

A Site-Specific SOS Amendment for the Eliza Spring Outlet Daylighting Project April 19, 2016



Dr. Donelle Robinson, Environmental Scientist



Eliza Spring Modifications



- Amphitheater built
- Outflow buried
- Concrete floor
- Masonry infill



Natural Habitat of Barton Springs Salamanders



Upper Barton Spring



**City of Austin
Water Quality Protection Lands**

Eliza Stream Restoration

- Need:
 - Broken infrastructure: buried pipe will fail
 - U.S. Fish and Wildlife Service permit to keep Barton Springs Pool open
- Opportunities:
 - Reestablish historical waterway
 - Create endangered species habitat in stream

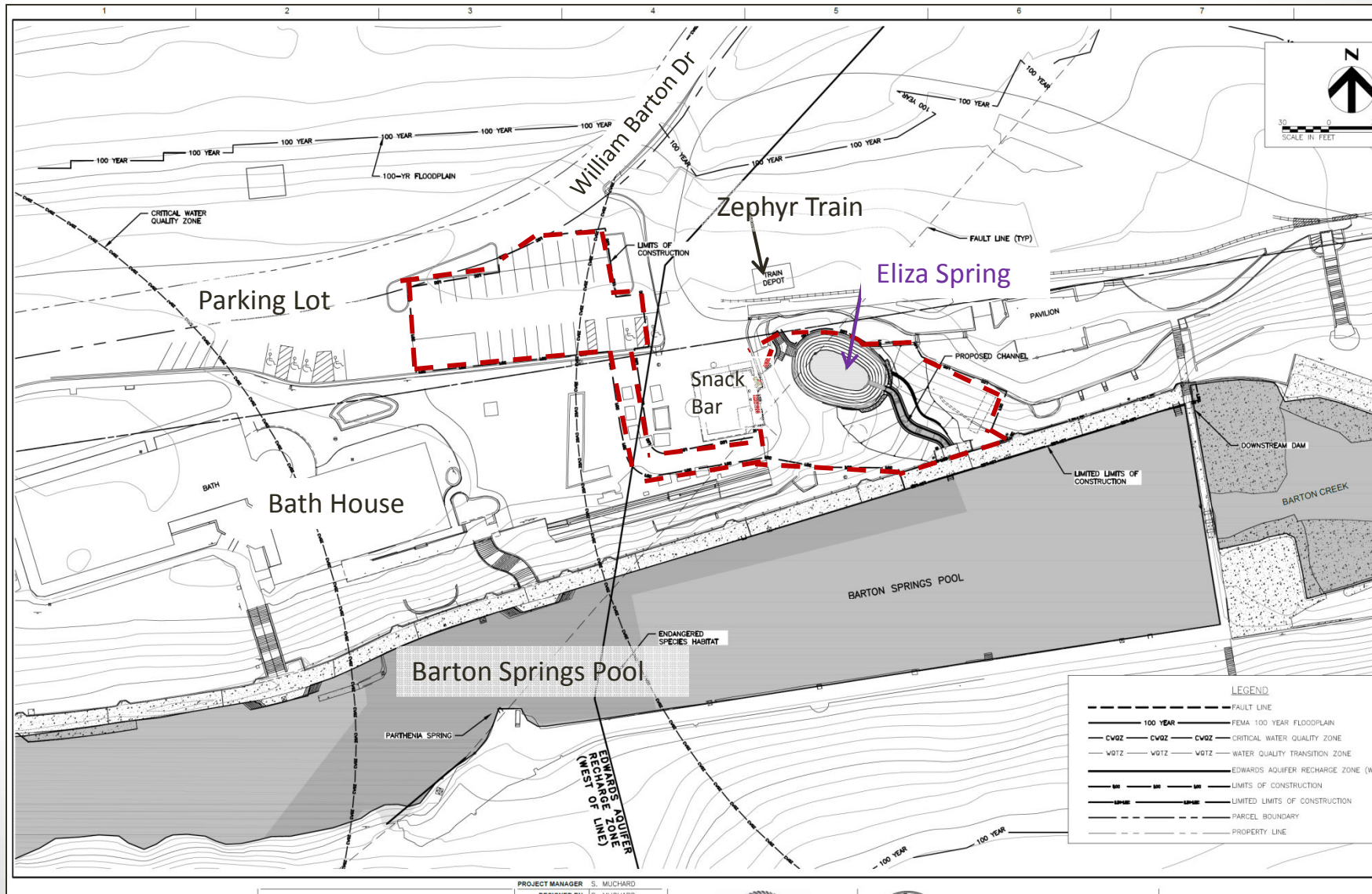
Proposed Stream



Need for Amendment to SOS Ordinance

- **25-8-515**: No exemptions, special exceptions, waivers, or variances to SOS Ordinance
- **25-8-514**: Site currently exceeds limits impervious cover in Barton Springs Zone
- **25-8-281**: Construction within the critical environmental feature buffer of Eliza Spring
- **25-8-341**: Cutting a tract of land exceeding a depth of four feet

Project Limits of Construction



100



Project results in equal or better water quality:

- Salamander biologists present for all work in salamander habitat
- Salamander biologist oversight throughout project
- Suspended solids removal from water prior to discharge
- Erosion controls during construction
- Area to be stabilized after construction
- Area revegetated consistent with Watershed Protection Ordinance
- Additional protections from Habitat Conservation Plan

Contact Information

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Eliza Springs Daylighting Website:

<http://www.austintexas.gov/departments/eliza-spring-daylighting>

Exhibit A: Limits of Construction

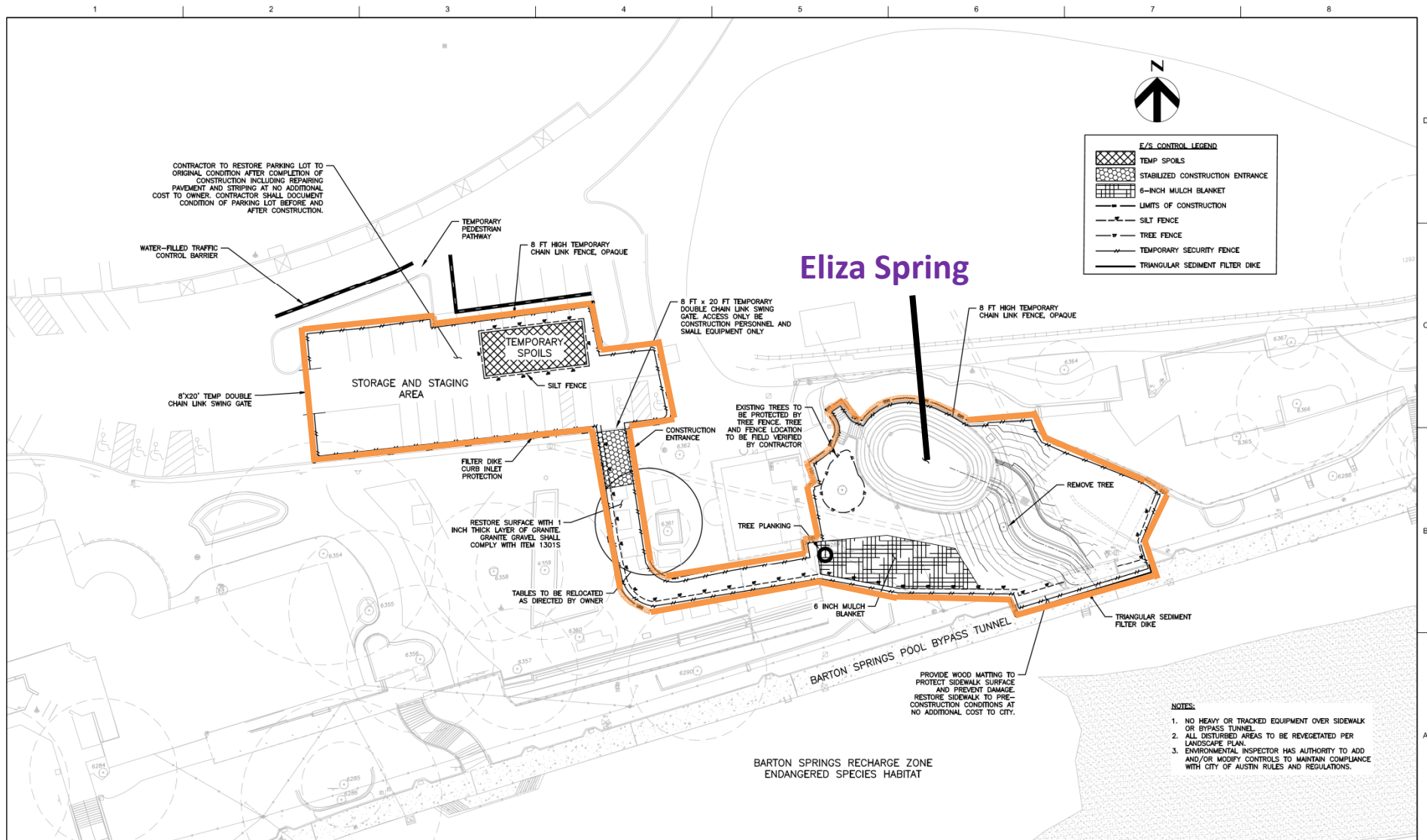
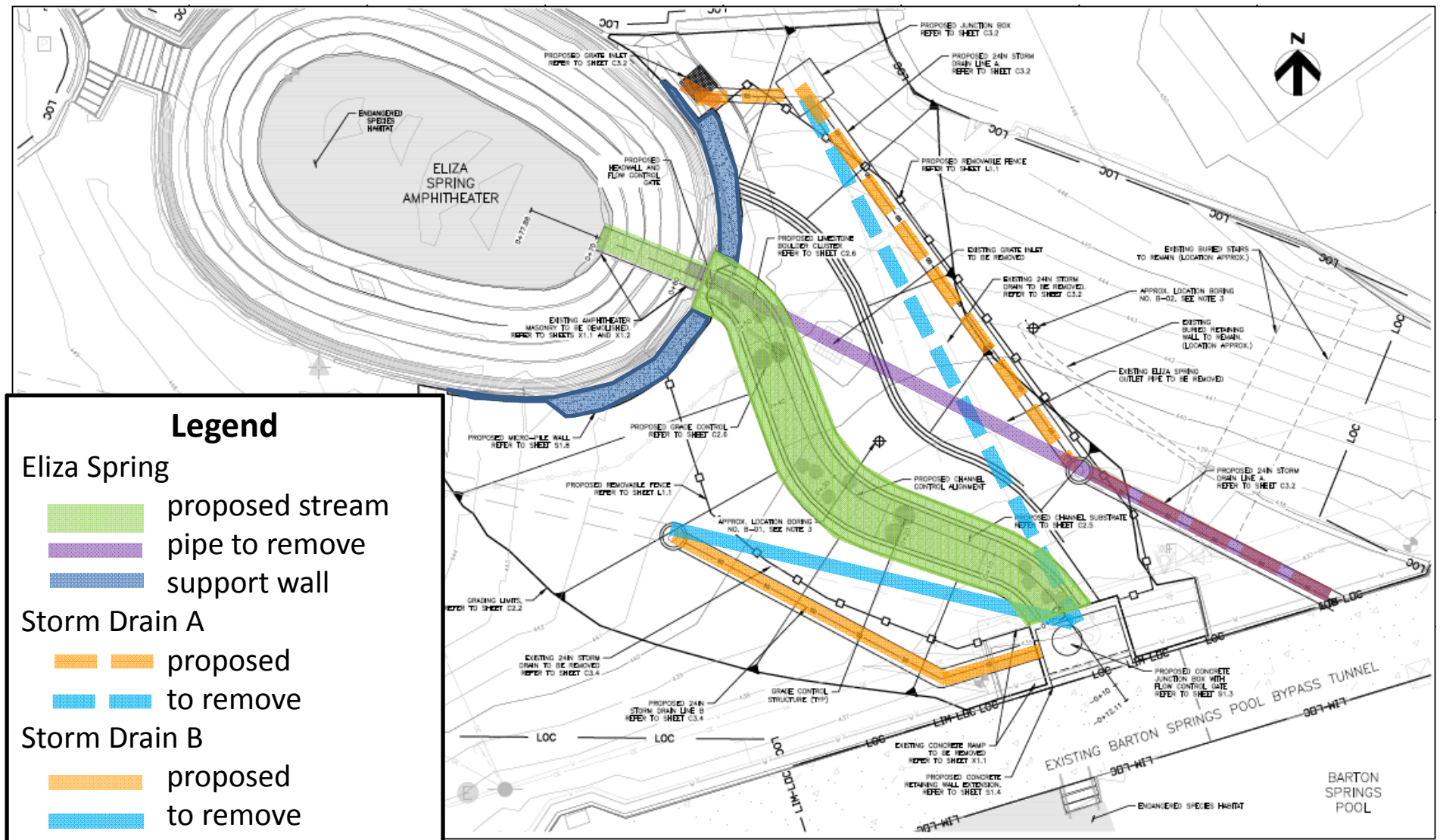


Exhibit B: New Channel, Storm Drain Redirection, and Structural Support



03/23/2016 DRAFT: FOR REVIEW ONLY
ORDINANCE NO. XXX

**AN ORDINANCE AMENDING SECTION 25-8-514 OF THE CITY CODE AND
GRANTING A VARIANCE TO SECTIONS 25-8-281, AND 25-8-341 OF THE CITY
CODE TO ALLOW CONSTRUCTION WITHIN THE BUFFER OF A CRITICAL
ENVIRONMENTAL FEATURE, AND TO ALLOW A CUT EXCEEDING A DEPTH OF
FOUR FEET.**

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

PART 1. This ordinance grants a site-specific amendment to City Code Section 25-8-514 (*Save Our Springs Initiative*) and variances to City Code sections 25-8-281 (*Critical Environmental Features*) and 25-8-341 (*Cut Requirements*) subject to Site Plan 2012-0104D to facilitate spring outlet daylighting and stream restoration at Eliza Spring (hereinafter the “Restoration Project”).

PART 2. A variance is granted from Section 25-8-281 (*Critical Environmental Features*) and Section 25-8-341 (*Cut Requirements*) and an exemption is provided from Section 25-8-514 (*Pollution Prevention Required*) of the City Code as amended to allow construction within the buffer of a critical environmental feature, cut of a tract of land exceeding a depth of four feet and an exemption from pollution prevention requirements of the Save Our Springs Ordinance associated with the Restoration Project as shown in Exhibits A and B.

PART 3. Construction authorized by this ordinance must adhere to the following conditions:

- (A) Protection of endangered species using the Conservation Measures described in the U.S. Fish and Wildlife Service Incidental Take Permit TE-839031-1 issued to the City of Austin.
- (B) Areas disturbed by construction will use protections for trees as warranted and use erosion and sediment controls. After construction, all disturbed areas will be revegetated.
- (C) A plan for handling water originating from Eliza Springs to re-route it from the Eliza Spring amphitheater, around the excavation of the existing outlet pipe, and into Barton Creek or the Barton Creek bypass culvert.
- (D) A plan for handling groundwater infiltrating into the trench excavations during construction, filtering suspended solids from the water to applicable standards and discharging the water into Barton Creek or the Barton Creek bypass culvert.
- (E) After the Restoration Project is complete, the new stream channel will be vegetated.

PART 4. This ordinance takes effect on _____, 2016



MEMORANDUM

TO: Dr. Mary Gay Maxwell, Chair and Commissioners
Environmental Commission

FROM: Chuck Lesniak, Environmental Officer
Watershed Protection Department

DATE: March 17, 2016

SUBJECT: SOS and Other Code Amendments for Eliza Springs Outlet Daylighting Project
SP-2012-0104D

On the March 23, 2016 Environmental Commission agenda is a proposed amendment to the City's Save Our Springs ordinance and related variances to the Chapter 25-8 of the Land Development Code. The ordinance is being brought forward to enable the Watershed Protection Department (WPD) to proceed with the Eliza Springs Outlet Daylighting Project.

Project Description and Background

Eliza Springs in Zilker Park (Figure 1) is habitat for the endangered Austin Blind and Barton Springs salamanders. Groundwater emerges from Eliza Springs and currently flows out of the historic amphitheater, into an underground pipe on the north side of the grounds of Barton Springs, and thence flows into the Barton Springs Bypass Tunnel. The existing outlet pipe is failing and requires replacement. Historically, Eliza Springs was connected to Barton Creek via a natural surface stream (Figure 2).

The Barton Springs Complex is not only critical habitat for federally-endangered salamander species, but also an important recreational resource for Austin. Operation of Barton Springs as a swimming facility requires a permit from the U.S. Fish and Wildlife Service (USFWS) to allow incidental "take" of protected salamanders under the federal Endangered Species Act Section 10(a)(1)(B). The City of Austin permit from the USFWS, authorized by Austin City Council Resolution 20111103-034, includes a conservation measure to replace the buried outlet pipe of Eliza Spring with a natural "daylighted" surface stream (Figure 3). The new surface stream will increase the area of potential salamander habitat and thus increase the resiliency of the salamander species to changing climatic and hydrologic conditions in the future.

Construction of the daylighted stream must fully comply with all of the conservation measures in the USFWS-approved Habitat Conservation Plan for Barton Springs, including the minimization of entry of anthropogenic pollutants into salamander habitat. WPD salamander biologists will oversee all aspects of the construction. Erosion control will be utilized consistent with code requirements, and suspended sediment in groundwater infiltrating into the excavation during construction will be filtered prior to discharge. Impacts to Eliza Springs itself within the amphitheater will be limited in spatial and temporal

extent, just to allow reconstruction of the keyway exit, and salamanders will be removed from the area prior to any dewatering.

WPD and consulting engineers HDR have developed a design to replace the failing buried pipe with the new surface stream (Figure 4). Some existing storm drains must be relocated to make room for the new surface stream. The project area is located within the grounds of Barton Springs in Zilker Park, in the Critical Water Quality Zone and floodplain of Barton Creek, in the Drinking Water Protection Zone and over the Edwards Aquifer Recharge Zone. The area in question is subject to the the Watershed Protection Ordinance, and the Save Our Springs Ordinance. The project is utilizing the existing, active site plan for Zilker Park and is proceeding as revision 2 of SP-2012-0104D.

Code Amendment and Variances

To construct the new surface stream, a cut of more than 4 feet is necessary to access the buried outlet pipe and to create a new stream channel with stable side slopes. The existing keyway where groundwater exits the Eliza Springs amphitheater must be removed to connect Eliza Springs with the new surface stream and thus construction must occur within the buffer of a Critical Environmental Feature (Eliza Spring itself).

The portion of Zilker Park on SP-2012-0104D within the Barton Creek Watershed already exceeds the maximum allowable 15% impervious cover. The SOS Ordinance would require the full site described on SP-2012-0104D to be brought into compliance for impervious cover in order to conduct the development proposed for the Eliza Springs Outlet Daylighting Project.

For the Eliza Springs Outlet Daylighting Project to complete the site development permit application process, two variances are necessary:

- 25-8-281 (*Critical Environmental Features*) to allow construction within the buffer of a Critical Environmental Feature (Eliza Springs), and
- 25-8-341 (*Cut Requirements*) to allow cut on a tract of land more than 4 feet in depth.

Because 25-8-515 prohibits variances from the SOS Ordinance, a site-specific amendment to the SOS Ordinance approved by the City Council is necessary to allow construction of the Eliza Springs Outlet Daylighting Project. Due to the special nature of the project to restore a historic stream and create additional salamander habitat in compliance with USFWS permit requirements, and in the interest of efficiency, the proposed site-specific ordinance will also authorize the two necessary variances.

Project Review

WPD is the project sponsor, and has developed the design in consultation with staff from the Parks and Recreation Department. Due to the complex nature of the project location in endangered species habitat, affecting a historic structure, in a floodplain, and in a metropolitan park, WPD is pursuing development of the daylighted stream under a full site plan. Staff from Development Services and other City of Austin departments have completed one round of review of the site plan application.

Recommendation

Staff recommends approval of the proposed amendment and associated variances for the following reasons:

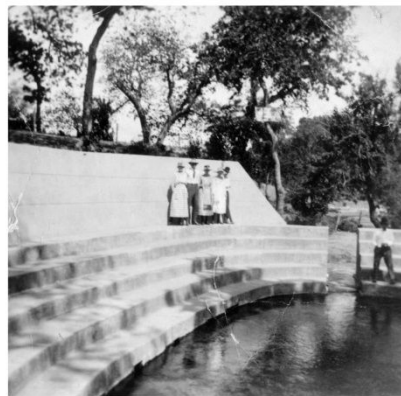
- The project is a condition of the USFWS permit for the continued operation of Barton Springs as a recreation facility.
- The project will increase the area of surface habitat for endangered salamanders.

- The project will replace a failing, buried outlet pipe with a surface stream more consistent with the historic conditions.
- The project will replace existing turf grass with a new riparian vegetation community that improves floodplain health as determined by a floodplain functional assessment to “good” consistent with the Watershed Protection Ordinance.
- The project will not impair the function of Eliza Springs, and impacts to the existing spring pool during construction will be minimized.
- Salamander biologists will be present on site during all aspects of the construction to oversee activity and ensure no unauthorized impacts to endangered salamanders.
- The project will comply with all applicable conservation measures in the USFWS permit for the continued operation of Barton Springs, including limitations on the use of herbicides, pesticides and fertilizers, such that the project will not result in any increase in pollutants.
- Erosion controls will be utilized in compliance with city code to ensure no discharge of sediment.
- Groundwater infiltrating into the excavation area will be filtered prior to discharge.
- Eliza Spring outflow will be re-routed around the excavation area during construction and will continue to discharge into Barton Creek.
- The new stream side slopes have been specifically designed to be stable and withstand flooding from Barton Springs.
- Other than the SOS amendment and variances identified, the project complies with City Code.

Figure 1. Salamander habitat spring locations within Zilker Park



Figure 2. Historic and current photographs of Eliza Spring.



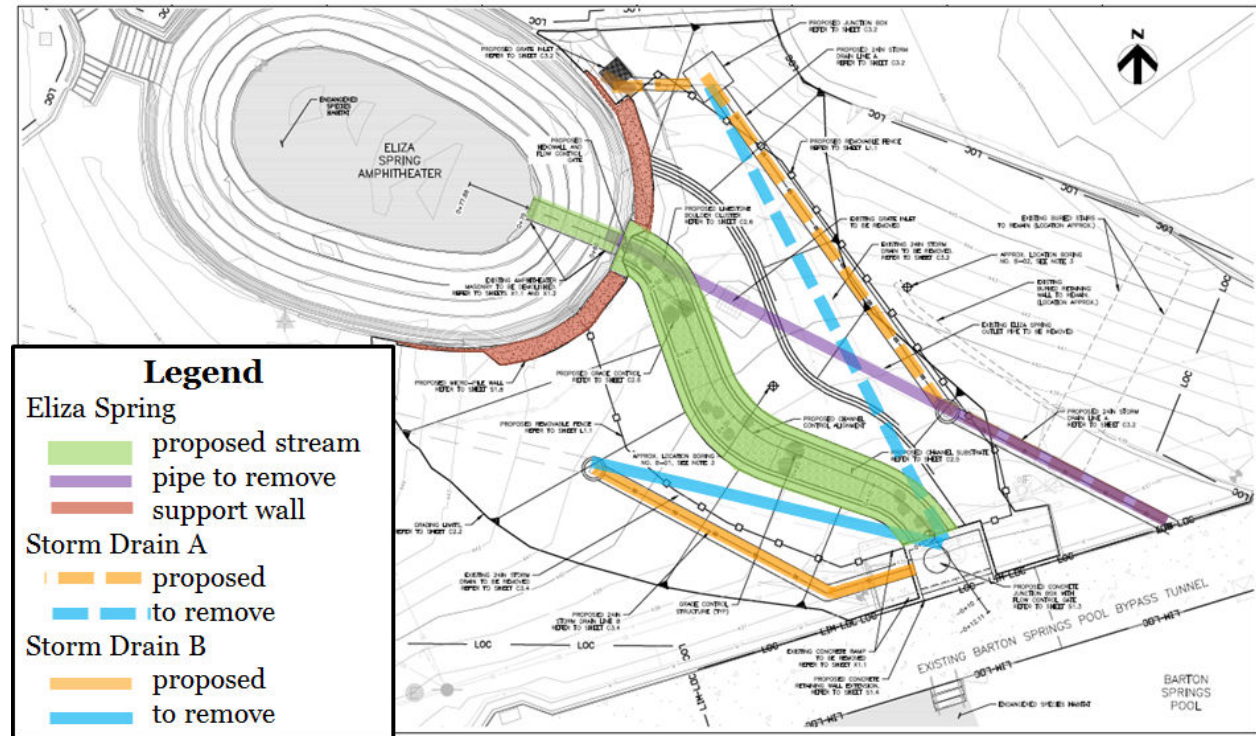
Austin History Center, Austin Public Library



Figure 3. Photosimulation of new Eliza Spring outlet surface stream.



Figure 4. Construction detail for Eliza Daylighting project.



ACTION ITEM

Name: Eliza Springs Outlet Daylighting (as revision to Barton Springs General Grounds Improvements) **SPC-2012-0104D**

Applicant: City of Austin Watershed Protection Department

Location: Zilker Park, 2201 Barton Springs Road

Staff Reviewer: Atha Phillips, DSD Environmental Review Specialist Senior

Watershed: Barton Creek (Barton Springs Zone), Drinking Water Protection Zone, and Edwards Aquifer Recharge Zone

Ordinance: Comprehensive Watershed Ordinance, Watershed Protection Ordinance, Save Our Springs Ordinance

Request: Consider and recommend approval of an ordinance granting variances as follows:

1. To allow construction within the buffer of a Critical Environmental Feature; [LDC 25-8-281]
2. To allow for a cut more than 4 feet; [LDC 25-8-341]

And providing amendments to the SOS Ordinance as follows:

1. To exempt the project from the impervious cover and pollution control requirements of the SOS Ordinance; [LDC 25-8-514(A)]

Staff Recommendation: Recommended for approval



ENVIRONMENTAL COMMISSION MOTION 20160323 008a

Date: March 23, 2016

Subject: Eliza Springs Outlet Daylighting (as revision to Barton Springs General Grounds Improvements) SPC-2012-0104D

Motion By: Pam Thompson

Second By: Peggy Maceo

RATIONALE:

Whereas, the Project is a condition of the USFWS permit for the continued operation of Barton Springs as a recreation facility. The project will replace a failing, buried outlet pipe with a surface stream more consistent with the historic conditions. The project will replace the existing turf grass with a new riparian vegetation community that improves floodplain health as determined by a flood plain functional assessment to “good” consistent with the Watershed Protection Ordinance; and

Whereas, the project will increase the area of surface habitat for endangered salamanders. And the project will not impair the function of Eliza Springs, and impacts to the existing spring pool during construction will be minimized.

Therefore, the Environmental Commission recommends support of the request for a site specific amendment to City Code Section 25-8-514 (Save Our Springs Initiative) and variances to City Code Sections 25-8-281 and 25-8-341 to allow the proposed project to exceed impervious cover limits and cut requirements, exempt the project from the pollution control requirements of the Save our Springs Initiative, and allow specific construction within the buffer of a critical environmental feature with the following;

Staff Conditions:

- Salamander biologists will be present on site during all aspects of the construction to oversee activity and ensure no unauthorized impacts to endangered salamanders;
- The project will comply with all applicable conservation measures in the USFWS permit for the continued operation of Barton Springs, including limitations on the use of herbicides, pesticides and fertilizers, such that the project will not result in any increase in pollutants;
- Erosion controls will be utilized in compliance with city code to ensure no discharge of sediment;
- Groundwater infiltrating into the excavation area will be filtered prior to discharge;
- Eliza Springs outflow will be re-routed around the excavation area during construction and will continue to discharge into Barton Creek;
- The new stream side slopes have been specifically designed to be stable and withstand flooding from Barton Springs;
- Other than the SOS amendment and variances identified, the project complies with City Code.

Environmental Commission Conditions:

1. Concern over frequent inundation of Eliza Springs with Flood Water which previously did not exist in recent history and as staff to address this concern

2. Consider Reducing density of trees with a minimum of 25' of spacing and consider removing bald cypress and consider more understory as a substitute for trees

VOTE 10-0-0-1

Recuse: None
For: Creel, Thompson, Gooch, Neely, Maxwell, H. Smith, B. Smith, Grayum, Maceo, Perales
Against: Moya
Abstain: None
Absent: None

Approved By:

A handwritten signature in black ink, appearing to read "Mary Gay Maxwell". The signature is written in a cursive, flowing style.

Mary Gay Maxwell, Environmental Commission Chair