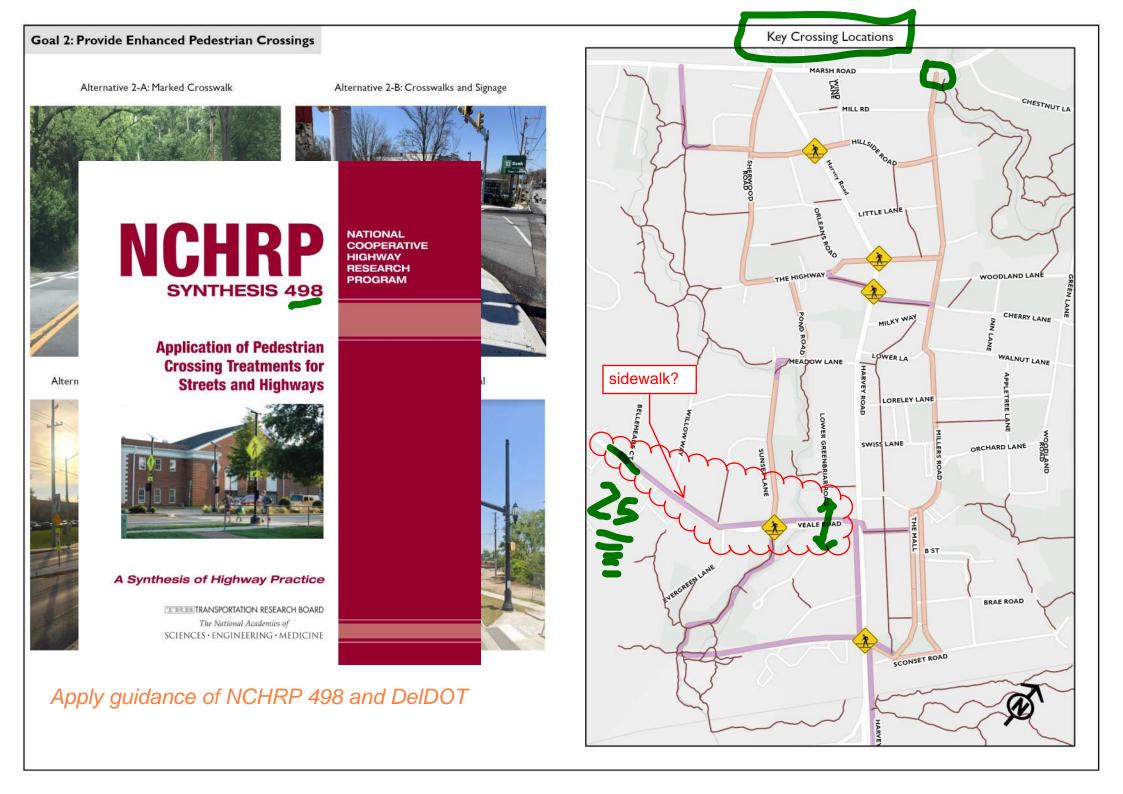
- " Develop a bicycle/pedestrian network to traverse through the Ardens
- Provide enhanced pedestrian crossings
- Manage vehicular travel speeds to comply with speed limits
- " Identify strategies/counter-measures to safety concerns
- Enhance transit and school bus stops



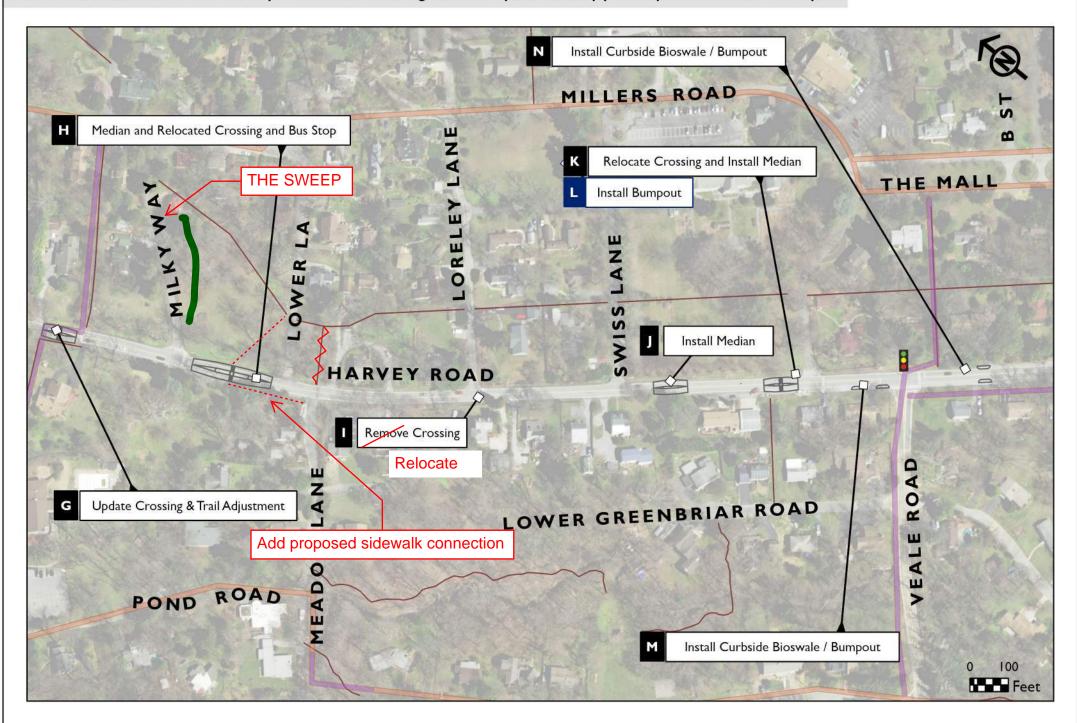
85th - Percentile Speeds 10/3/22 - 10/7/22 SPEED LIMIT 40 95 44 MPH 43 MPH SPEED LIMIT 35 ↑ MPH 40 MPH SPEED LIMIT 25 SPEED LIMIT 25 Harvey Rd 50 MPH 36 MPH Willow

What is traffic calm	ing?	
Traffic calming tool	box	
Chicane	Gateway	Bumpout/Neckdown

Goal I: Develop a Bicycle/Pedestrian Network that traverses the Ardens Alternative I-B: Develop parallel low-stress network Alternative I-A: Add amenities to Harvey Road MARSH ROAD MILL RD LITTLE LANE WOODLAND LANE CHERRY LANE CHERRY LANE MILKY WAY WALNUT LANE LOWERLA WALNUT LANE LORELEY LANE Pros SCO SET ROAD CONS: Proposed Condition Pros Proposed Condition Cons: Multi-use Trail On-Road Bicycle Route (Sharrows) ---- Unpaved Paths * Rendering location

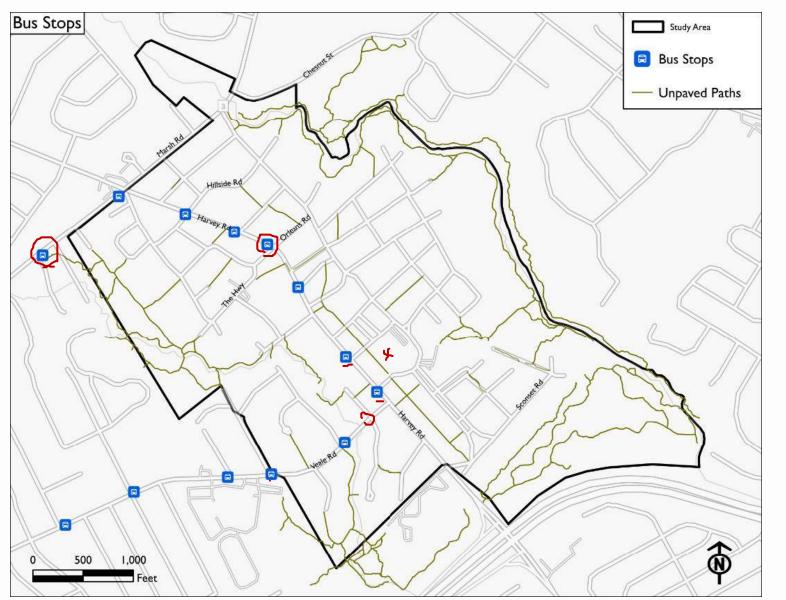


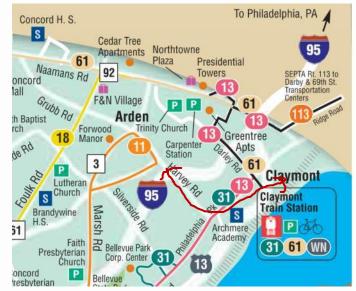
Goal 3: Create Countermeasures to Safety Concerns and to Manage Vehicular Speeds to Comply With Speed Limits or Desired Speed



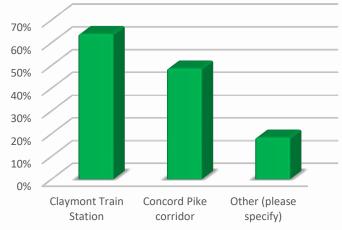
Goal 3: Create Countermeasures to Safety Concerns and to Manage Vehicular Speeds to Comply With Speed Limits or Desired Speed SCONSET coordinate w/ Safe Routes to School THE MALL project... Install Curbside Bioswale / Bumpout Enhance Speed Limit Signage Modify Intersection LIMIT HARVEY ROAD SPEED LIMIT 25 -95 Extend Median: Add Landscaping II. III FFT BIRFE Install Gateway ROAD HARVEY ROAD ш VEAL 0 100 Feet

Enhance transit and school bus stops





Where would you like to be able to go on the bus?





Project Schedule + Next Steps



Connecting with the Ardens: A Transportation Plan

2nd Public Meeting February 15th

5:00 pm - 5:30 pm (Youth Focus Group)

Prior to the public meeting, there will be a youth focus group. Kids are encouraged to attend and share their thoughts and ideas on the transportation issues facing the Arden Villages.

6:00 pm - 8:00 pm (Public Meeting)
Located in Buzz Ware Village Center
Rooms 1 and 2

Childcare will be available during the full presentation at Gild Hall.

☐ Postcard (arriving 2/1)
☐ Alternatives to Website (2/6)
☐ Public Survey (2/6 to 3/12)
☐ Public Meeting (2/15)
☐ Steering Committee (3/21)
☐ Steering Committee (4/25)
☐ Draft Plan by 5/8



Connecting with the Ardens

Steering Committee Meeting Summary March 21, 2023

Location: Virtual Meeting

Date | Time: March 21, 2023 | 12:00 pm – 1:30 pm **Topic:** Steering Committee Meeting #4

Attendees:

Steering Committee:WILMAPCO:Steve BenigniTigist ZegeyeBrooke BovardBill SwiatekBen GruswitzJake ThompsonMatthew Rogers (NCC)Randi Novakoff

Cooper Bowers (DelDOT)

Steve Ottinger (DART)

Randi Novakof
Dawn Voss

Jared Kauffman (DART) Consultant Team:

Randy Waltermyer (TPD)

Joe Platt (TPD) Lou Hufnagle (TPD) Wes Hicks (TPD)

Michelle Puszcz (Remline)

Recap of Public Meeting #2 / Survey #2:

Randy Waltermyer (RW) and the Steering Committee reviewed the second public meeting, held on 2/15/2023.

Mr. Waltermyer then provided a overview of the feedback from Survey #2. A total of 109 responses were received.

Review of Survey / Locally Preferred Alternative:

Randy Waltermyer (RW) walked the group through each of the alternatives and the survey results. The Steering Committee provided revisions and feedback.

See the slides mark-up for comments received.

Transit Recommendations:

Randy, Bill, Steve, and Jared shared transit recommendations with the Steering Committee, relaying key points from a 3/20/2023 call. All parties noted that further feasibility studies would be needed to advance these concepts.



Project Schedule:

Randy Waltermyer (RW) and the Steering Committee reviewed the project schedule. A draft plan is anticipated by 5/8/2023 and a Steering Committee meeting will be scheduled for 5/23/23.

Attachments:

• Slides (with meeting mark-up)



Connecting with the Ardens Steering Committee Meeting #4

March 21, 2023









Meeting Agenda

» Public Meeting #2 / Survey #2

12:00 pm – 12:10 pm

Synthesis to Locally Preferred Alternative

12:10 pm – 1:00 pm

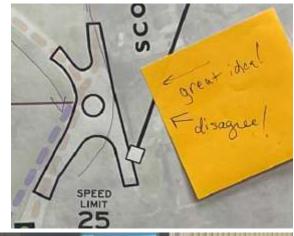
Transit Recommendations

1:00 pm – 1:15 pm

» Project Schedule/Final Steps

1:15 pm – 1:30 pm

Public Meeting #2 Public Survey #2



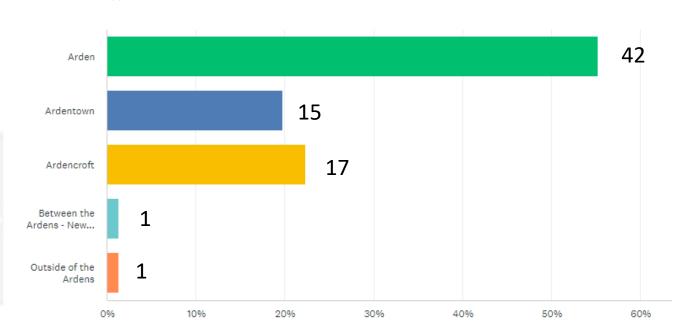




Public Survey #2

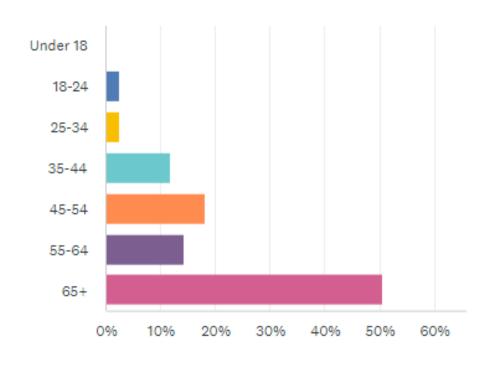
Are you a resident of:

Answered: 76 Skipped: 33



What is your age group?

Answered: 77 Skipped: 32



Project Goals

Rank the Goals

	•	1	•	2	•	3	•	4	•	TOTAL ▼	SCORE ▼
 Goal A - Manage speeds and address safety 		67.65% 69		13.739 1	% 4	14.71	% 15	3.929	% 4	102	3.45
▼ Goal B - Develop a bike/pedestrian network		15.69% 16		21.579 2		44.12	% 45	18.639 1	% 9	102	2.34
 Goal C - Provide enhanced pedestrian crossings 		14.71% 15		59.809	% 51	16.67	% 17	8.829	% 9	102	2.80
▼ Goal D - Enhance transit/school bus stops		1.96% 2		4.909	% 5	24.51	% 25	68.639 7	% O	102	1.40

Project Goals

Original order:

- Manage vehicular travel speeds and deploy safety countermeasures
- Develop a bicycle/pedestrian network to traverse through the Ardens
- 3) Provide enhanced pedestrian crossings
- 4) Enhance transit and school bus stops

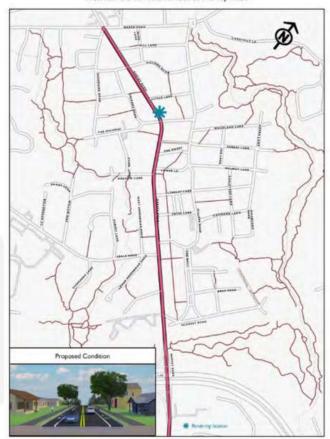
<u>Proposed Reorder:</u>

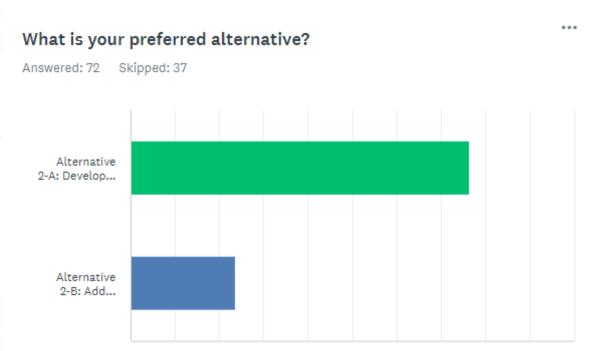
- Manage vehicular travel speeds and deploy safety countermeasures
- 2) Provide enhanced pedestrian crossings
- 3) Develop a bicycle/pedestrian network to traverse through the Ardens
- 4) Enhance transit and school bus stops



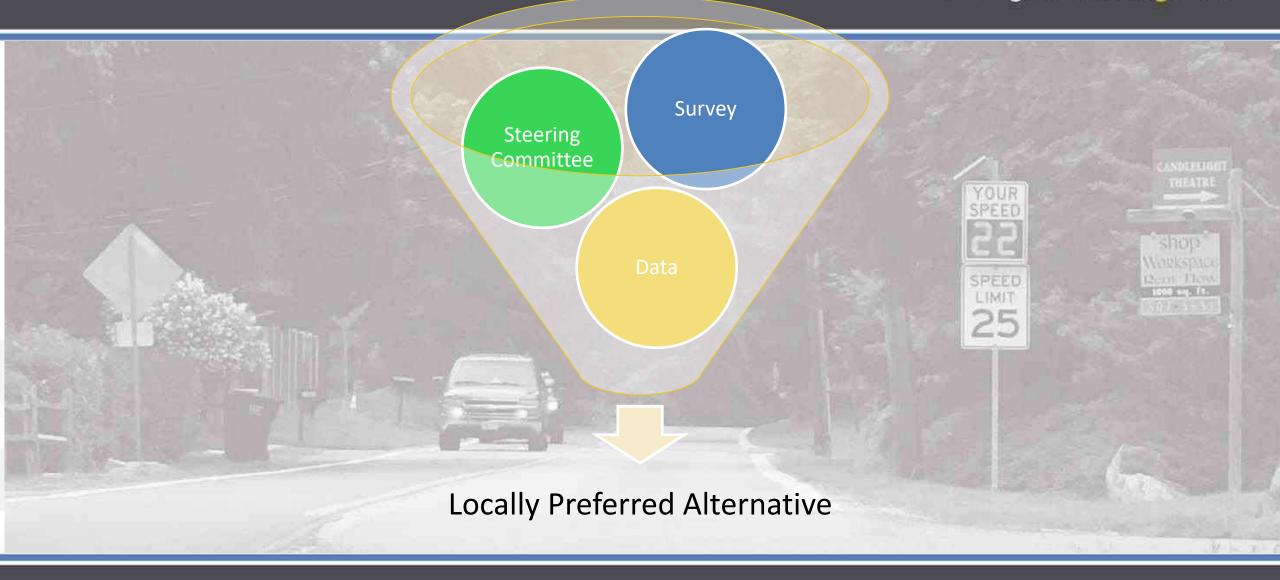
Develop a bicycle/pedestrian network to traverse through the Ardens



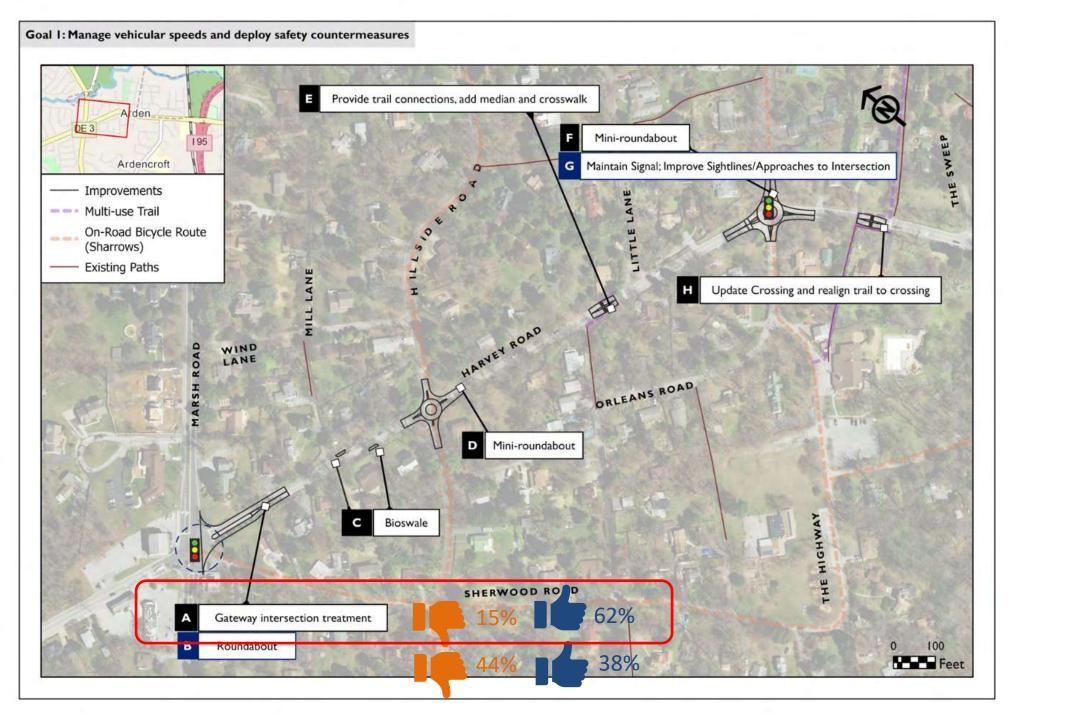


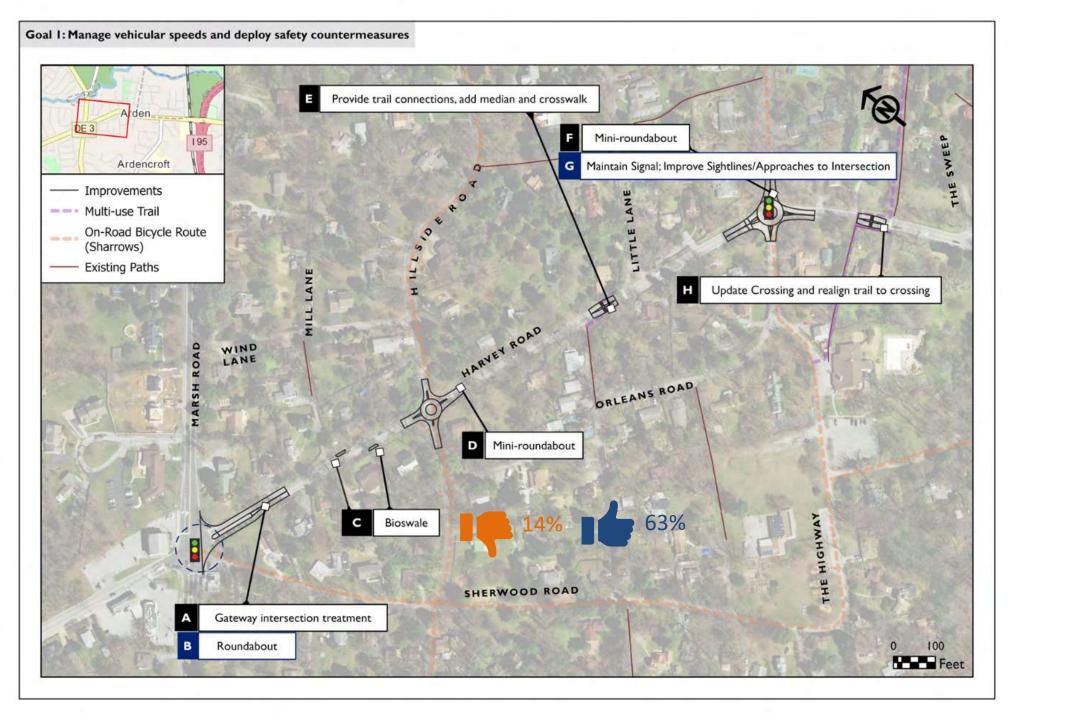


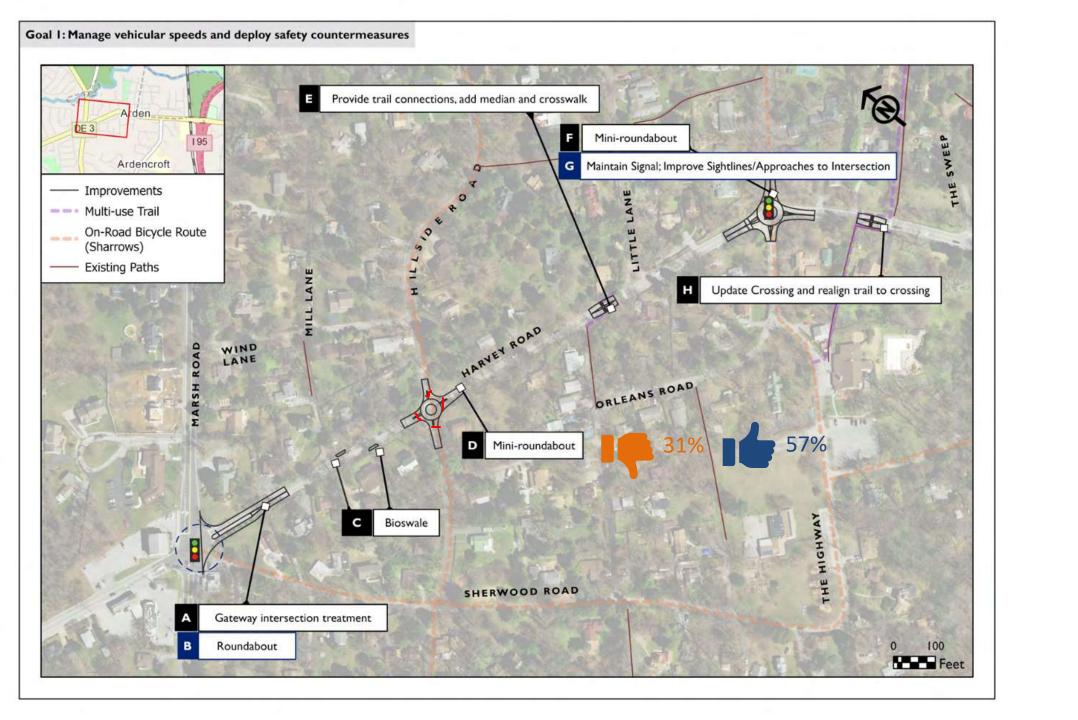
Moving Forward Together®

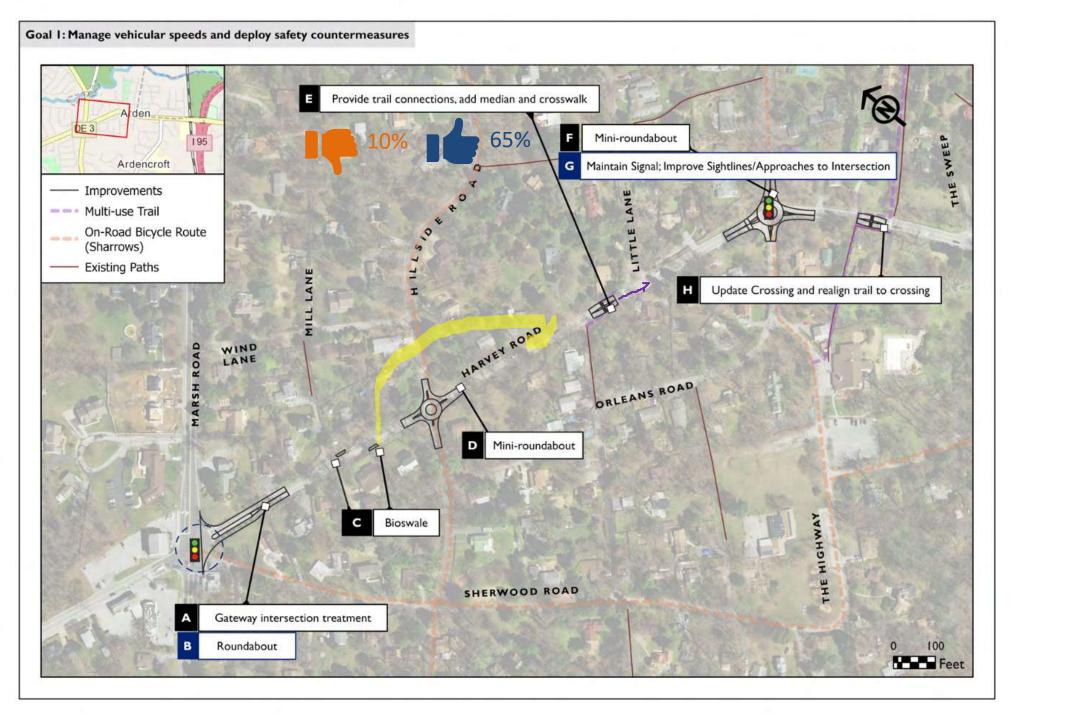


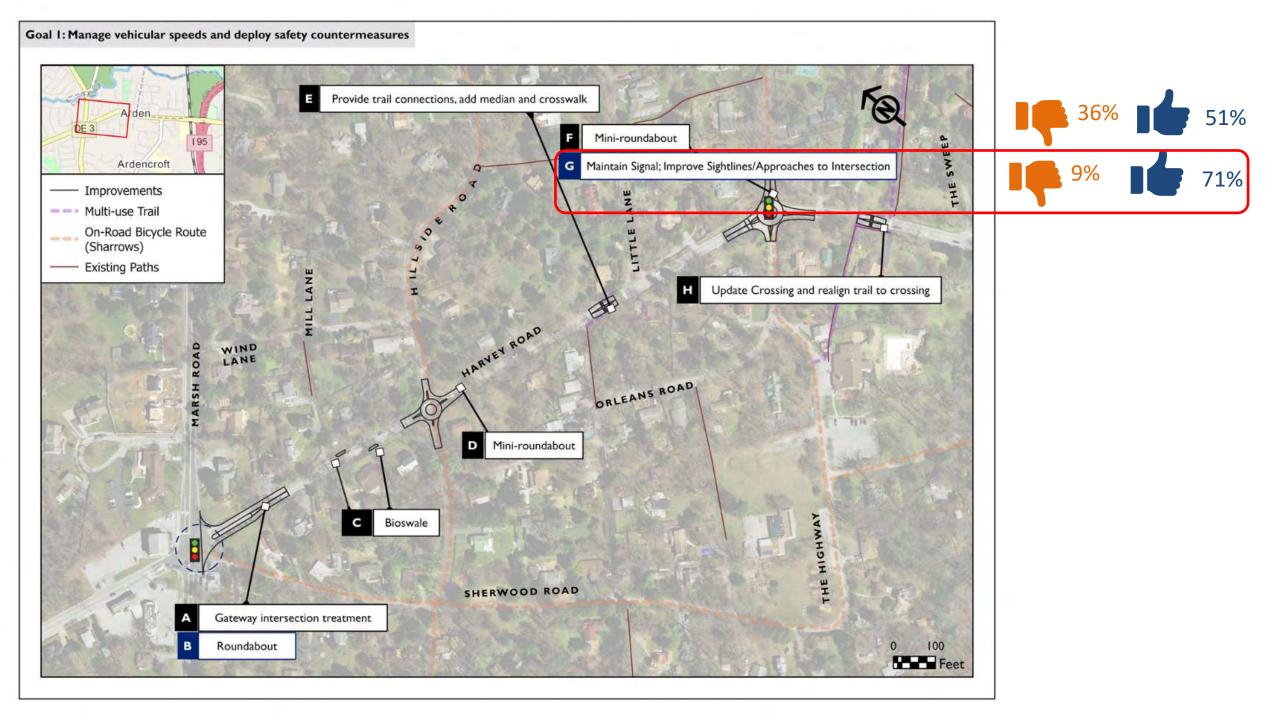


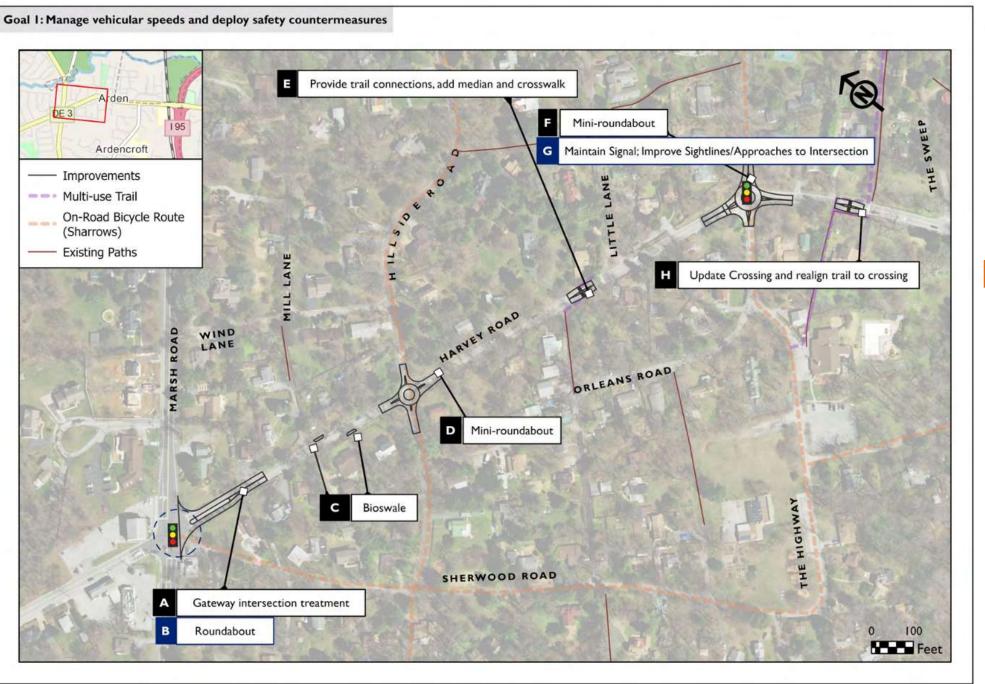








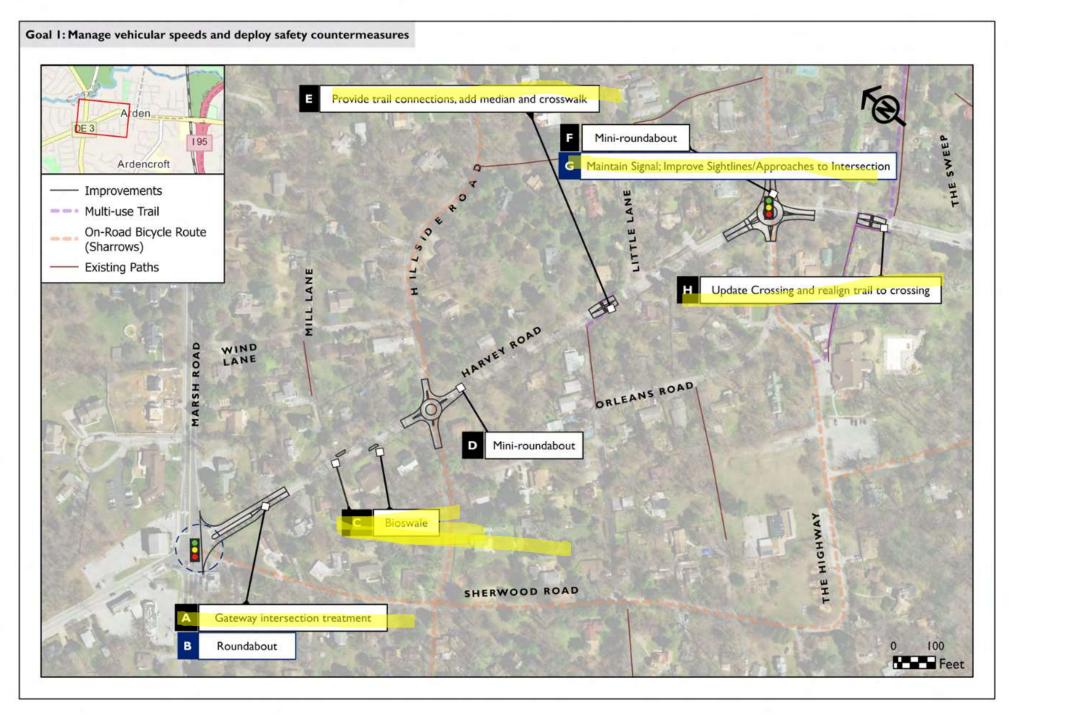


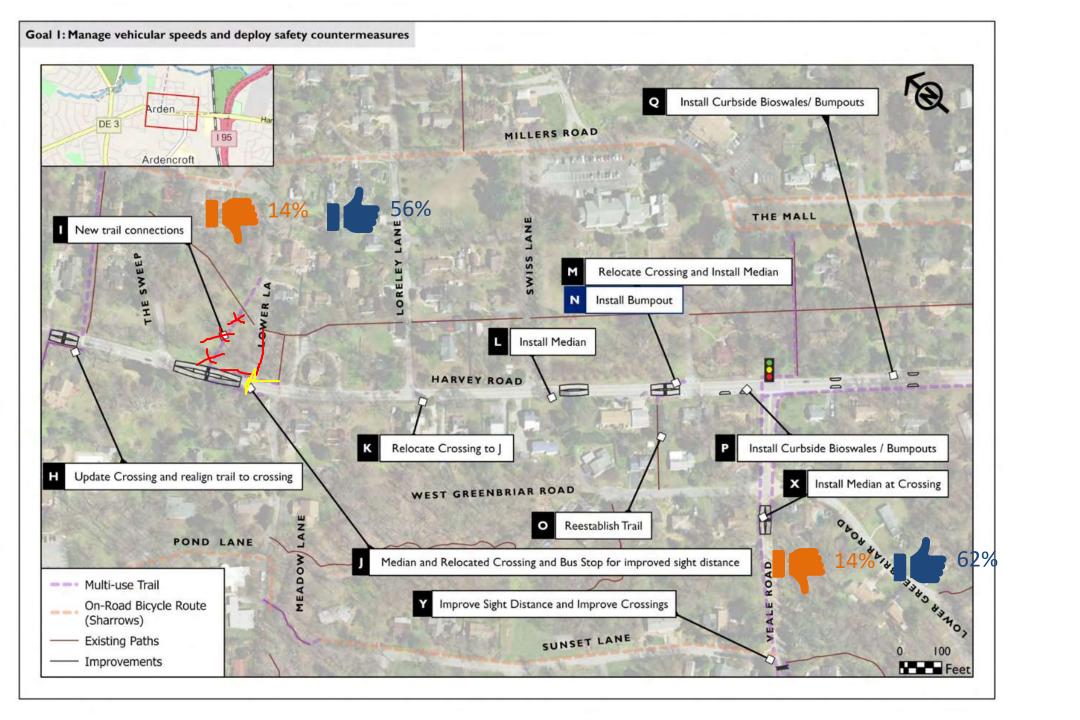


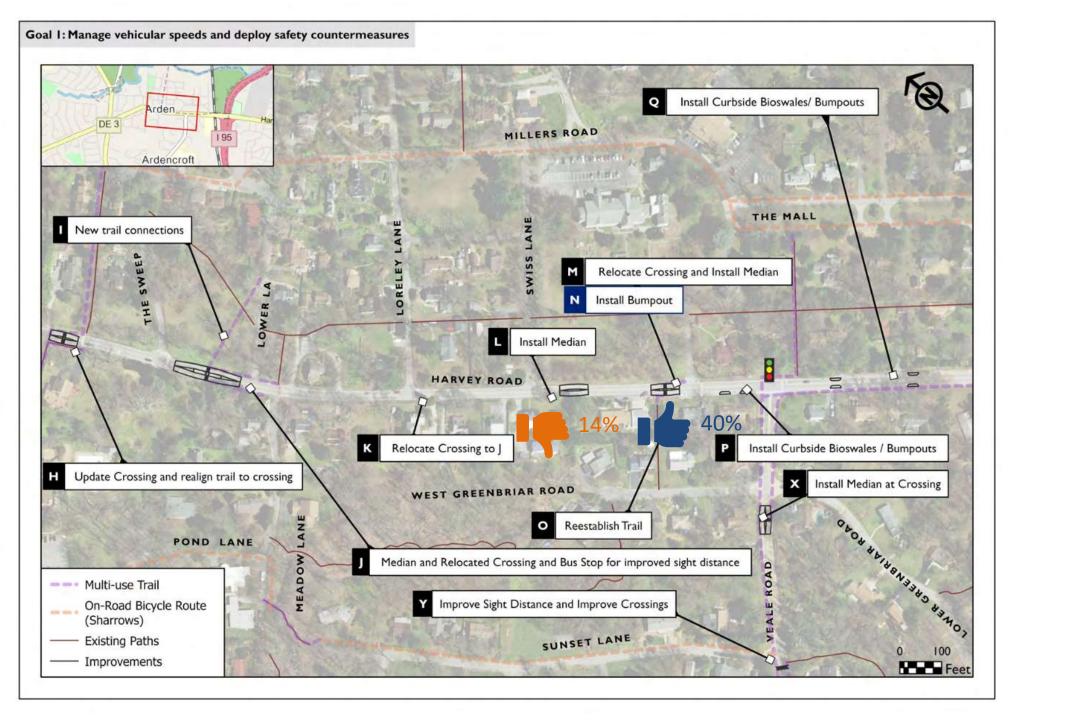


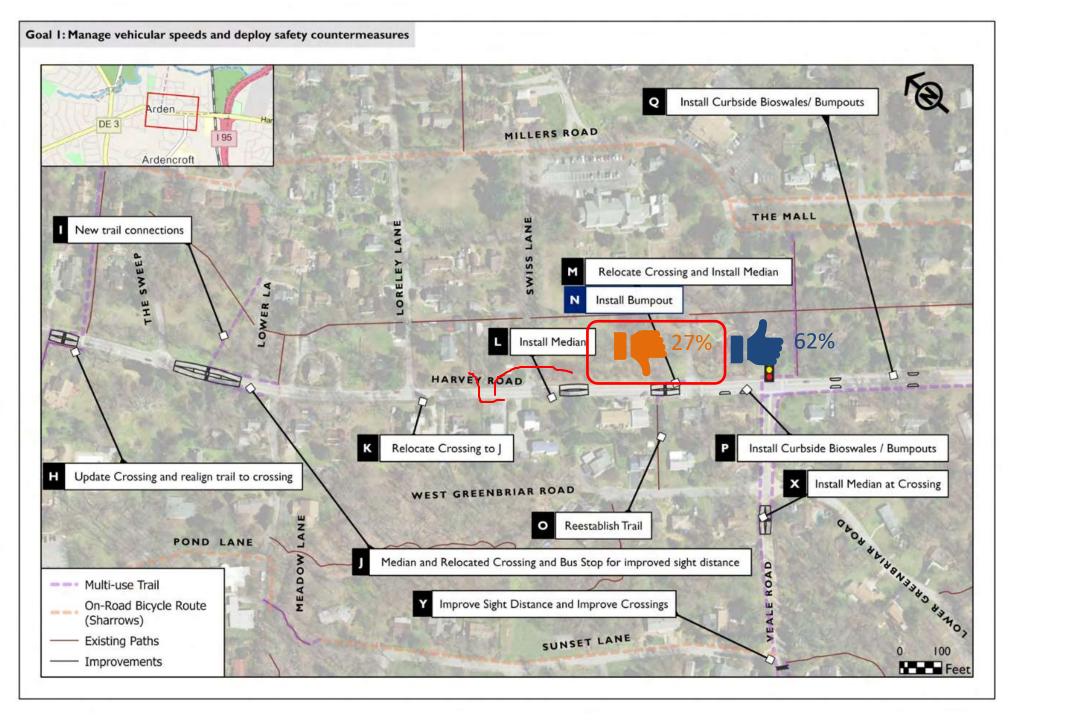


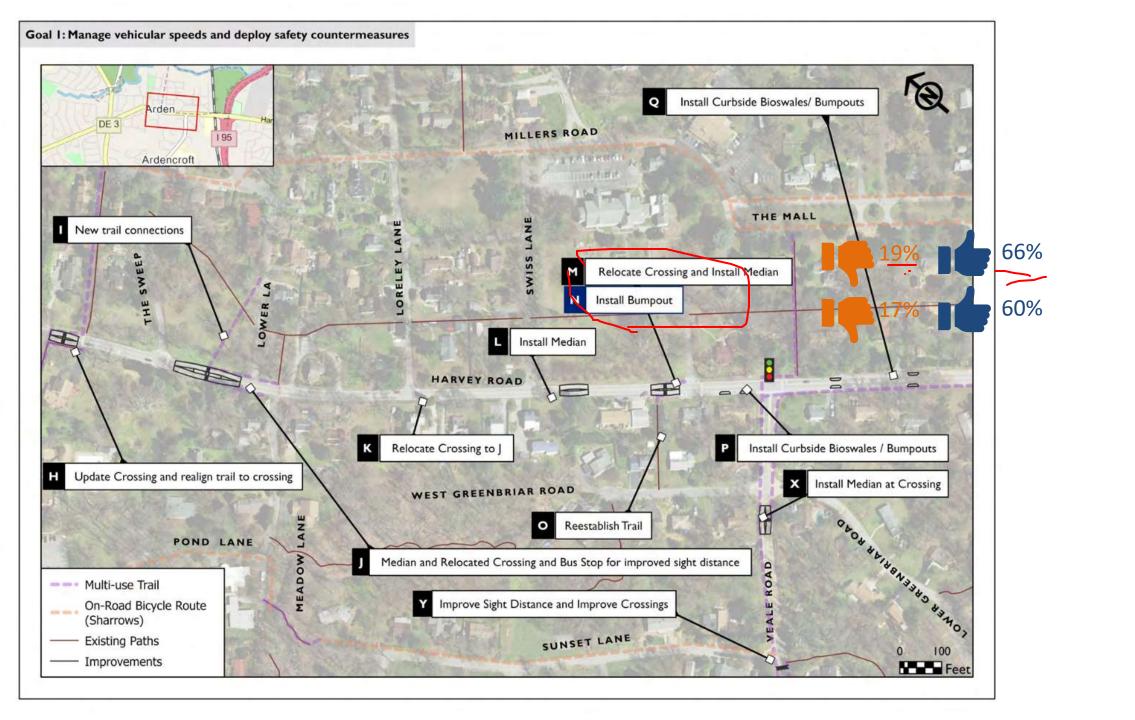
77%

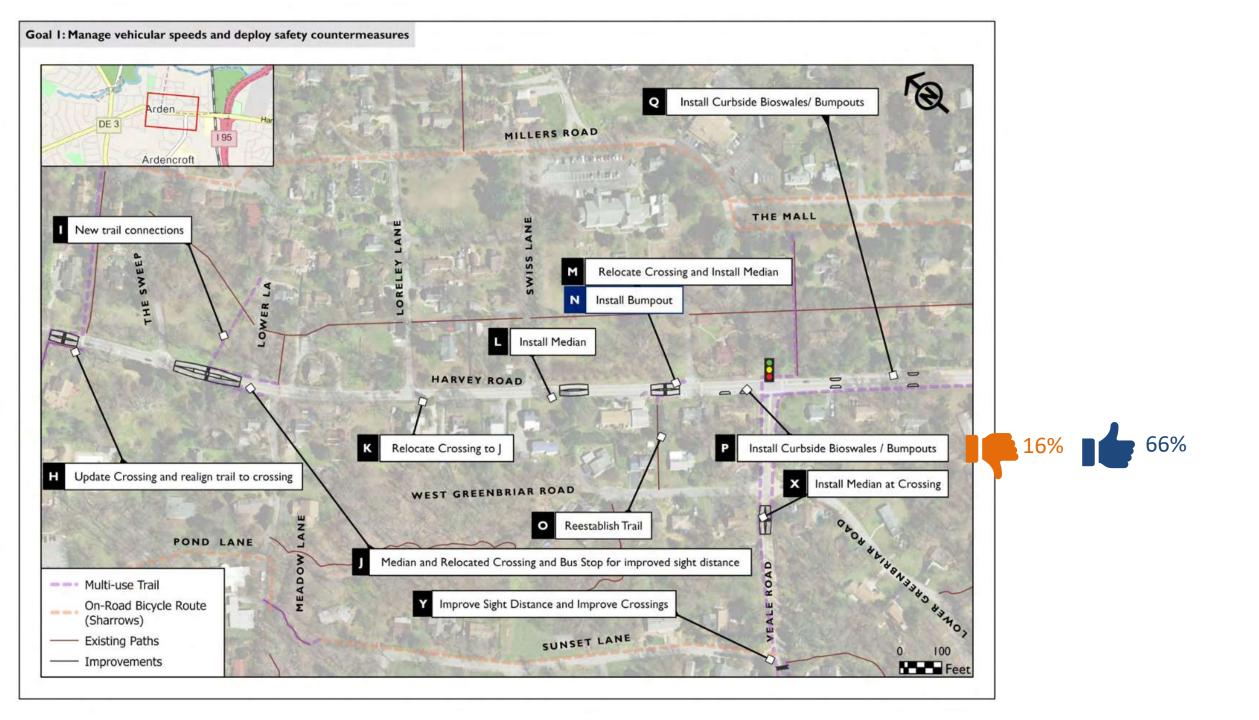


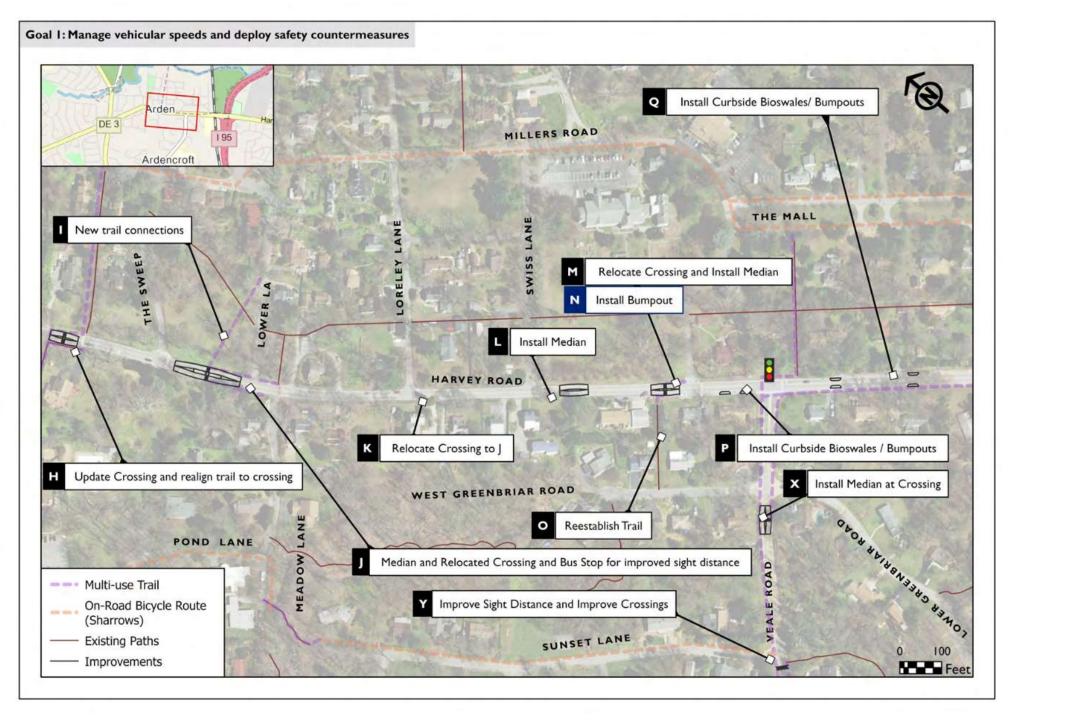


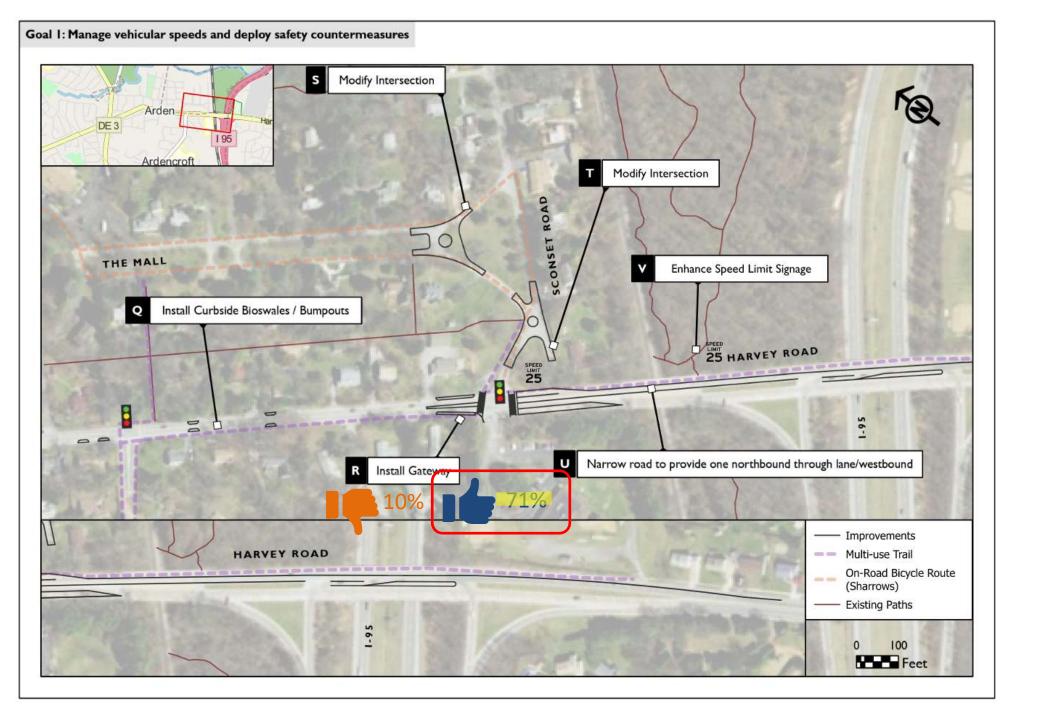


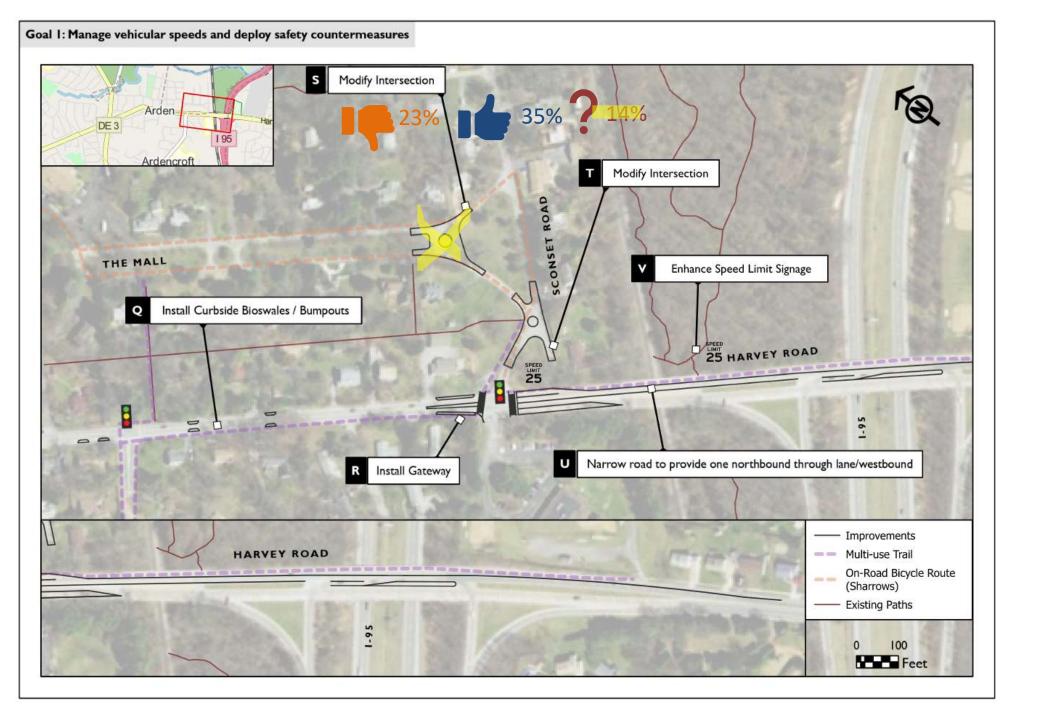


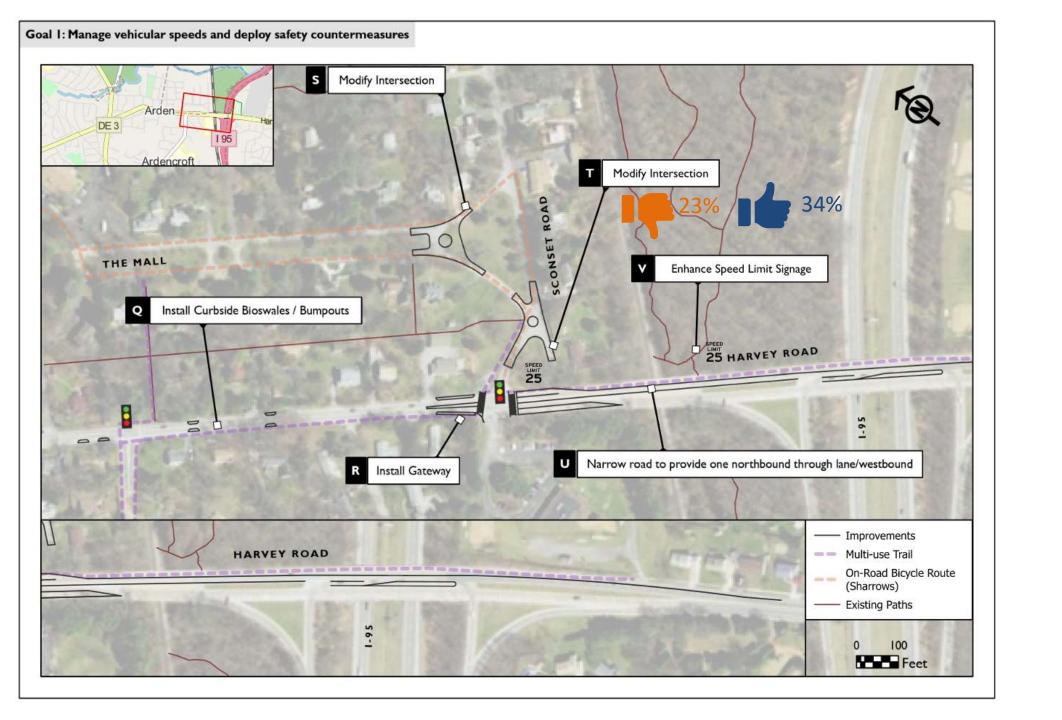


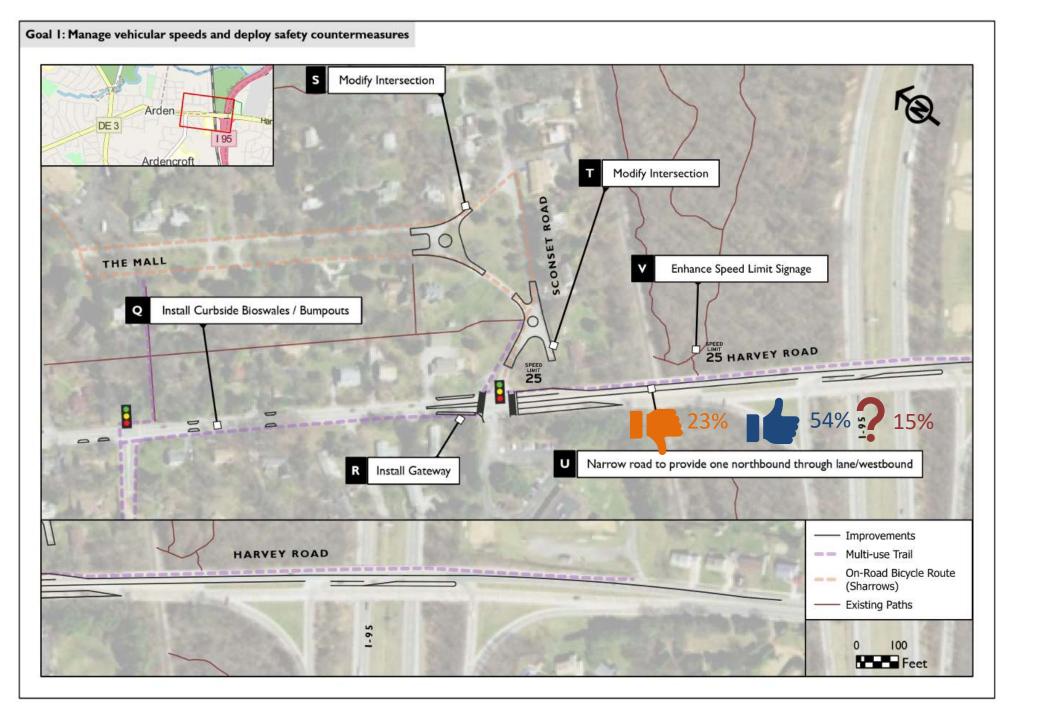


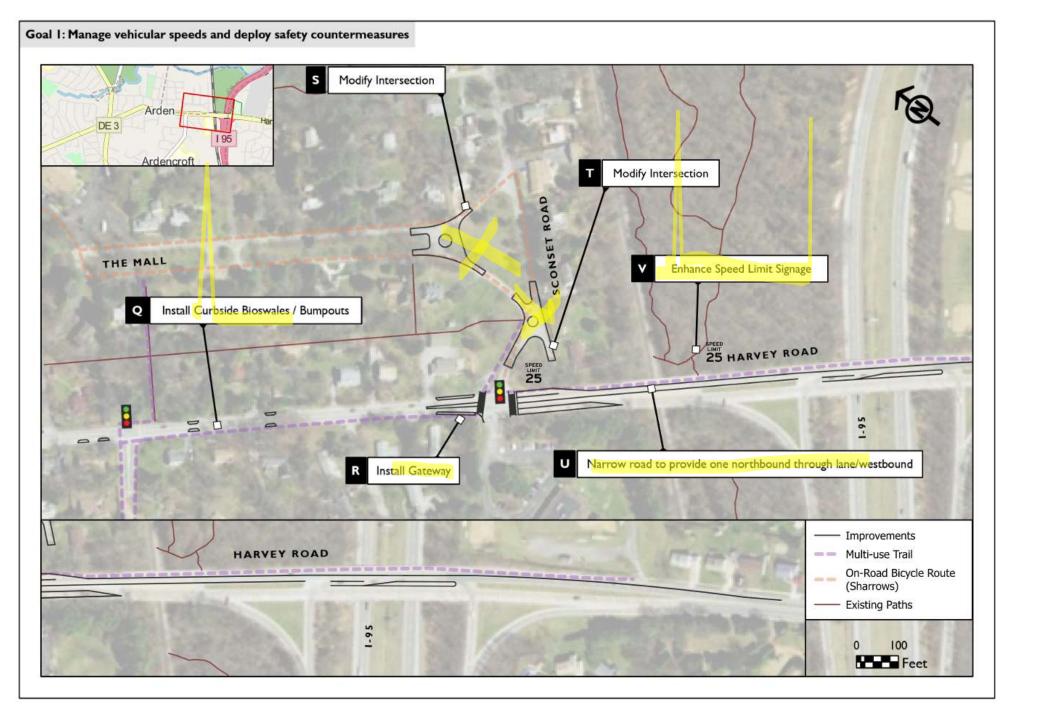


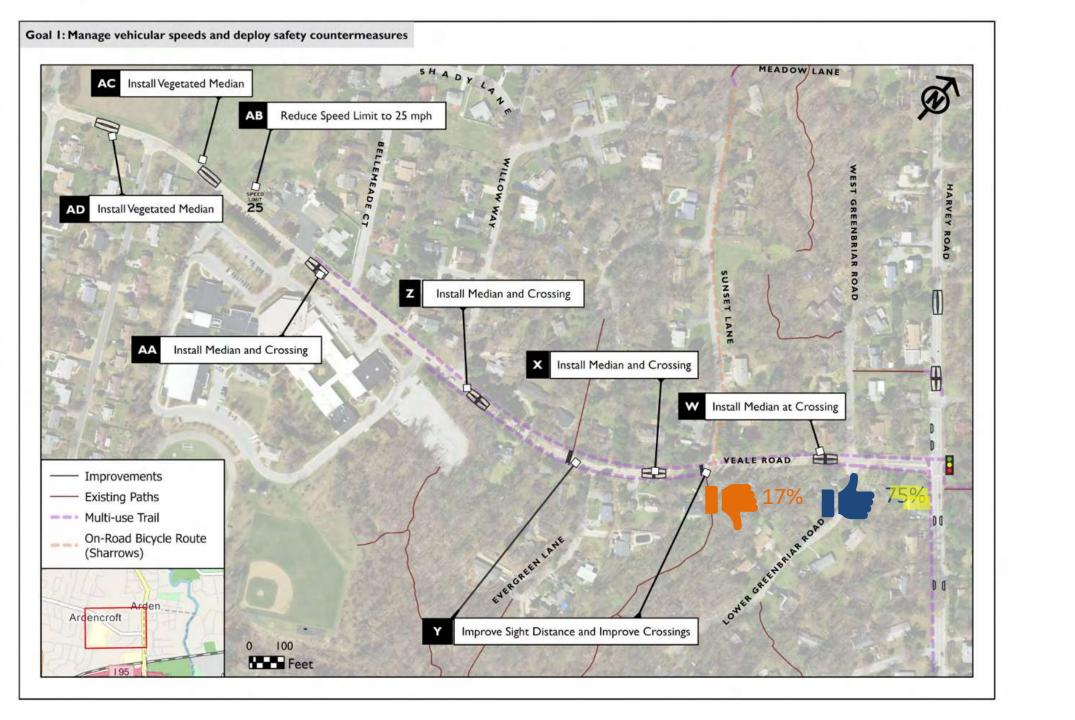


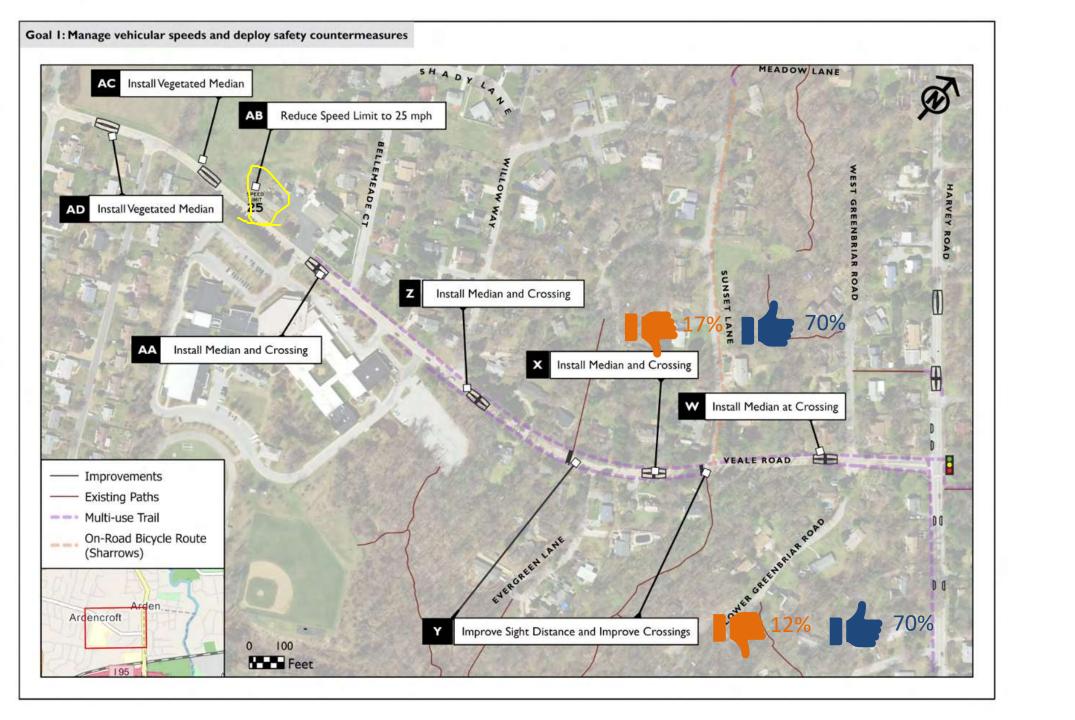


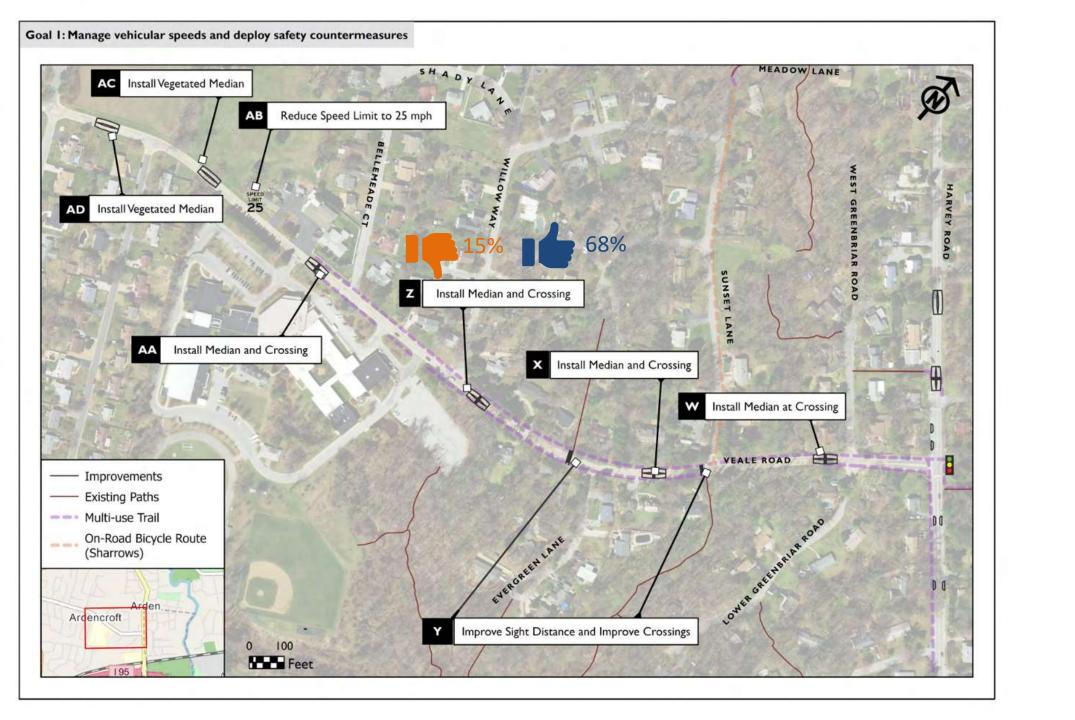


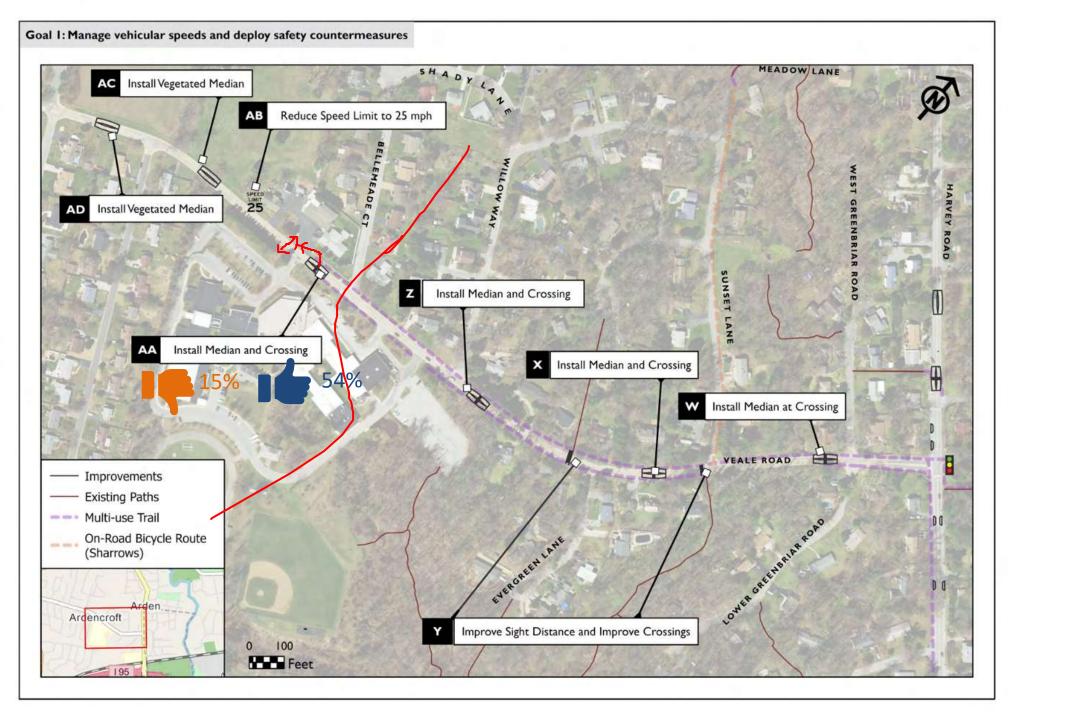


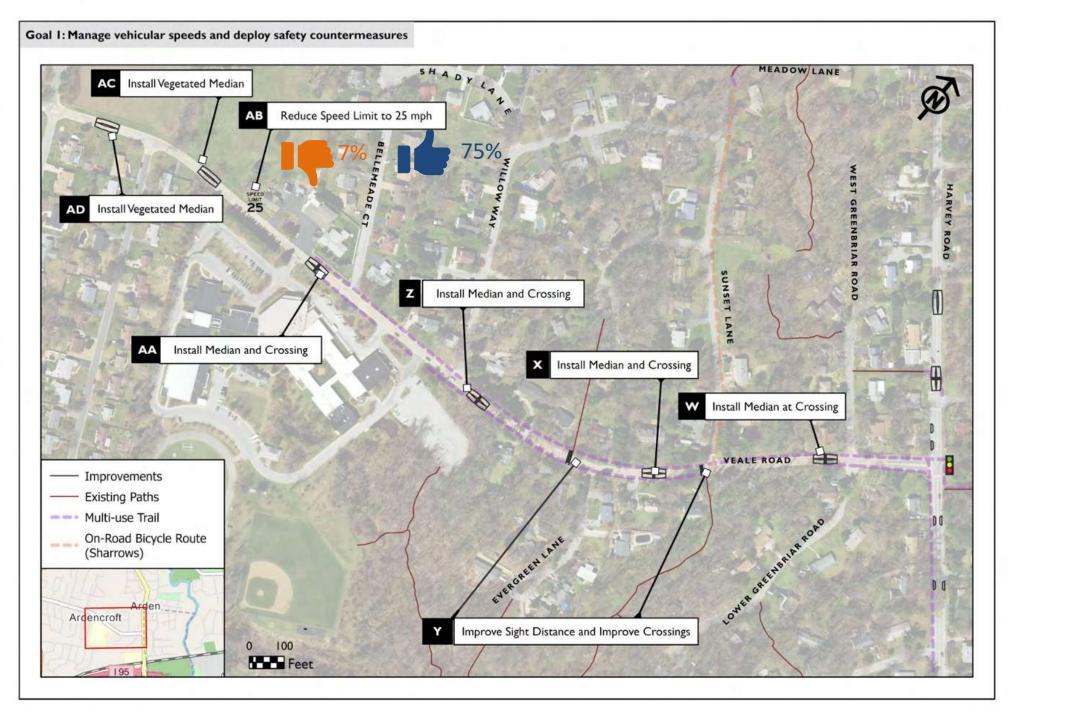


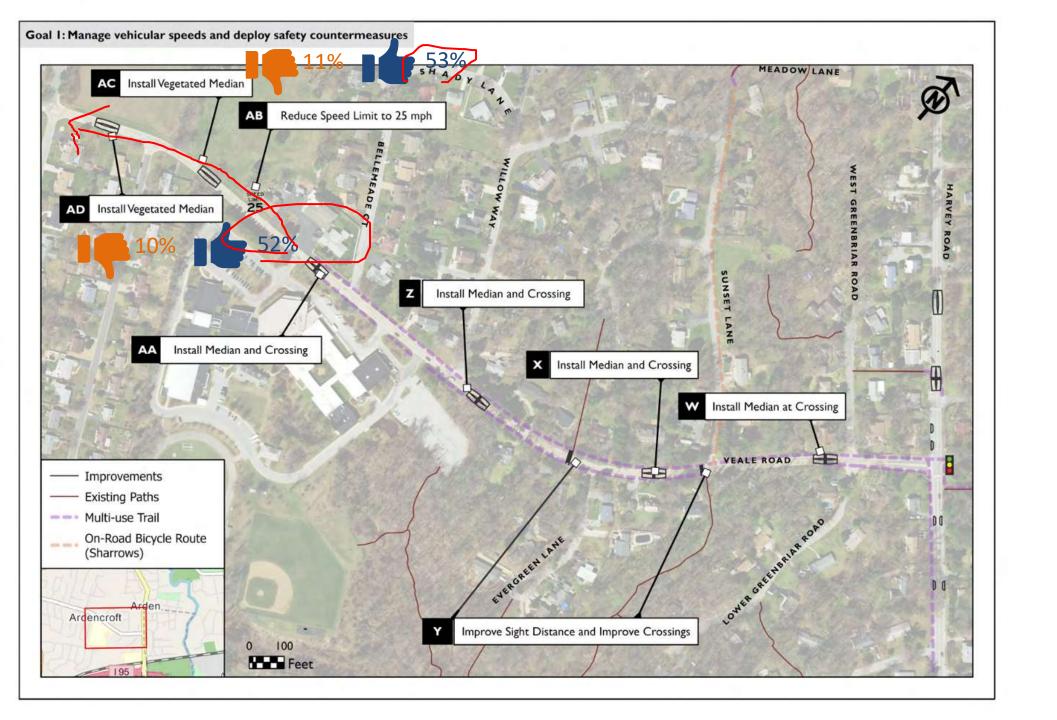


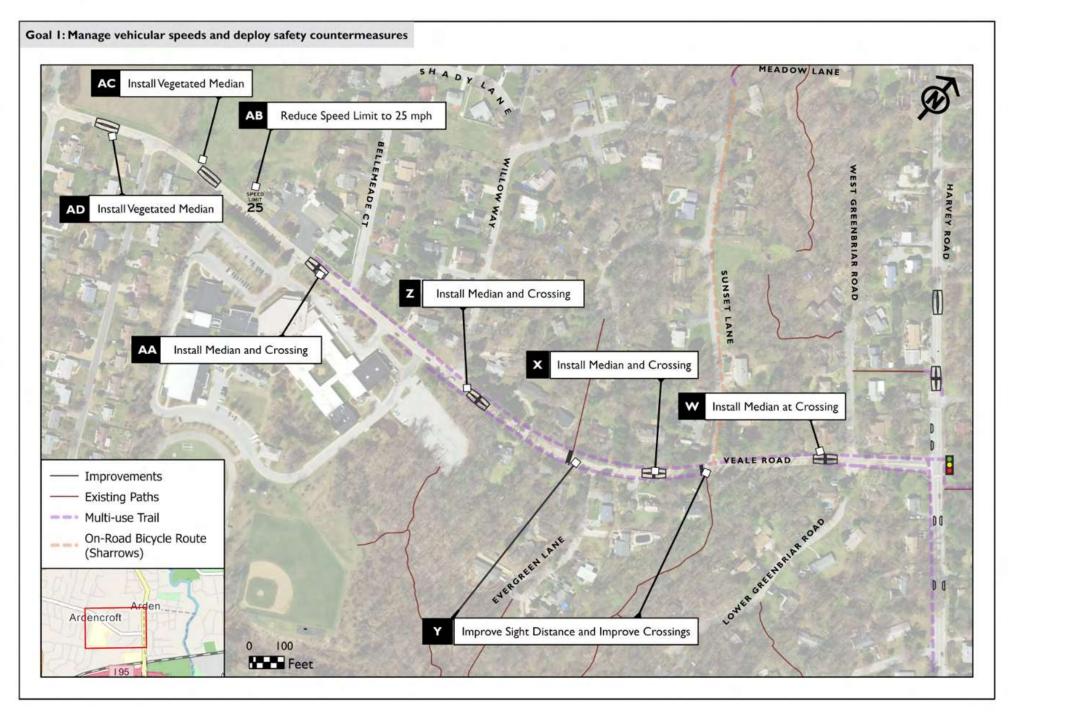


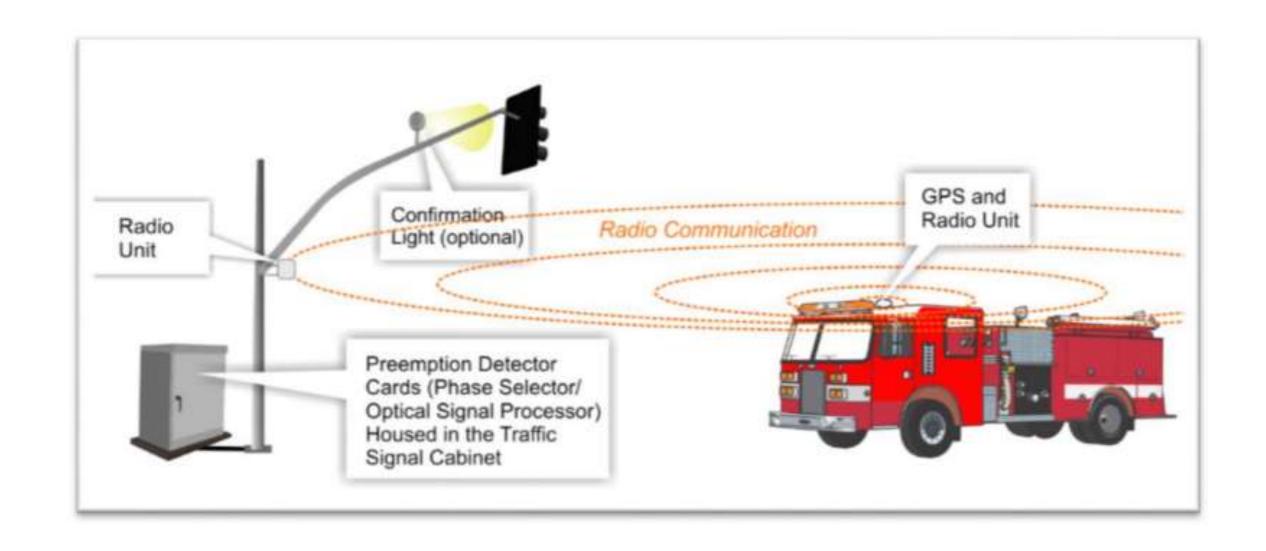




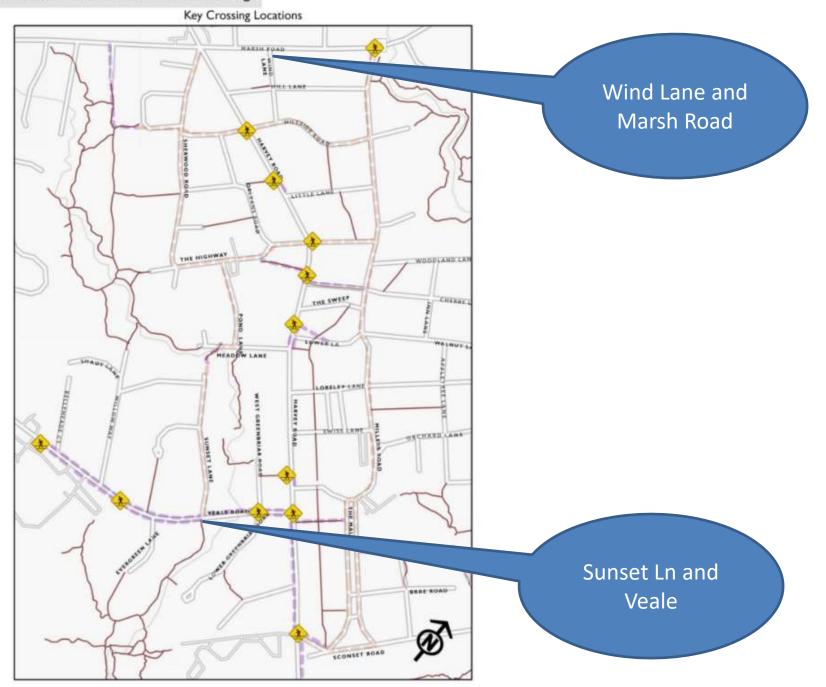








Goal 3: Provide Enhanced Pedestrian Crossings



Goal 4: Enhance Transit / School bus stops

Alternative 4-A: Modern/Sleek



Alternative 4-B: Traditional



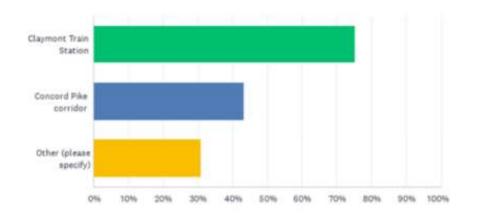
Alternative 4-C:Wooden Bus Stop



	1	2	3	TOTAL
4-A: Modern/Sleek	13.85%	35.38%	50.77%	
	9	23	33	65
4-B: Traditional	9.23%	52.31%	38.46%	
	6	34	25	65
4-C: Wooden Bus Stop	77.27%	12.12%	10.61%	
	51	8	7	66



Q16 Where would you like to be able to go on the bus?



Respondents chose "Claymont Train Station" as the top destination to travel to by bus.

OTHER RESPONSES:

Wilmington is still a good destination but the options above make bus more attractive.

Library, airport,

Downtown Wilmington, DAMuseum, Wilm train station

Marcus Hook Train Station, Bus connection area near HomeDepot, To/From Wilmington after 7:00pm

Brandywine Hundred and Claymont libraries; Downtown Wilmington

Claymont Library

Preferably the new station

Branmar Plaza

Riverfront Wilmington

Phila Airport

Bellevue State Park

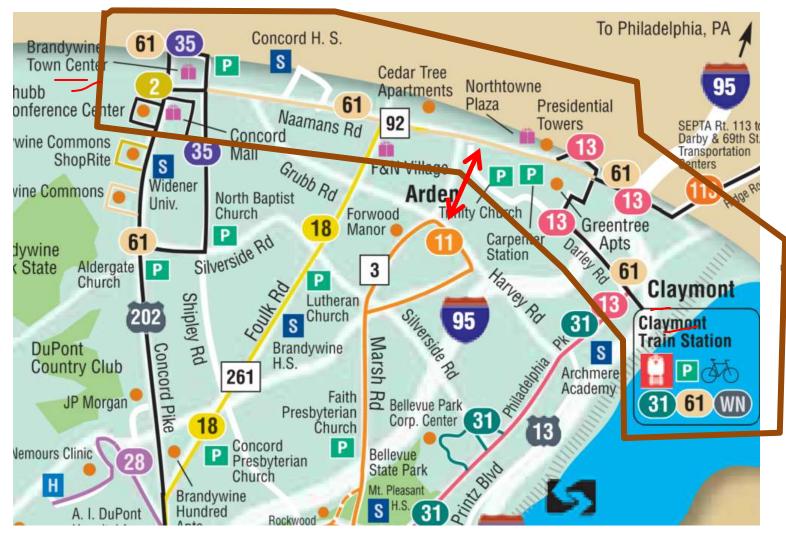
Wilmington

Biden train station

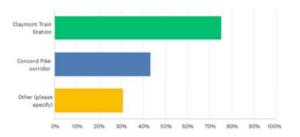
Trolley Square

Wilmington Train station

Marcus Hook train station



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Claymont Library

Preferably the new station

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Riverfront Wilmington

Phila Airport

Bellevue State Park

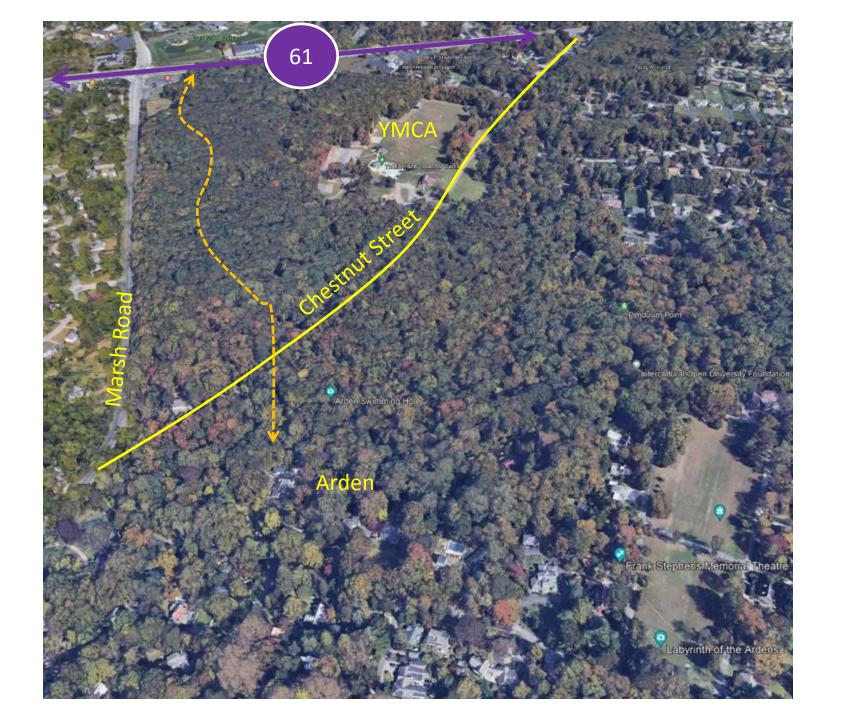
Wilmington

Biden train station

Trolley Square

Wilmington Train station

Marcus Hook train station

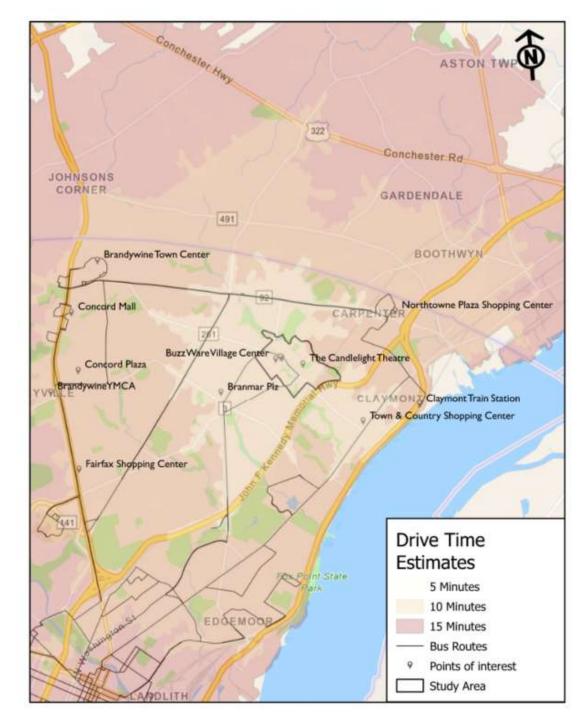




What is DART Connect?

DART Connect is a rideshare-like transit experience that uses smaller vehicles to provide bus service on-demand to customers. DART Connect uses the same vehicles and will be operated by the same DART drivers, while offering customers more direct, convenient and frequent trips to dozens of new destinations. DART Connect currently operates in the Georgetown/Millsboro area. The map below shows the existing service area in Sussex County.







Project Schedule + Next Steps

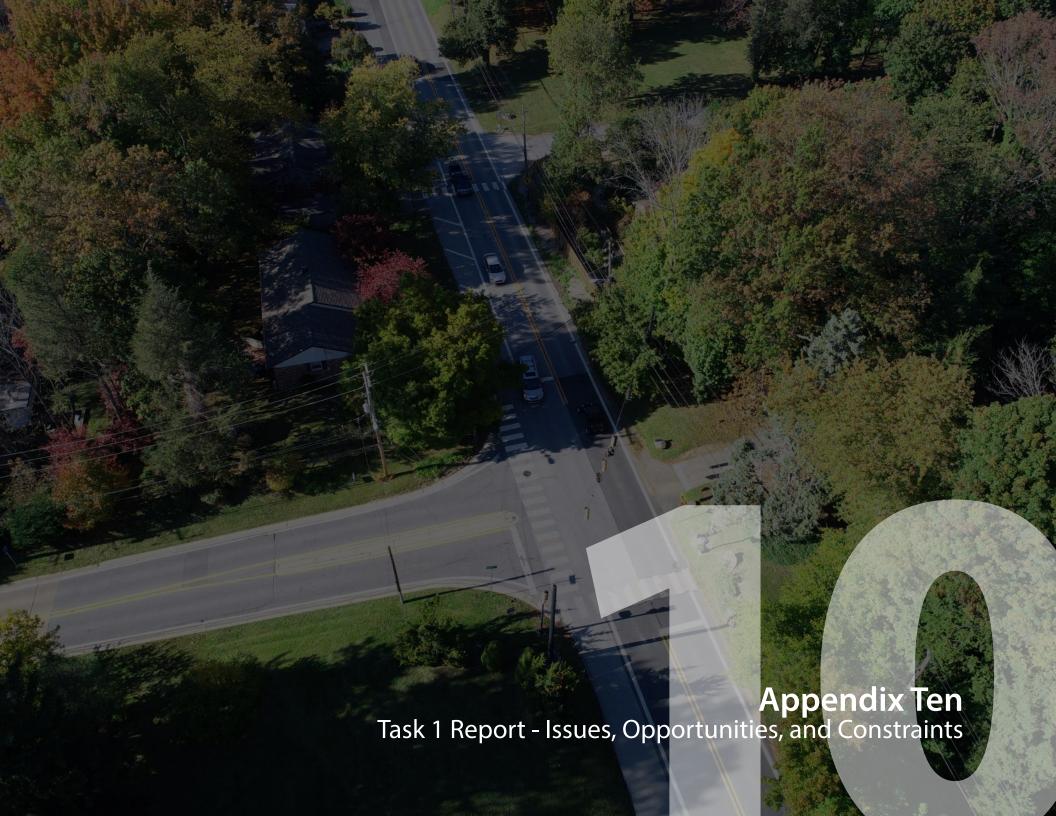
- ☐ Draft Plan by 5/8
- ☐ Steering Committee meeting: 5/23

Plan Acceptance in June:

- Ardentown (Feb/May); 2nd Monday
- Ardencroft (May / July); 3rd Thursday
- Arden 4th Monday (June)

Special Meeting? Joint?

Begin with Advisory Committee...



Ardens Transportation Plan Task 1 Report

Identify Issues, Opportunities, and Constraints

July 2022



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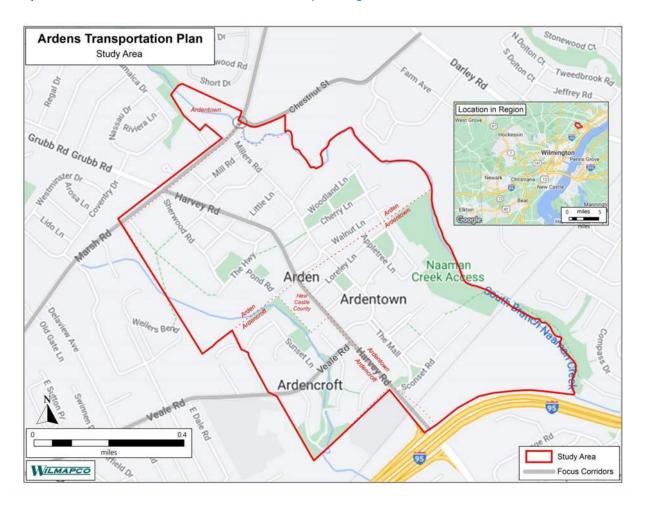
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Introduction

The Ardens Transportation Plan will address transportation issues common among the villages of Arden, Ardentown, and Ardencroft, with a focus on calming traffic and increasing access and safety for active transportation. This plan will build on and integrate with prior efforts including the villages' foundational plans, Arden's Water Quality Master Plan, the Ardentown Paths Plan, and the Wilmington Montessori Safe Routes to School Plan.

This report highlights existing demographics, transportation, and land use conditions in the study area, which comprises the three villages, as well as a small section of unincorporated New Castle County between them. This report also summarizes plans for future transportation investments in the study area. The contents of this report will help inform the recommendations of the Ardens Transportation Plan.

When viewing this report digitally, you can zoom in to the maps to see more detail. The maps will also be made available at <u>wilmapco.org/ardens</u>.

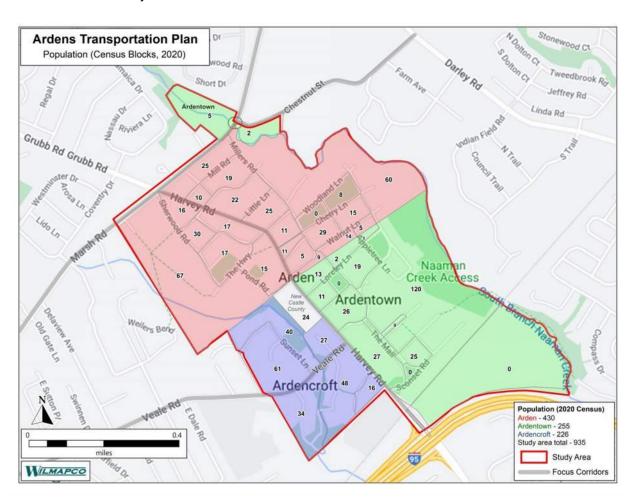


Demographics

According to the 2020 Census, 935 people live in the study area, including 24 in unincorporated New Castle County. Arden (pop. 430) is the largest and most populated of the three villages, followed by Ardentown (pop. 255) and Ardencroft (pop. 226). The study area is 0.58 square miles in size, with a population density of 1611 people per square mile.

The study area is predominately (89%) non-Hispanic White, 2% non-Hispanic Black, and less than 1% non-Hispanic Asian, with the remaining 8% of the population identifying as other or mixed races. The median household income in Arden is \$78,125; in Ardentown, \$62,813; and in Ardencroft, \$103,438.

The study area was not identified as a tech desert (an area with limited computer or internet access), nor was it identified as an area with limited English proficiency. In the Census tract containing the study area, less than 3% of households do not have a computer, 9% of households do not have internet access, and 13% of residents aged 5 or older have limited English proficiency. 23% of residents are aged 65 or older, and 15% have a disability. Less than 2% of households do not have access to a vehicle.



Land Use and Zoning

Land Use/Land Cover

Arden, Ardentown, and Ardencroft were each founded as single-tax communities, which have limited development and preserved their bucolic nature for more than a century. The Ardens Transportation Plan seeks to address transportation issues in the Ardens without impacting their historic, natural character.

The vast majority of the study area consists of residential and forest land. Residential land covers 59% of the study area; however, much of the natural trees and shrubbery are preserved within this area. 35% of the study area consists of undeveloped forest. Less than 5% of the study area is dedicated to commercial uses, which include a community center, theatre, art museum, and an assisted living facility.

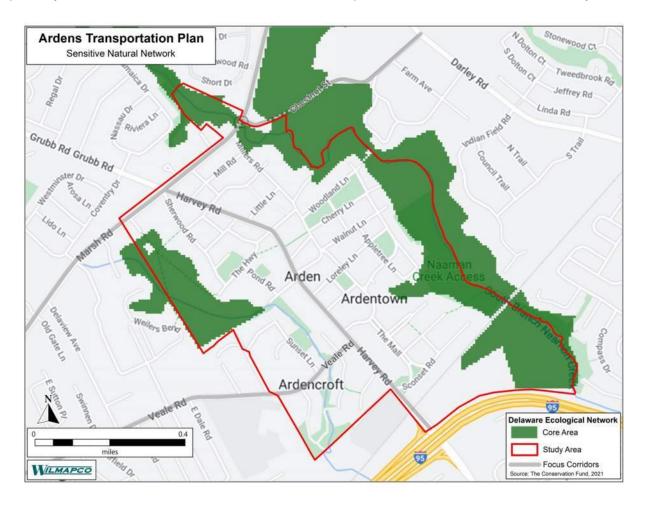


Historic Properties

Arden, Ardentown, and Ardencroft are each designated as a historic place by the National Park Service. Because each leasehold is owned by each village's common trust, every property within the Ardens is also designated as historic. The small section of unincorporated New Castle County in the study area does not contain any historic properties.

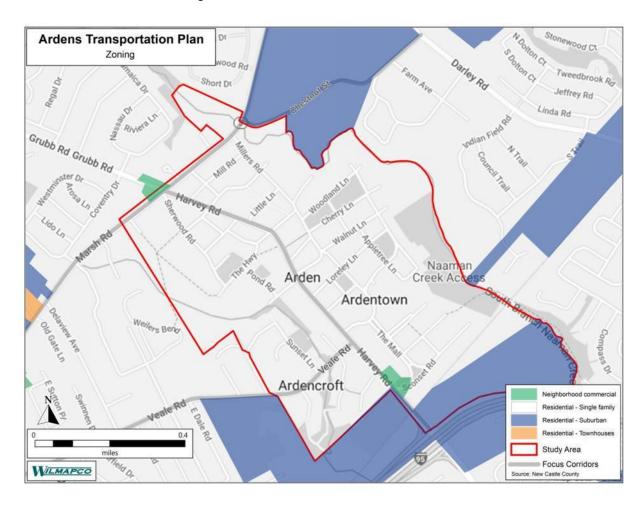
Sensitive Natural Network

The Conservation Fund has designated land within the Ardens as "core areas" in their ecological network. Core areas contain naturally functioning ecosystems and provide high-quality habitat for native plants and animals, and they are considered the highest priority for conservation. These core areas comprise 27% of land within the study area.



Zoning

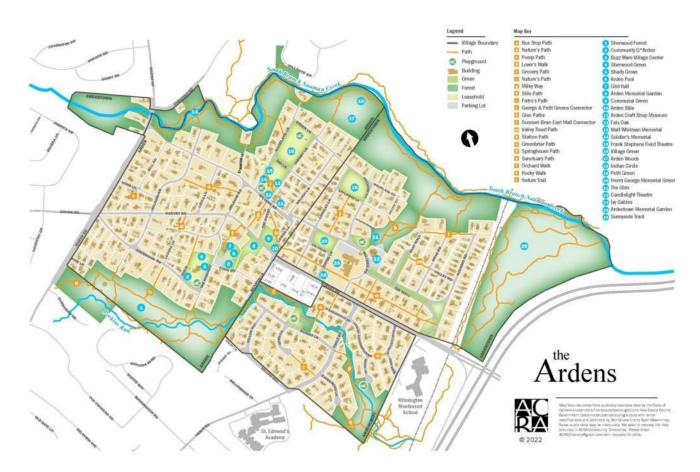
Nearly the entire study area is zoned single-family residential (NC10). The Sunnyside Tract, a nature preserve owned by the Village of Ardentown, is zoned suburban residential (S). A small section of land on the north corner of Harvey Road and Sconset Road is zoned neighborhood commercial (CN).



Transportation Conditions

Existing Path Network

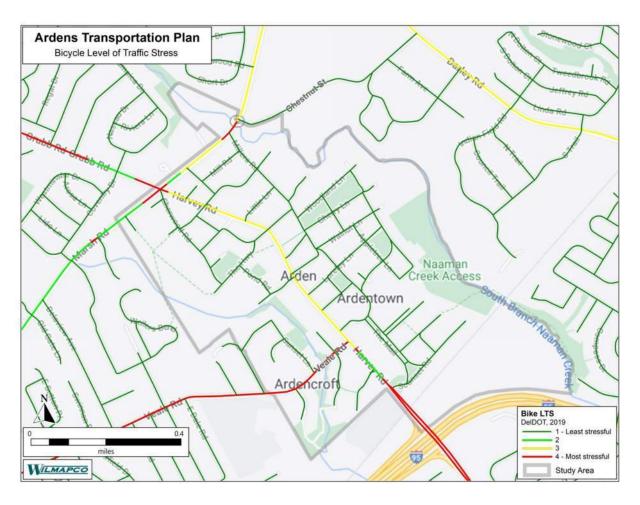
Each of the Ardens features an interconnected network of walking paths. Some of the paths are paved, while others consist of packed grass, dirt, or gravel. While not entirely ADA-compliant, these paths contribute to the Ardens' walkability. As shown on the following page, the majority of residential streets in the Ardens are narrow and have very light traffic volumes, making them comfortable for walking while sharing space with motor vehicles. These low-stress streets connect the gaps between the car-free paths, forming a dense walking grid that is comfortable and safe for nearly everyone, despite the Ardens' lack of sidewalks or other traditional pedestrian infrastructure.



Bicycle Level of Traffic Stress

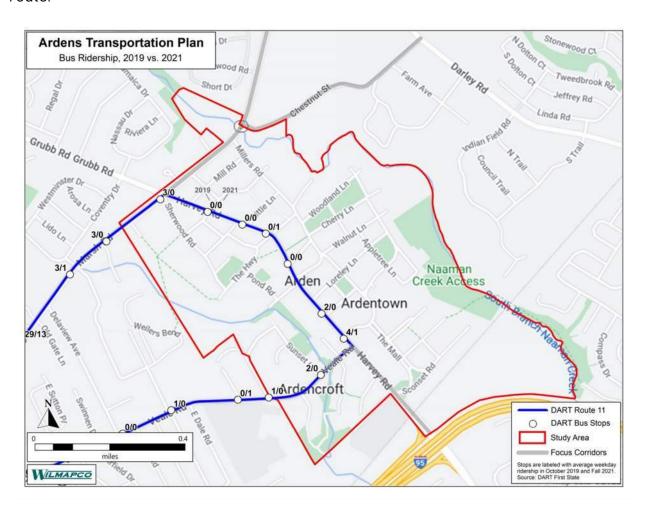
Bicycle level of traffic stress (bike LTS) is a measure of how stressful roads are for bicycling, based on infrastructure conditions including traffic speeds, traffic volumes, and the number of lanes. In 2019, DelDOT developed its own bike LTS methodology, giving each road segment in Delaware a bike LTS score ranging from 1 (least stressful) to 4 (most stressful).

The majority of roads in the study area are narrow, residential streets that are comfortable for everyone to walk and bike on (bike LTS 1). However, Harvey Road bisects the Ardens and serves as a barrier both to biking and crossing on foot, with LTS scores of 3 and 4. Veale Road (LTS 4) divides Ardencroft, and Arden is bordered by Marsh Road, with sections ranging from LTS 2 to 4. These higher-stress roads should be considered for safety improvements in the Ardens Transportation Plan.



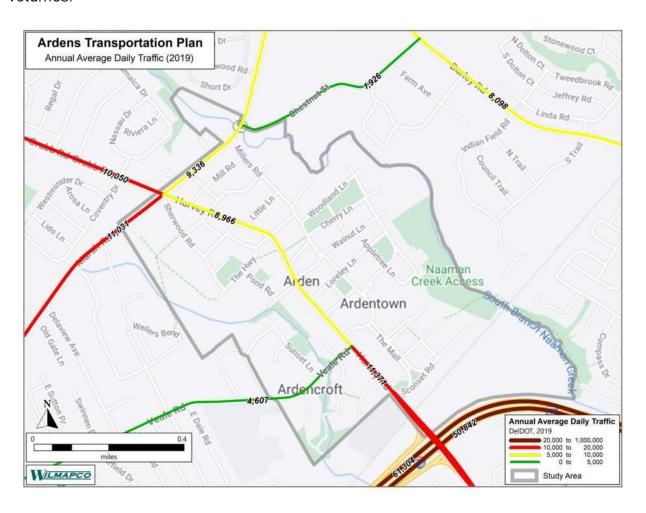
Bus Ridership

The study area is served by just one bus route, DART Route 11, which travels between downtown Wilmington and the Ardens, looping back on Harvey Road. The map below shows average weekday ridership (boardings and alightings) in October 2019 and Fall 2021. Ridership is very low in the Ardens, with an average of only 12 boardings and alightings per weekday in October 2019, falling to just 2 in Fall 2021. Ridership on DART Route 11 is higher outside of the study area. The Ardens Transportation Plan should assess transit needs in the Ardens and make any appropriate recommendations for adjustments to the bus network, with consideration to other areas served by this bus route.



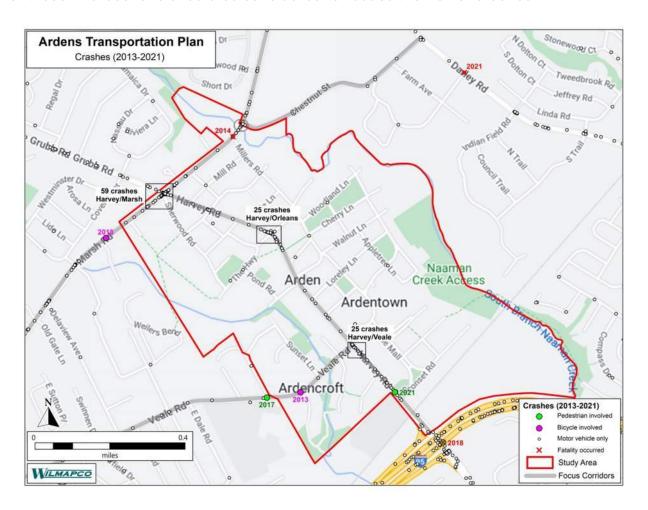
Traffic Volumes

DelDOT measures traffic volumes on state-owned roads, which in this study area include Harvey Road, Veale Road, Marsh Road, and Chestnut Street. In 2019, the annual average daily traffic was high on Harvey Road, likely as a result of its nearby connection to I-95. Similar traffic volumes were recorded on Marsh Road. Traffic volumes were low on Veale Road and Chestnut Street. Higher traffic volumes can serve as an impediment to biking, walking, and transit use. Improvements to pedestrian and bicycle infrastructure, as well as bus transit, may help reduce traffic volumes.



Crashes

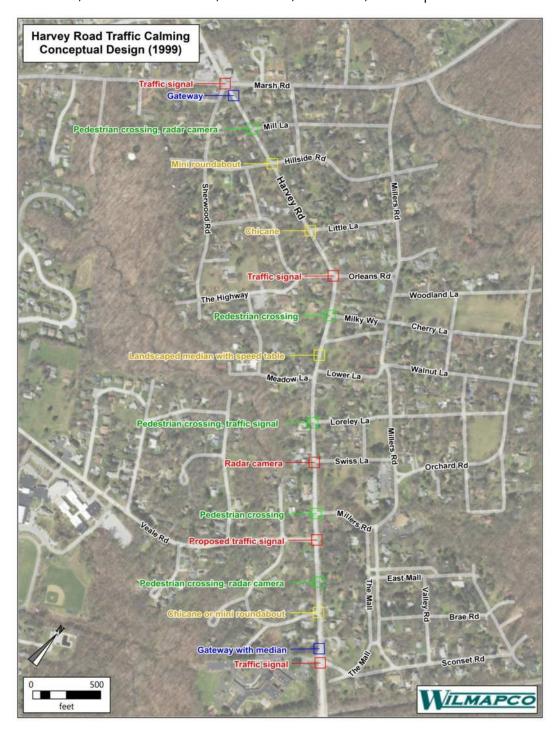
Between 2013 and 2021, a total of 205 reported vehicle crashes occurred within the study area, including one bicycle crash in 2013, one pedestrian crash in 2021, and one fatality in 2014 that occurred in a motor vehicle. A few crash clusters were identified at intersection along Harvey Road: at Marsh Road there were 59 crashes; at Orleans Road, 25; and at Veale Road, 25. Safety improvements along Harvey Road and at each of these intersections should be considered to reduce the risk of crashes.



Planned Transportation

Harvey Road Traffic Calming

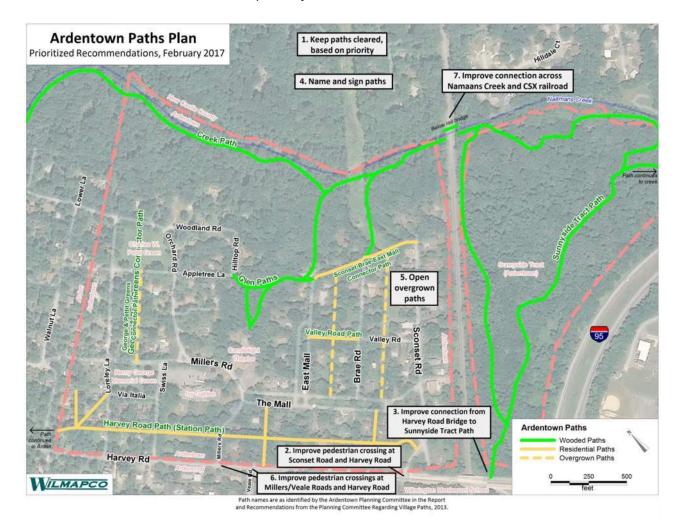
Efforts to calm traffic on Harvey Road and make it safer for people walking, biking, and using transit date back to 1999, when WILMAPCO developed a conceptual design for the corridor. This design includes a variety of features, such as crosswalks, traffic signals, radar cameras, a mini roundabout, a chicane, a median, and a speed table.



The only elements of this conceptual design that remain today are traffic signals and pedestrian crossings at intersections. Speed bumps were installed, but they have since been removed in response to noise complaints. In WILMAPCO's 2050 Regional Transportation Plan, "Harvey Road Traffic Calming" is listed as a long-term, fiscally constrained project, with a planned service year of 2036.

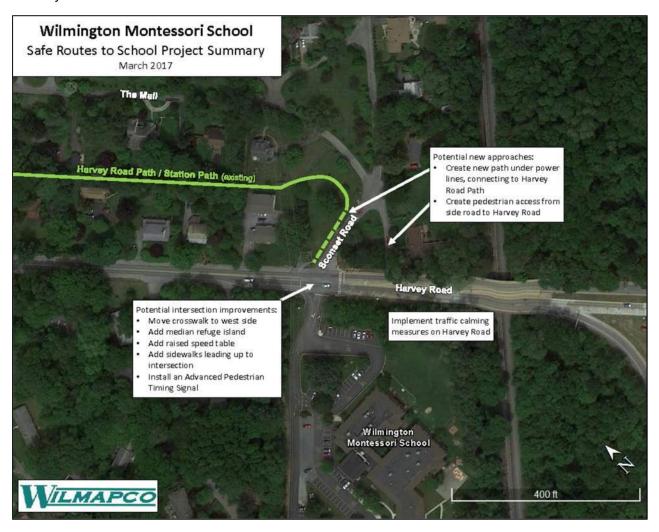
Ardentown Paths Plan

The <u>Ardentown Paths Plan</u>, endorsed in November 2017, presents recommendations for improvements to Ardentown's path network and serves as an update to the <u>2013 Ardentown Paths Report</u>. This plan was developed with extensive involvement of Ardentown residents, who were surveyed to determine which paths were most used and how the path network could best be improved. The recommendations in the map below are numbered in order of priority.

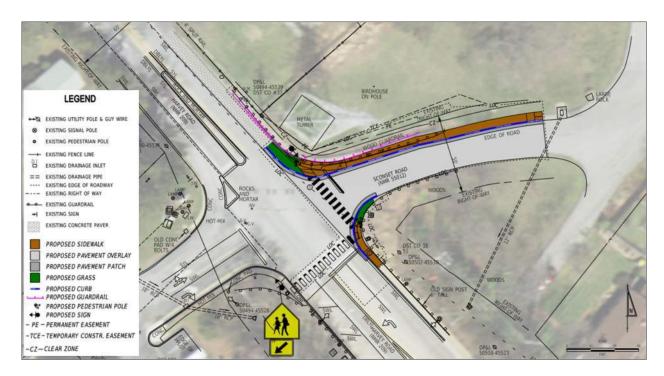


Wilmington Montessori School Safe Routes to School Plan

WILMAPCO and DelDOT administer the <u>Safe Routes to School</u> (SRTS) program in this region. SRTS is a federal grant program that provides a limited amount of funding for infrastructure improvements and education programs to make it safer for students to walk and bike to school. In May 2017, Wilmington Montessori School (WMS) and Ardentown requested SRTS funding for the infrastructure improvements in the map below. These recommendations were developed in collaboration between WILMAPCO, DelDOT, WMS, and Ardentown and focus on safety improvements for the intersection of Harvey Road and Sconset Road.



Some of these recommendations will be implemented in an intersection improvement project that is scheduled to begin construction in Fall 2022. As shown on the following page, this project will include a sidewalk on Sconset Road leading to the intersection, a curb extension on the east corner, and a crosswalk across Sconset Road. This project is expected to be completed by winter 2022/2023.



More information and updates on this project are available at https://deldot.gov/projects/index.shtml?dc=details&projectNumber=T201769011.

Marsh Road and Harvey Road/Grubb Road Intersection Improvements

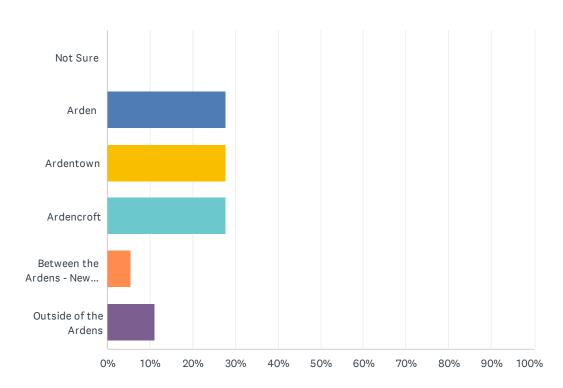
In 2020, a traffic study was requested to analyze safety and operational improvements for the intersection of Marsh, Harvey, and Grubb Roads, which is on the northwest border of the Ardens Transportation Plan study area. DelDOT presented a concept plan in March 2020 at a virtual workshop, with near unanimous approval, and it was finalized in December 2020. This concept plan provides crosswalks along all legs of the intersection, with pedestrian signals, push buttons, and ramps. It also features lane reconfigurations along the northbound, southbound, and eastbound approaches to provide a shared through/right turn lane and a separate left turn lane. The design phase was completed in December 2021. As of July 2022, the project is currently under construction and nearing completion.





Q1 Do you live in:

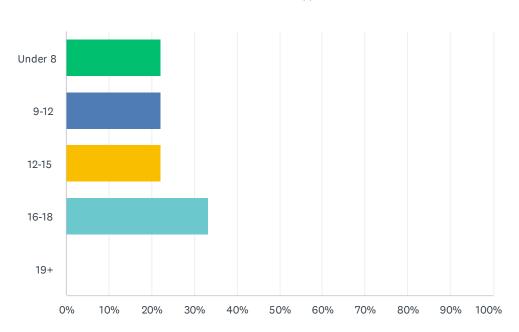
Answered: 18 Skipped: 0



ANSWER CHOICES	RESPONSES	
Not Sure	0.00%	0
Arden	27.78%	5
Ardentown	27.78%	5
Ardencroft	27.78%	5
Between the Ardens - New Castle County 'donut hole'	5.56%	1
Outside of the Ardens	11.11%	2
TOTAL		18

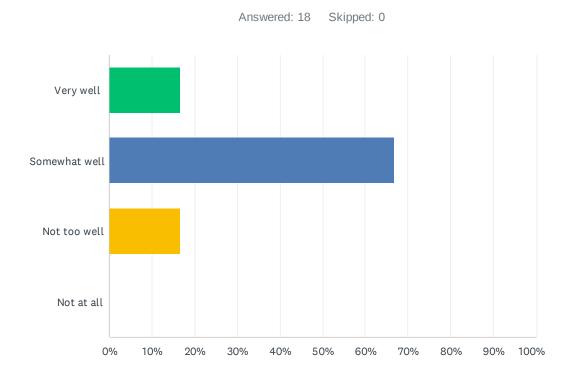
Q2 What is your age?

Answered: 18 Skipped: 0



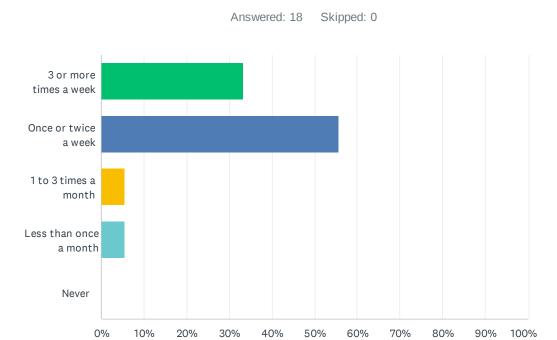
ANSWER CHOICES	RESPONSES	
Under 8	22.22%	4
9-12	22.22%	4
12-15	22.22%	4
16-18	33.33%	6
19+	0.00%	0
TOTAL		18

Q3 How well do you feel the transportation system in the Ardens meets your travel needs?



ANSWER CHOICES	RESPONSES	
Very well	16.67%	3
Somewhat well	66.67%	12
Not too well	16.67%	3
Not at all	0.00%	0
TOTAL		18

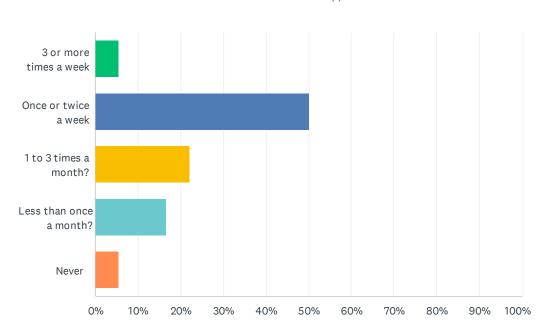
Q4 How often do you walk for transportation (to travel from one place to another)?



ANSWER CHOICES	RESPONSES	
3 or more times a week	33.33%	6
Once or twice a week	55.56%	10
1 to 3 times a month	5.56%	1
Less than once a month	5.56%	1
Never	0.00%	0
TOTAL		18

Q5 How often do you bike for transportation?





ANSWER CHOICES	RESPONSES	
3 or more times a week	5.56%	1
Once or twice a week	50.00%	9
1 to 3 times a month?	22.22%	4
Less than once a month?	16.67%	3
Never	5.56%	1
TOTAL		18





Public Comments Received & Plan Edits

Key Points from Public Comments:

Concern / Comment	Response
Roundabouts	Considered, but not locally preferred
Automated speed enforcement	Pending state legislation
Veale Road - blend of support	Added paragraph to minimize path widths where feasible,
and concern; 13 explicitly	permissible
supported, while 3 explicitly	
voice concern	
Widening of paved cartway	Unique process in the Ardens; DelDOT would cover survey
(desire to minimize/avoid)	expenses in preliminary engineering. Generally, traffic calming
	improvements propose only modest widening (1-2' feet).
	Recognition that widening would potentially change assessments
	- anticipated to be very minor/modest.
Concern for maintenance	Noted in the Plan; would need to be addressed village by village
(esp. bioswales and bus shelters)	(i.e. specific committee)
Concern for the proposed widths	Added paragraph to minimize path widths where feasible,
of paths	permissible
Is this the last opportunity for	No. Any designs that advance will include additional community
input?	involvement.
Aesthetics - maintain the	Context sensitivity noted in the Plan; also, need for continued
"Ardenesque" character	community input as any plan would advance further into
Desire to make the Ardens more	engineering. Achieved if proposed multimodal network would be implemented
ADA accessible / stroller friendly	Achieved ii proposed muttimodat network would be implemented
Importance of maintaining	Noted in the Plan
shoulder on Harvey Road	Noted in the Ftan
(between Veale Rd and Sconset	
Rd) for resident parking needs	
Interest in investigating the	Noted in the Plan
feasibility of replacing the geo-	Troca in the Fair
grid (shoulder) of Harvey Road to	
a surface that would be more	
accommodating of	
pedestrians/bicyclists	



Public Comments Received & Plan Edits

Summary of Plan Edits since Public Review Draft (6/6/23):

Plan Edits	Report Section	Page #
Expanded detail on traffic calming features,	Alternatives	34-35
provided links to literature on traffic calming		
effectiveness	A16 43	27. 42
Provided excerpts on recommended traffic calming	Alternatives	36-42
features from Delaware Traffic Calming manual - to		
provide further detail/specifics Added further details on proposed gateways	Figure 23	49
(proposed elements)	Figure 23	47
Added details on proposed gateways (proposed	Figure 32 (Sheet 1)	59
details)	rigule 32 (Sheet 1)	37
Shifted proposed bioswale at Improvement P to	Figure 32 (Sheet 2)	63
address resident concerns	rigare 32 (Sheet 2)	03
Added recommendation to evaluate shoulder	Figure 32 (Sheet 3)	64
geo-grid on Harvey Road between Veale Road and	3 (,	
Sconset to accommodate walkers/bicyclists - while		
still providing parking for residents		
Added recommendation to upgrade Montessori	Figure 32 (Sheet 3)	64
school zone to active flashers		
Added path link from Evergreen Road to pedestrian	Figure 32 (Veale Road)	65
crossings (Y, Z)		
Added/expanded sections on Maintenance,	Success within the Ardens	66
Enforcement, and Education		
Add further emphasis that DelDOT should continue	Success within the Ardens	66
to engage the Ardens in selecting context sensitive		
aesthetic treatments	Multiped del Neture de Figure 24	67
Removed path between Veale Road and The Mall from being paved due to resident (privacy)	Multimodal Network - Figure 34	67
concerns; adjusted recommendation to just address		
grade issue at Veale/Harvey intersection		
Added section about minimizing path widths	Multimodal Network - Figure 34	67
Added recommendation to replace chain with bike-	Multimodal Network - Figure 34	67
friendly gate at Hillside / Sherwood Forest Path	materinodat Network Tigure 34	0,
Clarified RTP status within WILMAPCO's RTP	Implementation Plan	70



Public Comments Received & Plan Edits

From: Don Lipari Sent: Monday, May 29, 2023 7:27 PM

To: ArdensComments <ArdensComments@bowman.com> **Subject:** [EXTERNAL] Comment for Connecting the Ardens

To the WILMAPCO Planners:

I know past discussions considered the various options for slowing traffic down on Harvey Rd between 195 and Marsh Road.

The roundabouts that are proposed are meant to slow the traffic down to the posted 25 MPH speed limit.

I am wondering the feasibility of installing photo-enforced speed detectors along Harvey Rd. I have seen photo-enforced red light enforcement in other roads in Wilmington. So there is a precedent for an automated system.

Thar	١k	you,
Don	Li	pari

From: James Schwaber	
Sent: Saturday, June 3, 2023 2:12 PM	
To: ArdensComments <ardenscomments@bowman.com></ardenscomments@bowman.com>	
Cc: Mary Brent Whipple >; Patrick Tom	an <patrick.toman@ardencroftassociation.org>; Wyn</patrick.toman@ardencroftassociation.org>
Achenbaum >; Evelyn Knotts <evelyn.knotts@arc< td=""><td>lencroftassociation.org>; Scott Kushner</td></evelyn.knotts@arc<>	lencroftassociation.org>; Scott Kushner
>; Neil Kantner	
Subject: [EXTERNAL] Wilmapco Plans for Ardens and Imp	rovements

Look forward to the meeting with Wilmapco Tuesday, but wanted to also make a comment in advance.

There have been suggestions that the plan might install ADA compliant sidewalks along the "state roads" of Harvey and Veale. My reaction is negative and cautious. Periodically there are similar initiatives to install "at least roadside pathways" and "street lights" to our Village roads. But these "improvements" have consistently been rejected as they would harm the essential historical and aesthetic nature of the communities - which is what makes them attractive and unique (and protected as Historical). ADA sidewalks would further turn these roads into even higher speed "highways", not local roads.

Any improvements might better be focused on slowing traffic down and raising a sense of community context inappropriate to speed through.



Public Comments Received & Plan Edits

rom: Jeffrey Stein	
ddress:	
hone:	
ubmitted: Tuesday, June 6, 2023 (at Public Meeting)	
lo widening of Harvey Road.	
lanting in roadways will fail. Avoid.	

From: Stevie French
Address:
Phone:
Email:
Submitted: Tuesday, June 6, 2023 (at Public Meeting)

The overall project looks great, thanks! Two comments -

- 1. Do the bike/footpaths really need to be six feet wide? They aren't that busy, seems like overkill.
- 2. Can we put more safety/calming measures at the Little Lane crosswalk that's proposed? As stated at meeting #2, it has the best line of sight in that area. So why not make it a main ped x-ing (vs. Orleans Rd).



Public Comments Received & Plan Edits

From: Polly Brown
Address:
Phone
Email:
Sent: Tuesday, June 6, 2023
Submitted: Tuesday, June 6, 2023 (at Public Meeting)

I have lived at my address since 1986. I was there when the last "Traffic Calming" processes were done. At the "T" intersection of Veale & Harvey, the calming on Veale turned out not to be as effective as hoped and the plantings were not kept up.

Also, I believe on the elevated portion of Veale on Harvey, the calming may not have been good, safetywise during precipitation in winter months.

Tonight I learned from your easel posters & presentation that not only do you wish to put a bioswale, but also a bus shelter, both of which require local upkeep, on my leasehold. I do not embrace either of these proposals on my leasehold. Mr. Ben Gruswitz (sp?) stated, "Some people use it as their front yard but it is in reality State property". Casting a very impersonal light on what is being proposed.

Please contact me if you have any questions.

Polly Brown

From: Linda Toman
Address:
Phone:
Email:
Submitted: Tuesday, June 6, 2023 (at Public Meeting)

I am very happy about all the plans. Especially along Veale Road. I live in Ardencroft and walk & ride my bike over to Arden many times a week, a little unsafely at times. I look forward tp a safer future.

Also I would welcome more transit to Claymont Train Station.

Thanks you for all your hard work!

Linda Toman



Public Comments Received & Plan Edits

From: Ronni Yaskin

Sent: Tuesday, June 6, 2023 2:45 PM

To: ArdensComments < ArdensComments@bowman.com>

Subject: [EXTERNAL] Plan ideas

Hi. I can't make the meeting tonight. I did have an idea to keep the walkways/sidewalks on Veale more "Ardenesque". On Veale Rd going over the creek near Harvey is a strip of grass with a wooden "rail" by the road. It provides a safe walkway and looks nice. Having it be grass is nicer than concrete, but if concrete is a must, the wooden rail looks more natural and soothing to the eye, yet still safe. Ronni Yaskin

From: James Schwaber

Sent: Tuesday, June 6, 2023 9:11 PM

To: ArdensComments <ArdensComments@bowman.com>

Cc: Jeffrey Politis <ardenchair@arden.delaware.gov>; PATRICK TOMAN

Subject: [EXTERNAL] Post presentation

Good job Randy,

So I understand you propose 6' wide sidewalks on Veale Rd to create an internal bikeway. NOT desirable at all.

I ride a bike and do not use Veale. From Arden take the Curtis wooden bridge to Willow Way and go up the hill, turn right onto Sunset Ct which dead ends at an opening in the fence leading to Bellemeade Pl and there you are across from St. Eds and next to Marinis. Internal "pathways".

No Veale sidewalk required. To get an internal bikeway.



Public Comments Received & Plan Edits

From: Deborah Ricard

Sent: Wednesday, June 7, 2023 10:47 AM

To: ArdensComments < ArdensComments@bowman.com>

Subject: [EXTERNAL] Ardens Plans Comments

Hi Randy,

Thanks for reviewing your Ardens plan and answering questions at the 6/06 meeting at the Buzz Ware Village Center.

My first comment is to remove the gateway at Harvey and Marsh. The gateway addition will greatly impact the 2 leaseholds in Arden located at that intersection and will likely require appropriating square footage from those Arden neighbors. Who will bear the cost of the required survey? I do not understand how announcing a community by name will slow traffic; those drivers are interested in getting from point A to Point B and could care less that they are going through a neighborhood. Work has recently been completed at that intersection which has improved traffic flow; let's not disrupt what has just been fixed.

Another comment is to advance legislation that will allow speed cameras that issue tickets to offenders on roads in residential locations such as the Ardens. This intervention, when legalized, would slow traffic significantly. Most drivers who become aware of this intervention slow down to avoid a ticket or find another route thus reducing traffic. Regrettably a small group of drivers would continue as before travelling over your mountable curbs.

Next, how are New Castle County residents outside the Ardens being made aware of meetings such as you had on June 6 and the upcoming meeting on June 26? As Ardens' residents are voting on a grand plan that affects these NCC neighbors I want to know their comments as well as those in the Ardens. After all I am being asked to vote on a plan that affects them.

Finally, how are steering group meetings announced to the public? Residents such as myself may wish to more closely follow the progress of your plan moving forward by attending one or more of these meetings.

Many thanks to you and the steering committee for your consideration of my comments.

Sincerely,
Deborah Ricard
Village of Arden Resident
Sent from my iPhone



Public Comments Received & Plan Edits

From: Vicki Scott

Sent: Wednesday, June 7, 2023 11:52 AM

To: ArdensComments <ardenscomments@bowman.com> Cc: Jeffrey Politis <ardenchair@arden.delaware.gov>

Subject: [EXTERNAL] Ardens Project

Thank you for investing time to evaluate possible changes that could reduce speed and make our roads safer for pedestrians.

As I understand it we have identified an immediate need to reduce speeds and improve safety, however, the plan options presented are long term. I heard questions at last nights' meeting asking for data showing the expected result but didn't hear any definitive answer. This leads me to believe the answer is we really don't know if these changes will produce the desired result.

I believe the villages need to reevaluate potential solutions that will address the issues in a more timely fashion without negatively impacting the landscape.

I would be in favor of automated speed cameras once they are approved for use in our area or a police presence on a routine basis to deter speeding on Harvey Rd.

Just my opinion. We are a democracy and I will support the majority decision.

Vicki Scott Sent from my iPhone

From: Hunter Clarke-Fields <

Sent: Wednesday, June 7, 2023 5:23 PM

To: ArdensComments <ardenscomments@bowman.com>
Cc: clarke-fieldsGERMANY, bill
Subject: [EXTERNAL] Vegle Read bike & pedestrian lane

Subject: [EXTERNAL] Veale Road bike & pedestrian lane

Hello!

I want to write in support of a Veale bike & pedestrian lane. It's desperately needed! We have many resources and facilities located on Veale (Marini's) and nearby (Branmar, etc.) but Veale road is horrible to walk on. There's no sidewalk. Pedestrian's risk injury and death. It's dangerous for bikers too. A bike and pedestrian lane would help people of all ages get more exercise and encourage children's exploration and independence. We NEED this! Please keep this in the transportation plan.

Regards

Hunter Clarke-Fields



Public Comments Received & Plan Edits

From: William Fields

Sent: Thursday, June 8, 2023 10:52 AM

To: ArdensComments <ardenscomments@bowman.com>

Subject: [EXTERNAL] Veale Road

Hello,

I am writing in support of a sidewalk and/or bike path along Veale road. It is currently very dangerous to travel to Marini's or Branmar plaza along Veale road. There is no shoulder or sidewalk at all, and people drive very fast along that road.

Also, it is currently not possible for wheelchair-bound people or people with strollers to get from Beech Ln, Lower Greenbrier, or West Greenbrier to the rest of Arden. It means they are totally cut off from the Gild Hall, the pool, etc. So, at a minimum there should be a path along Veale from West Greenbriar to Sunset.

Thank you,
-William Clarke-Fields

From: Scott Bowers

Sent: Thursday, June 8, 2023 11:27 AM

To: ArdensComments <ardenscomments@bowman.com> **Subject:** [EXTERNAL] Connecting with the Ardens project

I'm writing in support for bike and pedestrian pathways along Veale Road, Ardencroft.

I live on Beech Lane and walk my dog several times a day. Many times attempting to either cross or walk along Veale Road in an effort to go further West/North into Arden. It's very treacherous.

Appreciate whatever you can do.

Thanks,

Scott Bowers



Public Comments Received & Plan Edits

From: Tiffany Stigler

Sent: Thursday, June 8, 2023 3:03 PM

To: ArdensComments <ArdensComments@bowman.com>
Subject: [EXTERNAL] Connecting with The Ardens

Hello!

I'm writing to you regarding my excitement and support for the WILMAPCO Connecting with The Ardens project.

I am in full support of making changes to better The Ardens.

As a resident of Ardencroft, I am very concerned with the safety issues on Veale Rd. I would LOVE to see a sidewalk and/or bike path along Veale Rd to increase safety for pedestrians and bicyclists. Unfortunately, the streets of Lower Greenbriar/Beech Lane, Upper Green Briar/Upsan Downs, and Evergreen do not have safe access points for connecting with the other Ardens via Veale Rd or Harvey Rd. There is currently no safe route for individuals using wheelchair or stroller devices.

I am a very active person who enjoys walking The Arden's on a daily basis year-round. Unfortunately, since having a baby in March, my walking routes have been limited due to safety concerns on Veale Rd. There is not a shoulder or sidewalk that is safe for me to walk my baby via stroller. I am unable to safely push the stroller along the side of Veale Rd. Due to the bumpy, grassy hill along the side of the road, I have to take the infant car seat attachment off of the stroller and carry the baby while concurrently pushing the stroller base. If I leave my baby in the stroller to push her along the side of the road in the grass, her head bounces around to an extreme amount which is not healthy for her. I have attached a video of her head bouncing while pushing the stroller through the grass alongside of Veale Rd from Sunset to W. Greenbriar. The video doesn't depict how much worse the bouncing is while going uphill from W. Greenbriar to Sunset.

I have attempted to "beat the traffic" and push the stroller on the street twice. Both times I had to run quickly into the grassy area due to traffic in both directions. There is a small bridge on Veale Rd that has barriers in place and I was unable to dodge the cars onto the grass while I was in the middle of the bridge. I had to pray the drivers would pass me and my 3 month old daughter as I ran. During one of the recent attempts to use the road and not the grass, my daughter and I were almost hit by an Uber driver reversing down the road!

There are multiple residents in Ardencroft that use wheelchair devices. They are limited as to where they can travel in the neighborhood without the use of a motor vehicle due to lack of sidewalks.

I also have concerns regarding residents from Ardencroft crossing Harvey Rd to get to the bigger side of The Ardens. I typically use the crosswalk at the Montessori school but recently learned that cutting through the parking lot between the hours of 7am-7pm is illegal. The speeding traffic down Harvey Rd makes it extremely unsafe to cross at the Veale/Harvey crosswalk "to nowhere" or to walk along Harvey Rd to cross at Sconset if coming from Upper Greenbriar/Upsan Downs. Once across onto Sconset, there is very poor visibility of pedestrians walking along the street. A sidewalk would be very beneficial at this location along Harvey and Sconset to increase safety and visibility of pedestrians.

I am in full support of adding increased safety measures along Veale and Harvey roads. As I watch my baby grow faster and faster each day, I know in the blink of an eye she will be old enough to venture out into the world and the Ardens on her own. I am hopeful that other residents of the Ardens will consider not only the safety of my daughter, but the safety of all the other youth in the neighborhood. They are the future of the community and we need to protect them!

Thank you for your hard work, time, and patience (I know some people get a little heated during the meetings)!

Tiffany Stigler



Public Comments Received & Plan Edits

From: Rachelle Zazzu

Sent: Friday, June 9, 2023 7:43 AM

To: ArdensComments <ardenscomments@bowman.com>

Subject: [EXTERNAL] Plans to slow down traffic

Thank you for researching, gathering and presenting so much information about the traffic speeds and safety on Harvey Road. You were generous and patient and kind. Thank you.

I have many many concerns about what was presented. To wit: Why do we have only 3 days between final presentation and voting? Seriously..why? Is there some impetus that requires us to have so little time? This is a real question, not simply a challenge. It makes sense to have the vote at the next meeting.

I asked several times....several different ways...what the expected and realistic result would be...definitively. I received no response. Is is reasonable to expect a 20% decrease in traffic speeds? Greater? Less? This is a massive undertaking (needlessly in my opinion but we'll get to that). I worked for the 2nd largest employer in the state of New York and I promise you that no project of this magnitude was attempted without an expected outcome GOING INTO THE PROJECT. "Better" is not an outcome..it's a hope. That's not acceptable to me.

We are being asked for vote for wisps of smoke.... We are voting for a plan that can be vetoed before it gets off the ground by engineers who have NOT YET MADE ANY ASSESSMENT. This is nonsensical to me. Plans like this are voted on AFTER critical assessments are made.

We are voting for a plan that requires Perpetual funding and care by the residents in conjunction with agencies that have NO AGREEMENT to adhere to the findings in the residents surveys. So, yes...they probably will take into account that we don't want concrete, but if ultimately they decide that's best, that's what they will do. And in a village like Arden...that is meaningful and unwanted. If the bump outs are more in alignment with the Arden esthetic then we are required to maintain it in perpetuity. Same with the bus stops. No cost estimates have been provided, no committee or task force has been assigned to this but we are voting on it? Again..premature for me.

We are voting for a plan with the caveat that we are not voting for THIS plan. Again....nonsensical to me. Every person I have spoken to (I have spoken to many people...both yea and nay...in my quest for information gathering and an informed point of view)...and when I say EVERY person..I mean it....explains to me that we are voting for this because we can also vote against it in the future. Makes no sense.. It is explained to me that we are voting on this completely imperfect plan because if we don't then we are back at the unacceptable status quo. So what I understand is NOT ONE SINGLE PERSON I HAVE SPOKEN TO thinks this is a good plan, let alone a great plan. They think it is the plan they HAVE to vote for in order to affect any positive change. I think we can do better. I think it's possible to have a great plan and vote for it in a timely and informed manner.

Why are we being rushed to vote on a plan that has such disparate dissent? It's not like there are two camps. The people who are for this plan see this extraordinarily imperfect plan as their best hope to slow down traffic. When I point out that that has not been actually showed or proved to be true, I am dismissed because they feel something is better than nothing. I think we can hope for and achieve more. There are a myriad of reasons people DON'T like the plan..including the intrusion of this plan on their own lease holds....I notice that of all the people who are enthusiastic about this plan, not a single one of them will have a leasehold that is personally affected. Those residents matter also....right?

I have spoken with several engineers (granted..they are friends and they are not in this state....this is a salient caveat and I grant you that) since we had our meeting this past week and they are agreed that the number of bump outs proposed will ultimately have very little impact on speed. This is based on their supposition that the majority of traffic on Harvey Rd that goes through the Ardens are regulars...that is to say that driving on Harvey Rd is part of their daily routine and that they will learn soon enough that one bump out is coming and they will momentarily adjust. It has been suggested to me that 4 bump outs between Veale and Marsh would have a much better success rate. This makes sense to me and I would vote for that....and only that.

Lastly...I would be much more likely to vote for a plan that is much more singular. The inclusion of paths and bike lanes and trails, etc. is vital in keeping our residents safe. And this is important to me...The first step is slowing down the traffic on Harvey Rd and seeing where we are after that.

Thank you for this opportunity to voice my opinion.

Lastly, I want to say...and stress this...that when I tell people I am not in favor of the plan as-is that there has been a lot of push back. As if I don't share the same deep level of concern and care for the safety of our residents. This is patently untrue, unkind and unnecessary. The truer statement is that I am in favor of a BETTER plan and hold dear the residents of this community.

Best regards

Rev. Dr. Rachelle Zazzu (



Public Comments Received & Plan Edits

From: Janet Williams <

Date: June 10, 2023 at 12:48:42 PM EDT To: ardenscomments@bowman.com

Subject: crossing Harvey and Marsh on a bike

Hi,

I've been having trouble crossing Marsh road with my bike ever since the improvements were made on Marsh and Harvey roads. I cross there almost every day on my bike and often almost get hit. I come up Sherwood road and as soon as you ride off the curb at the light I am in the right lane where cars are directed to go straight. There are trees in the way so I can't see them coming and they can't see me until they are right in front of me. Even if I press the walk sign they don't see me when because they are taking a right hand turn after stop.

The other day I road my bike down Sherwood Fire Trail to the water tower and went under the chain to come out on Hillside Road. Then I crossed Marsh road away from the intersection.

This was much safer so it would be nice if there was a bike trail without a chain, so I could avoid having to cross the Harvey and Marsh intersection.

Thank You, Janet Williams





Public Comments Received & Plan Edits

From: Terri Hansen

Sent: Friday, June 16, 2023 9:30 AM

To: ArdensComments <ArdensComments@bowman.com>
Subject: [EXTERNAL] Harvey Road Traffic Calming

My name is Terri Hansen and I have lived at 1507 Harvey Road since 1980, when I was 14 years old. Prior to that I was a frequent visitor to my grandmother, Senta Booze, who moved to this leasehold with my grandfather, Herbert Booze in 1929, when they were a young married couple. My family has had a deep connection to Harvey Road going back nearly 100 years and we have seen it transform from a narrow dirt track, to what it is today. In fact, you used some of my family films at one of your presentations.

I want to comment on the plans for the stretch of Harvey from Veale to Sconset, the stretch I live on. This is the only section of Harvey to have shoulders, which were installed when the I95 interchange was built. My grandparents were involved in the fight to keep Harvey Road a half interchange to keep traffic down, and while they won that fight, a large part of the front yard was taken for the shoulders, and a steep bank was created along the front property line. As traffic increased, those shoulders provided a fairly safe place to bike, walk, and gave residents on this section of Harvey a safe place to pull out of our driveways.

In a prior effort at traffic calming on Harvey Road, sections of the shoulders were removed and replaced with concrete grids in an attempt to "visually narrow the road" and slow traffic. I fought against these grids, fearing they would do nothing to slow traffic, make walking difficult, and be dangerous for bikes to ride on. Additionally, in artist renderings they are seen as lovely, grassy shoulders, which doesn't happen in real life because of heat, poor soil quality, and salt content from winter road treatments. Additionally, once those grids went in suddenly we were seeing a street sweeper once a year, just in time to kill what green was growing. As someone who has delivered our community newsletter on Harvey Road, let me tell you how truly terrible those grids are to walk on, and they do nothing to slow traffic down.

These bioswales you are proposing will make our section of Harvey MORE dangerous for pedestrians, bikers, the postal service, Amazon deliveries, and residents. Every time I leave my driveway, I back out entirely on the shoulder and THEN pull out into traffic. If there is a bioswale, I won't be able to do that and will be forced to pull out into traffic, a far more dangerous prospect. Additionally, bioswale involves plantings. Who will plant them? Who chooses what will be in them? Who will care for them? When they become miserable and weedy messes we will have to live with them lowering the curb appeal and value of our homes as they gather trash from cars still speeding by.

Finally, you propose a "gateway" at Sconset Rd and the pictures I see are of a barren concrete barrier. We already have a "gateway" at Sconset, which is covered in Brandywine granite, and far more attractive, even if it does need some TLC right now. When that median and pork chop were put in place it helped stop people from speeding past in the turn lane, but as to slowing traffic down, not so much.

I would love to see Harvey reduced to one lane in the I95 overpass area, but if you don't make it physically impossible for people to use two lanes, plenty of people will treat it like it is two lanes anyway.

I have been living with Harvey my entire life, I learned to drive on it, my child has lived with it his entire life, learned to drive on it. We want to see speed reduced, but what you propose I have seen before, and have lived with for the last couple of decades and speed has only gotten worse. We need enforcement, which we never get. If we gained a reputation for strict enforcement, speed would go down, all you have to do is drive through Newport to see that.

One final request. PLEASE do not take the shoulders away from our section of Harvey Rd. Doing so will only make a bad situation worse and make getting in and out of our driveways even more difficult and dangerous.



Public Comments Received & Plan Edits

From: Jeannie Stith <

Sent: Saturday, June 17, 2023 10:11 PM

To: ArdensComments <ArdensComments@bowman.com>

Subject: [EXTERNAL] Ardens improvements

The thing I'm most excited about is the pedestrian path along Veale Rd between Sunset Ln and Lower Greenbriar. This is badly needed and I really hope it happens! Thanks so much for your work on this.

Warmly, Jeannie Stith

From: Denise Nordheimer

Sent: Monday, June 19, 2023 6:09 AM

To: ArdensComments < ArdensComments@bowman.com>

Cc: Dave

Subject: [EXTERNAL] Ardens Community Plan

Good morning. We wanted to voice our support for better connections between the Ardens for pedestrians, even if that means sidewalks. We frequently walk through all 3 Ardens and the connection between Ardencroft and the rest of the community could especially benefit. Thank you.

Denise and David Nordheimer

From: Andrea Zatarain

Sent: Monday, June 19, 2023 3:38 PM

To: ArdensComments < ArdensComments@bowman.com>

Subject: [EXTERNAL] Making the Ardens safer for pedestrians and bicycles

Dear Ardens Transportation Committee,

We have lived in the Ardens for 10 years and we love to bike as a family. We currently do not feel safe biking on Veale or Harvey roads and have seen too many close calls there. We also have witnessed speeding cars and cars passing on the parking lane.

Walking around the Ardens is a pleasure except when we need to cross Harvey or Veale. Pedestrians are not very visible and cars often speed on both of these roads.

We would love to be able bike safely around and between the Ardens and trust the our kids will not get killed when walking or biking over to their friends homes on the other side of Harvey.

Sincerely,

Andrea and Chris, parents of Stefan (13) and May (16)



Public Comments Received & Plan Edits

From: ramencat7

Sent: Monday, June 19, 2023 3:46 PM

To: ArdensComments <ArdensComments@bowman.com>
Subject: [EXTERNAL] changes to Veale and Harvey

Dear Ardens Transportation Committee,

We have lived in the Ardens for 10 years and I like to bike around town. Me and my friends currently do not feel safe biking or walking on Veale or Harvey roads and have seen too many close calls there. I have also witnessed speeding cars and cars passing on the parking lane.

Walking around the Ardens is a pleasure except when we need to cross Harvey or Veale. Pedestrians are not very visible and cars often speed on both of these roads.

We would love to be able bike safely around and between the Ardens and trust the our kids will not get killed when walking or biking over to their friends homes on the other side of Harvey.

Sincerely,

Stefan Raia (13)

From: May Raia < Sent: Monday, June 19, 2023 3:50 PM

To: ArdensComments <ArdensComments@bowman.com>

Subject: [EXTERNAL] Veale and Harvey Safety

Dear Ardens Transportation Committee,

I've lived in Arden for around 10 years and over the course of living here I have had many close calls when trying to cross Harvey and Veale, especially since to get to my piano teacher's house every sunday i have to cross that street. There are many speeding cars on those two roads and it is very unsafe since pedestrians are often not visible. I would love to be able to bike safely to my friends houses without fear of being killed in an accident that isn't even my fault.

Sincerely, May Raia, age 16



Public Comments Received & Plan Edits

From: christopher raia <

Sent: Monday, June 19, 2023 9:40 PM

To: ArdensComments <ArdensComments@bowman.com>

Cc: andrea zatarain < >; Chair Ardencroft <

Subject: [EXTERNAL] Ardens Transportation Plan | Veale Road Corridor

Hello-

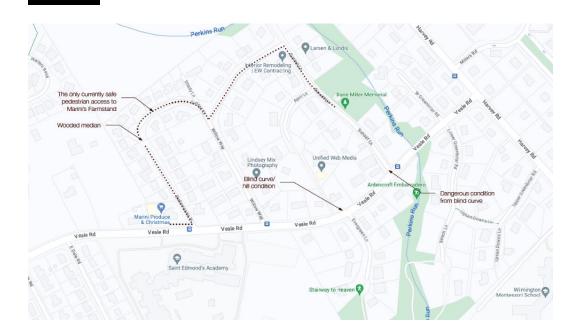
I would like to offer input on one specific portion of the Ardens Transportation Plan Being led by Ardencroft resident Ben Gruswitz.

It is to do with the need for pedestrian and bicycle accommodation along Veale Road, specifically from Harvey to Marini Produce. This is a very dangerous portion of roadway for pedestrian and driver alike, in that it contains a mix of troubling conditions:

- A downhill grade traveling East from Delaview Avenue to Perkins Run, which increases driver velocity
- A blind curve on the left for motorists headed in this direction—causing a safety issue for pedestrians and those pulling out of Sunset Lane
- A blind hill condition at the same spot—Sunset Lane is actually hidden by the hill grade at this moment

The preponderance of Ardencroft residents visit Marini Produce regularly in season and for those that choose to walk or bike, the conditions along Veale make it unsafe. Those folks will then take "the back way" through Sunset Farms and cut across the short wooded median. We think it is an important element of the Masterplan to introduce access for pedestrian and cyclist traffic along this corridor. It will also increase visibility and make driving here safer as well.

Best Regards, Christopher Raia





Public Comments Received & Plan Edits

From: L.H. < > Sent: Monday, June 19, 2023 11:39 PM

To: ArdensComments < ArdensComments@bowman.com>

Subject: [EXTERNAL] signs you can see

Good evening

Just ready the current Arden Transportation update and want you all to know you are doing a great job!

What I'd like to see happen most in the short term is lots of trimming so people can see all the road signs. Most particularly, I have been checking out the speed limit signs and most of them are hidden, covered, or impossible to see until the last second.

Thanks for all your work!

Lee Arden

From: Joe Berg
Sent: Monday, June 19, 2023 11:54 PM

To: ArdensComments <ardenscomments@bowman.com>Subject: [EXTERNAL] The Arden's Transportation Plan

Today was the first day I looked over the plan since I commented on the interactive map before the first meeting was held. I didn't expect that this plan would be so involved. My wife has been in a wheelchair since she was 44 years old due to a brainstem stroke. She will be in the wheelchair for the rest of her life. This Plan proposed will change her life through being able to get around our villages independently. We all take that for granite it's hard to put yourself in another person's shoes especially when they don't walk in them. One can't explain how important independence is very easy. My wife currently only uses her electric wheelchair on the street we live on Evergreen Lane. To go past the street that we live on would be life threating and dangerous for her.

One time I took my wife's Wheelchair up Veal Road to Harvy Road and made a left and went all the way up to Marsh Road and turned around and headed home. I was honked at more times than I could count, passed without regards to oncoming traffic and cursed at. This trip didn't take long. On the way back I was asked by a passing by police officer if I wanted him to fallow me. I assured him that I was fine, thanked him and waved him pass, However, another police officer came along Harvey Road and insisted that he fallow me back to the start of Evergreen Lane. Yeah, it was that unsafe for a person who has perfect vision and all of his physical attributes to drive a wheelchair on the 2 roads.

The plan being suggested would fix a lot of the access issues people with physical disabilities and our elderly have with our Village's. It cannot be understated how much being able to be independently involved and being a part of a community is needed. Also, how great will it be that she can also get to Richardsons Produce stand! She loves their cookies

I really hope all plans get adopted by the Villages it would totally change my wife's life in so many ways you can't even begin to understand.

Thank You, Joseph S. Berg and JoD Berg



Public Comments Received & Plan Edits

From: Don Lipari < > > Sent: Tuesday, June 20, 2023 10:37 AM

To: ArdensComments <ardenscomments@bowman.com>
Subject: [EXTERNAL] Comment for Connecting the Ardens

I'm not sure this falls within the scope of the Comment for Connecting the Ardens plan, however, I would like to request a street light at the intersection of Upper Greenbriar Rd and Harvey. It is overgrown with vegetation and making the turn onto Upper Greenbriar from Harvey requires a leap of faith at night. It is very hard to see the road.

Thank you, Don Lipari

From: James Schwaber

Sent: Friday, June 23, 2023 9:22 AM

To: Randy Waltermyer < rwaltermyer@bowman.com>

Cc: Mary Brent Whipple

Subject: [EXTERNAL] Re: Post presentation

Dear Mr. Waltermyer,

My name is Mary-Brent Whipple and I live in Ardencroft, Delaware along Veale Rd. I was unable to attend the last presentation due to being out of state and have had not been able to use the commentary site post presentation, but did attend the first two. I plan to be at Monday's meeting and wanted to contact you via my husband's computer to ask questions and express concerns.

I do feel that the traffic calming ideas presented are both creative and will hopefully work, especially placement of 25 mph notices at the beginning of entrances to the Ardens and the visual bump outs and crossings. You should know that most people I've talked to and at the meetings seemed positively disposed to the proposals. I do wish this aspect of the plan could be separated and voted on separately from the "paths" and sidewalk issue.

I have lived in both Arden and Ardencroft for 43 years and feel the proposal regarding Harvey and Veale roads is a solution looking for a problem especially considering expense (I pay federal taxes), disruption, appearance and traditions. When I said to Ben Gruswitz that I would be and have been happy for a foot path to be used in front of our yard I meant a ground "path", not the permeable asphalted photo I was sent with a five foot greenspace before the road. There are a number of questions which I expect may be asked which people are not clear about including myself as follows:

- 1. What are the ADA requirements for paths
- 2. Are paths meant to be "multiuse" or truly foot paths
- 3. Who is responsible for maintenance of sidewalks and paths
- 4. What are the requirements for keeping snow and leaves off sidewalks and paths and who is responsible for doing this
- 5. What legal liabilities come with a path or sidewalk on State land on your property

You may or may not know that in the Ardens paths mean a very different thing than an asphalted surface. While attempts are being made to slow traffic using visual means, cutting down trees which would be required for paths/sidewalks on Veale and Harvey roads open up the vista and create the opposite effect.

Please understand that these are not concerns expressed by someone who may be directly affected, but that I would still have them about any area in the Ardens. Residents have a very strong feeling about maintaining what makes us different and unique from the developments around us and would like to maintain this. I hope you are able to take these comments under serious consideration and will be seeing you Monday night.

Sincerely,

Mary-Brent Whipple