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CURVE TABLE

#	RADIUS	ARC LENGTH	CHORD LENGTH	TANGENT	CHORD BEARING	DELTA ANGLE
C1	30.00'	22.08'	21.58'	11.57'	N20°08'06"W	42°10'06"
C2	55.00'	49.23'	47.60'	26.40'	N15°34'45"W	51°16'48"
C3	55.00'	51.76'	49.88'	27.98'	N37°01'25"E	53°55'32"
C4	55.00'	51.76'	49.88'	27.98'	S89°03'03"E	53°55'32"
C5	55.00'	51.76'	49.88'	27.98'	S35°07'31"E	53°55'32"
C6	55.00'	49.23'	47.60'	26.40'	S17°28'39"W	51°16'48"
C7	30.00'	22.08'	21.58'	11.57'	S22°02'W	42°10'06"

BOUNDARY DESCRIPTION

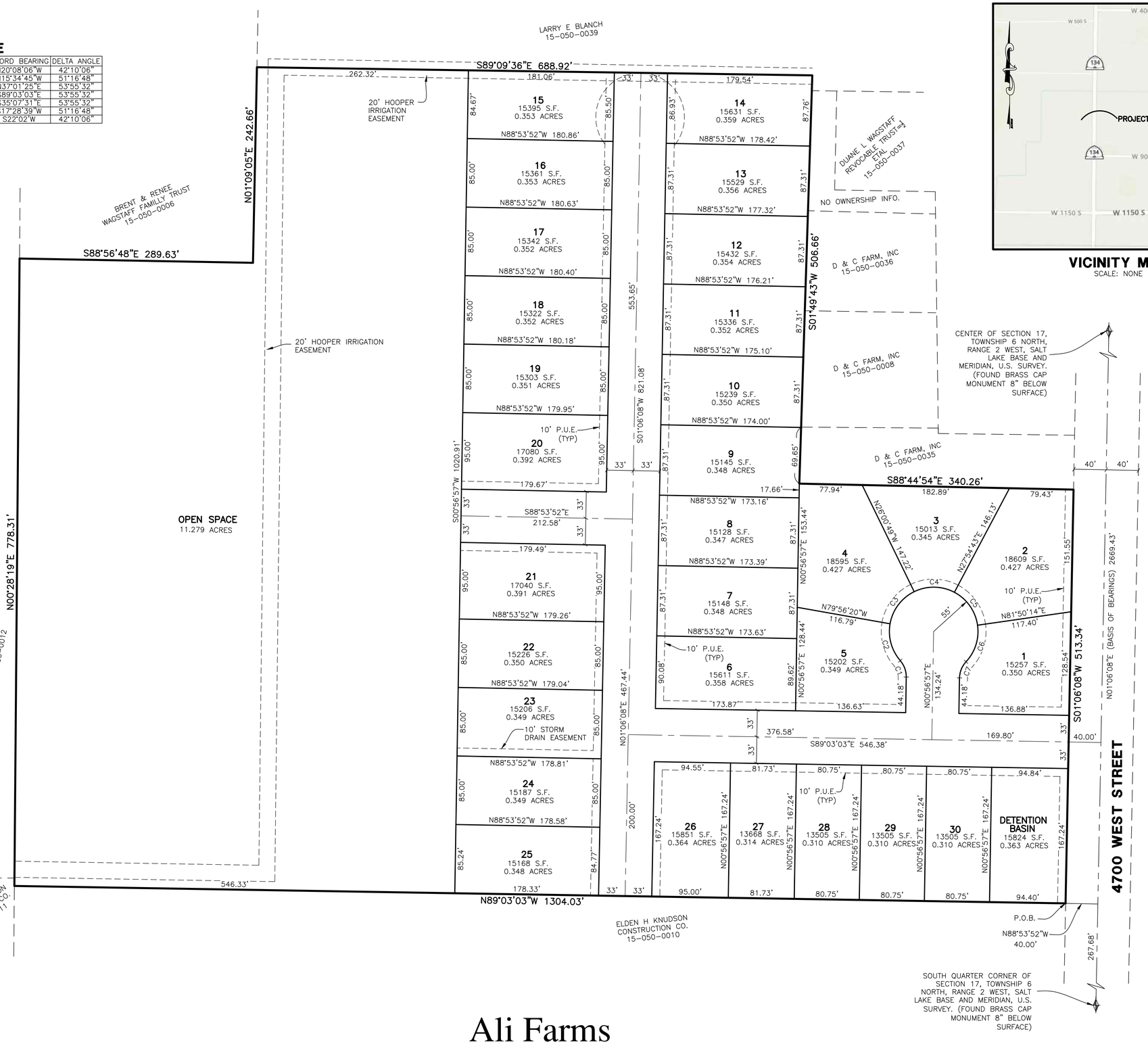
PART OF THE SOUTHWEST QUARTER OF SECTION 17, TOWNSHIP 6 NORTH, RANGE 2 WEST, SALT LAKE BASE AND MERIDIAN, U.S. SURVEY. MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF 4700 WEST STREET, SAID POINT BEING N01°06'08"E 267.68 FEET AND N88°53'52"W 40.00 FEET FROM THE SOUTH QUARTER CORNER OF SAID SECTION 17; THENCE N89°03'02"W 1304.03 FEET; THENCE N00°28'19"E 778.31 FEET; THENCE S88°56'48"E 289.63 FEET; THENCE N01°09'05"E 242.66 FEET; THENCE S89°09'36"E 688.92 FEET; THENCE S01°49'43"W 506.66 FEET; THENCE S88°44'54"E 340.26 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF 4700 WEST STREET; THENCE S01°06'08"W ALONG SAID WESTERLY LINE, 513.34 FEET TO THE POINT OF BEGINNING.

CONTAINING 1,095,666 SQUARE FEET OR 25.153 ACRES MORE OR LESS.

DESIGN DATA

TOTAL AREA.....25.15 ACRES
RIGHT-OF-WAY AREA.....2.89 ACRES
NET AREA.....22.26 ACRES
ALLOWABLE RIGHT-OF-WAY.....2.52 ACRES
OPEN SPACE PROPOSED...11.26 ACRES (50.6%)
DENSITY – 24.78 X 1.25 = 30.98 (30) LOTS



VICINITY MAP

SCALE: NONE

LEGEND

- = SECTION CORNER
- = BOUNDARY LINE
- = LOT LINE
- = ADJOINING PROPERTY
- = EASEMENTS
- = SECTION TIE LINE
- P.U.E. = PUBLIC UTILITY EASEMENT

60 0 60 120 180
Scale: 1" = 60'

Ali Farms

Weber County, Utah

Developer:
Phil Holland
(801) 668-1565

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF REEVE & ASSOCIATES, INC., 5160 S. 1500 W., RIVERDALE, UTAH 84405, AND SHALL NOT BE PHOTOCOPIED, RE-DRAWN, OR USED ON ANY PROJECT OTHER THAN THE PROJECT SPECIFICALLY DESIGNED FOR, WITHOUT THEIR WRITTEN PERMISSION. THE OWNERS AND ENGINEERS OF REEVE & ASSOCIATES, INC. DISCLAIM ANY LIABILITY FOR ANY CHANGES OR MODIFICATIONS MADE TO THESE PLANS OR THE DESIGN THEREON WITHOUT THEIR CONSENT.

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LAND PLANNERS • CIVIL ENGINEERS • LAND SURVEYORS
TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

REVISIONS
DATE | DESCRIPTION

Ali Farms
PART OF THE SW 1/4 OF SECTION 17, T.6N., R.2W., S.L.B & M., U.S. SURVEY
WEBER COUNTY, UTAH

Preliminary Plan

Project Info.
Engineer: N. Reeve
Planner: C. Cave
Designer: E. Roche
Date: 7-13-21
Name: ALI FARMS
Number: 7605-02

Sheet 1 of 2 Sheets

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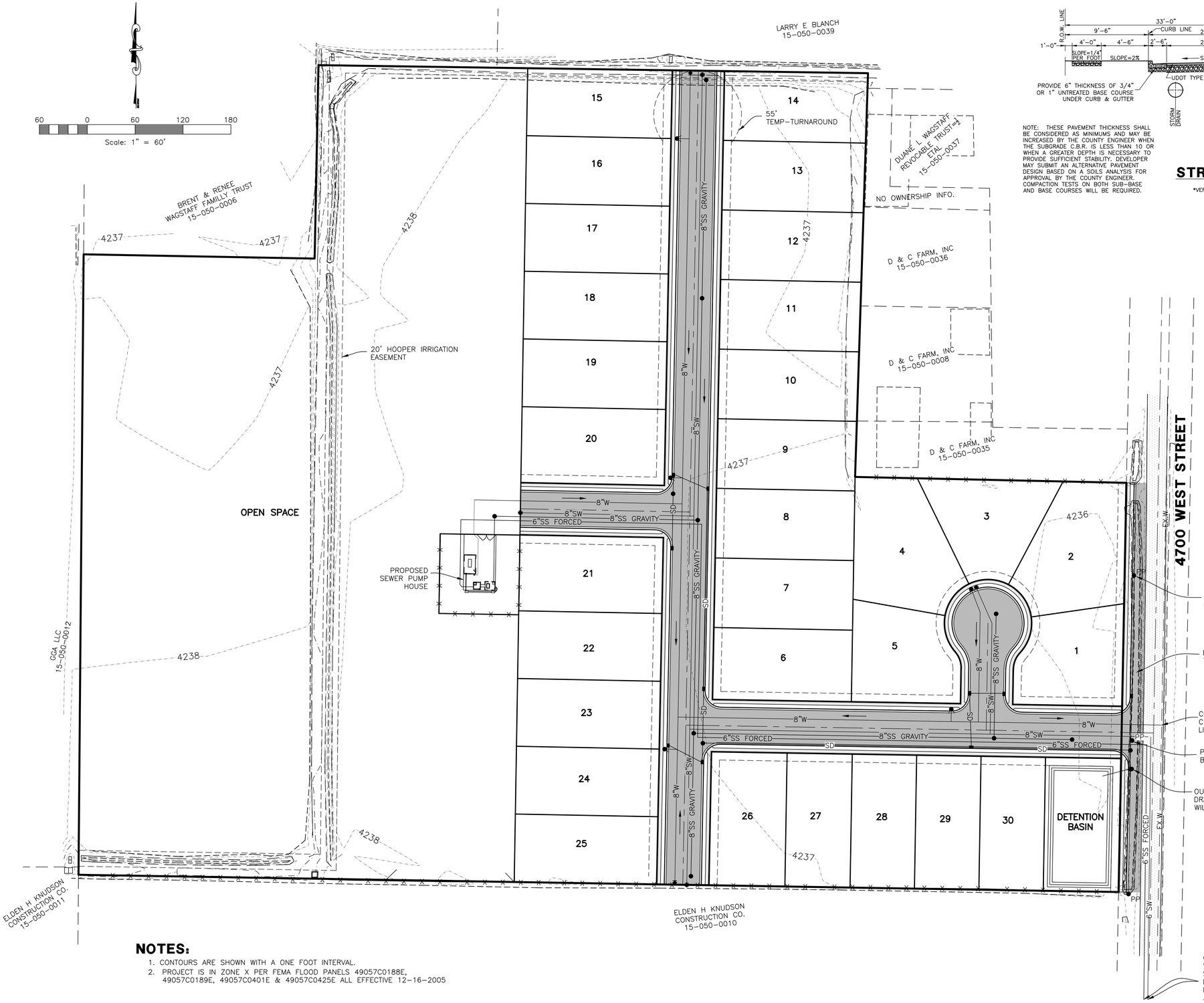

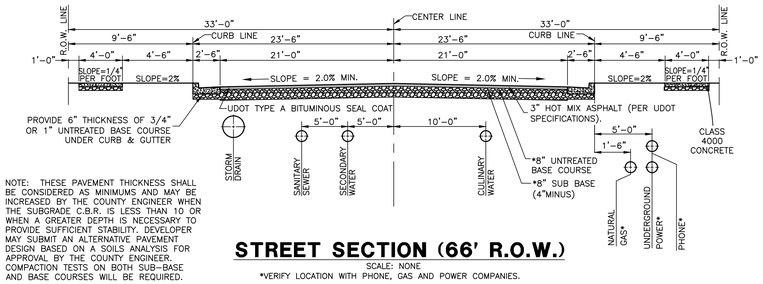

NOTE: THESE PAVEMENT THICKNESS SHALL BE CONSIDERED AS MINIMUMS AND MAY BE INCREASED BY THE COUNTY ENGINEER WHEN THE SUBGRADE C.B.R. IS LESS THAN 10 OR WHEN A GREATER DEPTH IS NECESSARY TO PROVIDE SUFFICIENT STABILITY. DEVELOPER MAY SUBMIT AN ALTERNATIVE PAVEMENT DESIGN BASED ON A SOILS ANALYSIS FOR APPROVAL BY THE COUNTY ENGINEER. COMPACTION TESTS ON BOTH SUB-BASE AND BASE COURSES WILL BE REQUIRED.

STREET SECTION (66' R.O.W.)

SCALE: NONE

*VERIFY LOCATION WITH PHONE, GAS AND POWER COMPANIES.

LEGEND

- = BOUNDARY LINE
- = LOT LINE
- = ADJOINING PROPERTY
- = EASEMENTS
- = ROAD CENTERLINE
- SS = PROPOSED SANITARY SEWER LINE
- SW = PROPOSED SECONDARY WATER LINE
- W = PROPOSED CULINARY WATER LINE
- EX.W = EXISTING CULINARY WATER LINE
- SD = PROPOSED STORM DRAIN (SIZE VARIES)
- = EXISTING FENCE LINE
- = PROPOSED FIRE HYDRANT
- = PROPOSED SANITARY SEWER MANHOLE
- = PLUG W/ 2" BLOW-OFF
- = PROPOSED STORM DRAIN MANHOLE
- = PROPOSED SINGLE GRATE CATCH BASIN WITH BICYCLE-SAFE GRATE
- PP = EXISTING POWER POLE
- = EXISTING ASPHALT SURFACE
- = PROPOSED ASPHALT SURFACE
- = PROPOSED CONCRETE

NOTES:

1. CONTOURS ARE SHOWN WITH A ONE FOOT INTERVAL.
2. PROJECT IS IN ZONE X PER FEMA FLOOD PANELS 49057C0188E, 49057C0189E, 49057C0401E & 49057C0425E ALL EFFECTIVE 12-16-2005

Storm Runoff Calculations

Ali Farms
7605-02 7/16/2021 JPL

The following runoff calculations are based on the Rainfall - Intensity - Duration Frequency Curve for the Ogden, UT area taken from the NOAA Atlas 14 database. Calculations have been completed for the 25-yr 24-hr storm event. Storm water runoff has been calculated for a fully developed site and limited to a release rate of 0.1 cfs/acre.

The calculations are as follows:

Assumptions:

Number of Lots	31	
House Area	2500 ft^2	
Driveway Area	600 ft^2	

Drainage Area:

Total Area =	25.15 acre or	1,095,662 ft^2	
Runoff Coefficients			
12% Paved Area		128,472	C = 0.9
7% Roof		80,200	C = 0.9
81% Landscaped Area		886,990	C = 0.2
Weighted Runoff Coefficient			C = 0.33

LID Retention

80th Percentile Rainfall Event	0.48	in
Is the site Feasible for LID?	Yes	
Site Imperviousness	0.19	
NRCS Soil Group	C/D	(USDA)
Rv Equation	0.83*1.122	
R_v	0.13	
V_{goal}	5659	c.f.

Volume of Run-off for 25-year Storm Event:

C = 0.33
I = See Below in/hr
A = 1095661.56 ft^2
Q(out) = 2.52 ft^3/s (0.1 cfs per acre)

time (min)	time (sec)	I (in./hr.)	Q (cfs)	Vol. in (cf)	Vol. out (cf)	Difference (cf)
0	0	0.00	0.00	0	0	0
5	300	4.30	36.35	10905	755	10151
10	600	3.27	27.64	16586	1509	15077
15	900	2.70	22.83	20543	2264	18279
30	1800	1.82	15.39	27695	4528	23167
60	3600	1.13	9.55	34390	9055	25335
120	7200	0.63	5.34	38468	18110	20358
180	10800	0.44	3.75	40446	27165	13281
360	21600	0.27	2.27	49120	54330	-5211
720	43200	0.17	1.41	60989	108661	-47672
1440	86400	0.10	0.81	70119	217321	-147202

Orifice Sizing

Given:
Q = 2.52 cfs
2g = 64.4 ft/s^2
H = 2.75 ft (Estimate)
Cd = 0.62 for circular openings
R = SQRT(Q/pi/(0.7*(64.4*H)^0.5))
R = 0.31 feet
3.74 inches
D = 7.48 inches
A = 43.92 inches ^2 0.3050 ft ^2

SUMMARY:

The required 25-yr storage volume is	**25,335**	**cubic feet**
The required LID Retention volume is	**5,659**	**cubic feet**
Orifice size is	**7.5**	**inches**

Developer:
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Ali Farms

Weber County, Utah

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DATE	DESCRIPTION

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WEBER COUNTY, UTAH

Preliminary Utility Plan

Project Info.
Engineer: N. Reeve
Planner: C. Cave
Designer: E. Roche
Date: 7-13-21
Name: ALI FARMS
Number: 7605-02

Sheet 2 of 2 Sheets

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