



# **Barton Spring Bathhouse Rehabilitation Site-Specific SOS Amendment**

## **2201 Barton Springs Rd**

**C20-2023-022**

Leslie Lilly

Environmental Program Coordinator

Watershed Protection

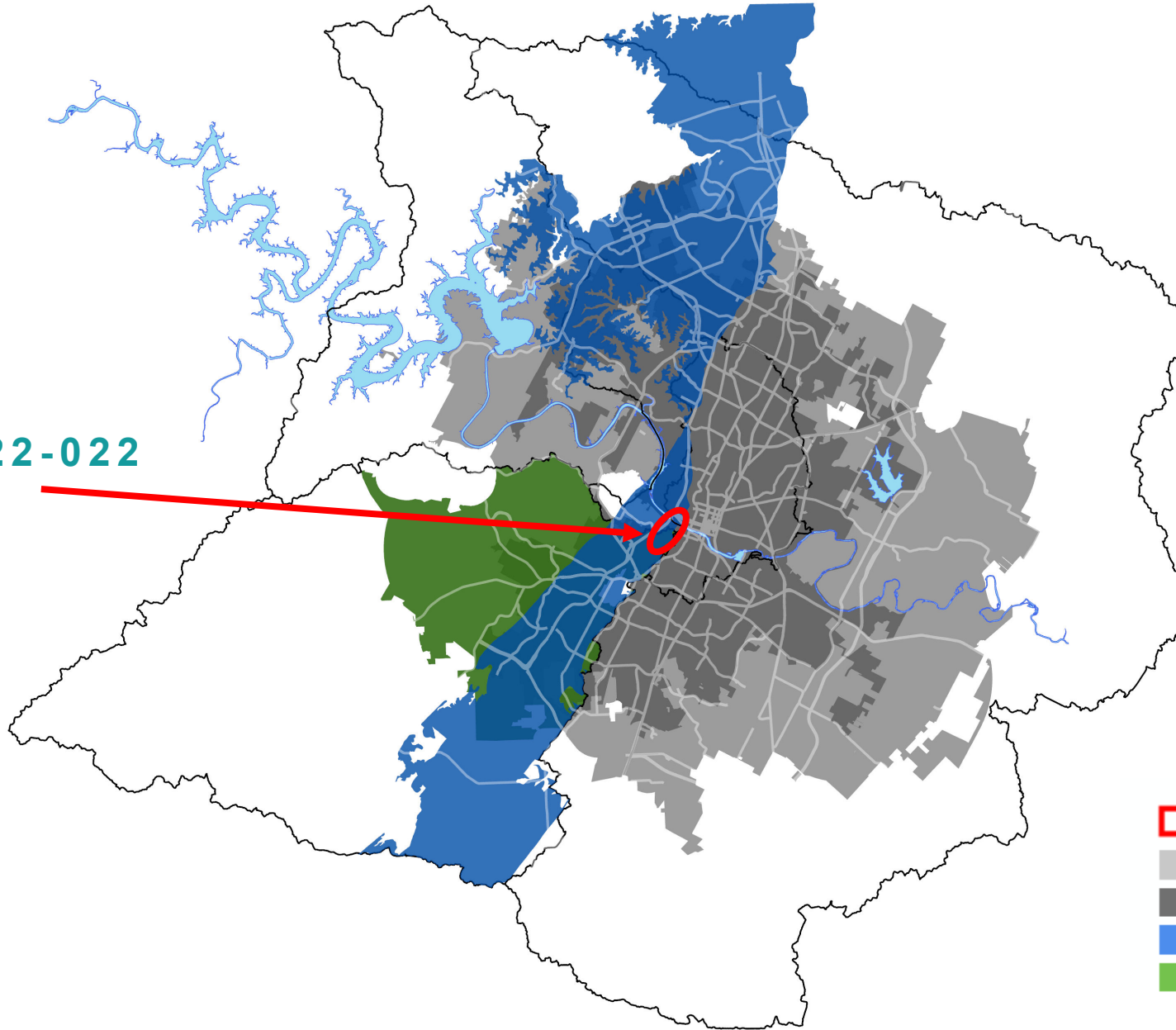


# Barton Springs Bathhouse Rehab

- Bathhouse constructed in 1947 (before SOS)
- Rehabilitation of the Bathhouse is a major component of 2009 Council-approved Barton Springs Pool Master Plan
- Funding provided by 2012 and 2018 General Obligation Bonds, Historic Preservation Fund, Barton Springs Conservancy, Watershed Protection Department, and Austin Water Department
- Requires SOS amendment to impervious cover limits and construction in the CWQZ
- Code amendment initiated by Planning Commission on June 27<sup>th</sup>, 2023



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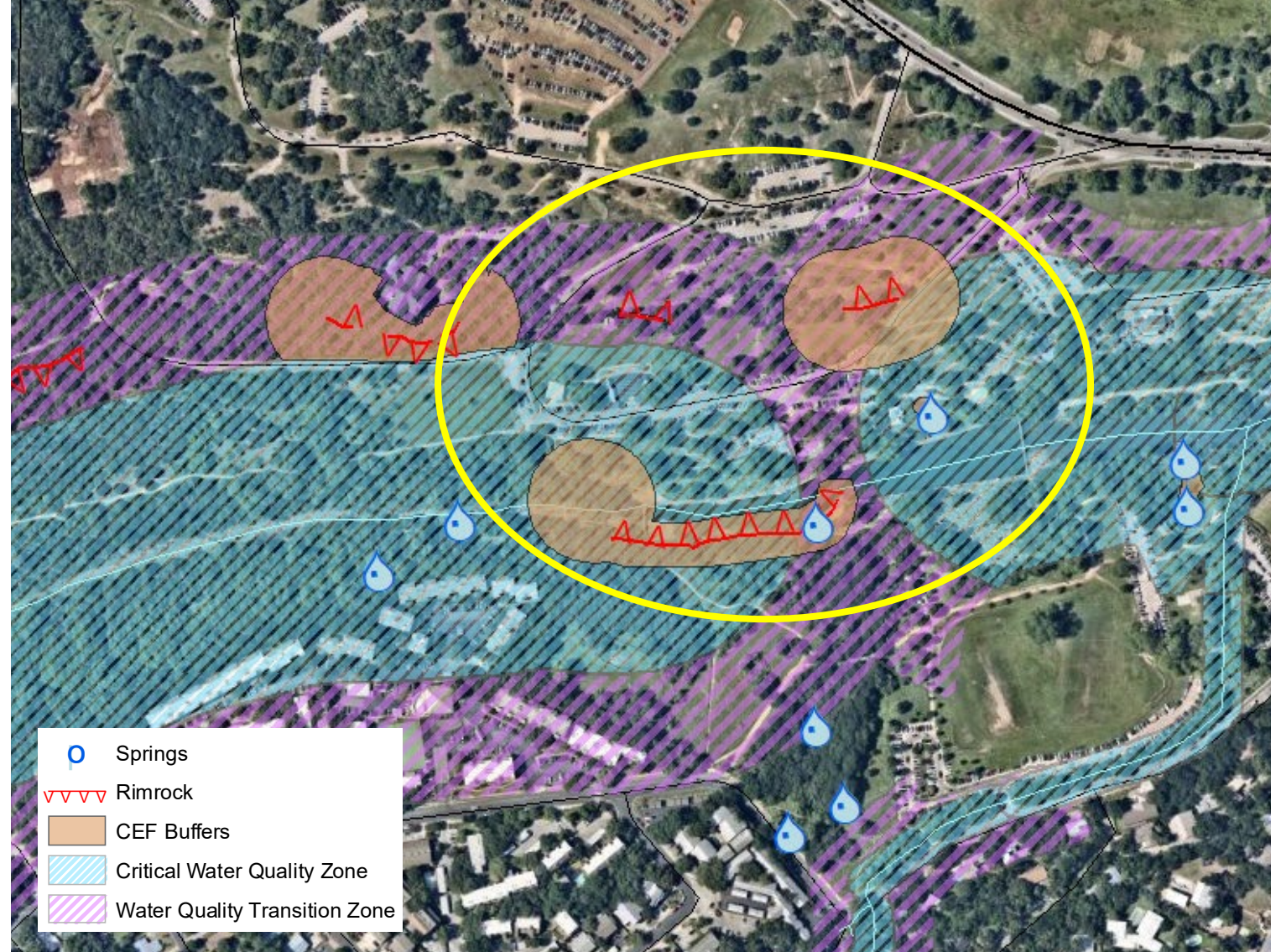
- Site Location
- Austin ETJ
- Austin City Limits
- Edwards Aquifer Recharge Zone
- Edwards Aquifer Contributing Zone





# Environmental Features

- Barton Creek Watershed
- Barton Springs Zone
- Edward Aquifer Recharge
- ~44% Impervious Cover in the Barton Creek Watershed in the recharge zone
- CWQZ and WQTZ
- CEF Features include springs (Eliza Springs and Pool Springs) and rimrock features

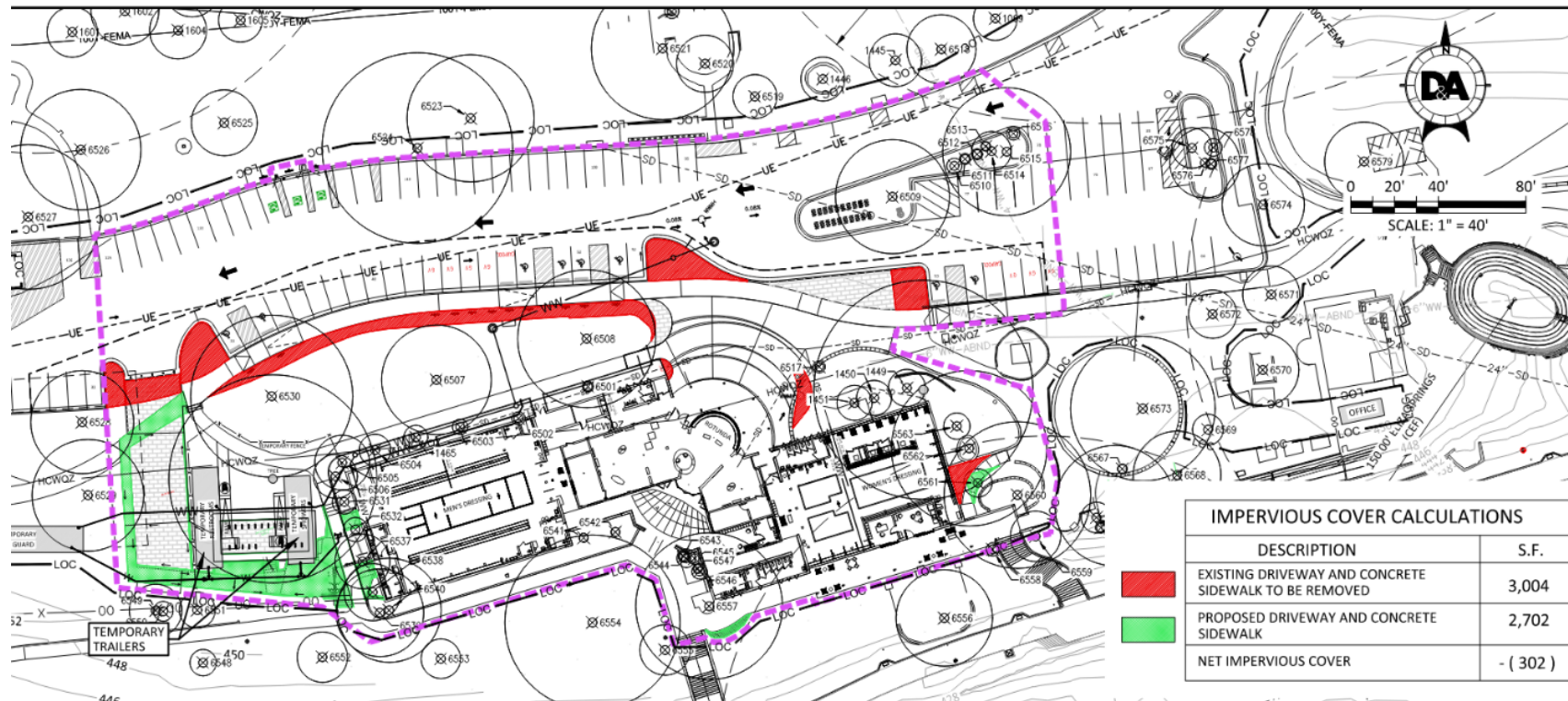






# SOS Amendment

- **Section A of 25-8-514 (Pollution Prevention Required)** shall be modified to allow impervious cover in excess of 15%.



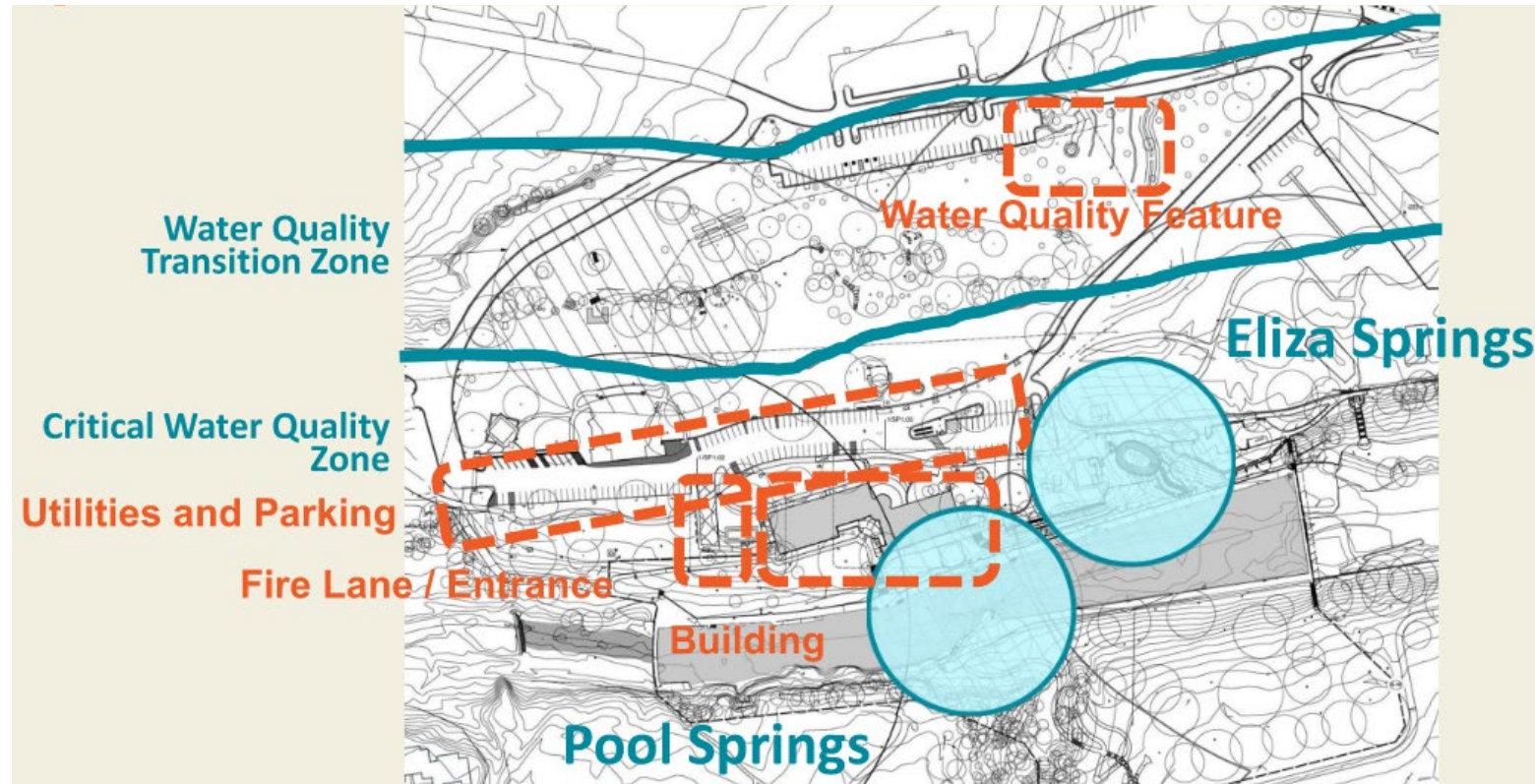
IMPERVIOUS COVER MAP

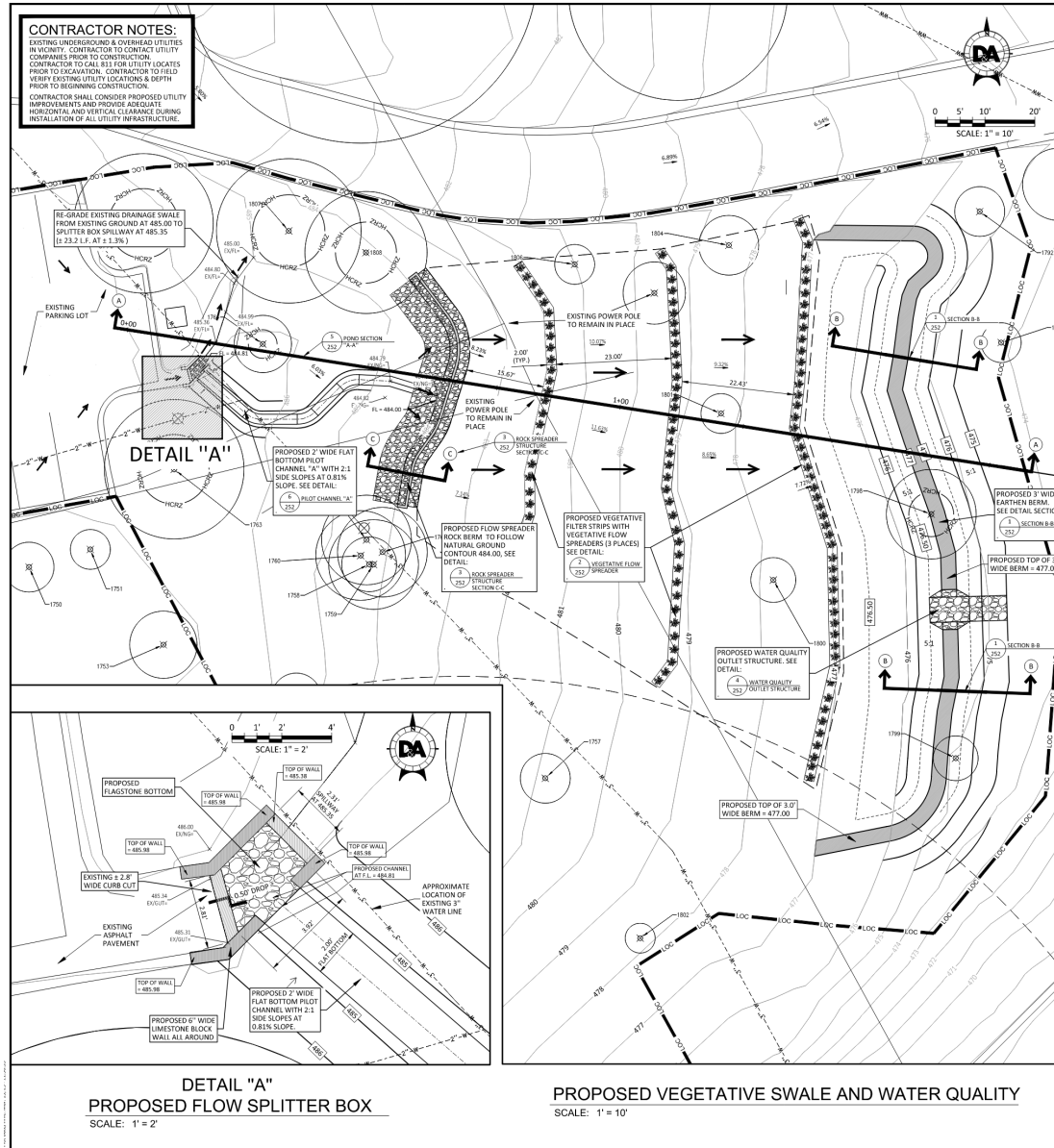
SCALE: 1" = 40'



# SOS Amendment

- **Section B of 25-8-514 (Pollution Prevention Required)** shall be modified to allow a development in the CWQZ as described in (SPC-2012-0104D(R6))





Appendix B-9: Vegetative Filter Strip

Drainage Area and Water Quality Volume Data  
(Drainage Area being treated is an alternative drainage area and impervious cover.)

Drainage Area (DA)	0.400 acre	
Drainage Area Impervious Cover (IC)	90.00%	0.360 acres
Capture Depth (CD)	1.2 inches	
Total Size Required Water Quality Volume (WQV=CD*DA*3630)	1742.40 cf	

VEGETATIVE FILTER STRIP CALCULATIONS

Drainage Area to Proposed Vegetative Filter Strip	0.400 acre	
Impervious cover of area treated by Vegetative Filter Strip (Treated Soil Type (Type A, B, C, Amended C, or Amended D	90.00%	0.360 acres

Size of Vegetative Filter Strip required per ECM 1.6.7(B)-Table 9-1 (F)

Required	Provided	
1.380 acre	0.152 acre	average

Width of Vegetative Filter Strip (VFSw)

Required	Provided	
75 ft	75 ft	average

Required Hydraulic Loading Rate per ECM 1.6.7 (H/Recom)

Required	Provided	
0.018 cfs/ft	0.018 cfs/ft	Q2 peak

Hydraulic Loading Rate (HLRv)=Qpeak/VFSw

Required	Provided	
1.380 acre	0.152 acre	average

WATER QUALITY CREDIT

Impervious Area Factor (IAF)=Treated IC/IC	1 max 1.0	
Percent Infiltration Provided by VFS (VFI) per ECM 1.6.7.5(B)-Table 9-2	21.00%	
BMP Design Factor (BMPDF)	NA	max 1.0
For HLR=0.05 and <0.15 cfs/ft: BMPDF=(VFI/65)/(10.05/HLRv)	21.00% max 1.0	
Water Quality Credit (WQC)=IAF*BMPDF	21.00% max 1.0	
Water Quality Volume Reduction (WQV=WQC)	366 cf	

Appendix B-5: Retention Pond / Rain Garden Calculations

Renovation work is within CWQZ, where water quality facilities are not allowed by code. Therefore water quality treatment is for an alternative drainage area for treatment of runoff from an existing parking lot.

Drainage Area Data

Drainage Area to Control (DA)	0.400 acres
Drainage Area Impervious Cover	90.00%
Capture Depth	1.20 inches
	0.00

Water quality Control Calculations

REQUIRED	PROVIDED
Water Quality Control to be Retention/Rain Garden	
25-year Peak Flow Rate to Control (Q25)	3.17 cfs
100-year Peak Flow Rate to Control (Q100)	3.78 cfs

Water Quality Volume (WQV=CD\*DA\*3630)

1742 cf	
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Retention Pond Volume

382 cf	
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Water Quality Elevation

476.5 ft msl	
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Elevation of Splitter/Overflow Weir

476.5 ft msl	
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Length of Splitter Weir

5 ft	
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Required Head to Pass Q100

max 1.0 ft	0.5 ft	Q100	3.8 cfs
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Pond Freeboard Provided to Pass Q100

min 0.25 ft	0.3 ft		
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Irrigation Area Calculations

NA	Hardman Soils (HSE) moderately rapid permeability
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Soil Permeability

0.2 in/hr	desktop	0-16 inches	brown fine sandy loam
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Pond Drawdown Time

<72 hrs	30 hrs	max ponding depth	6 inches
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Retention Pond configuration & storage

flowline area	228 ft
imp area	1300 ft
stage storage	0.5 ft msl
	382 cf

Summary Water Quality Treatment

vegetative filter strip water quality volume crec	366 cf
retention rain garden storage volume	382 cf
total volume treated	748 cf
rainfall runoff treatment capture depth	0.52 inches

**DA DOUCET & ASSOCIATES**  
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**ZILKER METRO - BARTON SPRINGS BATHHOUSE REHABILITATION IMPROVEMENTS**

**STORM WATER TREATMENT PLAN**

**NEW SHEET**

**SHEET 251**

Project No.: (P) 1563-004





# Staff Recommendation

**Staff recommends approval of the proposed site-specific SOS amendments with the following conditions:**

- The project will decrease total impervious cover on the site by 302 sq. ft.
- The project will improve water quality treatment by constructing a rain garden and vegetative filter strips to treat run off from 0.4 acres of previously untreated parking lot area.
- After renovation is complete, the project will repair impacted soils and revegetate and restore the site to conditions consistent with uses prior to construction.
- The project will use native plant species for all proposed plantings exterior to the buildings associated with the Barton Springs Bathhouse Rehabilitation Project





# Questions?

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