Exhibit 4 - Page 1 of 41 **CITY USE ONLY CITY OF MERCER ISLAND REFERENCE # PERMIT**# TYPE **COMMUNITY PLANNING & DEVELOPMENT** □ Type A 9611 SE 36TH STREET MERCER ISLAND, WA 98040 PHONE: 206.275.7605 Amount Due □ Type B www.mercergov.org Type C www.mybuildingpermit.com **Date Received** ☐ Misc.

Approved By:

Right-of-Way Use Permit Application

Applicant/Contact: Mat	tt Below/Sound Transit	Phone: 206-398-5280
Job Address: N. Mercer Wa	ay, 77th Ave. SE, 80th Ave. SE, 7714 N. Mercer Way, 2297 78th Ave SE	Email: matthew.below@soundtransit.org
Contractor doing work:	TBD	Phone:
Contractor Address:	Λ	Al Bus Lic #: Exp:
Check all boxes that apply: Surface improvement (r 	Underground in paved area Undergrour road paving, curbing, graveling, sidewalk, etc.)	Ind in unpaved area <a>Image Material Delivery Cutting pavement in ROW?

Please describe the nature of work below and indicate if there will be trenching or boring in roadway. Attach plans/sketch of work. Traffic Control Plan if applicable and indicate proposed work duration and schedule.

*Please see page below for detailed description

S:DSG/FORMS/2016/ROWApplication

NOTE: PERMIT AND DRAWINGS MUST ACCOMPANY CONTRACTOR ON THE JOB

ATTENTION: 1. INSPECTIONS ARE REQUIRED ON ALL PHASES OF WORK

2. PLEASE CALL 206.275.7730, **BY 4 PM DAY PRIOR** TO NEEDING INSPECTION OR TRAFFIC LANE RESTRICTIONS AND CLOSURES

3. CONTACT ALL UTILITY DEPARTMENTS BY CALLING ONE CALL- 811, 48 HOURS PRIOR TO DIGGING

NOTICE TO APPLICATION:

This permit becomes null and void if the work or construction authorized is not commenced within 180 days, or if work or construction is suspended or abandoned for 180 days at any time after work is commenced or if work is not completed within one year from the date of issue. All work shall be done in accordance with the approved plans, except where such approval is in conflict with other codes. The approved plans shall not be changed or modified without the prior approval of the City Engineer. It is the responsibility of the permittee to obtain the required inspections. Failure to notify this department that the work is ready for inspection may necessitate the removal of some of the construction materials at the owner's expense in order to perform such inspections.

In accepting this permit, the permittee, his successors, heirs and assigns agree to protect and hold harmless the City of Mercer Island from all claims, actions or damages of every kind and description which may accrue to be suffered by any persons, corporations or property by reason of the performance of the above described work, cost of materials and labor, character of materials used or manner of installation, maintenance and operation, and in case any such suit or action is brought against said City of Mercer Island or damage arising out of or by reason of any of the above causes, the grantee, his successors, heirs or assigns will upon notice to him or them of commencement of such action, defend the same at his or their own sole expense and will fully satisfy any judgement after the said suit or action shall have finally been determined if adverse to the City of Mercer Island.

Permittee agrees that it shall immediately notify the City Engineer should the Permittee discover any contaminated soil, sediment, ground water or other material while performing any work under this Permit in the Right of Way. Contaminated material or contamination refers to any hazardous substance, hazardous waste, or pollutant, as now or hereafter defined by applicable federal, state or local law or regulation, on or emanating from the Right of Way. Further, Permittee, its successors, heirs and assignees agree to be responsible for any costs, including but not limited to, costs of investigation, excavation, disposal, cleanup and worker protection, related to the Permittee's encountering or handling of contamination in the Right of Way while performing any work under this Permit. The Permittee shall comply with all applicable laws, regulations and City ordinances in handling, treating and disposing of contaminated materials, including worker safety and the disposal of Personal Protective Equipment. If the Permittee fails to timely perform work necessary to abate an environmental hazard or danger posed by such contamination and caused by the Permittee's acts or omissions, then the City may perform the necessary work, and the Permittee shall reimburse the City for all its costs related to such investigation and clean up.

The City Engineer may revoke, annul or terminate this permit if grantee fails to comply with any or all of its provisions, requirements or regulations as herein set forth or through willful or unreasonable neglect, fails to heed or comply with notices given him or if the utility herein granted, is not installed or operated and maintained in conformity herewith or at all.

I hereby certify that I have read and examined this application and know the same to be true and correct. All provisions of the laws and ordinances governing this type of work will be met whether specified herein or not. The granting of a permit does not presume to give authority to violate or cancel the provision of any other State or local law regulating construction or performance of construction.

The Permittee agrees to prosecute the work with all diligence and speed, and complete same within 365 days of approval.

Matthew Below	Matthew Below	10/19/2020
Applicant Name (please print)	Applicant Signature	Date:

Exhibit 4 - Page 2 of 41

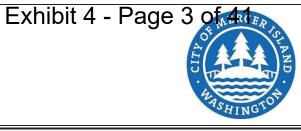
Please describe the nature of work below and indicate if there will be trenching or boring in roadway. Attach plans/sketch of work. Traffic Control Plan if applicable and indicate proposed work duration and schedule.

General construction work will remove the existing span-wire traffic signal system at N Mercer Way & 77th Avenue SE and install a new single-lane roundabout at the intersection. This will involve the demolition of existing facilities, grading, cement concrete roadway construction, new curbs/gutter/sidewalks, drainage, roadway illumination, retaining walls, signing, hardscape improvements, KC Metro bus shelter and signage improvements, roadside planter and landscaping areas, irrigation, and all other associated construction activities for the construction of the roundabout and adjacent transit flexible curb spaces. It is not anticipated that any directional boring will occur. The only trenching required will be for the installation of new electrical conduits crossing N Mercer Way. This will be done in the identified work zones and under short-term lane closures.

COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

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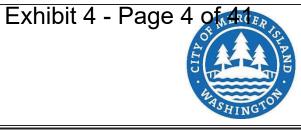
PERMIT APPLICATION

SITE ADDRESS*		PROJECT V	ALUATION*			Р	ERMIT #
A 7714 N MERCER WAY MERCER ISLAND	98040	\$7,100,000					
PROPERTY OWNER* Sound Transit TENANT NAME P	ADDRESS 401 S Jackson Seattle, WA 98	St,			PHONE/OF E-MAIL* matth		
APPLICANT CONTACT NAME*	ADDRESS	*			CELL/OFFIC	CE* 20639	985280
P Sound Transit/ Matthew Below	401 S Jackson S Seattle, WA 981	8t, 04					w@soundtransit.org
ARCHITECT / DESIGNER (Company/Name)	ADDRESS	3			CELL/OFFIC		<u> </u>
L R. KOESTER/ David Evans and Associates Inc		tgate Way, Suite 40	D				ster@deainc.com
STRUCTURAL ENGINEER (Company/Name)	ADDRESS	3			CELL/OFFIC	CF 425.51	9.6500
I ANTHONY WILEN, P.E./David Evans and Associates Inc	14432 SE Eas	stgate Way, Suite hington 98007	400		E-MAIL* Ac		
CONTRACTOR(Company/name)	ADDRESS	6			CELL/OFFIC	CE 425.51	9.6500
C TBD	14432 SE Ea Bellevue Was	stgate Way, Suite shington 98007	400		EMAIL* Aov	v@deainc.	com
A STATE CONTRACTOR LICENSE* #	1		MI BUSINES	S LICEN	NSE* #		
ELECTRICAL CONTRACTOR (Company/Name)	ADDRESS	3			CELL/OFFIC	CE	
N TBD					EMAIL*		
STATE CONTRACTOR LICENSE #			MI BUSINES	SS LICE	NSE #		
T *REQUIRED							
PERMIT Building Fire Protection TYPE Demolition Grading Electrical Mechanical Low Voltage Site Develop	☐ Fuel Ta ☐ Stormv		JPANCY YPE	Mult	le Family ti-Family nmercial ed Use rch/School	WORK TYPE	 Addition Alteration New Repair /
Will your project result in:		WOR	K DESCRIP	TION:			
A change of use	Yes 🗌 🛛 N	^{Io} ☑ Site	grading of	fsingle	e family r	esidenc	e lot to construct
New Single Family dwelling	Yes 🔲 🛛			-			ention vault and
A reduction in any existing side yard setback	Yes 🔲 🛛		ciated tra				
An increase in impervious surface by more than 100 square feet	Yes 🗸 🕴						
An increase in the gross floor area of more than 500 square feet	Yes 🔲 🛛	No 🗸					
An increase in the maximum building height above the highest point of the building	Yes 🗍 I	No 🗸					
		Ε ΤΟ ΑΡ	PLICAN	т			
This permit becomes null and void if the work or construction for two years at any time after work is commenced or if work i expire at the same time as the associated building permit exc shall expire 180 days from issuance. All work shall be done i approved plans shall not be changed or modified without the inspections. Failure to notify this department that work is reac expense in order to perform such inspections. I hereby certify that I am the owner of the subject property or I have read and examined this application and know the sam whether specified herein or not. The granting of a permit doe regulating construction of the performance of construction.	authorized is is not comple ept that if no n accordance prior approva dy for inspecti I have been ie to be true a s not presum	not commence ted within two y associated buil with the appro I of the Building on may necess authorized by ti and correct. All le to give autho	d within two ye ears from date ding permit is ved plans, exc Official. It is t itate the remove he owner(s) of provisions of la- rity to violate of	ears, or if e of issue issued, th cept wher he respon val of son val of son f the subj aws and or cancel	 Electrical, m ne electrical, r e such appro- nsibility of the ne of the cons- ect property t ordinances g the provision 	nechanical mechanical val is in col permittee struction m o represen overning th	and plumbing permits shall and/or plumbing permit nflict with other codes. The to obtain the required aterials at the owner's at this application, and that his type of work will be met
Matt Below Discrete Below, essound Transit, ou=DECM, Discrete Below, essound Transit, ou=DECM, Date: 2020.1011.411(30:3-07007	10/21	/2020	Matth	new	Below		
Signature of Owner/Contractor/Authorized Agent	Date		Printed Name	of Owne	er/Contractor	r/Authorize	ed Agent

COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | www.mercergov.org



PERMIT APPLICATION

	SITE ADDRESS*		PROJECT V	ALUATION*			P	ERMIT #
Α	2297 78TH AVE SE MERCER ISLAND	98040	\$7,100,000					
Р	PROPERTY OWNER* Sound Transit TENANT NAME	ADDRESS 401 S Jackson Seattle, WA 98	St,			PHONE/OFF E-MAIL* matthe		
	APPLICANT CONTACT NAME*	ADDRESS ³				CELL/OFFIC	CE* 20639	985280
Р	Sound Transit/ Matthew Below	401 S Jackson S Seattle, WA 981	6t, 04			E-MAIL* mat	tthew.belo	w@soundtransit.org
1	ARCHITECT / DESIGNER (Company/Name)	ADDRESS	3			CELL/OFFIC	E 425-5	19-6500
L	R. KOESTER/ David Evans and Associates Inc	14432 SE East Bellevue, WA S	tgate Way, Suite 40 98007	0		E-MAIL* Rei	nee.Koes	ster@deainc.com
	STRUCTURAL ENGINEER (Company/Name)	ADDRESS	3			CELL/OFFIC	E 425.51	9.6500
Ι	ANTHONY WILEN, P.E./David Evans and Associates Inc		stgate Way, Suite hington 98007	400		E-MAIL* Ao	w@deai	inc.com
C	CONTRACTOR(Company/name)	ADDRESS	6			CELL/OFFIC	CE 425.51	9.6500
C	TBD	14432 SE Ea Bellevue Was	stgate Way, Suite shington 98007	400		EMAIL* Aow	@deainc.	com
Α	STATE CONTRACTOR LICENSE* #			MI BUSINES	S LICEN	ISE* #		
	ELECTRICAL CONTRACTOR (Company/Name)	ADDRESS	3			CELL/OFFIC	Е	
Ν	TBD					EMAIL*		
	STATE CONTRACTOR LICENSE #			MI BUSINES	SS LICE	NSE #		
Т	*REQUIRED							
	PERMIT Building Fire Protection TYPE Demolition Grading Electrical Mechanical Low Voltage Site Develop	☐ Fuel Ta ☐ Stormv		JPANCY [YPE [☐ Mult ☐ Com ☐ Mixe	le Family ti-Family nmercial ed Use rch/School	WORK TYPE	 Addition Alteration New Repair /
Will	your project result in:		WOR	K DESCRIP	TION:			
A ch	nange of use	Yes 🔲 🛚 N	^{Io} ☑ Site	grading of	single	e family re	esidenc	e lots to support
Nev	v Single Family dwelling	Yes 🔲 🛚 🛚		struction of				
A re	duction in any existing side yard setback	Yes 🗌 🛛	No 🗸			0 0110 010 0		
	ncrease in impervious surface by more than square feet	Yes 🗸 🛛						
	ncrease in the gross floor area of more than square feet	Yes 🗍 I	No 🗸					
An i	ncrease in the maximum building height above							
the	highest point of the building				_			
for exp sha ap ins exp I h	is permit becomes null and void if the work or construction two years at any time after work is commenced or if work i pire at the same time as the associated building permit exc all expire 180 days from issuance. All work shall be done in proved plans shall not be changed or modified without the pections. Failure to notify this department that work is read bense in order to perform such inspections. ereby certify that I am the owner of the subject property or ave read and examined this application and know the sam	authorized is s not comple ept that if no n accordance prior approva ly for inspecti I have been	not commence ted within two y associated buil with the appro I of the Building on may necess authorized by f	rears from date ding permit is is ved plans, exce g Official. It is th itate the remov he owner(s) of	ears, or if of issue ssued, th ept when re respor val of son the subje	. Electrical, m ne electrical, m e such approvensibility of the ne of the consect property to	echanical nechanical val is in cor permittee struction ma	and plumbing permits shall and/or plumbing permit nflict with other codes. The to obtain the required aterials at the owner's t this application, and that
wh reg	ether specified herein or not. The granting of a permit doe gulating construction of the performance of construction.	s not presum		rity to violate or	r cancel			
	att Below						/	
Sig	nature of Owner/Contractor/Authorized Agent	Date		Printed Name	of Owne	er/Contractor	Authorize	ed Agent

COMMUNITY PLANNING & DEVELOPMENT

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PERMIT APPLICATION

	SITE ADDRESS*		PROJECT	VALUATION [*]	r		PE	RMIT #
Α	7714 N. Mercer Way, 2297 78th Ave SE, N. Mercer Way, 77th Ave. SE		\$7,100,000					
Р	PROPERTY OWNER* Sound Transit TENANT NAME	ADDRESS 401 S Jackson Seattle, WA 98	St,			PHONE/OF E-MAIL* matt		
	APPLICANT CONTACT NAME*	ADDRESS				CELL/OFFI	CE* 206398	35280
Р	Sound Transit/ Matthew Below	401 S Jackson S Seattle, WA 981	St, 04			E-MAIL* ma	tthew.below	@soundtransit.org
1	ARCHITECT / DESIGNER (Company/Name)	ADDRESS	6			CELL/OFFI	CE 425-51	9-6500
L	R. Koester/ David Evans and Associates Inc	14432 SE Eas Bellevue, WA 9	tgate Way, Suite 4 98007	.00		E-MAIL* Re	enee.Koest	ter@deainc.com
	STRUCTURAL ENGINEER (Company/Name)	ADDRESS	6			CELL/OFFIC	CE 425.519	.6500
Ι	Anthony Wilen, P.E./David Evans + Associates Inc		stgate Way, Suit hington 98007	e 400		E-MAIL* Ac	w@deair	nc.com
	CONTRACTOR(Company/name)	ADDRESS	6			CELL/OFFI	CE	
C	TBD					EMAIL*		
A	STATE CONTRACTOR LICENSE* #	<u> </u>		MI BUSINE	SS LICE	NSE* #		
	ELECTRICAL CONTRACTOR (Company/Name)	ADDRESS	3			CELL/OFFI	CE	
N	TBD					EMAIL*		
	STATE CONTRACTOR LICENSE #	I		MI BUSINE	ESS LICE	NSE #		
Т	*REQUIRED							
	PERMIT Building Fire Protection TYPE Demolition Grading Electrical Mechanical Low Voltage Site Develop	Fuel Ta	ank OCC	UPANCY TYPE	☐ Mul ☐ Cor ☐ Mix	gle Family lti-Family mmercial ed Use rch/School	WORK TYPE	 Addition Alteration New Repair /
Will	your project result in:		WOF	RK DESCRI	PTION:			
A cł	nange of use	Yes 🗌 🕴	No 🗹 Cor	struction	of reta	ining wal	ls and st	ormwater vault in
Nev	v Single Family dwelling	Yes 📃 🛛		port of M		-		
A re	duction in any existing side yard setback	Yes 🔲 🕴	No 🗸					
	ncrease in impervious surface by more than square feet	Yes 🔲 🕴	No 🗸					
	ncrease in the gross floor area of more than square feet	Yes 🔲 🛛 I	No 🗸					
	ncrease in the maximum building height above highest point of the building	Yes 🗌 🛛	No 🗸					
		NOTICE	E TO AI	PLICAN	IT			
for ex sh ap ins ex	is permit becomes null and void if the work or construction two years at any time after work is commenced or if work pire at the same time as the associated building permit exc all expire 180 days from issuance. All work shall be done i proved plans shall not be changed or modified without the spections. Failure to notify this department that work is reac pense in order to perform such inspections. ereby certify that I am the owner of the subject property or	is not comple ept that if no n accordance prior approva ly for inspecti	ted within two associated bu with the appr of the Buildir ion may neces	years from da ilding permit is oved plans, ex og Official. It is sitate the remo	te of issued, t issued, t cept whe the respo oval of sol	e. Electrical, n he electrical, r re such appro onsibility of the me of the con	nechanical au mechanical a val is in conf e permittee to struction mat	nd plumbing permits shall and/or plumbing permit flict with other codes. The p obtain the required terials at the owner's
l h wh reo	ave read and examined this application and know the sam lether specified herein or not. The granting of a permit doe gulating construction of the performance of construction.	e to be true a s not presum	and correct. All the to give auth	I provisions of ority to violate	laws and or cancel	ordinances g the provision	overning this	s type of work will be met
	Att Below Db: cn=Matt Below, c=Sound Transit, ou=DECM, email=mathwe below@soundtransit.org, c=US Date: 2020.10.19.09:06:11-07:00'	10/19	/2020			Below		
	nature of Owner/Contractor/Authorized Agent	Date		Printed Nam	e of Own	er/Contracto	r/Authorized	
<: \D	SG\FORMS\2018Forms\Permit Applications\Bldg	ı₽armit∆nn	RI442018					01/2018

DEVELOPMENT SERVICES GROUP

9611 SE 36TH STREET | MERCER ISLAND, WA 98040 PHONE: 206.275.7605 | <u>www.mercergov.org</u> Inspection Requests: Online: <u>www.MyBuildingPermits.com</u> VM: 206.275.7730

SECTION A: SMALL PROJECT STORMWATER SITE PLAN/REPORT

Narrative and Plan Submittal

Instructions: This is a template for a simplified Stormwater Report. This form or an equivalent must accompany your Building Permit Application if the answer is "Yes" to each statement below. If "No" is the answer to one or more of the statements below, a full Drainage Report is required and the project does not qualify for use of the Small Project Stormwater Site Plan/Report template.

Select "yes" or "no" for each statement below. Answer "yes" if the statement accurately describes your project.

Yes	No	Statement
		This project disturbs less than 1 acre and is not part of a larger common plan of development.
		This project converts less than 3/4 acre to lawn or landscape areas.
		This project will create, add, or replace (in any combination) 2,000 square feet or greater, but less than 5,000 square feet, of new plus replaced hard surface OR will have a land disturbing activity of 7,000 square feet or greater OR will result in a net increase of impervious surface of 500 square feet or greater.
		This project will not adversely impact a wetland, stream, water of the state, or change a natural drainage course.

Basic Project Information

Project Name:	
Site Address:	
Total Lot Size:	
Total Proposed Area to be Disturbed (including stockpile area):	sq ft
Total Volume of Proposed Cut and Fill:	sq ft
Total Proposed New Hard Surface Area:	sq ft
Total Proposed Replaced Hard Surface Area:	sq ft
Total Proposed Converted Pervious Surface Area	sq ft
(Native vegetation to lawn or landscape):	<u> </u>
Net Increase in Impervious Surface:	sq ft



Minimum Requirement #1 : Preparation of Stormwater Site Plan

Written Project Description:

Calculate new or replaced areas by surface type:

Lawn or Landscape Areas:		sq ft	Roof Area:	sq ft
Other Hard Surface Areas:				
Driveway:	sq ft Patio:		sq ft Sidewalk:	sq ft
Parking Lot:	sq ft Other:		sq ft	

Attach Drainage Plan

Drainage Plan shall include the following:

- <u>Scaled drawing</u> with slopes, lot lines, any public-right-of-way and any easements, location of each on-site stormwater management BMP selected above and the areas served by them, buildings, roads, parking lots, driveways, landscape features, and areas of disturbed soils to be amended.
- The scaled drawing must be suitable to serve as a recordable document that will be attached to the property deed for each lot that includes on-site BMPs. Document submittal must follow the "Standard Formatting Requirements for Recording Documents" per King County: <u>www.kingcounty.gov/depts/records-licensing/recorders-office/recordingdocuments.aspx</u>
- Identify design details and maintenance instructions for each on-site BMP, and attach them to this Small Project Stormwater Site Plan/Report.



Minimum Requirement #2 : Construction Stormwater Pollution Prevention

Complete Section B of this submittal package: Construction Stormwater Pollution Prevention Plan Narrative (SWPPP)

Attach construction SWPPP

Minimum Requirement #3 : Source Control of Pollution

This section contains practices and procedures to reduce the release of pollutants. Provide a description of all known, available and reasonable source control BMPs that will be, or are anticipated to be, used at this location to prevent stormwater from coming into contact with pollutants. Additional BMPs are found in Volume IV of the 2014 Stormwater Management Manual for Western Washington (SWMMWW).

Check the BMPs you will use:

BMP S411 for Landscaping and Lawn/ Vegetation Management Operational practices for sites with landscaping

BMP S421 for Parking and Storage of Vehicles. Public and commercial parking lots can be sources of suspended solids, metals, or toxic hydrocarbons such oils and greases.

BMP S433 for Pools, Spas, Hot Tubs, Fountains Discharge from pools, hot tubs, and fountains can degrade ambient water quality. Routine maintenance activities generate a variety of wastes. Direct disposal of these waters to drainage system and waters of the state are not permitted without prior treatment and approval.

Other BMPs found in Volume IV of SWMMWW applicable to project:



Minimum Requirement #4 : Preservation of Natural Drainage Systems

Natural drainage patterns shall be maintained and discharges from the project site shall occur at the natural location, to the maximum extent practicable. All outfalls require energy dissipation.

Choose the option below that best describes your project:



This site has existing drainage systems or outfalls. These items are shown on the Drainage Plan. Include the following items on the Drainage Plan:

- Pipe invert elevations, slopes, cover, and material
- Locations, grades, and direction of flow in ditches and swales, culverts, and pipes

Describe how these systems will be preserved:

This site does not have any existing drainage systems or outfalls.



CITY OF MERCER ISLAND Exhibit 4 - Page 10 of 41

SECTION A: SMALL PROJECT STORMWATER SITE PLAN/REPORT

Minimum Requirement #5 : On-site Stormwater Management

All projects meeting the thresholds for this Small Project Stormwater Report shall employ on-site stormwater management BMPs (See Small Project Stormwater Requirements Tip Sheet) to infiltrate, disperse, and retain stormwater runoff on-site to the extent feasible without causing flooding or erosion impacts.

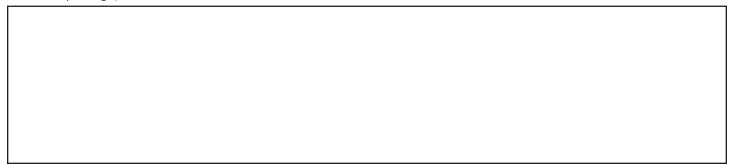
List #1

For each category select the *first* feasible item on the list below. Document your justification for each infeasible BMP in Section C of this submittal package.

Check <u>one</u> option for <u>each category</u> below:

Lav	vn and Landscape Areas	
	My project does not have Lawn or Landscape are	as
	Post-construction soil quality and depth	
	Post-construction soil quality and depth is infeasi	ble (see Section C of this submittal package)
Roo	ofs	
	My project does not have <i>Roof</i> areas	
	1. Full dispersion or downspout full infiltration	
	2. Rain garden or bioretention	
	3. Downspout dispersion system	Measured Infiltration Rate: in/ hr
	4. Perforated stub-out connections	
	(applicable if options #1-4 are infeasible and o	site detention authorized by the City Engineer drainage from the site will be discharged to a storm course or there is a capacity constraint in the system)
	6. No Roof BMP (applicable if options #1-4 are i	nfeasible and on-site detention is not required)

If #5 or #6 is selected, briefly describe why no Roof BMP is feasible (include detailed information in Section C of this submittal package):



CITY OF MERCER ISLAND SECTION A: SMALL PROJECT STORMWATER SITE PLAN/REPORT

Minimum Requirement #5 : On-site Stormwater Management (cont.)

	Oth	ner Hard Surfaces (such as driveway, sidewalk,	parking lot, patio, etc.)
		My project does not have Other Hard Surface areas	
		1. Full dispersion	Measured Infiltration Rate: in/ hr
		2. Permeable pavement, rain gardens, or bioretention	
		3. Sheet flow dispersion or concentrated flow dispersion	
		4. On-site detention system or fee-in-lieu of on-site deten (applicable if options #1-3 are infeasible and drainage for or surface water system that includes a watercourse or	rom the site will be discharged to a storm
		5. No Other Hard Surface BMP (applicable if options #1-3 required)	are infeasible and on-site detention is not
#5 i	s selec	ted, briefly describe why no Other Hard Surface BMP is fea	sible (include detailed information in

If #4 or #5 is selected, briefly describe why no Other Hard Surface BMP is feasible (include detailed informat Section C of this submittal package):

Flow Control Exempt List

Proceed with this list if your project discharges directly to Lake Washington or if findings from a downstream analysis confirm that the downstream system is free of capacity constraints for a minimum of ¼ mile and a maximum of 1 mile.

For flow control exempt discharges, the BMPs listed below for Roofs and Other Hard Surfaces do not need to be evaluated in priority order. You can select any BMP from the lists provided below and do not need to document infeasibility in Section C of this submittal package.

Check <u>one</u> option for <u>each category</u> below:



Lawn and Landscape Areas

My project does not have Lawn or Landscape areas

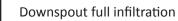


Post-construction soil quality and depth

CITY OF MERCER ISLAND SECTION A: SMALL PROJECT STORMWATER SITE PLAN/REPORT

Minimum Requirement #5 : On-site Stormwater Management (cont.)

My project does not have Roof areas





Roofs

Downspout dispersion system



Perforated stub-out connections

Each item above is infeasible

If "Each item above is infeasible" is selected, briefly describe why no Roof BMP is feasible:

Other Hard Surfaces (such as driveway, sidewalk, parking lot, patio, etc.)

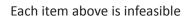
My project does not have Other Hard Surface areas



Sheet flow dispersion



Concentrated flow dispersion



If "Each item above is infeasible" is selected, briefly describe why no Other Hard Surface BMP is feasible:



CITY OF MERCER ISLAND Exhibit 4 - Page 13 of 41

SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

Instructions

This is a template for a simplified Construction Stormwater Pollution Prevention Plan ("Construction SWPPP"). If "No" is the answer to one or more of the statements on the first page of Section A of this submittal package, then a full Construction SWPPP is required and the project does not quality for the use of the Small Project Construction SWPPP Narrative template. If the project is less than the thresholds on the first page of Section A of this submittal package, then Minimum Requirement #2 still applies, but this section (Section B) or a full construction SWPPP is not required. You should include your Construction SWPPP in your contract with your builder. A copy of the Construction SWPPP must be located at the construction site or within reasonable access to the site for construction and inspection personnel at all times.

General Information on the Existing Site and Project

Describe the following in the Project Narrative box below (attach additional pages if necessary):

- Nature and purpose of the construction project
- Existing topography, vegetation, and drainage, and building structures
- Adjacent areas, including streams, lakes, wetlands, residential areas, and roads that might be affected by the construction project
- How upstream drainage areas may affect the site
- Downstream drainage leading from the site to the receiving body of water
- Areas on or adjacent to the site that are classified as critical areas
- Critical areas that receive runoff from the site up to one-quarter mile away
- Special requirements and provisions for working near or within critical areas
- Areas on the site that have potential erosion problems

Project Narrative:



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Construction SWPPP Drawings

Refer to the general Drawing Requirements in Stormwater Management Manual for Western Washington (SWMMWW) Volume I, Chapter 3.

Vicinity Map

Provide a map with enough detail to identify the location of the construction site, adjacent roads, and receiving waters.

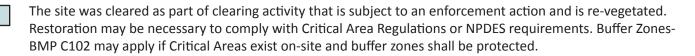
Sit	е Мар	
Inclu	ide the following (where applicable):	
	Legal description of the property boundaries or an illustration of property lines (including distances) on the drawings.	Final and interim grade contours as appropriate, drainage basins, and the direction of stormwater flow during and upon completion of construction.
	North arrow.	Areas of soil disturbance, including all areas affected by clearing, grading, and excavation.
	Existing structures and roads.	
	Boundaries and identification of different soil types.	Locations where stormwater will discharge to surface waters during and upon completion of construction.
	Areas of potential erosion problems.	Existing unique or valuable vegetation and vegetation to be preserved.
	Any on-site and adjacent surface waters, critical areas, buffers, flood plain boundaries, and Shoreline Management boundaries.	Cut-and-fill slopes indicating top and bottom of slope catch lines.
	Existing contours and drainage basins and the direction of flow for the different drainage areas.	Total cut-and-fill quantities and the method of disposal for excess material.
	Where feasible, contours extend a minimum of 25 feet beyond property lines and extend sufficiently to depict existing conditions.	Stockpile; waste storage; and vehicle storage, maintenance, and washdown areas.
Те	mporary and Permanent BMPs	
Inclu	ide the following on site map (where applicable):	
	Locations for temporary and permanent swales, interceptor trenches, or ditches.	Details for bypassing off-site runoff around disturbed areas.
	Drainage pipes, ditches, or cut-off trenches associated with erosion and sediment control and stormwater management.	Locations of temporary and permanent stormwater treatment and/or flow control best management practices (BMPs).
	Temporary and permanent pipe inverts and minimum slopes and cover.	Details for all structural and nonstructural erosion and sediment control (ESC) BMPs (including, but not limited to, silt fences, construction entrances, sedimentation facilities, etc.)
	Grades, dimensions, and direction of flow in all ditches and swales, culverts, and pipes.	Details for any construction-phase BMPs or techniques used for Low Impact Development (LID) BMP protection.
	Locations and outlets of any dewatering systems.	



Element 1: Preserve Vegetation / Mark Clearing Limits

The goal of this element is to preserve native vegetation and to clearly show the limits of disturbance.

This element **does not** apply to my project because:



Other Reason / Additional Comments:

If it **does** apply, describe the steps you will take and select the best management practices (BMPs) you will use:

The perimeter of the area to be cleared shall be marked prior to clearing operation with visible flagging, orange plastic barrier fencing and/or orange silt fencing as shown on the SWPPP site map. The total disturbed area shall be less than 7,000 square feet. Vehicles will only be allowed in the areas to be graded, so no compaction of the undeveloped areas will occur.

Additional Comments:

Check the BMPs you will use:

C101 Preserving Natural Vegetation

C102 Buffer Zones





Element 2: Construction Access

The goal of this element is to provide a stabilized construction entrance/exit to prevent or reduce or sediment track out.

This element **<u>does not</u>** *apply to my project because:*



The driveway to the construction area already exists and will be used for construction access. All equipment and vehicles will be restricted to staying on that existing impervious surface.

Other Reason / Additional Comments:

If it <u>does</u> apply, describe the steps you will take and select the BMPs you will use:

A stabilized construction entrance will be installed prior to any vehicles entering the site, at the location shown on the SWPPP site map.

Additional Comments:

С

C105 Stabilized Construction Entrance / Exit

C106 Wheel Wash



C107 Construction Road / Parking Area Stabilization



Element 3: Control Flow Rates

The goal of this element is to construct retention or detention facilities when necessary to protect properties and waterways downstream of development sites from erosion and turbid discharges.

This element **<u>does not</u>** apply to my project because:

Other Reason / Additional Comments:

If it <u>does</u> apply, describe the steps you will take and select the BMPs you will use:

Flow rates will be controlled by using SWPPP Element 4 sediment controls and BMP T5.13 Post-Construction Soil Quality and Depth if necessary.



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Element 4: Sediment Control

The goal of this element is to construct sediment control BMPs that minimize sediment discharges from the site.

This element **<u>does not</u>** apply to my project because:

The site has already been stabilized and re-vegetated.

Other Reason / Additional Comments:

If it <u>does</u> apply, describe the steps you will take and select the BMPs you will use:

Sediment control BMPs shall be placed at the locations shown on the SWPPP site map

Check the BMPs you will use:		
C231 Brush Barrier	C233 Silt Fence	C235 Wattles
C232 Gravel Filter Berm	C234 Vegetated Strip	



Element 5: Stabilize Soils

The goal of this element is to stabilize exposed and unworked soils by implementing erosion control BMPs.

This element **<u>does not</u>** apply to my project because:

Other Reason / Additional Comments:

If it <u>does</u> apply, describe the steps you will take and select the BMPs you will use:

Exposed soils shall be worked during the week until they have been stabilized. Soil stockpiles will be located within the disturbed area shown on the SWPPP site map. Soil excavated for the foundation will be backfilled against the foundation and graded to drain away from the building. No soils shall remain exposed and unworked for more than 7 days from May 1 to September 30 or more than 2 days from October 1 to April 30. Once the disturbed landscape areas are graded, the grass areas will be amended using BMP T5.13 Post-Construction Soil Quality and Depth. All stockpiles will be covered with plastic or burlap if left unworked.

Check the BMPs you will use:		
C120 Temporary & C122 Nets & Blankets Permanent Seeding	C124 Sodding	C131 Gradient C235 Wattles Terraces
C121 Mulching C123 Plastic Covering	C125 Topsoil / Composting	C140 Dust Control



Element 6: Protect Slopes

The goal of this element is to design and construct cut-and-fill slopes in a manner to minimize erosion.

This element **<u>does not</u>** *apply to my project because:*



No cut slopes over 4 feet high or slopes steeper than 2 feet horizontal to 1 foot vertical, and no fill slopes over 4 feet high will exceed 3 feet horizontal to 1 foot vertical. Therefore, there is no requirement for additional engineered slope protection.

Other Reason / Additional Comments:

If it <u>does</u> apply, describe the steps you will take and select the BMPs you will use:

Check	k the BMPs you will use:		
	C120 Temporary & Permanent Seeding	C205 Subsurface Drains	C207 Check Dams
	C204 Pipe Slope Drains	C206 Level Spreader	C208 Triangular Silt Dike (Geotextile-Encased Check Dam)



Element 7: Protect Permanent Drain Inlets

The goal of this element is to protect storm drain inlets during construction to prevent stormwater runoff from entering the conveyance system without being filtered or treated.

This element **<u>does not</u>** *apply to my project because:*

The site has open ditches in the right-of-way or private road right-of-way.

There are no catch basins on or near the site.

Other Reason / Additional Comments:

If it <u>does</u> apply, describe the steps you will take and select the BMPs you will use:

Catch basins on the site or immediately off site in the right-of-way are shown on the SWPPP site map. Storm drain inlet protection shall be installed.

Additional Comments:

Check the BMPs you will use:



C220 Storm Drain Inlet Protection



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Element 8: Stabilize Channels and Outlets

The goal of this element is to design, construct, and stabilize on-site conveyance channels to prevent erosion from entering existing stormwater outfalls and conveyance systems.

This element **does not** apply to my project because:

Construction will occur during the dry weather. No storm drainage channels or ditches shall be constructed either temporary or permanent. A small swale shall be graded to convey yard drainage around the structure using a shallow slope; it shall be seeded after grading and stabilized.

Other Reason / Additional Comments:

If it **does** apply, describe the steps you will take and select the BMPs you will use:

A wattle shall be placed at the end of the swale to prevent erosion at the outlet of the swale.

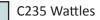
Additional Comments:

Check the BMPs you will use:

C202 Channel Lining

C207 Check Dams







Element 9: Control Pollutants

The goal of this element is to design, install, implement and maintain BMPs to minimize the discharge of pollutants from material storage areas, fuel handling, equipment cleaning, management of waste materials, etc.

This element **<u>does not</u>** *apply to my project because:*

Other Reason	/ Additional	Comments:
Other Reason	/ / waitiona	connicitty.

If it <u>does</u> apply, describe the steps you will take and select the BMPs you will use:

Any and all pollutants, chemicals, liquid products and other materials that have the potential to pose a threat to human health or the environment will be covered, contained, and protected from vandalism. All such products shall be kept under cover in a secure location on-site. Concrete handling shall follow BMP C151.

Additional Comments:

Check the BMPs you will use:
C151 Concrete Handling
C152 Sawcutting and Surfacing Pollution Prevention

C153 Material Delivery, Storage, and Containment

C154 Concrete Washout Area



SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

Element 10: Control De-watering

The goal of this element is to handle turbid or contaminated dewatering water separately from stormwater.

This element **<u>does not</u>** apply to my project because:

No dewatering of the site is anticipated.

Other Reason / Additional Comments:

If it <u>does</u> apply, describe the steps you will take and select the BMPs you will use:

Additional Comments:

Check the BMPs you will use:

C203 Water Bars

C236 Vegetated Filtration

C206 Level Spreader



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SECTION B: SMALL PROJECT CONSTRUCTION SWPPP NARRATIVE

Element 11: Maintain Best Management Practices

The goal of this element is to maintain and repair all temporary and permanent erosion and sediment control BMPs to assure continued performance.

Describe the steps you will take:



Best Management Practices or BMPs shall be inspected and maintained during construction and removed within 30 days after the City Inspector or Engineer determines that the site is stabilized, provided that they may be removed when they are no longer needed.

Element 12: Manage the Project

The goal of this element is to ensure that the construction SWPPP is properly coordinated and that all BMPs are deployed at the proper time to achieve full compliance with City regulations throughout the project.

If it <u>does</u> apply, describe the steps you will take and select the BMPs you will use:

The Construction SWPPP will be implemented at all times. The applicable erosion control BMPs will be implemented in the following sequence:

1. Mar

1. Mark clearing limits

- 2. Install stabilized construction entrance
- 3. Install protection for existing drainage systems and permanent drain inlets
- 4. Establish staging areas for storage and handling polluted material and BMPs
- 5. Install sediment control BMPs
- 6. Grade and install stabilization measures for disturbed areas
- 7. Maintain BMPs until site stabilization, at which time they may be removed



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Element 13: Protect Low Impact Development BMPs

The goal of this element is to protect on-site stormwater management BMPs (also known as "Low Impact Development BMPs") from siltation and compaction during construction. On-site stormwater management BMPs used for runoff from roofs and other hard surfaces include: full dispersion, roof downspout full infiltration or dispersion systems, perforated stubout connections, rain gardens, bioretention systems, permeable pavement, sheetflow dispersion, and concentrated flow dispersion. Methods for protecting on-site stormwater management BMPs include sequencing the construction to install these BMPs at the latter part of the construction grading operations, excluding equipment from the BMPs and the associated areas, and using the erosion and sedimentation control BMPs listed below.

Describe the construction sequencing you will use:

Additional Comments:

Select the BMPs you will use:

C102 Buffer Zone

C103 High Visibility Fence



C231 Brush Barrier

C233 Silt Fence

C234 Vegetated Strip

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SECTION C: INFEASIBILITY CRITERIA

Minimum Requirement #5 (On-Site Stormwater Management)

The following tables summarize infeasibility criteria that can be used to justify not using various on-site stormwater management best management practices (BMPs) for consideration for Minimum Requirement #5. This information is also included under the detailed descriptions of each BMP in the 2014 Stormwater Management Manual for Western Washington (Stormwater Manual), but is provided here in this worksheet for additional clarity and efficiency. Where any inconsistencies or lack of clarity exists, the requirements in the main text of the Stormwater Manual shall be applied. If a project is limited by one or more of the infeasibility criteria specified below, but an applicant is interested in implementing a specific BMP, a functionally equivalent design may be submitted to the City for review and approval. Evaluate the feasibility of the BMPs in priority order based on List #1 or #2 (Small Project Stormwater Requirements Tip Sheet and Stormwater Manual). Select the first BMP that is considered feasible for each surface type. Document the infeasibility (narrative description and rationale) for each BMP that was not selected. Only one infeasibility criterion needs to be selected for a BMP before evaluating the next BMP on the list. Attach additional pages for supporting information if necessary.

Note: If your project discharges directly to Lake Washington (flow control exempt) or a downstream analysis confirms that the downstream system is free of capacity constraints for a minimum of ¼ mile and a maximum of 1 mile, then you do not need to complete this worksheet, but should still refer to the infeasibility criteria when selecting BMPs.

	Lawn and Landscaped Areas	
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected
Post-construction Soil Quality and Depth List #1 and #2	 Siting and design criteria provided in BMP T5.13 (Stormwater Manual Volume V, Section 5.3) cannot be achieved. Lawn and landscape area is on till slopes greater than 33 percent. 	
	Roofs	
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected
Full Dispersion List #1 and #2	 Site setbacks and design criteria provided in BMP T5.30 (Stormwater Manual Volume V, Section 5.3) cannot be achieved. A 65 to 10 ratio of forested or native vegetation area to impervious area cannot be achieved. A minimum forested or native vegetation flowpath length of 100 feet (25 feet for sheet flow from a non-native pervious surface) cannot be achieved. 	
Downspout Full Infiltration List #1 and #2	 Evaluation of infiltration is not required per the Infiltration Infeasibility Map due to steep slopes, erosion hazards, or landslide hazards. Site setbacks and design criteria provided in BMP T5.10A (Stormwater Manual Volume III, Section 3.1.1) cannot be achieved. The lot(s) or site does not have out-wash or loam soils. There is not at least 3 feet or more of permeable soil from the proposed final grade to the seasonal high groundwater table or other impermeable layer. There is not at least 1 foot or more of permeable soil from the proposed bottom of the infiltration system to the seasonal high groundwater table or other impermeable layer. 	



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	Roofs (cont.)	
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected
	Note: Criteria with setback distances are as measured from the bottom edge of the bioretention soil mix.	
	Citation of any of the following infeasibility criteria must be based on an evaluation of site-specific conditions and a written recommendation from an appropriate licensed professional (e.g., engineer, geologist, hydrogeologist):	
	Where professional geotechnical evaluation recommends infiltration not be used due to reasonable concerns about erosion, slope failure, or down-gradient flooding.	
	Within an area whose ground water drains into an erosion hazard, or landslide hazard area.	
Bioretention or Rain Gardens	Where the only area available for siting would threaten the safety or reliability of pre-existing underground utilities, pre-existing underground storage tanks, pre-existing structures, or pre-existing road or parking lot surfaces.	
List #1 (both) and List #2 (bioretention only)	Where the only area available for siting does not allow for a safe overflow pathway to stormwater drainage system or private storm sewer system.	
	Where there is a lack of usable space for bioretention areas at re- development sites, or where there is insufficient space within the existing public right-of-way on public road projects.	
	Where infiltrating water would threaten existing below grade basements.	
	Where infiltrating water would threaten shoreline structures such as bulkheads.	
	The following criteria can be cited as reasons for infeasibility without further justification (though some require professional services to make the observation):	
	Evaluation of infiltration is not required per the Infiltration Infeasibility Map due to steep slopes, erosion hazards, or landslide hazards	
	Within setback provided for BMP T7.30 (Stormwater Manual Volume V, Section 7.4)	
	Where they are not compatible with surrounding drainage system as determined by the city (e.g., project drains to an existing stormwater collection system whose elevation or location precludes connection to a properly functioning bioretention area).	



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	Roofs (cont.)	
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected
Applicable		and Rationale for Each
	underground pipes when the capacity of the tank and pipe system is greater than 1,100 gallons.	



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	Roofs (cont.)	
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected
	The following criteria can be cited as reasons for infeasibility without further justification (though some require professional services to make the observation): Where field testing indicates potential bioretention/rain garden sites have a measured (a.k.a., initial) native soil saturated hydraulic conductivity less than 0.30 inches per hour. A small-scale or large-scale PIT in accordance with Stormwater Manual Volume III, Section 3.3.6 (or an alternative small scale test specified by the City) shall be used to demonstrate infeasibility of bioretention areas. If the measured native soil infiltration rate is less than 0.30 in/hour, bioretention/rain garden BMPs are not required to be evaluated as an option in List #1 or List #2. In these slow draining soils, a bioretention area with an underdrain may be used to treat pollution-generating surfaces to help meet Minimum Requirement #6, Runoff Treatment. If the underdrain is elevated within a base course of gravel, it will also provide some modest flow reduction benefit that will help achieve Minimum Requirement #7. Where the minimum vertical separation of 3 feet to the seasonal high groundwater elevation or other impermeable layer would not be achieved below bioretention that would serve a drainage area that exceeds the following thresholds (and cannot reasonably be surface (PGIS) 0.10,000 square feet of pollution-generating impervious surface (PGIS) 0.10,000 square feet of impervious area 0.375 acres of lawn and landscape. Where the minimum vertical separation of 1 foot to the seasonal high groundwater or other impermeable layer would not be achieved below bioretention that would serve a drainage area less than the above thresholds. Where the minimum vertical separation of 1 foot to the seasonal h	BMP Not Selected



CITY OF MERCER ISLAND SECTION CLINEFACIER UTV CRITERIA

	Roofs (cont.)	
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected
Downspout Dispersion Systems List #1 and #2	 Site setbacks and design criteria provided in BMP T5.10B (Stormwater Manual Volume III, Section 3.1.2) cannot be achieved. For splash blocks, a vegetated flowpath at least 50 feet in length from the downspout to the downstream property line, structure, stream, wetland, slope over 15 percent, or other impervious surface is not feasible. For trenches, a vegetated flowpath of at least 25 feet in between the outlet of the trench and any property line, structure, stream, wetland, or impervious surface is not feasible. A vegetated flowpath of at least 50 feet between the outlet of the trench and any slope steeper than 15 percent is not feasible. 	
Perforated Stub-Out Connections List #1 and #2	 Evaluation of infiltration is not required per the Infiltration Infeasibility Map due to steep slopes, erosion hazards, or landslide hazards For sites with septic systems, the only location available for the perforated portion of the pipe is located up-gradient of the drainfield primary and reserve areas. This requirement can be waived if site topography will clearly prohibit flows from intersecting the drainfield or where site conditions (soil permeability, distance between systems, etc.) indicate that this is unnecessary. Site setbacks and design criteria provided in BMP T5.10C (Stormwater Manual Volume III, Section 3.1.3) cannot be achieved. There is not at least 1 foot of permeable soil from the proposed bottom (final grade) of the perforated stub-out connection trench to the highest estimated groundwater table or other impermeable layer. The only location available for the perforated stub-out connection is under impervious or heavily compacted soils. 	
On-site Detention List #1 and #2	 Project discharges directly to Lake Washington. Findings from a 1/4 mile downstream analysis confirm that the downstream system is free of capacity constraints. Site setbacks and design criteria provided in the Stormwater Manual (Volume III, Section 3.2.2) cannot be achieved. 	



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Other Hard Surfaces				
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected		
Full Dispersion List #1 and #2	 Site setbacks and design criteria provided in BMP T5.30 (Stormwater Manual Volume V, Section 5.3) cannot be achieved. A 65 to 10 ratio of forested or native vegetation area to impervious area cannot be achieved. A minimum forested or native vegetation flowpath length of 100 feet (25 feet for sheet flow from a non-native pervious surface) cannot be achieved. 			
Permeable Pavement List #1 and #2	 Citation of any of the following infeasibility criteria must be based on an evaluation of site-specific conditions and a written recommendation from an appropriate licensed professional (e.g., engineer, geologist, hydrogeologist): Where professional geotechnical evaluation recommends infiltration not be used due to reasonable concerns about erosion, slope failure, or downgradient flooding. Within an area whose ground water drains into an erosion hazard, or landslide hazard area. Where infiltrating and ponded water below the new permeable pavement area would compromise adjacent impervious pavements. Where infiltrating water below a new permeable pavement area would threaten existing below grade basements. Where infiltrating water would threaten shoreline structures such as bulkheads. Down slope of steep, erosion prone areas that are likely to deliver sediment. Where fill soils are used that can become unstable when saturated. Excessively steep slopes where water within the aggregate base layer or at the subgrade surface cannot be controlled by detention structures and may cause erosion and structural failure, or where surface runoff velocities may preclude adequate infiltration at the pavement surface. Where installation of permeable pavement would threaten the safety or reliability of pre-existing underground utilities, pre-existing underground storage tanks, or pre-existing road subgrades. 			



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	Other Hard Surfaces (cont.)				
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected			
	The following criteria can be cited as reasons for infeasibility without further justification (though some require professional services to make the observation):				
	Evaluation of infiltration is not required per the Infiltration Infeasibility Map due to steep slopes, erosion hazards, or landslide hazards				
	Within an area designated as an erosion hazard, or landslide hazard.				
	Within 50 feet from the top of slopes that are greater than 20 percent.				
	For properties with known soil or groundwater contamination (typically federal Superfund sites or state cleanup sites under MTCA):				
	 Within 100 feet of an area known to have deep soil contamination. 				
Permeable Pavement	 Where groundwater modeling indicates infiltration will likely increase or change the direction of the migration of pollutants in the groundwater. 				
(cont.)	 Wherever surface soils have been found to be contaminated unless those soils are removed within 10 horizontal feet from the infiltration area. 				
	 Any area where these facilities are prohibited by an approved cleanup plan under the state MTCA or Federal Superfund Law, or an environmental covenant under Chapter 64.70 RCW. 				
	Within 100 feet of a closed or active landfill.				
	Within 100 feet of a drinking water well, or a spring used for drinking water supply, if the pavement is a pollution-generating surface.				
	Within 10 feet of a small on-site sewage disposal drainfield, including reserve areas, and grey water reuse systems. For setbacks from a "large on-site sewage disposal system," see Chapter 246-272B WAC.				
	Within 10 feet of any underground storage tank and connecting underground pipes, regardless of tank size. As used in these criteria, an underground storage tank means any tank used to store petroleum products, chemicals, or liquid hazardous wastes of which 10 percent or more of the storage volume (including volume in the connecting piping system) is beneath the ground surface.				
	At multi-level parking garages, and over culverts and bridges.				
	Where the site design cannot avoid putting pavement in areas likely to have long-term excessive sediment deposition after construction (e.g., construction and landscaping material yards).				



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Other Hard Surfaces (cont.)				
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected		
	The following criteria can be cited as reasons for infeasibility without further justification (though some require professional services to make the observation):			
	 Where the site cannot reasonably be designed to have: Porous asphalt surface < 5% slope Pervious concrete surface < 10% slope Permeable interlocking concrete pavement surface < 12% slope Grid systems < 6-12% slope (check with manufacturer and local supplier to confirm maximum slope) 			
Permeable Pavement	Where the subgrade soils below a pollution-generating permeable pavement (e.g., road or parking lot) do not meet the soil suitability criteria for providing treatment. See soil suitability criteria for treatment in the Stormwater Manual Volume III, Section 3.3.7. Note: In these instances, the city may approve installation of a 6 inch sand filter layer meeting city specifications for treatment as a condition of construction.			
(cont.)	Where underlying soils are unsuitable for supporting traffic loads when saturated. Soils meeting a California Bearing Ratio of 5 percent are considered suitable for residential access roads.			
	Where replacing existing impervious surfaces unless the existing surface is a non-pollution generating surface over an outwash soil with a saturated hydraulic conductivity of 4 inches per hour or greater.			
	Where appropriate field testing indicates soils have a measured (a.k.a., initial) subgrade soil saturated hydraulic conductivity less than 0.3 inches per hour. Only small-scale PIT or large-scale PIT methods in accordance with Stormwater Manual Volume III, Section 3.3.6 (or an alternative small scale test specified by the City) shall be used to evaluate infeasibility of permeable pavement areas. (Note: In these instances, unless other infeasibility restrictions apply, roads and parking lots may be built with an underdrain, preferably elevated within the base course, if flow control benefits are desired.)			
	Roads that receive more than very low traffic volumes, and areas having more than very low truck traffic. Roads with a projected average daily traffic volume of 400 vehicles or less are very low volume roads (AASHTO 2001) (U.S. Department of Transportation, 2013). Areas with very low truck traffic volumes are roads and other areas not subject to through truck traffic but may receive up to weekly use by utility trucks (e.g., garbage, recycling), daily school bus use, and multiple daily use by pick-up trucks, mail/parcel delivery trucks, and maintenance vehicles. (Note: This infeasibility criterion does not extend to sidewalks and other non-traffic bearing surfaces associated with the collector or arterial).			



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Other Hard Surfaces (cont.)				
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected		
Permeable Pavement (cont.)	The following criteria can be cited as reasons for infeasibility without further justification (though some require professional services to make the observation): At sites defined as "high-use sites" (refer to the Glossary in the Stormwater Manual Volume I). In areas with "industrial activity" as identified in 40 CFR 122.26(b)(14). Where the risk of concentrated pollutant spills is more likely such as gas stations, truck stops, and industrial chemical storage sites. Where routine, heavy applications of sand occur in frequent snow zones to maintain traction during weeks of snow and ice accumulation.			
	Where the seasonal high groundwater or an underlying impermeable/ low permeable layer would create saturated conditions within 1 foot of the bottom of the lowest gravel base course.			
Bioretention or Rain Gardens List #1 (both) and List #2 (bioretention only)	 Note: Criteria with setback distances are as measured from the bottom edge of the bioretention soil mix. Citation of any of the following infeasibility criteria must be based on an evaluation of site-specific conditions and a written recommendation from an appropriate licensed professional (e.g., engineer, geologist, hydrogeologist): Where professional geotechnical evaluation recommends infiltration not be used due to reasonable concerns about erosion, slope failure, or down-gradient flooding. Within an area whose ground water drains into an erosion hazard, or landslide hazard area. Where the only area available for siting would threaten the safety or reliability of pre-existing underground utilities, pre-existing underground storage tanks, pre-existing structures, or pre-existing road or parking lot surfaces. Where the only area available for siting does not allow for a safe overflow pathway to stormwater drainage system or private storm sewer system. Where there is a lack of usable space for bioretention areas at redevelopment sites, or where there is insufficient space within the existing public right-of-way on public road projects. Where infiltrating water would threaten existing below grade basements. Where infiltrating water would threaten shoreline structures such as bulkheads. 			



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Other Hard Surfaces (cont.)					
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected			
Bioretention or Rain Gardens (cont.)	The following criteria can be cited as reasons for infeasibility without further justification (though some require professional services to make the observation): Where evaluation of infiltration is not required per the Infiltration Infeasibility Map due to steep slopes, erosion hazards, or landslide hazards. Within setback provided for BMP T7.30 (Stormwater Manual Volume V, Section 7.4) Where they are not compatible with surrounding drainage system as determined by the city (e.g., project drains to an existing stormwater collection system whose elevation or location precludes connection to a properly functioning bioretention area). Where land for bioretention is within an erosion hazard, or landslide hazard area (as defined by MICC 19.07.060). Where the site cannot be reasonably designed to locate bioretention areas on slopes less than 8 percent. Within 50 feet from the top of slopes that are greater than 20 percent and over 10 feet of vertical relief. For properties with known soil or groundwater contamination (typically federal Superfund sites or state cleanup sites under the Model Toxics Control Act [MTCA]): Where groundwater modeling indicates infiltration will likely increase or change the direction of the migration of pollutants in the groundwater. Where way are where these facilities are prohibited by an approved cleanup plan under the state MTCA or Federal Superfund Law, or an environmental covenant under Chapter 64.70 RCW.				



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Other Hard Surfaces (cont.)				
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected		
Applicable	 Infeasibility Criteria The following criteria can be cited as reasons for infeasibility without further justification (though some require professional services to make the observation): Within 100 feet of an underground storage tank and connecting underground pipes when the capacity of the tank and pipe system is greater than 1,100 gallons. Where field testing indicates potential bioretention/rain garden sites have a measured (a.k.a., initial) native soil saturated hydraulic conductivity less than 0.30 inches per hour. A small-scale or large-scale PIT in accordance with Stormwater Manual Volume III, Section 3.3.6 (or an alternative small scale test specified by the City) shall be used to demonstrate infeasibility of bioretention areas. If the measured native soil infiltration rate is less than 0.30 in/hour, bioretention/rain garden BMPs are not required to be evaluated as an option in List #1 or List #2. In these slow draining soils, a bioretention area with an underdrain may be used to treat pollution-generating surfaces to help meet Minimum Requirement #6, Runoff Treatment. If the underdrain is elevated within a base course of gravel, it will also provide some modest flow reduction benefit that will help achieve Minimum Requirement #7. Where the minimum vertical separation of 3 feet to the seasonal high groundwater elevation or other impermeable layer would not be achieved below bioretention that would serve a drainage area that exceeds the following thresholds (and cannot reasonably be broken down into amounts smaller than indicated): 	and Rationale for Each		
	 5,000 square feet of pollution-generating impervious surface (PGIS) 10,000 square feet of impervious area 0.75 acres of lawn and landscape. Where the minimum vertical separation of 1 foot to the seasonal high groundwater or other impermeable layer would not be achieved below bioretention that would serve a drainage area less than the above thresholds Within 100 feet of a drinking water well, or a spring used for drinking water supply. Within 10 feet of small on-site sewage disposal drainfield, including reserve areas, and grey water reuse systems. For setbacks from a "large on-site sewage disposal system," see Chapter 246-272B WAC. 			



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Other Hard Surfaces (cont.)				
BMP and Applicable Lists	Infeasibility Criteria	Infeasibility Description and Rationale for Each BMP Not Selected		
Sheet Flow Dispersion List #1 and #2	 Site setbacks and design criteria provided in BMP T5.12 (Stormwater Manual Volume V, Section 5.3) cannot be achieved. Positive drainage for sheet flow runoff cannot be achieved. Area to be dispersed (e.g., driveway, patio) cannot be graded to have less than a 15 percent slope. For flat to moderately sloped areas, at least a 10 foot-wide vegetation buffer for dispersion of the adjacent 20 feet of contributing surface cannot be achieved. For variably sloped areas, at least a 25 foot vegetated flowpath between berms cannot be achieved. 			
Concentrated Flow Dispersion List #1 and #2	 Site setbacks and design criteria provided in BMP T5.11 (Stormwater Manual Volume V, Section 5.3) cannot be achieved. A minimum 3 foot length of rock pad and 50 foot flowpath OR a dispersion trench and 25 foot flowpath for every 700 square feet of drainage area followed with applicable setbacks cannot be achieved. More than 700 square feet drainage area drains to any dispersion device. 			
On-site Detention List #1 and #2	 Project discharges directly to Lake Washington. Findings from a 1/4 mile downstream analysis confirm that the downstream system is free of capacity constraints. Site setbacks and design criteria provided in the Stormwater Manual (Volume III, Section 3.2.2) cannot be achieved. 			



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SECTION D: POST-CONSTRUCTION SOIL MANAGEMENT

Attachments Required (Check off required items that are attached)			
Site Plan showing, to scale:			
Areas of undisturbed native vegetation (no amendment required)			
New planting beds (amendment required)			
New turf areas (amendment required)			
Type of soil improvement proposed for each area			
Soil test results (required if proposing custom amendment rates)			
Product test results for proposed amendments			

Total Amendment / Topsoil / Mulch for All Areas

Calculate the quantities needed for the entire site based on all of the areas identified on the Site Plan and the calculations on the following page(s):

Product	Total Quantity (CY)	Test Results
Product #1:	CY	% organic matter C:N ratio "Stable"?yesno
Product #2:	CY	% organic matter C:N ratio "Stable"? yes no
Product #3:	CY	% organic matter C:N ratio "Stable"? yes no



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SECTION D: POST-CONSTRUCTION SOIL MANAGEMENT

Other: _____

Amendment / Topsoil / Mulch by Area

For each identified area on your Site Plan, provide the following information:

Area # _____ (should match identified Area # on Site Plan)

(Use additional sheets if necessary)

Planting type:

Turf Planting Beds

H

Undisturbed native vegetation

Pre-Approved Amendment Method	
--------------------------------------	--

	Amend with compost	Turf: SF x 5.4 CY ÷ 1,000 SF =CY Planting beds: SF x 9.3 CY ÷ 1,000 SF=CY Total Quantity =CY Scarification depth: 8 inches	Product:		
	Stockpile and amend	Turf: SF x 5.4 CY ÷ 1,000 SF =CY Planting beds: SF x 9.3 CY ÷ 1,000 SF=CY Total Quantity =CY Scarification depth: 8 inches	Product:		
	Topsoil import	Turf: SF x 18.6 CY÷1,000 SF =CY Planting beds: SF x 18.6 CY ÷ 1,000 SF=CY Total Quantity =CY Scarification depth: 6 inches	Product:		
Cus	Custom Amendment				
	Amend with compost	Attach information on bulk density, percent organic matter, moisture content, C:N ratio, and heavy metals analysis to support custom amendment rate and scarification depth. Total Quantity =CY Scarification depth:inches	Product:		
	Stockpile and amend	Attach information on bulk density, percent organic matter, moisture content, C:N ratio, and heavy metals analysis to support custom amendment rate and scarification depth. Total Quantity =CY Scarification depth:inches	Product:		
Mulch					
	Amend with compost	Planting beds: SF x 12.4 CY ÷ 1,000 SF=CY Total Quantity =CY	Product:		
	Stockpile and amend	Planting beds: SF x 12.4 CY ÷ 1,000 SF=CY Total Quantity =CY	Product:		
	Topsoil import	Planting beds: SF x 12.4 CY ÷ 1,000 SF=CY Total Quantity =CY	Product:		

CY = cubic yards, C:N = Carbon:Nitrogen



CITY OF MERCER ISLAND SECTION E: SIGNATURE PAGE

Project Engineer's Certification for Section B

For Stormwater Site Plans with engineered elements, the Construction SWPPP is stamped by a professional engineer licensed in the State of Washington in civil engineering.

If required, attach a page with the project engineer's seal with the following statement:

"I hereby state that this Construction Stormwater Pollution Prevention Plan for <u>(name of project)</u> has been prepared by me or under my supervision and meets the standard of care and expertise which is usual and customary in this community for professional engineers. I understand that the City of Mercer Island does not and will not assume liability for the sufficiency, suitability, or performance of Construction SWPPP BMPs prepared by me."

Applicant Signature for Full Stormwater Package (Sections A through D)

I have read and completed the Stormwater Submittal Package and know the information provided to be true and correct.

Print Applicant Name:	

Applicant Signature:_____

Date