

VICINITY MAP

SCALE: NONE

LEGEND

- = SECTION CORNER
- = BOUNDARY LINE
- = LOT LINE
- = ADJOINING PROPERTY
- = EASEMENTS
- = SECTION TIE LINE
- = EXISTING FENCELINE
- = SWALE
- = PROPOSED CULINARY WATER LINE
- = EXISTING CULINARY WATER LINE
- = PROPOSED SECONDARY WATER LINE
- = TEST PIT LOCATION
- = PROPOSED FIRE HYDRANT
- = EXISTING FIRE HYDRANT
- = PROPOSED 3'x3' CATCH BASIN
- = PUBLIC UTILITY EASEMENT

- = EXISTING STRUCTURE
- = EXISTING PAVEMENT
- = PROPOSED PAVEMENT
- = EXISTING GRAVEL ROAD

CENTER OF SECTION SECTION 7, TOWNSHIP 6 NORTH, RANGE 2 WEST, SALT LAKE BASE AND MERIDIAN, US SURVEY, FOUND 3" WEBER COUNTY BRASS CAP MONUMENT IN 6" CONCRETE COLUMN 6" BELOW GROUND MARKED 1963 IN GOOD CONDITION

SOIL TEST PIT INFORMATION

EXPLORATION PIT #LOT 1 (UTM ZONE 12 NAD 83 0406831 E 4569091 N)
 0-22" LOAM, GRANULAR STRUCTURE, SAND SIZE MEDIUM TO FINE
 22-37" CLAY LOAM, MASSIVE STRUCTURE, SAND SIZE FINE
 37-64" SILT LOAM (NEAR SILTY CLAY LOAM), MASSIVE STRUCTURE, SAND SIZE FINE
 GROUNDWATER ENCOUNTERED AT TIME OF SOIL EVALUATION AT 58" BELOW GRADE
 LOT1: CONDUCT THE REQUIRED PERCOLATION TEST SO THAT THE BOTTOM OF THE PERCOLATION TEST HOLE IS AT 30 INCHES DEEP FROM THE ORIGINAL GRADE.

EXPLORATION PIT #LOT 2 (UTM ZONE 12 NAD 83 0406886 E 4569086 N)
 0-15" LOAM, GRANULAR STRUCTURE, SAND SIZE MEDIUM TO FINE
 15-23" FINE SANDY LOAM, MASSIVE STRUCTURE, SAND SIZE FINE, DENSE, MOTTLES COMMON BELOW 19"
 23-40" SILT LOAM (NEAR SILTY CLAY LOAM), MASSIVE STRUCTURE, SAND SIZE FINE, MOTTLES COMMON
 40-72" CLAY LOAM, MASSIVE STRUCTURE, SAND SIZE FINE, MOTTLES COMMON
 LOT2: CONDUCT THE REQUIRED PERCOLATION TEST SO THAT THE BOTTOM OF THE PERCOLATION TEST HOLE IS AT 30 INCHES AND 46 INCHES DEEP FROM THE ORIGINAL GRADE.

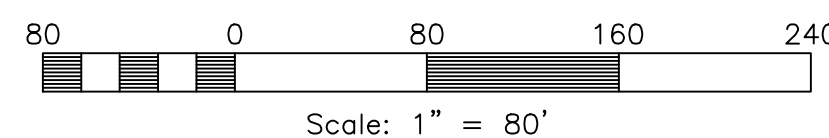
EXPLORATION PIT #LOT 3 (UTM ZONE 12 NAD 83 0406943 E 4569085 N)
 0-11" SILT LOAM, GRANULAR STRUCTURE, SAND SIZE FINE
 11-26" SILT CLAY LOAM, MASSIVE STRUCTURE, SAND SIZE VERY FINE
 26-79" SILT CLAY, MASSIVE STRUCTURE, SAND SIZE VERY FINE
 GROUNDWATER ENCOUNTERED AT TIME OF SOIL EVALUATION AT 79" BELOW GRADE
 LOT 3: CONDUCT THE REQUIRED PERCOLATION TEST SO THAT THE BOTTOM OF THE PERCOLATION TEST HOLE IS AT 18 INCHES AND 36 INCHES DEEP FROM THE ORIGINAL GRADE.

EXPLORATION PIT #LOT 4 (UTM ZONE 12 NAD 83 0406831 E 4569091 N)
 0-15" LOAM, GRANULAR STRUCTURE, SAND SIZE MEDIUM TO FINE
 15-49" SILTY CLAY LOAM, MASSIVE STRUCTURE, SAND SIZE FINE, MOTTLES FEW BELOW 46 INCHES, PERC? MOTTLES COMMON PERC?
 49-77" SILTY CLAY LOAM, MASSIVE STRUCTURE, SAND SIZE FINE, MOTTLES COMMON PERC?
 LOT 4: CONDUCT THE REQUIRED PERCOLATION TEST SO THAT THE BOTTOM OF THE PERCOLATION TEST HOLE IS AT 28 INCHES DEEP FROM THE ORIGINAL GRADE.

EXPLORATION PIT #LOT 5 (UTM ZONE 12 NAD 83 0407065 E 4569084 N)
 0-17" FINE SANDY LOAM (NEAR SANDY CLAY LOAM), GRANULAR STRUCTURE, SAND SIZE FINE, DENSE
 17-48" SILT CLAY LOAM, MASSIVE STRUCTURE, SAND SIZE FINE, MOTTLES COMMON
 48-62" CLAY LOAM, MASSIVE STRUCTURE, SAND SIZE FINE, MOTTLES COMMON
 LOT 5: CONDUCT THE REQUIRED PERCOLATION TEST SO THAT THE BOTTOM OF THE PERCOLATION TEST HOLE IS AT 30 INCHES DEEP FROM THE ORIGINAL GRADE.

EXPLORATION PIT #LOT 6 (UTM ZONE 12 NAD 83 0407135 E 4569081 N)
 0-10" LOAM, GRANULAR STRUCTURE, SAND SIZE MEDIUM TO FINE
 10-30" CLAY LOAM, MASSIVE STRUCTURE, SAND SIZE FINE
 30-52" SILTY LOAM (NEAR SILTY CLAY LOAM), MASSIVE STRUCTURE, SAND SIZE FINE, MOTTLES COMMON
 52-65" FINE SANDY LOAM, MASSIVE STRUCTURE, SAND SIZE FINE, MOTTLES COMMON
 LOT 6: CONDUCT THE REQUIRED PERCOLATION TEST SO THAT THE BOTTOM OF THE PERCOLATION TEST HOLE IS AT 24 INCHES DEEP FROM THE ORIGINAL GRADE.

EXPLORATION PIT #LOT 7 (UTM ZONE 12 NAD 83 0407187 E 4569084 N)
 0-13" LOAM, GRANULAR STRUCTURE
 13-42" SILT CLAY LOAM, MASSIVE STRUCTURE, SAND SIZE FINE, MOTTLES COMMON
 42-61" CLAY LOAM, MASSIVE STRUCTURE, VERY FINE SANDS AND HIGH SILT CONTENT
 LOT7: CONDUCT THE REQUIRED PERCOLATION TEST SO THAT THE BOTTOM OF THE PERCOLATION TEST HOLE IS AT 30 INCHES DEEP FROM THE ORIGINAL GRADE.



Storm Runoff Calculations
 Warren Estates Subdivision
 6600-03 10/13/2021

The following runoff calculations are based on the Rainfall - Intensity - Duration Frequency Curve for the Ogden area taken from the NOAA Atlas 14 database. Calculations have been completed for the 100-yr 24-hr storm event. Storm water runoff has been calculated for a fully developed site and limited to a release rate of 0.2 cfs/acre.

The calculations are as follows:

Drainage Area:	Total Area = 10.13 acre or	441,319 ft ²
	Runoff Coefficients	
	Paved Area	28,660 C = 0.9
	Roof	26,400 C = 0.9
	Landscaped Area	386,259 C = 0.2
	Weighted Runoff Coefficient	C = 0.29

LID Retention

80 th Percentile Rainfall Event	0.45 in
Is the site Feasible for LID?	Yes
Site Impermeability	0.12
NRCS Soil Group	B
Rv Equation	0.84(1.169)
R _s	0.07
V _{pond}	1232 c.f.

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

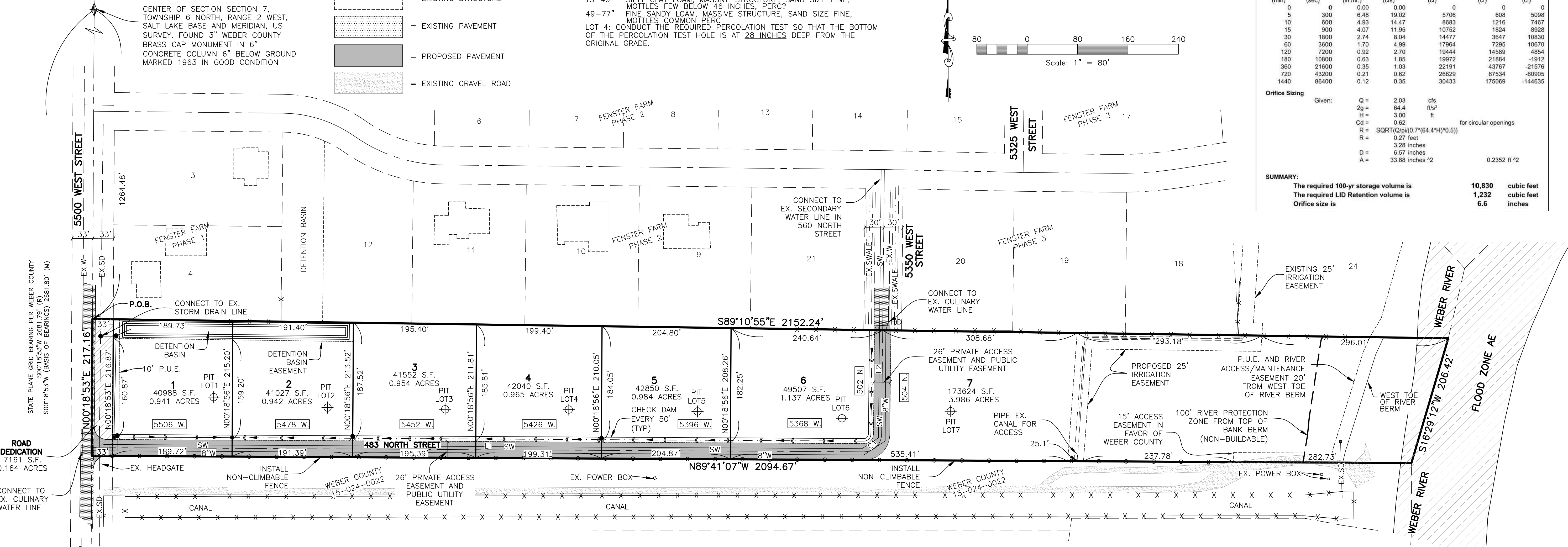
C =	0.29
I =	See Below in/hr
A =	441319.00 ft ²
Q(out) =	2.03 ft ³ /s

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	6.48	19.02	5706	868	5098
10	600	4.93	14.47	8683	1216	7467
15	900	4.07	11.95	10752	1624	8928
30	1800	2.74	8.04	14477	3647	10830
60	3600	1.70	4.99	17964	7295	10670
120	7200	0.92	2.70	19444	14589	4854
180	10800	0.63	1.85	19972	21884	-1912
360	21600	0.35	1.03	22191	43767	-21576
720	43200	0.21	0.62	26629	87534	-60905
1440	86400	0.12	0.35	30433	175069	-144635

Orifice Sizing

Given: Q = 2.03 cfs
 H = 64.4 ft
 H = 3.00 ft
 Cd = 0.62 for circular openings
 R = SQRT(Q/(pi*(0.7*(64.4^H)*0.5)))
 R = 0.27 feet
 D = 3.28 inches
 D = 6.57 inches
 A = 33.88 inches *2 = 0.2352 ft *2

SUMMARY:
 The required 100-yr storage volume is **10,830** cubic feet
 The required LID Retention volume is **1,232** cubic feet
 Orifice size is **6.6** inches



ELEVATION NOTES

- ADD 3.18 TO PROJECT ELEVATIONS FOR COMPARISON TO FEMA FIRM PARCELS (LOCATED ON NAVD88)
- ALL LOTS: FFE 4224.82 BFE 4222.82

NOTES

- LOTS WILL HAVE SEPTIC TANKS
- CONTOURS ARE SHOWN IN 1 FOOT INTERVALS
- PROJECT IS DESIGNED BY LOT AVERAGING AVERAGE LOT SIZE: 57,249 S.F. 1.31 ACRES
- SECONDARY WATER WILL CONNECT TO MOUNTAIN VIEW IRRIGATION PRESSURIZED SYSTEM IN 560 NORTH AND IN 5500 WEST STREET.
- FRONT BUILDABLE SETBACK WILL BE FROM THE PRIVATE ACCESS EASEMENT.

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 ON THE SECTION LINE, SAID POINT BEING S00°18'53"W 1264.48 FROM THE CENTER OF SAID SECTION 7; THENCE S89°10'55"E ALONG THE SOUTH BOUNDARY OF FENSTER FARM PHASES 1, 2, 3 AND 4, 2152.24 FEET TO THE CENTER LINE OF WEBER RIVER; THENCE S16°29'12"W ALONG SAID CENTER LINE, 206.42 FEET; THENCE N89°41'07"W 2094.67 FEET; THENCE N00°18'53"E 217.16 FEET TO THE POINT OF BEGINNING.

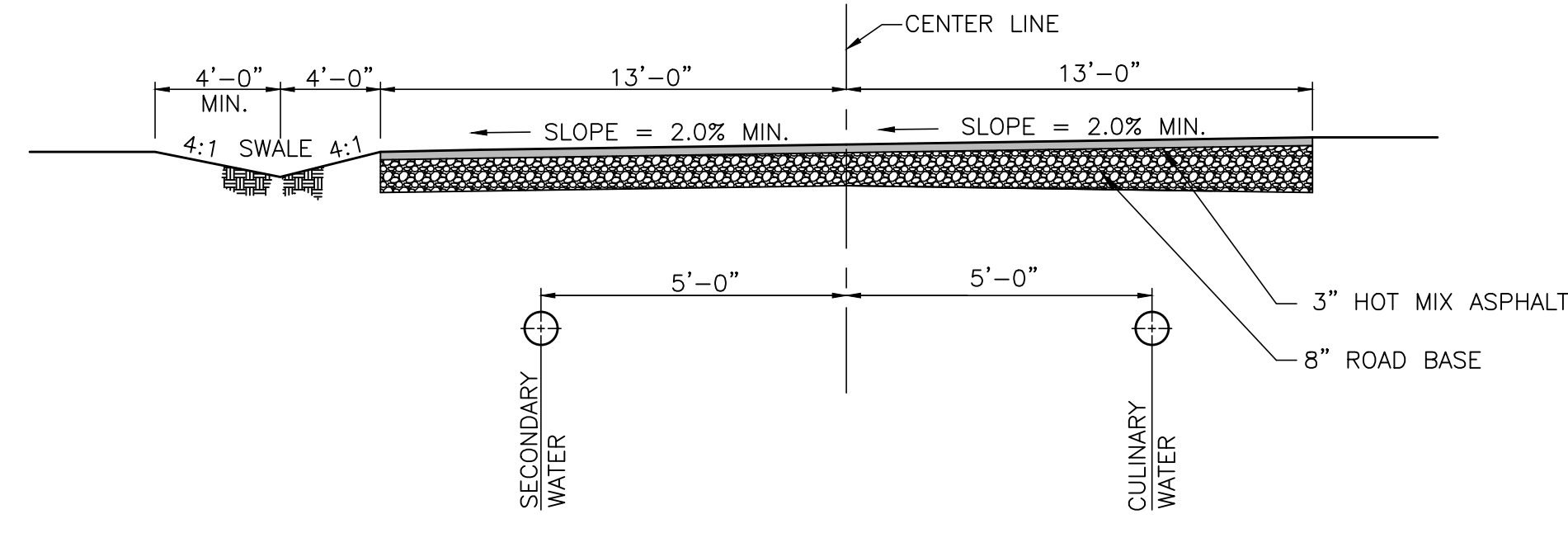
CONTAINING 441319 SQUARE FEET OR 10.131 ACRES MORE OR LESS.

LINE TABLE

LINE	BEARING	DISTANCE
L1	S89°41'07"E	1192.51'
L2	N00°35'48"E	165.28'
L3	N00°18'53"E	20.00'

CURVE TABLE

#	RADIUS	ARC LENGTH	CHORD LENGTH	TANGENT	CHORD BEARING	DELTA ANGLE
CT	28.00'	43.84'	39.50'	27.86'	N45°27'20"E	89°43'05"



STREET SECTION PRIVATE ACCESS EASEMENT

SCALE: NONE

Warren Estates Subdivision A Lot Averaged Subdivision

Weber County, Utah

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 TRAFFIC ENGINEERS • STRUCTURAL ENGINEERS • LANDSCAPE ARCHITECTS

REVISIONS

DATE	DESCRIPTION	ADD. TP. INFO
8-24-22		

Warren Estates Subdivision A Lot Averaged Subdivision
 PART OF THE SE 1/4 OF SECTION 7, T. 6N., R. 2W., S. 12B. & M., U.S. SURVEY
 WEBER COUNTY, UTAH

Preliminary Plan

Project Info.
 Engineer: J. Nate Reeve
 Planner: Chris J. Cave
 Designer: Emilee Roche
 Begin Date: 08/26/2021
 Name: WARREN ESTATES
 Number: 6600-03