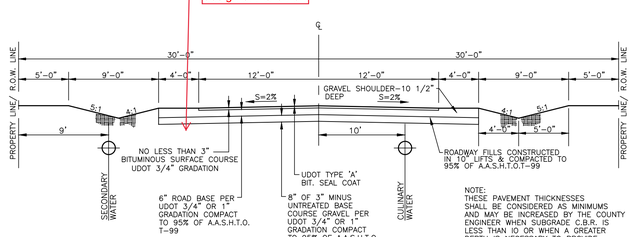

**Vicinity Map**
NOT TO SCALE

The County is now requiring a mix design of PG 64-34




NOTE:
THESE PAVEMENT THICKNESSES SHALL BE CONSIDERED AS MINIMUMS AND MAY BE INCREASED BY THE COUNTY ENGINEER WHEN SUBGRADE C.B.R. IS LESS THAN 10 OR WHEN A GREATER DEPTH IS NECESSARY TO PROVIDE SUFFICIENT STABILITY. DESIGNER MAY SUBMIT AN ALTERNATIVE PAVEMENT DESIGN BASED ON A DETAILED SOILS ANALYSIS FOR

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

## Storm Runoff Calculations
**Fenster Farm**

9/28/2018 DJC

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"
Tc from Project Site = 30 minutes

**Volume of Run-off for 100-year Storm Event:**
C = 0.30
I = See Below in/hr
A = 1189114.27 ft²
Q(out) = 5.46 ft³/s (Post-Development Allowed Flow per Acre)

0.1cfs per acre allowable discharge.

| 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 | 6.48 | 52.81 | 15842.67 | 1637.90 | 14204.77 |
| 10 | 600 | 4.93 | 40.18 | 24106.29 | 3275.80 | 20830.49 |
| 15 | 900 | 4.07 | 33.17 | 29851.70 | 4913.70 | 24938.01 |
| 30 | 1800 | 2.74 | 22.33 | 40193.45 | 9827.39 | 30366.06 |
| 60 | 3600 | 1.70 | 13.85 | 49875.08 | 19654.78 | 30220.30 |
| 120 | 7200 | 0.92 | 7.51 | 54099.79 | 39309.56 | 14790.23 |
| 180 | 10800 | 0.63 | 5.14 | 55537.37 | 58964.34 | -3426.98 |
| 360 | 21600 | 0.35 | 2.85 | 61610.39 | 117928.69 | -56318.30 |
| 720 | 43200 | 0.21 | 1.73 | 74636.59 | 235857.38 | -161220.79 |
| 1440 | 86400 | 0.12 | 0.95 | 81677.76 | 471714.75 | -390036.98 |

**Total Required Detention Volume 30,366 ft³**

**Orifice Sizing**
Given: Q = 5.46 cfs; 2g = 64.4 ft/s²; H = 3.75 ft; Cd = 0.62 for circular openings
R = SQRT(Q/pi/(0.7*(64.4*H)^0.5))
R = 0.42 feet
5.10 inches
D = 10.20 inches
A = 81.84 inches ^2 0.5669 ft ^2

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

## LEGEND

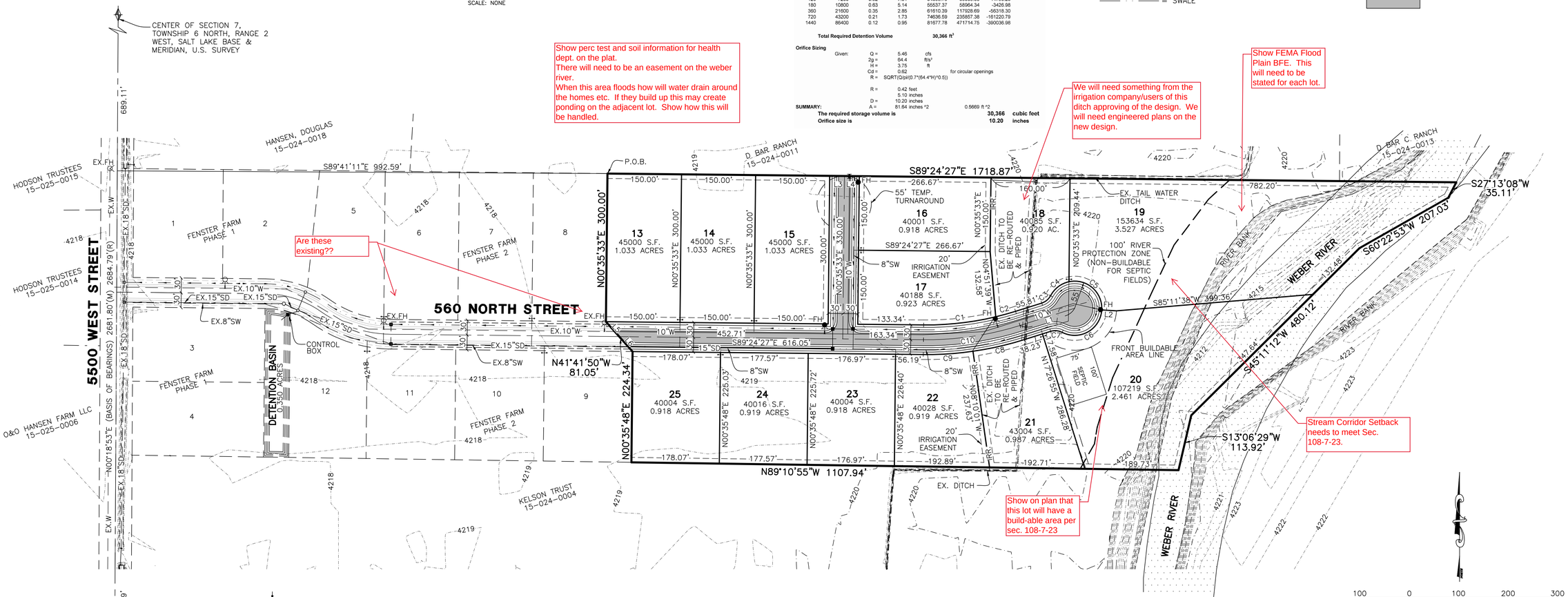
| | |
|---|---|
| | = SECTION CORNER |
| | = BOUNDARY LINE |
| | = LOT LINE |
| — — — — | = ADJOINING PROPERTY |
| - - - - - - | = EASEMENTS |
| — - — - — | = SECTION TIE LINE |
| ——W—— | = PROPOSED CULINARY WATER LINE (SIZE VARIES) |
| — —EX.W— — | = EXISTING CULINARY WATER LINE |
| ——SD—— | = PROPOSED STORM DRAIN (SIZE VARIES) |
| — —EX.SD— — | = EXISTING STORM DRAIN |
| ——SW—— | = PROPOSED IRRIGATION LINE |
| — —EX.SW— — | = EXISTING IRRIGATION LINE |
| ——IRR—— | = PROPOSED IRRIGATION TAIL WATER LINE |
| — x — x — | = EXISTING FENCE LINE |
| ——— · ——— | = SWALE |

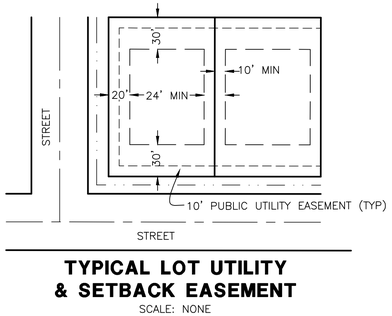
| | |
|---|---|
| EX.FH | = EX. FIRE HYDRANT |
| FH | = FIRE HYDRANT |
| | = PLUG W/ 2" BLOW-OFF |
| | = PROPOSED FIRE HYDRANT |
| | = EXISTING FIRE HYDRANT |
| | = EXISTING GATE VALVE |
| | = EXISTING STORM DRAIN MANHOLE |
| | = PROPOSED STORM DRAIN MANHOLE |
| | = EXISTING 3'X3' CATCH BASIN |
| | = FEMA FLOOD ZONE |
| | = PROPOSED PAVEMENT |

Show perc test and soil information for health dept. on the plat.
There will need to be an easement on the weber river.
When this area floods how will water drain around the homes etc. If they build up this may create ponding on the adjacent lot. Show how this will be handled.

We will need something from the irrigation company/users of this ditch approving of the design. We will need engineered plans on the new design.

Show FEMA Flood Plain BFE. This will need to be stated for each lot.




**TYPICAL LOT UTILITY & SETBACK EASEMENT**
SCALE: NONE

SOUTH QUARTER CORNER OF SECTION 7, TOWNSHIP 6 NORTH, RANGE 2 WEST, SALT LAKE BASE & MERIDIAN, U.S. SURVEY

## NOTES
1. CONTOURS ARE SHOW IN 1 FOOT INTERVALS.
2. CONNECT EXISTING STORM DRAIN, CULINARY WATER AND SECONDARY WATER TO EXISTING LINES IN PHASE 2
3. SOME EXISTING DITCHES WILL BE RE-ROUTED AND PIPED.
4. 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°57'45" |
| 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 | 18°02'28" |

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

# Fenster Farm Subdivision Phase 3
Weber County, Utah



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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
TRAFFIC ENGINEERS * STRUCTURAL ENGINEERS * LANDSCAPE ARCHITECTS

REVISIONS
DATE 8-9-18 DESCRIPTION City Comments

**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. Cave
Begin Date: 5-16-17
Name: FENSTER FARM PHASE 3
Number: 1714-26

Sheet 1 of 1 Sheets