SITE DATA

Project Information		
	Project Name:	**Wallbrook**
	Applicant:	Ben Mayo
	Applicant Contact Name:	Ben Mayo
	Applicant Contact Number:	919-361-5000
	Contact Email:	montes@Mcadamsco.com
	Municipal Jurisdiction (Select from dropdown menu):	Rolesville
	Last Updated:	Monday, April 1, 2024
Site Data:		
	Total Site Area (Ac):	42.35
	Existing Lake/Pond Area (Ac):	0.00
	Proposed Disturbed Area (Ac):	18.50
	Impervious Surface Area (acre):	12.47
	Type of Development (Select from Dropdown menu):	Residential
	Percent Built Upon Area (BUA):	29%
	Project Density:	High
	Is the proposed project a site expansion?	No
	Number of Drainage Areas on Site:	2
NOAA	**1-Year, 24-Hour Storm (inches) (See NOAA Website):**	2.86
	2-Year, 24-Hour Storm (inches) (See NOAA Website):	3.46
	10-Year, 24-Hour Storm (inches) (See NOAA Website):	5.04
Lot Data (if applicable):		
	Total Acreage in Lots:	8.15
	Number of Lots:	140
	Average Lot Size (SF):	2535.00
	Total Impervious Surface Area on Lots (SF):	226202.00
	Average Impervious Surface Area Per Lot (SF):	1615.73

Stormwater Narrative (limit to 1,200 characters - attach additional pages with submittal if necessary):

Wallbrook is a proposed residential development in Rolesville, North Carolina, located between Highway 401 and Wall Creek Drive. The development is approximately 43 acres. This Stormwater Impact Analysis includes the development of the residential and one commercial parcel. The proposed development on this site consists of the construction of 140 townhome units, along with roadways, sidewalks and trails, utilities, two stormwater control measures, and other supporting infrastructure. For more detail see the Stormwater Calculations book.

Project Name: Wallbrook

DRAINAGE AREA 1
STORMWATER PRE-POST CALCULATIONS

LAND USE & SITE DATA	PRE-DEVELOPMENT				POST-DEVELOPMENT			
Drainage Area (Acres)=	38.31				37.75			
Site Acreage within Drainage=	18.19				17.64			
One-year, 24-hour rainfall (in)=	2.86							
Two-year, 24-hour rainfall (in)=	3.46							
Ten-year, 24-hour storm (in)=	5.04							
Total Lake/Pond Area (Acres)=	0.00				0.23			
Lake/Pond Area not in the Tc flow path (Acres)=	0.00				0.23			
Site Land Use (acres):	A	B	C	D	A	B	C	D
Pasture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Woods, Poor Condition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Woods, Fair Condition	0.00	0.00	9.81	11.67	0.00	0.00	6.71	2.14
Woods, Good Condition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Open Space, Poor Condition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Open Space, Fair condition	0.00	0.00	0.00	10.79	0.00	0.00	2.56	1.43
Open Space, Good Condition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reforestation (in dedicated OS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Connected Impervious	0.00	0.00	0.22	5.79	0.00	0.00	2.57	2.23
Disconnected Impervious	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SITE FLOW	**PRE-DEVELOPMENT T_c**				**POST-DEVELOPMENT Tc**			
Sheet Flow								
Length (ft)=	100.00							
Slope (ft/ft)=	0.040							
Surface Cover:	Grass							
n-value=	0.240							
T_t (hrs)=	0.191							
Shallow Flow								
Length (ft)=	710.00							
Slope (ft/ft)=	0.031							
Surface Cover:	Unpaved							
Average Velocity (ft/sec)=	2.84							
T_t (hrs)=	0.07							
Channel Flow 1								
Length (ft)=	1627.00							
Slope (ft/ft)=	0.023							
Cross Sectional Flow Area (ft^2)=	10.50							
Wetted Perimeter (ft)=	9.50							
Channel Lining:	Weeds							
n-value=	0.040							
Hydraulic Radius (ft)=	1.11							
Average Velocity (ft/sec)=	6.09				#VALUE!			
T_t (hrs)=	0.07				#VALUE!			

WAKE COUNTY
NORTH CAROLINA

Project Name: Wallbrook

DRAINAGE AREA 1
STORMWATER PRE-POST CALCULATIONS

Channel Flow 2		
Length (ft)=	0.00	
Slope (ft/ft)=	0.000	
Cross Sectional Flow Area (ft^2)=	0.00	
Wetted Perimeter (ft)=	0.00	
Channel Lining:		
n-value=		
Hydraulic Radius (ft)=		
Average Velocity (ft/sec)=		#VALUE!
T_t (hrs)=		#VALUE!
Channel Flow 3		
Length (ft)=	0.00	
Slope (ft/ft)=	0.000	
Cross Sectional Flow Area (ft^2)=	0.00	
Wetted Perimeter (ft)=	0.00	
Channel Lining:		
n-value=		
Hydraulic Radius (ft)=		
Average Velocity (ft/sec)=		#VALUE!
T_t (hrs)=		#VALUE!
Tc (hrs)=	0.33	0.08
RESULTS	**PRE-DEVELOPMENT**	**POST-DEVELOPMENT**
Composite Curve Number=	82	82
Disconnected Impervious Adjustment		
Disconnected impervious area (acre) =		
$CN_{adjusted\ (1\text{-}year)}$=	**82**	
High Density Only		
Volume of runoff from 1" rainfall for DA HIGH DENSITY REQUIREMENT = (ft^3) =	22,533	
1-year, 24-hour storm (Peak Flow)		
Runoff (inches) = $Q^*_{1\text{-}year}$=	1.26	1.29
Volume of runoff (ft^3) =	83,207	82,497
Volume change (ft^3) =		
Peak Discharge (cfs)= $Q_{1\text{-}year}$=	48.570	70.269
2-year, 24-hour storm (LID)		
Runoff (inches) = $Q^*_{2\text{-}year}$=	1.74	1.77
Volume of runoff (ft^3) =	114,793	113,421
Peak Discharge (cfs)= $Q_{2\text{-}year}$=	67.007	96.610
10-year, 24-hour storm (DIA)		
Runoff (inches) = $Q^*_{10\text{-}year}$=	3.10	3.14
Volume of runoff (ft^3) =	204,736	207,493
Peak Discharge (cfs)= $Q_{10\text{-}year}$=	119.508	171.394

Project Name: Wallbrook

DRAINAGE AREA 2
STORMWATER PRE-POST CALCULATIONS

LAND USE & SITE DATA	PRE-DEVELOPMENT				POST-DEVELOPMENT			
Drainage Area (Acres)=	32.45				33.00			
Site Acreage within Drainage=	24.15				24.70			
One-year, 24-hour rainfall (in)=	2.86							
Two-year, 24-hour rainfall (in)=	3.46							
Ten-year, 24-hour storm (in)=	5.04							
Total Lake/Pond Area (Acres)=	0.00				0.31			
Lake/Pond Area not in the Tc flow path (Acres)=	0.00				0.00			
Site Land Use (acres):	A	B	C	D	A	B	C	D
Pasture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Woods, Poor Condition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Woods, Fair Condition	0.00	0.00	17.92	6.23	0.00	0.00	6.43	2.43
Woods, Good Condition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Open Space, Poor Condition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Open Space, Fair condition	0.00	0.00	0.00	2.35	0.00	0.00	5.38	2.81
Open Space, Good Condition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reforestation (in dedicated OS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Connected Impervious	0.00	0.00	0.26	0.81	0.00	0.00	7.10	0.55
Disconnected Impervious	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SITE FLOW	**PRE-DEVELOPMENT T_c**				**POST-DEVELOPMENT Tc**			
Sheet Flow								
Length (ft)=	100.00							
Slope (ft/ft)=	0.040							
Surface Cover:	Woods							
n-value=	0.400							
T_t (hrs)=	0.287							
Shallow Flow								
Length (ft)=	1345.00							
Slope (ft/ft)=	0.033							
Surface Cover:	Unpaved							
Average Velocity (ft/sec)=	2.92							
T_t (hrs)=	0.13							
Channel Flow 1								
Length (ft)=	1221.00							
Slope (ft/ft)=	0.021							
Cross Sectional Flow Area (ft^2)=	10.50							
Wetted Perimeter (ft)=	9.50							
Channel Lining:	Weeds							
n-value=	0.040							
Hydraulic Radius (ft)=	1.11							
Average Velocity (ft/sec)=	5.81							
T_t (hrs)=	0.06							

Project Name: Wallbrook

DRAINAGE AREA 2
STORMWATER PRE-POST CALCULATIONS

Channel Flow 2		
Length (ft)=		
Slope (ft/ft)=		
Cross Sectional Flow Area (ft^2)=		
Wetted Perimeter (ft)=		
Channel Lining:		
n-value=		
Hydraulic Radius (ft)=		
Average Velocity (ft/sec)=		
T_t (hrs)=		
Channel Flow 3		
Length (ft)=		
Slope (ft/ft)=		
Cross Sectional Flow Area (ft^2)=		
Wetted Perimeter (ft)=		
Channel Lining:		
n-value=		
Hydraulic Radius (ft)=		
Average Velocity (ft/sec)=		
T_t (hrs)=		
Tc (hrs)=	0.47	0.08
RESULTS	**PRE-DEVELOPMENT**	**POST-DEVELOPMENT**
Composite Curve Number=	76	84
Disconnected Impervious Adjustment		
Disconnected impervious area (acre) =		
$CN_{adjusted\ (1\text{-}year)}$=	**84**	
High Density Only		
Volume of runoff from 1" rainfall for DA HIGH DENSITY REQUIREMENT = (ft^3) =	30,982	
1-year, 24-hour storm (Peak Flow)		
Runoff (inches) = $Q^*_{1\text{-}year}$=	0.94	1.39
Volume of runoff (ft^3) =	82,020	125,024
Volume change (ft^3) =	43,004	
Peak Discharge (cfs)= $Q_{1\text{-}year}$=	21.448	76.418
2-year, 24-hour storm (LID)		
Runoff (inches) = $Q^*_{2\text{-}year}$=	1.35	1.89
Volume of runoff (ft^3) =	118,608	169,788
Peak Discharge (cfs)= $Q_{2\text{-}year}$=	31.016	103.780
10-year, 24-hour storm (DIA)		
Runoff (inches) = $Q^*_{10\text{-}year}$=	2.59	3.30
Volume of runoff (ft^3) =	227,162	288,971
Peak Discharge (cfs)= $Q_{10\text{-}year}$=	59.403	180.651

Project Name: Wallbrook

DA SITE SUMMARY
STORMWATER PRE-POST CALCULATIONS

SITE SUMMARY

DRAINAGE AREA SUMMARIES

DRAINAGE AREA:	DA1	DA2	DA3	DA4	DA5	DA6	DA7	DA8	DA9	DA10
Pre-Development (1-year, 24-hour storm)										
Runoff (in) = $Q_{pre,1\text{-}year}$ =	1.26	0.94								
Peak Flow (cfs)=$Q_{1\text{-}year}$ =	48.570	21.448								
Post-Development (1-year, 24-hour storm)										
Proposed Impervious Surface (acre) =	4.80	7.65								
Runoff (in)=$Q_{1\text{-}year}$ =	1.29	1.39								
Peak Flow (cfs)=$Q_{1\text{-}year}$ =	70.269	76.418								
Increase in volume per DA (ft^3)_1-yr storm=		43,004								
Minimum Volume to be Managed for DA HIGH DENSITY REQUIREMENT = (ft^3) =	22,533	30,982								

TARGET CURVE NUMBER (TCN)

Site Data

SITE \SOIL COMPOSITION

HYDROLOGIC SOIL GROUP	Site Area	%	Target CN
A	0.00	0%	N/A
B	0.00	0%	N/A
C	30.75	73%	N/A
D	11.59	27%	N/A

Total Site Area (acres) =	42.34
Percent BUA (Includes Existing Lakes/Pond Areas) =	29%
Project Density =	High
Target Curve Number (TCN) =	N/A
$CN_{adjusted\ (1\text{-}year)}$=	
Minimum Volume to be Managed (Total Site) Per TCN Requirement= ft^3 =	

Site Nitrogen Loading Data

HSG	TN export coefficient (lbs/ac/yr)	Site Acreage	N Export
Pasture	1.2	0.00	0.00
Woods, Poor Condition	1.6	0.00	0.00
Woods, Fair Condition	1.2	17.71	21.25
Woods, Good Condition	0.8	0.00	0.00
Open Space, Poor Condition	1.0	0.00	0.00
Open Space, Fair Condition	0.8	12.18	9.74
Open Space, Good Condition	0.6	0.00	0.00
Reforestation (in dedicated OS)	0.6	0.00	0.00
Impervious	21.2	12.45	263.94
SITE NITROGEN LOADING RATE (lbs/ac/yr)=		6.97	
Nitrogen Load (lbs/yr)=		294.94	
TOTAL SITE NITROGEN TO MITIGATE (lbs/yr)_Wendell Only=		142.51	

Site Nitrogen Loading Data For Expansions Only

	Existing	New
Impervious(acres)=	NA	NA
"Expansion Area" (acres=)		
Nitrogen Load (lbs/yr)=	NA	NA
SITE NITROGEN LOADING RATE (lbs/ac/yr)=	NA	NA
Total Site loading rate (lbs/ac/yr)		
TOTAL SITE NITROGEN TO MITIGATE (lbs/yr)=	NA	

Project Name: Wallbrook

DRAINAGE AREA 1
BMP CALCULATIONS

DRAINAGE AREA 1 - BMP DEVICES AND ADJUSTMENTS				
DA1 Site Acreage=	17.64			
DA1 Off-Site Acreage=	20.11			
Total Required Storage Volume for Site TCN Requirement (ft^3)=				
Total Required Storage Volume for DA1 1" Rainfall for High Density (ft^3)=	22,533			
Will site use underground detention/cistern?	No	Enter % of the year water will be reused=	0%	Note: Supporting information/details should be submitted to demonstrate water usage.

ENTER ACREAGE FOR ALL SUB-DRAINAGE AREAS IN DA

HSG	Sub-DA1(a) (Ac)		Sub-DA1(b) (Ac)		Sub-DA1(c) (Ac)		Sub-DA1(d) (Ac)		Sub-DA1(e) (Ac)	
	Site	Off-site	Site	Off-site	Site	Off-site	Site	Off-site	Site	Off-site
Pasture		0.01								
Woods, Poor Condition										
Woods, Fair Condition			8.85	4.84						
Woods, Good Condition										
Open Space, Poor Condition										
Open Space, Fair Condition	2.32		1.67	9.85						
Open Space, Good Condition										
Reforestation (in dedicated OS)										
Impervious	4.80	0.01		5.41						

Sub-DA1(a) BMP(s)

Device Name (As Shown on Plan)	Device Type	Water Quality Volume for Sub-DA (ft^3)	Provided Volume that will drawdown 2-5 days (ft^3)	Nitrogen Removal Efficiency	Sub-DA Nitrogen (lbs)	Nitrogen Removed (lbs)	Drawdown Time (hours)
SCM A	Wet Detention Basin	4,267	16,901	25%	103.84	25.96	53.76
				0%	77.88	0.00	
				0%	77.88	0.00	
				0%	77.88	0.00	
				0%	77.88	0.00	
Total Nitrogen remaining leaving the subbasin (lbs):		**77.88**					

Sub-DA1(b) BMP(s)

If Sub-DA1(b) is connected to upstream subbasin(s), enter the nitrogen leaving the most upstream subbasin(lbs):

Device Name (As Shown on Plan)	Device Type	Water Quality Volume for Sub-DA (ft^3)	Provided Volume that will drawdown 2-5 days (ft^3)	Nitrogen Removal Efficiency	Sub-DA Nitrogen (lbs)	Nitrogen Removed (lbs)	Drawdown Time (hours)
Bypass		19,890		0%	140.34	0.00	
				0%	140.34	0.00	
				0%	140.34	0.00	
				0%	140.34	0.00	
				0%	140.34	0.00	
Total Nitrogen remaining leaving the subbasin (lbs):		**140.34**					

Sub-DA1 (c) BMP(s)

If Sub-DA1(c) is connected to upstream subbasin(s), enter the nitrogen leaving the most upstream subbasin(lbs):

Device Name (As Shown on Plan)	Device Type	Water Quality Volume for Sub-DA (ft^3)	Provided Volume that will drawdown 2-5 days (ft^3)	Nitrogen Removal Efficiency	Sub-DA Nitrogen (lbs)	Nitrogen Removed (lbs)	Drawdown Time (hours)
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
Total Nitrogen remaining leaving the subbasin (lbs):							

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DRAINAGE AREA 1
BMP CALCULATIONS

Sub-DA1(d) BMP(s)							
If Sub-DA1(d) is connected to upstream subbasin(s), enter the nitrogen leaving the most upstream subbasin(lbs):							
Device Name (As Shown on Plan)	Device Type	Water Quality Volume for Sub-DA (ft^3)	Provided Volume that will drawdown 2-5 days (ft^3)	Nitrogen Removal Efficiency	Sub-DA Nitrogen (lbs)	Nitrogen Removed (lbs)	Drawdown Time (hours)
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
Total Nitrogen remaining leaving the subbasin (lbs):							
Sub-DA1(e) BMP(s)							
If Sub-DA1(e) is connected to upstream subbasin(s), enter the nitrogen leaving the most upstream subbasin(lbs):							
Device Name (As Shown on Plan)	Device Type	Water Quality Volume for Sub-DA (ft^3)	Provided Volume that will drawdown 2-5 days (ft^3)	Nitrogen Removal Efficiency	Sub-DA Nitrogen (lbs)	Nitrogen Removed (lbs)	Drawdown Time (hours)
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
Total Nitrogen remaining leaving the subbasin (lbs):							

DA1 BMP SUMMARY	
Total Volume Treated (ft^3)=	16,901
Nitrogen Mitigated(lbs)=	25.96
1-year, 24-hour storm	
Post BMP Volume of Runoff $(ft^3)_{(1\text{-year})}$=	65,596
Post BMP Runoff (inches) = $Q^*_{(1\text{-year})}$=	1.02
Post BMP $CN_{(1\text{-year})}$=	77
Post BMP Peak Discharge (cfs)= $Q_{1\text{-year}}$=	36.440
2-year, 24-hour storm (LID)	
Post BMP Volume of Runoff $(ft3)_{(2\text{-year})}$=	96,520
Post BMP Runoff (inches) = $Q^*_{(2\text{-year})}$=	1.51
Post BMP $CN_{(2\text{-year})}$=	78
Post BMP Peak Discharge (cfs)= $Q_{(2\text{-year})}$=	50.430
10-year, 24-hour storm (DIA)	
Post BMP Volume of Runoff $(ft^3)_{(10\text{-year})}$=	190,592
Post BMP Runoff (inches) = $Q^*_{(10\text{-year})}$=	2.98
Post BMP $CN_{(10\text{-year})}$=	95
Post BMP Peak Discharge (cfs)= $Q_{(10\text{-year})}$=	100.390

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DRAINAGE AREA 2
BMP CALCULATIONS

DRAINAGE AREA 1 - BMP DEVICES AND ADJUSTMENTS				
DA2 Site Acreage=	24.70			
DA2 Off-Site Acreage=	8.30			
Total Required Storage Volume TCN Requirement (ft^3)=				
Total Required Storage Volume for DA2 1" Rainfall for High Density (ft3)=	30,982			
Will site use underground detention/cistern?	No	Enter % of the year water will be reused=	0%	Note: Supporting information/details should be submitted to demonstrate water usage.

ENTER ACREAGE FOR ALL SUB-DRAINAGE AREAS IN DA

HSG	Sub-DA2(a) (Ac)		Sub-DA2(b) (Ac)		Sub-DA2(c) (Ac)		Sub-DA2(d) (Ac)		Sub-DA2(e) (Ac)	
	Site	Off-site	Site	Off-site	Site	Off-site	Site	Off-site	Site	Off-site
Pasture										
Woods, Poor Condition										
Woods, Fair Condition			8.86	4.84						
Woods, Good Condition										
Open Space, Poor Condition										
Open Space, Fair Condition	3.95		4.29	9.85						
Open Space, Good Condition										
Reforestation (in dedicated OS)										
Impervious	7.60			0.95						

Sub-DA1(a) BMP(s)

Device Name (As Shown on Plan)	Device Type	Water Quality Volume for Sub-DA (ft^3)	Provided Volume that will drawdown 2-5 days (ft^3)	Nitrogen Removal Efficiency	Sub-DA Nitrogen (lbs)	Nitrogen Removed (lbs)	Drawdown Time (hours)
SCM B	Wet Detention Basin	9,205	26,929	25%	164.28	41.07	51.84
				0%	123.21	0.00	
				0%	123.21	0.00	
				0%	123.21	0.00	
				0%	123.21	0.00	
Total Nitrogen remaining leaving the subbasin (lbs):		**123.21**					

Sub-DA1(b) BMP(s)

If Sub-DA1(b) is connected to upstream subbasin(s), enter the nitrogen leaving the most upstream subbasin(lbs):

Device Name (As Shown on Plan)	Device Type	Water Quality Volume for Sub-DA (ft^3)	Provided Volume that will drawdown 2-5 days (ft^3)	Nitrogen Removal Efficiency	Sub-DA Nitrogen (lbs)	Nitrogen Removed (lbs)	Drawdown Time (hours)
Bypass		7,440		0%	47.89	0.00	
				0%	47.89	0.00	
				0%	47.89	0.00	
				0%	47.89	0.00	
				0%	47.89	0.00	
Total Nitrogen remaining leaving the subbasin (lbs):		**47.89**					

Sub-DA1 (c) BMP(s)

If Sub-DA1(c) is connected to upstream subbasin(s), enter the nitrogen leaving the most upstream subbasin(lbs):

Device Name (As Shown on Plan)	Device Type	Water Quality Volume for Sub-DA (ft^3)	Provided Volume that will drawdown 2-5 days (ft^3)	Nitrogen Removal Efficiency	Sub-DA Nitrogen (lbs)	Nitrogen Removed (lbs)	Drawdown Time (hours)
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
Total Nitrogen remaining leaving the subbasin (lbs):							

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DRAINAGE AREA 2
BMP CALCULATIONS

Sub-DA1(d) BMP(s)							
If Sub-DA1(d) is connected to upstream subbasin(s), enter the nitrogen leaving the most upstream subbasin(lbs):							
Device Name (As Shown on Plan)	Device Type	Water Quality Volume for Sub-DA (ft^3)	Provided Volume that will drawdown 2-5 days (ft^3)	Nitrogen Removal Efficiency	Sub-DA Nitrogen (lbs)	Nitrogen Removed (lbs)	Drawdown Time (hours)
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
Total Nitrogen remaining leaving the subbasin (lbs):							
Sub-DA1(e) BMP(s)							
If Sub-DA1(e) is connected to upstream subbasin(s), enter the nitrogen leaving the most upstream subbasin(lbs):							
Device Name (As Shown on Plan)	Device Type	Water Quality Volume for Sub-DA (ft^3)	Provided Volume that will drawdown 2-5 days (ft^3)	Nitrogen Removal Efficiency	Sub-DA Nitrogen (lbs)	Nitrogen Removed (lbs)	Drawdown Time (hours)
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
				0%	0.00	0.00	
Total Nitrogen remaining leaving the subbasin (lbs):							

DA2 BMP SUMMARY	
Total Volume Treated (ft^3)=	26,929
Nitrogen Mitigated(lbs)=	41.07
1-year, 24-hour storm	
Post BMP Volume of Runoff $(ft^3)_{(1\text{-year})}$=	98,095
Post BMP Runoff (inches) = $Q^*_{(1\text{-year})}$=	1.09
Post BMP $CN_{(1\text{-year})}$=	79
Post BMP Peak Discharge (cfs)= $Q_{1\text{-year}}$=	18.750
2-year, 24-hour storm (LID)	
Post BMP Volume of Runoff $(ft3)_{(2\text{-year})}$=	142,859
Post BMP Runoff (inches) = $Q^*_{(2\text{-year})}$=	1.59
Post BMP $CN_{(2\text{-year})}$=	79
Post BMP Peak Discharge (cfs)= $Q_{(2\text{-year})}$=	27.240
10-year, 24-hour storm (DIA)	
Post BMP Volume of Runoff $(ft^3)_{(10\text{-year})}$=	262,042
Post BMP Runoff (inches) = $Q^*_{(10\text{-year})}$=	2.92
Post BMP $CN_{(10\text{-year})}$=	95
Post BMP Peak Discharge (cfs)= $Q_{(10\text{-year})}$=	70.960

Project Name: Wallbrook

DA SITE SUMMARY
BMP CALCULATIONS

BMP SUMMARY										
DRAINAGE AREA SUMMARIES										
DRAINAGE AREA:	DA1	DA2	DA3	DA4	DA5	DA6	DA7	DA8	DA9	DA10
Pre-Development (1-year, 24-hour storm)										
Runoff (in)=$Q^*_{1\text{-year}}$ =	1.26	0.94								
Peak Flow (cfs)=$Q_{1\text{-year}}$ =	48.570	21.448								
Post-Development (1-year, 24-hour storm)										
Target Curve Number (TCN) =	NA									
Post BMP Runoff (inches) = $Q^*_{(1\text{-year})}$=	1.02	1.09								
Post BMP Peak Discharge (cfs)= $Q_{1\text{-year}}$=	36.440	18.750								
Post BMP $CN_{(1\text{-year})}$=										
Post-BMP Nitrogen Loading										
TOTAL SITE NITROGEN MITIGATED (lbs)=	67.03									
SITE NITROGEN LOADING RATE (lbs/ac/yr)=	5.38									
TOTAL SITE NITROGEN LEFT TO MITIGATE_Wendell Only (lbs)=	**75.48**									