## When recorded, mail to:

Lehi City Recorder 153 North 100 East Lehi City, Utah 84043 ENT 59000: 2022 PG 1 of 42

Andrea Allen

Utah County Recorder

2022 May 13 10:32 AM FEE 0.00 BY AR

RECORDED FOR Cottonwood Title Insurance Agency, Ir

ELECTRONICALLY RECORDED

Affects Parcel No(s):	58:021:0525	
( )		

#### LONG-TERM STORMWATER MANAGEMENT AGREEMENT

	This Long	<ul><li>-Term Sto</li></ul>	rmwater M	lanagement <i>l</i>	Agreement (	("Agreement") is	made and
entere	ed into this			April		[20 <b>] 72 _</b> ,	
by and	d between	Lehi City,	a Utah mu	nicipal corpo	ration ("City	"), and	
			ewis L	landing L.	C.		,
a		Utah	limited	liability	Company	("Owne	∍r").

#### **RECITALS**

WHEREAS, the City is authorized and required to regulate and control the disposition of storm and surface waters within the MS4, as set forth in the Lehi City Stormwater Ordinance, as amended ("Ordinance"), adopted pursuant to the Utah Water Quality Act, as set forth in *Utah Code Ann*. §§ 19-5-101, *et seq.*, as amended ("Act"); and

WHEREAS, the Owner hereby represents and acknowledges that it is the owner in fee simple of certain real property more particularly described in Exhibit "A," attached hereto and incorporated herein by this reference ("Property"); and

WHEREAS, the Owner desires to build or develop the Property and/or to conduct certain regulated construction activities on the Property which will alter existing storm and surface water conditions on the Property and/or adjacent lands; and

WHEREAS, in order to accommodate and regulate these anticipated changes in existing storm and surface water flow conditions, the Owner is required to build and maintain at Owner's expense a storm and surface water management facility or improvements ("Stormwater Facilities"); and

WHEREAS, the Stormwater Facilities are more particularly described and shown in the final site plan or subdivision approved for the Property and related engineering drawings, and any amendments thereto, which plans and drawings are on file with the City and are hereby incorporated herein by this reference ("Development Plan"); and

WHEREAS, summary description of all Stormwater Facilities, details and all appurtenance draining to and affecting the Stormwater Facilities and establishing the standard operation and routine maintenance procedures for the Stormwater Facilities, and control measures installed on the Property, ("Long Term Stormwater Management Plan") more particularly shown in Exhibit "B" on file with the City Recorder and,

WHEREAS, a condition of Development Plan approval, and as required as part of the City's Small MS4 UPDES General Permit from the State of Utah, Owner is required to enter into this Agreement establishing a means of documenting the execution of the Long Term Stormwater Management Plan and,

NOW, THEREFORE, in consideration of the benefits received and to be received by the Owner, its successors and assigns, as a result of the City's approval of the Long Term Stormwater Management Plan, and the mutual covenants contained herein, the parties agree as follows:

#### Section 1

Construction of Stormwater Facilities. The Owner shall, at its sole cost and expense, construct the Stormwater Facilities in accordance with the Development Plans and specifications, and any amendments thereto which have been approved by the City.

#### Section 2

Maintenance of Stormwater Facilities. The Owner shall, at its sole cost and expense, adequately maintain the Stormwater Facilities. Owner's maintenance obligations shall include all system and appurtenance built to convey stormwater, as well as all structures, improvements, and vegetation provided to control the quantity and quality of the stormwater. Adequate maintenance, for purposes of this Agreement, is defined as good working condition so that the Stormwater Facilities are performing their design functions. The Owner shall, at its sole cost and expense, perform all work necessary to keep the Stormwater Facilities in good working condition.

#### Section 3

Annual Maintenance Report of Stormwater Facilities. The Owner shall, at its sole cost and expense, inspect the Stormwater Facilities and submit an inspection report and certification to the MS4 annually. The purpose of the inspection and certification is to assure safe and proper functioning of the Stormwater Facilities. The annual inspection shall cover all aspects of the Stormwater Facilities, including, but not limited to, the parking lots, structural improvements, berms, channels, outlet structure, pond areas, access roads, vegetation, landscaping, etc. Deficiencies shall be noted in the inspection report. The report shall also contain a certification as to whether adequate maintenance has been performed and whether the structural controls are operating as

designed to protect water quality. The annual inspection report and certification shall be due by June 30<sup>th</sup> of each year and shall be on forms acceptable to the City.

#### Section 4

City Oversight Inspection Authority. The Owner hereby grants permission to the City, its authorized agents and employees, to enter upon the Property and to inspect the Stormwater Facilities upon reasonable notice not less than three business days to the Owner. Such inspections shall be conducted in a reasonable manner and at reasonable times, as determined appropriate by the City. The purpose of the inspection shall be to determine and ensure that the Stormwater Facilities are being adequately maintained, are continuing to perform in an adequate manner, and are in compliance with the Act, the Ordinance, and the Stormwater Facilities Maintenance Plan.

#### Section 5

Notice of Deficiencies. If the City finds that the Stormwater Facilities contain any defects or are not being maintained adequately, the City shall send Owner written notice of the defects or deficiencies and provide Owner with a reasonable time, but not less than sixty (60) days, to cure such defects or deficiencies. Such notice shall be confirmed delivery to the Owner or sent certified mail to the Owner at the address listed on the County Tax Assessor.

#### Section 6

Owner to Make Repairs. The Owner shall, at its sole cost and expense, make such repairs, changes or modifications to the Stormwater Facilities as may be determined as reasonably necessary by the City within the required cure period to ensure that the Stormwater Facilities are adequately maintained and continue to operate as designed and approved.

#### Section 7

City's Corrective Action Authority. In the event the Owner fails to adequately maintain the Stormwater Facilities in good working condition acceptable to the City, after due notice of deficiencies as provided in Section 5 and failure to cure, then, upon Owner's failure to cure or correct within thirty days following a second notice delivered to Owner, the City may issue a Citation punishable as a Misdemeanor in addition to any State or EPA fine. The City may also give written notice that the facility storm drain connection will be disconnected. Any damage resulting from the disconnection is subject to the foregoing cure periods. It is expressly understood and agreed that the City is under no obligation to maintain or repair the Stormwater Facilities, and in no event shall this Agreement be construed to impose any such obligation on the City. The actions described in this Section are in addition to and not in lieu of any and all equitable remedies available to the City as provided by law for Owner's failure to remedy deficiencies or any other failure to perform under the terms and conditions of this Agreement.

ENT 59000: 2022 PG 4 of 42

#### Section 8

Reimbursement of Costs. In the event the City, pursuant to this Agreement, incurs any costs, or expends any funds resulting from enforcement or cost for labor, use of equipment, supplies, materials, and the like related to storm drain disconnection from the City system, the Owner shall reimburse the City upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the City. After said thirty (30) days, such amount shall be deemed delinquent and shall be subject to interest at the rate of ten percent (10%) per annum. Owner shall also be liable for any collection costs, including attorneys' fees and court costs, incurred by the City in collection of delinquent payments.

#### Section 9

Successor and Assigns. This Agreement shall be recorded in the County Recorder's Office and the covenants and agreements contained herein shall run with the land and whenever the Property shall be held, sold, conveyed or otherwise transferred, it shall be subject to the covenants, stipulations, agreements and provisions of this Agreement which shall apply to, bind and be obligatory upon the Owner hereto, its successors and assigns, and shall bind all present and subsequent owners of the Property described herein.

#### Section 10

Severability Clause. The provisions of this Agreement shall be severable and if any phrase, clause, sentence or provision is declared unconstitutional, or the applicability thereof to the Owner, its successors and assigns, is held invalid, the remainder of this Covenant shall not be affected thereby.

#### Section 11

Utah Law and Venue. This Agreement shall be interpreted under the laws of the State of Utah. Any and all suits for any claims or for any and every breach or dispute arising out of this Agreement shall be maintained in the appropriate court of competent jurisdiction in Utah County, Utah.

#### Section 12

Indemnification. This Agreement imposes no liability of any kind whatsoever on the City, and the Owner agrees to hold the City harmless from any liability in the event the Stormwater Facilities fail to operate properly. The Owner shall indemnify and hold the City harmless for any and all damages, accidents, casualties, occurrences, or claims which might arise or be asserted against the City from failure of Owner to comply with its obligations under this agreement relating to the Stormwater Facilities.

#### Section 13

Amendments. This Agreement shall not be modified except by written instrument executed by the City and the Owner of the Property at the time of modification, and no modification shall be effective until recorded in the Salt Lake County Recorder's Office.

ENT 59000: 2022 PG 5 of 42

#### **Section 14**

Subordination Requirement. If there is a lien, trust deed or other property interest recorded against the Property, the trustee, lien holder, etc., shall be required to execute a subordination agreement or other acceptable recorded document agreeing to subordinate their interest to the Agreement.

#### Section 15

Exhibit B. The Long-Term Stormwater Management Plan (LTSWMP) must adapt to change in good judgment when site conditions and operations change and when existing programs are ineffective. Exhibit B will not be filed with the agreement at County Recorder but is included by reference and kept on file with the City Recorder. Revision applications must be filed with the City Stormwater Division and amended into the LTSWMP on file with the Lehi City recorder.

## LONG-TERM STORMWATER MANAGEMENT PLAN AGREEMENT

SO AGREED this 20th day of	April 20 27.
PROPERTY OWNER	
By: Walk J	Title: Margur
By:	Title:
STATE OF UTAH )	
COUNTY OF Saulan )	
The above instrument was acknowledged be day of April , 2	
Cerander man Danger Notary Public Residing in: Lean Lat	NOTARY PUBLIC CHANTELLE MARTIN TAYLOR COMM. # 713730
My commission expires: 08.25.2024  CITY	MY COMMISSION EXPIRES AUGUST 25, 2024 A FATE OF UTAH
	Date:
Attest: John () Son City Recorder	SEALO
STATE OF UTAH :ss.	
COUNTY OF )	TATE OF WITH
The above instrument was acknowledged before the day of	fore me by MARK USHNSIN_, this 0_22
Sumi h. Busan	SHERRIE N. BENSON  NOTARY PUBLIC-STATE OF UTAH  COMMISSION# 706951  COMM. EXP. 06-27-2023
Residing in: Lens y	LTSWMP

ENT 59000: 2022 PG 7 of 42

## **EXHIBIT A**

Parcel Number: 58:021:0525

#### **Legal Description:**

Beginning at a point on the Northerly Right-of-Way line of 2100 North Street said point being South 89°48'50" West 1687.37 feet along the Quarter section line and North 114.94 feet from the East quarter corner of Section 2, Township 5 South, Range 1 West, Salt Lake Base and Meridian, and running;

thence along said Northerly Right-of-Way line the following two (2) courses:

- (1) Northwesterly 806.10 feet along the arc of a 15,185.50 foot radius curve to the left (center bears South 03°02'29" West and the chord bears North 88°28'46" West 806.00 feet with a central angle of 03°02'29");
- (2) West, a distance of 156.76 feet to the Easterly Boundary line of Holbrook Farms Plat F Subdivision, Recorded March 27, 2020 as Entry No. 39366:2020, of Official Records:

thence North 00°01'06" West 527.57 feet along said Easterly Boundary line; thence North 89°51'07" East 961.87 feet; thence South 00°04'52" East 551.44 feet to the point of beginning.

Contains 514,540 Square Feet or 11.812 Acres.

ENT **59000:2022** PG 8 of 42



Project:

**Lewis Landing Industrial Park** 

4150 West Waterbury Drive Lehi, Utah

Project Number: 10807A

Prepared For:

**Gardner Company** 

Ben Seastrand 201 South Main, #2000 (801) 870-4120

Date:

April 2022

Prepared By:

Jennie Linford, EIT

Reviewed By:

Jared Ford, PE

**Ensign Engineering** 

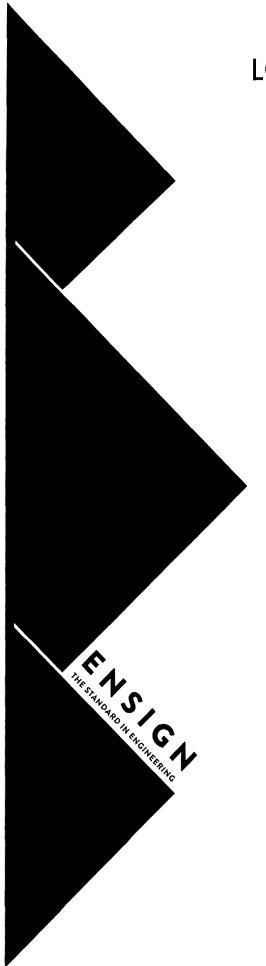
45 West 10000 South, Suite 500

Sandy, Utah 84070

P: (801) 255-0529

F: (801) 255-4449

ensigneng.com



ENT **59000: 2022** PG 9 of 42

## **EXHIBIT B**

## Long-Term Stormwater Management Plan

for:

Lewis Landing Industrial Park 4150 West Waterbury Drive Lehi, Utah

Gardner Company Ben Seastrand 201 South Main, #2000 Salt Lake City, Utah 84101 (801) 870-4120

ENT **59000**: 2022

PG 10 of 42

#### PURPOSE AND RESPONSIBILTY

As required by the Clean Water Act and resultant local regulations, including Lehi City Municipal Separate Storm Sewer Systems (MS4) Permit, those who develop land are required to build and maintain systems to minimize litter and contaminants in stormwater runoff that pollute waters of the State.

This Long-Term Stormwater Management Plan (LTSWMP) describes the systems, operations and the minimum standard operating procedures (SOPs) necessary to manage pollutants originating from or generated on this property. Any activities or site operations at this property that contaminate water entering the City's stormwater system, groundwater and generate loose litter must be prohibited.

The Jordan River and Utah Lake are impaired. The LTSWMP is aimed at addressing these impairments in addition to all other pollutants that can be generated by this property.

#### CONTENTS

SECTION 1: SITE DESCRIPTION, USE AND IMPACT

**SECTION 2: TRAINING** 

SECTION 3: RECORDKEEPING SECTION 4: APPENDICES

## SECTION 1: SITE DESCRIPTION, USE AND IMPACT ENT59000: 2022 PG 11 of 42

Our site infrastructure is limited at controlling and containing pollutants. If our property and operations are managed improperly we will contaminate our water resources. This LTSWMP includes standard operations procedures (SOP)s intended to compensate for the limitations of our site infrastructure and direct our maintenance operations to responsibly manage our grounds. SOPs are filed in appendix B.

### Parking, Sidewalk and flatwork

The Lewis Landing Industrial Park site has a significant amount of impervious surface, primarily concrete pavement, concrete walkways, and the buildings themselves. Any sediment, debris, fluids or other waste left or that collect on it will be carried by runoff to the storm drain inlets. This waste material will settle in our storm drain system increasing maintenance cost and any material dissolving in the runoff will pass through our system. Maintenance involves regular sweeping, but it can also involve pavement washing to remove stains, slick spots and appearance when necessary. The Sweeping and the Pavement Washing SOPs are used to manage the pollutants associated with pavements.

### Landscaping

This property's landscape areas will require regular maintenance. This will involve mowing, pruning, hand digging leaving grass clippings, sticks, branches, dirt, mulch, including fertilizers, pesticides and other pollutants that can fall or be left on our paved areas. It is vital that the paved areas with direct connection to the city storm drain systems remain clear and clean of landscape pollutants. The Landscape Maintenance SOP is written to control and manage this potential problem.

## Flood and Water Quality Control System

The area contributing to the storm drain runoff for this project totals around 11 acres. Our flood and water quality control system includes directing runoff into landscaping swales, open landscaping areas, and storm drain inlets. Directing runoff to our landscape areas is a low impact system intended to trap and treat our urban pollutants on the surface to protect downstream water resources.

The proposed site is designed to direct runoff from paved and other hardscape areas into gutters which will be collected in catch basins. The site has been graded to allow stormwater to drain away from buildings. Once stormwater has entered the pipe system, it will be conveyed to one of two detention basins with one being located in between the buildings in the truck court area and the other being in the northeast corner of the project. Both Detention Basins will discharge into the system in Waterbury Drive; flows will be restricted via two orifice plates located within storm drain cleanout boxes downstream of the basins. The western detention basin (in between the buildings), "Basin A" will detain stormwater runoff from the majority of the project with approximately 82% of the site being routed through this basin. The eastern detention basin, "Basin B" will detain stormwater runoff from the eastern portion of the project. The required and provided

detention volumes are shown in the table below. Orifice plate size and release rates are also shown in the table below.

ENT 59000: 2022 PG 12 of 42

Table 1-1 required and provided detention volumes

Basin A	29,025	30,273	5.06	1.69
Basin B	7,132	7,156	2.50	0.37

Runoff for each sub basin was calculated using the rational method and the 10-year 10-minute time of concentration rainfall intensity. Minimum pipe sizes for the outlet of each sub basin were then calculated using the Manning's equation. Calculations can be found on the following pages.

Due to large fills on the site below the buildings we are limiting the 80<sup>th</sup> percentile storage and infiltration below the buildings. As such there is 9-inches of gravel below the chambers in each of the two basins that will allow for retention and infiltration.

## **STORM DRAIN DETENTION**



PROJECT TITLE:		PROJECT NUMBER:
Lewis Landing Wa	arehouse - West Storage	10807
LOCATION:	· · · · · · · · · · · · · · · · · · ·	DATE:
Lehi, Utah		11/15/21
OWNER:		SHEET:
Gardner Company	/	1 OF 1
DESIGNED BY:	CHECKED BY:	APPROVED BY:
J. Ford	J. Ford	J. Ford
ADEAO	ALCULATION	

#### AREA CALCULATION

HARDSCAPE AREA :	6.33	acres	runoff coeff. C:	0.90
LANDSCAPE/NATIVE AREA:	2.11	acres	runoff coeff. C:	0.15
TOTAL AREA :	8.44	acres	WEIGHTED C:	0.71

## **RUNOFF CALCULATION**

100 Year Design Storm			Allov	wable Runoff	0.2	cfs/ac
				owable runoff	1.688	cfs
		Precipitation		Cumulative	Allowed Runoff	
Time (min)	CA (Acres)	(in/hr)	Time (sec)	Runoff (ft <sup>3</sup> )	(ft <sup>3</sup> )	Storage (ft <sup>3</sup> )
5	5.98	6.20	300	11,126	506	10,620
10	5.98	4.72	600	16,941	1,013	15,928
15	5.98	3.90	900	20,996	1,519	19,477
30	5.98	2.63	1,800	28,318	3,038	25,280
60	5.98	1.63	3,600	35,101	6,077	29,025
120	5.98	0.88	7,200	37,987	12,154	25,834
180	5.98	0.59	10,800	38,246	18,230	20,015
360	5.98	0.32	21,600	40,830	36,461	4,369
720	5.98	0.18	43,200	45,998	72,922	0
1440	5.98	0.09	86,400	47,549	145,843	0
				STORAG	GE REQUIRED :	29,025

#### STORAGE REQUIRED : 29,025 STORAGE PROVIDED : 30,273

### **OUTLET CONTROL**

Orifice Parameters			Orifice Size	Pipe Pa	arameters
Q (cfs) =	1.688	Area =	$Q/(C \times (2 \times g \times h)^{0.5})$	Type of Pipe =	HDPE
Coefficient(C) =	0.6	Area (in²) =	20.10	Manning (n) =	0.011
$g (ft/s^2) =$	32.2	Diameter (in)=	5.06	Pipe Dia. (d) =	12
High Water =	4,564.81	·		%Slope (s) =	0.50%
FL @ orifice =	4,558.50			Q allow (cfs)=	2.99
h (ft) =	6.3			1	
(Orifice c	(Orifice coefficient is taken from: McCuen, Richard / Hydrologic Design Methods /co 1998 p.424)				

2.53

Q allow (cfs)=

#### STORM DRAIN DETENTION ENSIGN PROJECT NUMBER 10807 Lewis Flex Warehouse - East Storage DATE: Lehi, Utah 11/15/21 SHEET 1 OF 1 Gardner Company DESIGNED B CHECKED BY: APPROVED BY: J. Ford J. Ford J. Ford AREA CALCULATION HARDSCAPE AREA: runoff coeff. C: 0.90 1.56 acres LANDSCAPE/NATIVE AREA 0.28 acres runoff coeff. C: 0.15 1.84 acres 0.78 TOTAL AREA: WEIGHTED C: RUNOFF CALCULATION 0.2 cfs/ac 100 Year Design Storm Allowable Runoff 0.368 cfs Total allowable runoff Cumulative Allowed Runoff Precipitation Storage (ft3) Time (min) CA (Acres) (in/hr) Time (sec) Runoff (ft<sup>3</sup>) $(ft^3)$ 1.44 6.20 300 2,681 110 2,570 10 1.44 4.72 600 4,081 221 3,861 15 1.44 3.90 900 331 4,727 5,059 30 1.44 2.63 1,800 6,823 662 6,160 60 1.44 1.63 3,600 8,457 1,325 7,132 120 1.44 0.88 7,200 9,152 2,650 6,502 9,214 5,240 180 1.44 0.59 10,800 3,974 1,888 360 1.44 0.32 21,600 9,837 7,949 720 1.44 0.18 43,200 11,082 15,898 0 1440 1.44 0.09 86,400 31,795 11,456 7,132 **STORAGE REQUIRED:** STORAGE PROVIDED: 7,156 **OUTLET CONTROL** Orifice Size Pipe Parameters Orifice Parameters Q(cfs) =0.368 Area = $Q/(C \times (2 \times g \times h)^{0.5})$ Type of Pipe = CONCRETE Manning (n) = Coefficient(C) =0.6 Area $(in^2) =$ 4.71 0.013 Pipe Dia. (d) = $g(ft/s^2) =$ 32.2 Diameter (in)= 2.45 12 High Water = 4,559.00 %Slope(s) =0.50%

(Orifice coefficient is taken from: McCuen, Richard / Hydrologic Design Methods /co 1998 p.424)

4,553.55

5.4

FL @ orifice =

h(ft) =

## **Waste Management**

ENT **59000: 2022** PG 15 of 42

There will be two trash enclosures on site, one for each building, contained within a fenced-off area. The trash enclosures will have a lid intended to prevent precipitation exposure, minimizing liquids that can leak to pavements, and also ensuring that light weight trash will not be exposed to wind and blown away. The fences have an additional benefit of trapping loose trash allowing us to pick it up before it will be carried off. Good waste management systems, if managed improperly, can end up as the source of the very pollution that they were intended to control. The Waste Management SOP is written to control and manage our waste.

### **Utility System**

Our roof top utility system is exposed to our roof drains which drain to our pavements. These units contain oils and other chemicals that can harm the Jordan River and Utah Lake if allowed to drain off our property. Liquids and other waste generated by maintenance of this system can be appropriately managed by the Spill Containment and Cleanup SOP.

### **Snow and Ice Removal Management**

Salt is a necessary pollutant and is vital to ensuring a safe parking and pedestrian walkways. However, salt and other ice management chemicals if improperly managed will unnecessarily increase our salt impact to our own vegetation and local water resources. Much of the runoff drains to our landscape swales. We need to minimize salt to maintain healthy root systems needed for optimum infiltration rates.

## **SECTION 2: TRAINING**

ENT 59000: 2022 PG 16 of 42

Ensure that all employees and maintenance contractors know and understand the SOPs specifically written to manage and maintain the property. Maintenance contractors must use the stronger of their Company and the LTSWMP SOPs. File all training records in Appendix C.

#### **SECTION 3: RECORDKEEPING**

Maintain records of operation and maintenance activities in accordance with SOPs. Mail a copy of the record to Lehi City Stormwater Division annually.

ENT **59000: 2022** PG 17 of 42

## **SECTION 4: APPENDICES**

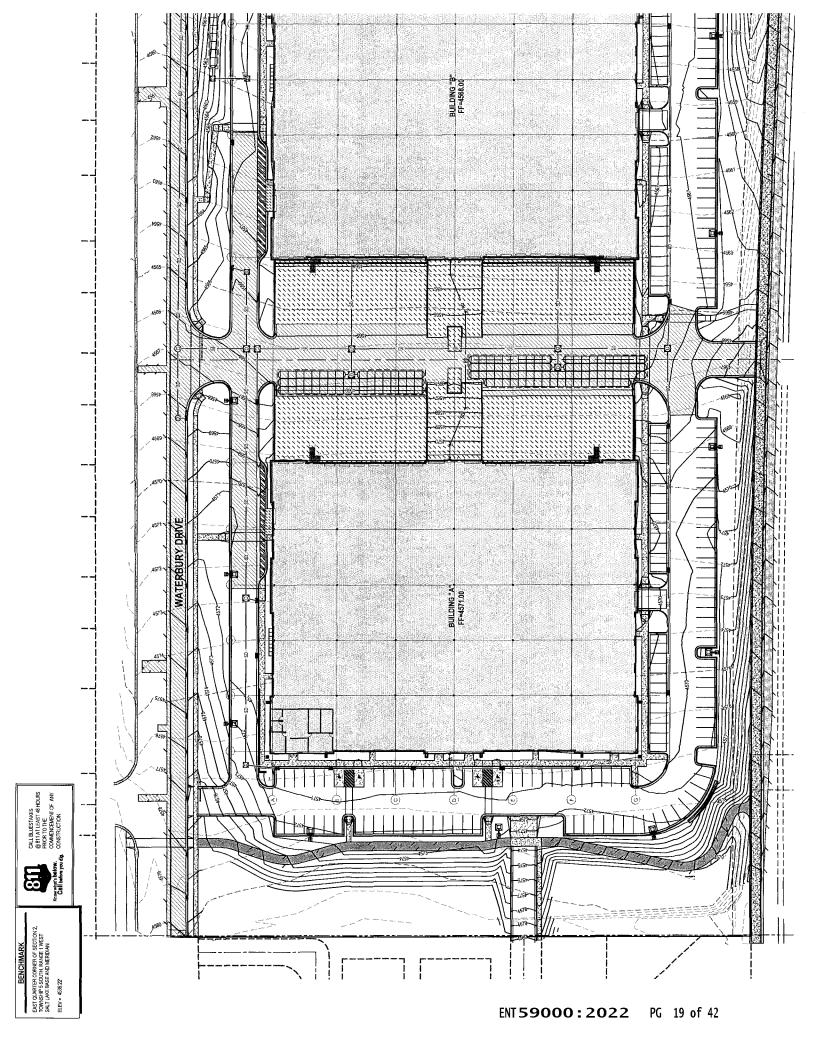
Appendix A- Site Drawings and Details

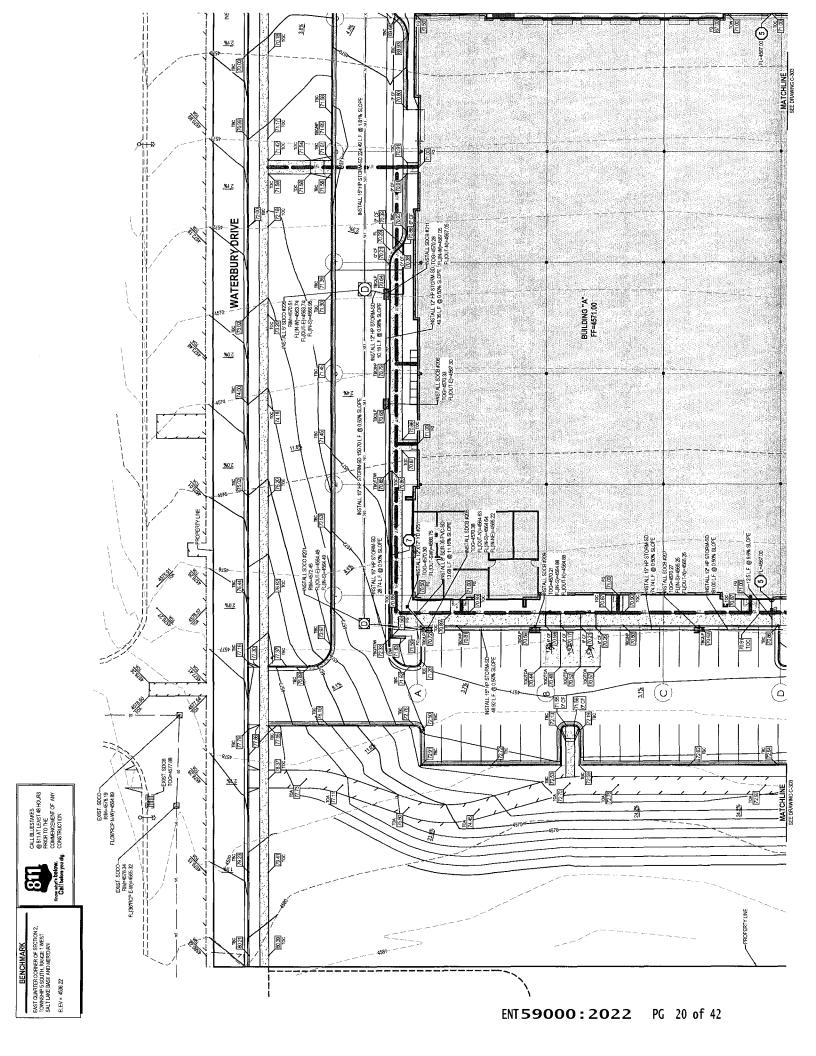
Appendix B- SOPs

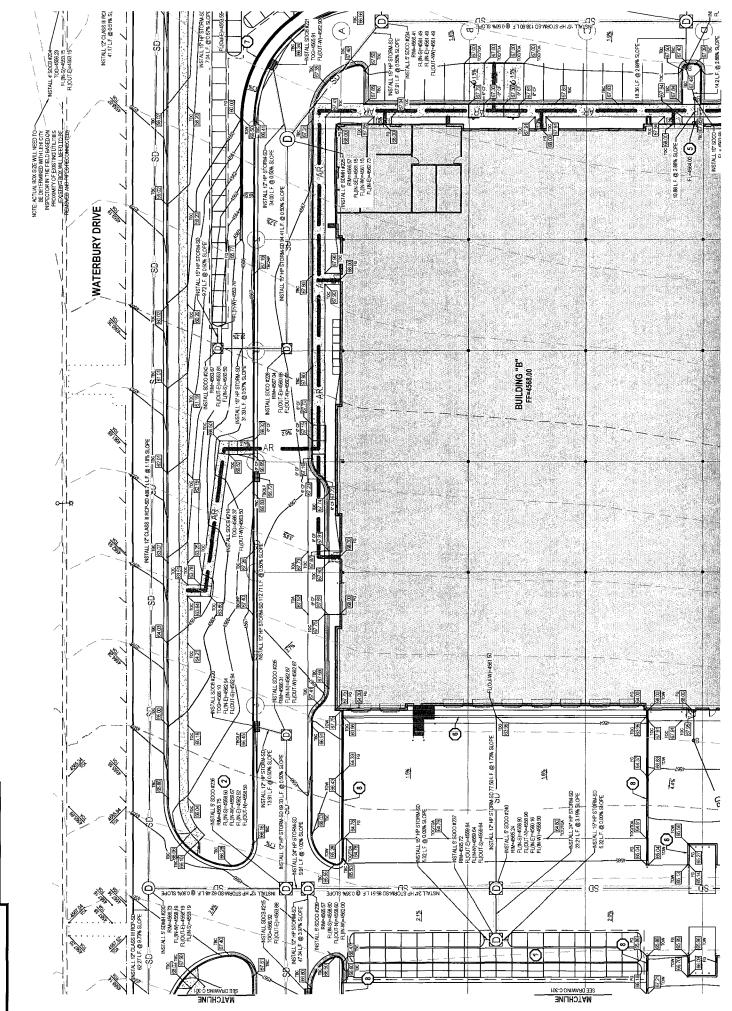
Appendix C- Recordkeeping Documents

## APPENDIX A - SITE DRAWINGS AND DETAILS

ENT **59000:2022** PG 18 of 42







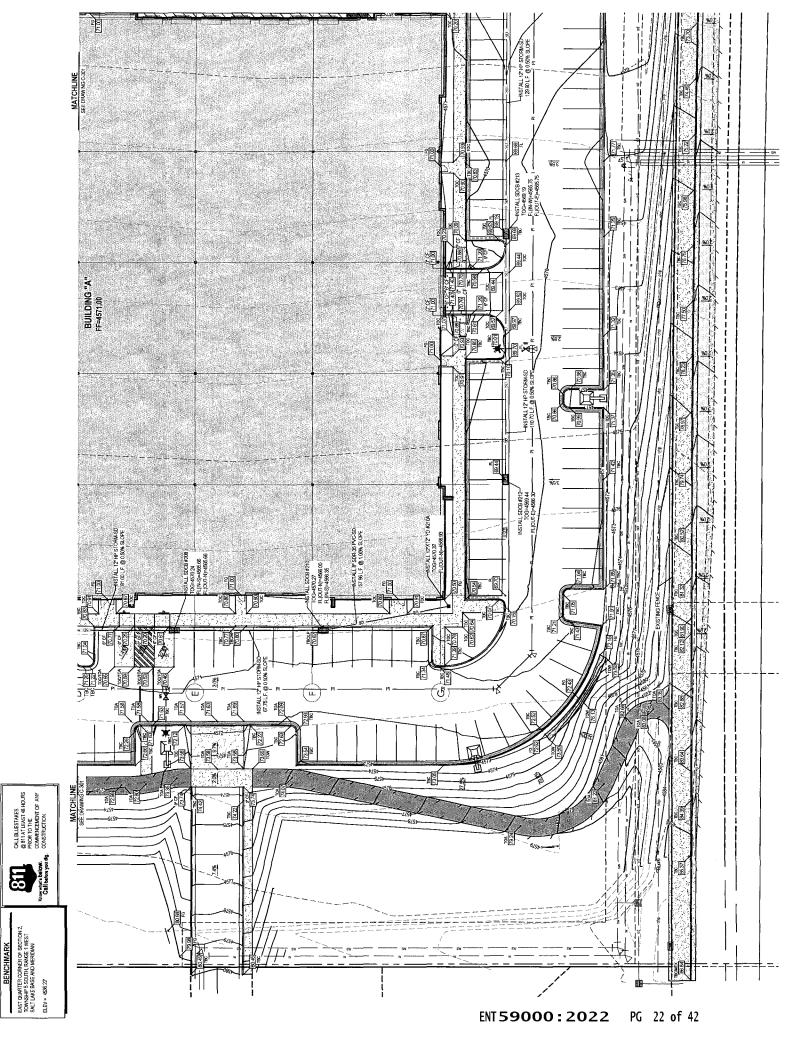
CALL BLUESTAKES
@ 811AT LEAST 48 HOURS
PRIOR TO THE
COMMENCEMENT OF ANY
CONSTRUCTION.

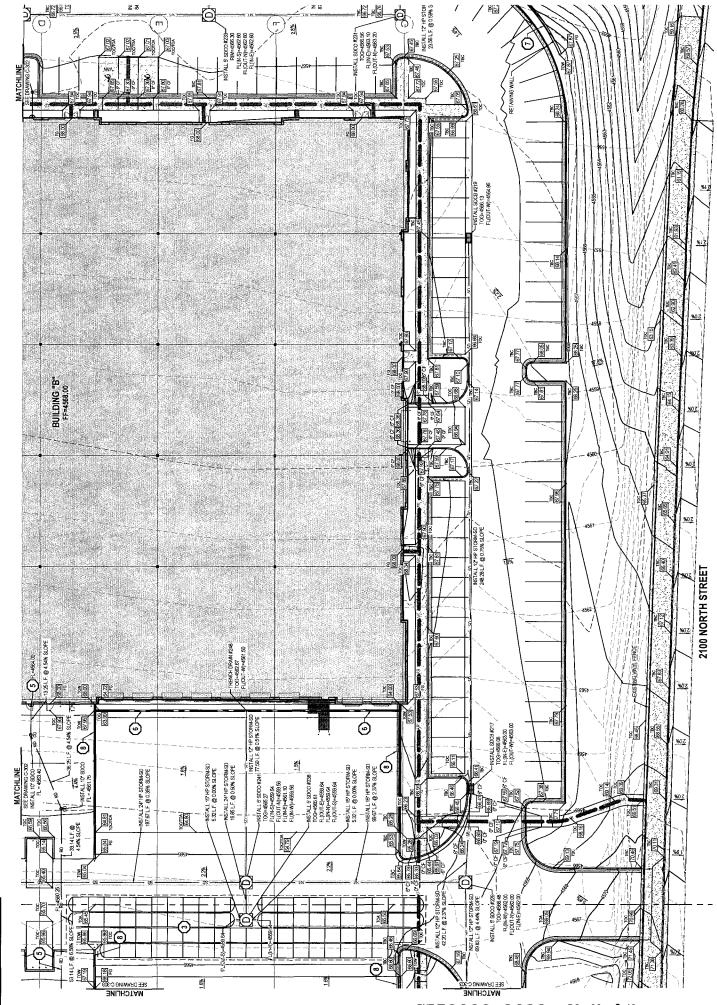
Call before you

EAST QUARTER CORNER OF SECTION 2, TOWNSHIP 5 SOUTH, RANGE 1 WEST SALT LAKE BASE AND MERIDIAN

ELEV = 4536.22

ENT 59000: 2022 PG 21 of 42





EMENCHMARK

EAST CHARGE NOS HOUSE
SALT LAKE BASE AND NETCOM
ROOM TO CHARGE STATES
SALT LAKE BASE AND NETCOM
ROOM TO CHARGE STATES
RO

ENT **59000: 2022** PG 23 of 42

APPENDIX B - SOPs

ENT **59000: 2022** PG 24 of 42

ENT **59000: 2022** PG 25 of 42

## **Pavement Sweeping**

General:

These SOPs are not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in these SOPs.

#### 1. Purpose:

- a) One of the primary contaminates in the Jordan River and Utah Lake is organic material.
- b) Any sediment, leaves, debris, spilt fluids or other waste that collects on our parking areas and sidewalks will fill in our landscaping swales, oil/sediment/trash traps and our underground infiltration system increasing our maintenance cost.

#### 2. Regular Procedure:

- a) Remain aware of minor sediment/debris and hand sweep or remove material by other means as needed. Significant deposits will likely collect in autumn with leaf fall and early spring after winter thaw. Usually sweeping machinery is the best tool for this application.
- b) Regularly manage outside activities that spread fugitive debris on our pavements. This involves outside functions including but not limited to: Yard sales, yard storage, fund raisers, etc.
- c) Do not allow car wash fund raiser or other related activities. Detergents will damage water resources and washed pollutants will fill our storm drain system and drain into the ground which we are responsible.
- d) Inform employees of proper parking and road maintenance to reinforce proper housekeeping.
- e) Restrict parking in areas to be swept prior to and during sweeping using regulations as necessary.

#### 4. Disposal Procedure:

- a) Dispose of debris and other materials removed from drive aisles and parking areas properly. Proper disposal of debris and other materials includes placing said materials in the designated dumpsters provided on site. Materials such as oil, batteries, and other hazardous waste must be disposed of at a hazardous waste facility. (Many local auto parts stores will dispose of used oil and vehicle batteries.)
- b) Use licensed facilities when haul off is necessary
- c) Do not store waste in locations where storm water could transport fines or liquids into the storm drain system.

#### 5. Documentation:

ENT **59000: 2022** PG 26 of 42

a) Document completed cleanup activities in "SMP Inspection Report".

#### 6. Frequency:

- a) Roadways should be swept once every three months and more frequently if inspections deem it necessary. Fall months will require street sweeping a minimum of once a month to prevent plant foliage from entering the storm drain system.
- b) Parking areas should be swept when inspections deem it necessary.

#### 7. Inspections:

- a) Inspections should occur once a month. Fall months will require a weekly inspection to ensure no plant foliage is in danger of entering or blocking the storm drain system.
- b) Inspections should identify any debris, trash or sediment on roadways and parking areas
- c) Use inspections to ensure all SOPs are being followed.
- d) Use inspection results to alter maintenance frequency if necessary.

#### 8. Training:

- a) Annually and at hire
- b) Inform staff and service contractors when incorrect SOP implementation is observed.

## Landscape Maintenance

#### General:

This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

#### 1. Purpose:

- a) One of the primary contaminates in the Jordan River and Utah Lake is organic material.
- b) Grass clippings, sticks, branches, dirt, mulch, fertilizers, pesticides and other pollutants will fill our landscaping swales, sediment/trash traps and underground infiltration system requiring future dredging and cleaning increasing our maintenance cost. Removing these debris after they have washed to our flood and water quality system will in very expensive.

#### 2. Maintenance Procedure:

ENT **59000: 2022** PG 27 of 42

a) Maintain healthy vegetation root systems. Healthy root systems will help improve permeable soils maintaining more desirable infiltration rates of our landscape areas receiving runoff from our pavements.

#### b) Grooming

- Lawn Mowing Immediately following operation sweep or blow clippings onto vegetated ground.
- Fertilizer Operation Prevent overspray. Sweep or blow granular fertilizer onto vegetated ground immediately following operation.
- Herbicide Operation Prevent overspray. Sweep or blow granular herbicide onto vegetated ground immediately following operation.
- c) Remove or contain all erodible or loose material prior forecast wind and precipitation events, before any non-stormwater will pass through the property and at end of work period. Light weight debris and landscape materials can require immediately attention when wind or rain is expected.
- d) Landscape project materials and waste can usually be contained or controlled by operational best management practices.
  - Operational; including but not limited to:
    - Strategic staging of materials eliminating exposure, such as not staging on pavement
    - Avoiding multiple day staging of landscaping backfill and spoil on pavements
    - > Haul off spoil as generated and daily
    - > Scheduling work when weather forecast are clear.

#### e) Cleanup:

- Use dry cleanup methods, e.g. square nose shovel and broom. Conditions are usually sufficient when no more material can be swept onto the square nosed shovel.
- Power blowing tools
- Sweep or blow small clippings into landscape areas, or collect and properly dispose of in designated dumpsters provided on site.
  - 1. Dispose of large clippings in approved locations or containers per waste management sop.
  - 2. Sweep or blow pavements or sidewalks where fertilizers or other solid chemicals have fallen, back onto grassy areas before applying irrigation water. Ensure that all fertilizers or other solid chemicals are completely cleaned off pavements or sidewalks following every application.

- Triple rinse pesticide and herbicide containers, and use rinse water as product.
   Dispose of unused pesticide as hazardous waste. Do not rinse onto pavements or hardscape areas which may cause a downstream impact
  - 1. Always follow all federal and state regulations governing use, storage and disposal of fertilizers, herbicides or pesticides and their containers. ("Read the Label")
  - 2. Document completed cleanup activities in "SMP Inspection Report".
  - 3. Keep copies of MSDS sheets for all pesticides, fertilizers and other hazardous products used.

ENT 59000: 2022 PG 28 of 42

#### 3. Waste Disposal:

a) Dispose of waste according to General Waste Management SOP, unless superseded by specific SOPs for the operation.

#### 4. Equipment:

a) Tools sufficient for proper containment of pollutants and removal.

#### 5. Frequency:

- a) Landscaping maintenance should occur weekly during spring and summer months or whenever inspections deem it necessary
- b) During fall months leaves and foliage should be collected when inspections deem it necessary.

#### 6. Inspections:

- a) Inspections should occur on a seasonal weekly basis when maintenance is occurring.
- b) Inspections should identify any leaves, clippings, or trimmings left in runoff areas.
- c) Inspections should identify any possible fertilizers, pesticides or chemicals that may enter storm water system.
- d) Use inspections to ensure all SOPs are being followed
- e) Use inspection results to alter maintenance frequency if necessary.

#### 7. Training:

- a) Annually and at hire
- b) Inform staff and service contractors when incorrect SOP implementation is observed.
- c) Landscape Service Contractors must use equal or better SOPs.
- d) Make sure your state Chemical Handling Certification is complete and up-to-date before handling any chemicals.

ENT **59000: 2022** PG 29 of 42

### Waste Management

General:

This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

#### 1. Purpose:

- a) Trash can easily blow out of our dumpster and trash receptacles.
- b) Liquids can leak from our dumpster polluting waterways, subsurface soils, stain our pavement and cause smell.

#### 2. Procedure:

- a) Remain aware of the lids and keep them closed.
- b) Remain aware of leaking and fix. Minimize allowing disposal of liquids in our receptacles and dumpster. Also liquids can leak from the waste haul trucks.
- c) Beware of dumpster capacity. Solve capacity issues. Leaving bags outside of dumpster is not acceptable.

# 3. Waste Disposal Restrictions for all waste Scheduled for the North Pointe Solid Waste Landfill:

- a) Generally most waste generated at this property, and waste from spill and clean up operations can be disposed in our dumpsters under the conditions listed in this SOP. Unless specific disposal requirements are identified by the product SDS or otherwise specified in other SOPs.
- b) Know the facility disposal requirements and restrictions. It should not be assumed that all waste disposed in collection devices will be disposed at the North Pointe Solid Waste Landfill.
- c) Review North Pointe Solid Waste Landfill regulations for additional restrictions and understand what waste is prohibited in the North Pointe Solid Waste Landfill. Ensure the SDS and North Pointe Solid Waste Landfill regulations are not contradictory.

North Pointe Solid Waste Landfill Guidelines:

- Electronic waste is accepted at the transfer station
- Mattresses are accepted
- Dead animals are only accepted at the transfer station Monday thru Friday,
   8 am to 2 pm
- Old refrigerators are accepted for recycling
- Green waste is accepted
- Old batteries are accepted at the transfer station

• Uncontaminated used oil is accepted at the transfer station

• Concrete, bricks and rocks are accepted ENT 59000: 2022 PG 30 of 42

Tree stumps are accepted

• Household Hazardous Waste is accepted on a limited basis

North Pointe Solid Waste Landfill Contact Information:

2000 West 200 South Lindon, Utah 84042

Transfer Station: 801-255-8538

Landfill: 801-787-0669

#### 4. Training:

a) Annually and at hire

b) Inform staff and service contractors when incorrect SOP implementation is observed.

### Flood and Water Quality System

#### General:

These SOPs are not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in these SOPs.

#### 1. Purpose:

- a) Our storm drain system will collect anything we leave in the way of runoff which will fill our underground StormTech Chamber system increasing maintenance cost.
- b) Any liquids or dissolved pollutants can increase the risk for contaminating groundwater for which we are responsible.
- c) During very intense storm events pollutants in excess runoff can by-pass our system increasing risk of contaminating groundwater and the Jordan River.

#### 2. Inspections:

- a) Inspection and Maintenance of the StormTech Chamber System is outlined in following detail.
- b) Regularly remove trash and debris from above ground detention/retention and low impact flood control swale and landscape infrastructure. Remove accumulations with regular grooming operations.

#### 3. Disposal Procedure:

a) StormTech Chamber System debris is removed utilizing a Jetvac and vacuum. See StormTech detail for more information.

- b) Remove and dispose sediment and debris at licensed facilities. Also dry waste can be disposed in your dumpster as permitted by the North Pointe Solid Waste

  Landfill. ENT 59000: 2022 PG 31 of 42
- c) Disposal of hazardous waste. Dispose of hazardous waste at regulated disposal facilities. Follow SDS Sheets. Also see Waste Management and Spill Control SOP.

#### 4. Documentation:

- a) Document completed cleanup activities in "SMP Inspection Report".
- b) Record the amount of waste collected and number of catch basins cleaned and the area they were cleaned in. Keep any notes or comments of any problems encountered.

#### 5. Training:

- a) Annually and at hire
- b) Inform staff and service contractors when incorrect SOP implementation is observed.

#### ENT **59000: 2022** PG 32 of 42

## 9.0 Inspection and Maintenance



#### 9.1 ISOLATOR ROW PLUS PLUS INSPECTION

Regular inspection and maintenance are essential to assure a properly functioning stormwater system. Inspection is easily accomplished through the manhole or optional inspection ports of an Isolator Row PLUS. Please follow local and OSHA rules for a confined space entry.

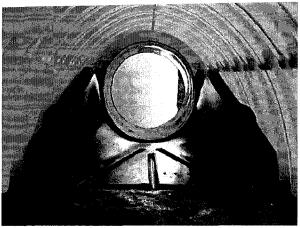
Inspection ports can allow inspection to be accomplished completely from the surface without the need for a confined space entry. Inspection ports provide visual access to the system with the use of a flashlight. A stadia rod may be inserted to determine the depth of sediment. If upon visual inspection it is found that sediment has accumulated to an average depth exceeding 3" (76 mm), cleanout is required.

A StormTech Isolator Row PLUS should initially be inspected immediately after completion of the site's construction. While every effort should be made to prevent sediment from entering the system during construction, it is during this time that excess amounts of sediments are most likely to enter any stormwater system. Inspection and maintenance, if necessary, should be performed prior to passing responsibility over to the site's owner. Once in normal service, a StormTech Isolator Row PLUS should be inspected bi-annually until an understanding of the sites characteristics is developed. The site's maintenance manager can then revise the inspection schedule based on experience or local requirements.

#### 9.2 ISOLATOR ROW PLUS MAINTENANCE

JetVac maintenance is recommended if sediment has been collected to an average depth of 3" (76 mm) inside the Isolator Row PLUS. More frequent maintenance may be required to maintain minimum flow rates through the Isolator Row PLUS. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row PLUS while scouring and suspending sediments. As the nozzle is retrieved, a wave of suspended sediments is flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/ JetVac combi- nation vehicles. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45" (1143 mm) are best. StormTech recommends a maximum nozzle pressure of 2000 psi be utilized during cleaning. The JetVac process shall only be performed on StormTech Rows that have ADS PLUS fabric over the foundation stone.

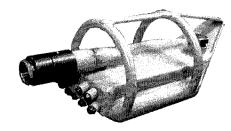
A FLAMP (flared end ramp) is attached to the inlet pipe on the inside of the chamber end cap to provide a smooth transition from pipe invert to fabric bottom. It is configured to improve chamber function performance over time by distributing sediment and debris that would otherwise collect at the inlet. It also serves to improve the fluid and solid flow back into the inlet pipe during maintenance and cleaning, and to guide cleaning and inspection equipment back into the inlet pipe when complete.



FLAMP (Flared End Ramp)



A typical JetVac truck (This is not a StormTech product.)







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

## **Pavement Washing**

ENT 59000: 2022 PG 33 of 42

#### General:

These SOPs are not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in these SOPs.

#### 1. Purpose:

- a) Pavement washing involving detergents can potentially contaminate groundwater with phosphates and with whatever we are washing.
- b) Pavement washing can fill our low impact flood control swale and landscape area, oil/sediment/trash traps and infiltration system with detergents, including sediment and debris increasing our maintenance cost.

#### 2. Procedure:

- a) Prevent waste fluids and any detergents if used from entering storm drain system. The following methods are acceptable for this operation.
  - Dam the inlet using a boom material that seals itself to the pavement and pick up the wastewater with shop-vacuum or absorbent materials.
  - Collect wastewater with shop-vacuum simultaneous with the washing operation.
  - Collect wastewater with vacuum truck or trailer simultaneous with the washing operation.
- b) This procedure must not used to clean the initial spills. First apply the Spill Containment and cleanup SOP following by pavement washing when desired or necessary.

#### 3. Disposal Procedure:

- a) Small volumes of diluted washing waste can usually be drained to the local sanitary sewer. Contact the Lehi Sewer Department.
- b) Large volumes must be disposed at regulated facilities.

#### 4. Pavement Cleaning Frequency:

a) There is no regular pavement washing regimen. Pavement washing is determined by conditions that warrant it, including but not limited to: prevention of slick or other hazardous conditions or restore acceptable appearance of pavements.

#### 5. Training:

a) Annually and at hire

b) Inform staff and service contractors when incorrect SOP implementation is observed.

ENT 59000: 2022 PG 34 of 42

### **Snow and Ice Removal Management**

#### General:

This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

#### 1. Purpose:

- a) Salt and other ice management chemicals if improperly managed will unnecessarily increase our salt impact to our own vegetation and local water resources.
- b) We need to maintain healthy root systems to help maintain optimum infiltration rates

#### 2. De-Icing Procedure:

- a) Do not store or allow salt or equivalent to be stored on outside paved surfaces.
- b) Minimize salt use by varying salt amounts relative to hazard potential.
- c) Sweep excessive piles left by the spreader.
- d) Watch forecast and adjust salt amounts when warm ups are expected the same day.

#### 3. Training:

- a) Annually and at hire.
- b) Require snow and ice service contractors to follow the stronger this SOP and their company SOPs.

#### **General Construction Maintenance**

#### General:

This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

#### 1. Purpose:

ENT **59000: 2022** PG 35 of 42

 Any sediment, debris, or construction waste will fill in our landscaping swales, sediment/trash traps and our underground infiltration system increasing our maintenance cost.

#### 2. Construction Procedure:

- a) Remove or contain all erodible or loose material prior forecast wind and precipitation events or before non-stormwater will pass through the project site. For light weight debris maintenance can require immediately attention for wind and runoff events. Many times daily maintenance is necessary or as needed per random, precipitation or non-stormwater events.
- b) Project materials and waste can be contained or controlled by operational or structural best management practices.
  - Operational; including but not limited to:
    - > Strategic staging of materials eliminating exposure, such as not staging on pavement
    - > Avoiding multiple day staging of backfill and spoil
    - > Haul off spoil as generated or daily
    - > Schedule work during clear forecast
  - Structural; including but not limited to:
    - ➤ Inlet protection, e.g. wattles, filter fabric, drop inlet bags, boards, planks
    - > Gutter dams, e.g. wattles, sandbags, dirt dams
    - > Boundary containment, e.g. wattles, silt fence
    - > Dust control, e.g. water hose,
    - ➤ Waste control, e.g. construction solid or liquid waste containment, dumpster, receptacles
- c) Inspection often to insure the structural best management practices are in good operating condition and at least prior to the workday end. Promptly repair damaged best management practices achieving effective containment.
- d) Cleanup:
  - Use dry cleanup methods, e.g. square nose shovel and broom.
  - Wet methods are allowed if wastewater is prevented from entering the stormwater system, e.g. wet/dry vacuum, disposal to our landscaped areas.
- e) Cleanup Standard:
  - When a broom and a square nosed shovel cannot pick any appreciable amount of material.

#### 3. Waste Disposal:

a) Dispose of waste according to General Waste Management SOP, unless superseded by specific SOPs for the operation.

b) Never discharge waste material to storm drains

ENT 59000: 2022 PG 36 of 42

#### 4. Equipment:

- a) Tools sufficient for proper containment of pollutants and cleanup.
- b) Push broom and square blade shovel should be a minimum.

#### 5. Training:

- c) Annually and at hire.
- d) Require snow and ice service contractors to follow the stronger this SOP and their company SOPs.

## **Spill Control**

#### General:

This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

#### 1. Purpose:

- a) Spilt liquids and solids will reach our low impact flood control landscaping areas, oil/sediment/trash traps and infiltration system potentially contaminating groundwater which we are responsible.
- b) It is vital we contain all spills on the surface. Spills reaching our underground flood control storage system can result in expensive spill mitigation, including potential tear out and replacement.

#### 2. Containment Procedure:

- a) Priority is to dam and contain flowing spills.
- b) Use spill kits booms if available or any material available to stop flowing liquids; including but not limited to, nearby sand, dirt, landscaping materials, etc.
- c) Hazardous or unknown waste material spills
  - 1. Critical Emergency constitutes large quantities of flowing uncontained liquid that people at risk or reach storm drain systems. Generally burst or tipped tanks and containment is still critical. Call HAZMAT, DWQ, Utah County Health Department, Lehi City.
    - Also report spills to DWQ of quantities of 25 gallons and more and when the spill of lesser quantity causes a sheen on downstream water bodies
  - 2. Minor Emergency constitutes a spill that is no longer flowing but has reached a storm drain and adequate cleanup is still critical. Call SLVHD, City

ENT 59000: 2022 PG 37 of 42

- 3. Spills that are contained on the surface, typically do not meet the criteria for Critical and Minor Emergencies and may be managed by the responsible implementation of this SOP.
- 4. Contact Numbers:

HAZMAT - 911 DWQ - 801-231-1769, 801-536-4123, 801-536-4300 Utah County Health Department - 801-851-7331 Lehi City - 385-201-1000

#### 3. Cleanup Procedure:

- a) NEVER WASH SPILLS TO THE STORM DRAIN SYSTEMS.
- b) Clean per SDS requirements but generally most spills can be cleaned up according to the following:
  - Absorb liquid spills with spill kit absorbent material, sand or dirt until liquid is sufficiently converted to solid material.
  - Remove immediately using dry cleanup methods, e.g. broom and shovel, or vacuum operations.
  - Cleanup with water and detergents may also be necessary depending on the spilled material. However, the waste from this operation must be vacuumed or effectively picked up by dry methods or vacuum machinery. See Pavement Washing SOP.
  - Repeat process when residue material remains.

#### 4. Disposal:

- a) Follow SDS requirements but usually most spills can be disposed per the following b. & c.
- b) Generally most spills absorbed into solid forms can be disposed to the dumpster and receptacles. Follow Waste Management SOP.
- c) Generally liquid waste from surface cleansing processes may be disposed to the sanitary sewer system after the following conditions have been met:
  - Dry cleanup methods have been used to remove the bulk of the spill and disposed per the Waste Management SOP.
  - The liquid waste amounts are small and diluted with water. This is intended for spill cleanup waste only and never for the disposal of unused or spent liquids.

#### 5. Documentation:

a) Document all spills in Appendix C.

#### 6. SDS sheets:

a) SDS Manual is filed in break room.

7. Materials:

ENT 59000: 2022

PG 38 of 42

a) Generally sand or dirt will work for most cleanup operations and for containment. However, it is the responsibility of the owner to select the absorbent materials and cleanup methods required by the SDS Manuals for chemicals used by the company.

#### 8. Training:

- a) Annually and at hire.
- b) Require snow and ice service contractors to follow the stronger this SOP and their company SOPs.

USWAC Long-Term Stormwater Management Plan 2021-08-10

## APPENDIX C - PLAN RECORDKEEPING DOCUMENTS

ENT **59000: 2022** PG 39 of 42

#### MAINTENANCE/INSPECTION SCHEDULE

ENT 59000: 2022 PG 40 of 42

Frequency	Site Infrastructure.
M	Catch Basins
Q	Manholes
A	StormTech System
M	Roof Drains

Inspection Frequency Key: A=annual, Q=Quarterly, M=monthly, W=weekly, S=following appreciable storm event, U=Unique infrastructure specific (specify)

#### RECORD INSPECTIONS IN THE MAINTENANCE LOG

Inspection Means: Either; Traditional walk through, Awareness/Observation, and during regular maintenance operations while noting efficiencies/inefficiencies/concerns found, etc.

## MAINTENANCE LOG ENT59000: 2022 PG 41 of 42

Date	Maintenance Performed/Spill Events. Perform Maintenance per SOPs	Observation Notes, including but not limited to; Inspection results, Observations, System Performance (effectiveness/inefficiencies), SOP Usefulness, Concerns, Necessary Changes	Initials

l	Annual Summary of LTSWMP effectiveness, inefficiencies, problems, necessary changes etc.
Ī	
ı	
١	
l	
l	
١	
l	
l	
Ì	
l	
l	
ĺ	
١	

<sup>\*</sup>You may create your own form that provides this same information or request a word copy of this document.

ENT **59000:2022** PG 42 of 42

## Annual SOP Training Log per Section 2

SOP	Trainer	Employee Name / Maintenance Contractor Co	Date
			<u></u>
L			

<sup>\*</sup>You may create your own form that provides this same information or request a word copy of this document.