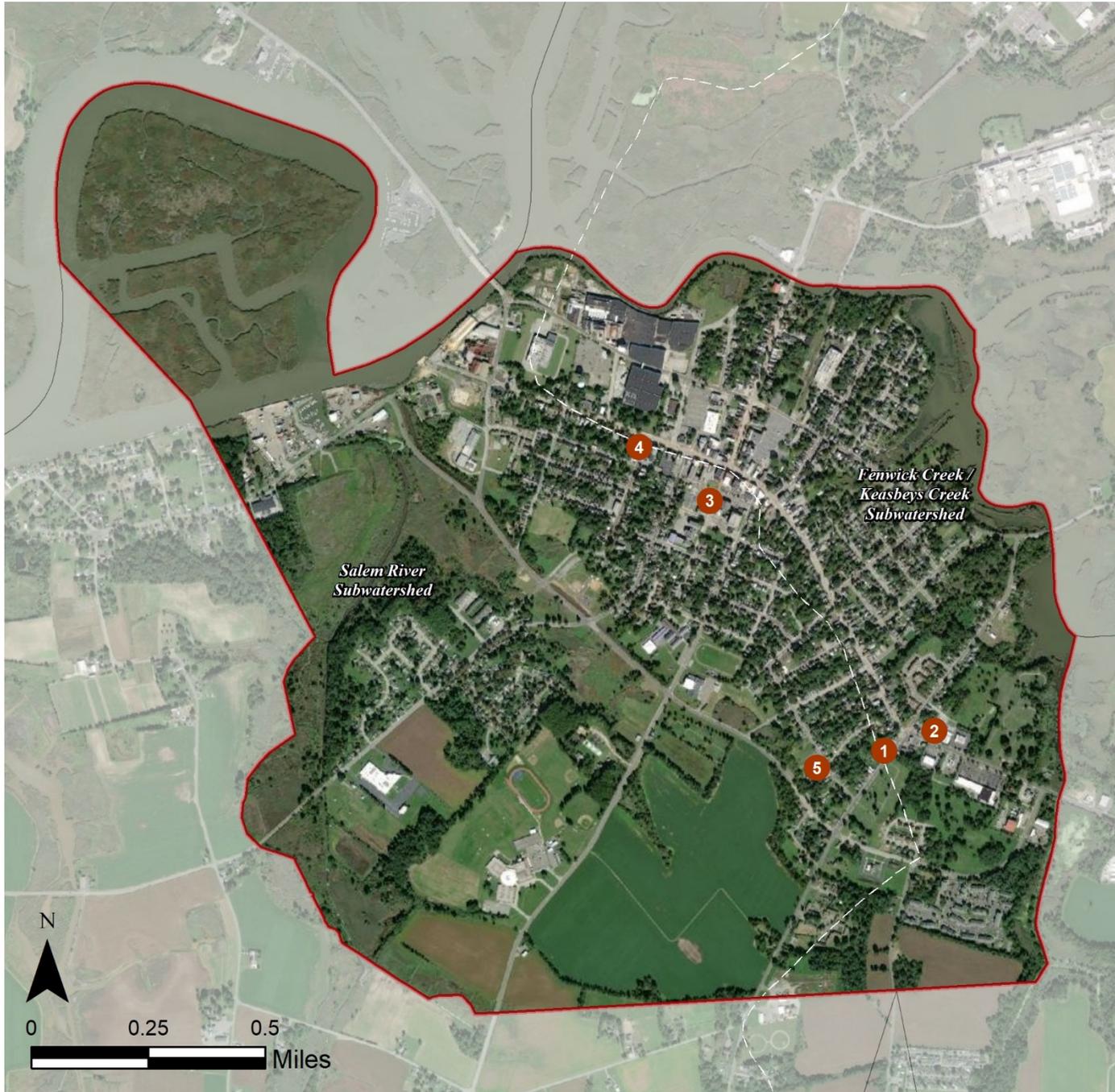


SALEM CITY: GREEN INFRASTRUCTURE SITES



SITES WITHIN THE FENWICK CREEK/ KEASBEYS CREEK SUBWATERSHED

1. Mount Pisgah AME Church
2. Spirit Life Fellowship Church

SITES WITHIN THE SALEM RIVER SUBWATERSHED

3. City of Salem Municipal Annex
4. Salem Oak Diner
5. Tabernacle of Praise Holy Church

MOUNT PISGAH AME CHURCH



Subwatershed: Fenwick Creek /
Keasbeys Creek

Site Area: 44,570 sq. ft.

Address: 15 Yorke Street
Salem, NJ 08079

Block and Lot: Block 72, Lots 14 & 15

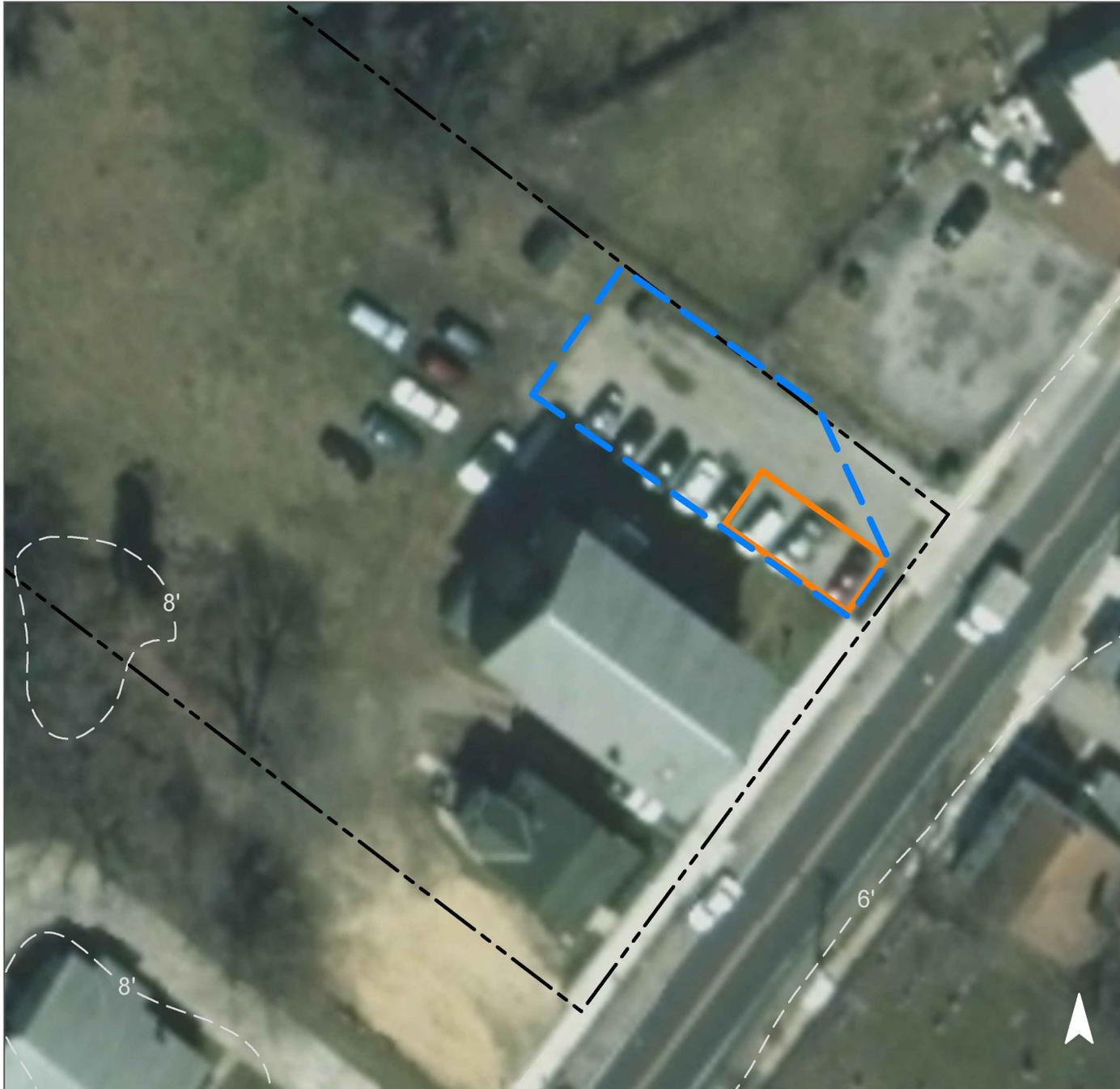


Parking spaces in the parking lot to the northeast side of the building can be converted to porous pavement to capture and infiltrate stormwater runoff from the parking lot. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green 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"
65	29,150	1.4	14.7	133.8	0.023	0.80

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	0.104	17	7,550	0.28	720	\$18,000

GREEN INFRASTRUCTURE RECOMMENDATIONS



Mount Pisgah AME Church

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



SPIRIT LIFE FELLOWSHIP CHURCH



Subwatershed: Fenwick Creek /
Keasbeys Creek

Site Area: 33,170 sq. ft.

Address: 424 East Broadway
Salem, NJ 08079

Block and Lot: Block 44
Lots 12, 13, 16, 17, 18

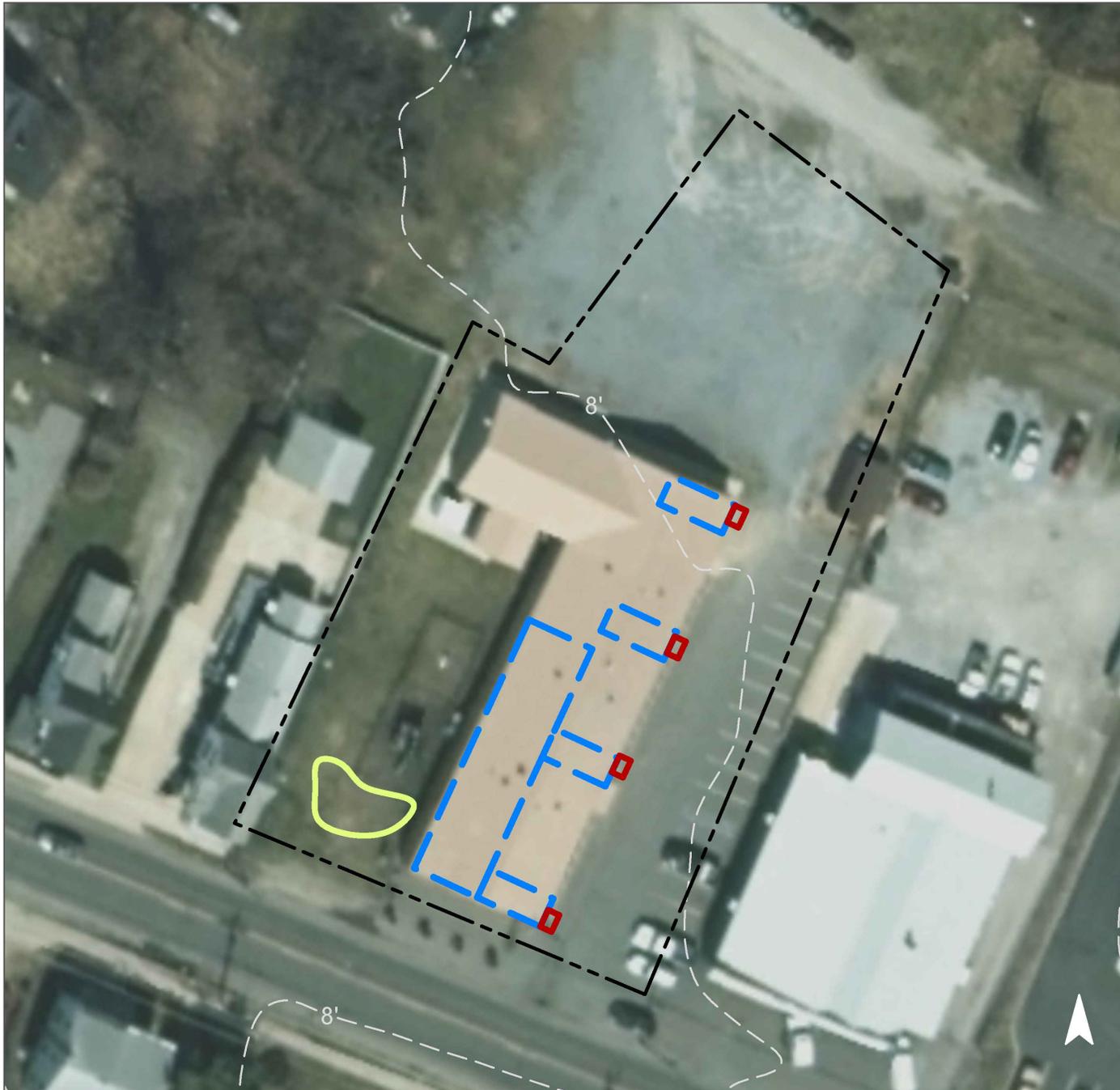


A rain garden can be installed southwest of the building to capture, treat, and infiltrate stormwater runoff from the roof. Downspout planter boxes can be constructed and installed at each of the four downspouts on the east side of the building to capture and treat the stormwater runoff from the rooftop. 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"
77	25,605	1.2	12.9	117.6	0.020	0.70

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	0.052	9	3,750	0.14	500	\$2,500
Planter boxes	n/a	2	n/a	n/a	3 (boxes)	\$3,000

GREEN INFRASTRUCTURE RECOMMENDATIONS



Spirit Life Fellowship Church

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



CITY OF SALEM MUNICIPAL ANNEX



Subwatershed: Salem River

Site Area: 19,100 sq. ft.

Address: 13 New Market Street
Salem, NJ 08079

Block and Lot: Block 57.01, Lots 6 - 10



A rain garden can be installed north of the building to capture, treat, and infiltrate rooftop runoff. 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"
83	15,880	0.8	8.0	72.9	0.012	0.44

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	0.021	3	1,510	0.06	200	\$1,000

GREEN INFRASTRUCTURE RECOMMENDATIONS



City of Salem Municipal Annex

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



SALEM OAK DINER



Subwatershed: Salem River

Site Area: 18,110 sq. ft.

Address: 113 West Broadway
Salem, NJ 08079

Block and Lot: Block 52, Lot 28



A strip of parking spaces on the south side of the building can be replaced with pervious pavement to capture and infiltrate stormwater from the parking lot. 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"
83	15,880	0.8	8.0	72.9	0.012	0.44

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	0.156	26	11,300	0.42	1,080	\$27,000

GREEN INFRASTRUCTURE RECOMMENDATIONS



Salem Oak Diner

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



TABERNACLE OF PRAISE HOLY CHURCH



Subwatershed: Salem River

Site Area: 32,710 sq. ft.

Address: 393 Magnolia Street
Salem, NJ 08079

Block and Lot: Blocks 87; 88
Lots 29; 2, 38, 39

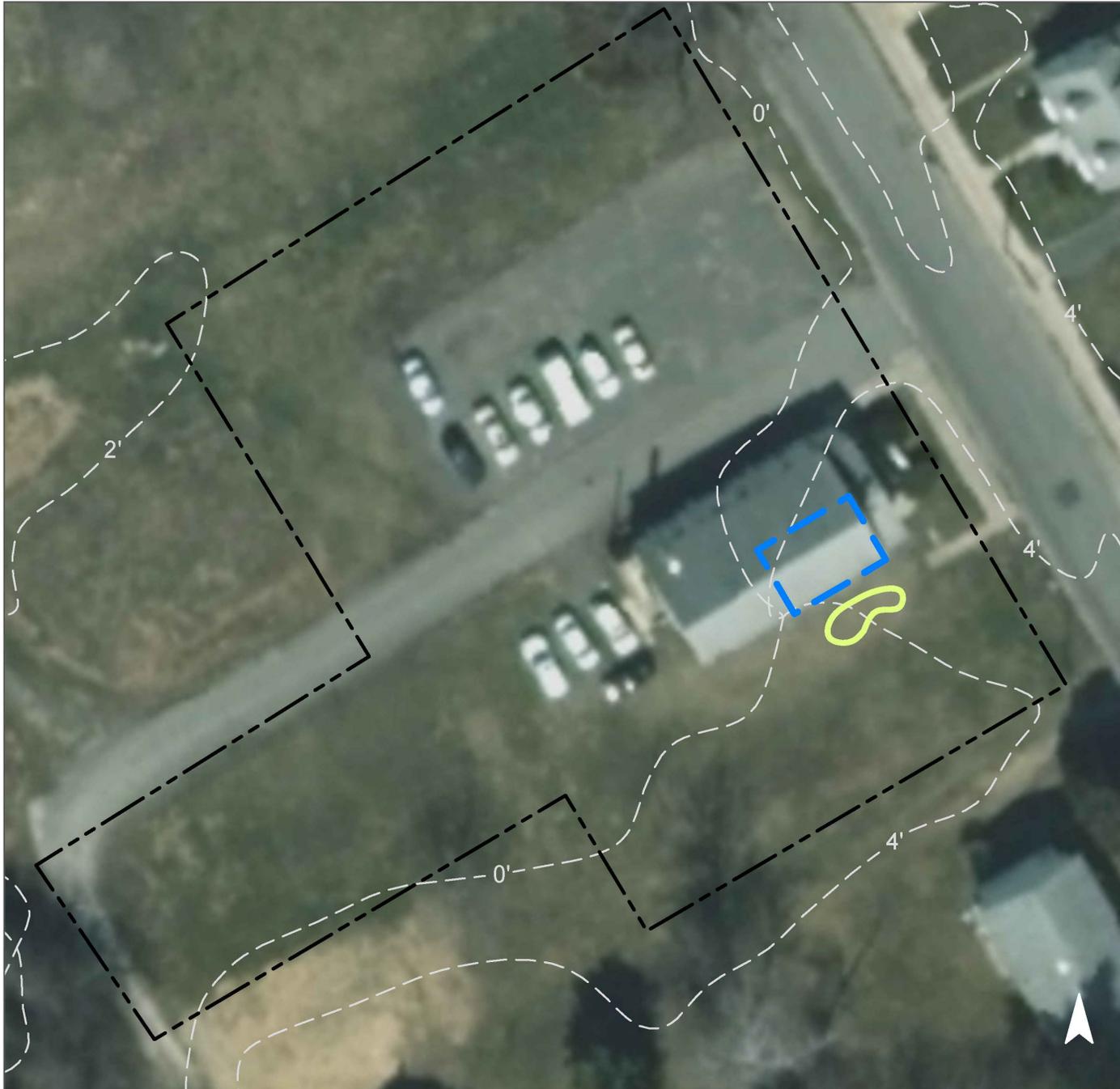


A rain garden can be installed southeast of the building to capture, treat, and infiltrate rooftop runoff. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

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"
46	14,940	0.7	7.5	68.6	0.012	0.41

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	0.014	2	990	0.04	130	\$650

GREEN INFRASTRUCTURE RECOMMENDATIONS



**Tabernacle of Praise
Holy Church**

-  bioretention system
-  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.)	(cu.ft.)	(Mgal)	(Mgal)
Fenwick Creek/Keasbeys Creek Sites	1.78	77,740				1.26	54,755	2.6	27.7	251.4	5,704	200,768	0.043	1.50
1 Mount Pisgah AME Church Total Site Info	1.02	44,570	72	14 & 15	65	0.67	29,150	1.4	14.7	133.8	3,036	106,883	0.023	0.80
2 Spirit Life Fellowship Church Total Site Info	0.76	33,170	44	12-13, 16-18	77	0.59	25,605	1.2	12.9	117.6	2,667	93,885	0.020	0.70
Salem River Sites	1.61	69,920				1.04	45,280	2.2	22.9	207.9	4,717	166,027	0.035	1.24
3 City of Salem Municipal Annex Total Site Info	0.44	19,100	57.01	6-10'	83	0.36	15,880	0.8	8.0	72.9	1,654	58,227	0.012	0.44
4 Salem Oak Diner Total Site Info	0.42	18,110	52	28	80	0.33	14,460	0.7	7.3	66.4	1,506	53,020	0.011	0.40
5 Tabernacle of Praise Holy Church Total Site Info	0.75	32,710	87; 88	29; 2, 38, 39	46	0.34	14,940	0.7	7.5	68.6	1,556	54,780	0.012	0.41

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)									
Fenwick Creek/Keasbeys Creek Sites	6,665	0.15	0.156	29	11,300	0.42				\$24,000	12%
1 Mount Pisgah AME Church											
Pervious pavement	4,000	0.09	0.104	17	7,550	0.28	720	\$25	SF	\$18,000	14%
Total Site Info	4,000	0.09	0.104	17	7,550	0.28				\$18,250	14%
2 Spirit Life Fellowship Church											
Bioretention system	1,990	0.05	0.052	9	3,750	0.14	500	\$5	SF	\$2,500	8%
Planter box (downspout)	675	0.02	n/a	2	n/a	n/a	3	\$1,000	box	\$3,000	3%
Total Site Info	2,665	0.06	0.052	11	3,750	0.14				\$5,750	10%
Salem River Sites	7,315	0.17	0.191	32	13,800	0.52				\$29,400	16%
3 City of Salem Municipal Annex											
Bioretention system	800	0.02	0.021	3	1,510	0.06	200	\$5	SF	\$1,000	5%
Total Site Info	800	0.02	0.021	3	1,510	0.06				\$1,250	5%
4 Salem Oak Diner											
Pervious pavement	5,990	0.14	0.156	26	11,300	0.42	1,080	\$25	SF	\$27,000	41%
Total Site Info	5,990	0.14	0.156	26	11,300	0.42				\$27,250	41%
5 Tabernacle of Praise Holy Church											
Bioretention system	525	0.01	0.014	2	990	0.04	130	\$5	SF	\$650	4%
Total Site Info	525	0.01	0.014	2	990	0.04				\$900	4%