

**CUMBERLAND VILLAGE**  
**STORM SEWER SYSTEM MAINTENANCE AGREEMENT**

THIS STORM SEWER SYSTEM MAINTENANCE AGREEMENT is made this 5th day of May, 2019 by and between the **City of Rochester Hills**, a Michigan municipal corporation (the "City"), whose address is 1000 Rochester Hills Drive,

Rochester Hills, Michigan 49309-3033, **DIVERSE REAL ESTATE LLC**, a Michigan limited liability company ("Developer"), whose address is **13001 23 Mile Road, Suite 200, Shelby Township, MI 48315**, and the **Cumberland Village Condominium Association**, a Michigan nonprofit corporation (the "Association"), whose address is c/o In Rhodes 3252 University Drive, Suite 145, Auburn Hills, MI 48326, with the consent of **S.E. MICHIGAN LAND HOLDING LLC**, a Michigan limited liability company ("S.E."), whose address is **13001 23 Mile Road, Suite 200, Shelby Township, MI 48315**.

**RECITALS:**

A. S.E. is the owner of certain real property located in the City of Rochester Hills, Oakland County, Michigan, which real property is more particularly described in Exhibit A attached hereto and incorporated herein (the "Property").

B. S.E. has granted to Developer certain development rights for the Property.

C. With S.E.'s consent, Developer intends to develop the Property as a residential community to be known as Cumberland Village, a single-family residential condominium development (hereinafter known as the "Development").

D. The Development will alter the natural flow of surface and storm water drainage.

E. Developer desires to extend to the future condominium unit owners within the Development the right to utilize and benefit from the storm water detention facilities and to provide a permanent method for the support and upkeep of said detention facilities.

F. Developer has proposed and the City has approved a storm water drainage and detention system (the "Storm Sewer System") as shown in Exhibit B attached hereto and incorporated herein (the "Approved Plan") and the Developer, S.E. and the City will benefit from the proper operation, use and maintenance of the Storm Sewer System and desire to enter into this binding contract relative to the use and governance of the areas depicted in the Approved Plan.

G. Developer also intends to bind the condominium unit owners in the Development to this Agreement so this Agreement is intended to run with the land.

NOW, THEREFORE, in consideration of the approval by the City of the Approved Plan and of the mutual promises contained herein, the parties hereto agree as follows:

I. **Storm Sewer System.** Developer hereby makes available and will grant to the Association the right to utilize, maintain, replace and repair, for the benefit of the Development, the Storm Sewer System, including but not limited to the detention basin areas

and the storm sewer lines existing within the Development and depicted in the Approved Plan. Components of the Storm Sewer System, including any and all water conveyance, detention facilities and devices, storm sewer pipe, catch basins, manholes, end-sections, ditches, swales, open water courses and rip-rap, shall be used solely for the purpose of conveying and detaining storm and surface drainage in the Development until such time as: (i) the City determines and notifies the Developer or Developer's successors and assigns, including the Association, in writing that it is no longer necessary to convey, or detain the storm and surface drainage; and (ii) an adequate alternative for conveying and detaining storm and surface drainage has been provided which is acceptable to the City and which includes the granting of any easements to the City or third parties as may be required or necessary for the alternative drainage system.

2. **Condominium Association for Cumberland Village.** Control and jurisdiction over the Storm Sewer System shall be vested in the Cumberland Village Condominium Association (Hereinafter referred to as "Association"). The Association is organized as a nonprofit corporation for a perpetual term under the laws of the State of Michigan. The Association was incorporated on May 17, 2019. Membership in the Association shall be mandatory for all of the condominium unit owners in the Development. The Association shall be responsible at its sole expense for the proper maintenance of the Storm Sewer System and for compliance with the terms of this Agreement. The Bylaws of the Association shall provide for a Board of Directors of no less than three (3) members and no more than five (5).

The Association members shall each bear their prorata share of the total costs of maintaining the Storm Sewer System (including without limitation, the real and personal property taxes assessed against it, if any, and insurance policies maintained with respect to it),

which shall constitute a lien against each member's condominium unit. The prorated share of the cost shall be based on each condominium unit owner's percentage of value as set forth in the Master Deed for Cumberland Village. Each Association member shall be entitled to vote in accordance with the Master Deed for Cumberland Village.

The Association shall have the authority to make and enforce regulations pertaining to the use and maintenance of the Storm Sewer System, which regulations shall be binding upon all members of the Association.

3. **Maintenance of Storm Sewer System.** The Association shall be responsible for the proper maintenance, repair and replacement of the Storm Sewer System and all parts thereof as detailed in the Maintenance Plan attached hereto as Exhibit C (the "Maintenance Plan"). Proper maintenance of the Storm Sewer System shall include, but is not limited to, (i) keeping the bottom of the detention basin and inlet pipes free from silt and debris; (ii) removing harmful algae; (iii) managing deleterious vegetative growth; (iv) maintaining the Storm Sewer System structures, end-sections and safety features; (v) controlling the effects of erosion; (vi) inspection of inlet and outlet pipes for structural integrity; (vii) inspection and replacement of rip-rap at inlet pipes; (viii) inspection and cleaning of storm sewer and catch basins upstream from the detention basin; (ix) inspection and replacement of stone around the outlet pipe; and (x) any other maintenance that is reasonable and necessary to facilitate and continue the proper operation of the Storm Sewer System. In no event shall the detention basin areas be utilized for any purpose other than detention of surface water without the prior written consent of the Association.

4. **Failure to Maintain Storm Sewer System.** In the event the Association fails at any time to maintain the Storm Sewer System (including without limitation the detention basin) in reasonable order and condition, the City may serve written notice upon the Association or upon its members setting forth the manner in which the Association has failed to maintain the Storm Sewer System in a reasonable condition and such notice shall include a demand that deficiencies of maintenance be cured within thirty (30) days thereof. The notice shall further state the date and place of a hearing thereon before the City Council or other such board, body or official to whom the City shall delegate such responsibility, which shall be held at least fourteen (14) days after the date of the notice. At such hearing, the City Council or other designated board, body or official may affirm or modify the list and description of maintenance deficiencies and, for good cause shown, may give an extension of the time within they shall be cured.

Thereafter, if the deficiencies set forth in the original notice, or in the modification thereof, shall not be cured within the time allowed, the City may maintain the same for a period of one (1) year. Such maintenance by the City shall not be construed as a trespass, constitute a taking of the Storm Sewer System, nor vest in the public any rights to use or enter the Storm Sewer System. Thereafter, if the Association does not properly maintain the Storm Sewer System, the City may, after providing similar written notice, schedule and hold another hearing to determine whether the City should maintain the Storm Sewer System for another year, and subject to a similar notice, hearing and determination in subsequent years.

In the event the City determines an emergency condition caused by or relating to the Storm Sewer System threatens the public health, safety or general welfare, the City shall

have the right to immediately and without notice enter the Storm Sewer System and undertake appropriate corrective action.

**5. Charges.** The cost of any maintenance by the City, plus a ten percent (10%) administrative fee, shall be assessed against the Association and, if not timely paid, added to the tax rolls, which charges shall be a lien on the Storm Sewer System and shall be collectable and enforceable in the same manner general property taxes are collected and enforced. The City shall be, at its option, subrogated to the right of the Association against its members to the extent of that cost and administrative charge, if the City shall, by an official resolution, give thirty (30) days written notice to each member of the Association of the City's election to be subrogated.

The Association members shall bear their prorated share of the total costs of maintaining the Storm Sewer System, which prorated share of the cost shall constitute a lien against each member's condominium unit and if not paid, the City shall have the right to add it to the tax rolls and collect it in the same manner as provided above. The prorated share of the cost shall be based on each condominium unit owner's percentage of value as set forth in the Master Deed for Cumberland Village. The cost of maintenance by the City shall be assessed against the Association or the Association members at the City's discretion.

In the event the City declares the existence of an emergency upon, caused by or relating to the Storm Sewer System, and the City takes appropriate corrective action, the City shall have the right to charge and collect the costs for such corrective action, as provided herein.

6. **Notice.** Any notices required under this Agreement shall be sent by certified mail to the address for each party set forth below, or to such other addresses as such party may notify the other parties in writing:

To the Developer: Diverse Real Estate LLC 13001  
23 Mile Road, Suite 200 Shelby  
Township, MI 48315

To the City: City Clerk  
City of Rochester Hills  
1000 Rochester Hill Drive  
Rochester Hills, Michigan 48309

To the Association: Cumberland Village Condominium  
Association c/o Angela Phillips  
In Rhodes Management Company  
3252 University Drive, Suite 145  
Auburn Hills, MI 48326

7. **Successors and Assigns, etc.** This Agreement shall constitute restrictions and covenants running with the Property. The parties hereto make this Agreement on behalf of themselves and their respective successors and assigns, and hereby warrant that they have the authority and capacity to make this contract.

8. **Recording.** This Agreement shall be recorded at the Oakland County Register of Deeds.

[Signatures and Acknowledgements on Following Pages]

IN WITNESS WHEREOF, the parties have executed this agreement on the date first written above.

Developer:

**DIVERSE REAL ESTATE LLC**  
a Michigan Limited Liability company

By: \_\_\_\_\_

Name: Anthony Lombardo

Its: Authorized Representative

STATE OF MICHIGAN  
COUNTY OF MACOMB

The foregoing instrument was acknowledged before me this 8<sup>th</sup> of May by Anthony Lombardo the ↑ of Diverse Real Estate LLC, a Michigan limited liability company, on behalf of the limited liability company.  
Authorized Representative

**HEIDI L. VERELLEN**  
NOTARY PUBLIC - STATE OF MICHIGAN  
COUNTY OF MACOMB  
My Commission Expires April 9, 2021  
Acting in the County of Macomb

Heidi R Verellen

\_\_\_\_\_, Notary Public  
State of Michigan, County of \_\_\_\_\_  
My commission expires: \_\_\_\_\_  
Acting in the County of \_\_\_\_\_


[Signatures and Acknowledgements Continue on Following Pages]



[Signature Page to Storm Sewer System Maintenance Agreement]

Association:

**CUMBERLAND VILLAGE  
CONDOMINIUM ASSOCIATION,**

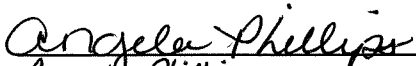
By: 

Name: Aaron McDowell

Its: Community Manager

STATE OF MICHIGAN  
COUNTY OF Oakland

The foregoing instrument was acknowledged before me this 8<sup>th</sup> day of May, <sup>2019</sup> by Aaron McDowell  
the Comm. Manager of the Cumberland Village Condominium Association, a Michigan  
nonprofit corporation, on behalf of the corporation.

  
Angela Phillips, Notary Public  
State of Michigan, County of Oakland  
My commission expires: 6/9/19  
Acting in the County of Oakland

[Signatures and Acknowledgements Continue on Following Pages]

John Staran  
Approved 6/6/19

**CITY OF ROCHESTER HILLS**

By: \_\_\_\_\_  
Bryan K. Barnett, Mayor

By: \_\_\_\_\_  
Tina Barton, City Clerk

**STATE OF MICHIGAN }  
                                  }SS  
COUNTY OF OAKLAND}**

This agreement was acknowledged before me on \_\_\_\_\_, 2019, by Bryan K. Barnett, Mayor, and Tina Barton, City Clerk, of the City of Rochester Hills, a Michigan Municipal Corporation on behalf of the Corporation.

:

\_\_\_\_\_, notary public

\_\_\_\_\_ County, Michigan

My commission expires:

Drafted by:

Cosimo Lombardo  
Lombardo Homes  
13001 23 Mile Road, Suite 200  
Shelby Township, MI 48315

When recorded return to:

Clerks Dept.  
City of Rochester Hills  
1000 Rochester Hills Dr.  
Rochester Hills, MI 48309

CONSENT

The undersigned, being the owner of the Property described in the foregoing Storm Sewer System Maintenance Agreement, hereby (a) consents and subjects its interest in the land to the Storm Sewer System Maintenance Agreement and all of the terms and conditions contained therein and (b) consents to the recordation of this Storm Sewer System Maintenance Agreement in the office of the Oakland County Register of Deeds.

S.E. MICHIGAN LAND HOLDING LLC, a Michigan limited liability company

By: \_\_\_\_\_

Name: Anthony Lombardo

Its: Authorized Representative

STATE OF MICHIGAN  
COUNTY OF MACOMB

The foregoing instrument was acknowledged before me this 8th day of May 2019 by Anthony Lombardo the Auth. Rep. of S.E. Michigan Land Holding, LLC, a Michigan limited liability company on behalf of the company.

HEIDI L. VERELLEN  
NOTARY PUBLIC - STATE OF MICHIGAN  
COUNTY OF MACOMB  
My Commission Expires April 9, 2021  
Acting in the County of Macomb

Heidi L Verelle

\_\_\_\_\_, Notary Public  
State of Michigan, County of \_\_\_\_\_  
My commission expires: \_\_\_\_\_  
Acting in the County of \_\_\_\_\_

HEIDI L. VERELLEN  
NOTARY PUBLIC - STATE OF MICHIGAN  
COUNTY OF MACOMB  
My Commission Expires April 9, 2021  
Acting in the County of Macomb

# EXHIBIT A STORM SEWER & DETENTION POND AGREEMENT

## LEGAL DESCRIPTION:

THE SOUTH 270 FEET OF LOT 1, AND ALL OF THE LOTS 5 THROUGH 9, BOTH INCLUSIVE, OF "STARR ESTATES", BEING A SUBDIVISION IN A PART OF THE NORTHWEST ¼ OF SECTION 27, TOWN 3 NORTH, RANGE 11 EAST, AVON TOWNSHIP (NOW CITY OF ROCHESTER HILLS), OAKLAND COUNTY, MICHIGAN ACCORDING TO THE PLAT RECORDED IN LIBER 64 OF PLATS, PAGE 35, OAKLAND COUNTY RECORDS, MORE PARTICULARLY DESCRIBED AS: BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 1, SOUTH 00°00' 00" WEST 461.50 FEET AND NORTH 89°30'59" EAST 60.00 FEET, AS CALCULATED AND MEASURED, FROM THE NORTHWEST CORNER OF SAID SECTION 27; THENCE ALONG THE WEST LINE OF LOT 1, NORTH 00°00' 00" EAST 270.00 FEET; THENCE NORTH 89°30'58" EAST 175.45 FEET, AS CALCULATED AND MEASURED, TO A POINT ON THE EAST LINE OF LOT 1; THENCE ALONG SAID EAST LINE, SOUTH 00°01'12" EAST 270.00 FEET, AS CALCULATED AND MEASURED, TO THE SOUTHEAST CORNER OF LOT 1 AND A POINT ON THE NORTH LINE OF LOT 5; THENCE ALONG THE NORTH LINE OF LOT 5, NORTH 89°30'59" EAST 709.74 FEET, AS CALCULATED AND MEASURED (RECORDED AS 709.23 FEET), TO THE NORTHEAST CORNER OF LOT 5; THENCE ALONG THE EAST LINE OF LOTS 5 THROUGH 9, AND IN PART ALONG THE WEST LINE OF "HAMLIN ESTATES SUBDIVISION" (LIBER 74, PAGE 16) AND IN PART ALONG THE WEST LINE OF "CUMBERLAND HILLS SUB. NO. 3" (LIBER 167, PAGES 40-43), SOUTH 00°31'01" EAST 1077.52 FEET, AS CALCULATED AND MEASURED (RECORDED AS 1077.64 FEET), TO THE SOUTHEAST CORNER OF LOT 9; THENCE ALONG THE SOUTH LINE OF LOT 9 AND IN PART ALONG THE WEST LINE OF "CUMBERLAND HILLS SUB. NO. 3", SOUTH 89°30'41" WEST 895.00 FEET, AS CALCULATED AND MEASURED (RECORDED AS 896.30 FEET), TO THE SOUTHWEST CORNER OF LOT 9; THENCE ALONG THE WEST LINE OF LOTS 5 THROUGH 9, NORTH 00°00' 00" EAST 1077.63 FEET, AS CALCULATED AND MEASURED (RECORDED AS 1077.64 FEET), BACK TO THE POINT OF BEGINNING AND CONTAINING 23.1073 ACRES OF LAND AS SURVEYED AND CALCULATED.

(LEGAL DESCRIPTION FROM A CERTIFICATE OF SURVEY BY RAYMOND J. DONNELLY, 7/9/2015)

#15-27-101-006 thru 011  
+ #15-27-101-039 thru 041

Jenny M.  
Approved 8/23/19

W-19-0571  
SHEET 1 OF 1

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CLIENT: LOMBARDO HOMES  
PROJECT: CUMBERLAND VILLAGE, N.W. 1/4 SEC. 27 ROCHESTER HILLS  
DATE: 04/29/19, 5/14/19 REV. PER CITY, 8/6/19 REV. PER CITY., 8/15/19 REV. STREET NAMES



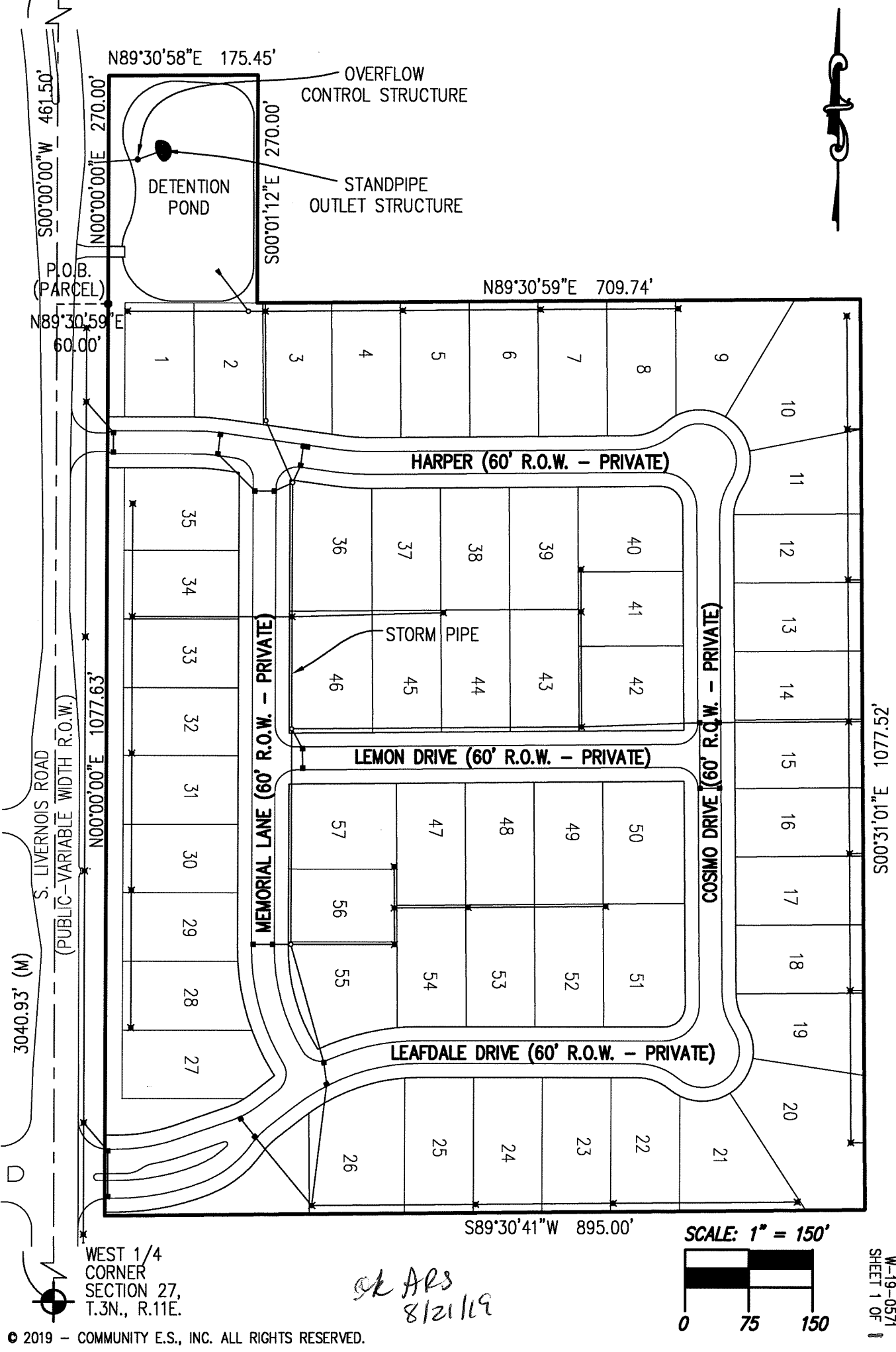
5805 24 MILE RD. SUITE B  
SHELBY TWP, MI 48316  
T (586) 677 - 4081

**Exhibit B**

**APPROVED PLAN**  
**(See Attached**

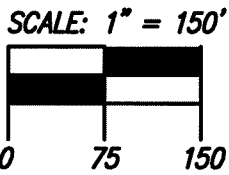
NORTHWEST  
CORNER  
SECTION 27,  
T.3N., R.11E.,

# EXHIBIT B STORM SEWER & DETENTION POND AGREEMENT



WEST 1/4  
CORNER  
SECTION 27,  
T.3N., R.11E.

*OK ARS  
8/21/19*



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W-19-0571  
SHEET 1 OF 1

CLIENT: LOMBARDO HOMES  
PROJECT: CUMBERLAND VILLAGE, N.W. 1/4 SEC. 27 ROCHESTER HILLS  
DATE: 04/29/19, 5/14/19 REV. PER CITY, 8/6/19 REV. PER CITY., 8/15/19 REV. STREET NAMES



5805 24 MILE RD. SUITE B  
SHELBY TWP, MI 48316  
T (586) 677 - 4081

**EXHIBIT 'C'**

**OPERATIONS AND MAINTENANCE MANUAL**

**CUMBERLAND VILLAGE  
STORM SEWER SYSTEM MAINTENANCE PLAN  
ROCHESTER HILLS, MI**

**DEVELOPER:  
Diverse Real Estate LLC  
13001 23 Mile Road, Suite 200  
Shelby Township, MI 48315**

Approved 5/30/19  
By Adele Swann

## OPERATION AND MAINTENANCE MANUAL

### INTRODUCTION:

This manual identifies the ownership, operation and maintenance responsibilities for all storm- water management systems including the detention basin, and underground storm sewer system, as incorporated into and detailed on the approved Site Plans. In order to comply with the local best management practices (BMP) and requirements, this manual should serve as a minimum performance standard. This manual should be retained intact and read in its entirety by all parties responsible for the operations and maintenance of the on-site BMP's.

### DEVELOPER:

Diverse Real Estate LLC  
1300 I 23 Mile Road, Suite 200  
Shelby Township, MI 48315

### PROPERTY INFORMATION:

This Operations and Maintenance Manual covers the storm sewer systems located at the property described in Exhibit A to the Cumberland Village Storm Sewer System Maintenance Agreement, dated May 8, 2019.

### STORM SEWER SYSTEM MAINTENANCE EXHIBIT:

Exhibit B of the Storm Sewer System Maintenance Agreement is the construction drawings of Cumberland Village, which depict the storm sewer system and the components thereof. This system is subject to the long-term operation and maintenance responsibilities detailed in this manual. The system includes:

- Storm sewer pipes
- Storm sewer structures (manholes, inlets, catch basins etc.)
- Detention Basin and Forebay

### INSPECTIONS:

The frequency of system inspections outlined in the manual and attached exhibits should be considered the minimum, if no events warrant additional inspections. The frequency of inspections should be fine-tuned over time as system specific conditions are better known and the rate at which certain maintenance operations need to be performed is better understood. Maintenance Inspection Checklists are provided for each of the BMP's in this system. Inspections should be performed by personnel responsible for maintenance and may need to be certified for confined space entry, depending on the component being inspected. Operation of the detention basin and outlet control structures may need to be inspected by a practicing civil engineer familiar with their operation.



Records of all routine inspections and any work performed on the system for maintenance, repair or replacement should be maintained by the owner and kept for a minimum of five (5) years. A copy of all records should be provided to the City of Rochester Hills Engineering Division. The records should include this manual, all inspection sheets, approved construction plans and as built documents, a maintenance log of work performed to the system(s) and contact information for the system inspector, civil engineer, landscape architect, geotechnical engineer and contractor involved with the system.

#### STORM SEWER SYSTEM MAINTENANCE:

Regular inspection and maintenance of BMP's are necessary if these facilities are to consistently perform up to expectations. Storm sewer systems are expected to perform quality and quantity control functions as long as the land use they serve exists. Failure to maintain these systems can create the following adverse impacts:

- Increased pollutants to surrounding surface water features
- Potential loss of life or property resulting from catastrophic failure of the facility
- Aesthetic or nuisance conditions, such as mosquitoes or reduced property values due to a degraded facility appearance.

Most of these impacts can be avoided through proper and timely inspection and maintenance. A major concern associated with these impacts is the general public's expectations related to the quality of life provided, in part, by construction of these systems. Inadequate maintenance means the general public may have a false sense of security. The most common cause of storm sewer system failure is the lack of adequate and proper operation, inspection, maintenance and management.

Good design and construction can reduce subsequent maintenance needs and costs, but they cannot eliminate the need for maintenance altogether. Maintenance requires a long-term commitment of time, money, personnel and equipment. Monitoring the overall performance of the storm water management system is a major aspect of any maintenance program.

The maintenance responsibilities for these systems lie with the current property owner and transfer with the property in perpetuity. If maintenance of the system is not performed, the City of Rochester Hills reserves the right to enter the property and perform all necessary work at the property owners' cost. Refer to the Storm Sewer System Maintenance Agreement, dated May 8 \_\_\_\_, 2019 for additional details.

### **General Maintenance Items:**

#### **Trash and Debris Removal:**

Removal of trash and debris from all areas of the property should be performed monthly. Removal of these items will prevent damage to vegetated areas and eliminate their potential to inhibit the operation of any of the storm water management systems. Sediment, debris and trash that are removed and collected should be disposed of according to local, State and Federal regulations at suitable disposal and/or recycling centers.

### **Storm Sewer System Maintenance Items:**

The following narratives give an overview of the maintenance requirements of the different components of the storm sewer system. The inspection checklists attached to this report offer a more complete listing of what should be inspected, when inspection should occur and the likely frequency of maintenance activities.

#### **Storm Sewer and Structures:**

Catch basins, inlets, manholes and sewer pipes should be inspected to check for sediment accumulation and clogging, floatable debris, dead vegetation etc. The structures and sewers should also be observed during a wet weather event to ensure their proper operation. Accumulated sediment and debris should be removed on an annual basis or as needed based on observed conditions. Structural repairs or maintenance should occur as needed based on observed conditions such as cracks, spalling, joint failure, leakage, misalignment or settlement of structures. A civil engineer should be retained if problems are thought to exist.

#### **Detention Basin Outlet Control Structure and Overflow Structure:**

Both the outlet control and overflow structures and connecting pipes should be inspected for sediment accumulation, floatable debris, trash and any other foreign matter that may impede flow or restrict the devices from working properly. The stone jacket surrounding the outlet control structure should be inspected for sediment build up, and the holes at the base of the outlet control structure should be inspected to make sure they do not become blocked. The grates of the two structures should be inspected for structural integrity and buildup of debris. The outlet control system should be inspected during a wet weather event to ensure all components are functioning properly. A civil engineer should be retained if problems are thought to exist.

Maintenance will include the removal of any debris, trash or sediment from the structures and/or pipe, cleaning of the stone jacket on the outlet control structure and removal of debris from the structure grates. The stone jacket may need replacement if cleaning does not adequately remove sediment build-up.

#### **Detention Basin:**

The inlet pipes to the basin should be inspected for structural integrity (pipes cracked, broken, spalled) and that the grates are free from debris. The area around and immediately downstream of the inlet pipes should be inspected for sediment build-up, erosion and the riprap should be inspected for integrity and sedimentation. Maintenance of the inlet pipes would include removal of any sediment build-up and debris, repair or replacement of any components that are in need of attention and to restore any areas that have eroded.

The basin should be inspected **for** healthy grass growth, side slope erosion, and excessive sedimentation. The riprap spillway between the basin should be inspected for sedimentation, erosion and overall integrity. The basin should be inspected during a wet weather event to ensure all aspects of the basin are functioning correctly. A civil engineer should be retained if problems are thought to exist or if the inspection personnel are not familiar with the operating conditions of the basin.

The planted vegetation within the basin should conform to that shown on the construction plans, and any invasive species should be removed. The vegetation should be inspected for healthy growth by a landscape architect if the inspection personnel are not familiar with the specific plantings inside the basin.

Any resident complaints regarding the basin's aesthetics or operation should be investigated during inspections and wet weather operations.

The following pages include inspection checklists for the various components listed above.

STORM SEWER SYSTEM

DATE/TIME OF INSPECTION: \_\_\_\_\_

INSPECTOR: \_\_\_\_\_

STORM SEWER SYSTEM MAINTENANCE AND TASKS SCHEDULE — POST CONSTRUCTION

SYSTEM COMPONENTS

<u>Maintenance Activities Monitoring/Inspection</u>	<u>Catch Basin inlets and Manholes</u>	<u>Storm Sewer Pipes</u>	<u>Rip Rap</u>	<u>Buffer Strip</u>	<u>Frequency</u>	<u>Comments</u>
Inspect for Sediment Accumulation	X	X			Annually	
Inspect for Floatables, dead vegetation and debris	X	X		X	Annually, and after major rainfall	
Inspect for erosion			X	X	Annually	
Inspect all components during wet weather and compare to as-built plans	X	X			Annually	
Inspect inside of structures and pipes for cracks, spalling, joint failure, settlement, sagging and misalignment	X	X			Annually	
<u>PREVENTATIVE MAINTENANCE</u>						
Remove accumulated sediment	X	X			Annually, or as needed	
Remove floatables, dead vegetation and debris	X	X		X	Annually, or as needed	
<u>REMEDIAL ACTIONS</u>						
Repair/stabilize areas of erosion			X	X	As needed	
Structural Repairs	X	X			As needed	

Make adjustments/repairs to ensure proper functioning	X	X	X		As needed	
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SUMMARY:

INSPECTORS REMARKS: \_\_\_\_\_

OVERALL CONDITION OF FACILITY: \_\_\_\_\_

RECOMMENDED ACTIONS NEEDED: \_\_\_\_\_

DATES ANY MAINTENANCE MUST BE COMPLETED BY: \_\_\_\_\_

OUTLET CONTROL AND OVERFLOW STRUCTURE

DATE/TIME OF INSPECTION: \_\_\_\_\_

INSPECTOR: \_\_\_\_\_

OUTLET CONTROL AND OVERFLOW MAINTENANCE AND TASKS SCHEDULE — POST CONSTRUCTION

SYSTEM COMPONENTS

<u>Maintenance Activities Monitoring/Inspection</u>	<u>Structures</u>	<u>Outlet Pipes</u>	<u>Rip Rap</u>	<u>Grates</u>	<u>Frequency</u>	<u>Comments</u>
Inspect for Sediment Accumulation	X	X	X		Annually	
Inspect for Floatables, dead vegetation and debris	X	X	X	X	Annually, and after major rainfall	
Inspect for erosion			X		Annually	
Inspect all components during wet weather and compare to as-built plans	X	X	X	X	Annually	
Inspect inside of structures and pipes for cracks, spalling, joint failure, settlement, sagging and misalignment	X	X			Annually	
<u>PREVENTATIVE MAINTENANCE</u>						
Remove accumulated sediment	X	X	X		Annually, or as needed	
Remove floatables, dead vegetation and debris	X	X	X	X	Annually, or as needed	
Replace or wash/clean stone filter jacket	X				As needed	
<u>REMEDIAL ACTIONS</u>						
Repair/stabilize areas of erosion			X		As needed	

Structural Repairs	X	X			As needed	
Make adjustments/repairs to ensure proper functioning	X	X	X	X	As needed	

SUMMARY:

INSPECTORS REMARKS: \_\_\_\_\_

OVERALL CONDITION OF FACILITY: \_\_\_\_\_

RECOMMENDED ACTIONS NEEDED: \_\_\_\_\_

DATES ANY MAINTENANCE MUST BE COMPLETED BY: \_\_\_\_\_

FOREBAY AND DETENTION BASIN

DATE/TIME OF INSPECTION: \_\_\_\_\_

INSPECTOR: \_\_\_\_\_

FOREBAY AND DETENTION BASIN MAINTENANCE AND TASKS SCHEDULE — POST CONSTRUCTION

SYSTEM COMPONENTS

<u>Maintenance Activities Monitoring/Inspection</u>	<u>Rip Rap at Inlets</u>	<u>Overflow Spillway</u>	<u>Sideslopes &amp; Banks</u>	<u>Buffer Strip</u>	<u>Basins</u>	<u>Frequency</u>	<u>Comments</u>
Inspect for Sediment Accumulation	X	X			X	Annually	
Inspect for Floatables, dead vegetation and debris	X	X	X	X	X	Annually, and after major rainfall	
Inspect for erosion	X	X	X	X	X	Annually	
Inspect all components during wet weather and compare to as-built plans	X	X			X	Annually	
Inspect for invasive plant species			X	X	X	Annually	
<u>PREVENTATIVE MAINTENANCE</u>							
Remove accumulated sediment	X	X			X	Annually, or as needed	
Remove floatables, dead vegetation and debris	X	X	X	X	X	Annually, or as needed	
Professional application of herbicide for invasive species that may be present			X	X	X	Annually, or as needed	
Repair erosion and/or reseed bare areas	X	X	X	X	X	Annually, or as needed	
<u>REMEDIAL ACTIONS</u>							



Repair/stabilize areas of erosion	X	X	X	X	X	As needed	
Structural Repairs	X	X				As needed	
Make adjustments/repairs to ensure proper functioning	X	X			X	As needed	
Excavate and reshape <b>Fore-bay</b> after major sediment removal (once sediment accumulates to 5"-12" or re-suspension of sediment is observed)*					X	As needed	

\* A civil engineer should be retained to observe basin operation

SUMMARY:

INSPECTORS REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

OVERALL CONDITION OF FACILITY: \_\_\_\_\_

RECOMMENDED ACTIONS NEEDED: \_\_\_\_\_

DATES ANY MAINTENANCE MUST BE COMPLETED BY: \_\_\_\_\_