

Storm Water Management Practice Maintenance Agreement

Document Number

HSA PrimeCare, 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.

HSA PrimeCare
233 S Wacker Drive, STE 350
Chicago, IL 60606

City of Waukesha
130 Delafield Street

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 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 _____, 201_.

Owner:

(Owners Signature)

Mark TeGrootenhuis

(Owners Typed Name)

Acknowledgements

State of Wisconsin:
County of Waukesha

Personally came before me this ___ day of _____, 201_ , the above named Mark TeGrootenhuis 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:

**Matt Carey, PE
Pinnacle Engineering Group
15850 W. Bluemound Rd. STE 210
Brookfield, WI 53005**

For Certification Stamp

City of Waukesha Common Council Approval

Dated this ___ day of _____, 201_.

Shawn N. Reilly, Mayor

Gina Kozlik, City Clerk

Acknowledgements

State of Wisconsin:
County of Waukesha

Personally came before me this ___ day of _____, 201_, 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:_____.

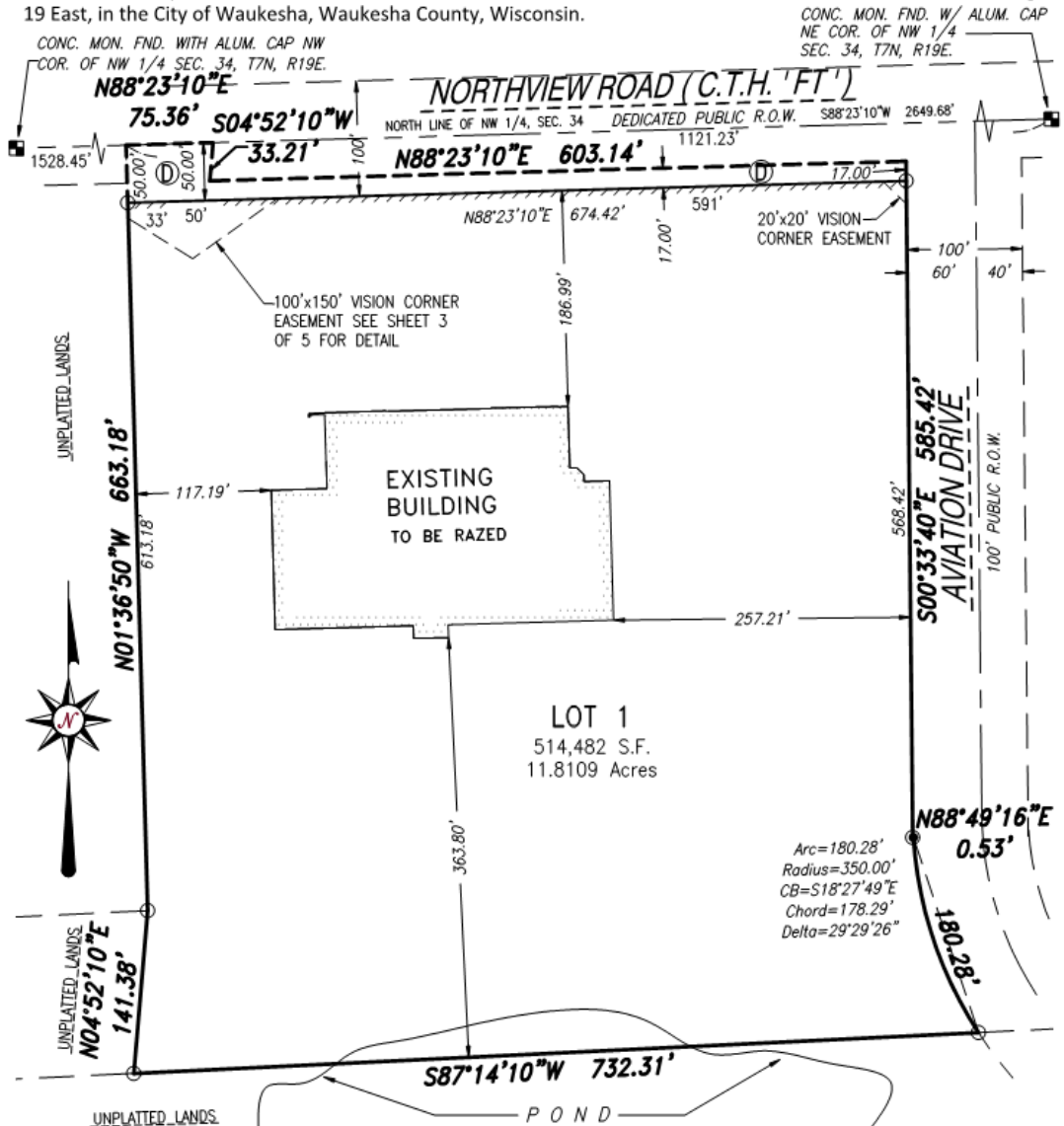
Exhibit A – Legal Description (Next Page)

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.

(SEE NEXT SHEET)

CERTIFIED SURVEY MAP NO. _____

A redivision of Parcel 1 of Certified Survey Map No. 2913, Parcel 2 and that part of Parcel 1 of Certified Survey Map No. 7492 and unplatted lands, all in the Northeast 1/4 of the Northwest 1/4 of the Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin.



- Indicates set 1" iron pipe, 18" in length, 1.13 lbs. per lineal foot.
- Indicates found 1" iron pipe.
- Ⓓ Indicates land dedicated to Waukesha County for street purposes
- ////// Indicates no vehicular access to CTH "FT"

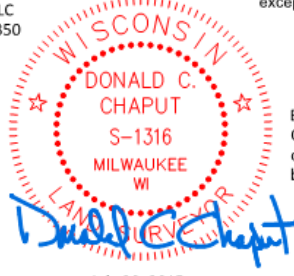
NOTES: Within the area of the vision corner easement, the height of all plantings, berms, fencing, signs or any other structure shall be limited to 24 inches above the intersection elevation. The vision corner easements are granted to Waukesha County.

- There shall be no vehicular access to Northview Ave, CTH "FT", except 50 feet as shown. This access is restricted to right turn out.

Subdivider: Waukesha Northview, LLC
233 S. Wacker Dr., Ste. 350
Chicago, IL 60606

VICINITY MAP
NW 1/4 SEC. 34, T7N, R19E
NORTHVIEW RD. (C.T.H. FT)
PEWAUKEE RD (C.T.H. - J)

1"=2000'



SCALE 1" = 120'

Bearings are referenced to grid North of the Wisconsin State Plane Coordinate System (South Zone) NAD 27, in which the North line of the Northwest 1/4 of Section 34, Town 7 North, Range 19 East, bears N88°23'10" E.

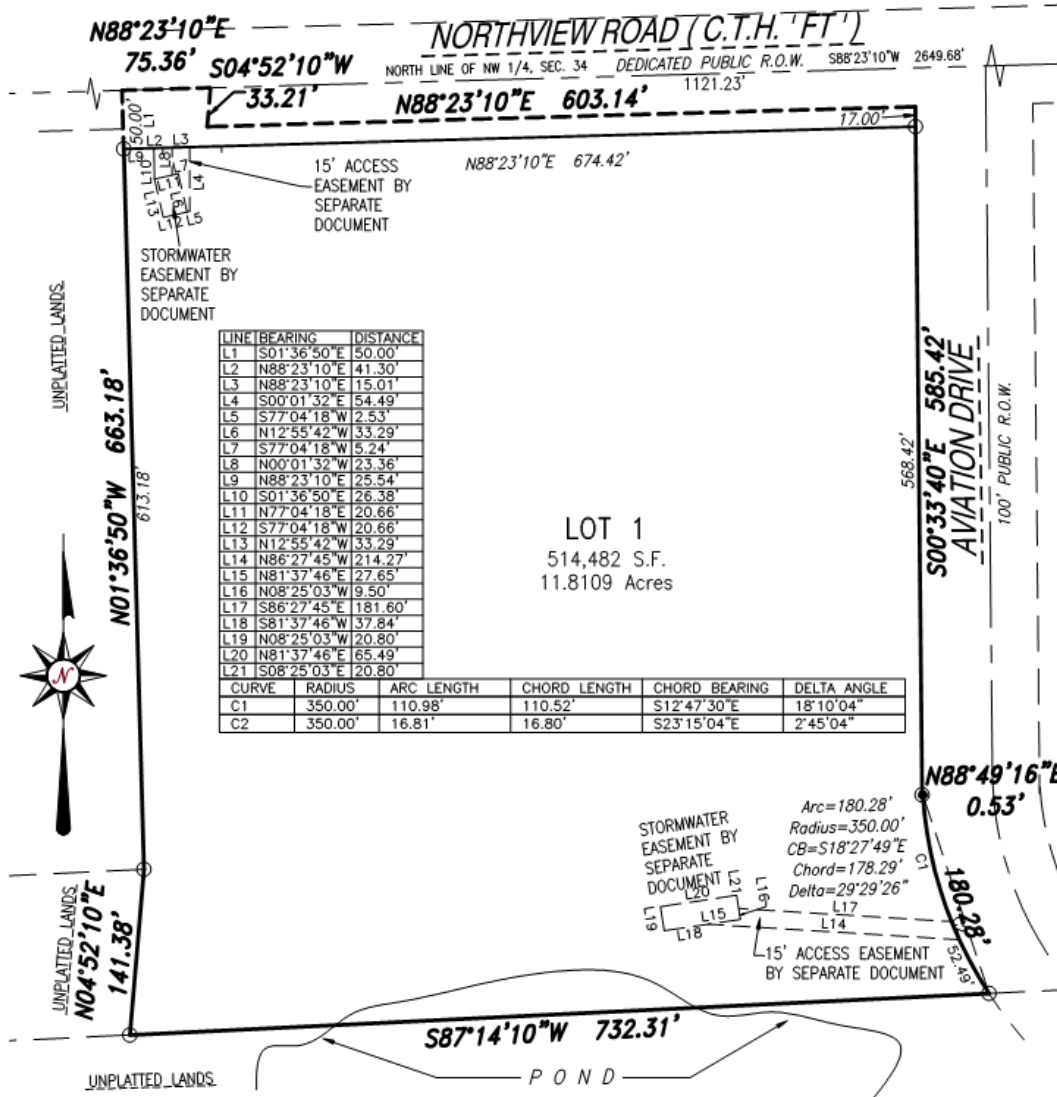
CHAPUT LAND SURVEYS LLC
234 W. FLORIDA STREET
MILWAUKEE, WI 53204
414-224-8068
www.chaputlandsurveys.com

July 20, 2015
Revised September 18, 2015
This instrument was drafted by Donald C. Chaput Professional Land Surveyor S-1316

Drawing No. 1910-tjn
SHEET 1 OF 5 SHEETS

CERTIFIED SURVEY MAP NO. _____

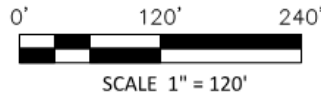
A redivision of Parcel 1 of Certified Survey Map No. 2913, Parcel 2 and that part of Parcel 1 of Certified Survey Map No. 7492 and unplatted lands, all in the Northeast 1/4 of the Northwest 1/4 of the Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin.



- Indicates set 1" iron pipe, 18" in length, 1.13 lbs. per lineal foot.
- Indicates found 1" iron pipe.



July 20, 2015
Revised September 18, 2015
This instrument was drafted by Donald C. Chaput Professional Land Surveyor S-1316



CHAPUT LAND SURVEYS LLC
234 W. FLORIDA STREET
MILWAUKEE, WI 53204
414-224-8068
www.chaputlandsurveys.com

Drawing No. 1910-tjn
SHEET 2 OF 5 SHEETS

CERTIFIED SURVEY MAP NO. _____

A redivision of Parcel 1 of Certified Survey Map No. 2913, Parcel 2 and that part of Parcel 1 of Certified Survey Map No. 7492 and unplatted lands, all in the Northeast 1/4 of the Northwest 1/4 of the Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin.

SURVEYOR'S CERTIFICATE

STATE OF WISCONSIN)
 :SS
 MILWAUKEE COUNTY}

I, DONALD C. CHAPUT, Professional Land Surveyor, do hereby certify:

THAT I have surveyed, divided and mapped a redivision of Parcel 1 of Certified Survey Map No. 2913, Parcel 2 and that part of Parcel 1 of Certified Survey Map No. 7492 and unplatted lands, all in the Northeast 1/4 of the Northwest 1/4 of the Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin, which is bounded and described as follows:

COMMENCING at the Northeast corner of said Northwest 1/4 Section; thence South 88°23'10" West along the North line of said 1/4 Section 1121.23 feet to the point of beginning of the lands hereinafter described; thence North 88°23'10" East along said North line 75.36 feet ; thence South 04°52'10" West 33.21 feet to a point on the South line of Northview Road; thence North 88°23'10" East along said South line 603.14 feet to a point on the West line of Aviation Drive; thence South 00°33'40" East along said West line 585.42 feet to a point; thence North 88°49'16" East along said West line 0.53 feet to a point on a curve; thence Southeasterly 180.28 feet along said West line and arc of a curve, whose center lies to the Northeast, whose radius is 350.00 feet and whose chord bears South 18°27'49" East 178.29 feet to a point; thence South 87°14'10" West 732.31 feet to a point; thence North 04°52'10" East 141.38 feet to a point; thence North 01°36'50" West 663.18 feet to the point of beginning.
 Said lands contain 516,913 square feet, or 11.8667 acres.

THAT I have made the survey, land division and map by the direction of Waukesha Northview, LLC, owner.

THAT the map is a correct representation of all the exterior boundaries of the land surveyed and the land division thereof made.

THAT I have fully complied with the provisions of Chapter 236 of the Wisconsin Statutes and the Land Division and Ordinances of the City of Waukesha in surveying, dividing and mapping the same.

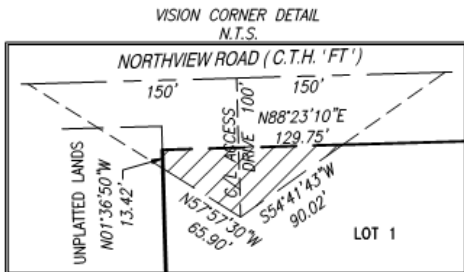
July 20, 2015

 DATE

Revised September 18, 2015

Donald C. Chaput

 DONALD C. CHAPUT
 REGISTERED LAND SURVEYOR S-1316



This instrument was drafted by Donald C. Chaput Professional Land Surveyor S-1316

Drawing No. 1910-tjn
 SHEET 3 OF 5 SHEETS

CERTIFIED SURVEY MAP NO. _____

A redivision of Parcel 1 of Certified Survey Map No. 2913, Parcel 2 and that part of Parcel 1 of Certified Survey Map No. 7492 and unplatted lands, all in the Northeast 1/4 of the Northwest 1/4 of the Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin.

OWNER'S CERTIFICATE

Waukesha Northview, LLC, a Wisconsin limited liability company, duly organized and existing under and by virtue of the laws of the State of Wisconsin, as owner, hereby certifies that said limited liability company caused the land described on this Certified Survey Map to be surveyed, divided and mapped as represented on this map in accordance with the requirements of the City of Waukesha.

Waukesha Northview, LLC, as owner, does further certify that this map is required by S.236.20 or 236.12 to be submitted to the following for approval or objection: City of Waukesha.

IN WITNESS WHEREOF, Waukesha Northview, LLC, has caused these presents to be signed by the hand of John E. Shaffer, _____, on this _____ day of _____, 2015

In the presence of: _____ Waukesha Northview, LLC

(Witness) _____ John E. Shaffer, _____

STATE OF WISCONSIN}
:SS
WAUKESHA COUNTY}

Personally came before me this _____ day of _____, 2015, John E. Shaffer, _____ Waukesha Northview, LLC, to me known as the person who executed the foregoing instrument and acknowledged that he executed the foregoing instrument as such officer as the deed of said limited liability company, by its authority.

Notary Public
State of Wisconsin
My commission expires. _____
My commission is permanent.

CONSENT OF CORPORATE MORTGAGEE

_____, a _____ banking association, mortgagee of the above described land, does hereby consent to the surveying, dividing and mapping the land described on this map and does hereby consent to the above certificate of Waukesha Northview, LLC, Owner.

By _____ Its
Name: _____
Title: _____

STATE OF WISCONSIN}
:SS
_____ COUNTY}

Personally came before me this _____ day of _____, 2015, _____ of _____, to me known as the person who executed the foregoing instrument and acknowledged that he executed the foregoing instrument as such officer as the deed of said corporation, by its authority.

Notary Public
State of Wisconsin
My commission expires. _____
My commission is permanent.



July 20, 2015
Revised September 18, 2015

This instrument was drafted by Donald C. Chaput
Professional Land Surveyor S-1316

Drawing No. 1910-tjn
SHEET 4 OF 5 SHEETS

CERTIFIED SURVEY MAP NO. _____

A redivision of Parcel 1 of Certified Survey Map No. 2913, Parcel 2 and that part of Parcel 1 of Certified Survey Map No. 7492 and unplatted lands, all in the Northeast 1/4 of the Northwest 1/4 of the Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin.

PLANNING COMMISSION CERTIFICATE OF APPROVAL

APPROVED by the Planning Commission of the City of Waukesha on this ___ day of _____, 2015.

SHAWN N. REILLY, CHAIRPERSON

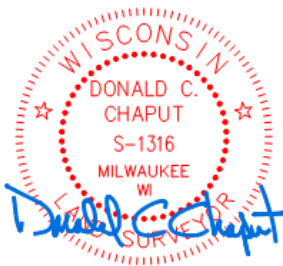
SECRETARY

COMMON COUNCIL CERTIFICATE OF APPROVAL

APPROVED by the Common Council of the City of Waukesha in accordance with the Resolution adopted on, this ___ day of _____, 2015

GINA L. KOZLIK, CITY CLERK

SHAWN N. REILLY, MAYOR



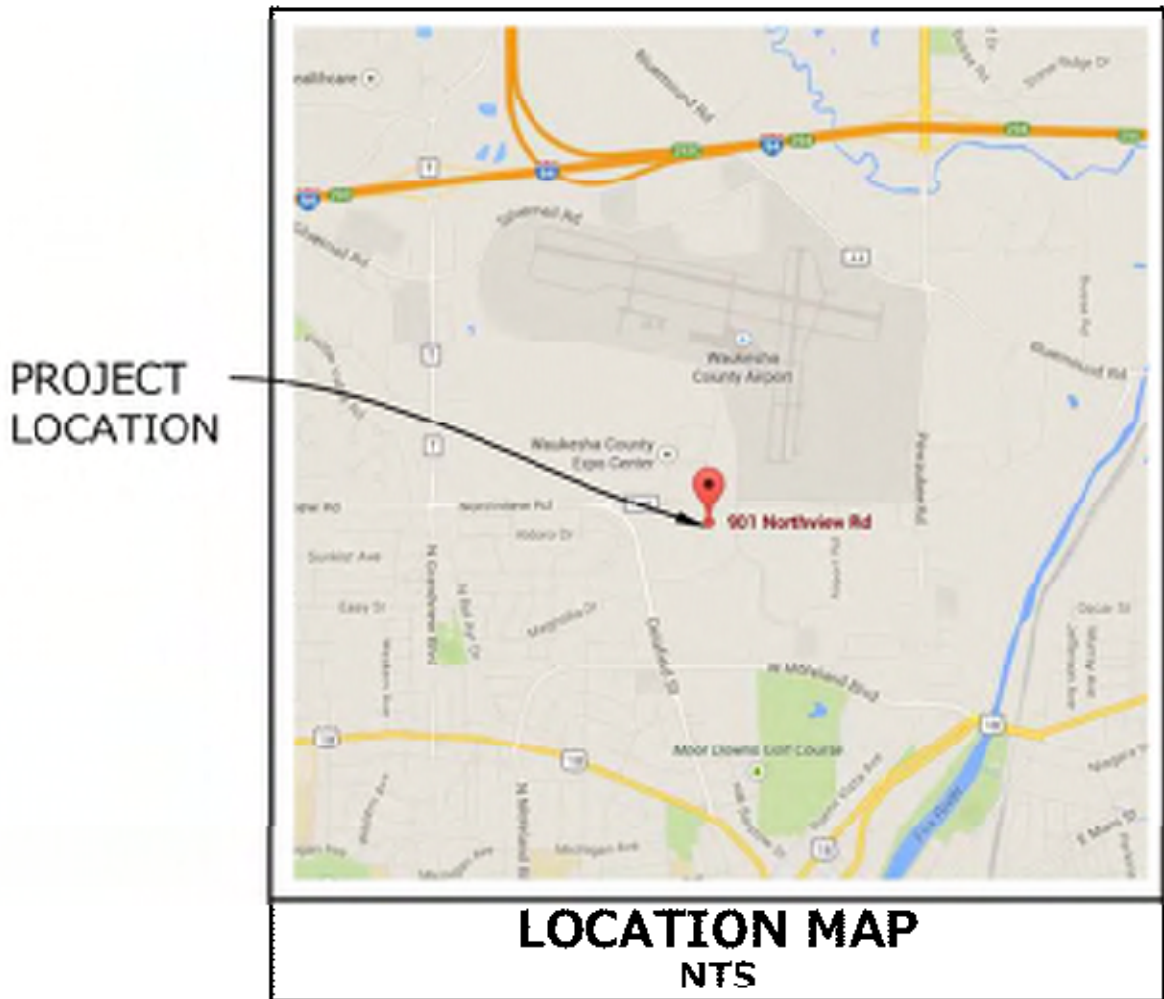
July 20, 2015
Revised September 18, 2015

This instrument was drafted by Donald C. Chaput
Professional Land Surveyor S-1316

Drawing No. 1910-tjn
SHEET 5 OF 5 SHEETS

Exhibit B - Location Map (Next Pages)
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 underground detention chambers and all associated pipes, and other components of these practices. The project is located at 901 Northview Road in Waukesha.



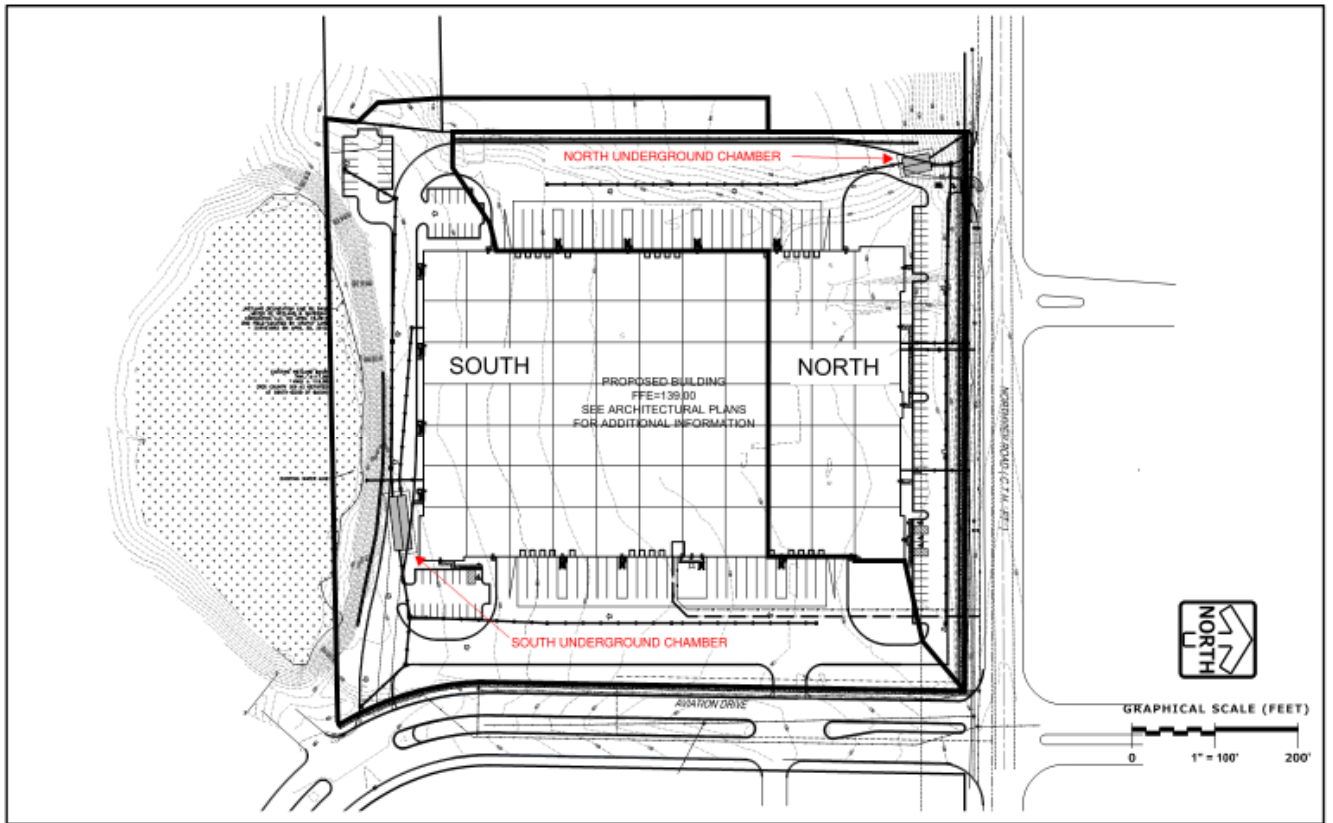
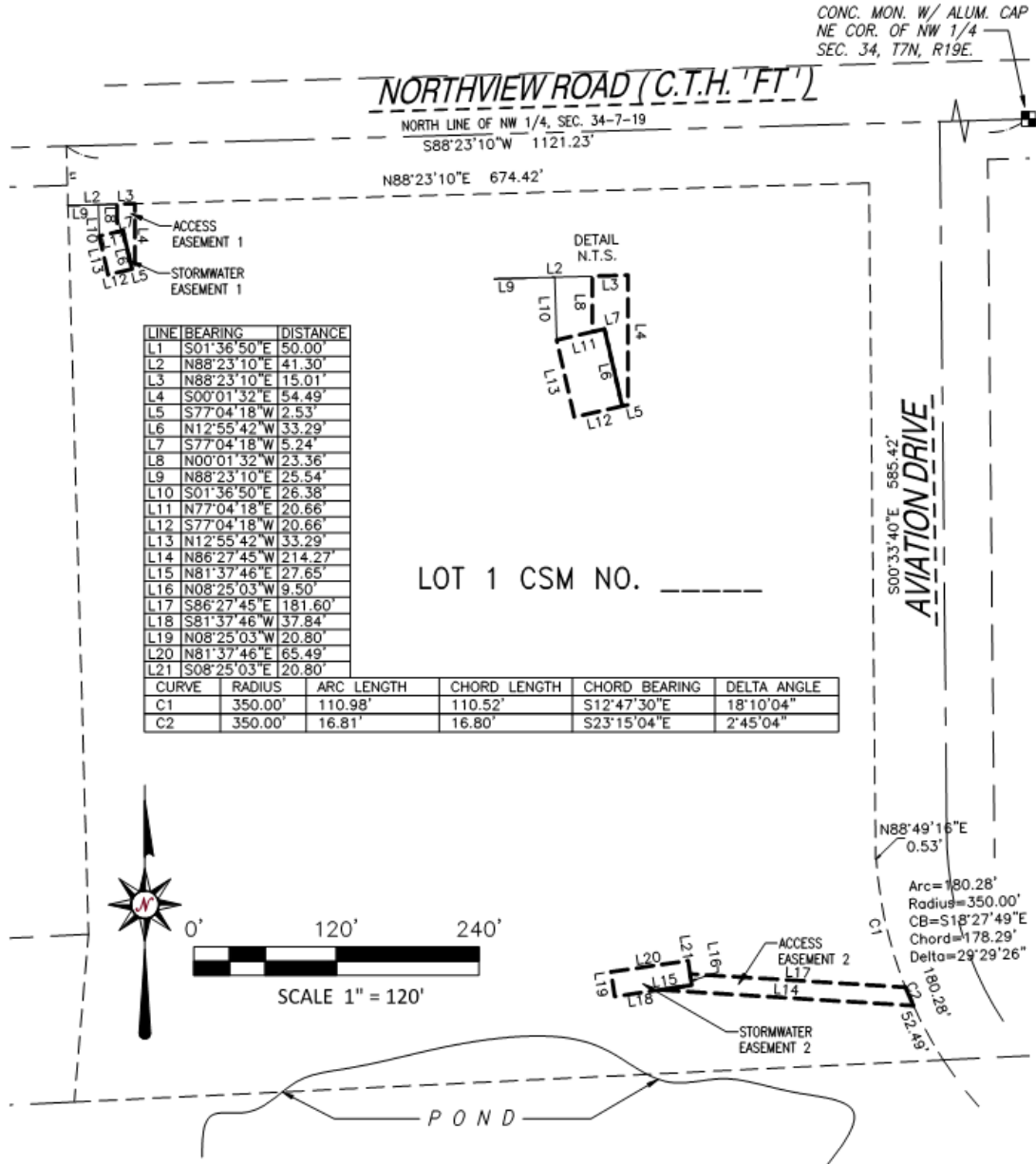


EXHIBIT B

A part of Parcel 1 of Certified Survey Map No. 2913, Parcel 2 and that part of Parcel 1 of Certified Survey Map No. 7492 and lands, all in the Northeast 1/4 of the Northwest 1/4 of the Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin



CHAPUT LAND SURVEYS LLC

234 W. FLORIDA STREET
MILWAUKEE, WI 53204
414-224-8068

www.chaputlandsurveys.com

Drawing No. 1910-deb SHEET 2 OF 2

CHAPUT LAND SURVEYS LLC

EXHIBIT B

ACCESS EASEMENT 1

A part of Parcel 1 of Certified Survey Map No. 2913, Parcel 2 and that part of Parcel 1 of Certified Survey Map No. 7492 and lands, all in the Northeast 1/4 of the Northwest 1/4 of the Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin bounded and described as follows:

Commencing at the Northeast corner of the Northwest 1/4 Section of said Section 34; thence South 88°23'10" West along the North line of the Northwest 1/4 Section 1121.23 feet to a point; thence South 01°36'50" East 50.00 feet to a point; thence North 88°23'10" East 41.30 feet to the point of beginning of the lands hereinafter described; thence North 88°23'10" East 15.01 feet to a point; thence South 00°01'32" East 54.49 feet to a point; thence South 77°04'18" West 2.53 feet to a point; thence North 12°55'42" West 33.29 feet to a point; thence South 77°04'18" West 5.24 feet to a point; thence North 00°01'32" West 23.36 feet to the point of beginning.

STORM WATER EASEMENT 1

A part of Parcel 1 of Certified Survey Map No. 2913, Parcel 2 and that part of Parcel 1 of Certified Survey Map No. 7492 and lands, all in the Northeast 1/4 of the Northwest 1/4 of the Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin bounded and described as follows:

Commencing at the Northeast corner of the Northwest 1/4 Section of said Section 34; thence South 88°23'10" West along the North line of the Northwest 1/4 Section 1121.23 feet to a point; thence South 01°36'50" East 50.00 feet to a point; thence North 88°23'10" East 25.54 feet to a point; thence South 01°36'50" East 26.38 feet to the point of beginning of the lands hereinafter described; thence North 77°04'18" East 20.66 feet to a point; thence South 12°55'42" East 33.29 feet to a point; thence South 77°04'14" West 20.66 feet to a point; thence North 12°55'42" West 33.29 feet to the point of beginning.

CHAPUT LAND SURVEYS LLC

EXHIBIT B

ACCESS EASEMENT 2

A part of Parcel 1 of Certified Survey Map No. 2913, Parcel 2 and that part of Parcel 1 of Certified Survey Map No. 7492 and lands, all in the Northeast 1/4 of the Northwest 1/4 of the Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin bounded and described as follows:

Commencing at the Northeast corner of the Northwest 1/4 Section of said Section 34; thence South 88°23'10" West along the North line of the Northwest 1/4 Section 1121.23 feet to a point; thence South 01°36'50" East 50.00 feet to a point; thence North 88°23'10" East 674.42 feet to a point on the West line of Aviation Drive; thence South 00°33'40" East along said West line 585.42 feet to a point; thence North 88°49'16" East along said West line 0.53 feet to a point on a curve; thence Southeasterly 110.98 feet along said West line and arc of a curve, whose center lies to the Northeast, whose radius is 350.00 feet and whose chord bears South 12°48'30" East 110.52 feet to the point of beginning of the lands hereinafter described; thence continue Southeasterly 16.81 feet along said West line and arc of a curve, whose center lies to the Northeast, whose radius is 350.00 feet and whose chord bears South 23°15'04" East 16.80 feet to a point; thence North 86°27'45" West 214.27 feet to a point; thence North 81°37'46" East 27.65 feet to a point; thence North 08°25'03" West 9.50 feet to a point; thence South 86°27'45" East 181.60 feet to the point of beginning.

STORM WATER EASEMENT 2

A part of Parcel 1 of Certified Survey Map No. 2913, Parcel 2 and that part of Parcel 1 of Certified Survey Map No. 7492 and lands, all in the Northeast 1/4 of the Northwest 1/4 of the Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, Wisconsin bounded and described as follows:

Commencing at the Northeast corner of the Northwest 1/4 Section of said Section 34; thence South 88°23'10" West along the North line of the Northwest 1/4 Section 1121.23 feet to a point; thence South 01°36'50" East 50.00 feet to a point; thence North 88°23'10" East 674.42 feet to a point on the West line of Aviation Drive; thence South 00°33'40" East along said West line 585.42 feet to a point; thence North 88°49'16" East along said West line 0.53 feet to a point on a curve; thence Southeasterly 110.98 feet along said West line and arc of a curve, whose center lies to the Northeast, whose radius is 350.00 feet and whose chord bears South 12°48'30" East 110.52 feet to a point; thence continue Southeasterly 16.81 feet along said West line and arc of a curve, whose center lies to the Northeast, whose radius is 350.00 feet and whose chord bears South 23°15'04" East 16.80 feet to a point; thence North 86°27'45" West 214.27 feet to the point of beginning of the lands hereinafter described; thence South 81°37'46" West 37.84 feet to a point; thence North 08°25'03" West 20.80 feet to a point; thence North 81°37'46" East 65.49 feet to a point; thence South 08°25'03" East 20.80 feet to a point; thence South 81°37'46" West 27.65 feet to the point of beginning.

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. Access to the stormwater practices for maintenance vehicles is shown in Exhibit B. Any 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.

System Description:

The underground detention chambers are designed to trap 40% of runoff sediment and maintain pre-development downstream peak flows. This is based on the City of Waukesha and WDNR detention and water quality requirements for a redeveloped site. The south chamber outfalls in a 24" pipe into an existing wetland. The north underground chamber outfalls in a 24" pipe into the existing road ditch along the south side of Northview Road. There is a fifteen foot wide access easement dedicated to the local municipality allowing for future BMP work. The estimated cost of the two underground detention chambers is \$80,000.

"As-built" construction drawings of the underground detention chambers showing actual dimensions, elevations, outlet structures, etc. will be recorded as an addendum(s) to this agreement within 60 days after City of Waukesha accepts verification of construction from the project engineer.

Minimum Maintenance Requirements:

To ensure the proper long-term function of the storm water management practices described above, the following activities must be completed:

Storm Water Maintenance Standards

1. Greenspace: Vegetation shall be maintained to prevent erosion caused by stormwater runoff. An inspection shall be made at least every 6 months. If vegetation is no longer in good condition it shall be replanted.
2. Curb & Gutter: All curb and gutter shall be inspected every 6 months. This inspection shall include the condition of the gutter and the cleanliness of the gutter. This shall be maintained to allow for proper drainage of the area.
3. Storm Sewer: All storm sewers shall be inspected once a year. This inspection shall include the condition of the main line storm sewers to ensure that the system is functioning according to the design requirements.
4. Catch Basins and inlets: All catch basins and inlets shall be inspected every 6 months and periodically cleaned to remove accumulated sediment.
5. Gutters and Downspouts: All building's gutters and downspouts shall be inspected every 6 months and periodically cleaned to remove accumulated sediment.
6. Vegetated Swales
 - a. Pesticides and Fertilizers: Chemicals shall be used in moderation and only as needed to promote healthy dense vegetation.
 - b. Mowing: The swale shall be mowed or cut to the height needed for proper function.
 - c. Sediment Removal: When infiltration rates impeded or sediment is 2 inches. Care shall be taken to ensure that the swale is not being compacted during removal process.

- d. Erosion: Any area bare of suitable vegetation shall, within 30 days of discovery or the onset of suitable weather, have any erosion repaired, filled with three inches of topsoil, seeded, and covered with a tackifier type mulch. On slopes of 10 to 1 or greater the repair shall be covered with turf reinforcement before placement of the top two inches of topsoil.
 - e. Litter and Debris: Swales shall be examined for debris accumulation after any storm that has significant runoff (observed flow in street gutters). Any debris within the swale shall be removed and disposed of offsite.
 - f. Proper drainage shall be maintained in all dry bottom detention basins to reduce mosquito breeding. No standing water shall be evident with one day of the complete drainage of the basin. Any such poorly drained area will need to be regraded or tiled.
7. Underground Detention Facilities
- a. Sediment Removal: Detention Chambers must be cleaned, when it exceeds 5% of the storage area, to remove accumulated trash, sediment and other debris or more often based on manufacturer's recommendations. This debris must be removed from the pipes and not allowed to travel downstream.
 - b. Annual Inspections:
 - 1. The Drain Inlets and outlets shall be inspected for debris and obstructions to ensure that runoff can move freely within the facility.
 - 2. Inspect facility for floating debris and sediment buildup.
 - 3. The Detention Chambers shall be inspected to ensure that they are not cracked or damaged and all necessary repairs must be made.
8. Other Devices will be reviewed on a case by case basis.
9. 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.

**Save Valuable Land and
Protect Water Resources**



Isolator[®] Row O&M Manual
StormTech[®] Chamber System for Stormwater Management

1.0 The Isolator[®] Row

1.1 INTRODUCTION

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



Looking down the Isolator Row from the manhole opening, woven geotextile is shown between the chamber and stone base.

1.2 THE ISOLATOR ROW

The Isolator Row is a row of StormTech chambers, either 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 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 protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

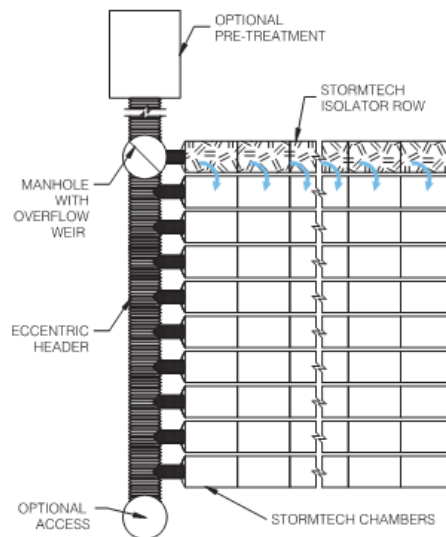
Two different fabrics are used for the Isolator Row. A woven geotextile fabric is placed between the stone and the Isolator Row chambers. The tough geotextile provides a media for storm water filtration and provides a durable surface for maintenance operations. It is also designed to prevent scour of the underlying stone and remain 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 DC-780, MC-3500 or MC-4500 models as these chambers do not have perforated side walls.

The Isolator Row is typically designed to capture the "first flush" and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but typically includes a high flow weir such that storm water flowrates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other chambers.

The Isolator Row may also be part of a treatment train. By treating storm water prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured. Pre-treatment best management practices can be as simple as deep sump catch basins, oil-water separators or can be innovative storm water treatment devices. 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 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.

StormTech Isolator Row with Overflow Spillway (not to scale)



² Call StormTech at 888.892.2694 or visit our website at www.stormtech.com for technical and product information.

2.0 Isolator Row Inspection/Maintenance



2.1 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.

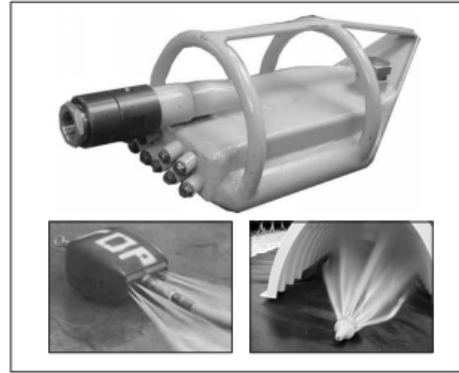
At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row 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, clean-out should be performed.

2.2 MAINTENANCE

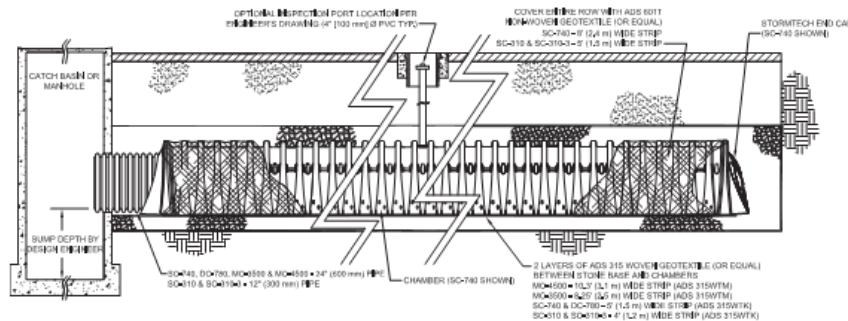
The Isolator Row was designed to reduce the cost of periodic maintenance. By "isolating" sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via 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.



Examples of culvert cleaning nozzles appropriate for Isolator Row maintenance. (These are not StormTech products.)

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row 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. Most JetVac reels have 400 feet of hose allowing maintenance of an Isolator Row up to 50 chambers long. **The JetVac process shall only be performed on StormTech Isolator Rows that have AASHTO class 1 woven geotextile (as specified by StormTech) over their angular base stone.**

StormTech Isolator Row (not to scale)



NOTE: NON-WOVEN FABRIC IS ONLY REQUIRED OVER THE INLET PIPE CONNECTION INTO THE END CAP FOR DC-780, MC-3500 AND MC-4500 CHAMBER MODELS AND IS NOT REQUIRED OVER THE ENTIRE ISOLATOR ROW.

Call StormTech at 888.892.2694 or visit our website at www.stormtech.com for technical and product information. 3

3.0 Isolator Row Step By Step Maintenance Procedures

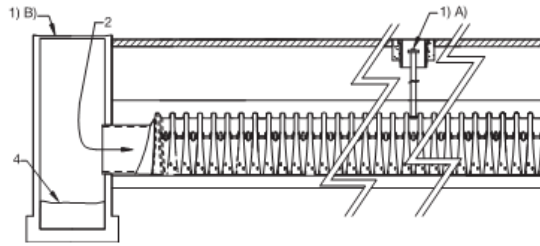
Step 1) Inspect Isolator Row for sediment

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

B) All Isolator Rows

- Remove cover from manhole at upstream end of Isolator Row
- Using a flashlight, inspect down Isolator Row through outlet pipe
 - Mirrors on poles or cameras may be used to avoid a confined space entry
 - Follow OSHA regulations for confined space entry if entering manhole
- 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.

StormTech Isolator Row (not to scale)



Step 2) Clean out Isolator Row using the JetVac process

- A fixed culvert cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
- Apply multiple passes of JetVac until backflush water is clean
- 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)			
3/15/01	6.3 ft.	none		New installation. Fixed point is CI frame at grade	djm
9/24/01		6.2	0.1 ft.	Some grit felt	sm
6/20/03		5.8	0.5 ft.	Mucky feel, debris visible in manhole and in Isolator row, maintenance due	rv
7/7/03	6.3 ft.		0	System jetted and vacuumed	djm



70 Inwood Road, Suite 3 | Rocky Hill | Connecticut | 06067
 860.529.8188 | 888.892.2694 | fax 866.328.8401 | www.stormtech.com

ADS "Terms and Conditions of Sale" are available on the ADS website, www.ads-pipe.com
 Advanced Drainage Systems, the ADS logo, and the green stripe are registered trademarks of Advanced Drainage Systems.
 Stormtech® and the Isolator® Row are registered trademarks of StormTech, Inc.
 Green Building Council Member logo is a registered trademark of the U.S. Green Building Council.

© 2013 Advanced Drainage Systems, Inc. S090809 02/13

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 on Parcel 1 of CSM No. 2913 being part of the Northwest ¼ of Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, WI. 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 underground detention chamber.

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.

HSA PrimeCare
233 S Wacker Drive, STE 350
Chicago, IL 60606

Dated this ___ day of _____, 201_.

Parcel Identification Number(s) – (PIN)

Owner:

[Owners Signature – per the Maintenance Agreement]

Mark TeGrootenhuis
[Owners Typed Name]

Acknowledgements

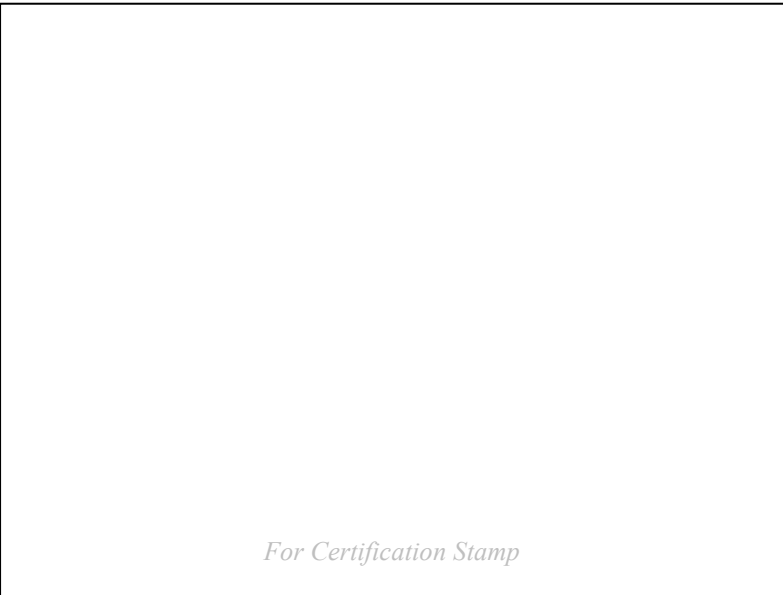
State of Wisconsin County of Waukesha

Personally came before me this ___ day of _____, 201_, the above named Mark TeGrootenhuis 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:

Matt Carey, PE
Pinnacle Engineering Group
15850 W. Bluemound Rd. STE 210
Brookfield, WI 53005



For Certification Stamp

Exhibit D Design Summaries for Underground Detention Chambers

Practice Design Summary. The following table summarizes the data used to design the north and south underground detention chambers.

EXISTING/PROPOSED 2, 10, 100 YEAR FLOW TABLES

EXISTING SITE

Area	Area (ac)	CN	Tc (min)	Peak Flows 2-year (cfs)	Peak Flows 10-year (cfs)	Peak Flows 100-year (cfs)
Exist Site North	3.14	93	6.0*	10.17	16.14	23.40
Exist Site South	9.09	94	6.0*	30.39	47.55	68.39
Total	12.23	94	6.0*	40.56	63.69	91.79

* A Tc of 6.0 min is used as the actual computed Tc is less than the minimum allowable Tc of 6.0 min per TR 55.

PROPOSED SITE

Area	Area (ac)	CN	Tc (min)	Peak Flows 2-year (cfs)	Peak Flows 10-year (cfs)	Peak Flows 100-year (cfs)
Prop Site North	4.16	93	6.0*	13.48	21.39	31.01
Prop Site South	8.07	92	6.0*	25.18	40.55	52.26
Total	12.23	93	6.0*	38.66	61.94	83.27

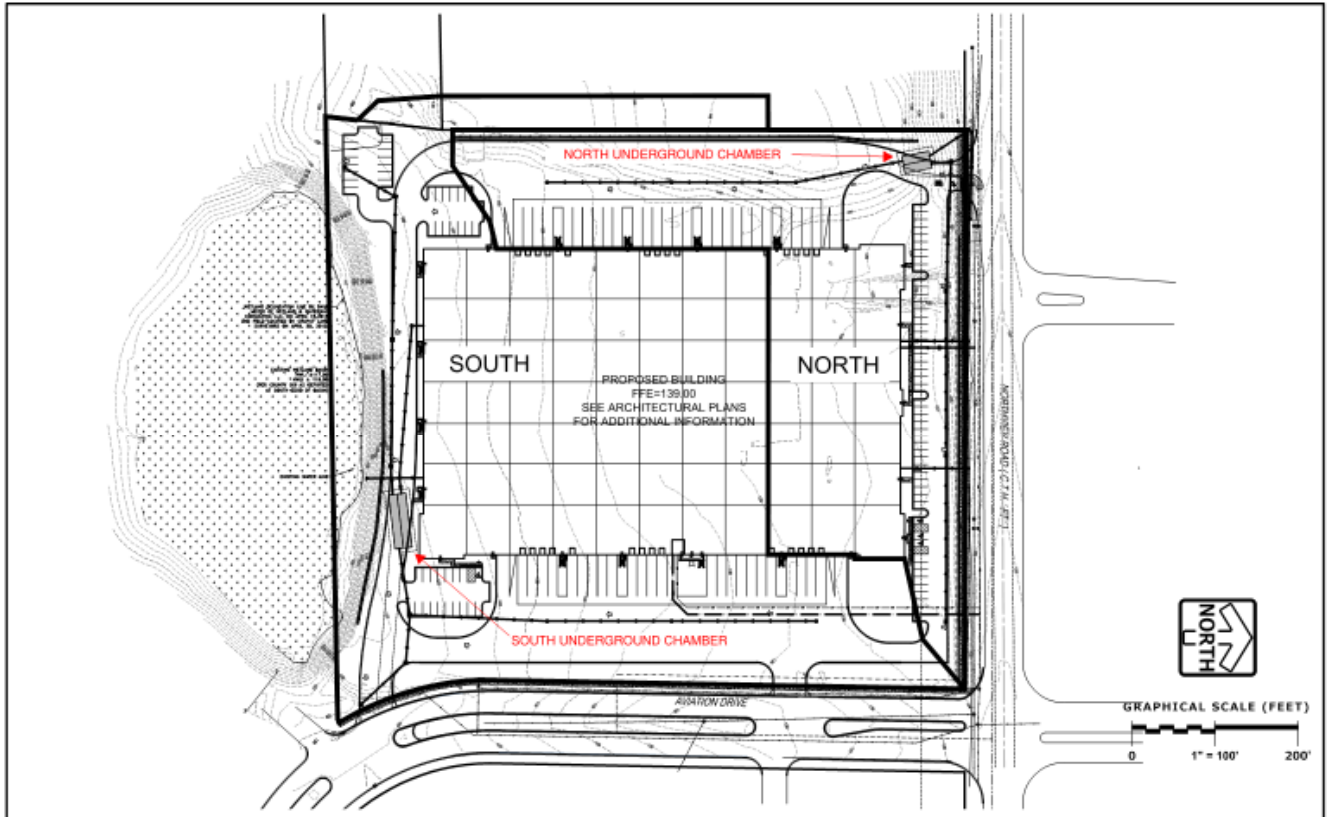
* A Tc of 6.0 min is used as the actual computed Tc is less than the minimum allowable Tc of 6.0 min per TR 55.

Water Quality Summary

Area/Pond	Area (ac)	Pounds of TSS Generated	Pounds of TSS Remaining	Percent Removal
Underground Chambers	6.62	5458	3246	41.65%

Exhibit D (continued)

Watershed Map. The watershed map shown below was used to determine the post-development data contained in this exhibit. The post-developed watershed areas are the same as the pre-development watershed areas for this project. (Areas shown in tables on previous page)



PROPOSED HYDROLOGY EXHIBIT

PINNACLE ENGINEERING GROUP

5950 W. BLUEMOUND ROAD | SUITE 210 | BROOKFIELD, WI 53005 | WWW.PINNACLE.ENG.COM |

PLAN | DESIGN | DELIVER

PEG JOB # 426.00

08/25/15

Exhibit D (continued)

WinSLAMM Water Quality Design Input Data:

Northview Model - Input Summary.txt
Data file name: Z:\Projects\2014\426.00-WI\DESIGN\SWMP\SLAMM\2015-06-03 BLH.mdb
WinSLAMM Version 10.1.6
Rain file name: C:\WinSLAMM Files\Rain Files\WI Milwaukee 69.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Cost Data file name:
Seed for random number generator: -42
Study period starting date: 03/28/69 Study period ending date: 12/06/69
Date: 06-08-2015 Time: 12:59:04
Site information:

LU# 1 - Industrial: Grass North Total area (ac): 0.450
45 - Large Landscaped Areas 1: 0.450 ac. Normal Clayey Low Density

LU# 2 - Industrial: Grass South Total area (ac): 1.820
45 - Large Landscaped Areas 1: 1.820 ac. Normal Clayey Low Density

LU# 3 - Industrial: Pavement North Total area (ac): 1.880
13 - Paved Parking 1: 1.880 ac. Connected Connected

LU# 4 - Industrial: Pavement South Total area (ac): 2.470
13 - Paved Parking 1: 2.470 ac. Connected Connected

Control Practice 1: Wet Detention Pond CP# 1 (DS) - North Underground Chamber
Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft): 3.5
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet characteristics:
Outlet type: Orifice 1
1. Orifice diameter (ft): 1
2. Number of orifices: 1
3. Invert elevation above datum (ft): 3.5
Outlet type: Broad Crested weir

Page 1

Exhibit D (continued)

Northview Model - Input Summary.txt

1. Weir crest length (ft): 16
2. Weir crest width (ft): 0.5
3. Height of weir opening (cfs): 0
4. Height from datum to bottom of weir opening: 5

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.0069	0.00	0.00
2	1.00	0.0069	0.00	0.00
3	2.00	0.0069	0.00	0.00
4	3.00	0.0069	0.00	0.00
5	4.00	0.0069	0.00	0.00
6	5.00	0.0069	0.00	0.00
7	6.00	0.0069	0.00	0.00
8	7.00	0.0069	0.00	0.00

Control Practice 2: Wet Detention Pond CP# 2 (DS) - South Chamber

Particle Size Distribution file name: Not needed - calculated by program

Initial stage elevation (ft): 3.5

Peak to Average Flow Ratio: 3.8

Maximum flow allowed into pond (cfs): No maximum value entered

Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 1
2. Number of orifices: 1
3. Invert elevation above datum (ft): 3.5

Outlet type: Broad Crested weir

1. Weir crest length (ft): 16
2. Weir crest width (ft): 5
3. Height of weir opening (cfs): 0
4. Height from datum to bottom of weir opening: 6

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.0136	0.00	0.00
2	1.00	0.0136	0.00	0.00
3	2.00	0.0136	0.00	0.00
4	3.00	0.0136	0.00	0.00
5	4.00	0.0136	0.00	0.00
6	5.00	0.0136	0.00	0.00
7	6.00	0.0136	0.00	0.00
8	7.00	0.0136	0.00	0.00

Control Practice 3: Other Device CP# 1 (DS) - DS Other Device # 2

Exhibit D (continued)

Northview Model - Input Summary.txt
Fraction of drainage area served by device (ac) = 1.00
Concentration reduction fraction = 1.00
Runoff volume reduction fraction = 0

Control Practice 4: Other Device CP# 2 (DS) - DS Other Device # 3
Fraction of drainage area served by device (ac) = 1.00
Concentration reduction fraction = 1.00
Runoff volume reduction fraction = 0

Exhibit E
As-built Survey for Underground Detention Basins.

The underground detention basins depicted are reduced copy of the as-built plan.

Project Identifier: 901 Northview Road

Storm water Practice: Underground Detention Chambers

Location of Practice: Parcel 1 of CSM No. 2913 being part of the Northwest ¼ of Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, WI.

Owner: HSA PrimeCare, 233 S Wacker Drive, STE 350, Chicago, IL 60606

Exhibit "E" Cross Section

NOMINAL CHAMBER SPECIFICATIONS
 SIZE (W x H x INSTALLED LENGTH) 100.0" x 60.0" x 48.3" (2540 mm x 1524 mm x 1227 mm)
 CHAMBER STORAGE 106.5 ft³ (3.01 m³)
 MINIMUM INSTALLED STORAGE* 162.6 ft³ (4.60 m³)
 NOMINAL WEIGHT 120 lbs [54.4 kg]

NOMINAL END CAP SPECIFICATIONS
 SIZE (W x H x INSTALLED LENGTH) 90.2" x 59.4" x 30.7" [2291 mm x 1509 mm x 781 mm]
 END CAP STORAGE 35.7 ft³ [1.01 m³)
 MINIMUM INSTALLED STORAGE* 108.7 ft³ [3.08 m³)
 NOMINAL WEIGHT 120 lbs [54.4 kg]

*ASSUMES 9" (229 mm) STONE FOUNDATION, 9" (229 mm) ROW SPACING, 12" (305 mm) STONE ABOVE, 12" (305 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

PART NUMBERS ENDING WITH "B" ARE FOR STUBS AT BOTTOM OF END CAP.
 PART NUMBERS ENDING WITH "T" ARE FOR STUBS AT TOP OF END CAP.

PART #	STUB	B	C
MC4500REPE08T	6" (150 mm)	42.54" (1081 mm)	N/A
MC4500REPE08B	6" (150 mm)	N/A	0.88" (22 mm)
MC4500REPE08T	8" (200 mm)	40.50" (1029 mm)	N/A
MC4500REPE08B	8" (200 mm)	N/A	1.01" (26 mm)
MC4500REPE10T	10" (250 mm)	38.37" (975 mm)	N/A
MC4500REPE10B	10" (250 mm)	N/A	1.13" (29 mm)
MC4500REPE12T	12" (300 mm)	35.69" (907 mm)	N/A
MC4500REPE12B	12" (300 mm)	N/A	1.56" (39 mm)
MC4500REPE15T	15" (375 mm)	32.72" (831 mm)	N/A
MC4500REPE15B	15" (375 mm)	N/A	1.70" (43 mm)
MC4500REPE18T	18" (450 mm)	29.38" (746 mm)	N/A
MC4500REPE18B	18" (450 mm)	N/A	1.97" (50 mm)
MC4500REPE24T	24" (600 mm)	23.05" (590 mm)	N/A
MC4500REPE24B	24" (600 mm)	N/A	2.26" (57 mm)
MC4500REPE30B	30" (750 mm)	N/A	2.95" (75 mm)
MC4500REPE36B	36" (900 mm)	N/A	3.25" (83 mm)
MC4500REPE42B	42" (1050 mm)	N/A	3.55" (90 mm)

1. CUSTOM INVERT LOCATIONS ON THE MC-4500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm).
 2. THE INVERT LOCATIONS IN COLUMN "B" ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

NOTE: ALL DIMENSIONS ARE NOMINAL

MC-4500 CHAMBER INSPECTION PORT DETAIL
N.T.S.

PAVEMENT

CONCRETE COLLAR

12" (300 mm) NYLOPLAST INLINE DRAIN BODY W/SOLID HINGED COVER OR GRATE
 PART# 2712AG10N
 SOLID COVER: 1299CGC
 GRATE: 1299CGS

CONCRETE SLAB
 8" (200 mm) MIN THICKNESS

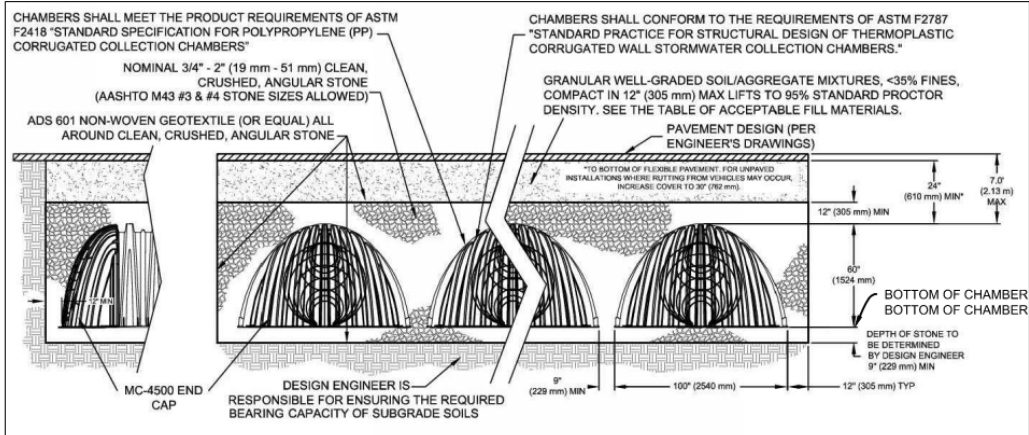
FLEXSTORM CATCH IT
 PART# 6212NYFX

10" (250 mm) INSERTA TEE
 PART#10N12ST35SI
 INSERTA TEE TO BE CENTERED ON CORRUGATION CREST

10" (250 mm) ADS N-12 HDPE PIPE

MC-4500 CHAMBER

18" (450 mm) MIN WIDTH



TYPICAL SECTION OF ADS STORMTECH 4500 CHAMBER

UNDERGROUND CHAMBER DETAIL

Exhibit F
Engineering/Construction Verification

DATE: _____

TO: City of Waukesha

FROM: __Pinnacle Engineering Group_____

RE: Engineering/Construction Verification for the following project:

Project Name: __901 Northview Road_____

Section __34_____, Town of _____Waukesha_____

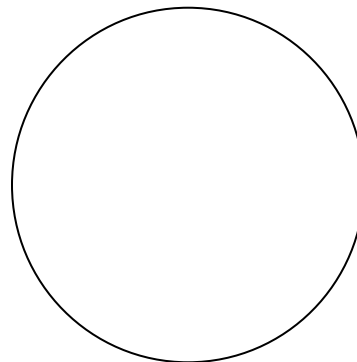
Storm Water Management & Erosion Control Permit # _____

Storm Water Management Practices: Underground Chambers

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.

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.]



(Signed P.E. stamp must be included)

Exhibit G
Storm Water Management and Erosion Control Permit Termination

Project Identifier: 901 Northview Road

Location: Parcel 1 of CSM No. 2913 being part of the Northwest ¼ of Section 34, Town 7 North, Range 19 East, in the City of Waukesha, Waukesha County, WI.

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 _____, 201_.

City of Waukesha representative:

(Signature)

(Typed Name and Title)

Acknowledgements

State of Wisconsin
County of Waukesha

Personally came before me this ___ day of _____, 201_, 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: _____