

# CONCRETE OUTFALL WER

#### FLOW RATE SUMMARY

1	Event	Intensity (in/hr)	Q Allowable (cfs)	Actual Release (cfs)
	100 yr	9.8	97.70	83.40
	25 yr	9.0	88.14	77.28
	10 yr	8.3	77.34	74.59
	5 vr	7.1	69.32	68.28

Note:
Reference Structural Plans By
Falkofske Engineering, Inc.
Dated 12/09/2015 For Design
Detail Of Concrete Weir.

## **LEGEND**

Q = Flow Rate (cfs)
C = 0.6 (Orifice Coefficient)
A = Area Of Orifice (sq.ft.)
H = Height Of Headwater (ft.)

#### 100-YEAR

 $Q = CA(2gh)\frac{1}{2}$ 

100 Yr. VSEL = 501.79

Qallowable = 97.70 cfs

 $Q = (0.6)(5.94)[(2)(32.2)(501.79-499.30)]^{\frac{1}{2}} + (0.6)(4.91)[(2)(32.2)(501.79-499.17)]^{\frac{1}{2}}$ 

Q = 83.40 cfs < Qallowable

### 25-YEAR

 $Q = CA(2gh)\frac{1}{2}$ 

25Yr. WSEL = 501.43

Qallowable = 88.14 cfs

 $Q = (0.6)(5.49)[(2)(32.2)(501.43-499.30)]^{1/2}$   $+(0.6)(4.91)[(2)(32.2)(501.43-499.17)]^{1/2}$ 

Q = 77.28 cfs < Qallowable

### 10-YEAR

 $Q = CA(2gh)\frac{1}{2}$ 

10 Yr. VSEL = 501.28

Qallowable = 77.34 cfs

 $Q = (0.6)(5.94)[(2)(32.2)(501.28-499.30)]^{\frac{1}{2}} + (0.6)(4.91)[(2)(32.2)(501.28-499.17)]^{\frac{1}{2}}$ 

 $Q = 74.59 \text{ cfs} < Qallowable}$ 

## 5-YEAR

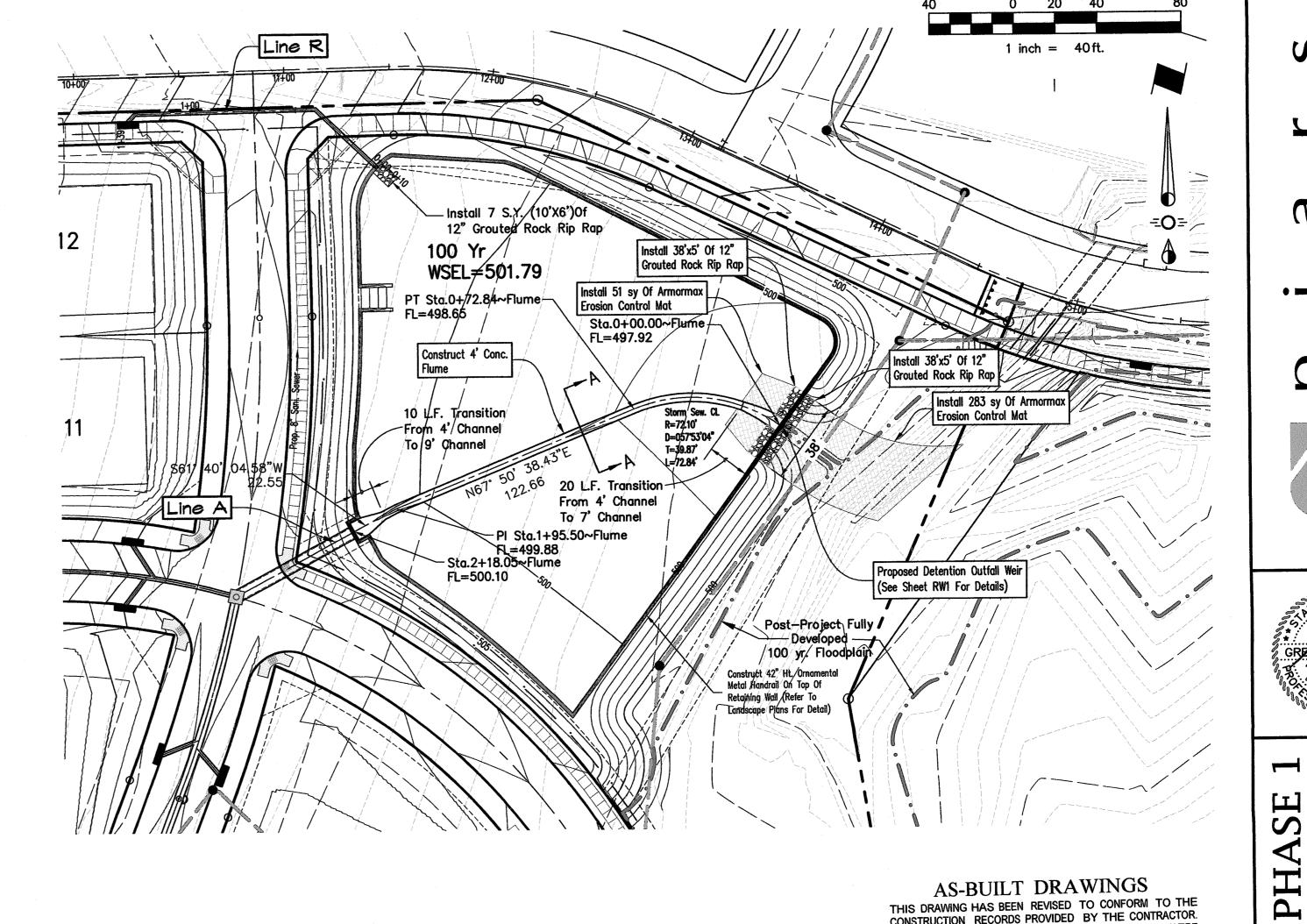
 $Q = CA(2gh)\frac{1}{2}$ 

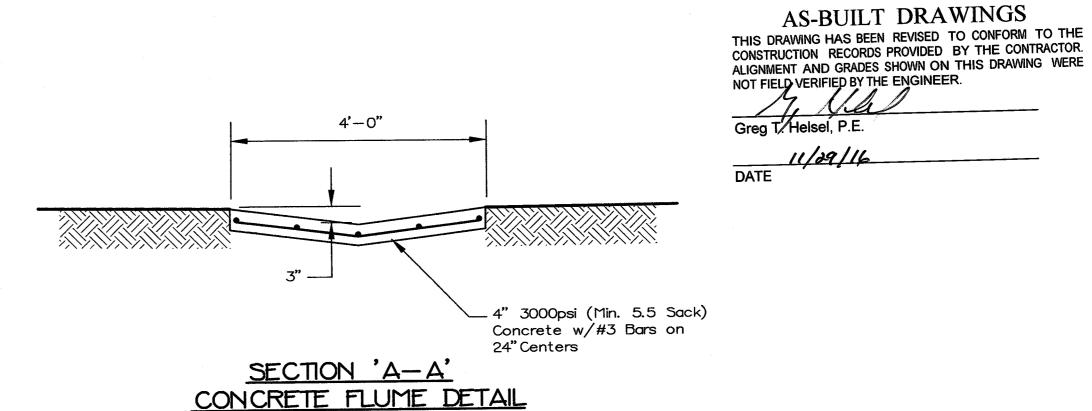
5Yr. VSEL = 500.95

Qallowable = 69.32 cfs

 $Q = (0.6)(5.94)[(2)(32.2)(500.95-499.30)]^{\frac{1}{2}} + (0.6)(4.91)[(2)(32.2)(500.95-499.17)]^{\frac{1}{2}}$ 

Q = 68.28 cfs < Qallowable





Being an "X" found in concrete at the intersection of

Highland Drive and being the southeast corner of Lot

Being an "X" found in concrete at the intersection of

the north line of East Fork Road with the west line of Calistoga Drive and being the southeast corner of Lot

16, Block X of Lakeview Summit, Phase One.

the north line of Arcadia Way with the west line of

24, Block Q of the Preserve Phase III.

Elevation = 565.30

Elevation = 500.49

# CAUTION !!! EXISTING UTILITIES

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

CALL 1-800-344-8377 (DIG-TESS) OR OTHER UTILITY LOCATION SERVICES 48 HOURS PRIOR TO CONSTRUCTION ACTIVITY. SPIARS ENGINEERING, INC. IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES OR DEPICTING EXACT LOCATIONS OF UTILITIES ON DRAWINGS.

Detention Pond 2

Revisions

Revisions

Scale: 1,=40,H' 1,=2,A

THE

Issue Dates:

06-30-2015

Drawn By: GD
Checked By: GTH

Sheet 33

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