

ITEM FOR ENVIRONMENTAL BOARD AGENDA

BOARD MEETING

DATE REQUESTED:

NOVEMBER 6, 2013

NAME & NUMBER

APAC TEXAS - BUCK

OF PROJECT:

SP-2013-0301D

NAME OF APPLICANT

Murfee Engineering Co. Inc.

OR ORGANIZATION:

(Contact: James Scaief 512-3327-9204)

LOCATION:

4220 Buck Lane

PROJECT FILING DATE:

August 8, 2013

WPDR/ENVIRONMENTAL Jim Dymkowski, 974-2707

STAFF:

james.dymkowski@austintexas.gov

WPDR/

Benny Ho, 974-3402

CASE MANAGER:

Benny.Ho@austintexas.gov

WATERSHED:

Colorado River Watershed (Suburban)

Desired Development Zone

ORDINANCE:

Comprehensive Watershed Ordinance (Current Code)

REQUEST:

Variance request is as follows:

To allow construction in the (CWQZ) Critical Water

Quality Zone.

LDC Section 25-8-392

STAFF RECOMMENDATION: Recommend approval.

REASONS FOR RECOMMENDATION: Findings of fact have been met.



MEMORANDUM

TO: Mary Gay Maxwell, Chairperson and Members of the Environmental Board

FROM: Jim Dymkowski, Environmental Review Specialist Senior

Planning and Development Review Department

DATE: November 6, 2013

SUBJECT: APAC Texas - Buck - SP-2013-0301D

On the November 6, 2013 agenda is a request for the consideration of one variance from LDC 25-8-392-to allow construction in the (CWQZ) Critical Water Quality Zone. The proposed construction of a haul road access is requested to allow the project full use of the land for a resource mining operation.

Description of Property

The subject property is located in the Colorado River Watershed, which is classified as Suburban, within the Desired Development Zone. It is in the City of Austin 2 mile ETJ. The southern half of the site is bisected by a minor classified waterway while the northern half of the site is bordered to the east by an intermediate classified waterway and to the north by another minor classified waterway. The Colorado River is approximately 500 feet to the east of the project. Code appropriate buffer setbacks have been placed on all of these waterways.

Existing Topography/Soil Characteristics/Vegetation

The property contains a very small area of slopes greater than 15% near an old stock pond in the northern most corner of the site. The site has historically been used for cattle and agricultural operations. Most of the areas onsite contain vegetation consistent with its agricultural and cattle use. There is a portion of the site near the old ranch home and work buildings and again in the northern portion of the site that does have some over story vegetation of Live oak, Cedar elm, and Retama. According to the Environmental Assessment, geology at this site is characterized by Fluviatile terrace deposits and soils classified as Bergsrom-Norwood, both consistent with the site's location in the floodplain of the Colorado River.

Critical Environmental Features/Endangered Species

Staff has visited the site numerous times and along with the environmental assessment has confirmed no Critical Environmental Features on or directly adjacent to the property.

Description of Project

The project consists of the excavation, mining, and extraction of surface and sub-surface resources with post-mining reclamation plan. The southern half of the site (shown as Area 1 on the plan sheet exhibits), received a City of Austin site plan permit SP-2007-0390D on April 18, 2008. Since that time, no excavation has begun and now the applicant wishes to permit the additional northern half of the project

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shown on this new permit as (Area 2 on the plan sheets exhibits). This new permit will replace the 2007 permit. During review, staff noticed that no access was approved on the old permit that would have allowed mining operations to cross through the critical of e minor classified waterway shown on the 2007 permit. This lack of a crossing also effectively prevents any access to the expanded mining area to the north proposed with this new permit.

The allowable impervious cover is 65% of the net site area in the ETJ suburban watershed for commercial development. The proposed impervious cover is 1.26 acres or .38% of the net site area of 333.70 acres.

Environmental Code Variance Request

The following variance to the land development code is being requested:

1. To allow construction in the (CWQZ) Critical Water Quality Zone. LDC Section 25-8-392

Recommendation

Staff recommends approval of the variance with no conditions as the Findings of Fact have been met.

Similar Cases

Staff was unable to find any similar cases where this type of haul road access was proposed across a critical water quality zone.



Planning and Development Review Department Staff Recommendations Concerning Required Findings Water Quality Variances

Project:

APAC Texas - Buck - SP-2013-0301D

Ordinance Standard:

Land Development Code Section 25-8-392

Variance Request:

To allow construction in the (CWQZ) Critical Water Quality Zone.

Findings:

A. Land Use Commission variance determinations from Chapter 25-8, Subchapter A – Water Quality of the City Code:

1. The requirement will deprive the applicant of a privilege or the safety of property given to owners of other similarly situated property with approximately contemporaneous development.

Yes. Strict adherence to the code would deprive the applicant of the privilege to develop the property in a manner similar to other mining properties. No other point of access is available to the applicant except at the proposed southeast corner of the site off Buck Lane. Without the proposed critical crossing approximately three quarters of the property could not be used.

2. The variance:

a) Is not based on a condition caused by the method chosen by the applicant to develop the property, unless the development method provides greater overall environmental protection than is achievable without the variance;

Yes. The variance is not based on the method chosen by the applicant to develop the property. The project has one possible access at the southeast corner of the property. Trying to access further north along Buck lane places it closer to some existing residential properties and would still need to cross the intermediate classified waterway adjacent to the east side of the site. Any project proposed on this property would need to cross the minor waterway to access the majority of developable area.

- b) Is the minimum change necessary to avoid the deprivation of a privilege given to other property owners and to allow a reasonable use of the property;
 Yes. Staff has worked with the applicant's engineer to set the location and the minimum width needed for the crossing that could also support the mining operation.
- c) Does not create a significant probability of harmful environmental consequences; and

Yes. The concrete crossing will be built at grade to maintain flows in the tributary. The crossing will be removed and revegetated to City of Austin 609S native standards after the mining operations cease.

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

Yes. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance. The single crossing at grade will not concentrate flows or modify the floodplain within the tributary. Also, by restricting the current agricultural use within the tributary water quality will be improved by maintaining the vegetated stability of the tributary.

- B. Additional Land Use Commission variance determinations for a requirement of Section 25-8-393 (Water Quality Transition Zone), Section 25-8-423 (Water Quality Transition Zone), Section 25-8-453 (Water Quality Transition Zone), or Article 7, Division 1 (Critical Water Quality Zone Restrictions):
 - The above criteria for granting a variance are met;
 Yes. All of the criteria in Section A of the Findings of Fact above have been met.
 - 2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property; and

 Ves. Without the property aritical exercises approximately three quarters of the property.

Yes. Without the proposed critical crossing approximately three quarters of the property would not be useable.

3. The variance is the minimum change necessary to allow a reasonable, economic use of the entire property.

Yes. Staff has worked with the applicant's engineer to set the location and the minimum width needed for the crossing to support the mining operation. Without the proposed critical crossing approximately three quarters of the property would not be useable.

Environmental Reviewer:

Environmental Program Coordinator:

Environmental Officer:

Date: October 25, 2013

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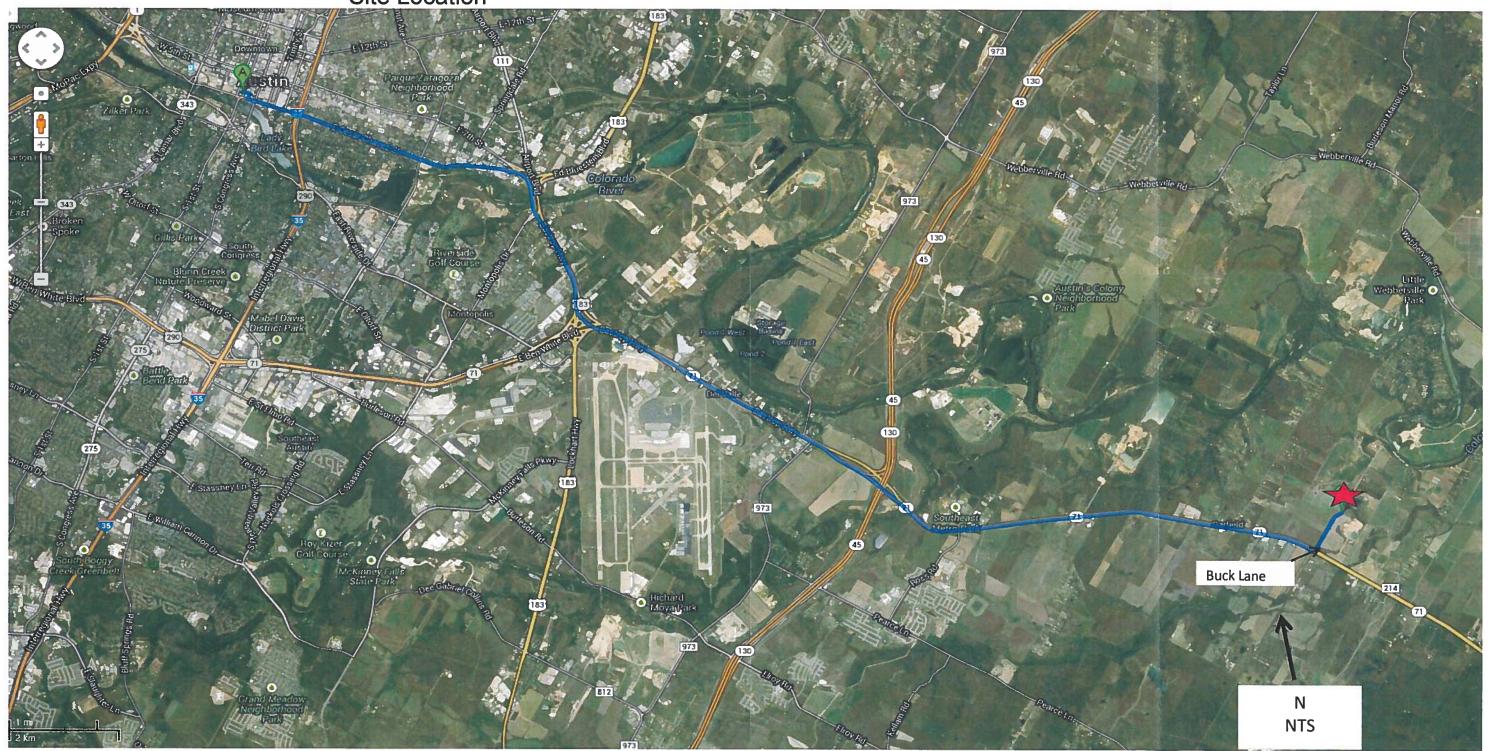
Staff may recommend approval of a variance after answering all applicable determinations in the affirmative (YES).

APAC Texas - Buck SP-2013-0301D Driving Directions

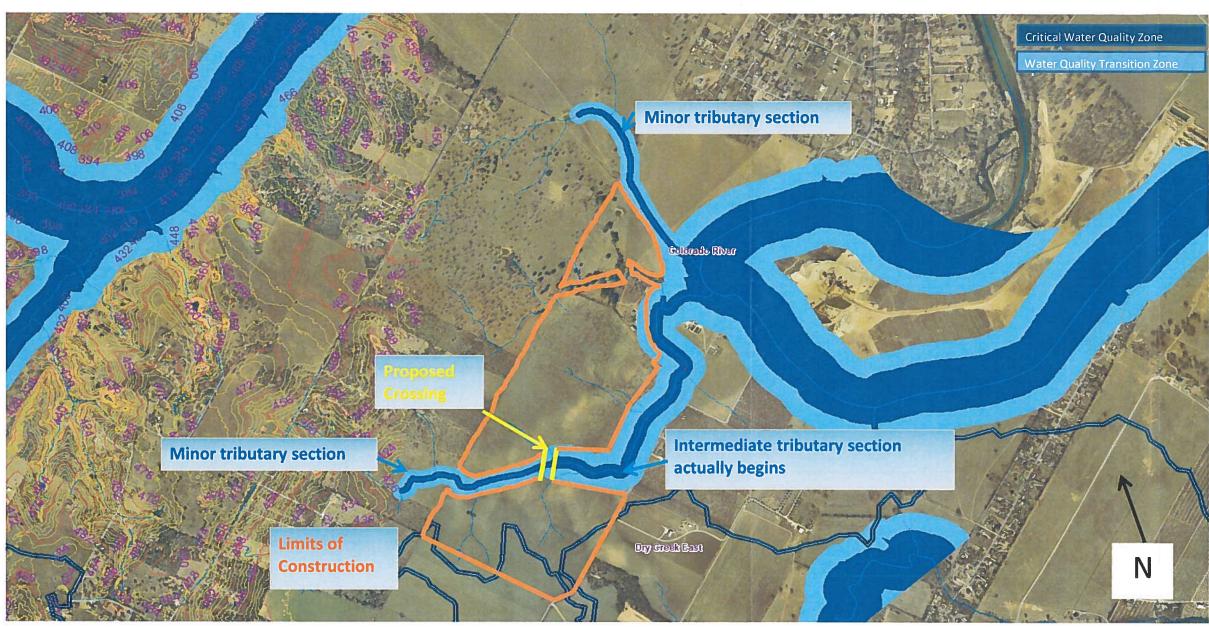
Beginning at Austin City Hall 301 W 2nd Street:

1. Head east on W 2nd St toward Lavaca St	
	492 ft.
2. Turn right at the 2nd cross street onto Colorado St	261.6
3. Turn left onto W Cesar Chavez St	361 ft.
	3.1 mi
4. Take the ramp onto Airport Blvd	
5. Keep left at the fork, follow signs for U.S. 183 S/Texas 71 and merge onto US-183 S	0.6 mi
of the profit at the form, follow signs for one follows from the first of the opening of the ope	1.3 mi
6. Take the Texas 71 E ramp on the left to Austin Bergstrom Intl Airport	
7. Merge onto TX-71 E	0.4 mi
7. Meige offic 1A-71 E	9.0 mi
8. Turn left onto Buck Ln	
Destination will be on the left	0.6:
4220 Buck Ln	0.6 mi
Garfield, TX 78617	

APAC TEXAS - BUCK SP-2013-0301D Site Location



APAC TEXAS - BUCK SP-2013-0301D Aerial Site View





ENVIRONMENTAL BOARD VARIANCE APPLICATION TEMPLATE

September 23, 2013

Greg Guernsey, Director City of Austin Planning and Development Review P.O. Box 1088 Austin, Texas 78767

RE:

Apac Texas – Buck, 4220 Buck Lane

SP-2013-0301D, Variance Request

Dear Mr. Guernsey,

As engineers for Apac Texas, a mining operation with ongoing activities in Travis County and Central Texas, we are requesting a variance to allow for a mining haul road to cross the Critical Water Quality Zone of a Minor Waterway.

Section 25-8-41 allows for Land Use Commission Variances from Chapter 25-8, Subchapter A. Specifically, the variance request is from 25-8-392 (Development in a Critical Water Quality Zone). A Findings of Fact for the variance request is included with this resubmittal. Also included is an additional Environmental Assessment for the addition to the limits of construction at the CWQZ crossing.

Sincerely,

ames F. Scaief, P.E., P.G.

cc:

Troy Carter, Apac Texas

Pam Madere, John Joseph (Coats-Rose)

File: 11001.25 Attachments

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PROJECT DESCRIPTION

Applicant Contact Information

Name of Applicant **Apac Texas** 1 Chisolm Trail, Ste. 450 Street Address Round Rock, Texas 78681 City State ZIP Code 512-919-1221 Work Phone Troy.Carter@apac.com E-Mail Address **Variance Case Information** Apac Texas - Buck Case Name SP-2013-0301D Case Number 4220 Buck Lane Address or Location **Environmental Reviewer** Jim Dymkowski Name LDC 25-8-392 Applicable Ordinance Colorado River Watershed Name □Urban **☑** Suburban □ Water Supply Suburban Watershed Classification ☐ Water Supply Rural ☐ Barton Springs Zone ☐ Barton Springs Segment ☐ Northern Edwards Segment Edwards Aquifer Recharge Zone Not in Edwards Aquifer Zones ☐ Yes ☑ No **Edwards Aquifer** Contributing Zone Distance to Nearest On site of variance request Classified Waterway Water and Waste Water N/A service to be provided by The variance request is as follows: 25-8-392 (Development in a Critical Water Quality Zone) Request

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Impervious		
cover	Existing	Proposed
square footage:	44,867	54,886
	1.03	1.26
acreage:		
percentage:	0.24%	0.29%

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)

The site is currently in agricultural production. A Minor Waterway crosses the southern portion from southwest to northeast. This is the waterway for which this variance request to cross is required, so discussion is focused mostly on this area. The only structures on the property, all well beyond the area of the variance request, consist of a house and various farm buildings.

Cultivation has historically crossed the waterway due to the lack of channel definition. However, on the basis of drainage area, the drainage is Classified. Vegetation is limited to agricultural production at the time. In recent history it has ranged from corn, to sunflowers, to pasture. Geologically, the site is overlain by Lower Colorado River Terrace Deposits consisting of sand, silt, clay, and gravel as depicted in the Geologic Map of the Austin Area, Texas, 1980. These materials were deposited by the meandering of the Colorado River over recent geologic time.

Slopes are all in the 0% - 15% category, though the entire area is better characterized by less than 1% to 4%. Elevation ranges from 432 at the southern end of the permit area to 406 in the lower reach of the drainage. Soils in the CWQZ consist of the Altoga, Bergstrom, Heiden, and Houston Black Series. These all are described in the NRCS Soil Survey of Travis County (Survey) as being of silty loam to clay in composition. None of these soils are described in the Survey as "frequently flooded" as compared to soils in other drainages in the area. This provides further evidence for the lack of storm flow frequent enough for channel formation in the drainage. A typical cross-section of the drainage consists of a gentle slope away from a generally flat 'channel'. No bed and bank exists. Photographs included with this variance request illustrate the characteristics of the drainageway.

The Environmental Assessment found no CEFs nor any other notable or outstanding characteristics of the property.

Clearly indicate in what way the proposed project does not comply with current Current code does not allow development in the CWQZ. Current code does allow for an Administrative Variance for a street crossing of a Minor Waterway. However, as this is a private crossing it does not meet the definition of a street, thus it follows

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Code (include	maps	and
exhibits)		

that to allow a crossing requires granting a variance for development in the CWQZ. The Code section for the variance is 25-8-392 (Development in a Critical Water Quality Zone). The attached exhibits indicate both the location and nature of the proposed crossing along with photographs of the crossing location.

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:

Apac Texas – Buck, SP-2013-0301D

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 or the safety of property given to owners of other similarly situated property with approximately contemporaneous development.
- Denial of variance prohibits owner from accessing other portions of the property under the same Yes. permit application and prevents full utilization of the property under the law.

2. The variance:

- a) Is not based on a condition caused by the method chosen by the applicant to develop the property, unless the development method provides greater overall environmental protection than is achievable without the variance;
- The land is unchanged from its historical legal lot configuration and the variance is necessary to Yes. access all portions of the owner's property.
 - b) Is the minimum change necessary to avoid the deprivation of a privilege given to other property owners and to allow a reasonable use of the property;
- Yes. Denial of the variance deprives the owner access to all portions of the property for its intended use.

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- c) Does not create a significant probability of harmful environmental consequences; and
- There is no significant probability of harmful environmental consequences as the crossing will consist Yes. of a single, low-impact, at grade drive with the current agricultural activity in the CWQZ to be terminated with construction of the drive. The drive will consist of a 50 foot wide perpendicular crossing of the 6700 linear feet of the CWQZ within the permit area. By constructing the drive 'at grade', meaning even with existing ground, the flow characteristics of the drainage will be maintained and no flow will be concentrated nor will the floodplain be affected as would occur with a culvert.
 - 3. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.
- Area has historically been and is currently under agricultural production, including the area of the Yes. CWQZ. Granting of the variance will reduce activity within the CWQZ due to the termination of agricultural activity resulting in only the single drive as the activity in the CWQZ. The reduction of CWQZ activity and the disturbed area restoration with native grasses will raise the environmental benefit.
- B. Additional Land Use Commission variance determinations for a requirement of Section 25-8-393 (Water Quality Transition Zone), Section 25-8-423 (Water Quality Transition Zone), Section 25-8-453 (Water Quality Transition Zone), or Article 7, Division 1 (Critical Water Quality Zone Restrictions):
 - 1. The criteria for granting a variance in Section A are met;
- Yes. Chapter 25-8-241 allows for the Land Use Commission to grant a variance from 25-8-392. Of the range of variances granted by the Commission, this one has to fall in the category of the least departure from the Code. No high quality vegetative or riparian vegetation occurs within the Critical Water Quality Zone. The entire zone consists of agricultural production. Historically, agricultural production has consisted of corn, sunflowers, and pasture. The environmental assessment found no critical environmental features.

The drainage is a Minor Waterway by definition only due to the contributing drainage area. There is no definition of a bed and bank that normally characterizes a stream channel. The topography consists of a gradual slope to a generally flat area and a repeat of the gradual slope on the opposite

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side. Because of this gentle topography, the area has been amenable to cultivation. Soils in the CWQZ consist of the Altoga, Bergstrom, Heiden, and Houston Black Series. These all are described in the NRCS Soil Survey of Travis County (Survey) as being of silty loam to clay in composition. None of these soils are described in the Survey as "frequently flooded" as compared to soils in other drainages in the area. This provides further evidence for the lack of storm flow frequent enough for channel formation in the drainage.

The proposed crossing will not alter the existing topography. The crossing will consist of a concrete travel surface 50 feet wide. It will be constructed level with the topography so that when any storm flow occurs, it will be spread over the same width as if the crossing did not exist. There will be no impact upon the floodplain. The crossing, being at existing land grade, is of low impact as compared to one elevated to accommodate a culvert. The disadvantage of the latter is the elevated crossing increases the floodplain, and the culvert creates a concentrated discharge with increased velocities. The approaches to the Critical Water Quality Zone will consist of a raised profile or hump to divert runoff away from the road rather than down the road and into the CWQZ. The disturbed area within the CWQZ outside the limits of the concrete will be restored per the City's 609S revegetation criteria consisting of native grasses. Temporary erosion controls will be in place during construction.

Without the variance, the owner is not able to legally access all portions of the property. The property has legal lot status without the subdivision process, thus the need for the variance is not due to the manner the property is subdivided. Any site development of this property would require the same variance.

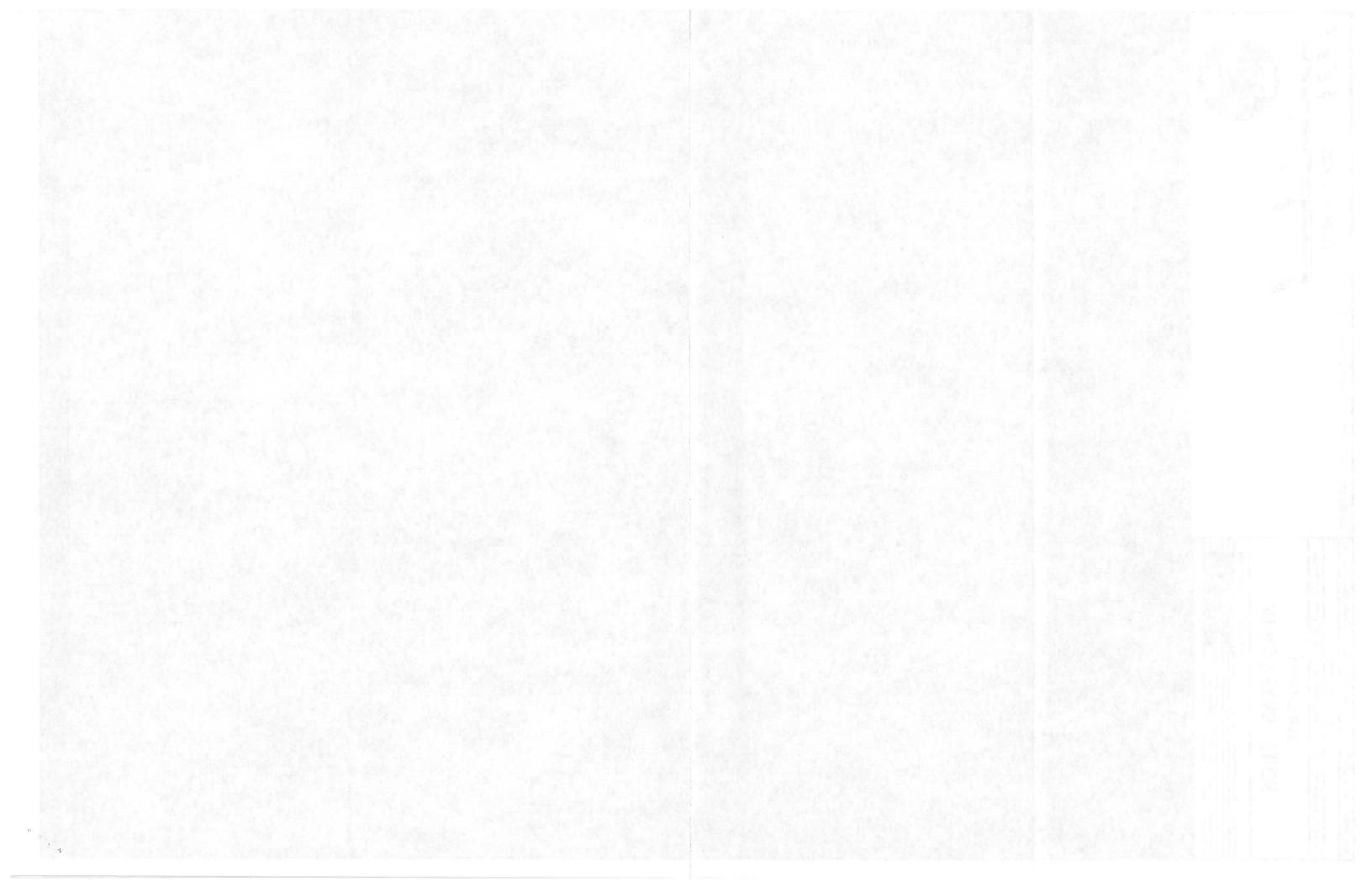
- 2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property; and
- Yes. The intended use is mining and without the variance, access to all portions of the property for the proposed use, or any other permitted use cannot occur on a majority of the property.
 - 3. The variance is the minimum change necessary to allow a reasonable, economic use of the entire property.
- Yes. The request is for a single crossing of a minor drainage which will allow the intended activity on the majority of the property. The crossing is low impact, to be constructed level with the existing topography, and will have no impact on the floodplain or existing drainage patterns. The only vegetation impacted by the crossing is seasonal agricultural production.
- **Variance approval requires all above affirmative findings.

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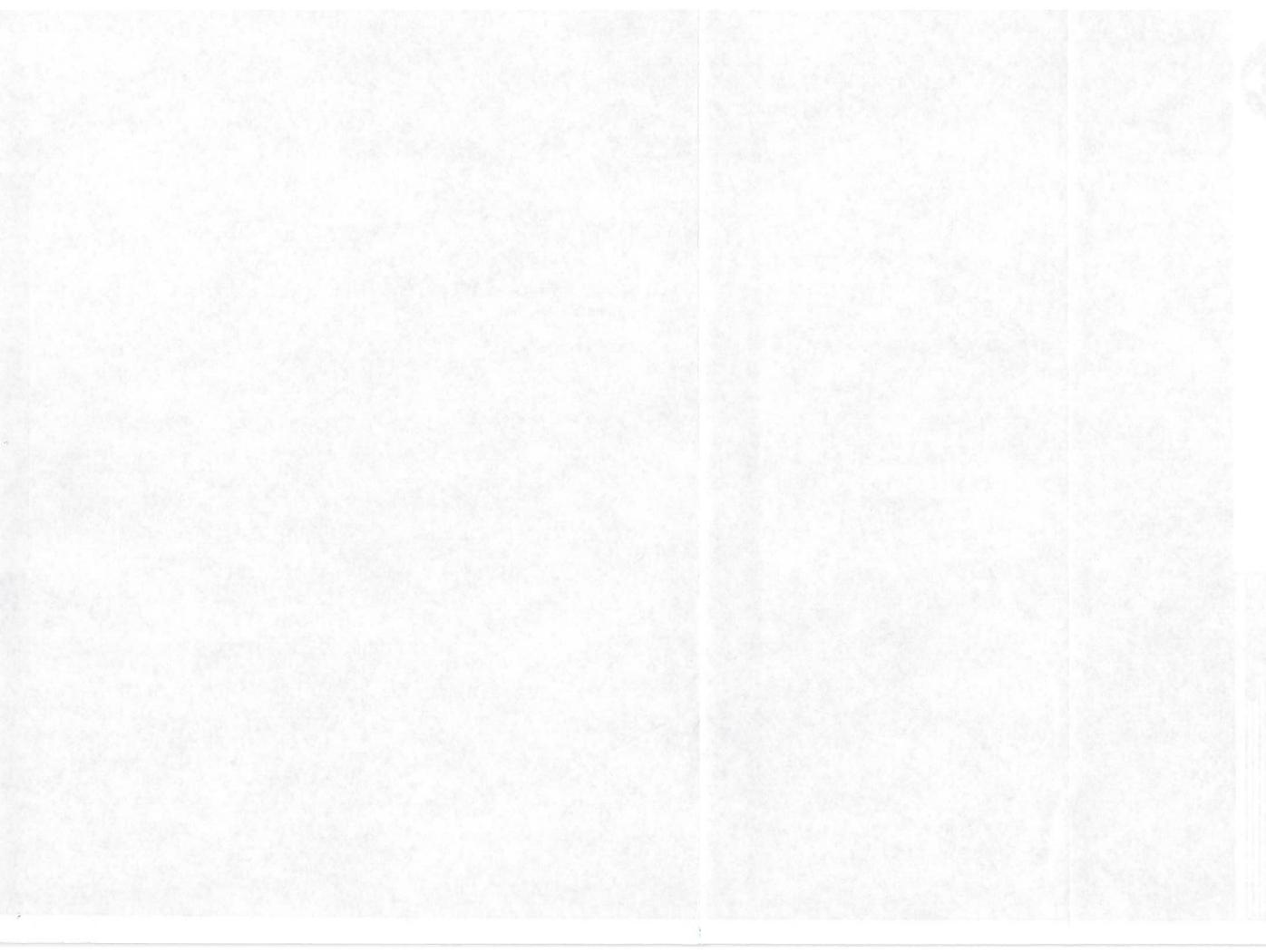
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Murfee Engineering Company

APAC TEXAS - BUCK SITE PHOTO 1 **VIEW TO NORTH ACROSS CWQZ**

1101 Capital of Texas Highway South, Building D, Suite 110, Austin, Texas 78746 (512) 327-9204

Texas Registered Engineering Firm F-353

PHOTO DATE: 9/18/2013

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APAC TEXAS - BUCK SITE PHOTO 2 **VIEW UPSTREAM IN "CHANNEL"**

1101 Capital of Texas Highway South, Building D, Suite 110, Austin, Texas 78746 (512) 327-9204

Texas Registered Engineering Firm F-353

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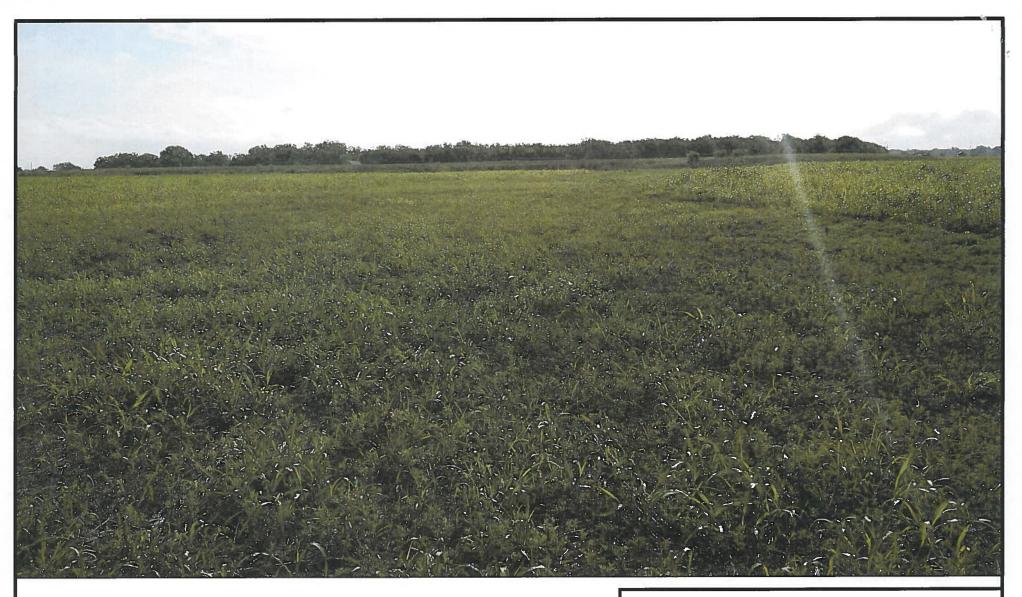
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Murfee Engineering Company

APAC TEXAS - BUCK SITE PHOTO 3 **VIEW DOWNSTREAM IN "CHANNEL"**

1101 Capital of Texas Highway South, Building D, Suite 110, Austin, Texas 78746 (512) 327-9204

Texas Registered Engineering Firm F-353

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CITY OF AUSTIN ENVIRONMENTAL ASSESSMENT FOR THE APAC TEXAS-BUCK TRACT (FORMERLY SHUMAKER-BUCK II TRACT)

Travis County, Texas

March 2011 UPDATED August 2013

Submitted to:

Murfee Engineering Company, Inc. 1101 S. Capital of Texas Highway, Suite D110 Austin, Texas 78746

By:

aci consulting 1001 Mopac Circle Austin, Texas 78746

aci project #: 19-11-011-1



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Environmental Assessment in Accordance with the City of Austin Land Development Code for the Apac Texas-Buck Tract in Travis County, Texas

March 4, 2011, Updated August 6, 2013

1.0 PURPOSE

The purpose of this environmental assessment is to evaluate:

- Area A the approximately 94.1-acre Apac Texas-Buck tract (formerly Shumaker-Buck II tract), and
- Area B the approximately 0.5-acre limits of construction (LOC) of an at-grade crossing in the Critical Water Quality Zone (CWQZ). Area B is 100 feet wide by 200 feet long, and is located south of Area A (Figure 1).

For the purposes of this environmental assessment, Area A and Area B, in combination, are referred to as the subject area.

This environmental assessment evaluates the subject area in accordance with the City of Austin Land Development Code ("LDC") §25-8-121. Specifically, this environmental assessment evaluates the subject area for the occurrence of critical environmental features (CEFs) as defined in the LDC and for potential endangered species habitat.

A site investigation was performed by aci consulting scientists on March 1, 2011 for Area A. A subsequent site investigation was performed by aci consulting scientists on July 24, 2013 for Area B.

2.0 PROJECT LOCATION

The subject area is located along Buck Lane approximately 0.9 miles north of Highway 71 between the towns of Garfield and Wyldwood, in Travis County, Texas (Figure 1).

3.0 EXISTING ENVIRONMENT

The subject area is currently an active cattle and agricultural operation. Two occupied residential houses and various agricultural buildings are located in the central part of the subject area.

3.1 Hydrology

The subject area lies within the Colorado River watershed and within the City's Suburban Watershed regulation area. According to Edwards aquifer recharge zone maps, the subject area

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does not lie within the recharge, transition, or contributing zones of the Edwards aquifer (TCEQ 2001). The eastern extent of **Area A** lies within the Federal Emergency Management Agency (FEMA) 500-year floodplain. The 100-year floodplain lies due east of **Area A**. **Area B** does not lie within the FEMA floodplain; however, it crosses a USGS blue line, which is identified as a tributary of the Colorado River. See Figure 2 for mapped FEMA 100-year flood zones near the subject area.

3.2 Topography

According to the *Webberville* USGS 7.5-minute topographic quadrangle, the elevation of the subject area ranges from approximately 400 feet to 450 feet above mean sea level (Figure 3). Drainage generally slopes from west to east towards the Colorado River.

3.3 Geology

The subject area is underlain by Fluviatile terrace deposits (Qt) (Barnes 1974). Fluviatile terrace deposits consist of three or more levels which may correspond to coastal Pleistocene units. The unit consists of gravel, sand, silt, and clay in various proportions. Along the Colorado River this unit consists mostly of dolomite, limestone, quartz, chert, and various igneous and metamorphic rocks from the Llano region and dolomite, limestone, and chert from the Edwards Plateau.

3.4 Soils

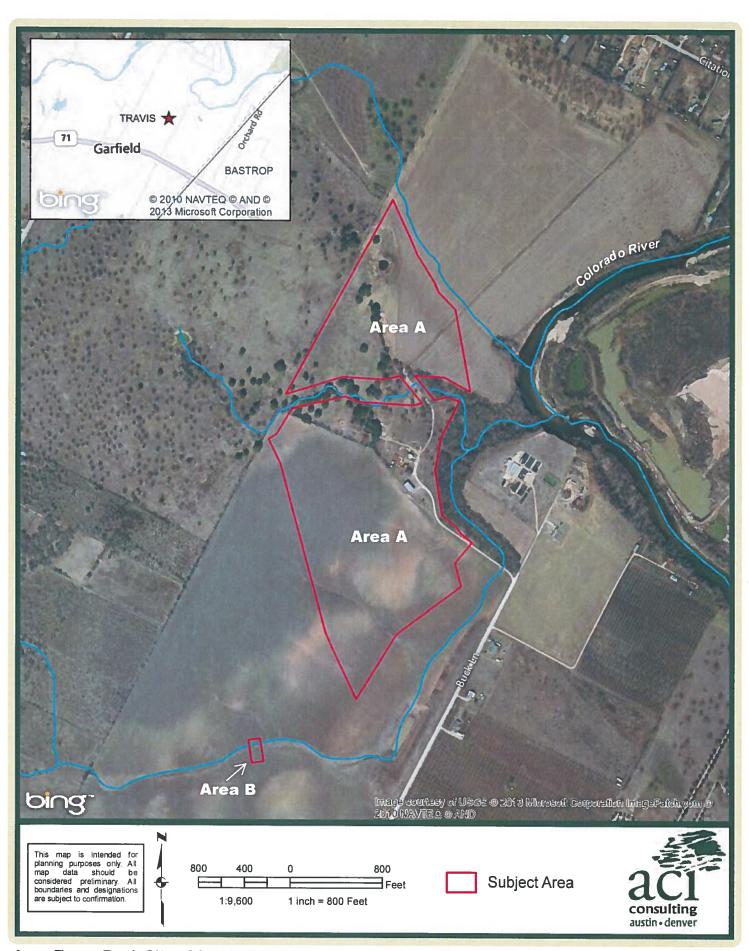
Soils in this area are classified as Bergstrom-Norwood, which are found on terraces and flood plains adjacent to the Colorado River and are described as deep, calcareous, loamy soils overlying recent and old alluvium (SCS 1974). Seven soils units are located within **Area A**: Altoga silty clay, 1 to 3 percent slopes (AgB), Altoga silty clay, 3 to 6 percent slopes, eroded (AgC2), Chaney fine sandy loam, 2 to 5 percent slopes, eroded (ChC2), Bergstrom silt loam, 1 to 3 percent slopes (BeB), Bergstrom silty clay loam, 0 to 1 percent slopes (BgA), Dougherty loamy sand, 0 to 2 percent slopes (DoA), and Houston Black clay, 0 to 1 percent slopes (HnA). One soil unit, AgB, is located within **Area B**.

3.5 Vegetation

The subject area lies within the 'crops' designation, as noted on the Texas Parks and Wildlife "Vegetation Types of Texas" map (McMahan et al. 1984). According to McMahan et al. crops are defined as areas including cultivated cover crops or row crops used for the purpose of producing food and/or fiber for either man or domestic animals. Field investigations determined that the vegetation within the subject area is consistent with this designation.

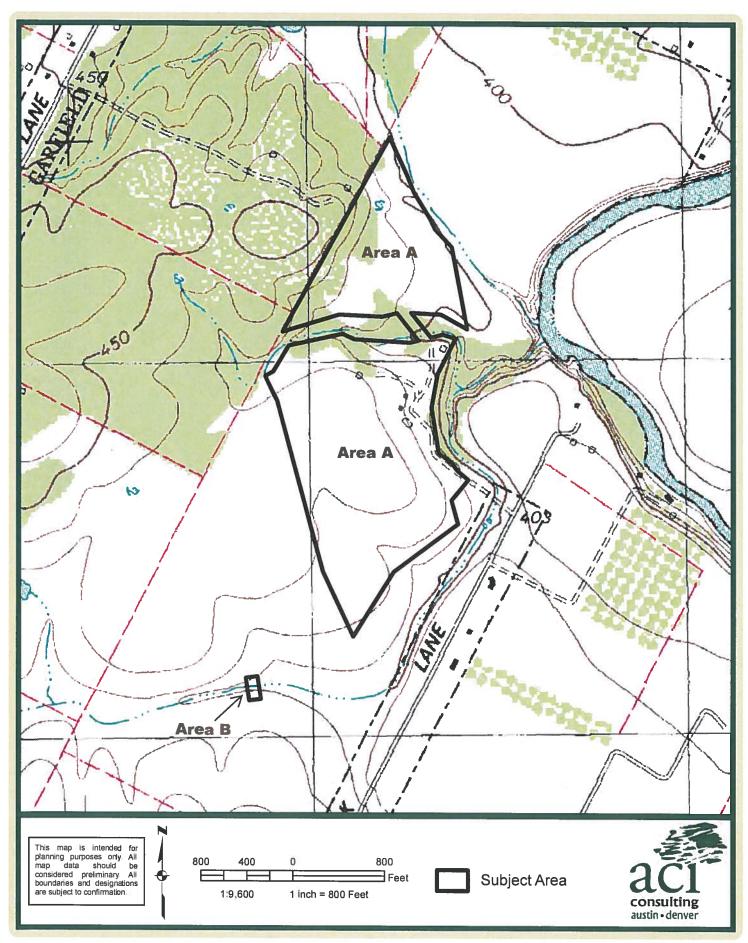
Canopy vegetation observed within Area A includes: live oak (Quercus virginana), cedar elm (Ulmus crassifolia), and retama (Parkinsonia aculeata). The tree layer within Area A has a height range of approximately 20 to 25 feet and a canopy cover of approximately five percent. Canopy cover is kept in a park-like state with little or no understory layer. The herbaceous layer vegetation observed within Area A is composed of primarily bermudagrass (Cynadon dactylon) and various other grasses and forbs.

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Apac Texas-Buck City of Austin EA Figure 2: 100-Year FEMA Floodplains



Apac Texas-Buck City of Austin EA
Figure 3: USGS 7.5 Minute Topographic Quadrangle: Webberville



Area B is located within maintained crops, with no canopy vegetation present. Vegetation observed within Area B includes, but is not limited to: maintained crop vegetation, silverleaf nightshade (Solanum elaeagnifolium), buffalobur nightshade (Solanum rostratum), common sunflower (Helianthus annuus), annual sumpweed (Iva annua), western ragweed (Ambrosia psilostachya), giant ragweed (Ambrosia trifida), spotted beebalm (Monarda punctata), johnsongrass (Sorghum halepense), prairie coneflower (Ratibida columnifera), and immature honey mesquite (Prosopis glandulosa)

Photographs of typical vegetation of the subject area are included as Appendix A.

The subject area is located in Sector 18 of the City of Austin Biological Resource Sector Map. The Biological Resource Sector Map indicates that priority woodlands may be present along the tributary of the Colorado River running through the central portion of the property.

4.0 CRITICAL ENVIRONMENTAL FEATURES

Section 25-8-1 of the City of Austin LDC defines CEFs as "features that are of critical importance to the protection of environmental resources, and include bluffs, springs, canyon rimrocks, caves, sinkholes, and wetlands."

On March 1, 2011 and July 24, 2013, aci consulting scientists conducted field investigations within the subject area in accordance with the City of Austin LDC. The field investigations were performed by surveying the entire subject area. No CEFs were identified within Area A.

A stock pond was identified at the northern end of Area A. Water was present at the time of investigation, but there were no indicators of hydric soils. Vegetation present consisted primarily of bermudagrass and retama, with some johnsongrass (*Sorghum halepense*) and woodsorrel (*Oxalis* spp.) and other forbs. It was determined unlikely that this stock pond is a CEF wetland.

2013 Update: No CEFs were identified within Area B.

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5.0 SPECIES INCLUDED UNDER THE CITY OF AUSTIN ENDANGERED SPECIES ORDINANCE

The City of Austin Endangered Species Ordinance ("COA ESO") requires that an endangered species habitat survey be conducted prior to application for site development of a parcel of land (LDC §25-8-695). Plant and animal species for which habitat surveys must be conducted include: bracted twistflower (Streptanthus bracteatus), canyon mock-orange (Philadelphus ernestii), black-capped vireo (Vireo atricapillus) ("BCVI"), golden-cheeked warbler (Dendroica chrysoparia) ("GCWA"), whooping crane (Grus americana), Barton Springs salamander (Eurycea sosorum), Austin blind salamander (Eurycea waterlooensis), and six species of karst invertebrates including: the Tooth Cave pseudoscorpion (Microcregris texana), Tooth Cave spider (Neoleptoneta myopica), Tooth Cave ground beetle (Rhadine persephone), Kretschmarr Cave mold beetle (Texamoaurops reddelli), Bee Creek Cave harvestman (Texella reddelli), and Bone Cave harvestman (Texella reyesi).

A habitat survey in accordance with LDC §25-8-695 and the City of Austin Environmental Criteria Manual was also conducted by **aci consulting** scientists. Descriptions of the habitat within the subject area and potential habitat for each endangered species are included below.

5.1 Bracted Twistflower

This annual plant has delicate pink flowers and usually grows no taller than three feet. Bracted twistflower occurs on thin clay soils blanketing limestone. All Travis County populations occur in oak-juniper woodland with a canopy cover of 25 to 100 percent, and most known sites are in areas that contain thick brush which appears to provide protection from deer. Plants that occur in association with bracted twistflower include evergreen sumac (*Rhus virens*), Mexican silktassel (*Garrya ovata* var. *lindheimeri*), shin oak (*Quercus sinuata var. breviloba*), and myrtlecroton (*Bernardia myricifolia*) (BAT 1990).

Field investigations indicate that the subject area lacks the requisite components to be considered bracted twistflower habitat. Thick brush was not abundant within the subject area, nor was the majority of plant species associated with the bracted twistflower. No observations of this plant species were made during the site visits.

5.2 Canyon Mock-orange

This plant can be found growing on Cow Creek, Edwards Limestone, and a few strata of Glen Rose Limestone. These two formations both contain holes and solution cavities, which often give the rock a "honeycombed" appearance. Canyon mock-orange can be found in both xeric and mesic juniper woodland and typically grows in full shade to full sun along cliffs in humid canyons. It is found in association with the following plants: elbowbush (*Forestiera pubescens*), shrubby boneset (*Eupatorium havanense*), shin oak (*Quercus sinuata var. breviloba*), fragrant sumac (*Rhus aromatica*), Mexican silktassel, Texas mulberry (*Morus microphylla*), Ashe juniper, and yaupon holly (*Ilex vomitoria*) (BAT 1990).



Limestone cliffs with holes or solution cavities are not present within the subject area nor are the majority of plants associated with the canyon mock orange. No observations of this plant species were made during the site visits.

5.3 Black-capped Vireo

The black-capped vireo (BCVI) is a migratory bird present in Texas only during its breeding season from March through September. BCVI habitat generally consists of shrub vegetation that extends from the ground to approximately 8 feet high, covering 30 to 60 percent or greater of the total area. Typical BCVI habitat in the Edwards Plateau Region includes vegetation species such as shin oak, evergreen sumac, Texas persimmon (*Diospyros texana*), and agarita (*Mahonia trifoliolata*). Although Ashe juniper is often part of the vegetative composition in BCVI habitat, preferred areas have a low density and low cover of juniper (Campbell 1995).

As verified during the field investigation, the subject area does not possess the structural and compositional vegetative elements necessary for preferred BCVI habitat. The probability of BCVI utilizing the subject area is highly unlikely.

5.4 Golden-cheeked Warbler

The GCWA is a migratory songbird endemic to Texas and only present during its breeding season of early March through early August. GCWA habitat typically consists of mature Ashe juniper woodlands interspersed with deciduous species. The areas most likely to be utilized by GCWA consist of nearly continuous cover of trees with 50 to 100 percent closed canopy (Campbell 2003). Deciduous species common in GCWA habitat include escarpment black cherry (*Prunus serotina*), Texas black walnut (*Juglans microcarpa*), ash (*Fraxinus* spp.), Texas oak (*Quercus texana*), and cedar elm.

USFWS protocol for performing habitat assessments for GCWA (USFWS 2010) recognizes three categories of potential GCWA habitat, as published in a section of the Texas Parks and Wildlife management guide for Texas endangered species titled "Management Guidelines for the Golden-cheeked Warbler in Rural Landscapes" (Campbell 2003). The three categories of potential GCWA habitat include:

- 1. Vegetation associations where GCWAs are expected to occur ("high quality habitat") include woodlands with mature Ashe juniper in a natural mix with oaks, elms, and other hardwoods in relatively moist areas including steep canyons, slopes, and adjacent uplands. The guidelines detail mature Ashe juniper trees to be those that are at least 15 feet in height with a diameter-at-breast height (dbh) of approximately 5 inches. These areas should have a nearly contiguous canopy cover of trees with 50-100 percent canopy closure and an overall woodland canopy height of 20 feet or more (Campbell 2003).
- 2. Vegetation associations that may be used by GCWAs include four additional types of areas that may be used by warblers, but are not representative of what is typically thought of as "best" warbler habitat:

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- Stands of mature Ashe juniper with shredding bark with scattered live oaks (≥10 percent total canopy cover), where the total canopy cover exceeds 35 percent and overall woodland canopy height is ≥20 feet.
- Bottomlands along creeks and drainages which support deciduous trees with at least 35 percent canopy cover with an average canopy height of 20 feet. Mature Ashe juniper must be present at the bottom or on nearby slopes.
- Mixed stands of post oak and/or blackjack oak with 10-30 percent canopy cover, with scattered mature Ashe juniper where total canopy cover exceeds 35 percent overall woodlands canopy height is 20 feet.
- Mixed stands of shin oak with 10-30 percent canopy cover with scattered mature Ashe juniper where total canopy cover exceeds 35 percent overall woodlands canopy height is 20 feet. (Campbell 2003)
- 3. Vegetation associations where GCWAs are not expected to be found include areas where GCWA are not expected to occur, unless adjacent to warbler habitat areas. The five areas are:
 - Stands of small Ashe juniper, averaging less than 15 feet in height and 5 inches dbh. These areas are often dry and relatively flat, lacking oaks and other broad-leaved trees and shrubs. These areas often include open rangelands, previously cleared areas, and old fields.
 - Pure stands of larger Ashe juniper greater than 15 feet in height and 5 inches dbh with few or no oaks or other hardwoods.
 - Open park-like woodlands or savannahs (even with old junipers) where canopy cover is less than 35 percent. These areas often have scattered live oaks and other trees.
 - Small junipers and other trees coming up along existing fencelines.
 - Small junipers less than 15 feet tall coming up under larger hardwoods where junipers have been removed in the last 20 years. (Campbell 2003)

Area A consists of open agricultural land with scattered live oak, cedar elm, and retama around stock ponds and along fence lines. This vegetation does not correspond to any of the vegetation associations for potential GCWA habitat.

2013 Update: Area B consists of open crop land with no canopy vegetation. This vegetation does not correspond to any of the vegetation associations for potential GCWA habitat.

5.5 Whooping Crane

The whooping crane is a migrant species whose flyway crosses the northeastern portion of Travis County, an area characterized as the Blackland Prairie ecoregion. The whooping crane utilizes a variety of habitat during migration; croplands are preferred for feeding, and vast wetland areas are selected for feeding and roosting, preferring secluded areas removed from human disturbance (Campbell 2003).



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The proximity of the subject area to human disturbance is not ideal for whooping cranes. The probability of whooping cranes feeding or roosting in the subject area is considered very low.

5.6 Barton Springs Salamander and Austin Blind Salamander

The Barton Springs salamander is an entirely aquatic and neotenic amphibian known only to occur around four spring outlets within Zilker Park, Austin, Texas. The springs are collectively known as Barton Springs and consist of Parthenia, Eliza, Old Mill, and Upper Barton Springs [62 FR 23377] (USFWS 1997). The salamander is concentrated near the spring openings where food sources are abundant, water chemistry and temperature are relatively constant, and where the salamander has access to both surface and subsurface habitat. The primary threat to the Barton Springs salamander is degradation to the quality and quantity of water that feeds Barton Springs from Barton Springs watershed.

The Barton Springs and Austin blind salamanders are known to exist only in four spring outlets within the Barton Springs segment of the Edwards aquifer. The subject area does not lie within the Edward aquifer recharge, contributing, or transition zone, and is approximately 10 miles from Barton Springs. Therefore, the probability of occurrence of these species within the subject area is considered very low.

5.7 Karst Invertebrates

Karst invertebrates are subterranean species that have adapted to areas with consistent humidity and temperature levels with a continual influx of nutrients from the surface. The caves in which the invertebrates occur were formed as a result of dissolution of the limestone formations making up the Edwards aquifer.

No karst features that could potentially contain habitat for endangered karst species were identified during field investigations. The probability of endangered karst invertebrates utilizing the subject area is highly unlikely.

6.0 STATEMENT OF FINDINGS

No critical environmental features were identified during site investigations. Habitat within the subject area is unlikely to be regularly utilized by the bracted twistflower, canyon mock-orange, BCVI, GCWA, whooping crane, Barton Springs salamander, Austin blind salamander, and endangered karst invertebrates.



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APPENDIX APhotographs of Typical Vegetation







Photo 1: Typical vegetation at central portion of Area A.



Photo 2: Stock pond and vegetation at northern portion of Area A.

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Photo 3: Typical vegetation near pond looking at the northeast portion of Area A.



Photo 4: Typical vegetation at southern portion of Area A.





Photo 5: Center of Area B, facing west.



Photo 6: Center of Area B, facing east.





Photo 7: Northeastern portion of Area B, facing southwest.



Photo 8: Northwestern of Area B, facing southeast.

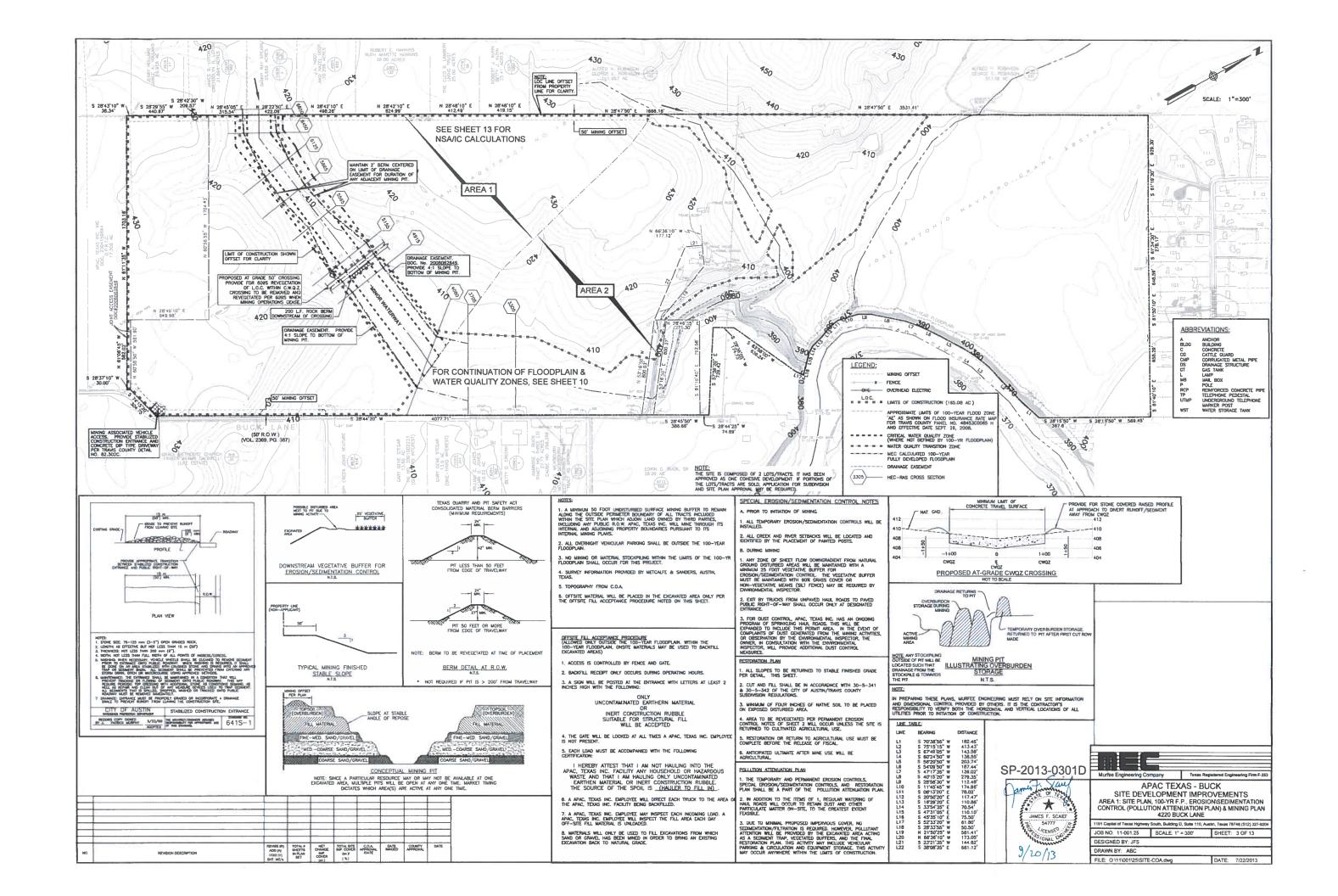


APPENDIX BCity of Austin Site Review CEF Worksheet

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City of Austin Site Review Critical Environmental Feature Worksheet

Buck Lane, Garfield, Texas 6 Phone Number 5	-	Project Name:		Apac Texas-Buck (formerly Shumaker-Buck II)	6	5 Pr	Primary Contact Name:			Lauren Dill	麦	
Page	7	Project Address:		ine, Garfield, Texas			Phone Number:			512-347-9	000	
FEATURE LONGITUDE FEATURE LONGITUDE FEATURE LATITUDE NOT	က	Date:		3/1/2011 (Updated 8/6/2013)			Prepared By:			Lauren	掛	
FEATURE TYPE (Wetland Rimnod, Recharge Feature, Seep, Spring) (Wetland Rimnod,	4	Environmental Assessment Date:		3/1/2011 (Updated 8/6/2013)			S Located? {yes,no}:					
City of Austin Use Only	6	FEATURE TYPE {Wetland,Rimrock,Recharge Feature,Seep,Spring}	FEATURE ID (eg S-1)	FEATURE LONGITUDE (WGS 1984 in Meters)	cotation	E S		notation	WET DIMENS	LAND IONS (ft)	RIMF DIMENS Length	ROCK RONS (ft) Avg Height
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