Document Number

Storm Water Management Practice Maintenance Agreement

La Casa De Esperanza, Inc. 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: <u>Legal Description</u> 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: <u>Maintenance Plan</u> – prescribes those activities that must be carried out to maintain compliance with this Agreement.

<u>Note</u>: After construction verification has been accepted by the City of Waukesha, for all planned storm water management practices, an <u>addendum(s)</u> 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.

Exhibit D: <u>Design Summaries</u> – design summaries of storm water practices.

Exhibit E: As-Built Survey – as-built data of storm water practices.

Exhibit F: Engineering/Construction Verification

Exhibit G: Storm Water Management and Erosion Control Permit Termination

Name and Return Address

City of Waukesha 130 Delafield Street Waukesha, WI 53188

Parcel Tax Key Number(s) – (PIN):

WAKC 1302.071 WAKC 1302.076 WAKC 1302.077 WAKC 1302.078

WAKC 1302.079

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.

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).

Anselmo Villareal (Owners Typed Name)

Acknowledgements

State of Wisconsin: County of Waukesha

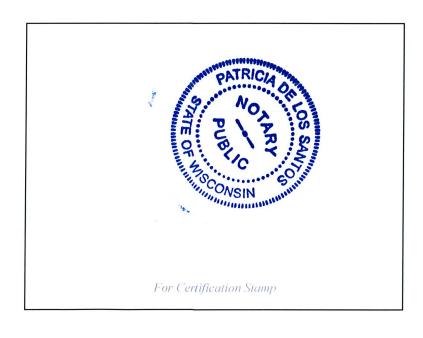
Personally came before me this 12 day of April, 2015 the above named Ausdino Villower to me known to be the person who executed the foregoing instrument and acknowledged the same.

Notary Public, Waukesha County, WI My commission expires: 3-78

This document was drafted by:

Kapur & Associates, Inc. 7711 N. Port Washington Rd.

Milwaukee, WI



City of Waukesha Common Council Approval	
Dated this day of, 201	
Shawn N. Reilly, Mayor	
Gina Kozlik, City Clerk	
Ackn	owledgements
State of Wisconsin: County of Waukesha	
Personally came before me this day of the person who executed the foregoing instrument a	, 201_, the above named to me known to be 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: La Casa De Esperanza – North of Arcadian Avenue Acres: 3.12

Date of Recording: October 19, 2017

Map Produced By: Jahnke & Jahnke Associates, Inc.

Legal Description:

All that part of the Southwest Quarter (SW 1/4) of the Northwest Quarter (NW 1/4) of Section 2, Town 6 North, Range 19 East, City of Waukesha, Waukesha County, Wisconsin and part of Lot 1, Block C, Lots 2, 3, 4, 5, 6, 7, 8 and 9 of Block C, Lot 5 and part of Lots 6, 7, 8, and 9 of Block A, and Lot 10 of Block A and part of Lots 4, 5, 6, 7, 8 and 9, Block B and vacated Gittner Place and Concordia Avenue all in Bowrons Addition to Village (now City) of Waukesha bounded and described as follows: Commencing at the northeast corner of Lot 4 of Certified Survey Map No. 8677 recorded in Volume 76 of Certified Survey Maps on Page 332 as Document No. 3390062 in the Waukesha County Register of Deeds Office; thence South 88°46'07" East along the south right-of-way line of Arcadian Avenue 334.74 feet; thence North 01°13'53" East 66.00 feet to the southwest corner of Lot 3, Block C of Bowrons Addition to the Village of Waukesha (now City) and the intersection of north line of Arcadian Avenue and the east line of Caroline Street; thence North 01°28'08" East along the east right-of-way line of Caroline Street 438.00 feet to the centerline of Concordia Avenue; thence South 89°04'10" East along said centerline 116.03 feet; thence North 01°16'38" East 87.35 feet to a point on the south line of Lot 5, Block A, of said Bowrons Addition; thence South 78°21'58" West along the south line of said Lot 5, Block A, 118.83 feet to the east line of Caroline Street; thence North 01°28'08" East along said east right-of-way line 51.50 feet; thence North 60°29'16" East along the north line of said Lot 5, Block A, 132.81 feet; thence South 21°34'03" East along the easterly line of said Lot 5, Block A 46.32 feet to the northwest corner of Lot 10, Block A of said Bowrons Addition; thence North 62°16'29" East along the north line of said Lot 10, Block A 138.02 feet to the westerly right-of-way line of Hartwell Avenue; thence South 29°27'52" East along said westerly right-of-way line 86.14 feet to the westerly right-of-way line of the Canadian National Railroad; thence South 10°58'47" West along said westerly right-of-way line 78.62 feet; thence Southerly 460.20 feet along said right-of-way line and the arc of a curve of radius 3484.70 feet, curve center lies to the west, chord bears South 14°45'47" West 459.87 feet; thence South 46.65 feet along said west right-of-way line and the arc of a curve of radius 1886.58 feet, curve center lies to the west, chord bears South 19°15'17" West 46.65 feet to the north right-of-way line of Arcadian Avenue; thence North 88°46'07" West along said north right-of-way line 163.76 feet to the place of beginning. Containing a net area of 135,886 square feet or 3.1195 acres of land.

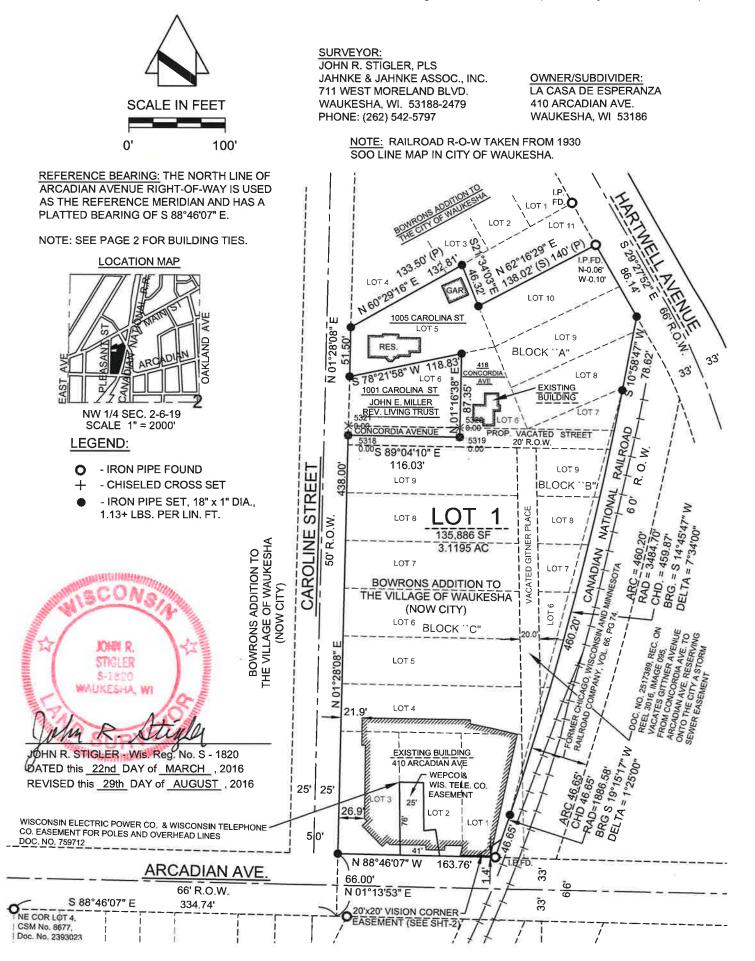


CERTIFIED SURVEY MAP NO.

Sheet 1 of 4

Property

All that part of the Southwest Quarter (SW ¼) of the Northwest Quarter (NW ¼) of Section 2, Town 6 North, Range 19 East, City of Waukesha, Waukesha County, Wisconsin and Part of Lot 1, Block C, Lots 2, 3, 4, 5, 6, 7, 8 and 9 of Block C, Lot 5and part of Lot 6, 7, 8, 9, Block A and Lot 10 of Block A, and part of Lots 4, 5, 6, 7, 8 and 9, Block B and vacated Gittner Place and Vacated Concordia Avenue all in Bowrons Addition to Village of Waukesha (now City of Waukesha)



FILE NAME: S:\PROJECTS\S7280\S7280_CSM2016.dwg P.S. WAUKESHA 5391 Project Identifier: La Casa De Esperanza – South of Arcadian Avenue Acres: 1.18

Date of Recording: September 9, 2016

Map Produced By: Jahnke & Jahnke Associates, Inc.

Legal Description:

All that part of the Southwest Quarter (SW ¼) of the Northwest Quarter (NW ¼) of Section 2, Town 6 North, Range 19 East, City of Waukesha, Waukesha County, Wisconsin bounded and described as follows: Commencing at the intersection of the west right-of-way line of N. Hartwell Avenue and the south right-of-way line of Arcadian Avenue; thence North 88°38'19" West along said south right-of-way line 100.00 feet to the place of beginning of the lands herein described; thence South 00°38'56" West 100.00 feet; thence South 88°38'19" East 100.00 feet to the west right-of-way line of N. Hartwell Avenue; thence South 00°38'56" West along said right-of-way line 50.00 feet; thence North 88°38'19" West 196.02 feet to the east right-of-way line of the former Canadian National Railroad; thence southerly 320.05 feet along the arc of a curve and said east right-of-way of radius 2037.77 feet, curve center lies to the west, chord bears South 30°46'26" West 319.72 feet; thence North 88°38'19" West 93.01 feet; thence northerly 487.93 feet along the arc of a curve of radius 1961.27 feet, curve center lies to the west, chord bears North 29°39'44" East 486.67 feet to the south right-of-way line of Arcadian Avenue; thence South 88°38'19" East along said south right-of-way line 113.43 feet to the place of beginning. Containing a net area of 1.1826 acres of land or 51,513 square feet of land.

VOLUME 114 PG. 180-184 9/9/16

FORM ARC-101

CERTIFIED SURVEY MAP NO. 1/484

Sheet 1 of 5

Property

All that part of the Southwest Quarter (SW ¼) of the Northwest Quarter (NW ¼) Section 2, Town 6 North, Range 19 East, City of Waukesha, Waukesha County, Wisconsin.

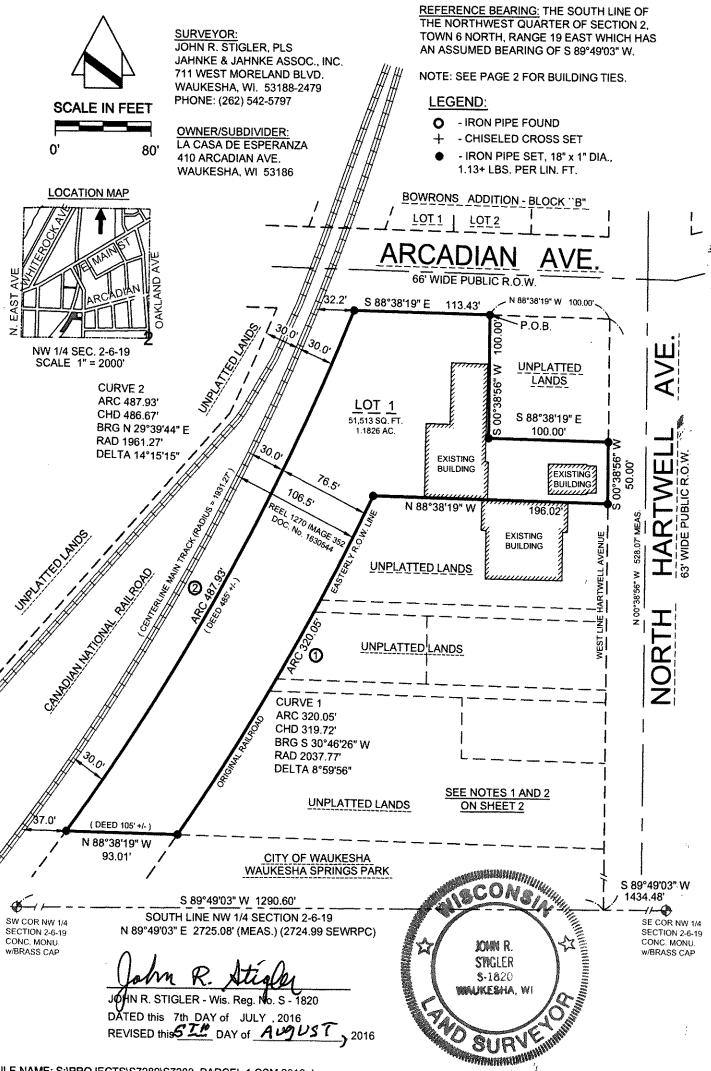


Exhibit B - Location Map Storm Water Management Practices Covered by this Agreement

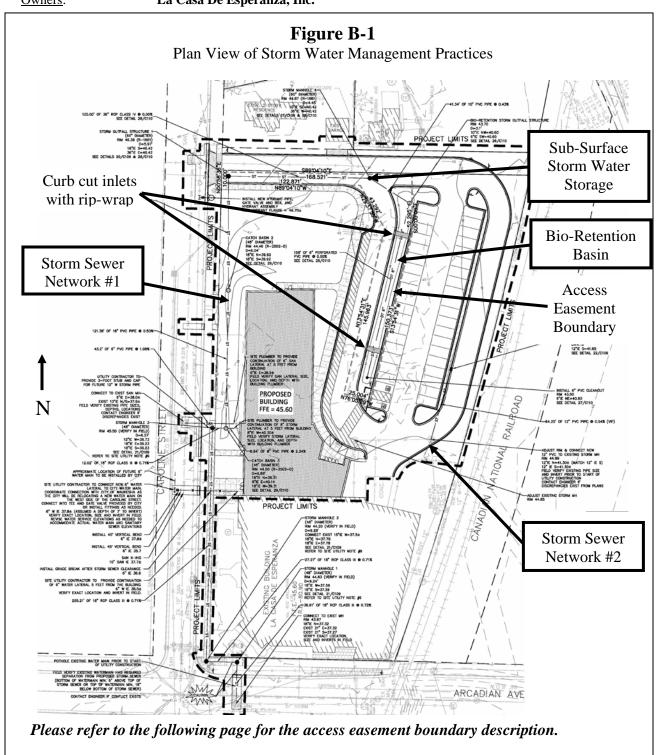
The storm water management practices covered by this Agreement are depicted in the figures below. The practices include one bio-retention basin and all associated pipes, earthen berms, rock chutes and other components of these practices. All the noted storm water management practices are located within the areas noted in Exhibit A.

Storm water Practices: Bio-Retention Basin, Sub-Surface Storm Water Storage, Storm Sewer Network #1,

Storm Sewer Network #2

<u>Location of Practices</u>: La Casa De Esperanza – North of Arcadian Avenue

Owners: La Casa De Esperanza, Inc.







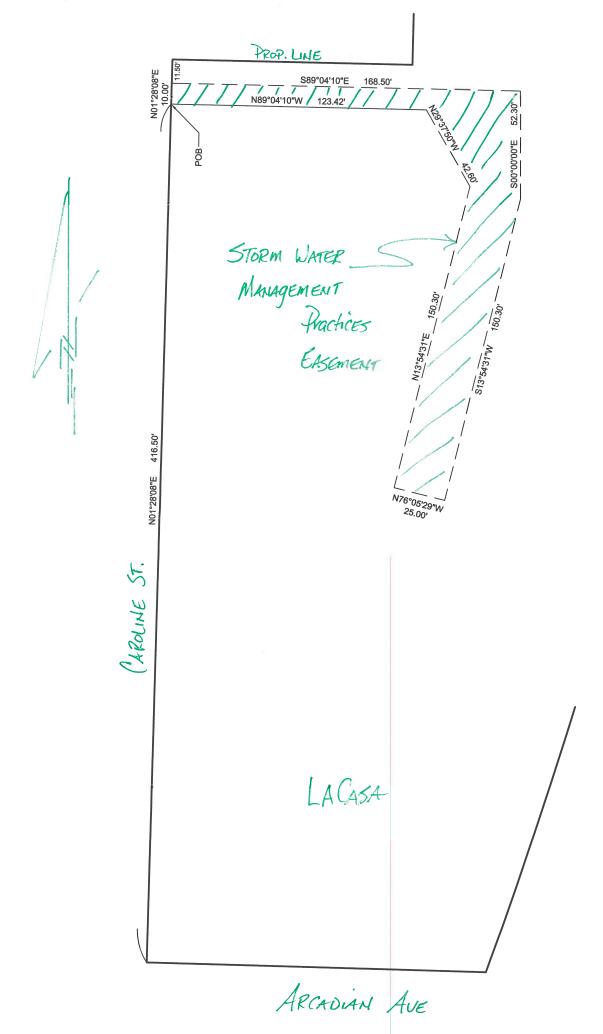
RE: La Casa De Esperanza Storm Water Management Practices

Legal Description: Variable Width Storm Sewer Easement

All that part of the Northwest Quarter (NW ¼) of Section 2, Township 6 North, Range 19 East, City of Waukesha, Waukesha County, State of Wisconsin bounded and described as follows: Commencing at the point of intersection of the east right-of-way line of Caroline Street and the north right-of-way line of Arcadian Avenue; thence along the east right-of-way line of Caroline Street, North 01°28'08" East 416.50 feet to the place of beginning of said Variable Width Storm Water Management Practices Easement; thence continuing North 01°28'08" East 10.00 feet; thence South 89°04'10" East 168.50 feet; thence South 00°00'00" East 52.30 feet; thence South 13°54'31" West 150.30 feet; thence North 76°05'29" West 25.00 feet; thence North 13°54'31" East 150.30 feet; thence North 29°37'50" West 42.60 feet; thence North 89°04'10" West 123.42 feet to the place of beginning.

Prepared by: John R. Stigler, PLS Wisconsin Reg. No. S-1820

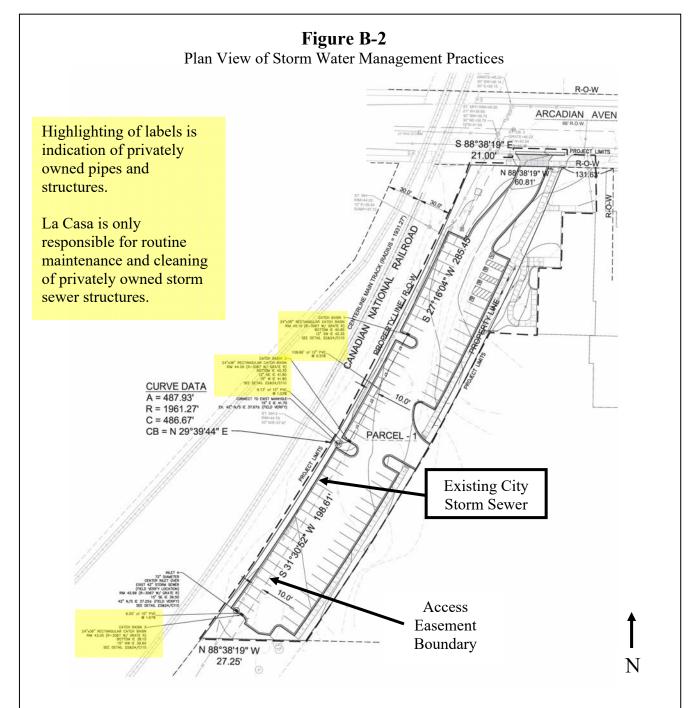
Dated: June 22, 2017



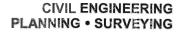
Storm Water Practices: Storm Sewer Network #3

Location of Practices: La Casa De Esperanza – South of Arcadian Avenue

Owner: La Casa De Esperanza, Inc.



Please refer to the following page for the access easement boundary description.





RE: La Casa De Esperanza 42" Storm Sewer Pipe Easement

Legal Description: Variable Width Storm Sewer Easement
All that part of the Northwest Quarter (NW 1/4) of Section 2, Township 6 North, Range 19 East, City of
Waukesha, Waukesha County, State of Wisconsin bounded and described as follows: Commencing at the
point of intersection of the west right-of-way line of N. Hartwell Avenue and the south right-of-way line of
Arcadian Avenue; thence North 88°38'19" West 192.44 feet along the south right-of-way line of Arcadian
Avenue to the place of beginning of said Variable Width Storm Sewer Easement; thence South 27°16'04" West
285.45 feet; thence South 31°30'52" West 198.61 feet to the south line of said easement; thence North
88°38'19" West along said south line 27.25 feet; thence Northerly 487.93 feet along the west line of said
easement and the arc of a curve of radius 1961.27 feet, curve center lies to the west, chord bears North
29°39'41" East 486.67 feet to the south right-of-way line of Arcadian Avenue; thence South 88°38'19" East
along said south right-of-way line 21.00 feet to the place of beginning.

Prepared by: John R. Stigler, PLS Wisconsin Reg. No. S-1820 Dated: June 30, 2016

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. 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.

The titleholder(s) or their designee must document all inspections as specified below. 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 on January 10th and July 10th each year.

System Description:

The bio-retention basin is designed to meet storm water quality performance standards by controlling total suspended solids in runoff from the post-construction site. The bio-retention in conjunction with the sub-surface storm water storage is designed to reduce peak flows from the post-construction site prior to discharging to the City storm sewer system. The bio-retention size and outfall structure must be maintained as specified in this Agreement.

The basin receives runoff from a 1.1-acre drainage area. During high rainfall or snow melt events, the water level will temporarily rise and slowly drain down to the elevation of the top of the engineered soil. The water level is controlled by an outfall structure located on the north end of the basin. The outfall structure consists of a 6-inch perforated PVC drain-tile leading into the structure, placed within 6 inches of washed stone (1-2" diameter) to prevent clogging, which is beneath 30 inches of engineered soil. The outfall structure is a 24-inch diameter structure with an opening 0.1 feet above the engineered soil, ultimately controlled by a 10-inch PVC outlet pipe (see Figures 1 and 3). This outfall structure allows the basin to collect water during runoff events and discharge at a controlled rate. Following the bio-retention basin is an underground detention facility consisting of a 36-inch class IV reinforced concrete pipe and an outfall structure with an 18-inch orifice and 2-foot tall overflow weir. "As-built" construction drawings of the basin, showing actual dimensions, elevations, outfall structures, etc. will be recorded as an addendum(s) to this agreement within 60 days after the City of Waukesha accepts verification of construction from the project engineer.

General Minimum Maintenance Requirements:

To ensure the proper long-term function of the storm sewer system described above, the following activities, per SPS 382.36(13), must be completed. Please note that this code is current through *Register, December, 2011, No. 672*.

- I. Accumulated solids or byproduct removal requirements.
 - La Casa de Esperanza shall make bi-annual visual inspections of all storm water and remove any floating debris and accumulated sediment. Accumulated debris shall also be removed from all paved areas and grass areas twice a year.
- II. Identification of safety hazards.
 - La Casa de Esperanza shall make periodic visual inspections of all storm water structures to verify that no safety hazards exist. These safety hazards may include but are not limited to missing grates, cracked structures, settled ground adjacent to the structures, etc.
- III. Cleaning and inspection schedule.
 - La Casa de Esperanza shall make annual, pre-rainy/snow melt season, and post storm inspections to verify the storm water system is functioning properly. It is recommended that the annual inspection occur in the pre-rainy/snow melt season (usually March thru May). Post storm inspections should occur after a rainfall of 3.80 inches during a 24-hour duration (10-Year Storm Event). While the inspections are being conducted, any floating debris and accumulated sediment shall be removed.

IV. Inspection and maintenance checklist.

Storm water structures shall be inspected and maintained as indicated above.

Grass swales and the bio-retention basin shall be inspected and maintained as follows:

- A. Grass swales shall be preserved to allow free flowing of surface runoff in accordance with approved grading plans. No buildings or other structures are allowed in these areas. No grading or filling is allowed that may interrupt flows in any way.
- B. Grass swales must be checked after heavy rains, or a minimum of once annually, for signs of erosion. Any eroding areas must be repaired immediately to prevent premature sediment build-up in downstream storm water facilities.
- C. Remove litter and debris from the bio-retention basin on a monthly basis, especially during spring and fall.
- D. Periodic mowing of the grass swales will encourage rigorous grass cover and allow better inspections for erosion. Waiting until after August 1 will avoid disturbing nesting wildlife.

V. Start up and shutdown procedures.

N/A

VI. Vector control requirements.

During the summer months, La Casa de Esperanza shall apply an oil to form a coating on top of standing water in the outlet control structure to drown larvae, pupae, and emerging adult mosquitoes. Companies that produce larvicides used in mosquito control are Bonide (Mosquito Beater WSP), BVA Inc. (BVA 2), and Clarke Mosquito Control Products, Inc. (GB-1111). Use according to label directions.

VII. A contingency plan in the event of system failure.

In the event of a system failure, the designated contact for Operation and Maintenance shall be called. The system will be evaluated and corrective actions will be taken to ensure that the storm water system operates properly. The contact information is shown below.

Bio-Retention Basin Minimum Maintenance Requirements

To ensure the proper long-term function of the bio-retention basin described above, the following activities must be completed:

I. Routine Maintenance

A. Vegetation

- 1. Side slopes, embankments, and emergency spillways that are not rock lined, which have been planted with turf grasses, should be moved at least twice a year to prevent woody growth and control noxious weeds.
- 2. More frequent mowing, typically once a week during a normal growing season, is recommenced for aesthetic and allergy control purposes.
- 3. Native grasses should be mowed to a height of 6 inches in mid to late summer or after they have achieved a height of 1-1/2 feet during the first growing season. Further mowing in subsequent growing seasons will not be required.
- 4. If possible, the native grass area should be burned off every three to four years in the spring of the year. Check local burning regulations as permits may be required.
- 5. If burning of the native grass areas is not possible, a 5- to 8-inch mowing every 3 to 4 years may suffice as a substitute management technique. The mowed area should be raked and performed in the spring.

B. Inspections

- 1. Inspections of the bio-retention basins shall be completed according to the time intervals indicated on the attached "Bio-Retention Basin Operation, Inspection, and Maintenance Report Form" or after significant rainfall events.
- 2. The inspections should be completed during wet weather conditions to determine if the bioretention basins are functioning properly.
- 3. Inspection priorities shall be as follows:
 - a. Inspect the embankments for subsidence, erosion, cracking and tree growth.
 - b. Inspect the condition of the overland overflow paths.
 - c. Inspect the basin bottoms for accumulation of sediment.
 - d. Inspect the outlet control structures for clogs, debris and material failures.
 - e. Inspect upstream and downstream channels from an erosion perspective.

- f. Inspect any modifications that may have been done to the bio-retention basins following their initial construction.
- g. Inspect the side slopes of the bio-retention basins for erosion, slumping, cracking or woody plant materials.
- 4. Documentation of the inspections should be completed using the attached "Bio-Retention Basin Operation, Inspection, and Maintenance Report Form" and filed. Documentation should include as a minimum:
 - a. Inspectors name, affiliation and professional credentials if applicable.
 - b. Date, time and weather conditions.
 - c. Approximate rainfall total over a 24-hour period if applicable.
 - d. Existing embankment, outlet and inlet conveyance systems and vegetation condition.
 - e. Sediment depth within the basins, outlet control structures, catch basins, manholes, endwalls, and curb and gutter.
 - f. Identification of potential structural failures and repair needs.
 - g. Other bio-retention basin conditions such as vegetation growth.
 - h. Repair recommendations.

C. Debris and Litter Removal.

- 1. Debris and litter removal from the bio-retention basins shall be completed at least once a month.
- 2. Particular attention should be paid to debris accumulating around the outlet structures to prevent potential clogging.

D. Erosion Control.

- 1. The bio-retention basin side slopes and embankments may suffer from periodic slumpage and erosion.
- 2. Corrective measures shall include re-grading, filling and re-vegetation of the eroded or slumping areas.
- 3. The ground surface around the bio-retention basin outlet structures should be inspected for displacement or undermining. Repairs shall be made upon discovery.

II. Non-Routine Maintenance

A. Structural Repairs and Replacement.

- 1. The estimated life of the outlet structure is 75 to 100 years. Annual inspection of the structures will disclose any potential structural problems. If structural problems appear, repair or replace the outlet.
- 2. Annual inspection of the bio-retention basin side slope and bottoms shall be conducted to disclose any potential leaks or seepage through the liners. If any appear to exist, corrective measures shall be taken.

B. Sediment Removal.

- 1. A sediment clean-out cycle of 10 to 15 years is recommended. Sediment removal may be necessary prior to 10 years if there is a substantial amount of land disturbance occurring within the contributory watershed. Annual inspections shall be made to ensure that the design depth and the available volume for storage is maintained, along with the infiltration capacity of the engineered soil.
- 2. Sediment removed from the bio-retention basin bottoms shall be hauled to an upland area, spread and stabilized with vegetative material.
- 3. It is recommended that the sediment be tested to determine if land filling is necessary. Contact the local DNR prior to sediment sampling and testing to ensure compliance with State standards and regulations.

III. Additional Considerations to Improve Bio-Retention Water Quality and Reduce Maintenance Costs

A. General

- 1. Improper disposal of yard wastes will affect the quality of the water exiting the bio-retention basins and may cause clogging of the outlet structures.
- 2. Improper fertilizer and pesticide application will affect the quality of the water exiting the bioretention basins.
- 3. Excess lawn watering will affect the quality of the water exiting the bio-retention basins due to increased water runoff that may contain fertilizers and pesticides.

B. Yard Care.

- 1. It is recommended to consider routine yard care maintenance that is practical and environmentally sound
- 2. Refer to the U.W. Extension's "Rethinking Yard Care" for additional information.
- C. Leaves and Yard Trimmings.
 - 1. It is recommended that leaves and yard trimmings are properly disposed of.
 - 2. Refer to the U.W. Extension's "Managing Leaves and Yard Trimmings" for further information.
- D. Lawn and Garden Fertilizers.
 - 1. It is recommended to control fertilizer applications on lawn and gardens so as not to be detrimental to the quality of the water exiting the bio-retention basins.
 - 2. Refer to the U.W. Extension's "Lawn and Garden Fertilizers" for further information.
- E. Lawn and Garden Pesticides.
 - 1. Lawn and garden pesticides may pollute surface and ground water.
 - 2. Refer to the U.W. Extension's "Lawn and Garden Pesticides" for further information.
- F. Lawn Watering.
 - 1. Excess lawn watering will wash pollutants into the bio-retention basins.
 - 2. Refer to the U.W. Extension's "Lawn Watering" for further information.
- G. Lawn Weed Control.
 - 1. Proper turf management will lower the amount of the chemicals that may runoff into the bioretention basins during rain events.

Refer to the U.W. Extension's "Lawn Weed Control" for further information.

Exhibit D Design Summaries

Project Identifier: La Casa De Esperanza	Project Size: 2.7 Acres	No. of Lots: <u>2</u>
Number of Runoff Discharge Points:3	Watershed (ultimate dischar	ge): Fox River
Watershed Area: 2.7 Acres (Includes both site	es. North and South of Arcadian	Ave.

<u>Watershed Data Summary</u>. The following table summarizes the watershed data used to determine peak flows and runoff volumes required to design wet detention basin #1.

Cummany Data Flamenta	La Casa De Esperanza			
Summary Data Elements	Pre-developed	Post-developed		
Watershed Areas (in acres) (see attached map)	2.7	2.7		
Average Watershed Slopes (%)	1-3%	1-3%		
Land Uses (% of each) (see attached map)	48% pavement 25% grass HSG B 5% grass HSG D 22% gravel	55% pavement 21% grass HSG B 11% grass HSG D 3% gravel 10% roofs		
Runoff Curve Numbers	98 x 0.48 = 47.0 61 x 0.25 = 15.3 80 x 0.05 = 4.0 98 x 0.22 = 21.6 RCN = 88	98 x 0.55 = 53.9 61 x 0.21 = 12.8 80 x 0.11 = 8.8 98 x 0.03 = 2.9 98 x 0.10 = 9.8 RCN = 88		
Conveyance Systems Types	Storm Sewer	Storm Sewer		
Summary of Average Conveyance System Data	12-42" Reinforced Concrete pipe @ 0.5%	12-18" PVC pipe @ 0.5%		
Time of Concentration (Tc) (see attached map & worksheets)	13.3 min.	11.9 min.		
25% of 2-yr 24-hr post-dev runoff volume	N/A	0.09 ac. ft.		
1-year/24 hour Runoff Volume	0.27 ac. ft.	0.28 ac. ft.		
2-yr./24 hour Peak Flow (see attached hydrographs)	5.6 cfs	5.2 cfs		
10-yr./24 hour Peak Flow	9.6 cfs	8.5 cfs		
100-yr./24 hour Peak Flow	14.8 cfs	13.0 cfs		

Exhibit D (continued)

Practice Design Summary

The following tables summarize the data used to design the Bio-Retention Basin:

Design Element	Design Data	
e Assessment Data:		
Contributing Drainage Area to Basin	1.067 acres	
% of Each Land Use Contributing to Drainage Area	26% of Pervious, 74% of Impervious	
Any Buried or Overhead Utilities in Area?	No	
Proposed Outfall Conveyance System/Discharge	10" PVC	
Floodplain, Shoreland, or Wetlands?	No	
neral Retention Basin Data		
Average Soil Texture at Pond Bottom Elevation (USDA)	Warsaw Loam	
Permanent Pool Surface Area	0 square feet	
Design Permanent Pool Water Surface Elevation	N/A	
Freeboard (100 Year Water Elevation)	3.63'	
Length/Width (Length/Width Ratio)	190'x12' (16.)	

Bio-Retention Facility Inflow, Outflow & Storage Data						
Design Storm SCS Type II	Inflow Peak/Volume	Maximum Outflow Rate	Maximum Water Elevation	Storage Volume (cubic feet)	Time to Drain	Outflow Control Structures*
1-yr/24-hour	1.84 cfs	1.11 cfs	42.47	763 cf	15 hours	#1
2-yr/24-hour	2.35 cfs	1.34 cfs	43.17	1,063 cf	15 hours	#1
10-yr/24-hour	4.06 cfs	3.58 cfs	43.93	1,640 cf	17 hours	#1 & 2
100-yr/24-hour	6.17 cfs	4.04 cfs	44.24	2,814 cf	19 hours	#1 & 2
*The controlling elem	ents are summarized	l below				
#1 = 10.0" Outlet Pipe	at Elevation 40.60		#2 = 24" Horiz. Standing Pipe at Elevation 43.70			.70
6" Draintile at Elevati			·			

Exhibit D (continued)

The following tables summarize the data used to design the Underground Detention System:

Underground Detention System Design Summary	Design Data
Site Assessment Data: (Refer to Appendix C for SWMP Figures)	
Contributing Drainage Area to Basin	1.067 acres
26% of Pervious, 74% of Impervious	26% of Pervious, 74% of Impervious
Proposed Outfall Conveyance System/Discharge	18" PVC Pipe to Exist Storm Sewer
Floodplain, Shoreland, or Wetlands?	No
General Basin Design Data (Refer to Appendix C for Detail Drawings	s)
Permanent Pool Surface Area	0 square feet
Design Permanent Pool Water Surface Elevation	40.50
Freeboard (Top of Pipe 100 Year Water Elevation)	42.53'
Total Available Storage	883.6 cubic feet
Length/Width (Dimensions/Ratio)	125 LF of 36" Diameter Pipe

Underground Detention System Inflow, Outflow & Storage Data						
Design Storm SCS Type II	Inflow Peak/Volume	Maximum Outflow Rate	Maximum Water Elevation	Storage Volume (cubic feet)	Time to Drain	Outflow Control Structures*
1-yr/24-hour	1.11 cfs	1.10 cfs	41.10	125 cf	15 hours	#1
2-yr/24-hour	1.34 cfs	1.32 cfs	41.17	149 cf	16 hours	#1
10-yr/24-hour	3.58 cfs	2.92 cfs	42.16	500 cf	18 hours	#1
100-yr/24-hour	4.04 cfs	3.43 cfs	42.53	638 cf	19 hours	#1 & 2
*The controlling elements are summarized below (Refer to Appendix D for Detail Drawings)						
#1 = 10" Orifice at Elevation 40.50 #2 = Overflow Weir at Elevation 42.50						

Exhibit D (continued)

<u>Watershed Map</u>. The watershed map shown below was used to determine the required post-development data contained in this exhibit. The post-developed watershed areas are the same as the pre-development watershed areas for this project.

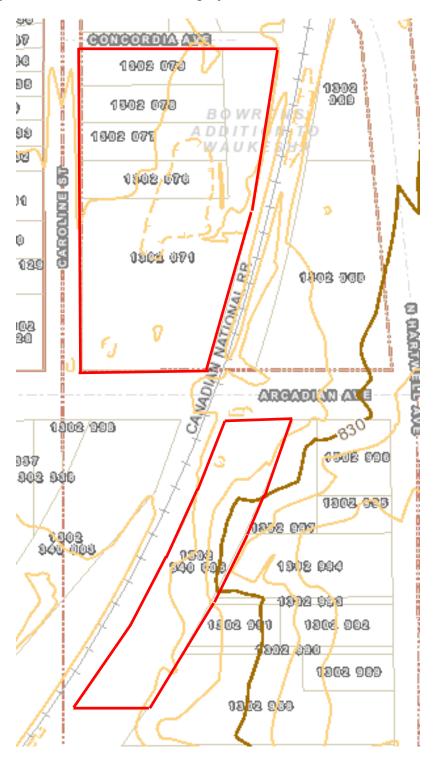


Exhibit E As-Built Survey

Project Identifier: La Casa De Esperanza

Storm water Practice: Bio-Retention Basin and Sub-Surface Storm Water Storage Facility

Location of Practice: La Casa De Esperanza – North of Arcadian Avenue

Owners: La Casa De Esperanza, Inc.

Figure E-1: Cross Section of Bio-Retention Basin

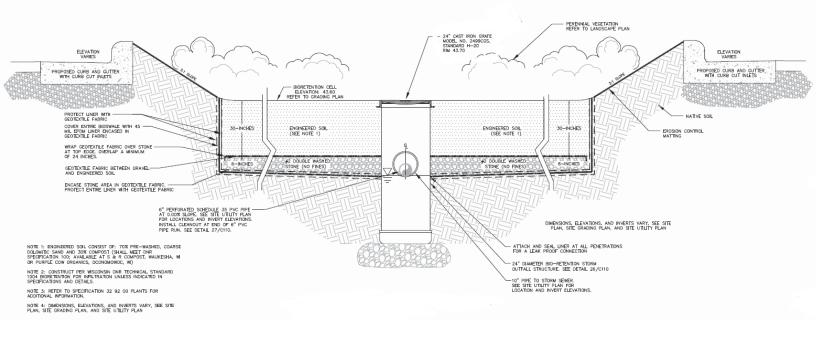


Figure E-2: Bio-Retention Basin Outfall Structure Detail

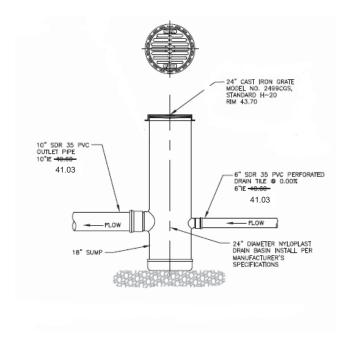
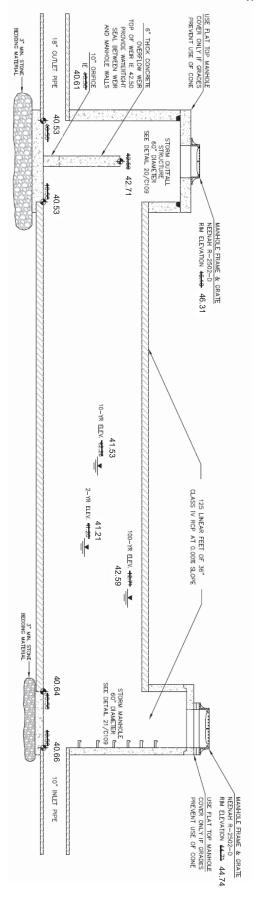
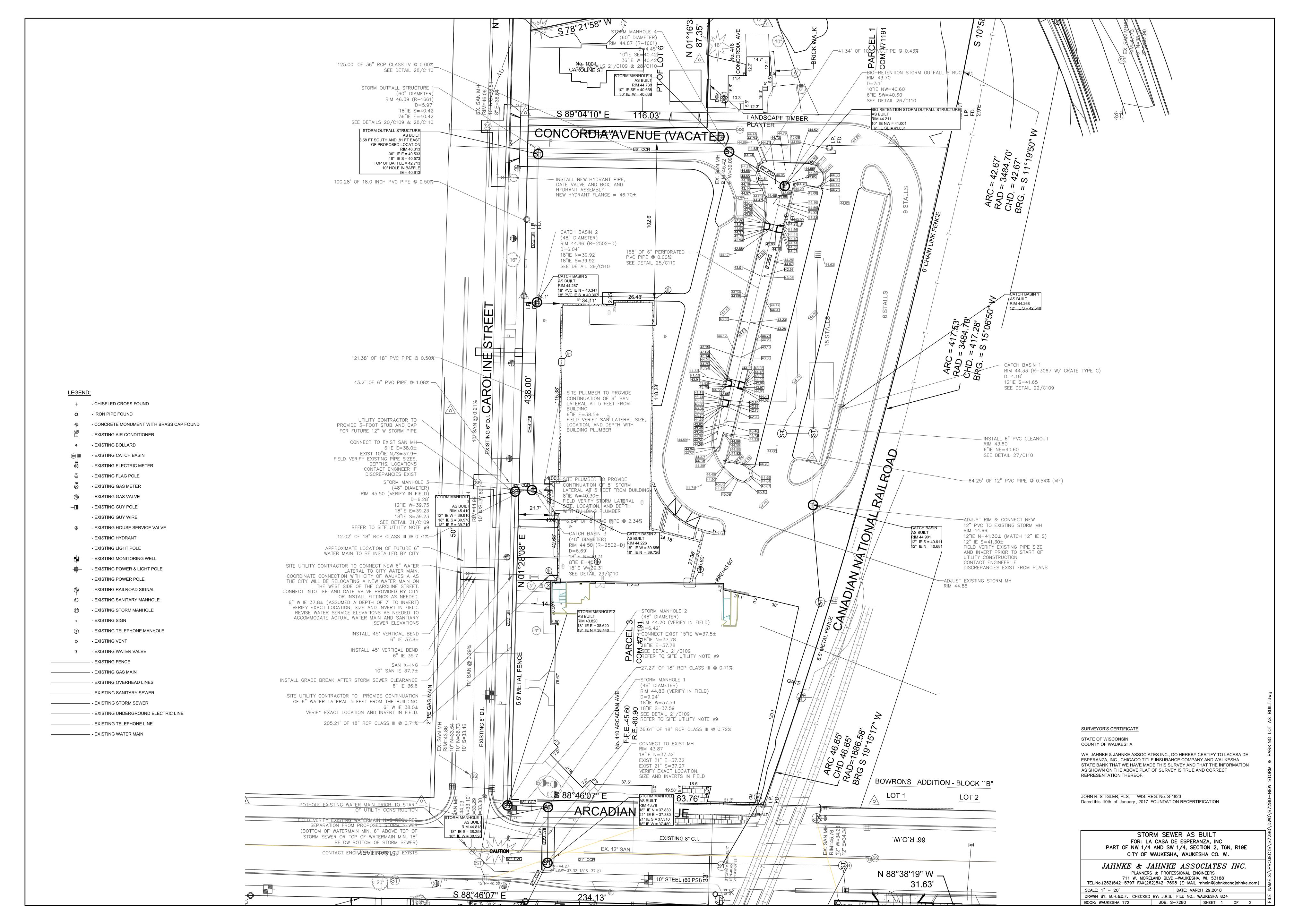
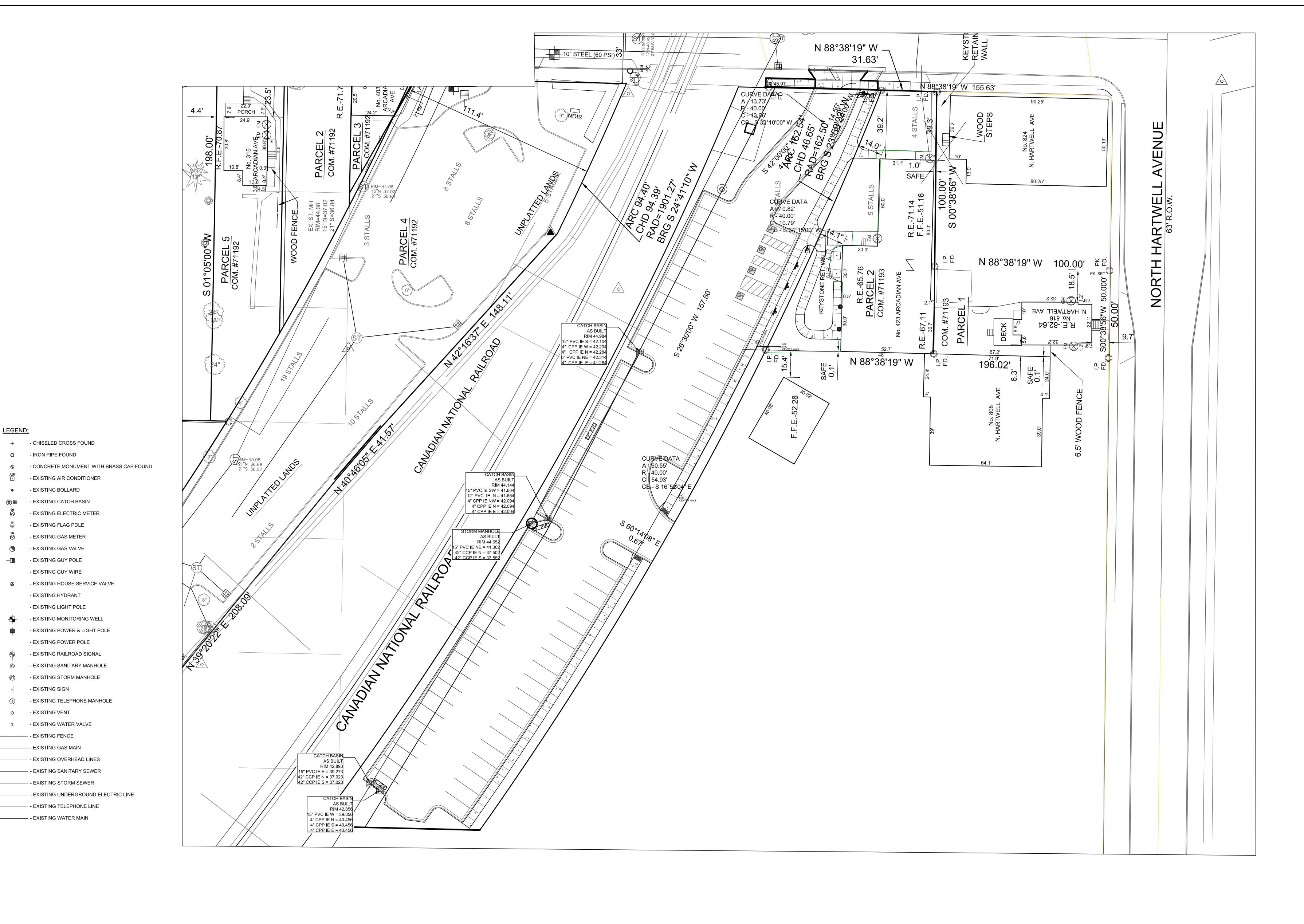


Figure E-3: Sub-Surface Storm Water Storage Facility







STORM SEWER AS BUILT
FOR: LA CASA DE ESPERANZA, INC
PART OF NW 1/4 AND SW 1/4, SECTION 2, T6N, R19E
CITY OF WAUKESHA, WAUKESHA CO. WI.

JAHNKE & JAHNKE ASSOCIATES INC.

PLANNERS & PROFESSIONAL ENGINEERS

711 W. MORELAND BLVD.-WAUKESHA, WI. 53188

TEL.No.(262)542-5797 FAX(262)542-7698 (E-MAIL mhein@jahnkeandjahnke.com)

 SCALE: 1" = 20'
 DATE: MARCH 29,2018

 DRAWN BY: M.H.&D.F. CHECKED BY: J.R.S. FILE NO.: WAUKESHA 834

 BOOK: WAUKESHA 172
 JOB: S-7280
 SHEET 2 OF 2

Exhibit F Engineering/Construction Verification

DATE:	04/11/2018	
TO:	City of Waukesha	
FROM:	Brad Jors / Kapur & Associates	[Project Engineer's Name/Company]
RE:	Engineering/Construction Verification for the	e following project:
	Project Name: La Casa Charter School	
	Section 2 , City of Wau	ıkesha
	Storm Water Management & Erosion Control	l Permit #
	Storm Water Management Practices:	
	Bio-Retention Basin, Sub-Surface Storm Water St	torage System

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 "asbuilt" 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.

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.



(Signed P.E. stamp must be included)

Exhibit G Storm Water Management and Erosion Control Permit Termination

Project Identifier: La Casa De Esperanza – North of Arcadian Avenue

All that part of the Southwest Quarter (SW 1/4) of the Northwest Quarter (NW 1/4) of Section 2, Town 6 North, Range 19 East, City of Waukesha, Waukesha County, Wisconsin and part of Lot 1, Block C, Lots 2, 3, 4, 5, 6, 7, 8 and 9 of Block C, Lot 5 and part of Lots 6, 7, 8, and 9 of Block A, and Lot 10 of Block A and part of Lots 4, 5, 6, 7, 8 and 9, Block B and vacated Gittner Place and Concordia Avenue all in Bowrons Addition to Village (now City) of Waukesha bounded and described as follows: Commencing at the northeast corner of Lot 4 of Certified Survey Map No. 8677 recorded in Volume 76 of Certified Survey Maps on Page 332 as Document No. 3390062 in the Waukesha County Register of Deeds Office; thence South 88°46'07" East along the south right-of-way line of Arcadian Avenue 334.74 feet; thence North 01°13'53" East 66.00 feet to the southwest corner of Lot 3, Block C of Bowrons Addition to the Village of Waukesha (now City) and the intersection of north line of Arcadian Avenue and the east line of Caroline Street; thence North 01°28'08" East along the east right-of-way line of Caroline Street 438.00 feet to the centerline of Concordia Avenue; thence South 89°04'10" East along said centerline 116.03 feet; thence North 01°16'38" East 87.35 feet to a point on the south line of Lot 5, Block A, of said Bowrons Addition; thence South 78°21'58" West along the south line of said Lot 5, Block A, 118.83 feet to the east line of Caroline Street; thence North 01°28'08" East along the easterly line of said Lot 5, Block A 46.32 feet to the northwest corner of Lot 10, Block A of said Bowrons Addition; thence North 62°29'16" East along the north line of said Lot 5, Block A, 132.81 feet; thence South 21°34'03" East along the easterly line of said Lot 10, Block A 46.32 feet to the northwest corner of Lot 10, Block A of said Bowrons Addition; thence North 62°16'29" East along the north line of said Lot 10, Block A 138.02 feet to the westerly right-of-way line of Hartwell Avenue; thence South 29°27'52" East along said westerly r

Project Identifier: La Casa De Esperanza – South of Arcadian Avenue Location:

All that part of the Southwest Quarter (SW ½) of the Northwest Quarter (NW ½) of Section 2, Town 6 North, Range 19 East, City of Waukesha, Waukesha County, Wisconsin bounded and described as follows: Commencing at the intersection of the west right-of-way line of N. Hartwell Avenue and the south right-of-way line of Arcadian Avenue; thence North 88°38'19" West along said south right-of-way line 100.00 feet to the place of beginning of the lands herein described; thence South 00°38'56" West 100.00 feet; thence South 88°38'19" East 100.00 feet to the west right-of-way line of N. Hartwell Avenue; thence South 00°38'56" West along said right-of-way line 50.00 feet; thence North 88°38'19" West 196.02 feet to the east right-of-way line of the former Canadian National Railroad; thence southerly 320.05 feet along the arc of a curve and said east right-of-way of radius 2037.77 feet, curve center lies to the west, chord bears South 30°46'26" West 319.72 feet; thence North 88°38'19" West 93.01 feet; thence northerly 487.93 feet along the arc of a curve of radius 1961.27 feet, curve center lies to the west, chord bears North 29°39'34" East 486.67 feet to the south right-of-way line of Arcadian Avenue; thence South 88°38'19" East along said south right-of-way line 113.43 feet to the place of beginning. Containing a net area of 1.1826 acres of land or 51.513 square feet of land.

(Typed Name and Title)

Acknowledgements

State of Wisconsin County of Waukesha		
Personally came before me this day of _ known to be the person who executed the fore	, 201_, the above namedegoing instrument and acknowledged the same.	to me
	[Name]	<u>.</u>
	Notary Public, Waukesha County, WI My commission expires:	