



FINAL
STORM-WATER
MANAGEMENT PLAN

FOR
Primrose of Riverside

3985 Dublin Granville Road

LOCATED IN
CITY OF DUBLIN
FRANKLIN COUNTY
OHIO

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INTRODUCTION

The 3.5 acre parcel is located at 3985 Dublin Granville Road in the city of Dublin, Ohio. The site is currently unused and has a grass/brush covering that drains predominantly from East to West with 4%+/- slopes.

It is the intent to extend a public neighborhood street from Dublin Granville Road to connect to an existing drive near the South property line. The existing drive connects to Dublin Center Drive. The remaining parcels will be divided into 2 commercial lots. The South lot will be developed into an early education facility. The remaining lot to the north will be developed in the future. The size of the created lots are: 0.528 Acres of right-of-way, South lot (Lot #1) 1.370 acres, North lot (Lot #2) 1.632 Acres.

The proposed impervious areas derived for this report were acquired by measuring the proposed asphalt and concrete areas for Lot #1 and the proposed street improvements. The impervious area for lot #2 assumed an 80% impervious coverage, (1.30 Acres).

An underground detention system is proposed located on the southwest corner of the parking lot. The system designed is the ADS Stormtech MC-3500. This system is designed to handle the water quantity and water quality requirements. The water quality is treated by installing the three isolator rows with a system of manifolds to meet the draw down and quality filtering system. The system utilizes the surrounding gravel void space. Surrounding gravel is between the units and also above and below the MC3500 units. The gravel extends below the units by 9-inches and above the system by 12-inches.

To analyze and design the detention system Pondpack V8i is used. This software does not account for the 40% void space in the gravel. The system determines the volume required then an equivalent volume is calculated utilizing the void space in the surrounding gravel.

SOILS

The overall site is comprised of two soil types

Symbol	Name	Soil Classification
CrB	Crosby silt loam, Southern Ohio Till Plain, 2 to 6 percent slopes	C/D
Ko	Kokomo silty clay loam, 0 to 2 percent slopes	C/D

PRE-DEVELOPED

Area-3.0 Ac
CN – 84
Tc- 0.185 hours

Run-off 0.9 inches

POST DEVELOPED

Area-3.0 Ac
CN- 94
Tc- 0.11 hours
Run-off 1.6 inches

CRITICAL STORM

$((\text{Pre Run-off} - \text{Post Run-off}) / \text{Pre Run-off}) * 100 = \% \text{ increase}$

$$((0.9 - 1.6) / 0.9) * 100 = 70\%$$

Therefore, the critical storm is the 10-Year Storm

WATER QUALITY VOLUME

The total disturbed area is 3.0 acres.

$P = 0.9$
Disturbed Area $A = 3.0$

$$WQ_v = P * R_v * A / 12$$

$$R_{v1} = 0.05 + 0.9i$$

where i is the impervious ratio

$$i = 102,112 / 130,786 = 0.781$$

$$R_v = 0.05 + 0.9 * 0.781 = 0.753$$

Therefore $WQ_v = 0.169 \text{ Ac-ft} = 7,362 \text{ cu.ft.}$

Sediment Storage = 1,472 cu.ft.

WATER QUALITY ORIFICE SIZING

Water Quality Volume – 7,365 cu.ft
Draw Down Time = 48 Hours

$$WQV / (48 \text{ HRS} * 3600 \text{ S})$$

$$= 7,362/172,800$$

$$= 0.0426 \text{ CFS}$$

Orifice under standard pressure

$$Q = (A * 8.02 * K * h^{0.5}) / 144$$

$$d = ((27.86 * Q) / (K * h^{0.5}))^{0.5}$$

Where K=0.62
h = head = 2.4'

Therefore d = 1.112 inches

Use 1-inch

Total volume required – 7,365 + 1,472 = 8,837 cu.ft.

Total volume provided at elevation 890.17 = 10,600 cu.ft.

SUB-BASIN FLOWS

The site is comprised of 3 sub-basins listed below:

Sub-Basin	Design Storm (CFS/Ac)						
	1	2	5	10	25	50	100
2650	0.6	0.8	1.0	1.2	1.6	2.3	2.9
2660	2.1	3.0	3.7	4.3	5.1	5.9	6.8
MR200	1.0	1.2	1.7	2.2	3.0	3.9	4.8

The detentions system is releasing into the MR200 basin. To prevent issues down stream we have designed the control structure to reduce all flows to the MR200 basin allowable flow rates. The site has 1.6 acres in the MR200 basin so the allowable release rate will be 1.6 cfs for storms 1 thru 10. See below for the remaining allowable release rates.

POST-DEVELOPED

The underground detention system by ADS stormtech is proposed. The unit is the MC-3500. The system also accounts for storage in the surrounding gravel backfill at 40% void space.

Storm Event	Pre-developed Q (cfs)	Post-Developed Q (cfs)	Allowable Release (cfs)	Actual Release (cfs)	Pond Water Surface Elevation	Pond Volume Ac-ft
1	3.52	6.88	1.6	1.10	889.61	0.164
2	4.85	8.57	1.6	1.24	889.99	0.210
5	6.86	10.96	1.6	1.42	890.54	0.277

10	8.55	12.91	1.6	1.56	891.01	0.334
25	10.96	15.62	4.8	2.97	891.59	0.399
50	12.97	17.86	6.24	5.48	892.01	0.439
100	15.10	20.20	7.68	7.63	892.62	0.481

CONCLUSION

The calculations used a total of 1,075' of 60" Diameter pipe to simulate the underground detention. This accounted for slightly over 0.484 Ac-ft. however, the detention system utilizes the surrounding gravel void space; reducing the overall length of storm chambers. Although the length is reduced the over all volume of the system MC3500 system is 21,646 cu.ft (0.497 Ac-ft)



11/26/2020

APPENDICES

SITE/DRAINAGE MAP

USGS MAP

SOILS MAP

PRE-DEV. TR55 CALCULATIONS

POST DEV. TR55 CALCULATIONS

MASTER SUMMARY

PRE-DEV. HYDROGRAPHS

POST-DEV, HYDROGRAPHS

POND HYDROGRAPHS

ADS STORMTECH SYSTEM DATA

APPENDIX 1
Site Plan

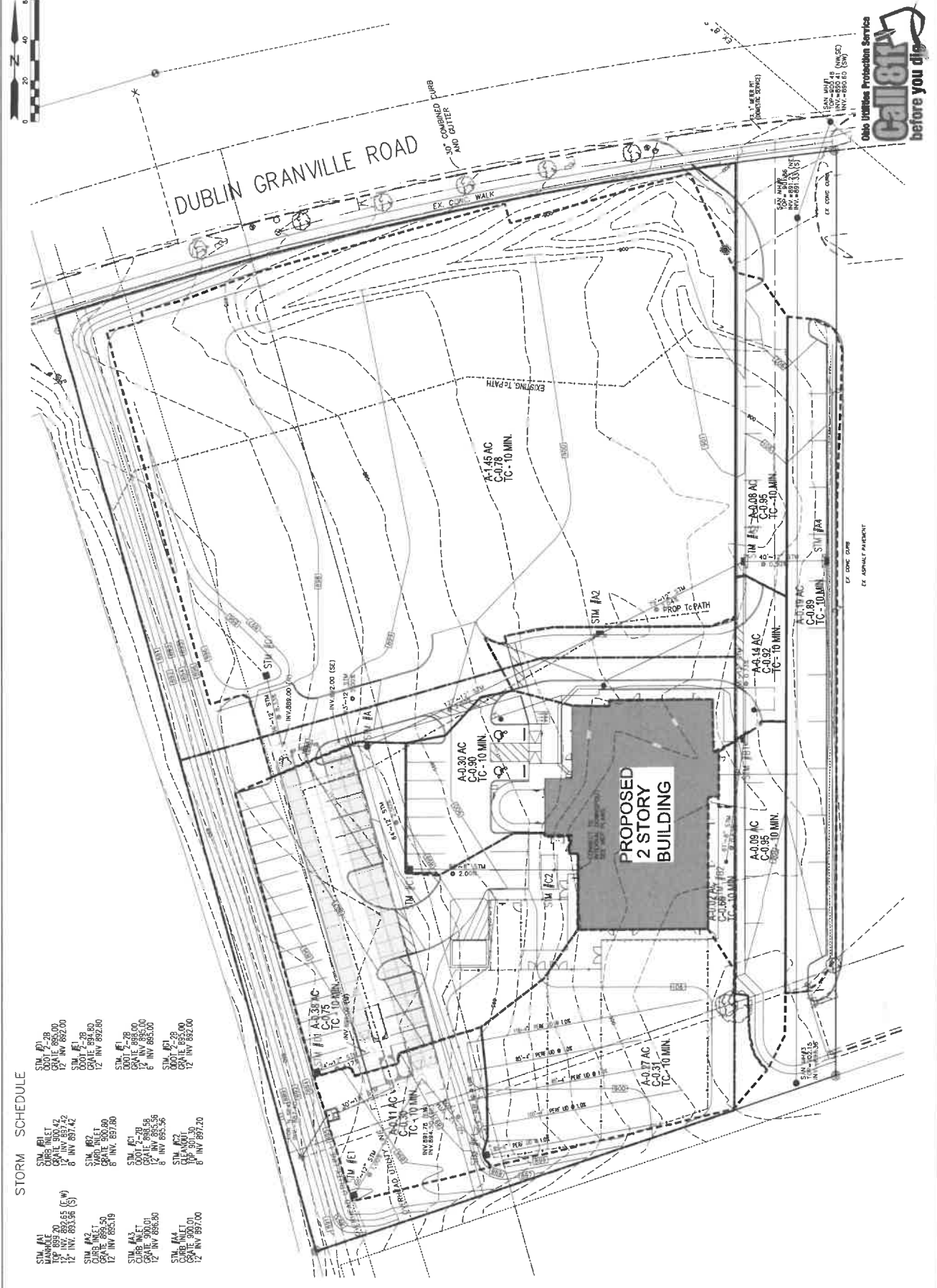
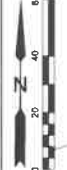
REVISIONS	DATE	DESCRIPTION

OWNER:
 EDUCATION DEVELOPMENT GROUP LLC
 1209 HILL ROAD N. SUITE 200
 FREDERICKTOWN, OHIO 43147
 TEL: 937.490.9460 FAX: 937.428.9794



PRIMROSE SCHOOL RIVERSIDE DRAINAGE PLAN
 3885 RIVINGTON ROAD, SUITE 100, FREDERICKTOWN, OHIO 43147
 TEL: 937.490.9460 FAX: 937.428.9794

0.7.0



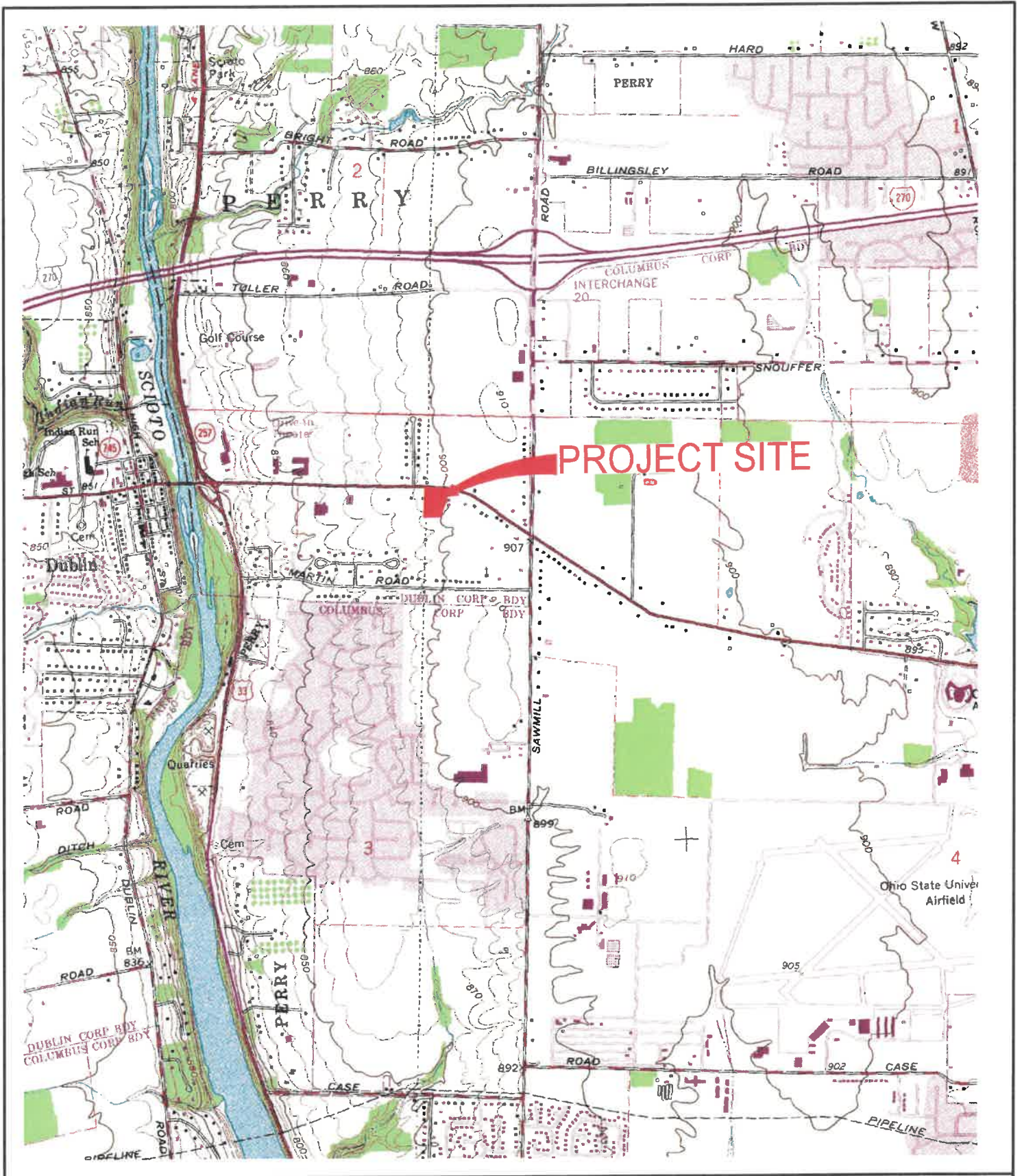
STORM SCHEDULE

STIM #A1	2.28 AC	C-0.12	TC-10 MIN.
MANHOLE	12" INV. 899.65		
CURB INLET	12" INV. 897.42		
GRATE	8" INV. 893.96 (S)		
STIM #A2	2.28 AC	C-0.12	TC-10 MIN.
MANHOLE	12" INV. 899.65		
CURB INLET	12" INV. 897.42		
GRATE	8" INV. 893.96 (S)		
STIM #A3	2.28 AC	C-0.12	TC-10 MIN.
MANHOLE	12" INV. 899.65		
CURB INLET	12" INV. 897.42		
GRATE	8" INV. 893.96 (S)		
STIM #A4	2.28 AC	C-0.12	TC-10 MIN.
MANHOLE	12" INV. 899.65		
CURB INLET	12" INV. 897.42		
GRATE	8" INV. 893.96 (S)		
STIM #A5	2.28 AC	C-0.12	TC-10 MIN.
MANHOLE	12" INV. 899.65		
CURB INLET	12" INV. 897.42		
GRATE	8" INV. 893.96 (S)		
STIM #A6	2.28 AC	C-0.12	TC-10 MIN.
MANHOLE	12" INV. 899.65		
CURB INLET	12" INV. 897.42		
GRATE	8" INV. 893.96 (S)		
STIM #A7	2.28 AC	C-0.12	TC-10 MIN.
MANHOLE	12" INV. 899.65		
CURB INLET	12" INV. 897.42		
GRATE	8" INV. 893.96 (S)		

Ohio Utilities Protection Service
Call 811
 before you dig

APPENDIX 2

USGS Map



Community Civil Engineers, LLC
 2440 DAYTON-XENIA ROAD, SUITE B
 BEAVERCREEK, OHIO 45434
 TEL. 937.490.9460 FAX 937.426.9798
 www.communitycivilengineers.com

SCALE 0 2000 4000 6000



TOPOGRAPHIC LOCATION MAP

PRIMROSE OF RIVERSIDE

DUBLIN, OHIO

DESIGN:	DATE:
SMB	09/01/2020
DRAWN:	
CHECK:	
JOB #:	
19-410	

Fig.1

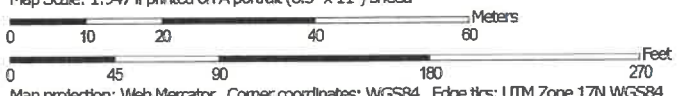
APPENDIX 3

Soils Map

Custom Soil Resource Report Soil Map



Map Scale: 1:947 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

APPENDIX 4

PRE-DEV TR55 CALCULATIONS

3985 DUBLIN GRANVILLE ROAD

Subsection: Time of Concentration Calculations

Label: CM-1

Return Event: 1 years

Storm Event: 1-Year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	95.00 ft
Manning's n	0.180
Slope	0.032 ft/ft
2 Year 24 Hour Depth	2.6 in
Average Velocity	0.16 ft/s
Segment Time of Concentration	0.167 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	190.00 ft
Is Paved?	False
Slope	0.032 ft/ft
Average Velocity	2.89 ft/s
Segment Time of Concentration	0.018 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.185 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Runoff CN-Area
Label: CM-1

Return Event: 1 years
Storm Event: 1-Year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Open space (Lawns,parks etc.) - Fair condition; grass cover 50% to 75% - Soil D	84.000	3.000	0.0	0.0	84.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	3.000	(N/A)	(N/A)	84.000

APPENDIX 5
POST DEV TR55 CALCULATIONS

3985 DUBLIN GRANVILLE ROAD

Subsection: Time of Concentration Calculations
Label: CM-1

Return Event: 1 years
Storm Event: 1-Year

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	25.00 ft
Manning's n	0.240
Slope	0.015 ft/ft
2 Year 24 Hour Depth	2.6 in
Average Velocity	0.07 ft/s
Segment Time of Concentration	0.097 hours

Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	10.00 ft
Is Paved?	True
Slope	0.020 ft/ft
Average Velocity	2.87 ft/s
Segment Time of Concentration	0.001 hours

Segment #3: Length and Velocity	
Hydraulic Length	175.00 ft
Velocity	4.00 ft/s
Segment Time of Concentration	0.012 hours

Time of Concentration (Composite)	
Time of Concentration (Composite)	0.110 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Runoff CN-Area
 Label: CM-1

Return Event: 1 years
 Storm Event: 1-Year

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	2.400	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil D	80.000	0.600	0.0	0.0	80.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	3.000	(N/A)	(N/A)	94.400

APPENDIX 6
MASTER SUMMARY

3985 DUBLIN GRANVILLE ROAD

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
CM-1	Pre 1 year	1	0.221	12.025	3.52
CM-1	Pre 2 year	2	0.304	12.000	4.85
CM-1	Pre 5 year	5	0.428	12.000	6.86
CM-1	Pre 10 year	10	0.535	12.000	8.55
CM-1	Pre 25 year	25	0.689	12.000	10.96
CM-1	Pre 50year	50	0.820	12.000	12.97
CM-1	Pre 100 year	100	0.961	12.000	15.10

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
O-1	Pre 1 year	1	0.221	12.025	3.52
O-1	Pre 2 year	2	0.304	12.000	4.85
O-1	Pre 5 year	5	0.428	12.000	6.86
O-1	Pre 10 year	10	0.535	12.000	8.55
O-1	Pre 25 year	25	0.689	12.000	10.96
O-1	Pre 50year	50	0.820	12.000	12.97
O-1	Pre 100 year	100	0.961	12.000	15.10

3985 DUBLIN GRANVILLE ROAD

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
CM-1	Post 1 year	1	0.396	11.925	6.88
CM-1	Post 2 year	2	0.498	11.925	8.57
CM-1	Post 5 year	5	0.645	11.925	10.96
CM-1	Post 10 year	10	0.767	11.925	12.91
CM-1	Post 25 year	25	0.938	11.925	15.62
CM-1	Post 50year	50	1.081	11.925	17.86
CM-1	Post 100 year	100	1.231	11.925	20.20

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
O-1	Post 1 year	1	0.389	12.225	1.10
O-1	Post 2 year	2	0.490	12.250	1.24
O-1	Post 5 year	5	0.636	12.300	1.42
O-1	Post 10 year	10	0.756	12.350	1.56
O-1	Post 25 year	25	0.926	12.175	2.97
O-1	Post 50year	50	1.068	12.125	5.48
O-1	Post 100 year	100	1.217	12.100	7.63

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
PO-2 (IN)	Post 1 year	1	0.396	11.925	6.88	(N/A)	(N/A)
PO-2 (OUT)	Post 1 year	1	0.389	12.225	1.10	889.61	0.164
PO-2 (IN)	Post 2 year	2	0.498	11.925	8.57	(N/A)	(N/A)
PO-2 (OUT)	Post 2 year	2	0.490	12.250	1.24	889.99	0.210
PO-2 (IN)	Post 5 year	5	0.645	11.925	10.96	(N/A)	(N/A)
PO-2 (OUT)	Post 5 year	5	0.636	12.300	1.42	890.54	0.277
PO-2 (IN)	Post 10 year	10	0.767	11.925	12.91	(N/A)	(N/A)
PO-2 (OUT)	Post 10 year	10	0.756	12.350	1.56	891.01	0.335
PO-2 (IN)	Post 25 year	25	0.938	11.925	15.62	(N/A)	(N/A)
PO-2 (OUT)	Post 25 year	25	0.926	12.175	2.97	891.59	0.399
PO-2 (IN)	Post 50year	50	1.081	11.925	17.86	(N/A)	(N/A)
PO-2 (OUT)	Post 50year	50	1.068	12.125	5.48	892.00	0.439
PO-2 (IN)	Post 100 year	100	1.231	11.925	20.20	(N/A)	(N/A)
PO-2 (OUT)	Post 100 year	100	1.217	12.100	7.63	892.61	0.481

APPENDIX 7
PRE-DEV. HYDROGRAPHS

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary

Label: CM-1

Return Event: 1 years

Storm Event: 1-Year

Storm Event	1-Year
Return Event	1 years
Duration	24.000 hours
Depth	2.2 in
Time of Concentration (Composite)	0.185 hours
Area (User Defined)	3.000 acres
<hr/>	
Computational Time Increment	0.025 hours
Time to Peak (Computed)	12.018 hours
Flow (Peak, Computed)	3.54 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	12.025 hours
Flow (Peak Interpolated Output)	3.52 ft ³ /s
<hr/>	
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	1.9 in
Maximum Retention (Pervious, 20 percent)	0.4 in
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	0.9 in
Runoff Volume (Pervious)	0.222 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.221 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.185 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.37 ft ³ /s
Unit peak time, Tp	0.123 hours
Unit receding limb, Tr	0.494 hours
Total unit time, Tb	0.617 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary
Label: CM-1

Return Event: 2 years
Storm Event: 2-Year

Storm Event	2-Year
Return Event	2 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.185 hours
Area (User Defined)	3.000 acres
<hr/>	
Computational Time Increment	0.025 hours
Time to Peak (Computed)	12.018 hours
Flow (Peak, Computed)	4.87 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	4.85 ft ³ /s
<hr/>	
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	1.9 in
Maximum Retention (Pervious, 20 percent)	0.4 in
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.2 in
Runoff Volume (Pervious)	0.304 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.304 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.185 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.37 ft ³ /s
Unit peak time, Tp	0.123 hours
Unit receding limb, Tr	0.494 hours
Total unit time, Tb	0.617 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary
Label: CM-1

Return Event: 5 years
Storm Event: 5-Year

Storm Event	5-Year
Return Event	5 years
Duration	24.000 hours
Depth	3.2 in
Time of Concentration (Composite)	0.185 hours
Area (User Defined)	3.000 acres
Computational Time Increment	0.025 hours
Time to Peak (Computed)	11.993 hours
Flow (Peak, Computed)	6.86 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	6.86 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	1.9 in
Maximum Retention (Pervious, 20 percent)	0.4 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.7 in
Runoff Volume (Pervious)	0.429 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.428 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.185 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.37 ft ³ /s
Unit peak time, Tp	0.123 hours
Unit receding limb, Tr	0.494 hours
Total unit time, Tb	0.617 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary
Label: CM-1

Return Event: 10 years
Storm Event: 10-Year

Storm Event	10-Year
Return Event	10 years
Duration	24.000 hours
Depth	3.7 in
Time of Concentration (Composite)	0.185 hours
Area (User Defined)	3.000 acres
Computational Time Increment	0.025 hours
Time to Peak (Computed)	11.993 hours
Flow (Peak, Computed)	8.56 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	8.55 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	1.9 in
Maximum Retention (Pervious, 20 percent)	0.4 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.1 in
Runoff Volume (Pervious)	0.536 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.535 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.185 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.37 ft ³ /s
Unit peak time, Tp	0.123 hours
Unit receding limb, Tr	0.494 hours
Total unit time, Tb	0.617 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary

Label: CM-1

Return Event: 25 years

Storm Event: 25 Year

Storm Event	25 Year
Return Event	25 years
Duration	24.000 hours
Depth	4.4 in
Time of Concentration (Composite)	0.185 hours
Area (User Defined)	3.000 acres
Computational Time Increment	0.025 hours
Time to Peak (Computed)	11.993 hours
Flow (Peak, Computed)	10.98 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	10.96 ft ³ /s
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	1.9 in
Maximum Retention (Pervious, 20 percent)	0.4 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.8 in
Runoff Volume (Pervious)	0.691 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.689 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.185 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.37 ft ³ /s
Unit peak time, Tp	0.123 hours
Unit receding limb, Tr	0.494 hours
Total unit time, Tb	0.617 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary
Label: CM-1

Return Event: 50 years
Storm Event: 50-Year

Storm Event	50-Year
Return Event	50 years
Duration	24.000 hours
Depth	5.0 in
Time of Concentration (Composite)	0.185 hours
Area (User Defined)	3.000 acres
<hr/>	
Computational Time Increment	0.025 hours
Time to Peak (Computed)	11.993 hours
Flow (Peak, Computed)	13.01 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	12.97 ft ³ /s
<hr/>	
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	1.9 in
Maximum Retention (Pervious, 20 percent)	0.4 in
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.3 in
Runoff Volume (Pervious)	0.822 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.820 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.185 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.37 ft ³ /s
Unit peak time, Tp	0.123 hours
Unit receding limb, Tr	0.494 hours
Total unit time, Tb	0.617 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary

Label: CM-1

Return Event: 100 years

Storm Event: 100-Year

Storm Event	100-Year
Return Event	100 years
Duration	24.000 hours
Depth	5.6 in
Time of Concentration (Composite)	0.185 hours
Area (User Defined)	3.000 acres
<hr/>	
Computational Time Increment	0.025 hours
Time to Peak (Computed)	11.993 hours
Flow (Peak, Computed)	15.15 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	12.000 hours
Flow (Peak Interpolated Output)	15.10 ft ³ /s
<hr/>	
Drainage Area	
SCS CN (Composite)	84.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	1.9 in
Maximum Retention (Pervious, 20 percent)	0.4 in
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.9 in
Runoff Volume (Pervious)	0.963 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.961 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.185 hours
Computational Time Increment	0.025 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	18.37 ft ³ /s
Unit peak time, Tp	0.123 hours
Unit receding limb, Tr	0.494 hours
Total unit time, Tb	0.617 hours

APPENDIX 8
POST DEV. HYDROGRAPHS

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary

Label: CM-1

Return Event: 1 years

Storm Event: 1-Year

Storm Event	1-Year
Return Event	1 years
Duration	24.000 hours
Depth	2.2 in
Time of Concentration (Composite)	0.110 hours
Area (User Defined)	3.000 acres
<hr/>	
Computational Time Increment	0.015 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	6.94 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	11.925 hours
Flow (Peak Interpolated Output)	6.88 ft ³ /s
<hr/>	
Drainage Area	
SCS CN (Composite)	94.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	0.6 in
Maximum Retention (Pervious, 20 percent)	0.1 in
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.6 in
Runoff Volume (Pervious)	0.396 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.396 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.110 hours
Computational Time Increment	0.015 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	30.84 ft ³ /s
Unit peak time, Tp	0.073 hours
Unit receding limb, Tr	0.294 hours
Total unit time, Tb	0.367 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary

Label: CM-1

Return Event: 2 years

Storm Event: 2-Year

Storm Event	2-Year
Return Event	2 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.110 hours
Area (User Defined)	3.000 acres
Computational Time Increment	0.015 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	8.65 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	11.925 hours
Flow (Peak Interpolated Output)	8.57 ft ³ /s
Drainage Area	
SCS CN (Composite)	94.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	0.6 in
Maximum Retention (Pervious, 20 percent)	0.1 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.0 in
Runoff Volume (Pervious)	0.498 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.498 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.110 hours
Computational Time Increment	0.015 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	30.84 ft ³ /s
Unit peak time, Tp	0.073 hours
Unit receding limb, Tr	0.294 hours
Total unit time, Tb	0.367 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary

Label: CM-1

Return Event: 5 years

Storm Event: 5-Year

Storm Event	5-Year
Return Event	5 years
Duration	24.000 hours
Depth	3.2 in
Time of Concentration (Composite)	0.110 hours
Area (User Defined)	3.000 acres
Computational Time Increment	0.015 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	11.05 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	11.925 hours
Flow (Peak Interpolated Output)	10.96 ft ³ /s
Drainage Area	
SCS CN (Composite)	94.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	0.6 in
Maximum Retention (Pervious, 20 percent)	0.1 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.6 in
Runoff Volume (Pervious)	0.646 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.645 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.110 hours
Computational Time Increment	0.015 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	30.84 ft ³ /s
Unit peak time, Tp	0.073 hours
Unit receding limb, Tr	0.294 hours
Total unit time, Tb	0.367 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary

Label: CM-1

Return Event: 10 years

Storm Event: 10-Year

Storm Event	10-Year
Return Event	10 years
Duration	24.000 hours
Depth	3.7 in
Time of Concentration (Composite)	0.110 hours
Area (User Defined)	3.000 acres
Computational Time Increment	0.015 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	13.01 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	11.925 hours
Flow (Peak Interpolated Output)	12.91 ft ³ /s
Drainage Area	
SCS CN (Composite)	94.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	0.6 in
Maximum Retention (Pervious, 20 percent)	0.1 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.1 in
Runoff Volume (Pervious)	0.767 ac-ft
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.767 ac-ft
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.110 hours
Computational Time Increment	0.015 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	30.84 ft ³ /s
Unit peak time, Tp	0.073 hours
Unit receding limb, Tr	0.294 hours
Total unit time, Tb	0.367 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary
Label: CM-1

Return Event: 25 years
Storm Event: 25 Year

Storm Event	25 Year
Return Event	25 years
Duration	24.000 hours
Depth	4.4 in
Time of Concentration (Composite)	0.110 hours
Area (User Defined)	3.000 acres
<hr/>	
Computational Time Increment	0.015 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	15.73 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	11.925 hours
Flow (Peak Interpolated Output)	15.62 ft ³ /s
<hr/>	
Drainage Area	
SCS CN (Composite)	94.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	0.6 in
Maximum Retention (Pervious, 20 percent)	0.1 in
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.8 in
Runoff Volume (Pervious)	0.939 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.938 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.110 hours
Computational Time Increment	0.015 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	30.84 ft ³ /s
Unit peak time, Tp	0.073 hours
Unit receding limb, Tr	0.294 hours
Total unit time, Tb	0.367 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary
Label: CM-1

Return Event: 50 years
Storm Event: 50-Year

Storm Event	50-Year
Return Event	50 years
Duration	24.000 hours
Depth	5.0 in
Time of Concentration (Composite)	0.110 hours
Area (User Defined)	3.000 acres
<hr/>	
Computational Time Increment	0.015 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	17.98 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	11.925 hours
Flow (Peak Interpolated Output)	17.86 ft ³ /s
<hr/>	
Drainage Area	
SCS CN (Composite)	94.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	0.6 in
Maximum Retention (Pervious, 20 percent)	0.1 in
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.3 in
Runoff Volume (Pervious)	1.082 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.081 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.110 hours
Computational Time Increment	0.015 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	30.84 ft ³ /s
Unit peak time, Tp	0.073 hours
Unit receding limb, Tr	0.294 hours
Total unit time, Tb	0.367 hours

3985 DUBLIN GRANVILLE ROAD

Subsection: Unit Hydrograph Summary
Label: CM-1

Return Event: 100 years
Storm Event: 100-Year

Storm Event	100-Year
Return Event	100 years
Duration	24.000 hours
Depth	5.6 in
Time of Concentration (Composite)	0.110 hours
Area (User Defined)	3.000 acres
<hr/>	
Computational Time Increment	0.015 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	20.33 ft ³ /s
Output Increment	0.025 hours
Time to Flow (Peak Interpolated Output)	11.925 hours
Flow (Peak Interpolated Output)	20.20 ft ³ /s
<hr/>	
Drainage Area	
SCS CN (Composite)	94.000
Area (User Defined)	3.000 acres
Maximum Retention (Pervious)	0.6 in
Maximum Retention (Pervious, 20 percent)	0.1 in
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.9 in
Runoff Volume (Pervious)	1.233 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.231 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.110 hours
Computational Time Increment	0.015 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	30.84 ft ³ /s
Unit peak time, Tp	0.073 hours
Unit receding limb, Tr	0.294 hours
Total unit time, Tb	0.367 hours

APPENDIX 9
POND HYDROGRAPHS

3985 DUBLIN GRANVILLE ROAD

Subsection: Level Pool Pond Routing Summary
 Label: PO-2 (IN)

Return Event: 1 years
 Storm Event: 1-Year

Infiltration			
Infiltration Method (Computed)	No Infiltration		
Initial Conditions			
Elevation (Water Surface, Initial)	887.75 ft		
Volume (Initial)	0.000 ac-ft		
Flow (Initial Outlet)	0.00 ft ³ /s		
Flow (Initial Infiltration)	0.00 ft ³ /s		
Flow (Initial, Total)	0.00 ft ³ /s		
Time Increment	0.025 hours		
Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	6.88 ft ³ /s	Time to Peak (Flow, In)	11.925 hours
Flow (Peak Outlet)	1.10 ft ³ /s	Time to Peak (Flow, Outlet)	12.225 hours
Elevation (Water Surface, Peak)	889.61 ft		
Volume (Peak)	0.164 ac-ft		
Mass Balance (ac-ft)			
Volume (Initial)	0.000 ac-ft		
Volume (Total Inflow)	0.396 ac-ft		
Volume (Total Infiltration)	0.000 ac-ft		
Volume (Total Outlet Outflow)	0.389 ac-ft		
Volume (Retained)	0.006 ac-ft		
Volume (Unrouted)	0.000 ac-ft		
Error (Mass Balance)	0.0 %		

3985 DUBLIN GRANVILLE ROAD

Subsection: Level Pool Pond Routing Summary
 Label: PO-2 (IN)

Return Event: 2 years
 Storm Event: 2-Year

Infiltration

Infiltration Method (Computed)	No Infiltration
-----------------------------------	-----------------

Initial Conditions

Elevation (Water Surface, Initial)	887.75 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.025 hours

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	8.57 ft ³ /s	Time to Peak (Flow, In)	11.925 hours
Flow (Peak Outlet)	1.24 ft ³ /s	Time to Peak (Flow, Outlet)	12.250 hours

Elevation (Water Surface, Peak)	889.99 ft
Volume (Peak)	0.210 ac-ft

Mass Balance (ac-ft)

Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	0.498 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.490 ac-ft
Volume (Retained)	0.007 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

3985 DUBLIN GRANVILLE ROAD

Subsection: Level Pool Pond Routing Summary
 Label: PO-2 (IN)

Return Event: 5 years
 Storm Event: 5-Year

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	887.75 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.025 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	10.96 ft ³ /s	Time to Peak (Flow, In)	11.925 hours
Flow (Peak Outlet)	1.42 ft ³ /s	Time to Peak (Flow, Outlet)	12.300 hours

Elevation (Water Surface, Peak)	890.54 ft
Volume (Peak)	0.277 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	0.645 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.636 ac-ft
Volume (Retained)	0.009 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

3985 DUBLIN GRANVILLE ROAD

Subsection: Level Pool Pond Routing Summary
 Label: PO-2 (IN)

Return Event: 10 years
 Storm Event: 10-Year

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	887.75 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.025 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	12.91 ft ³ /s	Time to Peak (Flow, In)	11.925 hours
Flow (Peak Outlet)	1.56 ft ³ /s	Time to Peak (Flow, Outlet)	12.350 hours

Elevation (Water Surface, Peak)	891.01 ft
Volume (Peak)	0.334 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	0.767 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.756 ac-ft
Volume (Retained)	0.010 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

3985 DUBLIN GRANVILLE ROAD

Subsection: Level Pool Pond Routing Summary
Label: PO-2 (IN)

Return Event: 25 years
Storm Event: 25 Year

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	887.75 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.025 hours

Inflow/Outflow Hydrograph Summary

Flow (Peak In)	15.62 ft ³ /s	Time to Peak (Flow, In)	11.925 hours
Flow (Peak Outlet)	2.97 ft ³ /s	Time to Peak (Flow, Outlet)	12.175 hours

Elevation (Water Surface, Peak)	891.59 ft
Volume (Peak)	0.399 ac-ft

Mass Balance (ac-ft)

Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	0.938 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.926 ac-ft
Volume (Retained)	0.012 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

3985 DUBLIN GRANVILLE ROAD

Subsection: Level Pool Pond Routing Summary
 Label: PO-2 (IN)

Return Event: 50 years
 Storm Event: 50-Year

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	887.75 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.025 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	17.86 ft ³ /s	Time to Peak (Flow, In)	11.925 hours
Flow (Peak Outlet)	5.48 ft ³ /s	Time to Peak (Flow, Outlet)	12.125 hours

Elevation (Water Surface, Peak)	892.00 ft
Volume (Peak)	0.439 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	1.081 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	1.068 ac-ft
Volume (Retained)	0.013 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

3985 DUBLIN GRANVILLE ROAD

Subsection: Level Pool Pond Routing Summary
 Label: PO-2 (IN)

Return Event: 100 years
 Storm Event: 100-Year

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	887.75 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft ³ /s
Flow (Initial Infiltration)	0.00 ft ³ /s
Flow (Initial, Total)	0.00 ft ³ /s
Time Increment	0.025 hours

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	20.20 ft ³ /s	Time to Peak (Flow, In)	11.925 hours
Flow (Peak Outlet)	7.63 ft ³ /s	Time to Peak (Flow, Outlet)	12.100 hours

Elevation (Water Surface, Peak)	892.61 ft
Volume (Peak)	0.481 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	1.231 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	1.217 ac-ft
Volume (Retained)	0.014 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

APPENDIX 10
ADS STORMTECH
SYSTEM DATA

PROJECT INFORMATION	
ENGINEERED BY:	KEVIN HENDRICKSON
PRODUCT MANAGER:	513-497-9953 KEVIN.HENDRICKSON@ADS-PIPE.COM
ADS SALES REP:	JOHN MCGEORGE 514-578-1561 JOHN.MCGEORGE@ADS-PIPE.COM
PROJECT NO.:	5201598



ADVANCED DRAINAGE SYSTEMS, INC.



FOR STORMTECH
INSTRUCTIONS,
DOWNLOAD THE
INSTALLATION APP

PRIMROSE SCHOOL OF RIVERSIDE

DUBLIN, OH

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-3500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"; CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (4 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN², AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL BE SIGNED BY THE MANUFACTURER'S REPRESENTATIVE, AND SHALL BE EQUAL TO 1.85 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12 OF THE AASHTO LRD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

- STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM -6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
 - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE CONSTRUCTION GUIDE.
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.
- USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.
- CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

DATE:	11/14/20	DRAWN:	SVO
PROJECT #:	S201598	CHECKED:	MHW
PRIMROSE SCHOOL OF RIVERSIDE DUBLIN, OH			

DATE	DRAWN	CHECKED	DESCRIPTION

4640 TRUMAN BLVD
HILLIARD, OH 43028

ADVANCED DRAINAGE SYSTEMS, INC.

520 CROWMELL AVENUE | ROCKY HILL, CT | 06067
860-434-1188 | 860-282-2888 | WWW.STORMTECH.COM

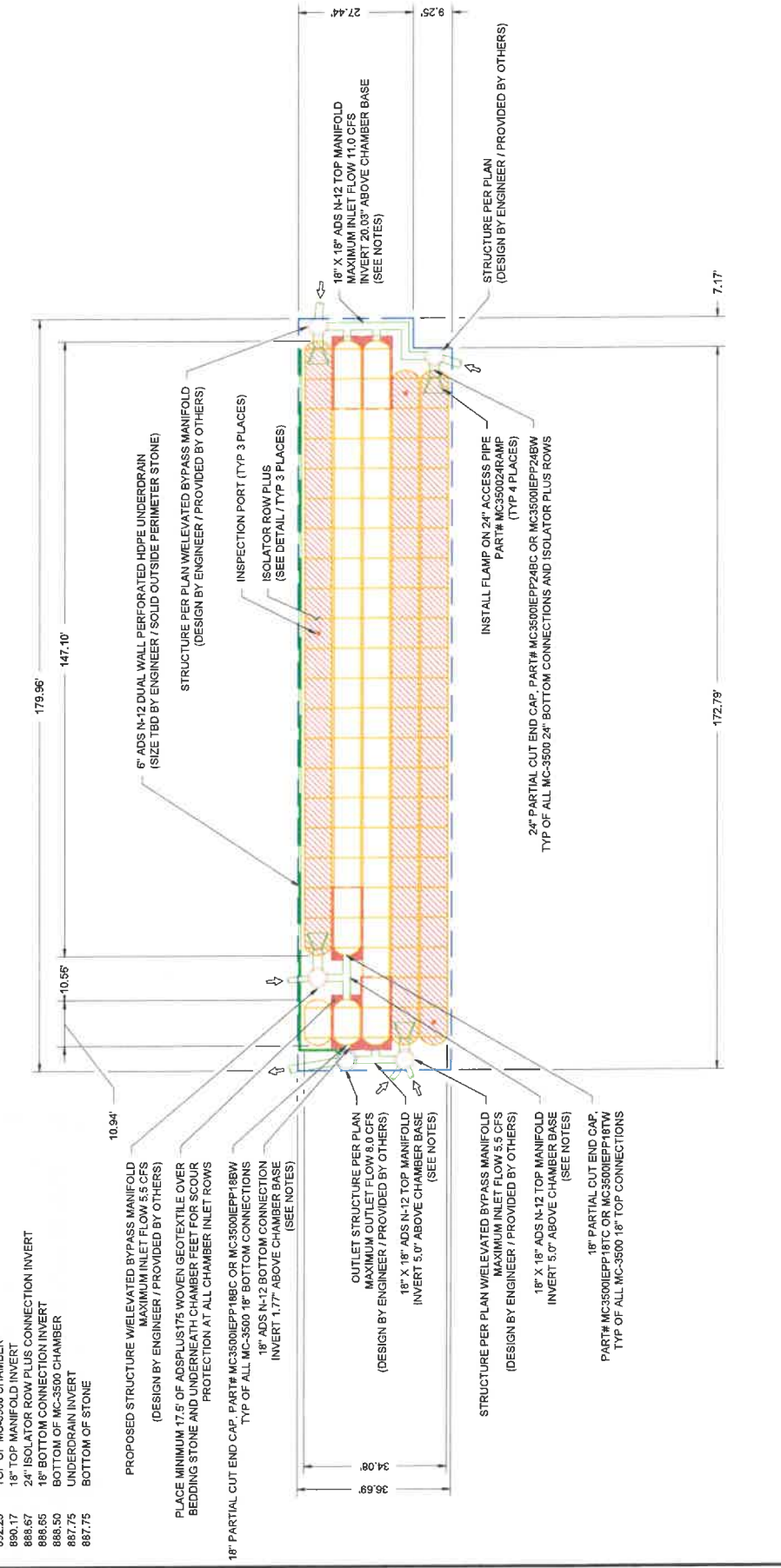
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PROPOSED LAYOUT

- 109 STORMTECH MC-3500 CHAMBERS
- 14 STORMTECH MC-3500 END CAPS
- 12 STONE ABOVE (in)
- 9 STONE BELOW (in)
- 40 % STONE VOID
- 21,696 INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
- 6,536 SYSTEM AREA (ft²)
- 433 SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS

- 900.25 MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
- 894.25 MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
- 893.75 MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
- 893.75 MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
- 893.75 MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
- 893.25 TOP OF STONE
- 892.25 TOP OF MC-3500 CHAMBER
- 890.17 18" TOP MANIFOLD INVERT
- 888.67 24" ISOLATOR ROW PLUS CONNECTION INVERT
- 888.50 BOTTOM OF MC-3500 CHAMBER
- 887.75 UNDERDRAIN INVERT
- 887.75 BOTTOM OF STONE



NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSTANT SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.

18" X 18" ADS N-12 TOP MANIFOLD
MAXIMUM INLET FLOW 11.0 CFS
INVERT 20.03' ABOVE CHAMBER BASE
(SEE NOTES)

STRUCTURE PER PLAN
(DESIGN BY ENGINEER / PROVIDED BY OTHERS)

INSTALL FLAMP ON 24" ACCESS PIPE
PART# MC350024RAMP
(TYP 4 PLACES)

24" PARTIAL CUT END CAP. PART# MC3500EPP24BC OR MC3500EPP24BW
TYP OF ALL MC-3500 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS

INSPECTION PORT (TYP 3 PLACES)

ISOLATOR ROW PLUS
(SEE DETAIL / TYP 3 PLACES)

STRUCTURE PER PLAN WIELEVATED BYPASS MANIFOLD
(DESIGN BY ENGINEER / PROVIDED BY OTHERS)

6' ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN
(SIZE TBD BY ENGINEER / PROVIDED BY OTHERS)

STRUCTURE PER PLAN WIELEVATED BYPASS MANIFOLD
MAXIMUM INLET FLOW 5.5 CFS
(DESIGN BY ENGINEER / PROVIDED BY OTHERS)

PLACE MINIMUM 17.5' OF ADS PLUS 17.5' MOVEN GEOTEXTILE OVER
BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR
PROTECTION AT ALL CHAMBER INLET ROWS

18" X 18" ADS N-12 TOP MANIFOLD
MAXIMUM INLET FLOW 8.0 CFS
(DESIGN BY ENGINEER / PROVIDED BY OTHERS)

18" X 18" ADS N-12 TOP MANIFOLD
INVERT 5.0' ABOVE CHAMBER BASE
(SEE NOTES)

18" X 18" ADS N-12 TOP MANIFOLD
MAXIMUM INLET FLOW 5.5 CFS
(DESIGN BY ENGINEER / PROVIDED BY OTHERS)

18" X 18" ADS N-12 TOP MANIFOLD
INVERT 5.0' ABOVE CHAMBER BASE
(SEE NOTES)

18" PARTIAL CUT END CAP.
PART# MC3500EPP18TC OR MC3500EPP18TW
TYP OF ALL MC-3500 18" TOP CONNECTIONS

18" ADS N-12 BOTTOM CONNECTION
TYP OF ALL MC-3500 18" BOTTOM CONNECTIONS
INVERT 1.77' ABOVE CHAMBER BASE
(SEE NOTES)

18" X 18" ADS N-12 TOP MANIFOLD
MAXIMUM INLET FLOW 11.0 CFS
INVERT 20.03' ABOVE CHAMBER BASE
(SEE NOTES)

OUTLET STRUCTURE PER PLAN
MAXIMUM INLET FLOW 8.0 CFS
(DESIGN BY ENGINEER / PROVIDED BY OTHERS)

18" X 18" ADS N-12 TOP MANIFOLD
INVERT 5.0' ABOVE CHAMBER BASE
(SEE NOTES)

STRUCTURE PER PLAN WIELEVATED BYPASS MANIFOLD
MAXIMUM INLET FLOW 5.5 CFS
(DESIGN BY ENGINEER / PROVIDED BY OTHERS)

18" X 18" ADS N-12 TOP MANIFOLD
MAXIMUM INLET FLOW 5.5 CFS
(DESIGN BY ENGINEER / PROVIDED BY OTHERS)

18" X 18" ADS N-12 TOP MANIFOLD
INVERT 5.0' ABOVE CHAMBER BASE
(SEE NOTES)

18" PARTIAL CUT END CAP.
PART# MC3500EPP18TC OR MC3500EPP18TW
TYP OF ALL MC-3500 18" TOP CONNECTIONS

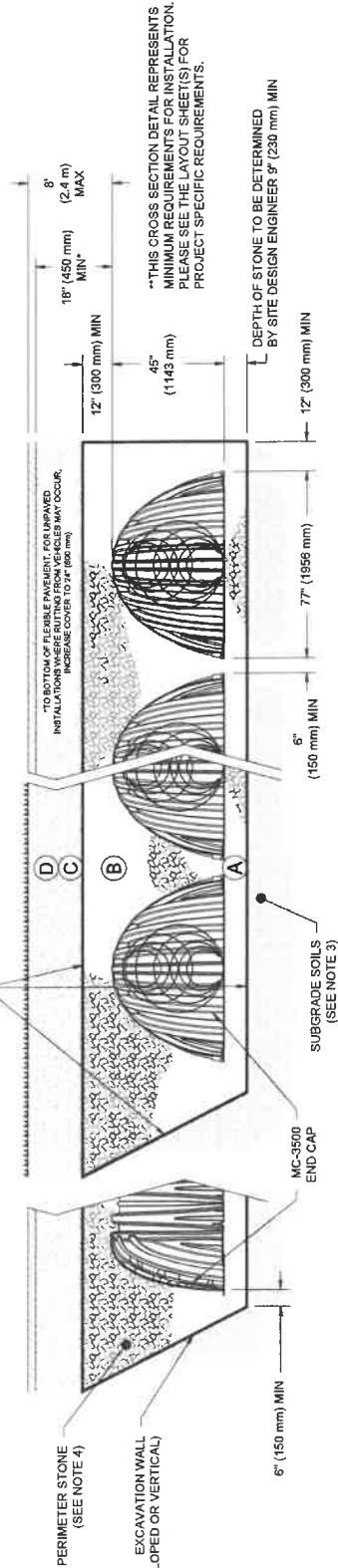
ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M1457 A-1, A-2-4, A-3 OR AASHTO M431 3, 357, 4, 467, 5, 55, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M431 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M431 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ²³

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

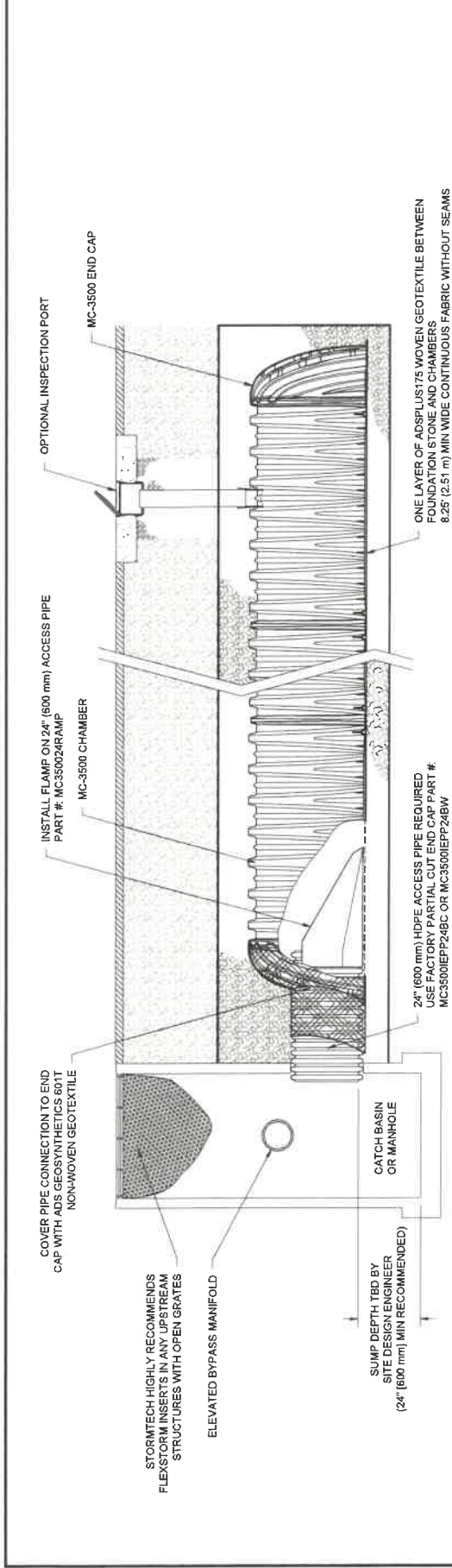
ADS GEOSYNTHETICS 601T NONWOVEN GEOTEXTILE ALL AROUND CLEAN, CRUSHED, ANGULAR STONE IN A & B LAYERS



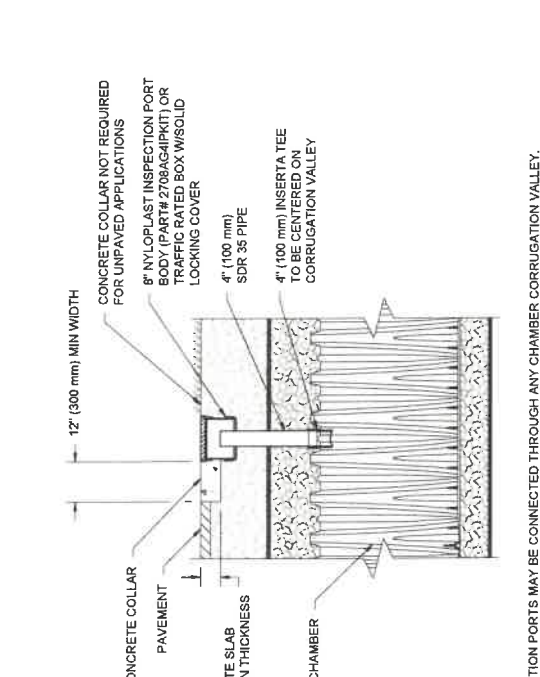
NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-18a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING. CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL. THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION. a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN². AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C). CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

PROJECT # S201598 DATE: 11/14/20 DRAWN: SVO CHECKED: MHM PRIMROSE SCHOOL OF RIVERSIDE DUBLIN, OH	DATE: _____ DESCRIPTION: _____ DRAWN: _____ CHECKED: _____	520 CROMWELL AVENUE KOSCIUSKO HILL, CT 06067 StormTech CORROSION RESISTANT CHAMBER SYSTEMS INC. 4640 TRUEMAN BLVD HILLIARD, OH 43026
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MC-3500 ISOLATOR ROW PLUS DETAIL
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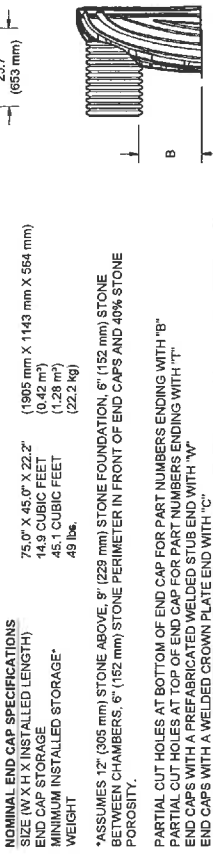
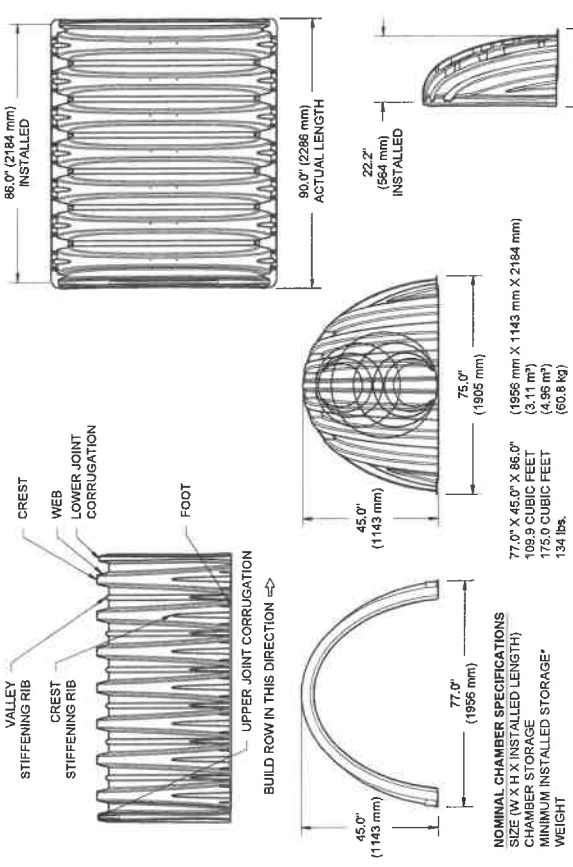
INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
 A. INSPECTION PORTS (IF PRESENT)
 A.1. REMOVE/OPEN LID ONLY FOR LAST IN-LINE DRAIN
 A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 A.5. IF SEDIMENT IS AT OR ABOVE, 3\"/>
 B. ALL ISOLATOR PLUS ROWS
 B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
 B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
 B.2.1. MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 B.2.2. FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 B.3. IF SEDIMENT IS AT OR ABOVE, 3\"/>
- STEP 2)
 CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
 A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45\"/>
- STEP 3)
 REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS. RECORD OBSERVATIONS AND ACTIONS.
- STEP 4)
 INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.
- NOTES**
 1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
 2. CONDUCT JETTING AND VACUORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

**4\"/>
 NTS**

DATE	DESCRIPTION

MC-3500 TECHNICAL SPECIFICATION

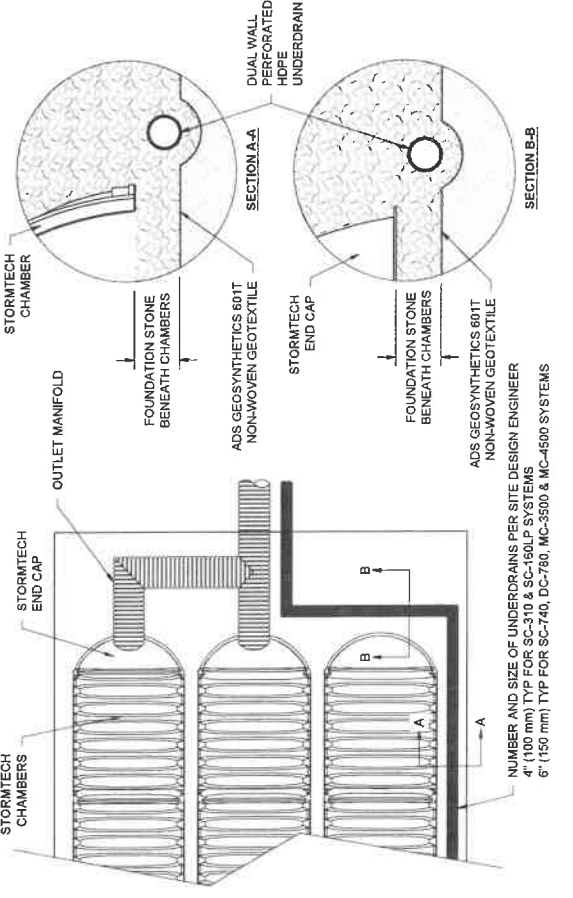


PART #	STUB	B	C
MC3500EPP06T	6" (150 mm)	33.21" (844 mm)	—
MC3500EPP06B	—	—	0.66" (17 mm)
MC3500EPP08T	8" (200 mm)	31.16" (791 mm)	—
MC3500EPP08B	—	—	0.81" (21 mm)
MC3500EPP10T	10" (250 mm)	29.04" (738 mm)	—
MC3500EPP10B	—	—	0.93" (24 mm)
MC3500EPP12T	12" (300 mm)	26.36" (670 mm)	—
MC3500EPP12B	—	—	1.35" (34 mm)
MC3500EPP15T	15" (375 mm)	23.39" (594 mm)	—
MC3500EPP15B	—	—	1.50" (38 mm)
MC3500EPP18TW	18" (450 mm)	20.03" (509 mm)	—
MC3500EPP18BC	—	—	1.77" (45 mm)
MC3500EPP16BW	—	—	—
MC3500EPP24TC	—	—	—
MC3500EPP24TW	—	—	—
MC3500EPP24BC	—	14.48" (368 mm)	—
MC3500EPP24BW	—	—	2.06" (52 mm)
MC3500EPP30BC	30" (750 mm)	—	2.75" (70 mm)

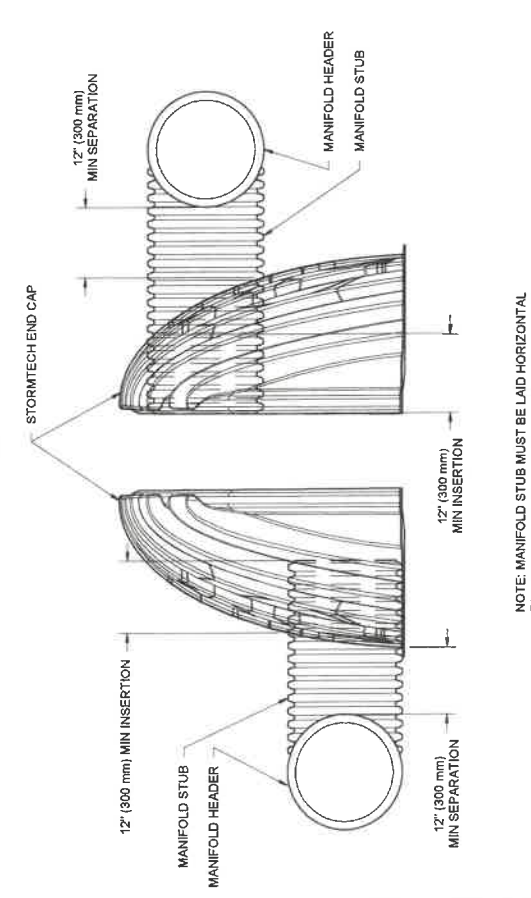
NOTE: ALL DIMENSIONS ARE NOMINAL.

CUSTOM PARTIAL CUT INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' IS THE CLOSEST POSSIBLE FOR THE PIPE SIZE.

UNDERDRAIN DETAIL



MC-SERIES END CAP INSERTION DETAIL



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.