Document Number

Storm Water Management Practice Maintenance Agreement

Boucher Holdings LLC, as "Owner" of the property described below, in accordance with Chapter 32 City of Waukesha Storm Water Management and Erosion Control, agrees to install and maintain storm water management practice(s) on the subject property in accordance with approved plans and Storm Water Management Plan conditions. The owner further agrees to the terms stated in this document to ensure that the storm water management practice(s) continues serving the intended functions in perpetuity. This Agreement includes the following exhibits:

Exhibit A: Legal Description of the real estate for which this Agreement applies ("Property").
Exhibit B: Location Map(s) – shows an accurate location of each storm water management practice affected by this Agreement.
Exhibit C: Maintenance Plan – prescribes those activities that must be carried out to maintain compliance with this Agreement.

Note: After construction verification has been accepted by the City of Waukesha, for all planned storm water management practices, an addendum(s) to this agreement shall be recorded by the Owner showing design and construction details. The addendum(s) may contain several additional exhibits, including certification by City of Waukesha of Storm Water and Erosion Control Permit termination, as described below.

Name and Return Address

City of Waukesha
130 Delafield Street
Waukesha, WI 53188

Parcel Identification Number(s) – (PIN)

Through this Agreement, the Owner hereby subjects the Property to the following covenants, conditions and restrictions:

1. The Owner shall be responsible for the routine and extraordinary maintenance and repair of the storm water management practice(s) and drainage easements identified in Exhibit B until Storm Water and Erosion Control Permit termination by the City of Waukesha in accordance with Chapter 32 of the City Code of Ordinances.
2. After Storm Water and Erosion Control Permit termination under 1., the current Owner(s) shall be solely responsible for maintenance and repair of the storm water management practices and drainage easements in accordance with the maintenance plan contained in Exhibit C.
3. The Owner(s) shall, at their own cost, complete inspections of the storm water management practices at the time intervals listed in Exhibit C, and conduct the inspections by a a qualified professional, file the reports with the City of Waukesha after each inspection and complete any maintenance or repair work recommended in the report. The Owner(s) shall be liable for the failure to undertake any maintenance or repairs. After the work is completed by the Contractor, the qualified professional shall verify that the work was properly completed and submit the follow-up report to the City within 30 days.
4. In addition, and independent of the requirements under paragraph 3 above, the City of Waukesha, or its designee, is authorized to access the property as necessary to conduct inspections of the storm water management practices or drainage easements to ascertain compliance with the intent of this Agreement and the activities prescribed in Exhibit C. The City of Waukesha may require work to be done which differs from the report described in paragraph 3 above, if the City of Waukesha reasonably concludes that such work is necessary and consistent with the intent of this agreement. Upon notification by the City of Waukesha of required maintenance or repairs, the Owner(s) shall complete the specified maintenance or repairs within a reasonable time frame determined by the City of Waukesha.
5. If the Owner(s) do not complete an inspection under 3. above or required maintenance or repairs under 4. above within the specified time period, the City of Waukesha is authorized, but not required, to perform the specified inspections, maintenance or repairs. In the case of an emergency situation, as determined by the City of Waukesha, no notice shall be required prior to the City of Waukesha performing emergency maintenance or repairs. The City of Waukesha may levy the costs and expenses of such inspections, maintenance or repair related actions as a special charge against the Property and collected as such in accordance with the procedures under s. 66.0627 Wis. Stats. or subch. VII of ch. 66 Wis. Stats.

6. This Agreement shall run with the Property and be binding upon all heirs, successors and assigns. After the Owner records the addendum noted above, the City of Waukesha shall have the sole authority to modify this agreement upon a 30-day notice to the current Owner(s).

Dated this ___ day of _____, 202_.

Owner:

_____
(Owners Signature)

Daniel G. Nienhuis, General Counsel, Boucher Holdings, LLC.
_____
(Owners Typed Name)

Acknowledgements

State of Wisconsin:
County of Waukesha

Personally came before me this ____ day of _____, 202_, the above named _Daniel G. Nienhuis_ to me known to be the person who executed the foregoing instrument and acknowledged the same.

_____.
[Name]
Notary Public, Waukesha County, WI
My commission expires:_____.

This document was drafted by:

____Jeremy Jeffery, P.E._____

_16745 W Bluemound Road,
_Brookfield, WI 53005 ____

[Name and address of drafter]

For Certification Stamp

City of Waukesha Common Council Approval

Dated this ___ day of _____, 202_.

_____

Shawn N. Reilly, Mayor

_____

Gina Kozlik, City Clerk

Acknowledgements

State of Wisconsin:
County of Waukesha

Personally came before me this ____ day of _____, 202_, the above named _ Daniel G. Nienhuis to me known to be the person who executed the foregoing instrument and acknowledged the same.

_____.
[Name]
Notary Public, Waukesha County, WI
My commission expires:_____.

Exhibit A – Legal Description

The following description and reduced copy map identifies the land parcel(s) affected by this Agreement. For a larger scale view of the referenced document, contact the Waukesha County Register of Deeds office.

Project Identifier: **Waukesha Hyundai** Acres**: 5.3758**
Date of Recording: **November 17, 2021**
Map Produced By: **Chaput Land Surveys, Milwaukee, WI**
Legal Description: **Recorded as CSM 12248, Doc no. 4633506 on 11/17/21**
LOT 3: PART SOUTHWEST ¼ AND NORTHWEST ¼ OF SECTION 36, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF WAUKESHA, WAUKESHA COUNTY, WI. TO BEGIN; N74°53'05"E 386.19', S04°31"36"E 638.32, S66°15'05" 126.49', S74°56'22"W 193.95', N15°03'38"W 496.25', N74°53'05"E 49.63', N14°15'32"W 150' TO BEGIN. 5.3758 ACRES SURVEY MAP NO. 159140-MS.

Waukesha Hyundai

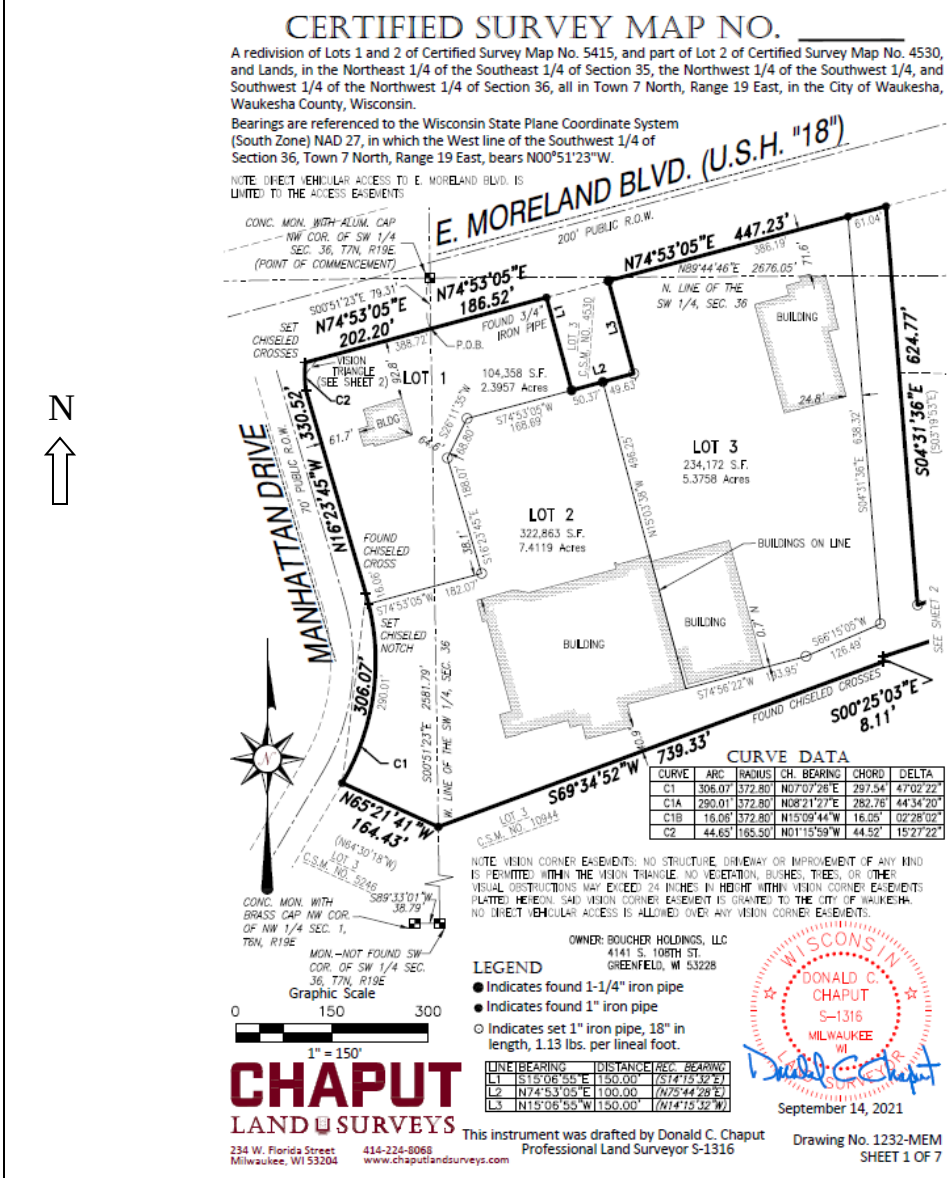


Exhibit B - Location Map
Storm Water Management Practices Covered by this Agreement

The storm water management practices covered by this Agreement are depicted in the reduced copy of a portion of the construction plans, as shown below. The practices include two independent underground detention tanks.

Subdivision Name: **Waukesha Hyundai**
Storm water Practices: **Underground Detention Tank – North, Underground Detention Tank – South**
Location of Practices: **Under parking lot**

Figure 1
Plan View of Storm Water Practices

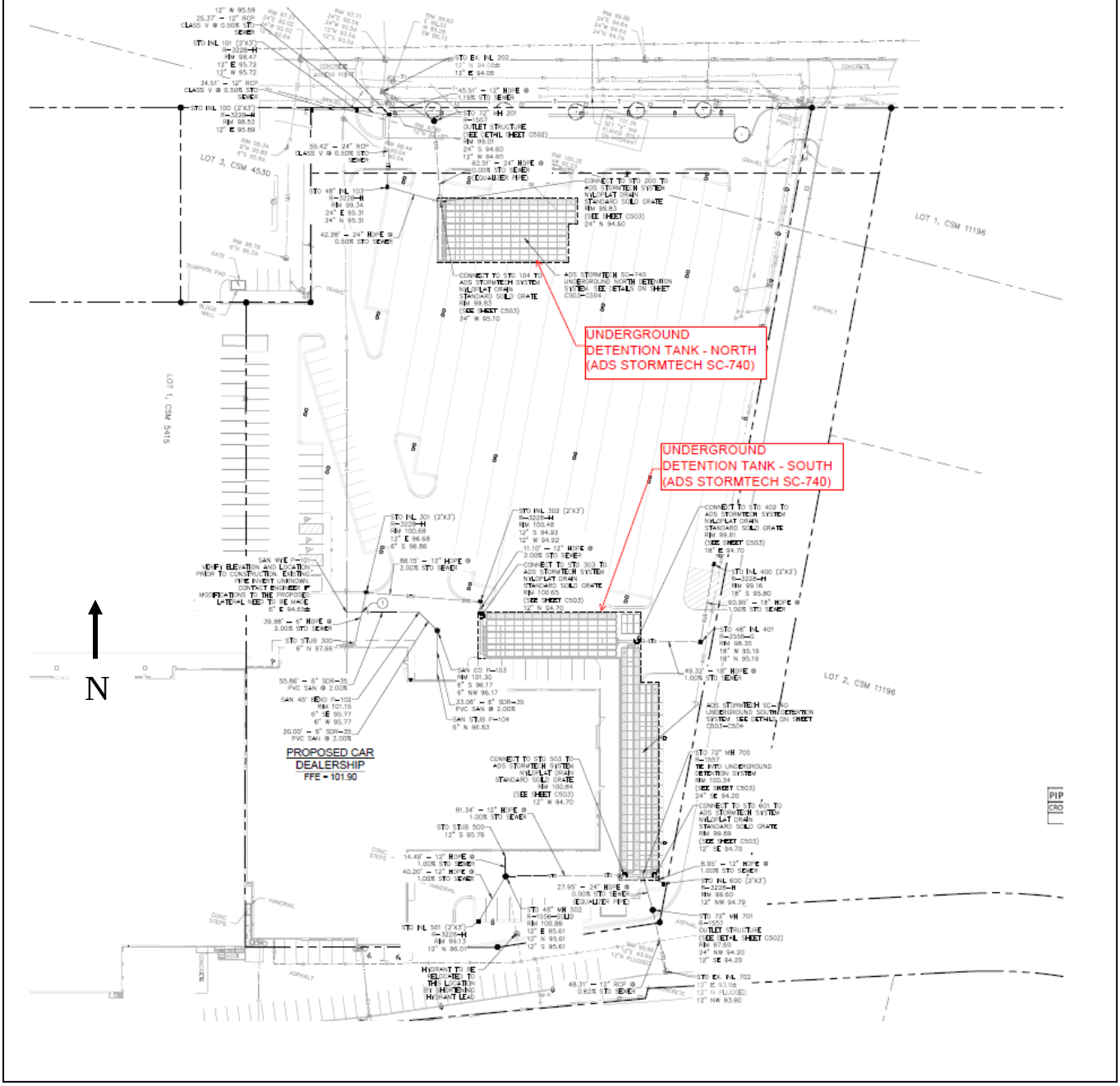


Exhibit C
Storm Water Practice Maintenance Plan

This exhibit explains the basic function of each of the storm water practices listed in Exhibit B and prescribes the minimum maintenance requirements to remain compliant with this Agreement. The maintenance activities listed below are aimed to ensure these practices continue serving their intended functions in perpetuity. The list of activities is not all inclusive, but rather indicates the minimum type of maintenance that can be expected for this particular site. The titleholder(s) or their designee must document all inspections as specified above. Documentation shall include as a minimum: (a) Inspectors Name, Address and Telephone Number, (b) Date of Inspections, (c) Condition Report of the Storm Water Management Practice, (d) Corrective Actions to be Taken and Time Frame for Completion, (e) Follow-up Documentation after Completion of the Maintenance Activities. All documentation is to be delivered to the attention of the City Engineer at the City of Waukesha Engineering Department on January 10th and July 10th each year. Any repair, maintenance, or failure of a storm water practice that is caused by a lack of maintenance will subject the Owner(s) to enforcement of the provisions listed on page 1 of this Agreement by the City of Waukesha.

I. ROUTINE MAINTENANCE

A. Inspections (A competent inspector or inspection service qualified to review drainage systems shall be chosen and hired by the Owner.)
   1. Inspection priorities include visual observation and documentation of:
      a. Accumulation of sediment and debris in the storm sewer inlets, wet underground detention systems, and outlet control structures.
      b. Any modification to the contributory watershed. Confirm and document any modifications.
      c. Inspect underground detention systems for settling, cracking, erosion, leakage, and structural condition of outlet control structure. Make repairs as necessary.
      d. Inspect site for areas of erosion. If present, eroded areas shall be repaired using low-impact earth moving techniques commensurate with the scale of the repair task. Any bare soil areas shall be revegetated according to the original design specifications.
   2. Inspect all storm sewer structures, underground detention system basins, and outlet control structures after significant rainfall events and at least twice annually, once in the Spring and once in the Fall. Conduct inspections during wet weather conditions to determine if the storm sewer system is functioning properly.

B. Debris and Litter Removal.
   1. Remove debris and litter from the area, including the storm sewer system, underground detention systems, and outlet control structures.
   2. Remove debris and litter from the grates and inverts of all the storm sewer inlets, catch basins, and manholes.
   3. Remove accumulated sediment from all storm sewer inlets, catch basins, and manholes.

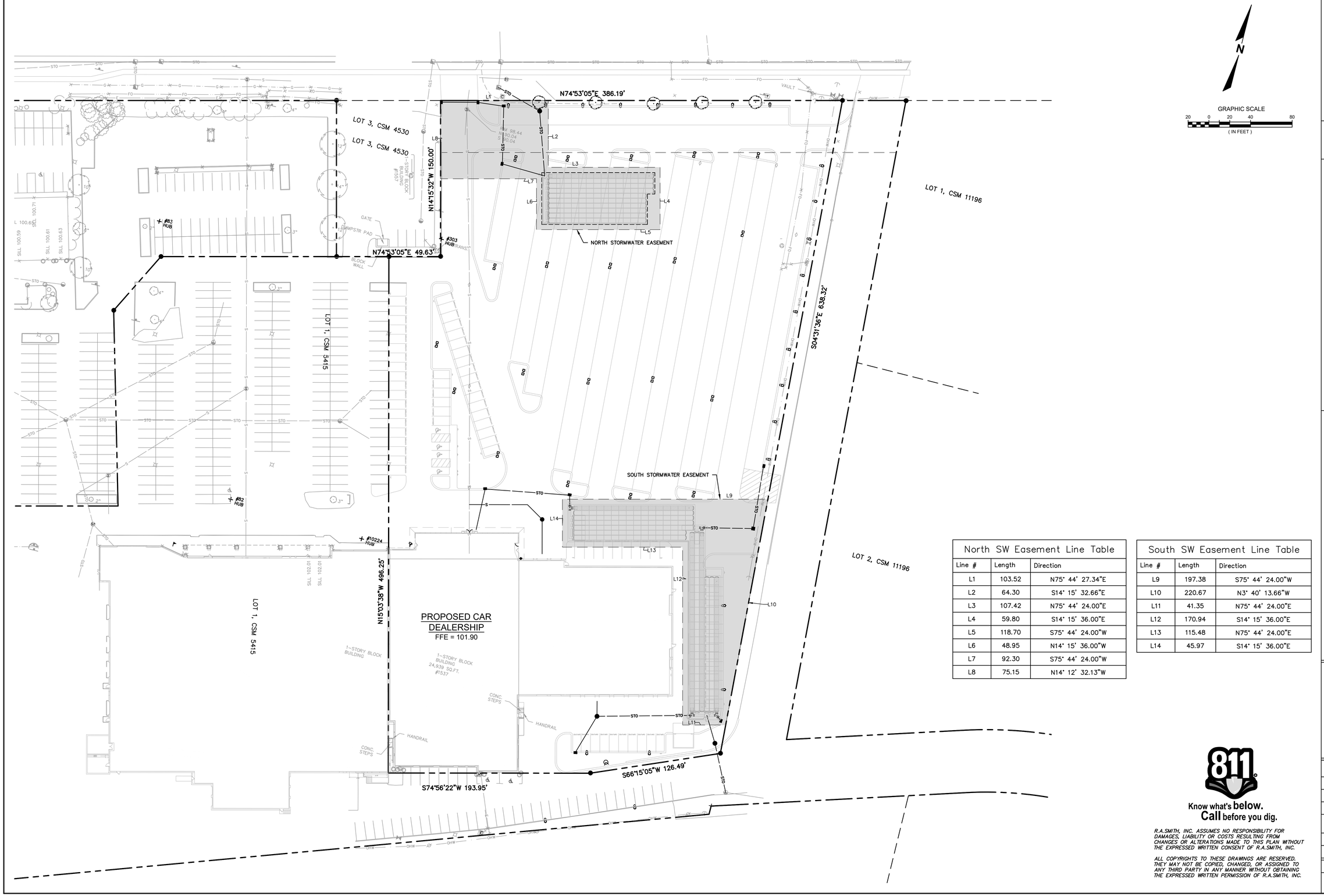
II. NON-ROUTINE MAINTENANCE

A. Post Construction Monitoring
   1. For the first 12 months following installation of the underground detention systems and storm sewers, the system is to be inspected on a quarterly basis to verify the integrity of the conveyance system. Following the initial 12 months, the system is to be inspected at least every 6 months or more frequently as determined by the initial 12-month monitoring period.

B. Structural Repairs and Replacement.
   1. Conduct routine inspection and maintenance of all storm sewer structures to promote longevity.

III. DOCUMENTATION OF MAINTENANCE

A. Complete attached "Inspection Form for Storm Water Management Systems" The Owner will maintain the records.



North SW Easement Line Table		
Line #	Length	Direction
L1	103.52	N75° 44' 27.34"E
L2	64.30	S14° 15' 32.66"E
L3	107.42	N75° 44' 24.00"E
L4	59.80	S14° 15' 36.00"E
L5	118.70	S75° 44' 24.00"W
L6	48.95	N14° 15' 36.00"W
L7	92.30	S75° 44' 24.00"W
L8	75.15	N14° 12' 32.13"W

South SW Easement Line Table		
Line #	Length	Direction
L9	197.38	S75° 44' 24.00"W
L10	220.67	N3° 40' 13.66"W
L11	41.35	N75° 44' 24.00"E
L12	170.94	S14° 15' 36.00"E
L13	115.48	N75° 44' 24.00"E
L14	45.97	S14° 15' 36.00"E

Know what's **below.**
Call before you dig.

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DATE	DESCRIPTION

raSmith
CREATIVITY BEYOND ENGINEERING
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Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com
Brookfield, WI | Milwaukee, WI | Appleton, WI | Madison, WI
Cedarburg, WI | Naperville, IL | Irvine, CA

WAUKESHA HYUNDAI
CITY OF WAUKESHA, WISCONSIN

EXHIBIT C
STORMWATER EASEMENT EXHIBIT

DATE: 03/25/2022
SCALE: 1" = 40'
JOB NO. 3210204
PROJECT MANAGER: RYAN J. LANCOUR P.E.
DESIGNED BY: JJJ
CHECKED BY: RJL

SHEET NUMBER
EX00

StormTech®
Detention • Retention • Water Quality
An ADS company

Isolator® Row PLUS O&M Manual

THE MOST **ADVANCED** NAME IN WATER MANAGEMENT SOLUTIONS®

ADS®

THE ISOLATOR® ROW PLUS

INTRODUCTION

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row PLUS is a technique to inexpensively enhance Total Suspended Solids (TSS) and Total Phosphorus (TP) removal with easy access for inspection and maintenance.

THE ISOLATOR ROW PLUS

The Isolator Row PLUS is a row of StormTech chambers, either SC-160, SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-4500 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as storm water rises in the Isolator Row PLUS and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC- 310-3 and SC-740 models) allow storm water to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row PLUS protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

ADS geotextile fabric is placed between the stone and the Isolator Row PLUS chambers. The woven geotextile provides a media for stormwater filtration, a durable surface for maintenance, prevents scour of the underlying stone and remains intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the perforations in the sidewall of the chamber. The non-woven fabric is not required over the SC-160, DC-780, MC-3500 or MC-4500 models as these chambers do not have perforated side walls.

The Isolator Row PLUS is designed to capture the "first flush" runoff and offers the versatility to be sized on a volume basis or a flow-rate basis. An upstream manhole not only provides access to the Isolator Row PLUS but includes a high/low concept such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row PLUS bypass through a manifold to the other chambers. This is achieved with either an elevated bypass manifold or a high-flow weir. This creates a differential between the Isolator Row PLUS row of chambers and the manifold to the rest of the system, thus allowing for settlement time in the Isolator Row PLUS. After Stormwater flows through the Isolator Row PLUS and into the rest of the StormTech chamber system it is either exfiltrated into the soils below or passed at a controlled rate through an outlet manifold and outlet control structure.

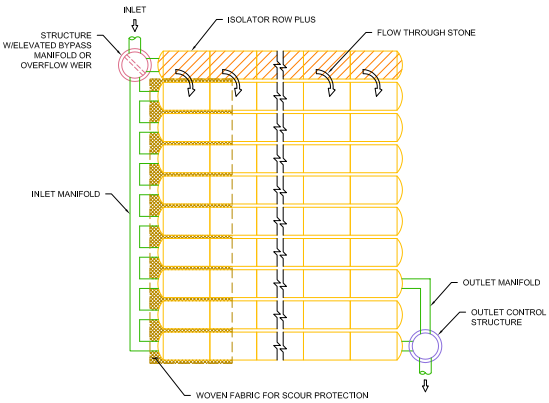
The Isolator Row FLAMP™ (patent pending) is a flared end ramp apparatus that is attached to the inlet pipe on the inside of the chamber end cap. The FLAMP provides a smooth transition from pipe invert to fabric bottom. It is configured to improve chamber function performance over time by enhancing outflow of solid debris that would otherwise collect at an end of the chamber. It also serves to improve the fluid and solid flow into the access pipe during maintenance and cleaning and to guide cleaning and inspection equipment back into the inlet pipe when complete.

The Isolator Row PLUS may be part of a treatment train system. The design of the treatment train and selection of pretreatment devices by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, the Isolator Row PLUS is recommended by StormTech as an effective means to minimize maintenance requirements and maintenance costs.

Note: See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row PLUS.

Looking down the Isolator Row PLUS from the manhole opening, ADS PLUS Fabric is shown between the chamber and stone base.

StormTech Isolator Row PLUS with Overflow Spillway (not to scale)



ISOLATOR ROW PLUS INSPECTION/MAINTENANCE

INSPECTION

The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row PLUS should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row PLUS incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row PLUS, clean-out should be performed.

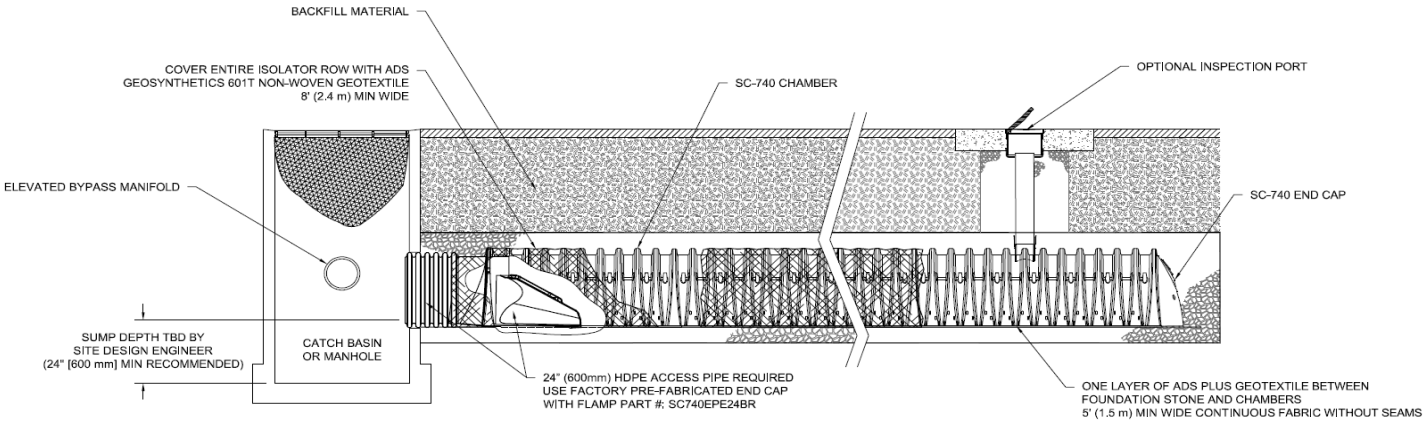
MAINTENANCE

The Isolator Row PLUS was designed to reduce the cost of periodic maintenance. By “isolating” sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row PLUS while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45” are best. StormTech recommends a maximum nozzle pressure of 2000 psi be utilized during cleaning. Most JetVac reels have 400 feet of hose allowing maintenance of an Isolator Row PLUS up to 50 chambers long. **The JetVac process shall only be performed on StormTech Isolator Row PLUS that have ADS PLUS Fabric (as specified by StormTech) over their angular base stone.**

StormTech Isolator Row PLUS (not to scale)

Note: Non-woven fabric is only required over the inlet pipe connection into the end cap for SC-160LP, DC-780, MC-3500 and MC-4500 chamber models and is not required over the entire Isolator Row PLUS.



ISOLATOR ROW PLUS STEP BY STEP MAINTENANCE PROCEDURES

STEP 1

Inspect Isolator Row PLUS for sediment.

A) Inspection ports (if present)
   i. Remove lid from floor box frame
   ii. Remove cap from inspection riser
   iii. Using a flashlight and stadia rod,measure depth of sediment and record results on maintenance log.
   iv. If sediment is at or above 3 inch depth, proceed to Step 2. If not, proceed to Step 3.

B) All Isolator Row PLUS
   i. Remove cover from manhole at upstream end of Isolator Row PLUS
   ii. Using a flashlight, inspect down Isolator Row PLUS through outlet pipe
      1. Mirrors on poles or cameras may be used to avoid a confined space entry
      2. Follow OSHA regulations for confined space entry if entering manhole
   iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches), proceed to Step 2. If not, proceed to Step 3.

STEP 2

Clean out Isolator Row PLUS using the JetVac process.

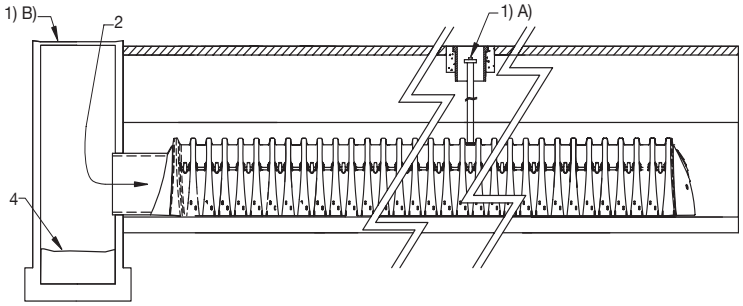
A) A fixed floor cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
B) Apply multiple passes of JetVac until backflush water is clean
C) Vacuum manhole sump as required

STEP 3

Replace all caps, lids and covers, record observations and actions.

STEP 4

Inspect & clean catch basins and manholes upstream of the StormTech system.



SAMPLE MAINTENANCE LOG

Date	Stadia Rod Readings		Sediment Depth (1)–(2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/11	6.3 ft	none		New installation. Fixed point is CI frame at grade	DJM
9/24/11		6.2	0.1 ft	Some grit felt	SM
6/20/13		5.8	0.5 ft	Mucky feel, debris visible in manhole and in Isolator Row PLUS, maintenance due	NV
7/7/13	6.3 ft		0	System jetted and vacuumed	DJM

StormTech Detention • Retention • Water Quality
An ADS company

Advanced Drainage Systems, Inc.
4640 Trueman Blvd., Hilliard, OH 43026
1-800-821-6710 www.ads-pipe.com

1. Document Number

Document number

Addendum 1
Storm Water Management Practice Maintenance Agreement

The purpose of this addendum is to record verified "as-built" construction details, supporting design data and permit termination documentation for the storm water management practice(s) located at Waukesha Hyunda, a redivision of Lots 1 and 2 of Certified Survey Map No. 5415, and part of Lot 2 of Certified Survey Map No. 4530, and lands, in the Northeast 1/4 of the Southeast 1/4 of Section 35, the Northwest 1/4 of the Southwest 1/4, and Southwest 1/4 of the Northwest 1/4 of Section 36, all in Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin. This document shall serve as an addendum to document # _____, herein referred to as the "Maintenance Agreement". This addendum includes all of the following exhibits:

Exhibit D: Design Summary – contains a summary of key engineering calculations and other data used to design the wet detention basin.
Exhibit E: As-built Survey – shows detailed "as-built" cross-section and plan view of the wet detention basin.
Exhibit F: Engineering/Construction Verification – provides verification from the project engineer that the design and construction of the wet detention basin complies with all applicable technical standards and Waukesha County ordinance requirements.
Exhibit G: Storm Water Management & Erosion Control Permit Termination – provides certification by the City of Waukesha that the Storm Water and Erosion Control Permit for the above noted site has been terminated.

Name and Return Address

_____
Parcel Identification Number(s) – (PIN)

Dated this ___ day of _____, 202_.

Owner:

_____
[Owners Signature – per the Maintenance Agreement]

_____
[Owners Typed Name]

Acknowledgements

State of Wisconsin County of Waukesha

Personally came before me this ____ day of _____, 202_, the above named _Daniel G. Nienhuis to me known to be the person who executed the foregoing instrument and acknowledged the same.

_____.
[Name]
Notary Public, Waukesha County, WI
My commission expires:_____.

This document was drafted by:

____ Jeremy Jeffery, P.E._____

_16745 W Bluemound Road,
_Brookfield, WI 53005 ___
[Name and address of drafter]

Exhibit D
Design Summaries for Underground Detention Tank - North

Project Identifier: Waukesha Hyundai **Project Size:** 5.3758 Acres **No. of Lots:** N/A
Number of Runoff Discharge Points: 1 **Watershed (ultimate discharge**): Fox River
Watershed Area (including off-site runoff traveling through project area): 1.67 acres

Watershed Data Summary. The following table summarizes the watershed data used to determine peak flows and runoff volumes required to design Underground Detention Tank - North

Summary Data Elements	E-1 and P-1	
	Pre-develop (E-1)	**Post-develop (P-1)**
Watershed Areas *(in acres) (see attached map)*	1.78	1.67
Average Watershed Slopes (%)	2-4%	2-4%
Land Uses *(% of each) (see attached map)*	0.15ac Grass 1.50ac Pavement 0.13ac Roof	0.11ac Grass 1.56ac Pavement 0.00ac Roof
Runoff Curve Numbers	RCN = 93	RCN = 94
Conveyance Systems Types	Overland	50% overland 50% storm sewer
Time of Concentration *(Tc) (see attached map & worksheets)*	6 min.	6 min.
1-year/24 hour Runoff Volume	5.37 cfs	1.50 cfs
2-yr./24 hour Peak Flow *(see attached hydrographs)*	6.21 cfs	1.64 cfs
10-yr./24 hour Peak Flow	9.31 cfs	3.69 cfs
100-yr./24 hour Peak Flow	15.85 cfs	5.47 cfs

Watershed Data Summary. The following table summarizes the watershed data used to determine peak flows and runoff volumes required to design Underground Detention Tank - South

Summary Data Elements	E-2 and P-2	
	Pre-develop (E-2)	**Post-develop (P-2)**
Watershed Areas *(in acres) (see attached map)*	3.14	2.31
Average Watershed Slopes (%)	2-4%	2-4%

Land Uses *(% of each) (see attached map)*	0.24ac Grass 2.00ac Pavement 0.90ac Roof	0.04ac Grass 1.78ac Pavement 0.49ac Roof
Runoff Curve Numbers	RCN = 93	RCN = 97
Conveyance Systems Types	Overland	50% overland 50% storm sewer
Time of Concentration *(Tc)* *(see attached map & worksheets)*	6 min.	6 min.
1-year/24 hour Runoff Volume	9.47 cfs	1.58 cfs
2-yr./24 hour Peak Flow *(see attached hydrographs)*	10.95 cfs	1.71 cfs
10-yr./24 hour Peak Flow	16.43 cfs	3.77 cfs
100-yr./24 hour Peak Flow	27.95 cfs	5.48 cfs

Practice Design Summary. The following table summarizes the data used to design Underground Detention Tank - North

Design Element	Design Data
Site assessment data: (see attached maps)	
Contributing drainage area to basin	1.67 acres
Distance to nearest private well (including off-site wells)	> 100 feet
Distance to municipal well (including off-site wells)	> 1200 feet
Wellhead protection area involved?	No
Ground slope at site of proposed basin	average 2-3%
Any buried or overhead utilities in the area?	No
Proposed outfall conveyance system/discharge (w/ distances)	46' – 12 HDPE pipe into back of existing Inlet along Moreland
Any downstream roads or other structures? (describe)	No
Floodplain, shoreland or wetlands?	No
General basin design data (see attached detailed drawings):	
Top of Stone	98.10
Top of Chamber	97.60
Chamber Invert	95.10
Bottom of Stone	94.60

Design Basin Inflow, Outflow & Storage Data
(see attached hydrographs and detail drawings)

Inflow Peak/Volume	Maximum Outflow Rate	Max. Water Elevation	Storage Volume at Max. Elev. (above perm. pool)	Outflow Control Structures*
1-yr./24 hr.	1.50	95.73	0.084 af	#1 and #2
2-yr./24 hr.	1.64	95.89	0.099 af	#1 and #2
10-yr./24 hr.	3.69	96.33	0.138 af	#1, #2 and #3
100-yr./24 hr.	5.47	97.79	0.237 af	#1, #2 and #3

Device Routing Invert Outlet Devices

#1 Primary 94.60' **12.0" Round Culvert**
L= 45.5' CMP, mitered to conform to fill, Ke= 0.700
Inlet / Outlet Invert= 94.60' / 94.06' S= 0.0119 '/' Cc= 0.900
n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2 Device 1 94.60' **8.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3 Device 1 96.00' **6.0' long x 0.5' breadth Broad-Crested Rectangular Weir**
Head (feet) 0.20 0.40 0.60 0.80 1.00
Coef. (English) 2.80 2.92 3.08 3.30 3.32
Primary OutFlow Max=1.50 cfs @ 12.31 hrs HW=95.73' (Free Discharge)
1=Culvert (Passes 1.50 cfs of 2.64 cfs potential flow)
2=Orifice/Grate (Orifice Controls 1.50 cfs @ 4.29 fps)
3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Practice Design Summary. The following table summarizes the data used to design Underground Detention Tank - South

Design Element	Design Data
Site assessment data: (see attached maps)	
Contributing drainage area to basin	2.31 acres
Distance to nearest private well (including off-site wells)	> 100 feet
Distance to municipal well (including off-site wells)	> 1200 feet
Wellhead protection area involved?	No
Ground slope at site of proposed basin	average 2-3%
Any buried or overhead utilities in the area?	No
Proposed outfall conveyance system/discharge (w/ distances)	48' – 12 RCP pipe into back of existing Inlet
Any downstream roads or other structures? (describe)	No
Floodplain, shoreland or wetlands?	No
General basin design data (see attached detailed drawings):	
Top of Stone	97.70
Top of Chamber	97.20
Chamber Invert	94.70
Bottom of Stone	94.20

Design Basin Inflow, Outflow & Storage Data
(see attached hydrographs and detail drawings)

Inflow Peak/Volume	Maximum Outflow Rate	Max. Water Elevation	Storage Volume at Max. Elev. (above perm. pool)	Outflow Control Structures*
1-yr./24 hr.	1.58	95.41	0.165 af	#1 and #2
2-yr./24 hr.	1.71	95.56	0.189 af	#1 and #2
10-yr./24 hr.	3.77	95.97	0.255 af	#1, #2 and #3
100-yr./24 hr.	5.48	97.39	0.426 af	#1, #2 and #3

#1 Primary 94.20' **12.0" Round Culvert**
L= 48.3' CMP, mitered to conform to fill, Ke= 0.700
Inlet / Outlet Invert= 94.20' / 93.90' S= 0.0062 '/' Cc= 0.900
n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2 Device 1 94.20' **8.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3 Device 1 95.60' **6.0' long x 0.5' breadth Broad-Crested Rectangular Weir**
Head (feet) 0.20 0.40 0.60 0.80 1.00
Coef. (English) 2.80 2.92 3.08 3.30 3.32
Primary OutFlow Max=1.58 cfs @ 12.39 hrs HW=95.41' (Free Discharge)
1=Culvert (Passes 1.58 cfs of 2.82 cfs potential flow)

2=Orifice/Grate (Orifice Controls 1.58 cfs @ 4.52 fps)
3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Exhibit D (continued)

Watershed Map. The watershed map shown below was used to determine the post-development data contained in this exhibit.

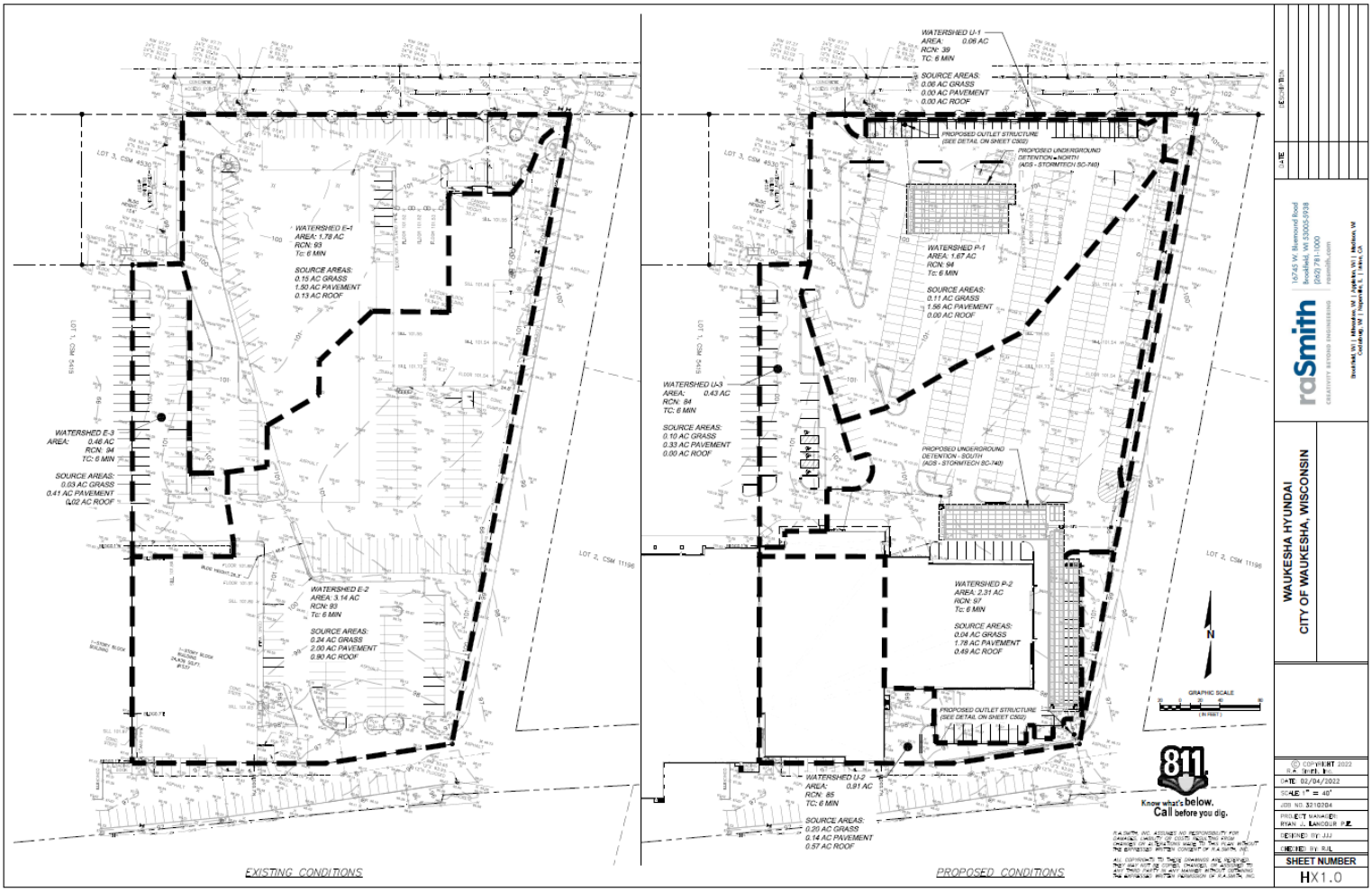


Exhibit E
As-built Survey for Underground Detention Tank - North

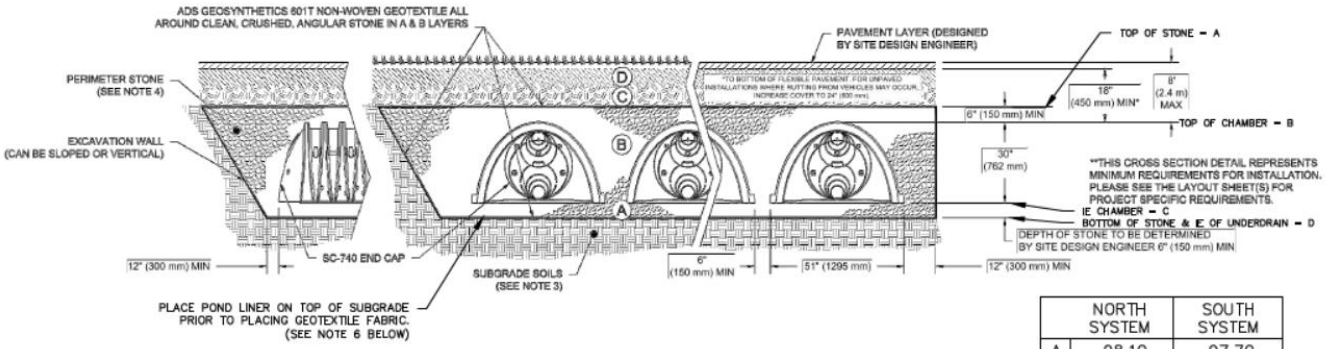
The wet detention basin depicted in Figure 1 is a reduced copy of the as-built plan.

Project Identifier**:** **Waukesha Hyundai**
Storm water Practice**:** **Underground Detention Tanks North and South**
Location of Practice**:** **Under parking lot**

Exhibit E

Cross-Section A – A'

PLEASE NOTE:
1. 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".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. 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.
4. 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.



	NORTH SYSTEM	SOUTH SYSTEM
A	98.10	97.70
B	97.60	97.20
C	95.10	94.70
D	94.60	94.20

NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. 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.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. 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 2".
   - 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 550 LBS/IN/IN. 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.
6. PLACE 40 MIL (HDPE) POND AND CANAL LINER OR EQUAL ON SUBGRADE EXTENDING THE ENTIRE EXCAVATED AREA AND UP EXCAVATED WALLS ONE FOOT PRIOR TO PLACING GEOSYNTHETIC FABRIC.

Exhibit "F"
Engineering/Construction Verification

DATE: _____

TO: City of Waukesha

FROM: _____[Project Engineer's Name/Company]

RE: Engineering/Construction Verification for the following project:

Project Name: _____

Section _____, Town of _____

Storm Water Management & Erosion Control Permit # _____

Storm Water Management Practices: _____

_____

For the above-referenced project and storm water management practices, this correspondence shall serve as verification that: 1) all site inspections outlined in approved inspection plans have been successfully completed; and 2) the storm water management practice design data presented in Exhibit D, and the "as-built" construction documentation presented in Exhibit E comply with all applicable state and local technical standards, in accordance with the City of Waukesha Storm Water Management and Erosion Control Ordinance.

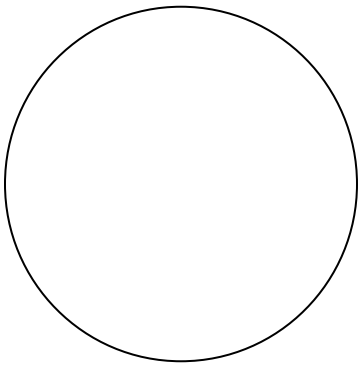
[Must include one of the following two statements:]

1. Any variations from the originally approved construction plans are noted in Exhibit E. These variations are considered to be within the tolerances of standard construction techniques and do not affect the original design as presented in Exhibit D in any way.
[Note: The City may request additional documentation to support this statement depending on the extent of deviations from the approved plans.]

Or

2. Any design or construction changes from the originally approved construction plans are documented in Exhibits D and E and have been approved by the City of Waukesha.

[Note: If warm season and wetland planting verification is required, it may be included in this exhibit.]



(Signed P.E. stamp must be included)

Exhibit G
Storm Water Management and Erosion Control Permit Termination

Project Identifier: Waukesha Hyundai

Location: **Recorded as CSM 12248, Doc no. 4633506 on 11/17/21**

A redivision of Lots 1 and 2 of Certified Survey Map No. 5415, and part of Lot 2 of Certified Survey Map No. 4530, and lands, in the Northeast 1/4 of the Southeast 1/4 of Section 35, the Northwest 1/4 of the Southwest 1/4, and Southwest 1/4 of the Northwest 1/4 of Section 36, all in Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin.

Storm Water Management and Erosion Control Permit Holder's Name:

_____

Storm Water Management & Erosion Control Permit #: _____

Chapter 32 – City of Waukesha Storm Water Management and Erosion Control requires that all newly constructed storm water management practices be maintained by the Storm Water and Erosion Control Permit Holder until permit termination, after which maintenance responsibilities shall be transferred to the responsible party identified on the subdivision plat [or CSM] and referenced in this Maintenance Agreement.

Upon execution below, this exhibit shall serve to certify that the Storm Water Permit Holder has satisfied all requirements of the Storm Water Management and Erosion Control Ordinance and that the City of Waukesha has terminated the Storm Water Management and Erosion Control Permit for the property covered by this Maintenance Agreement.

Dated this ___ day of _____, 202_.

City of Waukesha representative:

_____
(Signature)

_____

(Typed Name and Title)

Acknowledgements

State of Wisconsin
County of Waukesha

Personally came before me this ____ day of _____, 202_, the above named _____ to me known to be the person who executed the foregoing instrument and acknowledged the same.

_____.
[Name]
Notary Public, Waukesha County, WI
My commission expires: _____

City of Waukesha
Underground Detention System Inspection and Maintenance Checklist

Facility:			
Location/Address:			
Date:	**Time:**	**Weather Conditions:**	**Date of Last Inspection:**
Inspector:		**Title:**	
Rain in Last 48 Hours: ☐ **Yes** ☐ **No**		**If yes, list amount and timing:**	
Pretreatment: ☐ **vegetated filter strip** ☐ **swale** ☐ **turf grass** ☐ **forebay** ☐ **other, specify:** ☐ **none**			
Site Plan or As-Built Plan Available: ☐ **Yes** ☐ **No**			

*Do not enter underground detention chambers to inspect system unless Occupational Safety & Health Administration (OSHA) regulations for confined space entry are followed.
*Follow inspection and maintenance instructions and schedules provided by system manufacturer and installer.
*Properly dispose of all wastes.

Inspection Item		**Comment**	**Action Needed**
1. PRETREATMENT			
Sediment has accumulated.	☐ Yes ☐ No ☐ N/A		☐ Yes ☐ No
Trash and debris have accumulated.	☐ Yes ☐ No ☐ N/A		☐ Yes ☐ No
2. INLETS			
Inlets are in poor structural condition.	☐ Yes ☐ No ☐ N/A		☐ Yes ☐ No
Sediment, trash, or debris have accumulated and/or is blocking the inlets.	☐ Yes ☐ No ☐ N/A		☐ Yes ☐ No
3. CHAMBERS			
Sediment accumulation threshold has been reached.	☐ Yes ☐ No ☐ N/A		☐ Yes ☐ No
Trash and debris have accumulated in chambers.	☐ Yes ☐ No ☐ N/A		☐ Yes ☐ No
4. CHAMBERS			
Structural deterioration is evident.	☐ Yes ☐ No ☐ N/A		☐ Yes ☐ No
5. OUTLETS			
Outlets in poor structural condition.	☐ Yes ☐ No ☐ N/A		☐ Yes ☐ No
Sediment, trash or debris are blocking outlets.	☐ Yes ☐ No ☐ N/A		☐ Yes ☐ No
Erosion is occurring around outlets.	☐ Yes ☐ No ☐ N/A		☐ Yes ☐ No
6. OTHER			
Evidence of ponding water on area draining to system.	☐ Yes ☐ No ☐ N/A		☐ Yes ☐ No
Evidence that water is not being conveyed through the system.	☐ Yes ☐ No ☐ N/A		☐ Yes ☐ No
Additional Notes			

Rev. Date _____

Wet Weather inspection needed ☐ **Yes** ☐ **No**

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Photo 2: Click or tap here to enter text.

Photo 3: Click or tap here to enter text.

Photo 4: Click or tap here to enter text.