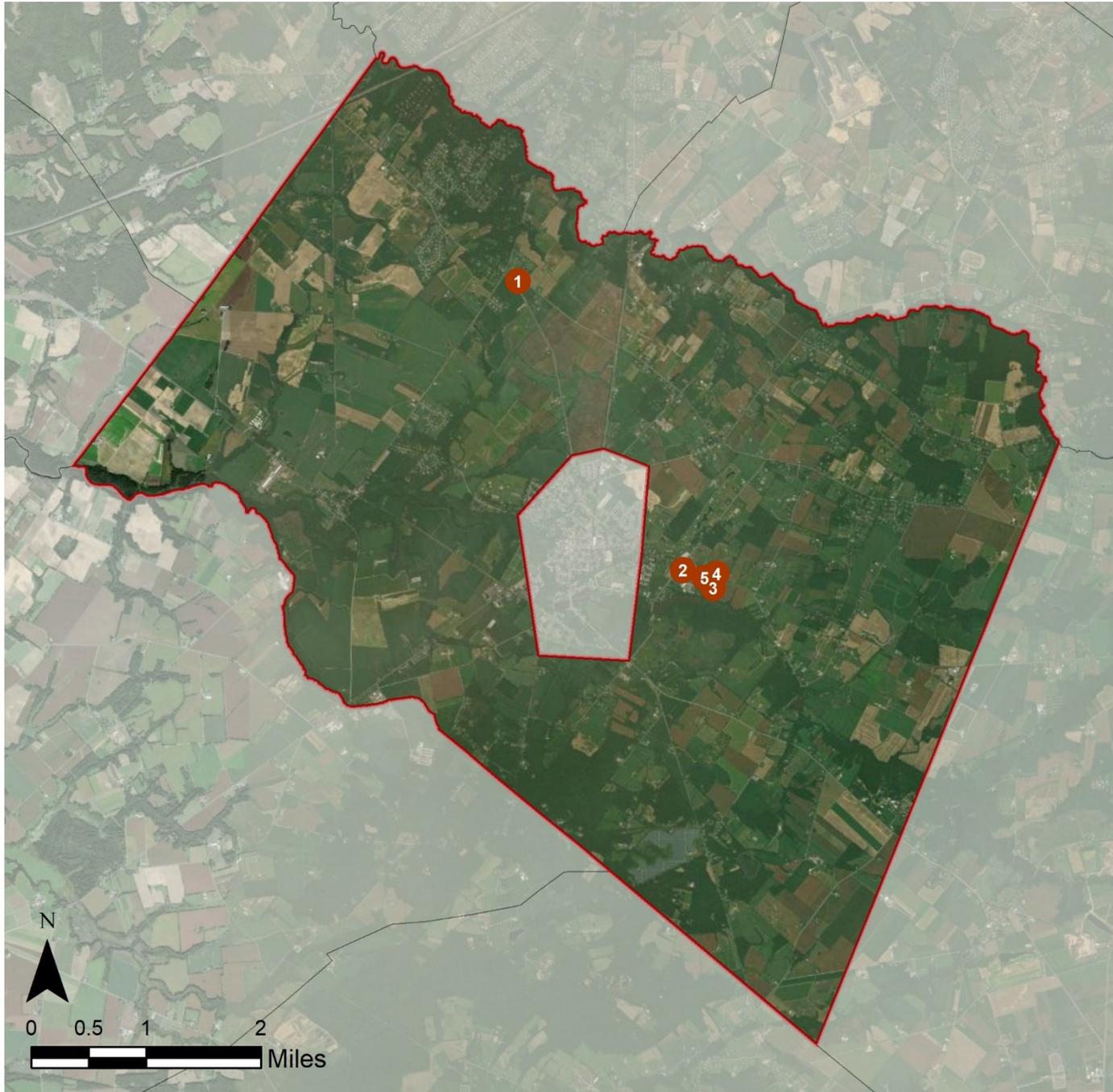


PILESGROVE TOWNSHIP: GREEN INFRASTRUCTURE SITES



SITES WITHIN THE OLDMANS CREEK SUBWATERSHED

1. Hope Community Church

SITES WITHIN THE SALEM RIVER SUBWATERSHED

2. Conoco Gas Station
3. J&B Engel Engineering Surveyors
4. Nick's Pizzeria
5. Zane Western Apparel

HOPE COMMUNITY CHURCH



Subwatershed: Oldmans Creek
Site Area: 214,710 sq. ft.
Address: 3 Point Airy Road
Pilesgrove, NJ 08098
Block and Lot: Block 8, Lot 6.01

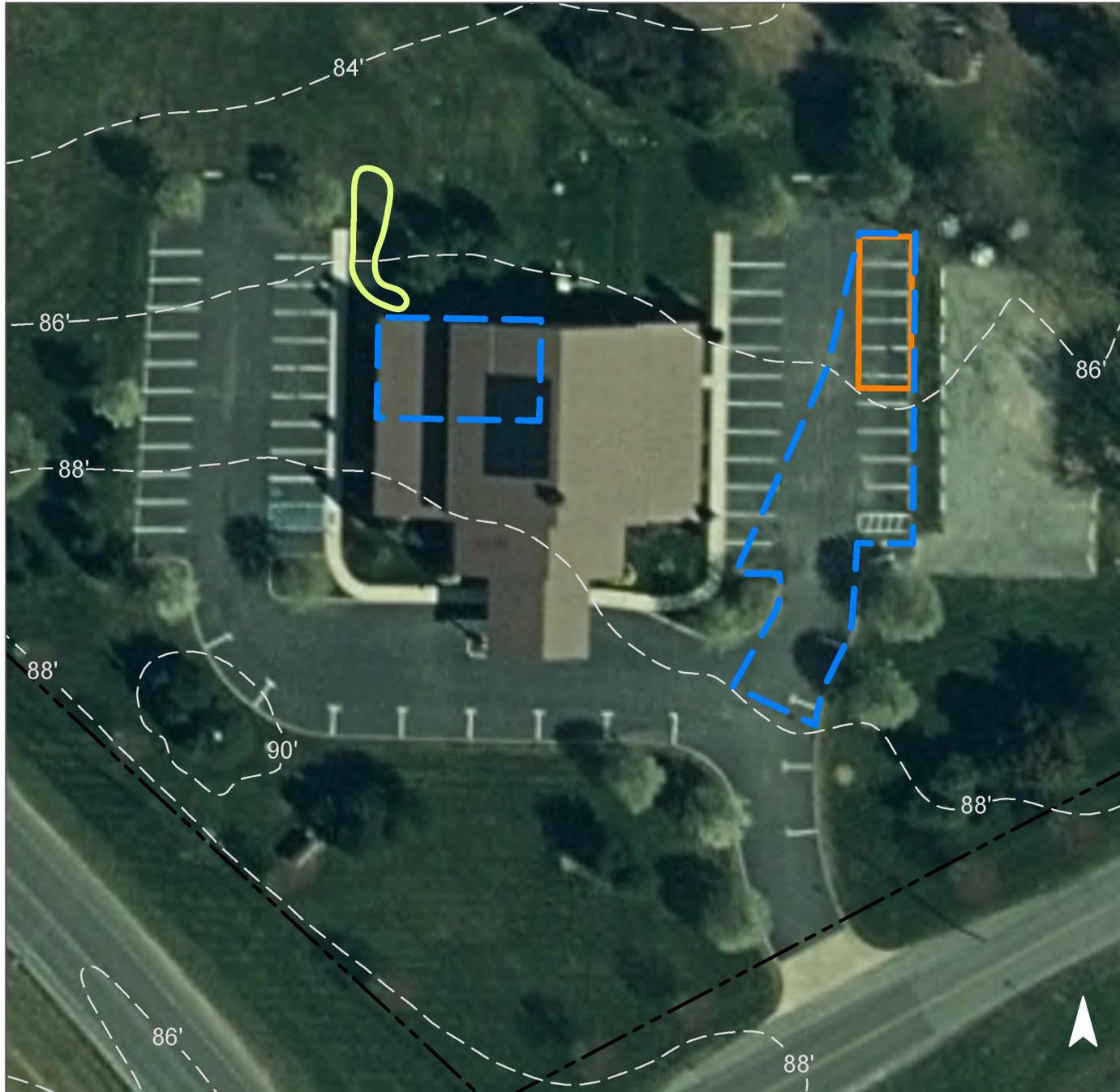


Parking spaces in the parking lot to the east of the building can be converted to porous pavement to capture and infiltrate stormwater runoff from the parking lot. A rain garden can be installed to the northwest of the building to capture, treat, and infiltrate stormwater runoff from the roof. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
20	43,740	2.1	22.1	200.8	0.034	1.20

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.044	7	3,220	0.12	425	\$2,125
Pervious pavement	0.125	21	9,070	0.34	900	\$22,500

GREEN INFRASTRUCTURE RECOMMENDATIONS



Hope Community Church

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



CONOCO GAS STATION



Subwatershed: Salem River
Site Area: 50,855 sq. ft.
Address: 1170 US Highway 40
Pilesgrove, NJ 08098
Block and Lot: Block 38, Lot 1



A rain garden can be installed to the east of the parking lot to capture, treat, and infiltrate stormwater runoff from the pavement. A preliminary soil assessment suggests that the soils have suitable drainage characteristics for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
82	41,470	2.0	20.9	190.4	0.032	1.14

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.215	36	15,590	0.59	2,065	\$10,325

GREEN INFRASTRUCTURE RECOMMENDATIONS



Conoco Gas Station

-  bioretention system
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



J&B ENGEL ENGINEERING SURVEYORS



Subwatershed: Salem River
Site Area: 57,780 sq. ft.
Address: 1196 US Highway 40
Pilesgrove, NJ 08098
Block and Lot: Block 38, Lot 2.02



A rain garden can be installed east of the parking lot to capture, treat, and infiltrate stormwater runoff from the pavement. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
48	27,620	1.3	13.9	126.8	0.022	0.76

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.057	10	4,150	0.16	550	\$2,750

GREEN INFRASTRUCTURE RECOMMENDATIONS



**J&B Engel Engineering
Surveyors**

-  bioretention system
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



NICK'S PIZZERIA



Subwatershed: Salem River

Site Area: 20,115 sq. ft.

Address: 1197 US Highway 40
Pilesgrove, NJ 08098

Block and Lot: Block 40, Lot 15



A rain garden can be installed west of the parking lot to capture, treat, and infiltrate stormwater runoff from the pavement. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
47	9,535	0.5	4.8	43.8	0.007	0.26

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.057	10	4,150	0.16	550	\$2,750

GREEN INFRASTRUCTURE RECOMMENDATIONS



Nick's Pizzeria

-  bioretention system
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



ZANE WESTERN APPAREL



Subwatershed: Salem River

Site Area: 54,250 sq. ft.

Address: 1190 US Highway 40
Pilesgrove, NJ 08098

Block and Lot: Block 38, Lot 2.03



Parking spaces in the parking lot to the north of the building can be converted to porous pavement to capture and infiltrate stormwater runoff from the parking lot and rooftop. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
56	30,110	1.5	15.2	138.2	0.023	0.83

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Pervious pavement	0.220	37	15,960	0.60	1,800	\$45,000

GREEN INFRASTRUCTURE RECOMMENDATIONS



Zane Western Apparel

-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



Summary of Existing Conditions

Subwatershed/Site Name/Total Site Info/GI Practice	Area (ac)	Area (SF)	Block	Lot	I.C. %	I.C. Area (ac)	I.C. Area (SF)	Existing Annual Loads (Commercial)			Runoff Volumes from I.C.		Runoff Volumes from I.C.	
								TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)	Water Quality Storm (1.25" over 2-hours)	Annual (cu.ft.)	Water Quality Storm (1.25" over 2-hours)	Annual (Mgal)
											(cu.ft.)		(Mgal)	
OLDMANS CREEK SITES	4.93	214,710				1.00	43,740	2.1	22.1	200.8	4,556	160,380	0.034	1.20
1 Hope Community Church Total Site Info	4.93	214,710	8	6.01	20	1.00	43,740	2.1	22.1	200.8	4,556	160,380	0.034	1.20
SALEM RIVER SUBWATERSHEAD SITES	4.20	183,000				2.50	108,735	5.2	54.9	499.2	11,327	398,695	0.085	2.98
2 Conoco Gas Stations Total Site Info	1.17	50,855	38	1	82	0.95	41,470	2.0	20.9	190.4	4,320	152,057	0.032	1.14
3 J & B Engel Engineering Surveyors Total Site Info	1.33	57,780	38	2.02	48	0.63	27,620	1.3	13.9	126.8	2,877	101,273	0.022	0.76
4 Nick's Pizzeria Total Site Info	0.46	20,115	40	15	47	0.22	9,535	0.5	4.8	43.8	993	34,962	0.007	0.26
5 Zane Western Apparel Total Site Info	1.25	54,250	38	2.03	56	0.69	30,110	1.5	15.2	138.2	3,136	110,403	0.023	0.83

Summary of Proposed Green Infrastructure Practices

Subwatershed/Site Name/Total Site Info/GI Practice	Potential Management Area		Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Max Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cfs)	Size of BMP	Unit Cost (\$/unit)	Unit	Total Cost (\$)	I.C. Treated %
	Area (SF)	Area (ac)									
OLDMANS CREEK SITES	6,515	0.15	0.170	28	12,290	0.46				\$24,625	15%
1 Hope Community Church											
Bioretention system	1,705	0.04	0.044	7	3,220	0.12	425	\$5	SF	\$2,125	4%
Pervious pavement	4,810	0.11	0.125	21	9,070	0.34	900	\$25	SF	\$22,500	11%
Total Site Info	6,515	0.15	0.170	28	12,290	0.46				\$24,625	15%
SALEM RIVER SUBWATERSHEAD SITES	21,510	0.49	0.560	94	40,580	1.53				\$61,325	20%
2 Conoco Gas Stations											
Bioretention system	8,260	0.19	0.215	36	15,590	0.59	2,065	\$5	SF	\$10,325	20%
Total Site Info	8,260	0.19	0.215	36	15,590	0.59				\$10,325	20%
3 J & B Engel Engineering Surveyors											
Bioretention system	2,200	0.05	0.057	10	4,150	0.16	550	\$5	SF	\$2,750	8%
Total Site Info	2,200	0.05	0.057	10	4,150	0.16				\$2,750	8%
4 Nick's Pizzeria											
Bioretention system	2,590	0.06	0.067	11	4,880	0.18	650	\$5	SF	\$3,250	27%
Total Site Info	2,590	0.06	0.067	11	4,880	0.18				\$3,250	27%
5 Zane Western Apparel											
Pervious pavement	8,460	0.19	0.220	37	15,960	0.60	1,800	\$25	SF	\$45,000	28%
Total Site Info	8,460	0.19	0.220	37	15,960	0.60				\$45,000	28%