

## UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS) FORM 1 -- Catchment Information

Subwatershed: Unnamed Tributary					
Location of Catchment Centroid on ADC Map:	Year: 2	000	Page: <u>17</u>	Grid:	K8
State Plane Coordinates of Outfall Location:	X: <u>1</u>	399388		Y: <u>482098</u>	
Closest Road Intersection to Outfall: Electric Ave	nue and Balo	lwin Aven	ue		
Outfall SDI ID or Outfall Description: Drains to sto	orm drain sys	tem that r	uns along Baldw	in Avenue	
Objective: Demonstration / Impairment(s) (Sheet	: 1) <u> </u>	Demonstr	ation		
Drainage Area (ac): 9.5	Impervi	ous Area	(ac): <u>6.6</u>		
Percent Impervious: 70%	Soil Re	charge F	actor (S): <u>0.3</u>	6	
WQ <sub>v</sub> (required): 0.54	Re <sub>v</sub> (ree	quired): <mark>(</mark>	).19		
Predominant Land Use: <u>commercial</u>	Mean D	Pepth to C	Ground Water:	Unknown	
Sanitary System: Septic Municipal Sewer	Water S	Supply:	On Site Well	Public Water	
Storm Drainage System Within Catchment	t				
Piped: 100% Open Channels:	0%				
Area Drained by System: 100%					
Location in Catchment: Headwaters Middle	Lower				
Open Channel Lining- Vegetation: 0%	Riprap:	0%	Concrete:	0% Other:	0%
Existing IMP(s) / BMP(s)					
SDI ID: Type (number from Shee	ets 4 & 5):		Age:		
Closest Road Intersection to IMP / BMP:					
Catchment Area Treated (ac) :	Perc	entage C	Catchment Trea	ated:	
WQ <sub>v</sub> Provided: $\square$ YES $\square$ NO Re <sub>v</sub> Provid	ed: 🛛 YES	NO	C <sub>p</sub> Provide	ed: YES	NO
SDI ID: Type (number from Shee	ets 4 & 5):		Age:		
Closest Road Intersection to IMP / BMP:					
Catchment Area Treated (ac) :	Perc	entage C	Catchment Trea	ated:	
WQ <sub>v</sub> Provided: $\Box$ YES $\Box$ NO Re <sub>v</sub> Provid	ed: YES	NO	C <sub>p</sub> Provide	ed: YES	NO
SDI ID: Type (number from Shee	ets 4 & 5): _		Age:		
Closest Road Intersection to IMP / BMP:					
Catchment Area Treated (ac) :	Perc	entage C	Catchment Trea	ated:	
WQ <sub>v</sub> Provided: $\Box$ YES $\Box$ NO Re <sub>v</sub> Provid	ed: YES	NO	C <sub>p</sub> Provide	ed: YES	NO

## UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS) FORM 1 -- Catchment Information (concluded)

CATCHMENT SUMMARY					
$WQ_v$ (provided):	0.316	Re <sub>v</sub> (provided) :	0.316		
Area Treated (ac):	8.68	Impervious Area Treated (ac):	6.36		
Area Treated (%):	91%	Impervious Area Treated (%):	96%		

#### Comments

## UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS) FORM 2 -- Site Information

Site Name: Federal Express	Address: Baldwin Avenue, Crofton, MD
Site Owner: Federal Express	
State Plane Coordinates of Site Centroid:	X:         1399392         Y:         482126         Date:         5/7/03
Personnel: PM	Weather: sunny, 75F deg
Area (ac): 9.1	Impervious Area (ac): 6.5
Percent Impervious: 71%	Soil Recharge Factor (S): 0.36
WQ <sub>v</sub> (required): 0.52	Re <sub>v</sub> (required): 0.19
Property Area (ac): <u>9.1</u>	Property Area Included in Site: 100%
Amount of Catchment Occupied by Site: 96%	_
Storm Drainage System Within Site	
Piped: <u>100%</u> Open Channels: <u>09</u>	Area Drained by System: <u>100%</u>
Open Channel Lining - Vegetation: 0% Riprap	0%         Concrete:         0%         Other:         0%
Existing IMP(s) / BMP(s) (Indentified on Page	1, FORM 1, Catchment Information)
SDI ID: Conditio	Dn: 🗌 Excellent 🔲 Good 🔛 Average 🔛 Fair 🔛 Poor
	Dn: Excellent Good Average Fair Poor
	Dn: 🗌 Excellent 🔲 Good 🔛 Average 🔛 Fair 🔛 Poor
Site Information	
Type of Pavement:         Image: Bituminous         Image: Concrete         Image:	Gravel Grid Pavers Other
Pavement Condition:	Average Fair Poor
Underdrains can be easily directed to existing stor	m drains or daylighted: VES INO
Gutter/Exterior Downspouts Present:	✓ NO
Roof Connected Directly to Storm Drain: VES	□ NO
Roof Drains onto Impervious Surface:	Ом
Obvious Existing Drainage Problems:	ensive 🔲 Moderate 🗌 Average 🗌 Limited 🗹 None
Steep Slopes Present:   Extensive Moderation	ate Average 🖌 Limited 🗌 None
Existing Landscaping:	ate Average Limited None
Mature / Specimen Trees:	ate Average Limited 🗹 None
Area Available for Aboveground BMPs:	ensive 🗹 Moderate 🗌 Average 🗌 Limited 🗌 None
Existing Cover of Potential Aboveground BMP Loc	Cations: Grass J Landscaped Gravel Other Pervious

## UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS) FORM 2 -- Site Information (concluded)

Commercial / Instit	tutional		
Islands Present: VE	ES 🔲 NO	Curb Present Around Island:	YES NO
Ground Level of Islan	d Relative to Paveme	ent: Above Equal Below	
Island Landscaping:	☐ Impervious ☐ Bare	e Earth Gravel Grass Mulch Herb Trees (2 - 6 in. DBH) Trees (>6 in. DB	baceous Plants 🗹 Shrubs H)
Trees have sufficient	spacing to allow IMP	S YES NO	
Parking area that can	be directed to poten	tial treatment area with little grading:	90%
SITE SUMMARY			
$WQ_v$ (provided) :	0.316	$Re_v$ (provided):	0.316
Area Treated (ac) :	8.68	Impervious Area Treated (ac):	6.36
Area Treated (%) :	95%	Impervious Area Treated (%):	98%
Photographs			
No. <u>695</u>	Description:	looking east along south side of property	
No. <u>696</u>	Description:	looking north along west side of property	
No. <u>697</u>	Description:	looking south along west side of property	
No. <u>698</u>	Description:	looking east along north side of property	
No. <u>699</u>	Description:	looking south along east side of site	
No. <u>700</u>	Description: looking west along north side of site		
No. <u>701</u>	Description: looking west along south side of site		
No. <u>702</u>	Description:	looking north along east side of site	
No	Description:		

Description:

**Comments** Trucks must access building on all four sides so pavement must be durable.

No.

## UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS) FORM 2 -- Site Information





695







697







699

## UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS) FORM 2 -- Site Information (concluded)





702

New LID IMP ☑ SWM BMP Retrofit □ New	SWM BMP 🗆	Type (Sheets 4 & 5):	7
State Plane Coordinates of IMP / BMP Centroid:	X: <u>1399383</u>	Y	482102
Sketch Location of Footprint (with Approximate Dime	nsions) and Drainage	e Boundary on Site N	lap
Identify all Impairments Addressed by Recommendat	ion (Sheet 1): <u>1</u>	, 4, 7, 16	
Treatment Area Ownership:	Utility ROW County	Other Government	Private
Infrastructure / Structures / Buildings Impacted:	YES NO		
Limited Impact to Adjacent Properties:	0		
Area Accessible for Construction:			
Area Accessible for Maintenance:			
Limited Permitting Issues: VES NO			
Jurisdictional Wetlands Impacted:			
Forest Retention Area Impacted:			
Conservation Easement Impacted:			
Utilities Present: None Natural Gas Electric Tel	ephone 🗌 Cable 🔲 Wat	er 🗌 Sewer 🗹 Other	A/C
Utilities Impacted: 🗹 None 🗌 Natural Gas 🗌 Electric 🗌 Tel	ephone 🗌 Cable 🗌 Wat	er Sewer Other	
Impacted Utilities: Above Gound Underground			
Critical Area Impacted: YES VNO			
Mature / Specimen Trees Impacted:			
Existing Landscaping Impacted:			
Underdrain Needed: YES VNO Under	erdrains Can Dischar	ge: □yes □no	
Soils are Suitable: TYES NO Grou	nd Water Table Leve	el Suitable: 🔲 YES	NO
Estimate IMP / BMP drainage area included on site:	<u>2.6</u> a	C	100%
Retrofit of Existing SWM BMP			
SDI ID:	Add Forebay:	YES NO	
Modify Outlet Stucture:	Add Aquatic Bench	I: YES NO	
Grade Bottom of Facility:	Plant Native Veget	ation: YES NO	
Provide Additional Storage Volume: YES NO			
Excavation / Raise the Embankment:	10		

IMP / BM	IP SUM	MARY		
WQ <sub>v</sub> (prov	/ided):	undetermined		Re <sub>v</sub> (provided): 0
Area Treated (ac): 2.6			Impervious Area Treated (ac): <u>2.6</u>	
Photogra	aphs			
No.	703		Description:	front of building (west side)
No.			Description:	

# **Comments** Roof on several levels may complicate design/installation.

IMP size = 111,216 sq ft

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New LID IMP ☑ SWM BMP Retrofit □ New	SWM BMP	Type (Sheets 4 & 5	i): <u>38</u>
State Plane Coordinates of IMP / BMP Centroid:	X: <u>1399044</u>	-	Y: 481868
Sketch Location of Footprint (with Approximate Dime	ensions) and Draina	ige Boundary on Site	Мар
Identify all Impairments Addressed by Recommendation	tion (Sheet 1):	1, 2, 3, 4, 7, 16	
Treatment Area Ownership: Transportation ROW	Utility ROW Cou	nty 🗌 Other Governmen	nt 🔽 Private
Infrastructure / Structures / Buildings Impacted:	YES 🔽 NO		
Limited Impact to Adjacent Properties:	10		
Area Accessible for Construction: VES NO			
Area Accessible for Maintenance: VES INO			
Limited Permitting Issues: VES INO			
Jurisdictional Wetlands Impacted:			
Forest Retention Area Impacted:			
Conservation Easement Impacted:			
Utilities Present: Vone Natural Gas Electric Tel	ephone Cable V	Vater Sewer Othe	er
Utilities Impacted: Vone Natural Gas Electric Te	lephone 🗌 Cable 🗌 V	Vater Sewer Othe	er
Impacted Utilities: Above Gound Underground			
Critical Area Impacted: YES VO			
Mature / Specimen Trees Impacted:			
Existing Landscaping Impacted:			
Underdrain Needed: YES NO Under	erdrains Can Discha	arge: ☑YES □NO	
Soils are Suitable: VES NO Grou	Ind Water Table Le	vel Suitable: VES	NO
Estimate IMP / BMP drainage area included on site:	0.06	ac	100%
Retrofit of Existing SWM BMP			
SDI ID:	Add Forebay:	YES NO	
Modify Outlet Stucture:  VES NO	Add Aquatic Ben	ch: □yes □no	
Grade Bottom of Facility: YES NO	Plant Native Veg	etation: TYES NO	)
Provide Additional Storage Volume: TYES NO			
Excavation / Raise the Embankment:	NO		

IMP / BMP SUM	IARY	
$WQ_v$ (provided):	0.005	Re <sub>v</sub> (provided): 0.005
Area Treated (ac):	0.06	Impervious Area Treated (ac): 0.06

#### Photographs

No.	704	Description:	looking south at IMP site
No.		Description:	

# CommentsDue to high volume of FEDEX vehicle travel, directing flow using raised bituminous"speed bumps" is not recommended. Use trench drains.IMP size = 415 sq ft



New LID IMP ☑ SWM BMP Retrofit □	New SWM BMP	] Туре (	(Sheets 4 & 5):	38
State Plane Coordinates of IMP / BMP Centro	oid: X: <u>13</u>	99038	Y:	481956
Sketch Location of Footprint (with Approximat	te Dimensions) and [	Drainage Boun	dary on Site Ma	ар
Identify all Impairments Addressed by Recom	mendation (Sheet 1)	1, 2, 3,	4, 7, 16	
Treatment Area Ownership:	DW Utility ROW	County	Other Government	✓ Private
Infrastructure / Structures / Buildings Impacted	d: □yes ☑no			
Limited Impact to Adjacent Properties:	ES 🔲 NO			
Area Accessible for Construction:	NO			
Area Accessible for Maintenance:	NO			
Limited Permitting Issues: VES NO				
Jurisdictional Wetlands Impacted:	✓ NO			
Forest Retention Area Impacted:	✓ NO			
Conservation Easement Impacted:	✓ NO			
Utilities Present: I None Natural Gas	ric 🔲 Telephone 🔲 Cable	e 🗌 Water 🗌	Sewer Other	
Utilities Impacted: I None Natural Gas	ric 🔲 Telephone 🔲 Cable	e 🗌 Water 🗌	Sewer Other	
Impacted Utilities: Above Gound	round			
Critical Area Impacted: YES VINO				
Mature / Specimen Trees Impacted:	✓ NO			
Existing Landscaping Impacted:	NO			
Underdrain Needed: VES VO	Underdrains Can	Discharge: 🖸	YES NO	
Soils are Suitable: VES NO	Ground Water Tal	ole Level Suita	able: 🗸 YES [	NO
Estimate IMP / BMP drainage area included of	on site: 0.2	ac		100%
Retrofit of Existing SWM BMP				
SDI ID:	Add Foreba	ay: 🗌 yes	NO	
Modify Outlet Stucture:  YESNO	Add Aquati	c Bench: 🔲 y	ES 🔲 NO	
Grade Bottom of Facility: YES NO	Plant Nativ	e Vegetation:	YES NO	
Provide Additional Storage Volume:	ЛО			
Excavation / Raise the Embankment:	ES NO			

IMP / BMP SUMN	IARY	
$WQ_v$ (provided):	0.016	Re <sub>v</sub> (provided): 0.016
Area Treated (ac):	0.20	Impervious Area Treated (ac): 0.20

#### **Photographs**

No.	705	Description:	looking north
No.	706	Description:	looking south
No.		Description:	

CommentsDue to high volume of FEDEX vehicle travel, directing flow using raised bituminous"speed bumps" is not recommended. Use trench drains and curb cuts.IMP size = 1,356 sq ft





706

New LID IMP ☑ SWM BMP Retrofit □ New 3	SWM BMP 🗆	Type (Sheets 4 & 5)	: 38
State Plane Coordinates of IMP / BMP Centroid:	X: <u>1399047</u>	Y	482230
Sketch Location of Footprint (with Approximate Dimer	nsions) and Draina	ge Boundary on Site M	1ap
Identify all Impairments Addressed by Recommendation	on (Sheet 1):	1, 2, 3, 4, 7, 16	
Treatment Area Ownership:	Utility ROW Coun	ty Other Government	✓ Private
Infrastructure / Structures / Buildings Impacted:	YES 🔽 NO		
Limited Impact to Adjacent Properties:	)		
Area Accessible for Construction:			
Area Accessible for Maintenance:			
Limited Permitting Issues: VES NO			
Jurisdictional Wetlands Impacted:			
Forest Retention Area Impacted:			
Conservation Easement Impacted:			
Utilities Present:  None  Natural Gas Electric  Tele	phone Cable Wa	ater Sewer Other	
Utilities Impacted: Vone Natural Gas Electric Tele	phone 🗌 Cable 🗌 Wa	ater Sewer Other	
Impacted Utilities: Above Gound Underground			
Critical Area Impacted: YES VO			
Mature / Specimen Trees Impacted:YESNO			
Existing Landscaping Impacted:			
Underdrain Needed: VES VNO Unde	rdrains Can Discha	rge: ☑ YES □ NO	
Soils are Suitable: VES NO Group	nd Water Table Lev	el Suitable: VES	NO
Estimate IMP / BMP drainage area included on site:	0.28	ac	100%
Retrofit of Existing SWM BMP			
SDI ID:	Add Forebay: [	YES NO	
Modify Outlet Stucture:  YESNO	Add Aquatic Bend	h: □yes □no	
Grade Bottom of Facility: YES NO	Plant Native Vege	etation: YES NO	
Provide Additional Storage Volume: YES NO			
Excavation / Raise the Embankment: $\Box_{\text{YES}}$	0		

IMP / BMP SUMMARY			
WQ <sub>v</sub> (provided):	0.020	Re <sub>v</sub> (provided): 0.020	
Area Treated (ac):	0.28	Impervious Area Treated (ac): 0.25	

#### **Photographs**

No.	707	Description:	looking north
No.	708	Description:	looking south
No.		Description:	

CommentsDue to high volume of FEDEX vehicle travel, directing flow using raised bituminous"speed bumps" is not recommended. Use trench drains and curb cuts.IMP size = 1,718 sq ft





708

New LID IMP ☑ S	SWM BMP Retrofit	] New	SWM BMP [	⊐ ту	pe (Sheets	s 4 & 5): <mark>3</mark>	38
State Plane Coordin	nates of IMP / BMP C	entroid:	X: <u>13</u>	99188		Y:	482230
Sketch Location of F	-ootprint (with Appro>	kimate Dime	nsions) and l	Drainage B	oundary or	n Site Ma	р
Identify all Impairme	ents Addressed by Re	commendat	ion (Sheet 1)	): <u>1, 2,</u>	3, 4, 7, 16	6	
Treatment Area Own	nership: Transportat	ion ROW	Utility ROW	County	Other Go	vernment	✓ Private
Infrastructure / Struc	ctures / Buildings Imp	acted:	YES 🔽 NO				
Limited Impact to Ac	djacent Properties:	YES NO	С				
Area Accessible for	Construction:	YES NO					
Area Accessible for	Maintenance:	YES NO					
Limited Permitting Is	ssues: ☑YES ☐NO						
Jurisdictional Wetlar	nds Impacted:	YES 🔽 NO					
Forest Retention Are	ea Impacted:	YES 🔽 NO					
Conservation Easen	ment Impacted:	YES 🔽 NO					
Utilities Present:	None 🗌 Natural Gas 🔽	Electric Tele	ephone Cable	e 🔽 Water	Sewer	Other	
Utilities Impacted:	None 🗌 Natural Gas 🗌	Electric Tele	ephone 🗌 Cable	e 🗌 Water	Sewer	Other	
Impacted Utilities:	Above Gound	Inderground					
Critical Area Impacte	ed: □YES ☑NO						
Mature / Specimen	Trees Impacted:	YES 🔽 NO					
Existing Landscapin	ng Impacted:	YES NO					
Underdrain Needed	: ☑ YES □ NO	Unde	rdrains Can	Discharge:	VES	NO	
Soils are Suitable:	✓ YES □ NO	Grou	nd Water Ta	ble Level S	uitable:	VES	NO
Estimate IMP / BMP	odrainage area incluc	led on site:	0.5	5 <mark>6</mark> ac		_	100%
Retrofit of Existin	ng SWM BMP						
SDI ID:			Add Foreba	ay: □ <sub>YE</sub>	s 🔲 no		
Modify Outlet Stuctu	JINCE: YES NO		Add Aquati	c Bench:	YES N	10	
Grade Bottom of Fa	cility: TYES NO		Plant Nativ	e Vegetatio	on: 🛛 YES	□ NO	
Provide Additional S	Storage Volume:	es 🗌 no					
Excavation / Raise t	the Embankment:		Ю				

IMP / BMP SUMMARY				
WQ <sub>v</sub> (provided):	0.034	Re <sub>v</sub> (provided): 0.034		
Area Treated (ac):	0.56	Impervious Area Treated (ac): 0.42		

#### **Photographs**

No.	709	Description:	looking east
No.	710	Description:	looking west
No.		Description:	

CommentsDue to high volume of FEDEX vehicle travel, directing flow using raised bituminous"speed bumps" is not recommended. Use trench drains and curb cuts. Additional flat area may be<br/>obtained by converting existing parking spots.IMP size = 3,020 sq ft





New LID IMP ☑ SWM BMP Retrofit □ New S	WM ВМР 🗆	Type (Sheets 4 & 5):	38
State Plane Coordinates of IMP / BMP Centroid:	X: <u>1399360</u>	Y:	482317
Sketch Location of Footprint (with Approximate Dimens	ions) and Drainage	e Boundary on Site M	lap
Identify all Impairments Addressed by Recommendation	n (Sheet 1): <u>1</u>	, 2, 3, 4, 7, 16	
Treatment Area Ownership:	Jtility ROW County	Other Government	✓ Private
Infrastructure / Structures / Buildings Impacted:	S 🔽 NO		
Limited Impact to Adjacent Properties:			
Area Accessible for Construction:			
Area Accessible for Maintenance:			
Limited Permitting Issues: VES NO			
Jurisdictional Wetlands Impacted:			
Forest Retention Area Impacted:			
Conservation Easement Impacted:			
Utilities Present:	none 🗌 Cable 🗹 Wat	er Sewer Other	
Utilities Impacted: 🗹 None 🗌 Natural Gas 🗌 Electric 🔲 Teleph	none 🗌 Cable 🗌 Wat	er Sewer Other	
Impacted Utilities: Above Gound Underground			
Critical Area Impacted: YES VO			
Mature / Specimen Trees Impacted: TYES VO			
Existing Landscaping Impacted: VES NO			
Underdrain Needed: YES NO Underd	Irains Can Dischar	ge: 🗹 yes 🗌 no	
Soils are Suitable: VES NO Ground	d Water Table Leve	el Suitable: VES	NO
Estimate IMP / BMP drainage area included on site:	<u>0.37</u> a	с	100%
Retrofit of Existing SWM BMP			
SDI ID:	Add Forebay:	YES NO	
Modify Outlet Stucture: YES NO	Add Aquatic Bench	n: 🗌 yes 🗌 no	
Grade Bottom of Facility: TYES NO	Plant Native Veget	ation: YES NO	
Provide Additional Storage Volume: YES NO			
Excavation / Raise the Embankment:			

IMP / BMP SUMMARY				
$WQ_v$ (provided):	0.019	Re <sub>v</sub> (provided): 0.019		
Area Treated (ac):	0.37	Impervious Area Treated (ac): 0.24		

#### **Photographs**

No.	711	Description:	looking east
No.	712	Description:	looking west
No.		Description:	

CommentsDue to high volume of FEDEX vehicle travel, directing flow using raised bituminous"speed bumps" is not recommended. Use trench drains and curb cuts. Additional flat area may be<br/>obtained by converting existing parking spots.IMP size = 1,687 sq ft





712

New LID IMP ☑ SWM BMP Retrofit	New	SWM BMP C	] Ту	be (Sheets	4 & 5): <u>3</u>	8
State Plane Coordinates of IMP / BMP C	Centroid:	X: <u>13</u>	99655		Y:	482315
Sketch Location of Footprint (with Appro	oximate Dime	nsions) and E	Drainage B	oundary on	Site Map	)
Identify all Impairments Addressed by R	ecommendat	ion (Sheet 1)	: <u>1, 2,</u>	3, 4, 7, 16		
Treatment Area Ownership:	ation ROW	Utility ROW	County	Other Gove	ernment	✓ Private
Infrastructure / Structures / Buildings Imp	pacted:	YES 🔽 NO				
Limited Impact to Adjacent Properties:	YES N	0				
Area Accessible for Construction:	YES NO					
Area Accessible for Maintenance:	YES NO					
Limited Permitting Issues: VES NO	)					
Jurisdictional Wetlands Impacted:	YES 🔽 NO					
Forest Retention Area Impacted:	YES 🔽 NO					
Conservation Easement Impacted:	YES 🔽 NO					
Utilities Present: None Natural Gas	Z Electric Tele	ephone 🔲 Cable	✓ Water	Sewer	Other	
Utilities Impacted: Vone Natural Gas	Electric Tele	ephone 🔲 Cable	Water	Sewer	Other	
Impacted Utilities: Above Gound	Underground					
Critical Area Impacted: YES VO						
Mature / Specimen Trees Impacted: [	YES VNO					
Existing Landscaping Impacted: [	✓ YES □ NO					
Underdrain Needed: YES VO	Unde	rdrains Can I	Discharge:	✓ YES	NO	
Soils are Suitable: VES NO	Grou	nd Water Tab	ole Level S	uitable: 🔽	YES	NO
Estimate IMP / BMP drainage area inclu	ded on site:	0.8	<mark>9</mark> _ac		_	100%
Retrofit of Existing SWM BMP						
SDI ID:		Add Foreba	ay: 🛛 YES	S 🔲 NO		
Modify Outlet Stucture:	)	Add Aquatio	c Bench: [		)	
Grade Bottom of Facility:	)	Plant Native	e Vegetatio	on: 🛛 YES	NO	
Provide Additional Storage Volume:	YES 🗌 NO					
Excavation / Raise the Embankment:		10				

IMP / BMP SUM		
$WQ_v$ (provided):	0.047	Re <sub>v</sub> (provided): 0.047
Area Treated (ac):	0.89	Impervious Area Treated (ac): 0.47

#### Photographs

No.	713	Description:	looking east
No.	714	Description:	looking west
No.		Description:	

CommentsDue to high volume of FEDEX vehicle travel, directing flow using raised bituminous"speed bumps" is not recommended. Use trench drains and curb cuts. Additional flat area may be<br/>obtained by converting existing parking spots.IMP size = 3,428 sq ft





714

New LID IMP ☑ S	SWM BMP Retrofit 🛛	New SWM BMP	🗆 Ту	pe (Sheets	s 4 & 5): <u>(</u>	39	
State Plane Coordina	ates of IMP / BMP Cent	roid: X: <u>1</u>	399700		Y:	48218	39
Sketch Location of F	Footprint (with Approxim	ate Dimensions) and	Drainage B	oundary o	n Site Ma	ıp	
Identify all Impairme	nts Addressed by Reco	mmendation (Sheet 1	): <u>1, 2</u>	, 3, 4, 7, 16	6		
Treatment Area Owr	nership: Transportation	ROW Utility ROW	County	Other Go	overnment	✓ Private	
Infrastructure / Struc	ctures / Buildings Impact	ed: 🗌 YES 🗹 NO					
Limited Impact to Ad	ljacent Properties:	YES NO					
Area Accessible for	Construction:	NO					
Area Accessible for I	Maintenance: VES	NO					
Limited Permitting Is	SUES: VES NO						
Jurisdictional Wetlan	nds Impacted:	✓ NO					
Forest Retention Are	ea Impacted:	✓ NO					
Conservation Easer	nent Impacted:	✓ NO					
Utilities Present:	None 🗌 Natural Gas 🗹 Ele	ctric 🔲 Telephone 🔲 Cab	le 🗌 Water	Sewer	Other		
Utilities Impacted:	None 🗌 Natural Gas 🗌 Ele	ctric 🔲 Telephone 🗌 Cab	le 🗌 Water	Sewer	Other		
Impacted Utilities: [	Above Gound	rground					
Critical Area Impacte	ed: 🗌 yes 🗹 no						
Mature / Specimen T	Trees Impacted:	s 🔽 NO					
Existing Landscaping	g Impacted:	s 🔲 NO					
Underdrain Needed:	YES VNO	Underdrains Can	Discharge:	YES	NO		
Soils are Suitable:	YES NO	Ground Water Ta	able Level S	Suitable:	✓ YES	NO	
Estimate IMP / BMP	drainage area included	on site: 0.	<mark>42</mark> ac		-	1009	%
Retrofit of Existin	g SWM BMP						
SDI ID:		Add Foreb	ay: □ <sub>YE</sub>	s 🔲 NO			
Modify Outlet Stuctu	I <b>re:</b> YES NO	Add Aqua	tic Bench:		NO		
Grade Bottom of Fac	cility: YES NO	Plant Nativ	ve Vegetati	on: 🛛 YES	□ NO		
Provide Additional S	storage Volume: YES	NO	-				
Excavation / Raise th	he Embankment:	YES NO					

IMP / BMP SUMMARY	
WQ <sub>v</sub> (provided): 0.025	Re <sub>v</sub> (provided): 0.025
Area Treated (ac): 0.42	Impervious Area Treated (ac): 0.31

#### **Photographs**

No.	715	Description:	looking north
No.		Description:	

CommentsDue to high volume of FEDEX vehicle travel, directing flow using raised bituminous"speed bumps" is not recommended. Use trench drains and curb cuts. Additional flat area may be<br/>obtained by converting existing parking spots.IMP size = 2,215 sq ft



New LID IMP ☑ SWM BMP Retrofit □	New SWM BMP	] Type (S	heets 4 & 5):	39	
State Plane Coordinates of IMP / BMP Centro	oid: X: <u>13</u>	<u> 99700</u>	Y:	482108	8
Sketch Location of Footprint (with Approximation	te Dimensions) and D	Prainage Bounda	ary on Site M	ар	
Identify all Impairments Addressed by Recom	mendation (Sheet 1)	1, 2, 3, 4,	7, 16		
Treatment Area Ownership:	DW Utility ROW	County Ot	ther Government	✓ Private	
Infrastructure / Structures / Buildings Impacte	d: □yes ☑no				
Limited Impact to Adjacent Properties:	es 🗋 no				
Area Accessible for Construction:	NO				
Area Accessible for Maintenance:	NO				
Limited Permitting Issues: VES NO					
Jurisdictional Wetlands Impacted:	✓ NO				
Forest Retention Area Impacted:	✓ NO				
Conservation Easement Impacted:	✓ NO				
Utilities Present: Vone Natural Gas Electron	ric 🔲 Telephone 🗌 Cable	Water Sev	wer Other		-
Utilities Impacted: Vone Natural Gas Electron	ric 🔲 Telephone 🗌 Cable	Water Sev	wer Other		
Impacted Utilities: Above Gound	jround				
Critical Area Impacted: YES VO					
Mature / Specimen Trees Impacted:	✓ NO				
Existing Landscaping Impacted:	NO				
Underdrain Needed: VES VNO	Underdrains Can I	Discharge: 🗹	YES NO		
Soils are Suitable: VES INO	Ground Water Tab	ole Level Suitabl	le: 🗸 YES	□ NO	
Estimate IMP / BMP drainage area included of	on site: 0.3	<mark>4</mark> _ac		100%	6
Retrofit of Existing SWM BMP					
SDI ID:	Add Foreba	ay: □ <sub>YES</sub> □	NO		
Modify Outlet Stucture:	Add Aquation	<b>Bench:</b> YES	NO		
Grade Bottom of Facility:	-	e Vegetation:			
Provide Additional Storage Volume:		-			
Excavation / Raise the Embankment: $\Box \gamma$					

IMP / BMP SUMMA	RY	
WQ <sub>v</sub> (provided): 0.0	020	Re <sub>v</sub> (provided): 0.020
Area Treated (ac): 0.3	34	Impervious Area Treated (ac): 0.24

#### **Photographs**

No.	716	Description:	looking south
No.		Description:	

CommentsDue to high volume of FEDEX vehicle travel, directing flow using raised bituminous"speed bumps" is not recommended. Use trench drains and curb cuts. Additional flat area may be<br/>obtained by converting existing parking spots.IMP size = 1,872 sq ft



New LID IMP ☑ SWM BMP Retrofit □ New SWM BMP □ Type (Sheets 4 & 5): <u>38</u>	
State Plane Coordinates of IMP / BMP Centroid: X: <u>1399574</u> Y: <u>4819</u>	11
Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map	
Identify all Impairments Addressed by Recommendation (Sheet 1): <u>1, 2, 3, 4, 7, 16</u>	
Treatment Area Ownership: Transportation ROW Utility ROW County Other Government Private	
Infrastructure / Structures / Buildings Impacted: 🛛 🖓 NO	
Limited Impact to Adjacent Properties: VES NO	
Area Accessible for Construction: Image Incompared No	
Area Accessible for Maintenance: I YES NO	
Limited Permitting Issues: VES NO	
Jurisdictional Wetlands Impacted: YES VNO	
Forest Retention Area Impacted: TYES INO	
Conservation Easement Impacted: YES INO	
Utilities Present: 🗹 None 🗋 Natural Gas 🗋 Electric 🗋 Telephone 🗋 Cable 🗍 Water 🗋 Sewer 🗍 Other	
Utilities Impacted: 🗹 None 🗋 Natural Gas 🗋 Electric 🗋 Telephone 🗋 Cable 🗍 Water 🗋 Sewer 🗍 Other	
Impacted Utilities: Above Gound Underground	
Critical Area Impacted: YES INO	
Mature / Specimen Trees Impacted: YES VNO	
Existing Landscaping Impacted:	
Underdrain Needed: YES NO Underdrains Can Discharge: YES NO	
Soils are Suitable: VES NO Ground Water Table Level Suitable: VES NO	
Estimate IMP / BMP drainage area included on site: <u>1.71</u> ac <u>100</u>	%
Retrofit of Existing SWM BMP	
SDI ID: Add Forebay: <u>VES</u> NO	
Modify Outlet Stucture:       YES       NO       Add Aquatic Bench:       YES       NO         Grade Bottom of Facility:       YES       NO       Plant Native Vegetation:       YES       NO	
Grade Bottom of Facility: Provide Additional Storage Volume: YES NO Plant Native Vegetation: VES NO PLANT NATIVE VEGETATION PLANT NATIVE VEGETATION: VES NO PLANT NATIVE VEGETATION NATIVE VEGETATION: VES NO PLANT NATIVE VEGETATION NATIVE VEGETATIO	
Excavation / Raise the Embankment: $\square$ Yes $\square$ NO	

IMP / BMP SUMMARY	
WQ <sub>v</sub> (provided): 0.081	Re <sub>v</sub> (provided): 0.081
Area Treated (ac): <u>1.71</u>	Impervious Area Treated (ac): 0.98

#### **Photographs**

No.	717	Description:	looking west
No.	718	Description:	looking east
No.		Description:	

CommentsDue to high volume of FEDEX vehicle travel, directing flow using raised bituminous"speed bumps" is not recommended. Use trench drains and curb cuts. Additional flat area may be obtained<br/>obtained by converting existing parking spots.IMP size = 7,083 sq ft





718

New LID IMP ☑ SWM BMP Retrofit □	New SWM BMP	🛛 Туре	(Sheets 4 & 5)	38	
State Plane Coordinates of IMP / BMP Centr	oid: X: <u>13</u>	99308	Y	:4	481902
Sketch Location of Footprint (with Approxima	ate Dimensions) and I	Drainage Bou	ndary on Site N	lap	
Identify all Impairments Addressed by Recon	nmendation (Sheet 1)	1, 2, 3,	4, 7, 16		
Treatment Area Ownership:	OW Utility ROW	County	Other Government	V P	Private
Infrastructure / Structures / Buildings Impacted	ed: 🗌 YES 🗹 NO				
Limited Impact to Adjacent Properties:	YES 🔲 NO				
Area Accessible for Construction:	NO				
Area Accessible for Maintenance:	NO				
Limited Permitting Issues: VES INO					
Jurisdictional Wetlands Impacted:	✓ NO				
Forest Retention Area Impacted:	✓ NO				
Conservation Easement Impacted:	✓ NO				
Utilities Present: Vone Natural Gas Elec	tric 🔲 Telephone 🗌 Cable	e 🗌 Water 🗌	Sewer Other		
Utilities Impacted: Vone Natural Gas Elec	tric Telephone Cable	e 🗌 Water 🗌	Sewer Other		
Impacted Utilities: Above Gound	ground				
Critical Area Impacted: YES VNO					
Mature / Specimen Trees Impacted:	✓ NO				
Existing Landscaping Impacted:	✓ NO				
Underdrain Needed: YES VNO	Underdrains Can	Discharge:	✓ YES 🗌 NO		
Soils are Suitable: VES INO	Ground Water Ta	ble Level Suit	able: 🔽 YES	🗌 NO	
Estimate IMP / BMP drainage area included	on site: <u>1.2</u>	2 <mark>5</mark> ac			100%
Retrofit of Existing SWM BMP					
SDI ID:	Add Foreba	ay: 🗌 YES	□ NO		
Modify Outlet Stucture: VES NO	Add Aquati	c Bench:	YES 🔲 NO		
Grade Bottom of Facility: TYES NO	Plant Nativ	e Vegetation:	YES NO		
Provide Additional Storage Volume:	NO				
Excavation / Raise the Embankment:	(es 🔲 no				

IMP / BMP SUMMARY				
WQ <sub>v</sub> (provided):	0.049	Re <sub>v</sub> (provided): 0.049		
Area Treated (ac):	1.25	Impervious Area Treated (ac): 0.59		

#### **Photographs**

No.	719	Description:	looking west
No.	720	Description:	looking east
No.		Description:	

CommentsDue to high volume of FEDEX vehicle travel, directing flow using raised bituminous"speed bumps" is not recommended. Use trench drains and curb cuts. Additional flat area may be<br/>obtained by converting existing parking spots.IMP size = 4,301 sq ft





719