

WHEN RECORDED, MAIL TO:  
Utah Department of Transportation  
Right of Way, Fourth Floor  
Box 148420  
Salt Lake City, UT 84114-8240

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Book - 10674 Ps - 862-873  
ADAM GARDINER  
RECORDER, SALT LAKE COUNTY, UTAH  
UT ST-DEPT OF TRANSPORTATION  
BOX 148420 ATT: MONE WARDLE  
SLC UT 84114-8420  
BY: KRP, DEPUTY - WI 12 P.

## UTAH DEPARTMENT OF TRANSPORTATION DRAINAGE AGREEMENT

Salt Lake County

Tax ID No. 08-36-205-047

This Drainage Agreement made and entered into this \_\_\_\_ day of \_\_\_\_\_  
20<sup>18</sup> between Utah Department of Transportation ("Department") and  
RDA of Salt Lake City ("Permittee"), who owns the property described in Exhibit A.

### RECITALS

The Permittee (property owner) desires to construct a drainage system and a drainage connection within the Department Right of Way subject to the requirements and conditions described in the Permit.

Department's Policy 08A-06 requires the Permittee to sign the Drainage Agreement as part of the permitting process for a drainage connection.

The parties agree as follows:

(1) **COMPLIANCE:** Permittee must comply with the conditions in the permit and applicable state and federal statutes, regulations and rules. The Department may perform inspection of Permittee's drainage system to monitor compliance with the Permit and with state and federal statutes, regulations, and rules. Permittee grants the Department access to the Permittee's property for inspection or to perform any repairs to prevent damage to the Department's Right of Way. The Department's inspection does not relieve the Permittee of its responsibilities in meeting the Permit conditions. The Permittee is responsible for the Department's inspection costs. Permittee's responsibilities include:

- a) Permittee is responsible for repairing and restoring any portion of the Department Right of Way and drainage systems located therein that may be damaged as a result of making the drainage connection or as the result of any subsequent drainage originating from the Permittee's property.
- b) Permittee must not increase its drainage discharge into the Department's drainage system without the written permission of the Department.
- c) A bonded contractor must apply for the required permit to install drainage systems in the Department Right of Way prior to the commencement of any such work.
- d) The Permittee is responsible to obtain environmental clearances, permits, or other approvals from any other local, state or federal agency that may have regulatory jurisdiction or oversight.

(2) **MAINTENANCE**: Permittee's drainage system must at all times be maintained, repaired, constructed, and operated by and at the expense of the Permittee. The drainage system will be serviced without access from any interstate highway or ramp. The Department may notify the Permittee of any maintenance requirements if the Permittee fails to maintain the drainage system. The Department reserves the right, without relieving the Permittee of its obligations, to reconstruct or make repairs to the drainage system, as it may consider necessary, and the Permittee must reimburse the Department for its cost if the Permittee fails to comply with the Department's written notification and complete the required maintenance.

(3) **FUTURE IMPACTS**: The Department has the right to change its drainage system for any future transportation project. If the Department's drainage system is reconstructed or modified, the Department reserves the right to hold the Permittee responsible for the cost to reconnect to the Department's drainage system. The Department is not responsible for any costs the Permittee incurs due to the drainage system being reconstructed or modified.

(4) **LIABILITY**: Pursuant to R930-7-6(2)(b), the Permittee is required to guarantee satisfactory performance under this Permit. The Department may proceed against Permittee to recover all expenses incurred by the Department, its employees, or contractors in repairing the sections of roadway damaged by the Permittee or its drainage system, including the failure to restore the Right of Way to Department standards. The Permittee will be liable for all costs the Department incurs under this agreement.

The Permittee will indemnify, defend, and hold harmless the Department, its employees, and the State of Utah from responsibility for any damage or liability arising from Permittee's construction, maintenance, repair, or any other related operation of the drainage system pursuant to the Permit issued under this agreement.

The Permittee will not hold the Department liable for damages resulting from any back-up or flow into the Permittee's drainage system or property. The Permittee accepts all risks associated with the connection to the Department's drainage system. The Permittee is responsible for all liability resulting from the discharge of pollutants into the Department's drainage system from its property or drainage system.

**(5) CANCELLATION OF PERMIT:** Any failure on the part of Permittee to comply with the terms and conditions set forth in the Permit or this Agreement may result in cancellation of the Permit. Failure of the Permittee to pay any sum of money for costs incurred by the Department in association with inspection, reconstruction, repair, or maintenance of the drainage system may also result in cancellation of the Permit. Non-compliance with either the Permit or Agreement may result in the Department removing the drainage system and restoring the highway and Right of Way at the sole expense of the Permittee. The Department will notify the Permittee in writing prior to any cancellation, setting forth the violations, and will provide the Permittee a reasonable time to correct the violations to the satisfaction of the Department. The Department may order the Permittee to remove its drainage system if the violations are not corrected.

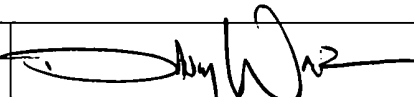
**(6) SUCCESSORS AND ASSIGNS:** All covenants, obligations and agreements will be binding upon the parties, their successors and assigns and run with the land as described in Exhibit A until the drainage connection is removed from the Department's Right of Way.

**(7) MISCELLANEOUS:**

- a) Each party agrees to undertake and perform all further acts that are reasonably necessary to carry out the intent and purpose of the Agreement at the request of the other party.
- b) This Agreement does not create any type of agency relationship, joint venture, or partnership between the Department and Permittee.
- c) The failure of either party to insist upon strict compliance of any of the terms and conditions, or failure or delay by either party to exercise any rights or remedies provided in this Agreement, or by law, will not release either party from any obligations arising under this Agreement.

- d) This Agreement shall be deemed to be made under and shall be governed by the laws of the State of Utah in all respects. Each person signing this Agreement warrants that the person has full legal capacity, power and authority to execute this Agreement for and on behalf of the respective party and to bind such party.
  
- e) If any portion of this Agreement is held to be invalid or unenforceable for any reason by a court of competent jurisdiction, such invalidity or unenforceability shall not affect any other provision, and this Agreement shall be construed as if such invalid or unenforceable provision had never been included.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

CURRENT PROPERTY OWNER/PERMITTEE	
Name Printed:	Danny Walz
Signature:	

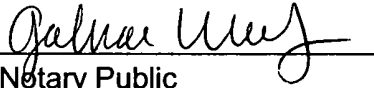
State of Utah )

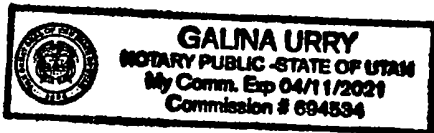
County of Salt Lake )


On this 9 day of May, in the year 2018,

Danny Walz personally appeared before me and duly acknowledged to me that he/she executed this agreement as the current property owner of said property or was authorized to sign the agreement on behalf of the property owner. Witness my hand and official seal.

(NOTARY SEAL)

  
Notary Public



UTAH DEPARTMENT OF TRANSPORTATION – Region Permits Officer	
Name Printed:	NATHAN STEPHENS
Signature:	

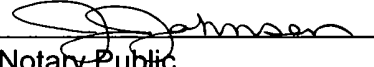
State of Utah)

County of Salt Lake )

On this 7<sup>th</sup> day of May, in the year 2018,

\_\_\_\_\_ personally appeared before me, who duly acknowledged to me that he/she executed this agreement pursuant to the authority delegated to him/her for the Utah Department of Transportation. Witness my hand and official seal.

(NOTARY SEAL)

  
Notary Public



**EXHIBIT A (Legal Description of Permittee's Property)**

A parcel of land lying and situate in the Northeast quarter of Section 36, Township 1 North, Range 1 West, Salt Lake Base and Meridian, Salt Lake City, Salt Lake County, Utah, being more particularly described as follows:

Beginning at a point on the East line of 300 West Street and the Southwest corner of Lot 2, Marmalade District, recorded January 15, 2014 in Book 2014P at Page 9, in the office of the Salt Lake County Recorder; thence North 00°01'28" East 513.17 feet along the East right of way line of 300 West Street; thence North 89°59'33" East 201.90 feet along the South right of way line of 600 North Street; thence South 00°01'15" West 177.50 feet; thence North 89°59'33" East 7.71 feet; thence South 00°01'15" West 161.36 feet; thence North 89°56'19" West 90.22 feet; thence South 00°14'04" West 174.74 feet; thence North 89°51'18" West 118.76 feet to the point of beginning.

TOGETHER WITH a right of way as described in that certain Easement recorded March 23, 2017 as Entry No. 12501445 in Book 10540 at Page 8110 of official records.

**EXHIBIT B**

(include drainage plan showing state route, mile post and location of all drainage systems and drainage calculations)

**“EXHIBIT B”**—Department Drainage Agreement (per UDOT Policy 08A-06)





## LIFT STATION

### At Buildout

Avg day gpd  
120.0 gpm

Gallons a minute to run 3 times an hour  
for 6 minutes (average day) 399.6

Wet well Diameter 6 ft  
Area 28.27

## Volume

Depth	Vol (ft <sup>3</sup> )	Vol (gallons)
0.5	14.14	105.75
1	28.27	211.49
1.5	42.41	317.24
2	56.55	422.98
2.5	70.69	528.73
* 3	84.82	634.48
3.5	98.96	740.22
4	113.10	845.97
4.5	127.23	951.71
5	141.37	1057.46
5.5	155.51	1163.21
6	169.65	1268.95
6.5	183.78	1374.70

## PUMP RUN TIME AT BUILDOUT

$$t = \text{vol} / (\text{Qout} - \text{Qin})$$

Depth	t=	
0.5	t=	0.38
1	t=	0.76
1.5	t=	1.13
2	t=	1.51
2.5	t=	1.89
3	t=	2.27
* 3.5	t=	2.65
4	t=	3.03
4.5	t=	3.40
5	t=	3.78
5.5	t=	4.16
6	t=	4.54
6.5	t=	4.92

## DETENTION TIME AT BUILDOUT

$$T = \text{vol} / (\text{Qout} - \text{Qin}) + \text{Vol} / \text{Qin}, \quad T = t + \text{vol} / \text{Qin}$$

Depth	T=	
0.5	T=	1.26
1	T=	2.52
1.5	T=	3.78
2	T=	5.04
2.5	T=	6.30
3	T=	7.56

	3.5	T=	8.82
*	4	T=	10.08
	4.5	T=	11.33
	5	T=	12.59
	5.5	T=	13.85
	6	T=	15.11
	6.5	T=	16.37

Depth \* 3.5'

\*choose based on pump run time and detention time approximately pump run time ~5min-10 min  
detention time 15-20min

2/6

## SETTINGS

	Existing	At buildout
Ground elevation		4239.97
Lowest Inlet Invert		4233.17
Alarm Level		4233.00
1st Pump		4231.00
Pump Off		4227.50
Low Alarm Level		4227.00
Wet well bottom		4225.50

Total Depth 14.5

## FRICION LOSSES AT BUILDOUT

$$f = .2083 (100/C)^{1.85} (Q^{1.85}) / (d^{4.86})$$

$$Q = \frac{399.6}{C = 130}$$

	diameter	actual dia
d1	4	4.072
d2	6	5.993
d3	8	

$$\text{Length} = 110$$

f(d1)=	9.0622376 ft/100ft	9.9684614
f(d2)=	1.3853197 ft/100ft	1.5238517
f(d3)=	#DIV/0! ft/100ft	#DIV/0!

## VELOCITY

$$v=(0.550)*C*((d/12)^{0.63})*((f/100)^{0.54})$$

$$v(d1)= 9.9870721$$

$$v(d2)= 4.6206711$$

$$v(d3)= \text{\#DIV/0!}$$

## Operational Losses

Type	Number of	4" k values	6" k values	8" k values
Entrance	1	0.5	0.5	
Exit	1	1	1	
Check Valve	1	2	2	
Globe Valve	1	6	5.9	
90 degree bend	5	0.19	0.17	
45 degree bend	3	0.19	0.17	
	$\Sigma k$	11.02	10.76	

$$hm=kv^2/2g$$

$$hm(d1)= 56.022046$$

$$hm(d2)= 11.709096$$

$$hm(d3)= \text{\#DIV/0!}$$

## STATIC LOSSES

$$\text{Discharge elevation} \quad \underline{4237.81}$$

$$\text{Bottom of lift station} \quad \underline{4,225.5}$$

$$\Delta z = \underline{12.3}$$

## TOTAL DYNAM HEAD

$$TDH=\Delta z+hm+fl$$

$$TDH(d1)= 78.3$$

$$TDH(d2)= 25.5$$

$$TDH(d3)= \text{\#DIV/0!}$$