



ITEM FOR ENVIRONMENTAL COMMISSION AGENDA

COMMISSION MEETING DATE: April 15, 2020

NAME & NUMBER OF PROJECT: Davis Water Treatment Plant
SPC-2012-0414(R1)

NAME OF APPLICANT OR ORGANIZATION: MWM Design Group; Shari Pape

LOCATION: 3352 Mount Bonnell Road

COUNCIL DISTRICT: District 10

ENVIRONMENTAL REVIEW STAFF: Scott Hiers, Environmental Scientist Senior; Watershed Protection Department, 512.974.1916, scott.hiers@austintexas.gov

ENVIRONMENTAL REVIEW STAFF: Pamela Abee-Taulli, Environmental Review Specialist Senior, Development Services Department, 512.974.1879, pamela.abee-taulli@austintexas.gov

WATERSHED: Huck's Slough & Lake Austin watersheds, Water Supply Suburban & Water Supply Rural Classification, Drinking Water Protection Zone

REQUEST: Variance requests are as follows:

1. Request to vary from LDC 25-8-281(C)(2)(b) to allow the construction within 150-foot of Critical Environmental Feature (CEF) buffers.
2. Request to vary from LDC 25-8-341 to allow cut exceeding 4 feet, to 4.5 feet.

STAFF RECOMMENDATION: Staff recommends these variances, having determined the findings of fact to have been met.

STAFF CONDITIONS: None



Development Services Department
Staff Recommendations Concerning Required Findings

Project Name &
Case Number: **Davis Water Treatment Plant - SPC-2012-0414(R1)**

Ordinance Standard: **Watershed Protection Ordinance**

Variance Request: **To allow construction within 150-foot Critical Environmental Feature (CEF) buffer for a Rimrock CEF [LDC 25-8-281(C)(2)(b)].**

Include an explanation with each applicable finding of fact.

A. Land Use Commission variance determinations from Chapter 25-8-41 of the CityCode:

1. The requirement will deprive the applicant of a privilege available to owners of similarly situated property with approximately contemporaneous development subject to similar code requirements.

Yes. Other City of Austin water treatment plants have the same chemical feed system in place to help control zebra mussel infestations in the raw water transmission main. Chemical treatment is necessary to control zebra mussel infestations in raw water transmission mains.

2. The variance:

- a) Is not necessitated by the scale, layout, construction method, or other design decision made by the applicant, unless the design decision provides greater overall environmental protection than is achievable without the variance;

Yes. The variance is not necessitated by the design. No alternative locations are available on site for a Zebra Mussel Mitigation System. The system must be placed in or near the existing intake pump house. There is not enough room in the existing pump station to house the entire system, such as the chemical storage. All the proposed construction coincides within areas of existing impervious cover. Minimal impervious cover is being added.

- b) Is the minimum deviation from the code requirement necessary to allow a reasonable use of the property;

Yes. The variance is a minimum deviation from the code requirement and is allowing for a reasonable use of the

property. No new impervious cover is proposed. The Zebra Mussel Mitigation System and the associated construction activities is in areas, or adjacent to areas, with existing impervious cover or development. The piping for the chemical storage and metering station is the shortest and most direct route to the existing building, and the system is located where there is already an asphalt driveway or development.

- c) Does not create a significant probability of harmful environmental consequences.

Yes. The variance with the staff recommended conditions does not create a probability of significant harmful environmental consequences. Construction is within existing structures or where there is existing impervious cover. The chemical tank and piping are double contained. The equipment pad is curbed and covered with a canopy. The pump metering station includes a virtual day tank and there are automated valves at the pump bay that close if the pumps fail or when the pumps are not running. No new impervious cover is being added. As part of the Stormwater Pollution Prevention Plan, temporary sedimentation and erosion controls will be installed prior to the start of construction activities. The applicant is providing wetland plantings along the shoreline that will reduce shoreline erosion and reduce the possibility of sediment-laden surface runoff from entering the lake.

- 3. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.


Yes, the variance will result in water quality that is at least equal to the water quality achievable without the variance. The proposed construction will not impact existing water quality. No new impervious cover is proposed. During construction, Stormwater Pollution Prevention Plan best practices will be employed to prevent construction sediment and debris from entering the stormwater runoff, and additional wetland plants along the shoreline will be provided to enhance the water quality of surface water runoff.

Staff Recommendation: Staff recommends the Findings of Fact have been met.

- B. The Land Use Commission may grant a variance from a requirement of Section 25-8-422 (*Water Supply Suburban Water Quality Transition Zone*), Section 25-8-452 (*Water Supply Rural Water Quality Transition Zone*), Section 25-8-482 (*Barton Springs Zone Water Quality Transition Zone*), Section 25-8-368 (*Restrictions on Development Impacting Lake Austin, Lady Bird Lake, and Lake Walter E. Long*), or Article 7, Division 1 (*Critical Water Quality Zone Restrictions*), after determining that:

1. The criteria for granting a variance in Subsection (A) are met;
Yes / No N/A
2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property;
Yes / No N/A
3. The variance is the minimum deviation from the code requirement necessary to allow a reasonable, economic use of the entire property.
Yes / No N/A

Staff Recommendation: N/A.

Hydrogeologic Reviewer  Date: 4/07/2020
(WPD) Scott E. Hiers

Environmental Officer  Date: 4/07/2020
(WPD) Chris Herrington



Development Services Department
Staff Recommendations Concerning Required Findings

Project Name: Davis Water Treatment Plant - SPC-2012-0414(R1)
Ordinance Standard: Watershed Protection Ordinance
Variance Request: Request to vary from LDC 25-8-341 to allow cut exceeding 4 feet, to 4.5 feet.

Include an explanation with each applicable finding of fact.

A. Land Use Commission variance determinations from Chapter 25-8-41 of the City Code:

1. The requirement will deprive the applicant of a privilege available to owners of similarly situated property with approximately contemporaneous development subject to similar code requirements.

Yes Other City of Austin water treatment plants have the same chemical feed system in place to help control zebra mussel infestations in the raw water transmission main. Chemical treatment is necessary to control zebra mussel infestations in raw water transmission mains.

2. The variance:

- a) Is not necessitated by the scale, layout, construction method, or other design decision made by the applicant, unless the design decision provides greater overall environmental protection than is achievable without the variance;

Yes The variance is not necessitated by the scale, layout, or construction method. It is necessitated by the steepness of the slope (40 percent) at the edge of the site where the concrete pad is proposed to be located. The cut is necessary for the concrete pad that will house the chemical feed system. The proposed pad location is 1) close to the freshwater intake, minimizing the amount of construction needed for laying the pipes; 2) outside of both the Critical Water Quality Zone for Lake Austin and the Water Quality Transition Zone for Huck's Slough, maximizing distance from the adjacent bodies of water; and 3) on the far side of the site from the seep, spring, and rimrock Critical Environmental Features.

- b) Is the minimum deviation from the code requirement necessary to allow a reasonable use of the property;

Yes The variance is the minimum deviation from the code, exceeding the grading limit by only six inches.

- c) Does not create a significant probability of harmful environmental consequences.

Yes The variance does not create a significant probability of harmful environmental consequences. The cut will be stabilized by a wall on three sides of the concrete pad.

3. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.

Yes The proposed construction will not impact existing water quality. During construction, erosion and sedimentation control best practices will be employed to prevent construction sediment and debris from entering the stormwater runoff.

- B. The Land Use Commission may grant a variance from a requirement of Section 25-8-422 (*Water Supply Suburban Water Quality Transition Zone*), Section 25-8-452 (*Water Supply Rural Water Quality Transition Zone*), Section 25-8-482 (*Barton Springs Zone Water Quality Transition Zone*), Section 25-8-368 (*Restrictions on Development Impacting Lake Austin, Lady Bird Lake, and Lake Walter E. Long*), or Article 7, Division 1 (*Critical Water Quality Zone Restrictions*), after determining that::

1. The criteria for granting a variance in Subsection (A) are met;

NA

2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property;

NA

3. The variance is the minimum deviation from the code requirement necessary to allow a reasonable, economic use of the entire property.

NA

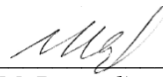
Staff Determination: Staff determines that the findings of fact have been met. No conditions are recommended.

Environmental Reviewer
(DSD)


(Pamela Abee-Taulli)

4/3/2020
Date

Environmental Review
Manager (DSD)


(Mike McDougal)

4-3-2020
Date

Environmental Officer
(WPD)


(Chris Herrington)

4/07/2020
Date



ENVIRONMENTAL COMMISSION VARIANCE APPLICATION FORM

PROJECT DESCRIPTION

Applicant Contact Information

Name of Applicant	Minda Sarmiento, Austin Public Works
Street Address	6800 Burleson Road, Bldg 312, Ste 200
City State ZIP Code	Austin, Texas 78744
Work Phone	512-974-5645
E-Mail Address	minda.sarmiento@austintexas.gov

Variance Case Information

Case Name	Davis WTP Zebra Mussels Mitigation		
Case Number	SPC-2012-0414C(R1)		
Address or Location	3352 Mount Bonnell Road		
Environmental Reviewer Name	Pamela Abee-Taulli		
Environmental Resource Management Reviewer Name	Scott Hiers		
Applicable Ordinance	Watershed Protection Ordinance		
Watershed Name	Lake Austin; Huck's Slough		
Watershed Classification	<input type="checkbox"/> Urban <input type="checkbox"/> Suburban <input checked="" type="checkbox"/> Water Supply Suburban <input checked="" type="checkbox"/> Water Supply Rural <input type="checkbox"/> Barton Springs Zone		
Edwards Aquifer Recharge Zone	<input type="checkbox"/> Barton Springs Segment Northern Edwards Segment <input checked="" type="checkbox"/> Not in Edwards Aquifer Zones		
Edwards Aquifer Contributing Zone	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

Distance to Nearest Classified Waterway	100'
Water and Waste Water service to be provided by	Not Applicable
Request	<p>The variance request is as follows (Cite code references):</p> <p>Land Development Code 25-8-281: Construction is prohibited within 150' of a Critical Environmental Feature (in our case, rimrock and wetlands)</p>

Impervious cover	Existing	Proposed
square footage:	_____	___0___
acreage:	___7.31___	___0___
percentage:	___27%___	___0___
Provide general description of the property (slope range, elevation range, summary of vegetation / trees, summary of the geology, CWQZ, WQTZ, CEFs, floodplain, heritage trees, any other notable or outstanding characteristics of the property)	<p>The site terrain slopes (~22%) towards the site parking lot and is located in the Lake Austin and Huck's Slough Watersheds. The chemical metering station will be installed at an elevation of ~512' and the chemical piping will be installed under the asphalt parking area. The terrain is covered with brush. There is one heritage tree: a 64' diameter CRZ heritage oak tree located outside of the LOC at an elevation higher than the proposed work ground, although the dripline extends over the LOC.</p> <p>The chemical metering station will be installed outside of the WQTZ and CWQZ but, the chemical piping will have to cross through the CWQZ in order to reach the pump station. The concrete pad abuts a brush-covered slope and the back of the concrete pad will require excavation of 5.5' of soil, exceeding the Land Development Code (LDC) limit of 4' of excavation.</p> <p>There is rimrock and wetlands adjacent to the LSPS so the proposed installation will be located inside of the 150' rimrock and wetlands CEF buffer. No work is proposed inside the 100-year floodplain. There are two identified wetlands areas on either side of the LSPS right at the shoreline. The wetlands will not be impacted by the proposed construction.</p>	

Clearly indicate in what way the proposed project does not comply with current Code (include maps and exhibits)	<ul style="list-style-type: none"> Construction will be performed within the 150' rimrock/wetlands CEF buffer.
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FINDINGS OF FACT

As required in LDC Section 25-8-41, in order to grant a variance the Land Use Commission must make the following findings of fact:

Include an explanation with each applicable finding of fact.

Project: **Zebra Mussel Mitigation Techniques – Chemical Storage and Feed System**

Ordinance:

A. Land Use Commission variance determinations from Chapter 25-8-41 of the City Code:

1. The requirement will deprive the applicant of a privilege available to owners of similarly situated property with approximately contemporaneous development subject to similar code requirements.

Yes The proposed construction prevents zebra mussels from clogging the LSPS of the water treatment plant. All water plants with LSPSs drawing water from zebra mussel infested water bodies will require treatment to prevent zebra mussels from settling on the pump intake equipment and piping. If there is no room in the existing pump station, then the new construction must be installed outdoors in protected areas adjacent to the lakeshore.

2. The variance:
 - a) Is not necessitated by the scale, layout, construction method, or other design decision made by the applicant, unless the design decision provides greater overall environmental protection than is achievable without the variance;

Yes The design decision to place the chemical storage and metering station next to the lakeshore is because the LSPS is already on the lakeshore. There is no other feasible location.

- b) Is the minimum deviation from the code requirement necessary to allow a reasonable use of the property;

Yes The chemical storage and metering station was situated in a small space outside of either the CWQZ or WQTZ. The chemical piping was routed in the shortest and most direct route and does not disturb any vegetated areas.

- c) Does not create a significant probability of harmful environmental consequences.

Yes The chemical storage and metering station is designed to prevent any harmful environmental consequences. The tank and piping are double contained. The equipment pad is curbed and covered with a canopy. The pump metering station includes a virtual day tank and there are automated valves at each pump bay that automatically close if the pumps fail and whenever the pumps are not running.

3. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.

Yes The proposed construction will not impact existing water quality. During construction, SWPPP best practices will be employed to prevent construction sediment and debris from entering the stormwater runoff.

- B. Additional Land Use Commission variance determinations for a requirement of Section 25-8-422 (Water Quality Transition Zone), Section 25-8-452 (Water Quality Transition Zone), Article 7, Division 1 (Critical Water Quality Zone Restrictions), or Section 25-8-368 (Restrictions on Development Impacting Lake Austin, Lady Bird Lake, and Lake Walter E. Long):

1. The criteria for granting a variance in Subsection (A) are met;

Yes Installing a utility line in the CWQZ is permitted per Article 7 Division 1 (D) as long as the utility line follows the most direct path to minimize disturbance, which is true for the proposed utility lines.

2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property;

Yes The chemical storage and metering station will prevent zebra mussels from clogging the pump intake equipment and piping. Without it, the City would have to constantly physically remove the zebra mussels settling on the equipment at great expense.

3. The variance is the minimum deviation from the code requirement necessary to allow a reasonable, economic use of the entire property.

Yes The variance requested is the minimum deviation necessary to allow reasonable, economic use of the entire property. The chemical storage and metering station will prevent zebra mussels from clogging the pump intake equipment and piping. Without it, the City would have to constantly physically remove the zebra mussels settling on the equipment at great expense.



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Edwards Aquifer Recharge Zone	<input type="checkbox"/> Barton Springs Segment Northern Edwards Segment <input checked="" type="checkbox"/> Not in Edwards Aquifer Zones
Edwards Aquifer Contributing Zone	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Distance to Nearest Classified Waterway	100'
Water and Waste Water service to be provided by	Not Applicable
Request	<p>The variance request is as follows (Cite code references):</p> <p>Land Development Code 25-8-341: Cuts on a tract of land may not exceed four feet of depth.</p>

Impervious cover	Existing	Proposed
square footage:	_____	___0___
acreage:	___7.31___	___0___
percentage:	___27%___	___0___
Provide general description of the property (slope range, elevation range, summary of vegetation / trees, summary of the geology, CWQZ, WQTZ, CEFs, floodplain, heritage trees, any other notable or outstanding characteristics of the property)	<p>The site terrain slopes (~22%) towards the site parking lot and is located in the Lake Austin and Huck's Slough Watersheds. The chemical metering station will be installed at an elevation of ~512' and the chemical piping will be installed under the asphalt parking area. The terrain is covered with brush. There is one heritage tree: a 64' diameter CRZ heritage oak tree located outside of the LOC at an elevation higher than the proposed work ground, although the dripline extends over the LOC.</p> <p>The chemical metering station will be installed outside of the WQTZ and CWQZ but, the chemical piping will have to cross through the CWQZ in order to reach the pump station. The concrete pad abuts a brush-covered slope and the back of the concrete pad will require excavation of 5.5' of soil, exceeding the Land Development Code (LDC) limit of 4' of excavation.</p> <p>There is rimrock and wetlands adjacent to the LSPS so the proposed installation will be located inside of the 150' rimrock and wetlands CEF buffer. No work is proposed inside the 100-year floodplain. There are two identified wetlands areas on either side of the LSPS right at the shoreline. The wetlands will not be impacted by the proposed construction.</p>	

Clearly indicate in what way the proposed project does not comply with current Code (include maps and exhibits)	<ul style="list-style-type: none"> The back of the concrete pad will require 5.5' of soil excavation. LDC limits excavation to a depth of 4'.
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FINDINGS OF FACT

As required in LDC Section 25-8-41, in order to grant a variance the Land Use Commission must make the following findings of fact:

Include an explanation with each applicable finding of fact.

Project: **Zebra Mussel Mitigation Techniques – Chemical Storage and Feed System**

Ordinance:

A. Land Use Commission variance determinations from Chapter 25-8-41 of the City Code:

1. The requirement will deprive the applicant of a privilege available to owners of similarly situated property with approximately contemporaneous development subject to similar code requirements.

Yes The proposed construction prevents zebra mussels from clogging the LSPS of the water treatment plant. All water plants with LSPSs drawing water from zebra mussel infested water bodies will require treatment to prevent zebra mussels from settling on the pump intake equipment and piping. If there is no room in the existing pump station, then the new construction must be installed outdoors in protected areas adjacent to the lakeshore.

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Yes The design decision to place the chemical storage and metering station next to the lakeshore is because the LSPS is already on the lakeshore. There is no other feasible location.

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Yes The chemical storage and metering station was situated in a small space outside of either the CWQZ or WQTZ. The chemical piping was routed in the shortest and most direct route and does not disturb any vegetated areas.

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Yes The chemical storage and metering station is designed to prevent any harmful environmental consequences. The tank and piping are double contained. The equipment pad is curbed and covered with a canopy. The pump metering station includes a virtual day tank and there are automated valves at each pump bay that automatically close if the pumps fail and whenever the pumps are not running.

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1. The criteria for granting a variance in Subsection (A) are met;

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2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property;

Yes The chemical storage and metering station will prevent zebra mussels from clogging the pump intake equipment and piping. Without it, the City would have to constantly physically remove the zebra mussels settling on the equipment at great expense.

3. The variance is the minimum deviation from the code requirement necessary to allow a reasonable, economic use of the entire property.

Yes The variance requested is the minimum deviation necessary to allow reasonable, economic use of the entire property. The chemical storage and metering station will prevent zebra mussels from clogging the pump intake equipment and piping. Without it, the City would have to constantly physically remove the zebra mussels settling on the equipment at great expense.



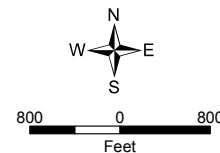
CITY OF AUSTIN
DAVIS WTP
ZEBRA MUSSEL CHEMICAL
STORAGE AND FEED
SYSTEM
(8207.009)

Project Location
Map

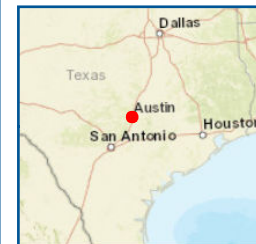
Legend



DAVIS WTP



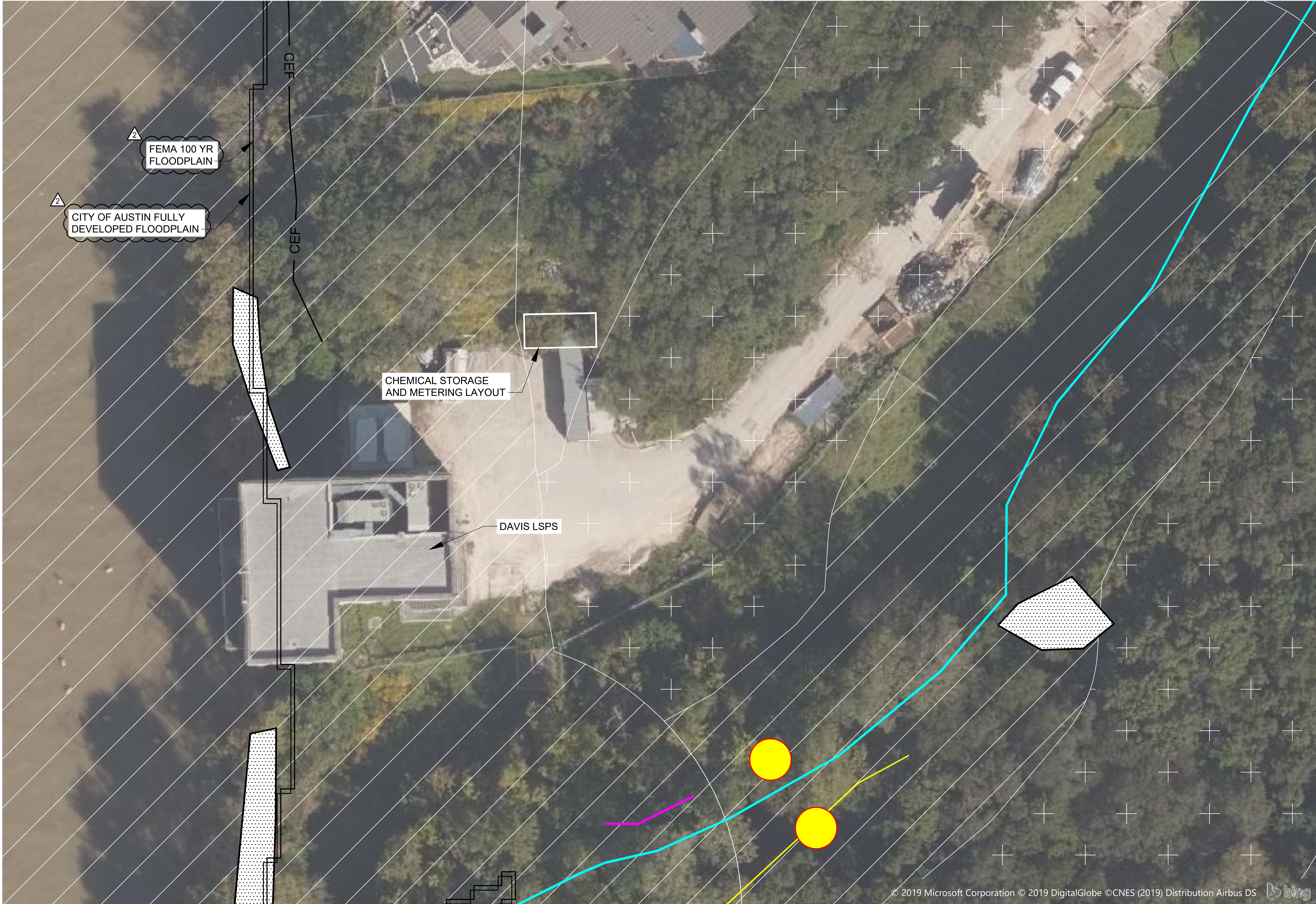
1 inch = 1,700 feet





BV PN
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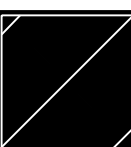


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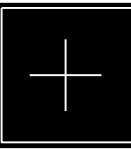





LEGEND

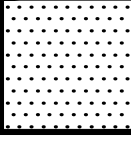


CRITICAL WATER QUALITY ZONE




WATER QUALITY TRANSITION ZONE







CRITICAL ENVIRONMENTAL
FEATURE: WETLANDS




CEF




CREEK




ROCK OUTCROPS



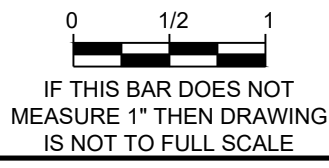
SEEPS AND SPRINGS



SEEPS AND SPRINGS




CRITICAL ENVIRONMENTAL
FEATURE (CANYON RIMROCK)*

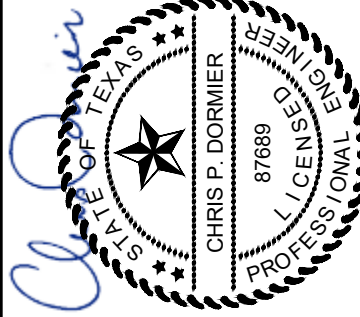
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CHECKED: AVK				2		
APPROVED: DAT						
DATE: NOVEMBER 2019						
						
PROJECT NO. 402943						
G-06 SHEET 6 OF 36						

CITY OF AUSTIN
ZEBRA MUSSEL MITIGATION TECHNIQUES
DAVIS WTP

GENERAL
SITE LAYOUT



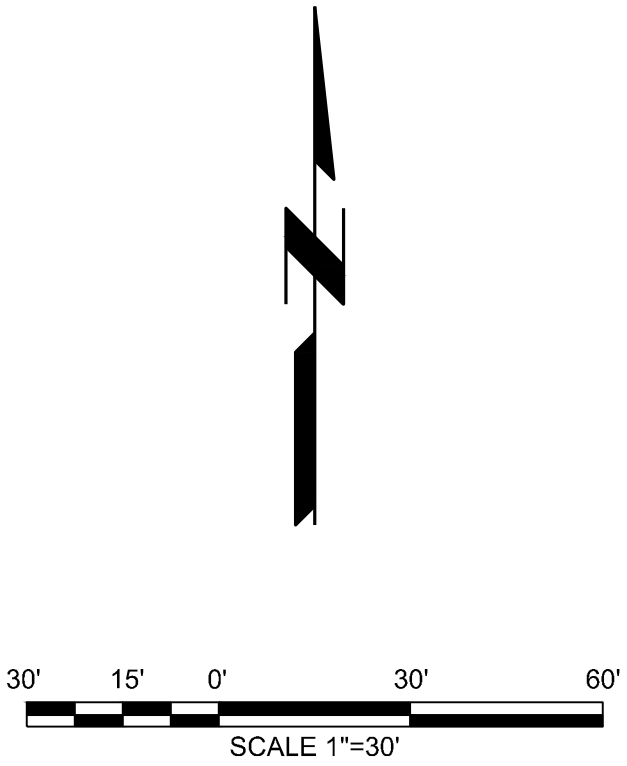
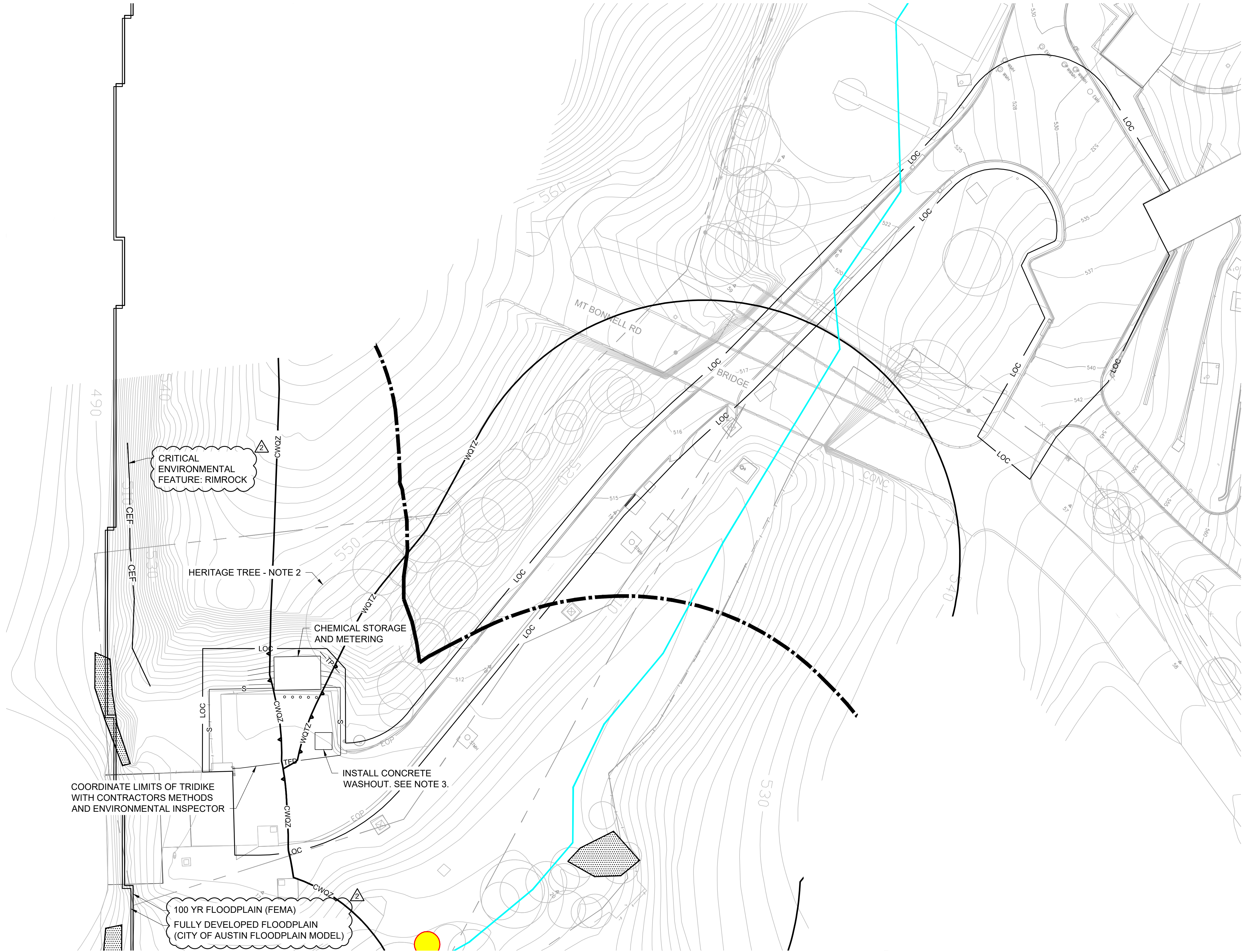
BLACK & VEATCH
Black & Veatch Corporation
Austin, Texas



DATE: 3/3/2020
REVISIONS AND RECORD OF USE



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D10000
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- NOTES:
- CONSTRUCTION EXIT NOT REQUIRED AS NO TRUCK TIRES LEAVE THE PAVEMENT.
 - LIVE OAK TREE WITH 32" DIAMETER MULTI-TRUNK AND A 64' DIAMETER DRIPLINE IS LOCATED OVER 25' ABOVE CONSTRUCTION AREA. COORDINATE NEED FOR TREE PROTECTION WITH ENVIRONMENTAL INSPECTOR.
 - CONTRACTOR SHALL COORDINATE LOCATION OF CONCRETE WASH OUT AREAS WITH ENVIRONMENTAL INSPECTOR IN FIELD. CONTRACTOR SHALL SUBMIT DETAILS OF PROPOSED WASH OUT DESIGN AND LOCATIONS TO ENGINEER FOR REVIEW AND APPROVAL.
 - ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS ARE TO REMAIN OVERNIGHT, SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
 - PERPENDICULAR EROSION CONTROLS MUST BE INSTALLED EVERY 30 FEET AS THE TRENCH IS BACKFILLED.

LEGEND

CWQZ	CRITICAL WATER QUALITY ZONE
WQTZ	WATER QUALITY TRANSITIONAL ZONE
LOC	LIMITS OF CONSTRUCTION
EOP	EDGE OF PAVEMENT
S	SILT FENCE
TFD	TRIANGULAR FILTER DYKE
TP	TREE PROTECTION
CEF	CRITICAL ENVIRONMENTAL FEATURE (CANYON RIMROCK)
Creek	CREEK
Wetlands	WETLANDS
CEFB	CEF BUFFER ZONE
Seeps and Springs	SEEPS AND SPRINGS

CITY OF AUSTIN
ZEBRA MUSSEL MITIGATION TECHNIQUES
DAVIS WTP

CIVIL
OVERALL SITE ACCESS, LIMITS OF CONSTRUCTION
AND EROSION AND SEDIMENTATION CONTROL PLAN

DESIGNED: MLS
DETAILED: BWA
CHECKED: AVK
APPROVED: DAT
DATE: NOVEMBER 2019

PROJECT NO.
402943

C-01A
SHEET
7A OF 36

BLACK & VEATCH
Black & Veatch Corporation
Austin, Texas

PROFESSIONAL SEAL
CHRIS P. DORMIER
87698
L.C.E.N.S.E.D.
PROFESSOR OF CIVIL ENGINEERING
STATE OF TEXAS

3/3/2020

ADDENDUM NO. 1 (UPDATED BACKGROUND)	ADDENDUM NO. 2	DATE	REVISIONS AND RECORD OF USE	NO.	BY	CHK/APP
1	2					