



## El Paso County MS4 Post Construction Detention / Water Quality Facility Documentation Form

This document **must be completed and submitted** with required attachments to the County for projects requiring a detention and/or a water quality facility. A separate completed form must be submitted for each facility.

Project name: 4-Way Ranch Metropolitan District Lift Station Site Development Plan

Owner name: 4-Way Ranch Metropolitan District

Location Address: TBD – Highway 24 and Stapleton Drive Nearest Major Cross Streets

Latitude and Longitude:

LAT: 38.970983, LONG:-104.562028

Assessor's Parcel #: 4200000366

Section: 28 & 33

Township: 12 S Range: 64 W

Expected Completion date: December 2020

Project acreage: 1.05

Design Ponding Acres: 0.12

Design Storm:

WQCV

Design Engineer Email Address: rmangino@jdshydro.com

To ensure compliance with C.R.S. 37-92-602(8), the completed Stormwater Detention and Infiltration Design Data Sheet **must be attached**. The form can be found here: <https://maperture.digitaldataservices.com/gvh/?viewer=cswdif#> (click on Download SDI Design Data Sheet)

List all permanent water quality control measure(s) (EDBs, rain gardens, etc):

Porous Pavement

For all projects for which the constrained redevelopment sites standard is applied, provide an explanation of why it is not practicable to meet the full design standards.

**Attach Operations and Maintenance (O&M) Plan** describing the operation and maintenance procedures that ensure the long-term observation, maintenance, and operation of control measure(s), including routine inspection frequencies and maintenance activities. If multiple, different water quality control measures are used at the same location, a separate O & M Plan must be provided for each facility.

**Attach Private Detention Basin / Stormwater Quality Best Management Practice Maintenance Agreement and Easement** addressing maintenance of BMPs that shall be binding on all subsequent owners of the permanent BMPs.

### Attachments:

Stormwater Detention and Infiltration Design Data Sheet

O & M Plan

Maintenance and Access Agreement

Review Engineer

EPC Project File No.

PPR-18-051

# Stormwater Detention and Infiltration Design Data Sheet

Worksheet Protected

### User Input: Watershed Characteristics

Watershed Slope =	0.025	ft/ft
Watershed Length =	500	ft
Watershed Area =	0.28	acres
Watershed Imperviousness =	40.0%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	100.0%	percent
Percentage Hydrologic Soil Groups C/D =	0.0%	percent

Location for 1-hr Rainfall Depths (use dropdown):

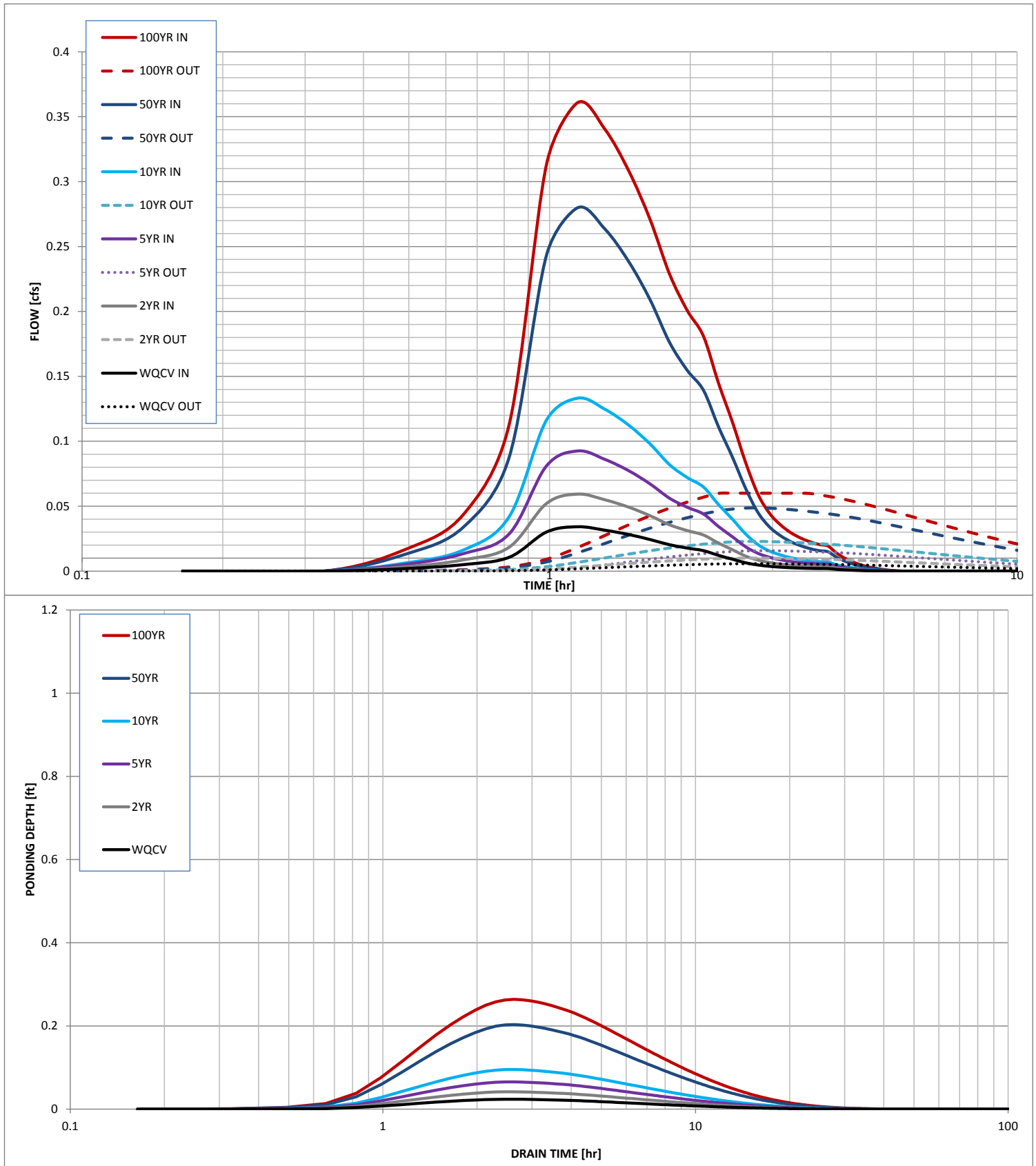
[illegible]

After completing and printing this worksheet to a pdf, go to:  
<https://maperture.digitaldataservices.com/gvh/?viewer=cswdif>  
 create a new stormwater facility, and  
 attach the pdf of this worksheet to that record.

### Routed Hydrograph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.16	0.94	1.22	1.47	2.16	2.50	in
Calculated Runoff Volume =	0.004	0.007	0.010	0.015	0.032	0.042	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.004	0.007	0.010	0.015	0.032	0.041	acre-ft
Time to Drain 97% of Inflow Volume =	22.2	22.2	22.2	22.2	22.2	22.2	hours
Time to Drain 99% of Inflow Volume =	28.6	28.6	28.6	28.6	28.6	28.6	hours
Maximum Ponding Depth =	0.02	0.04	0.07	0.10	0.20	0.26	ft
Maximum Poned Area =	0.12	0.12	0.12	0.12	0.12	0.12	acres
Maximum Volume Stored =	0.003	0.005	0.008	0.011	0.023	0.030	acre-ft

# Stormwater Detention and Infiltration Design Data Sheet





***4-WAY RANCH  
METROPOLITAN DISTRICT***

***LIFT STATION***

***OPERATIONS & MAINTENANCE MANUAL***

***for***

***PERMEABLE PAVING SYSTEM***

**June 2019**

**Prepared By:**

PCD File No. PPR-18-051



CONSULTANTS, INC.

**OPERATIONS AND MAINTENANCE MANUAL  
4-WAY RANCH METROPOLITAN DISTRICT**

**LIFT STATION – PERMEABLE PAVING SYSTEM**

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**OPERATIONS AND MAINTENANCE PROCEDURES**

- Description
- Purpose
- Installation
- Routine Maintenance
- Manufacturer's Specifications

## **Operations and Maintenance Procedures**

### **Description:**

A permeable paving system covers approximately 5,026 square feet of driveway at the site of a new wastewater pump station (lift station). This facility is owned and operated by the 4-Way Ranch Metropolitan District (4WRMD, the District), and conveys wastewater via lifting pumps from future development within 4-Way Ranch to the Woodmen Hills Wastewater Treatment Facility via a force main along Stapleton Drive.

The paving system consists of approximately five inches (5") of AASHTO #57 crushed gravel below a one-inch thick, high-density polyethylene (HDPE) grid paver, with 1-1/2 inches of 3/8-inch gravel inside and above the grid paver. The top of the 3/8" gravel is "at grade" for the driveway and parking areas.

### **Purpose:**

The purpose of the permeable paving system is to offset the need for a detention pond prior to development of the Waterbury Subdivision while allowing storm water to infiltrate almost immediately and filter into the soils beneath instead of flowing immediately offsite. The volume of the permeable material at an assumed 40% void ratio is roughly 5,010 gallons, or 670 cubic feet.

### **Installation:**

Grid pavers are placed on AASHTO #57 gravel and interlocked. Galvanized steel stakes are used to secure the pavers in place prior to installation of 3/8-inch gravel inside and above the pavers.

### **Routine Maintenance:**

Routine maintenance of the paving system involves:

- Replacement of any gravel displaced during normal operations
- Replacement of grid pavers upon damage
- Spraying for weeds and removal of weeds
- Do not use equipment intended for thatching, scalping, or aerating on paving system.

### **Manufacturers' Manuals**

Specific manufacturer's manuals are part of the final O&M manual presented to the District upon completion of the overall project. A copy of the specifications of an approved manufacturer is provided below.

**PRIVATE DETENTION BASIN /  
STORMWATER QUALITY BEST MANAGEMENT PRACTICE  
MAINTENANCE AGREEMENT AND EASEMENT**

This PRIVATE DETENTION BASIN / STORMWATER QUALITY BEST MANAGEMENT PRACTICE MAINTENANCE AGREEMENT AND EASEMENT (Agreement) is made by and between EL PASO COUNTY by and through THE BOARD OF COUNTY COMMISSIONERS OF EL PASO COUNTY, COLORADO (Board or County), 4-WAY RANCH METROPOLITAN DISTRICT (Developer), and 4-WAY RANCH JOINT VENTURE, LLC (Owner). The above may occasionally be referred to herein singularly as "Party" and collectively as "Parties."

Recitals

A. WHEREAS, Owner is the owner of certain real estate (the Property) in El Paso County, Colorado, which Property is legally described in Exhibit A attached hereto and incorporated herein by this reference; and

B. WHEREAS, Developer desires to develop on the Property a land use to be known as Lift Station; and

C. WHEREAS, the development of this Property will increase the volume of water runoff and will decrease the quality of the stormwater runoff from the Property, and, therefore, it is in the best interest of public health, safety and welfare for the County to condition approval of this land use on Developer's promise to construct adequate stormwater quality structural Best Management Practices ("BMPs") for the land use; and

D. WHEREAS, Chapter 8, Section 8.4.5 of the El Paso County Land Development Code, as periodically amended, promulgated pursuant to Section 30-28-133(1), Colorado Revised Statutes (C.R.S.), requires the County to condition approval of all subdivisions on a developer's promise to so construct adequate drainage, water runoff control facilities, and BMPs in subdivisions; and

E. WHEREAS, the Drainage Criteria Manual, Volume 2, as amended by Appendix I of the El Paso County Engineering Criteria Manual (ECM), as each may be periodically amended, promulgated pursuant to the County's Colorado Discharge Permit System General Permit (MS4 Permit) as required by Phase II of the National Pollutant Discharge Elimination System (NPDES), which MS4 Permit requires that the County take measures to protect the quality of stormwater from sediment and other contaminants, requires subdividers, developers, landowners, and owners of facilities located in the County's rights-of-way or easements to provide adequate permanent stormwater quality BMPs with new development or significant redevelopment; and

F. WHEREAS, Section 2.9 of the El Paso County Drainage Criteria Manual provides for a developer's promise to maintain a subdivision's drainage facilities in the event the County does not assume such responsibility; and

G. WHEREAS, developers in El Paso County have historically chosen water runoff detention basins as a means to provide adequate drainage and water runoff control in subdivisions,

which basins, while effective, are less expensive for developers to construct than other methods of providing drainage and water runoff control; and

H. WHEREAS, Developer desires to construct for the land use one (1) detention basin/stormwater quality BMP(s) ("detention basin/BMP(s)") as the means for providing adequate drainage and stormwater runoff control and to meet requirements of the County's MS4 Permit, and to operate, clean, maintain and repair such detention basin/BMP(s); and

I. WHEREAS, Developer shall be charged with the duties of constructing, operating, maintaining and repairing the detention basin/BMP(s) on the portion of the Property described in [Exhibit B](#); and

J. WHEREAS, it is the County's experience that subdivision developers and property owners historically have not properly cleaned and otherwise not properly maintained and repaired these detention basins/BMPs, and that these detention basins/BMPs, when not so properly cleaned, maintained, and repaired, threaten the public health, safety and welfare; and

K. WHEREAS, the County, in order to protect the public health, safety and welfare, has historically expended valuable and limited public resources to so properly clean, maintain, and repair these detention basins/BMPs when developers and property owners have failed in their responsibilities, and therefore, the County desires the means to recover its costs incurred in the event the burden falls on the County to so clean, maintain and repair the detention basin/BMP(s) serving this land use due to the Developer's failure to meet its obligations to do the same; and

L. WHEREAS, the County conditions approval of this land use on the Developer's promise to so construct the detention basin/BMP(s) and to reimburse the County in the event the burden falls upon the County to so clean, maintain and/or repair the detention basin/BMP(s) serving this land use; and

M. WHEREAS, the County could condition land use approval on the Developer's promise to construct a different and more expensive drainage, water runoff control system and BMPs than those proposed herein, which more expensive system would not create the possibility of the burden of cleaning, maintenance and repair expenses falling on the County; however, the County is willing to forego such right upon the performance of Developer/Owner's promises contained herein; and

N. WHEREAS, the County, in order to secure performance of the promises contained herein, conditions approval of this land use upon the Owner's grant herein of a perpetual Easement over a portion of the Property for the purpose of allowing the County to periodically access, inspect, and, when so necessary, to clean, maintain and/or repair the detention basin/BMP(s).

## Agreement

NOW, THEREFORE, in consideration of the mutual Promises contained herein, the sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Incorporation of Recitals: The Parties incorporate the Recitals above into this Agreement.

2. Covenants Running with the Land: Developer/Owner agrees that this entire Agreement and the performance thereof shall become a covenant running with the land, which land is legally described in [Exhibit A](#) attached hereto, and that this entire Agreement and the performance thereof shall be binding upon itself, its successors and assigns.

3. Construction: Developer shall construct on that portion of the Property described in [Exhibit B](#) attached hereto and incorporated herein by this reference, one (1) detention basin/BMP(s). Developer shall not commence construction of the detention basin/BMP(s) until the El Paso County Planning and Community Development Department (PCD) has approved in writing the plans and specifications for the detention basin/BMP(s) and this Agreement has been signed by all Parties and returned to the PCD. Developer shall complete construction of the detention basin/BMP(s) in substantial compliance with the County-approved plans and specifications for the detention basin/BMP(s). Failure to meet these requirements shall be a material breach of this Agreement, and shall entitle the County to pursue any remedies available to it at law or in equity to enforce the same. Construction of the detention basin/BMP(s) shall be substantially completed within one (1) year (defined as 365 days), which one year period will commence to run on the date the approved plat of this Subdivision is recorded in the records of the El Paso County Clerk and Recorder. In cases where a subdivision is not required, the one year period will commence to run on the date the Erosion and Stormwater Quality Control Permit (ESQCP) is issued. Rough grading of the detention basin/BMP(s) must be completed and inspected by the El Paso County Planning and Community Development Department prior to commencing road construction.

In the event construction is not substantially completed within the one (1) year period, then the County may exercise its discretion to complete the project, and shall have the right to seek reimbursement from the Developer and its successors and assigns for its actual costs and expenses incurred in the process of completing construction. The term actual costs and expenses shall be liberally construed in favor of the County, and shall include, but shall not be limited to, labor costs, tool and equipment costs, supply costs, and engineering and design costs, regardless of whether the County uses its own personnel, tools, equipment and supplies, etc. to correct the matter. In the event the County initiates any litigation or engages the services of legal counsel in order to enforce the Provisions arising herein, the County shall be entitled to its damages and costs, including reasonable attorney fees, regardless of whether the County contracts with outside legal counsel or utilizes in-house legal counsel for the same.

4. Maintenance: The Developer agrees for itself and its successors and assigns that it will regularly and routinely inspect, clean and maintain the detention basin/BMP(s) and otherwise keep the same in good repair, all at its own cost and expense. No trees or shrubs that will impair the structural integrity of the detention basin/BMP(s) shall be planted or allowed to grow on the detention basin/BMP(s).

5. Creation of Easement: Owner hereby grants the County a non-exclusive perpetual easement upon and across that portion of the Property described in Exhibit B. The purpose of the easement is to allow the County to access, inspect, clean, repair and maintain the detention basin/BMP(s); however, the creation of the easement does not expressly or implicitly impose on the County a duty to so inspect, clean, repair or maintain the detention basin/BMP(s).

6. County's Rights and Obligations: Any time the County determines, in the sole exercise of its discretion, that the detention basin/BMP(s) is not properly cleaned, maintained and/or otherwise kept in good repair, the County shall give reasonable notice to the Developer and its successors and assigns, that the detention basin/BMP(s) needs to be cleaned, maintained and/or otherwise repaired. The notice shall provide a reasonable time to correct the problem(s). Should the responsible parties fail to correct the specified problem(s), the County may enter upon the Property to so correct the specified problem(s). Notice shall be effective to the above by the County's deposit of the same into the regular United States mail, postage pre-paid. Notwithstanding the foregoing, this Agreement does not expressly or implicitly impose on the County a duty to so inspect, clean, repair or maintain the detention basin/BMP(s).

7. Reimbursement of County's Costs / Covenant Running With the Land: The Developer agrees and covenants, for itself, its successors and assigns, that it will reimburse the County for its costs and expenses incurred in the process of completing construction of, cleaning, maintaining, and/or repairing the detention basin/BMP(s) pursuant to the provisions of this Agreement.

The term "actual costs and expenses" shall be liberally construed in favor of the County, and shall include, but shall not be limited to, labor costs, tools and equipment costs, supply costs, and engineering and design costs, regardless of whether the County uses its own personnel, tools, equipment and supplies, etc. to correct the matter. In the event the County initiates any litigation or engages the services of legal counsel in order to enforce the provisions arising herein, the County shall be entitled to its damages and costs, including reasonable attorney's fees, regardless of whether the County contracts with outside legal counsel or utilizes in-house legal counsel for the same.

8. Contingencies of Land Use/Land Disturbance Approval: Developer's and Owner's execution of this Agreement is a condition of land use/land disturbance approval.

The County shall have the right, in the sole exercise of its discretion, to approve or disapprove any documentation submitted to it under the conditions of this Paragraph, including but not limited to, any separate agreement or amendment, if applicable, identifying any specific maintenance responsibilities not addressed herein. The County's rejection of any documentation submitted hereunder shall mean that the appropriate condition of this Agreement has not been fulfilled.

9. Agreement Monitored by El Paso County Planning and Community Development Department and/or El Paso County Department of Public Works: Any and all actions and decisions to be made hereunder by the County shall be made by the Director of the El Paso County Planning and Community Development Department and/or the Director of the El Paso County Department of Public Works. Accordingly, any and all documents, submissions, plan approvals, inspections, etc. shall be submitted to and shall be made by the Director of the Planning and Community Development Department and/or the Director of the El Paso County Department of Public Works.

10. Indemnification and Hold Harmless: To the extent authorized by law, Developer and Owner agree, for themselves and their respective successors and assigns, that they will indemnify, defend, and hold the County harmless from any and all loss, costs, damage, injury, liability, claim, lien, demand, action and causes of action whatsoever, whether at law or in equity, arising from or related to its intentional or negligent acts, errors or omissions or that of its agents, officers, servants, employees, invitees and licensees in the construction, operation, inspection, cleaning (including analyzing and disposing of any solid or hazardous wastes as defined by State and/or Federal environmental laws and regulations), maintenance, and repair of the detention basin/BMP(s), and such obligation arising under this Paragraph shall be joint and several. Nothing in this Paragraph shall be deemed to waive or otherwise limit the defense available to the County pursuant to the Colorado Governmental Immunity Act, Sections 24-10-101, *et seq.* C.R.S., or as otherwise provided by law.

11. Severability: In the event any Court of competent jurisdiction declares any part of this Agreement to be unenforceable, such declaration shall not affect the enforceability of the remaining parts of this Agreement.

12. Third Parties: This Agreement does not and shall not be deemed to confer upon or grant to any third party any right to claim damages or to bring any lawsuit, action or other proceeding against either the County, the Developer/Owner, or their respective successors and assigns, because of any breach hereof or because of any terms, covenants, agreements or conditions contained herein.

13. Solid Waste or Hazardous Materials: Should any refuse from the detention basin/BMP(s) be suspected or identified as solid waste or petroleum products, hazardous substances or hazardous materials (collectively referred to herein as "hazardous materials"), the Developer and Owner shall take all necessary and proper steps to characterize the solid waste or hazardous materials and properly dispose of it in accordance with applicable State and/or Federal environmental laws and regulations, including, but not limited to, the following: Solid Wastes Disposal Sites and Facilities Acts, §§ 30-20-100.5 – 30-20-119, C.R.S., Colorado Regulations Pertaining to Solid Waste Disposal Sites and Facilities, 6 C.C.R. 1007-2, *et seq.*, Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992k, and Federal Solid Waste Regulations 40 CFR Ch. I. The County shall not be responsible or liable for identifying, characterizing, cleaning up, or disposing of such solid waste or hazardous materials. Notwithstanding the previous sentence, should any refuse cleaned up and disposed of by the County be determined to be solid waste or hazardous materials, the Developer and Owner, but not the County, shall be responsible and liable as the owner, generator, and/or transporter of said solid waste or hazardous materials.

14. Applicable Law and Venue: The laws, rules, and regulations of the State of Colorado and El Paso County shall be applicable in the enforcement, interpretation, and execution of this Agreement, except that Federal law may be applicable regarding solid waste or hazardous materials. Venue shall be in the El Paso County District Court.

IN WITNESS WHEREOF, the Parties affix their signatures below.

Executed this 12<sup>th</sup> day of November, 2019, by:

4-Way Ranch Metropolitan District

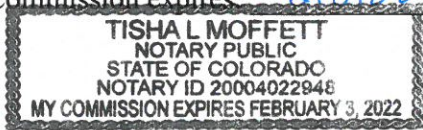
By: \_\_\_\_\_

Peter Martz, Board Vice President

The foregoing instrument was acknowledged before me this 12<sup>th</sup> day of November, 2019, by Peter martz as Board Vice President of 4-Way Ranch Metropolitan District.

Witness my hand and official seal.

My commission expires: 2/3/22



Tisha L. Moffett  
Notary Public

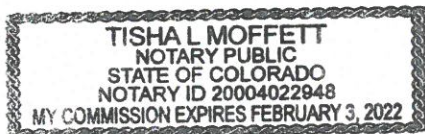
Executed this 12<sup>th</sup> day of November, 2019, by:  
4-Way Ranch Joint Venture, LLC

By: Peter R. Martz  
Name: PETER MARTZ  
Title: MANAGER

The foregoing instrument was acknowledged before me this 12<sup>th</sup> day of November, 2019, by Peter martz as manager of 4-Way Ranch Joint Venture, LLC.

Witness my hand and official seal.

My commission expires: 2/3/22



Tisha L. Moffett  
Notary Public

Executed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by:

BOARD OF COUNTY COMMISSIONERS  
OF EL PASO COUNTY, COLORADO

By: \_\_\_\_\_  
Craig Dossey, Executive Director  
Planning and Community Development Department  
Authorized signatory pursuant to LDC

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_,  
2019, by \_\_\_\_\_, Executive Director of El Paso County Planning and Community  
Development Department.

Witness my hand and official seal.

My commission expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

Approved as to Content and Form:

\_\_\_\_\_  
Assistant County Attorney