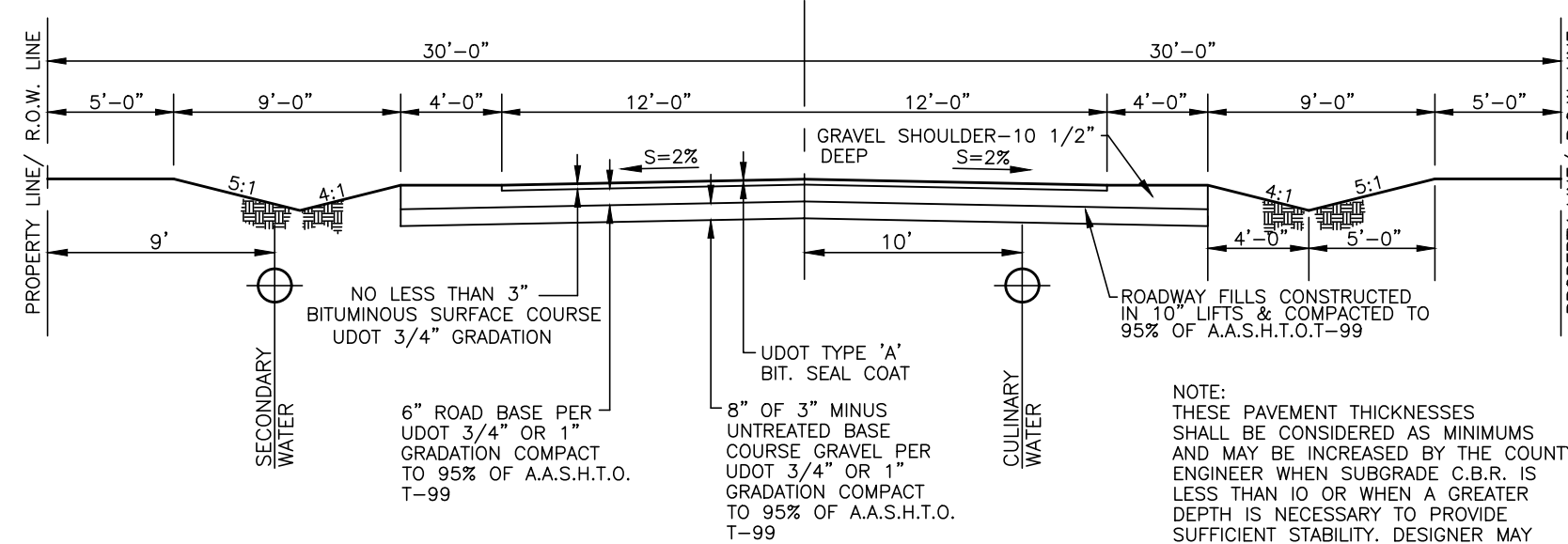




Vicinity Map
NOT TO SCALE



STREET SECTION (60' R.O.W.)
SCALE: NONE

Storm Runoff Calculations
Fenster Farm

9/28/2018
The following runoff calculations are based on the Rainfall - Intensity - Duration Frequency Curve for the Harrisville, UT area taken from the NOAA Atlas 14 database, using a 100 year storm for detention. Storm water runoff has been calculated for a fully developed site.

The calculations are as follows:

Drainage Area:
Total Area = 27.30 acre or 1,189,114 ft²

Runoff Coefficients
Paved Area 99,886 C = 0.9
Landscaped Area 1,021,728 C = 0.2
Roof 67,500 C = 0.9

Weighted Runoff Coefficient
C = 0.30

Time of Concentration
Using Storm Water Run-Off "Overland Flow Time"
To from Project Site = 30 minutes

Volume of Run-off for 100-year Storm Event:

Time (min)	Time (sec)	I (in/hr)	Q (cfs)	Vol in (cf)	Vol out (cf)	Difference (cf)
0	0	0.00	0.00	0.00	0.00	0.00
5	300	6.49	62.81	15842.67	1637.90	14204.77
10	600	4.63	40.18	24106.29	3275.80	20830.49
15	900	4.07	33.17	28851.70	4913.70	24938.01
30	1800	2.74	22.33	40193.45	8927.39	30366.06
60	3600	1.70	13.85	49875.08	16654.78	33220.30
120	7200	0.92	7.51	54959.79	30909.59	14150.20
180	10800	0.63	5.14	55537.37	43864.34	11673.03
360	21600	0.35	2.95	51810.39	11326.69	40483.70
720	43200	0.21	1.73	74638.59	23567.38	51071.21
1440	86400	0.12	0.95	81677.78	47174.75	34503.03

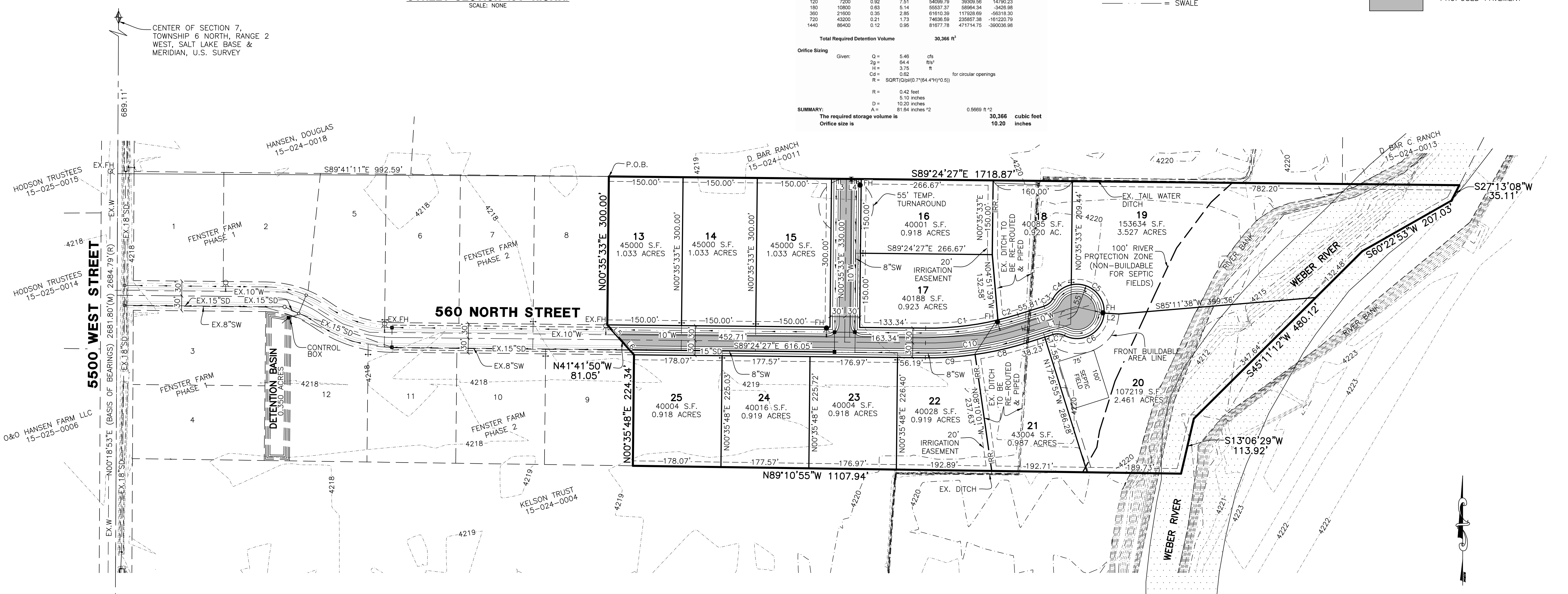
Total Required Detention Volume 30,366 ft³

Orifice Sizing
Given: Q = 5.46 cfs
Zg = 64.4 ft
H = 3.75 ft
Cd = 0.62
R = SQRT(Q/(0.7854*H^0.5))
R = 0.42 feet
D = 5.10 inches
D = 10.20 inches
A = 81.64 inches²
0.5669 ft²

SUMMARY:
The required storage volume is 30,366 cubic feet
Orifice size is 10.20 inches

LEGEND

- SECTION CORNER
 - BOUNDARY LINE
 - LOT LINE
 - ADJOINING PROPERTY
 - EASEMENTS
 - SECTION TIE LINE
 - EX. W — EXISTING CULINARY WATER LINE (SIZE VARIES)
 - SD — PROPOSED STORM DRAIN (SIZE VARIES)
 - EX. SD — EXISTING STORM DRAIN
 - SW — PROPOSED IRRIGATION LINE
 - EX. SW — EXISTING IRRIGATION LINE
 - IRR — PROPOSED IRRIGATION TAIL WATER LINE
 - EXISTING FENCE LINE
 - SWALE
- EX. FH = EX. FIRE HYDRANT
 - FH = FIRE HYDRANT
 - ⊗ = PLUG W/ 2" BLOW-OFF
 - ⊙ = PROPOSED FIRE HYDRANT
 - ⊘ = EXISTING FIRE HYDRANT
 - ⊗ = EXISTING GATE VALVE
 - ⊙ = EXISTING STORM DRAIN MANHOLE
 - ⊘ = PROPOSED STORM DRAIN MANHOLE
 - ⊙ = EXISTING 3'X3' CATCH BASIN
 - ⊘ = FEMA FLOOD ZONE
 - = PROPOSED PAVEMENT



NOTES

- CONTOURS ARE SHOWN IN 1 FOOT INTERVALS.
- CONNECT EXISTING STORM DRAIN, CULINARY WATER AND SECONDARY WATER TO EXISTING LINES IN PHASE 2
- SOME EXISTING DITCHES WILL BE RE-ROUTED AND PIPED.
- DETENTION BASIN WILL BE CONSTRUCTED IN PHASE 2

LINE TABLE

LINE	BEARING	DISTANCE
L1	N72°33'05"E	116.02'
L2	S86°27'31"E	30.00'
L3	S89°24'27"E	30.00'
L4	S89°24'27"E	30.00'
L5	S41°41'50"E	40.55'
L6	S41°41'50"E	40.50'

BOUNDARY DESCRIPTION

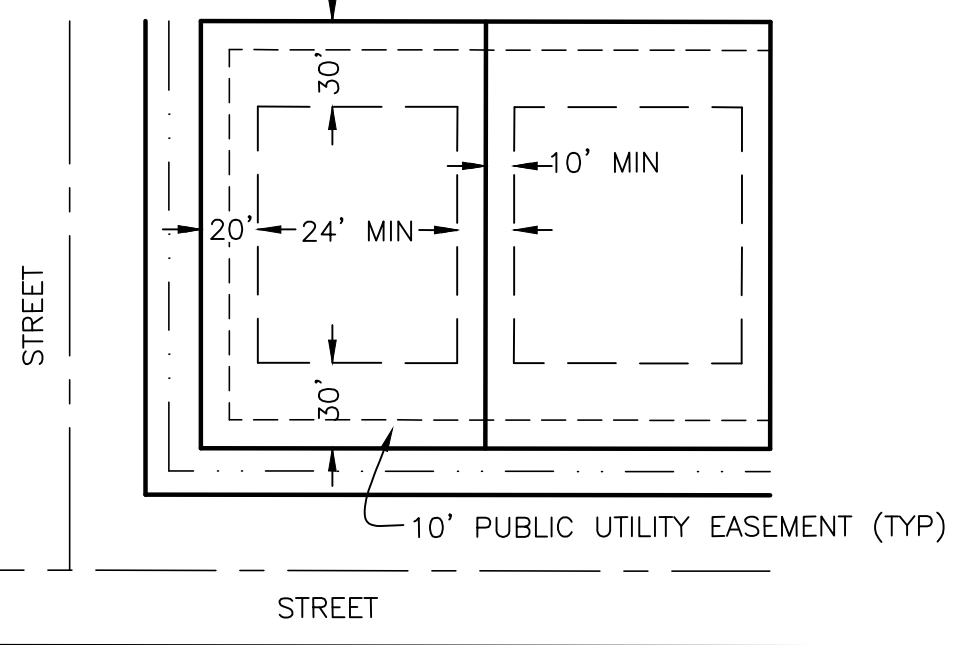
PART OF THE SOUTHEAST QUARTER OF SECTION 7, TOWNSHIP 6 NORTH, RANGE 2 WEST, SALT LAKE BASE AND MERIDIAN, U.S. SURVEY. DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT, SAID POINT BEING S00°18'53"W 689.11 FEET AND S89°41'11"E 992.59 FEET; THENCE S89°24'27"E 1718.87 FEET; THENCE S27°13'08"W 35.11 FEET; THENCE S60°22'53"W 207.03 FEET; THENCE S45°11'12"W 480.12 FEET; THENCE S13°06'29"W 113.92 FEET; THENCE N89°10'55"W 1107.94 FEET; THENCE N00°35'48"E 224.34 FEET; THENCE N41°41'50"W 81.05 FEET; THENCE N00°35'33"E 300.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 799430 SQUARE FEET OR 18.352 ACRES MORE OR LESS

CURVE TABLE

#	RADIUS	ARC LENGTH	CHD LENGTH	TANGENT	CHD BEARING	DELTA
C1	599.91'	147.41'	147.04'	74.08'	N83°33'11"E	14°04'43"
C2	599.91'	41.49'	41.48'	20.75'	N74°31'57"E	3°57'46"
C3	30.00'	23.61'	23.01'	12.46'	N50°00'06"E	45°05'57"
C4	55.00'	48.44'	46.89'	25.92'	S52°41'08"W	50°28'01"
C5	55.00'	101.39'	87.63'	72.49'	S49°16'11"E	105°37'20"
C6	55.00'	109.54'	92.31'	84.87'	N60°35'45"E	114°06'32"
C7	30.00'	23.61'	23.01'	12.46'	S84°53'57"E	45°05'57"
C8	659.91'	106.91'	106.79'	53.57'	N77°11'32"E	9°16'55"
C9	659.91'	100.93'	100.84'	50.57'	N86°12'54"E	8°45'48"
C10	629.91'	198.34'	197.53'	100.00'	N81°34'19"E	118°02'28"



TYPICAL LOT UTILITY & SETBACK EASEMENT
SCALE: NONE

Fenster Farm Subdivision Phase 3

Weber County, Utah

Reeve & Associates, Inc.
5160 SOUTH 1500 WEST RIVERDALE, UTAH 84405
TEL: (801) 621-3100 FAX: (801) 621-2666 www.reeve-assoc.com
LAND PLANNERS • CIVIL ENGINEERS • LAND SURVEYORS
TRAPEZOIDAL ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

REVISIONS

DATE	DESCRIPTION	CITY COMMENTS
8-9-18		

Fenster Farms Subdivision Phase 3
PART OF THE SE QUARTER OF SECTION 7, T.6N., R.2W., S.L.B. & M., U.S. SURVEY
WEBER COUNTY, UTAH

Preliminary Design

Project Info.

Engineer: N. Reeve
Designer: C. Gave
Begin Date: 5-16-17
Name: FENSTER FARM PHASE 3
Number: 1714-26

DEVELOPER:

Allen Karras
Century 21
2609 N. Main
Sunset, UT. 84015
(801) 564-0909

Sheet **1** of 1 Sheets