US ARMY CORPS OF ENGINEERS
FORT WORTH DISTRICT
ENVIRONMENTAL INFORMATION DOCUMENT
FOR THE PROPOSED CONSTRUCTION OF
CENTRAL TEXAS AIRPORT
BASTROP COUNTY, TEXAS

SWF-2010-00506

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1.0 PROPOSED ACTION

The Applicant, CTA, LLC, proposes to construct the Central Texas Airport (CTA), a privately funded, general aviation (GA) reliever airport for the Central Texas area, on a portion of approximately 1,100 acres located south of FM 969 and FM 1704 in Bastrop County, Texas, two miles east of Webberville and approximately 10 miles east of SH 130 (Appendix A, Figure 1). The proposed CTA would be constructed consistent with the general layout and level of airport facilities identified in a 2003 Wilbur Smith Associates (WSA) Central Texas Airport feasibility study, which would allow a new GA reliever airport in the Central Texas area to best serve anticipated levels and types of demand.

The proposed construction of CTA, as it relates to this Environmental Information Document (EID), is shown in yellow on Figure 6 in Appendix B, and would consist of:

- A 7,200-foot long by 100-foot wide airport runway,
- A parallel 7,200-foot long by 50-foot wide taxiway,
- Precision approach,
- ARC D-III design standards,
- Seven 10-foot by 5-foot by 3,330-foot long reinforced concrete box culverts to convey storm water runoff,
- A 26-acre storm water detention pond,
- Onsite storm water collection facilities,
- An entrance road along the west boundary of the site approximately 9,000 feet long,
- A thoroughfare roadway traversing the eastern property approximately 9,000 feet long,
- Onsite wet and dry utilities, and
- Nine Hangers, fire and rescue facilities, fuel farm, water storage tank, 13,200 square feet of commercial airport office building, and 28.3-acre commercial development site.

Please refer to Appendix B for the conceptual site plan of the proposed CTA project.

The proposed action, as described above, is a complete and independent project. No funding or approval for development beyond this proposed action has been obtained. The elements of the conceptual Eco-merge project (for example: commercial, industrial, or energy production, hotel, infrastructure, and other development features) are a second and independent project from the proposed action, on which the proposed action does not depend to fulfill its purpose and need. The specific design and feasibility of future actions will depend on what is economically feasible in the future.

2.0 PURPOSE AND NEED

The purpose of the proposed project is to fulfill the established need for a GA reliever airport in the Central Texas area by constructing a privately funded, economically feasible, functional general aviation reliever airport that is easily accessible to the Central Texas area.

The need for a GA reliever airport in the Central Texas area has been confirmed by numerous studies, reports, and multiple efforts to develop such air transportation infrastructure by the Federal Aviation Administration (FAA), Texas Department of Transportation (TxDOT), and several area municipalities. These studies include, but are not limited to:

1. Austin Airport Alternative Site Evaluation And Selection Update Executive Summary (TCB 1987) prepared for the City of Austin;
2. The New Pflugerville Airport Site Selection Study, Working Paper A, Executive Summary (URS Greiner Woodward Clyde and Hicks & Company 2000) prepared for the City of Pflugerville;
3. The New Pflugerville Airport Site Selection and Feasibility Study (URS Greiner Woodward Clyde et. al. 2000) prepared for the City of Pflugerville;
4. Central Texas Airport Phase I Feasibility Study (WSA 2003) prepared for the Texas Department of Transportation (TxDOT); and
5. Business and High Technology Requirements (COAACGAS 2007) prepared for the City of Austin Airport Commission General Aviation Subcommittee.

These studies cumulatively provide the basis of demand, and prove that such aviation facilities for the Central Texas area are needed. They further provide dozens of new airport site options, refine these options with specific site evaluations, and establish the design parameters for a new GA airport.

In July 2003, Wilbur Smith Associates, Inc. (WSA) prepared a Central Texas Airport feasibility study for the Texas Department of Transportation (TxDOT) to identify the potential regional demand for a new general aviation reliever airport in the Central Texas area, and also to identify a facility template based on the needs of the region's aviation users (WSA 2003). In the 2003 study, the Central Texas area was defined as Travis County and six contiguous counties: Bastrop, Blanco, Burnet, Caldwell, Hays, and Williamson. The findings of the study indicated that there is a strong demand for a new general aviation reliever airport in the Central Texas area (WSA 2003). Due to factors, such as the closing of Robert Mueller Municipal Airport and Austin Executive Airport in the late 1990s, rapid population growth, commercial and residential development, and increased demand for aviation facilities and services, options for general aviation aircraft owners and transient pilots had become limited in the Central Texas area (WSA 2003), creating a need for a general aviation reliever airport in the

Central Texas area. The definitions of functional and easily accessible in the purpose and need are based on the respective definitions in the 2003 WSA study and are described in the following sections.

Functional General Aviation Reliever Airport for the Central Texas Area
Data compiled for the 2003 WSA feasibility study identified the general layout and level of airport facilities that would allow a new general aviation reliever airport in the Central Texas area to best serve anticipated levels and types of demand. Based on the study, the following items were identified as general facilities necessary for a functional new general aviation reliever airport in the Central Texas area:

- 7,000- by 100-foot runway;
- Precision approach;
- ARC D-III design standards;
- Parallel taxiway;
- Aircraft storage and other aviation facilities; and
- Land envelope of approximately 750 acres (minimum) (WSA 2003).

Accessible General Aviation Reliever Airport to Primary Demand Nodes in the Central Texas Area
An analysis of regional demand for the Central Texas area was performed for the 2003 WSA feasibility study. Based on the 2003 WSA study, primary demand nodes represent locations in the Central Texas area where "people, pilots, and businesses are more densely populated, and as a direct result, the demand for aviation services in these areas is relatively higher than in less populated areas" (WSA 2003). The analysis indicated that the primary demand nodes for the Central Texas area are located along the north-south corridor of I-35 in Travis and Williamson Counties, and to a lesser extent in Hays County (WSA 2003). According to the analysis, for a new general aviation reliever airport to serve the greatest demand density in the Central Texas area, it should be located proximate to the I-35 corridor in Travis, Williamson, and Hays Counties. Since the 2003 study was conducted, the new SH 130 tollway was constructed eight miles east of the I-35 corridor, shifting the demand eastward.

2.1 Background

In 1999, Austin's primary commercial airport, Robert Mueller Municipal Airport (Mueller Airport), and Austin Executive Airport (AEA) were closed, which resulted in the displacement of over 400 GA aircraft, along with virtually all associated maintenance, repair, and support businesses. These actions created the operational need for a GA reliever airport in the Central Texas area. Based on TxDOT statistics, Mueller Airport housed approximately 283 based GA aircraft, including over 100 multi-engine piston and jet aircraft, and AEA accommodated approximately 90 GA aircraft and over 90,000 GA services prior to their closing (WSA 2003). Austin officials had requested that the

Air Force close Bergstrom Air Force Base for the redevelopment of Austin's new Austin Bergstrom International Airport (ABIA).

Only a very limited scope of GA facilities was relocated to the new ABIA. During its first year of operation, ABIA accommodated approximately 110 based GA aircraft (WSA 2003). ABIA's primary mission was to provide support for the long-term commercial passenger and air cargo transportation needs of the region, utilizing only funding provided by federal and state sources and airport operations. Aircraft hangars for only 54 GA aircraft were constructed and remain today, leaving the region's GA infrastructure needs under serviced, as repeatedly noted in the studies that have been conducted. Additionally, the ABIA Master Plan states that GA reliever airport facilities are expected to be constructed by others to serve the region in the future, taking the pressure off of ABIA to expand support for this segment of aviation (P&D 2003).

Presently, three supporting GA reliever airports exist proximate to the Hays/Travis/Williamson Counties I-35 corridor: one in Georgetown; one in San Marcos; and one near Pflugerville that was formerly called Birds Nest Airport and has been renamed to Austin Executive Airport. Neither Georgetown nor San Marcos are conveniently located to Austin, nor are they suitable for supporting Austin's current or future GA needs (WSA 2003). None of these airports, individually or cumulatively, meet the established demand or facility requirements set out in the series of airport and aviation studies noted above.

The new AEA is approximately 15 miles northeast of Austin near Pflugerville. Prior to closing in 1999, the Birds Nest was a small airport utilized for small private, agricultural, and recreational aircraft and ultralights. The newly redeveloped AEA runway is aligned to compass headings of 130 degrees and 310 degrees (13-31). This realignment results in a 40- to 50-degree crosswind configuration with prevailing winds to allow the construction of a longer runway with greater separation distance from an existing electric substation and 138 kilovolt (kV) transmission lines that bound the airfield to the north. After the new runway was completed, the Lower Colorado River Authority (LCRA) constructed another 345 kV transmission line to the west of the field approximately 2,800 feet from the approach end of the runway. This electric transmission infrastructure creates potentially hazardous obstacles to the operations of the new 13-31 runway. Despite these factors, the new AEA still provides badly needed GA support for an abundance of smaller private and commercial aircraft that do not require full precision instrument landing capabilities or require compliance with commercial insurance requirements. It is beneficial to ABIA operations for AEA to accommodate this segment of the market. However, the purpose and need of the proposed action is different.

The Applicant believes the proposed construction of the CTA would satisfy the need for a GA reliever airport in the Central Texas area by providing facilities established in the

cited studies listed in Section 2.0, which are needed to support the growing GA demand created over the past 12 years since the closure of Mueller Airport.

2.2 Permitting and Compliance Background

Waters of the U.S.
Currently, two unnamed ephemeral tributaries to the Colorado River, WAT-3 and WAT-4, drain across the proposed layout of the Airport. In addition, a man-made stock tank (Pond-1) is located in the west-central portion of the proposed CTA site (Appendix A, Figure 2).

The Applicant originally notified the U.S. Army Corps of Engineers (USACE) of the proposed project and requested a project number and project manager for an individual permit in November 2010. Subsequently, the USACE issued permit number SWF-2010-00506 in November 2010. The Applicant and representatives from the Airport team participated in a pre-application meeting with USACE personnel in Fort Worth, Texas on November 22, 2010 and a site visit on December 15, 2010.

On January 17, 2011, the Applicant submitted an application for a Department of the Army Permit under Section 404 of the Clean Water Act (CWA) and an application for water quality certification under Section 401 of the CWA to discharge dredged and fill material into waters of the United States associated with the proposal to construct the CTA. The Applicant proposes to discharge approximately 46,000 cubic yards of dredged and fill material into approximately 9.42 acres of waters of the U.S., including 5,390 linear feet (0.87 acre) of ephemeral stream (WAT-3 and WAT-4) and 8.55 acres of a man-made stock tank (Pond-1) (Appendix A, Figure 2).

The USACE requested that the Applicant prepare an Environmental Information Document (EID) to assist the USACE in the issuance of a Section 404 Individual Permit and supporting an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) pursuant to the National Environmental Policy Act of 1969 (NEPA). The purpose of this document is to fulfill the USACE's request for an EID.

Section 401 and Section 402 Compliance
Section 401 of the Clean Water Act requires that all applicants for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to acquire a Section 401 Certification. As a requirement of the Section 404 process, the Applicant has submitted a TCEQ Tier II 401 Water Quality Certification Questionnaire and Alternative Analysis Checklist for the proposed CTA, concurrent with the submittal of the Individual Permit application.

Section 402 of the Clean Water Act implements the National Pollutant Discharge Elimination System (NPDES). In the State of Texas, the NPDES is administered by the

TCEQ as the Texas Pollutant Discharge Elimination System (TPDES). A Stormwater Pollution Prevention Plan (SWP3) will be prepared and administered for the proposed CTA project. The SWP3 will follow guidelines stated in the TPDES General Permit (TXR150000). Appropriate BMPs will be in place to minimize the potential discharge of suspended solids during storm events. The SWP3 would include provisions for installation, maintenance, and upgrading of BMPs throughout the construction process. The BMPs are designed to dissipate stormwater flow and capture suspended solids on site. Per the requirements in the TPDES General Permit, all disturbed areas are required to be restored to at least 70 percent vegetative coverage prior to removal of BMPs on the site.

The Applicant would use applicable technologies selected from the following temporary stormwater BMPs during construction activities for erosion and sediment control:

- Filter Berms (Rock Berms);
- Silt Fences;
- Stabilized Construction Entrances;
- Straw or Hay Bales;
- Vegetated Buffers;
- Concrete Washout Areas;
- Vehicle Maintenance and Washing Area;
- General Site Waste Management; and
- Dust Control.

Hazardous Materials Containment and Management

Regulations and permitting of Petroleum Storage Tanks (PSTs) in Texas is the responsibility of the TCEQ. The TCEQ regulates PSTs under Texas Administrative Code Chapter 334, which has the stated purpose to:

- Provide a comprehensive regulatory program for hazardous substance and petroleum substance underground storage tank (UST) systems, and a limited regulatory program for petroleum product aboveground storage tanks (ASTs), as prescribed by the Texas Water Code, Chapter 26, Subchapter I and Subchapter K;
- Establish minimum standards and procedures to reasonably protect and maintain the quality of the state's groundwater and surface water resources from environmental contamination that could result from any releases of harmful substances stored in such tanks;
- Provide for the use of risk-based corrective action; and
- Generally provide for the protection of human health and safety, as well as the protection of the overall environment of the state.

Spill Prevention
A Spill Prevention Control and Countermeasure Plan (SPCC) would be in place during the construction phase of the proposed project if above ground storage capacity of diesel or gasoline exceeds 1,320 gallons, or underground storage exceeds 42,000 gallons.

The SPCC would include the following provisions:

- Monthly inspections to ensure integrity of all tanks, piping, valves, seals, secondary containment, and all other associated equipment;
- Conduction of Annual Employee Training regarding plan maintenance and implementation during a spill event to ensure quick and efficient emergency response to potential spills that may occur on the site; and
- Review and updating of the plan every five years.

The SPCC would also include additional information regarding facility drainage patterns, emergency contacts, spill prevention systems, and information regarding appropriate transferring and pumping of all fuels, lubricants, solvents, and waste products on site.

Other Certifications or Approvals Received

FEMA CLOMR-F
The proposed layout for the CTA covers an area which is bisected by an existing Federal Emergency Management Agency (FEMA) 1% Annual Chance Floodplain. In order to construct the Airport entirely outside of the floodplain, a portion of the effective floodplain would need to be filled in. The proposed improvements with the 1% Annual Chance Floodplain required to construct the proposed CTA were submitted to FEMA on May 10, 2010 in an application for a Conditional Letter of Map Revision Based on Fill (CLOMR-F) The application for the CLOMR-F was reviewed and commented on by FEMA reviewers. After FEMA's comments were addressed, FEMA issued a letter on September 28, 2010 stating that the proposed CTA meets the minimum floodplain management criteria of the National Flood Insurance Program (Appendix C).

FAA Letter of No Objection to Utilization of Airspace

On February 1, 2010, the Applicant voluntarily requested a letter of no objection to the utilization of airspace from the FAA, based on the runway alignment and location for the proposed CTA. The purpose of this request to the FAA was to confirm that the utilization of airspace for the proposed CTA was compatible with other area FAA airport operations or air traffic. On May 12, 2010, the FAA issued the letter of no objection for the utilization of the navigable airspace for the proposed CTA. This letter states that the proposed landing area for CTA will not adversely affect the safe and efficient use of the navigable airspace by aircraft. No further involvement by the FAA is required or requested by the Applicant. As a private development project, the FAA does not have jurisdiction over the design, development, or operations of CTA.

Letters from the FAA are included in Appendix C.

3.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

Section 404(b)(1) Alternatives Analysis Guidance

This section discusses the site selection process and presents an alternatives analysis pursuant to the Section 404(b)(1) Alternatives Analysis Guidance (USACE 1999) for the proposed CTA. The Section 404(b)(1) guidelines provide that "the U.S. Army Corps of Engineers may only permit discharges of dredged or fill material into waters of the United States that represent the least damaging practicable alternative, so long as the alternative does not have other significant adverse environmental consequences" (USACE 1999). Also, under TCEQ rules at 30 TAC Section 279.11(c), the TCEQ may certify discharges of dredged or fill material into waters of the United States only after practical alternatives which have less adverse impact on aquatic ecosystems have been evaluated (USACE 1999).

The Section 404(b)(1) guidelines specify that the practicality and the environmental impact of the alternatives must be addressed. To be practical, the alternative must be "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall purposes" (USACE 1999). The Section 404(b)(1) guidelines also specify that if the least environmentally damaging practicable alternative still has impacts to the aquatic ecosystem, the Applicant must identify how the impacts from the proposed project would be further minimized, and a compensatory mitigation plan must be provided for any remaining unavoidable adverse impacts (USACE 1999).

3.1 Site Selection

The site selection process for the CTA was based on two principal elements: 1) the mission for the proposed airport and 2) the specific site needs based upon the prototype design elements of the proposed airport. The mission for the CTA is to provide a

private solution to the missing general aviation infrastructure component for the Central Texas area, as defined in the airport studies conducted over the last three decades (see Section 2.0 of this document). The site needs were established from these same studies and additional parameters desired by the Applicant of the proposed CTA project.

In May 1987, the "Austin Airport Alternative Site Evaluation and Selection Update Executive Summary" (TCB 1987) was prepared for the City of Austin. The purpose of this study was to evaluate alternative site locations for Mueller Airport to provide for the long-term commercial air passenger, air cargo, State of Texas, Texas Army National Guard, and general aviation needs for Central Texas. The study evaluated 24 sites, ultimately recommending the Manor site. Instead of building on the Manor site, the City of Austin elected to ask the U.S. Air Force to close Bergstrom Air Force Base and transfer it to the City of Austin for its airport site, which today is ABIA. Unlike the Manor site, which encompassed open land area and a design that could accommodate long-term expansion of all of Austin's aviation needs, the ABIA site suffers numerous constraints. ABIA is surrounded on all sides by existing U.S., State, and County highways and roads, adjoins a county prison and a landfill, Onion Creek flows through the property, and the site contains buried materials and waste from earlier military operations. These impediments leave limited developable property, which forces competition between the long-term air passenger and cargo demands for the region and the general aviation segment. This factor led to multiple attempts by the FAA, State of Texas, and other municipalities in Central Texas to build a new general aviation airport to serve the Central Texas region. The existing, smaller general aviation airports in and around Austin cannot meet the current or future operational needs established in a series of prior airport studies.

With ABIA satisfying the long-term commercial air passenger and cargo needs for the region, the prototype design for Central Texas' general aviation airport requirements were simplified. The studies mentioned in Section 2.0 of this document focused solely on the general aviation needs and established siting parameters and a prototype airport design. The consensus of these studies identified the need for a general aviation airport consisting of:

- Approximately 600 to 800 acres;
- Ultimate runway length of 7,000 feet and width of 100 feet;
- Single runway with parallel taxiway;
- Accommodate business jet aircraft; and
- Precision approach and lighting.

During the CTA site selection process, the Applicant's aviation experts and consultants concurred with these parameters and all of the original 24 sites from the 1987 study and the sites included in the Pflugerville study were reviewed. Most of the sites were in

areas that had been evaluated previously as potential airport locations. The original data collected for the 1987 and the Pflugerville studies were examined, site visits were conducted, and additional investigations were made to further explore the suitability of the locations to meet the needs for a GA airport as outlined in the WSA 2003 study. Each study rated the sites relative to the intended purpose and overall expectation of meeting the intended need. A thorough examination of the criteria and findings was part of the review process. One of the most important evaluations was airspace compatibility with existing airports. Ten sites were eliminated because the Applicant's aviation experts and consultants identified them as having potential for airspace conflict. Several sites were eliminated because of potential development restrictions within the Edwards Aquifer area, and several sites were eliminated due to topographic and floodplain concerns. The five remaining sites were determined to merit further evaluation. These sites were the Bird's Nest Airport, Highway 71 East tract, Austin Energy tract, Webbers Crossing tract, and McFarland tracts (Appendix A, Figure 3).

Table 1 below summarizes the CTA site selection analysis of the five sites based on the prior studies, desktop analysis using National Wetlands Inventory (NWI) map data, and site visits.

Table 1. Central Texas Airport Site Selection Analysis Matrix.

	McFarland	Webber's Crossing	Austin Energy	Highway 71 East	Birds Nest
Topography			X	X	X
Major Airports		X	X	X	
Access					
Runway Length					X
Landfill					
Industry					
Towers		X	X	X	X
Population Density			X		
Environment			X		X
Potential Waters and Wetlands	2 tributaries and one man-made stock pond; 0 wetlands	3 potential tributaries; 8 potential NWI wetlands	3 potential tributaries; 3 potential NWI wetlands	4 potential tributaries; complex of wetlands	3 potential tributaries; 4 potential NWI wetlands
Political Jurisdiction		X	X	X	X
Comments	Superior Site		Power Lines	Power Lines	Power Lines

Initially, the Birds Nest Airport, Highway 71 East tract, and Austin Energy tract were eliminated due to physical and environmental site constraints and electric transmission lines that would necessitate crosswind runway alignments and/or runway lengths that did not meet the prototype airport design criteria.

Further evaluation of the Webber's Crossing, Highway 71 East, and Austin Energy tracts based on the NWI maps and site visits revealed potential environmental constraints in the form of potential tributaries and wetlands (Appendix A, Figures 4, 5,

and 6). As depicted in Appendix A, Figure 4, when the proposed action is overlaid on the Webbers Crossing tract aerial, the proposed action does not fit within the boundaries of the Webbers Crossing tract. As mentioned in the previous paragraph, the Austin Energy tract (Appendix A, Figure 5) has a conflict with power lines, which run east-west through the center of the tract. To avoid the power lines, the runway would need to be rotated counter-clockwise and moved to the western side of the property, which would result in potential impacts to three tributaries and three wetlands. In addition, the power lines are still at the northern edge of the runway. As depicted in Appendix A, Figure 6, when the proposed action is overlaid on the Highway 71 East tract aerial, the proposed action would result in potential impacts to three tributaries, and several wetlands associated with the tributaries, near the eastern boundary of the tract.

For the reasons described above, the Birds Nest Airport, Webber's Crossing tract, Highway 71 East tract, and Austin Energy tract were eliminated.

The McFarland tract was evaluated by the same aviation experts, geologists/hydrologists, civil and soils engineers, environmental consultants, economists, and FAA consultants and officials. The specific McFarland tract off of FM 969 at FM 1704 was determined to be the superior site in the region, based on the criteria in Table 1 above, and the fact that it meets the defined prototype airport parameters. Two tributaries and one man-made stock pond with no aquatic value, are located on site. No wetlands exist on the site and the Colorado River would not be impacted by construction of the proposed project on the site. Additionally, the soils on the site were determined to be appropriate for construction of the proposed project. With the unanimous support of the Bastrop County Commissioners Court approving the economic development inducements for this privately-funded airport project, the McFarland tract was chosen as the preferred site for the development of the proposed CTA.

3.2 On-Site Configurations

Construction of the proposed CTA on the selected site at FM 969 and FM 1704 in Bastrop County, Texas would have the potential to impact jurisdictional waters of the U.S. located on the proposed site. The USACE conducted a jurisdictional waters assessment during the site visit in December 2010 and determined that approximately 9.42 acres of waters of the U.S., including 5,390 linear feet of ephemeral stream (approximately 0.87 acre) and an approximately 8.55-acre man-made stock tank, are located on the proposed CTA site (Appendix A, Figure 2).

The Applicant considered two onsite airport configurations to determine whether there is a less environmentally damaging practicable alternative to waters of the U.S. on the proposed CTA site.

Runway Orientation

The orientation of airport runways to the prevailing winds, or the direction from which the wind blows most frequently, is critical to the safe operation of aircraft, especially smaller aircraft which are more susceptible to impacts from crosswinds (winds that are perpendicular to the runway or the path of the aircraft). A wind analysis of the Austin area was performed for the 2003 WSA feasibility study using the methodology detailed in Airport Circular 150/530013 "Airport Design." The FAA recommends that airport runways be aligned to accommodate for 95 percent wind coverage. The findings of the 2003 WSA wind analysis indicated that a potential runway with compass headings of 170 and 350 (a north-south runway alignment), which is consistent with the primary runway orientation at ABIA, would provide the greatest coverage in both visual flight rules and all-weather conditions (WSA 2003). In a review of the alignment of runways in the Central Texas area, it was determined that most airports in the area have a north-south alignment. Deviating from the north-south alignment introduces potential limitations to operations and safety by increasing crosswind incompatibilities associated with taking off and landing; however, runways aligned within a few degrees of those headings should provide sufficient wind coverage based on FAA standards (WSA 2003).

FAA Requirements and Safety Guidelines for Runways

Since this will be a privately developed, owned, and operated airport, the Applicant is not required to adhere to FAA requirements and safety guidelines. However, in the interest of safety, conformance with commercial aviation insurance standards, and functionality as an important final missing national air transportation infrastructure asset needed in the Central Texas area, the Applicant intends to follow generally accepted safety standards that apply to its intended operations and aviation market segment. Unlike many airports in the nation, the Applicant desires to contain all of its airport component operations within the private airport boundaries including the Runway Protection Zones (RPZs), which are trapezoid-shaped areas extending off the ends of runways, and are intended to promote a compatible and safe land use envelope.

3.2.1 Configuration One

Configuration One (Appendix B, Figure 7) was designed to optimize the operational capabilities of the proposed CTA, and would ensure safety and compatibility with the surrounding community. The runway, which is aligned to a compass bearing of 010 degrees and 190 degrees (01/19), is consistent with prevailing winds. The Applicant has received a letter of no objection from the FAA for the runway position associated with Configuration One and has received a "Letter of No Objection" from the FAA on the use of the airspace associated with this design.

Configuration One is designed to contain all components of the proposed CTA within the boundaries of the 1,100-acre tract, including the entire land envelope for the proposed runway and RPZs. Configuration One is also designed so that all noise

impacts, as measured by FAA standards (>65+ Ldn), lie well within the boundaries of CTA and do not extend into the surrounding business campus or community.

Approximately 9.42 acres of waters of the U.S., including 5,390 linear feet of ephemeral stream (approximately 0.87 acre) and an approximately 8.55-acre man-made stock tank are located on the proposed CTA site; there are no wetlands on site. As designed, Configuration One would impact these waters of the U.S.

3.2.2 Configuration Two

Configuration Two assumes the same layout as Configuration One because this layout was designed to optimize the operational capabilities of the proposed CTA. However, in an attempt to cause less impact to waters of the U.S., the layout was slightly rotated clockwise and moved to the east, placing the runway and taxiway between the man-made stock tank and WAT-3 and WAT-4, in the area that is not considered jurisdictional by the USACE (Appendix A, Figure 8). The Applicant does not have a letter of no objection from the FAA for the runway position associated with Configuration Two and does not have a "Letter of No Objection" from the FAA on the use of the airspace associated with this design.

The Applicant's aviation experts have determined that Configuration Two does not provide an acceptable envelope for the runway and RPZs, as the entire land envelope for the proposed runway and RPZs would not be contained within the boundaries of the site. Configuration Two would place part of the RPZ and the approach of inbound aircraft directly over FM 1704 and FM 969, as well as over an existing church located at the intersection of FM 969 and FM 1704. Additionally, Configuration Two rotates the alignment of the runway clockwise to a northeast-southwest alignment, possibly introducing crosswind impacts to aircraft. Furthermore, it is not certain whether Configuration Two would have less impact to waters of the U.S. than Configuration One due to the close connection between the runway/taxiway and hangars and the airport support buildings west of the runway.

Due to additional potential safety risks and impacts to the community and to the existing church, Configuration Two was eliminated and not carried forward through the environmental consequences section.

3.2.3 No-Build Alternative

Under the No-build Alternative, the construction of CTA would not occur, and the purpose and need of the proposed project, as set forth in Section 2.0, would not be met.

Presently, the GA needs of the Austin region are underserved, as ABIA is not designed or equipped to service the region's GA needs. The No-build Alternative would result in adverse economic, social, and financial loss to Bastrop County and the Central Texas region and would eliminate the potential for new jobs being created. Additionally,

abandonment of the project would result in loss of investment by both Bastrop County and the Applicant, and would be economically impractical for them. For these reasons, the No-build Alternative was eliminated and not carried forward through the environmental consequences section.

3.3 FEASIBLE BUILD ALTERNATIVES

Three feasible build alternatives were discussed during the design phase of the project. The feasible alternative development scenarios considered by the Applicant include: 1) Alternative 1 – Detention Pond, 2) Alternative 2 – Open Bottom Box Culvert System, and 3) Alternative 3 – Concrete-lined Detention Pond. All three feasible build alternatives would be located on the proposed 1,100-acres CTA site on FM 969 in Bastrop County Texas. The proposed alignment of the runway is the one presented in Configuration One in Section 2.2.1 above (Appendix B).

Alternative 1 – Detention Pond

Alternative 1 would involve constructing a privately funded, GA reliever airport, runway, and associated buildings on a portion of an approximately 1,100-acre site. The layout for Alternative 1 covers an area which is bisected by an existing FEMA 1% Annual Chance Floodplain from two tributaries of the Colorado River. A total of approximately 9.42 acres of waters of the U.S. including 5,390 linear feet (0.87 acre) of ephemeral stream and 8.55 acres of man-made stock tank is proposed to be permanently filled during the construction of the proposed CTA. Illustrations of the proposed project activities, which are included in Appendix B, would include:

- A 7,200-foot long by 100-foot wide airport runway,
- A 7,200-foot long by 50-foot wide taxiway,
- Seven 10-foot by 5-foot by 3,330-foot long reinforced concrete box culverts to convey storm water runoff,
- A 26-acre storm water detention pond,
- Onsite storm water collection facilities,
- An entrance road along the west boundary of the site approximately 9,000 feet long,
- A thoroughfare roadway traversing the eastern property approximately 9,000 feet long,
- Onsite wet and dry facilities, and
- Hangars, airport support facilities, and a commercial office building.

The proposed layout of CTA covers an area which is bisected by an existing FEMA 1% Annual Chance Floodplain from WAT-3 and WAT-4 of the Colorado River. Currently, these two tributaries drain across the proposed layout of CTA. In order to construct CTA entirely outside of the floodplain, a portion of the effective floodplain would need to be filled in. The proposed plan would call for filling in the portion of the floodplain and conveying drainage from WAT-3 and WAT-4 via a culvert system and open channel

system. The proposed culverts and open channels would drain to a proposed 26-acre detention pond, which would mitigate the flow generated by the airport development and reduce peak flows to predevelopment levels prior to releasing the flow in a controlled manner into the existing tributary downstream of the property. Details of each proposed improvement are described below.

The proposed culvert system used to convey offsite storm water across the property would consist of a 3,330-linear foot set of seven 10-foot by 5-foot reinforced concrete box culverts (RCBs). At a slope of 0.50 percent, these culverts would have a capacity of 3,559 cubic feet per second, which is enough to convey the 100-year offsite storm flow of 3,504 cubic feet per second. The culvert system would fully convey the 100-year flow of WAT-3 across the property and discharge directly into the detention pond.

A two-part drainage channel is proposed to be constructed to convey the 100-year flow, which currently is conveyed by WAT-4. The upper part of the proposed channel would extend approximately 1,765 linear feet and convey the 100-year storm flow from WAT-4 with a top width of 75 feet with a 20-foot wide concrete bottom and grass lined 4:1 side slopes. The lower part of the channel would extend approximately 1,170 linear feet and convey the 100-year storm flow from WAT-4 and the diversion channel (described in the next paragraph). The channel would have a top width of 65 feet with a 23-foot wide grass lined bottom and 4:1 side slopes. The purpose for the WAT-4 channel would be to convey the storm water from WAT-4 in a defined channel, which would reduce the area subject to flooding. The channel is designed to fully convey the 100-year flow of WAT-4 and would discharge directly into the detention pond.

Non-jurisdictional overland flow from north of the proposed CTA property would be diverted around the proposed runway of the airport via a proposed 1,490-linear foot set of four 8-foot by 4-foot RCBs. The proposed culverts would then empty into a proposed 1,700-linear foot drainage channel, which would convey the runoff to the WAT-4. Because of the minimal amount of vertical drop from the upper end of the channel to the outfall, concrete lining would be required along the bottom of the channel to facilitate drainage, while the side slopes would be grass lined. The channel would have a top width of 56 feet with a 15-foot wide concrete bottom and grass lined 4:1 side slopes. The proposed channel and culverts are designed to fully convey the 100-year storm flow of drainage areas to the north of the property.

The proposed detention pond would be constructed within the existing 100-year floodplain. It would provide 380.62 acre-feet of storage capacity during the 100-year storm event and would include one foot of freeboard. The side slopes of the pond would be graded at a 4:1 side slope for maintainability. The pond would have a spillway elevation of 381.00 feet, which would allow it to have positive drainage off the project site. The flow out of the pond would be governed by a 55-foot long rectangular weir. The top of the pond would be set at an elevation of 393.00 feet, which includes over 1

foot of freeboard. The detention volume would be contained within the elevation range from 381.00 feet to 393.00 feet.

The quantity of material that would be discharged (filled) in waters of the U.S. is approximately 46,000 cubic yards. The material utilized for discharge (fill) would consist of the concrete box culverts and the existing onsite soils. The onsite soils consist of sand, clay, and loam. The concrete box culverts would be either pre-cast and placed by cranes, or cast-in-place. The existing onsite soils utilized for fill material would be moved and placed using onsite construction equipment such as scrapers, excavators, off-road trucks, vibrating compactors, sheeps foot rollers, smooth whell compactors, and water trucks. The total 46,000 cubic yards would consist of on-site sandy clay in the amount of approximately 29,700 cubic yards and concrete in the amount of approximately 16,300 cubic yards. Sandy clay materials excavated in the detention pond in the amount of 269,000 cubic yards would be used as site fill on the proposed project site. The outlet structure would be constructed of compacted select fill (sandy clay) in the amount of approximately 28,000 cubic yards and concrete in the amount of approximately 160 cubic yards.

Alternative 2 – Open Bottom Box Culvert System

Under this alternative, the engineer investigated the use of an open bottom box culvert system, which would span the drainages, including the pond, at a height that water would flow through. This alternative would result in no impact to waters of the U.S., as the goal would be to build the structure over the tributaries and pond, allowing the drainages to flow in their natural fashion.

Alternative 3 – Concrete-Lined Detention Pond

Under this alternative, the project team discussed the option of engineering and constructing a traditional, concrete-lined detention pond that would draw down within 24 to 48 hours following storm events. This concrete-lined detention pond, which would regularly not contain surface water, would consist of reinforced concrete and rip-rap along the existing flow lines of WAT-3 and WAT-4. The scope of the facilities to be constructed and the changes to the floodplain would be the same as listed in Alternative 1 – Detention Pond, above.

3.4 Recommended Preferred Alternative

Alternative 2 proposes to span the drainages onsite, including the pond, to allow the drainages to flow in their natural manner, which would avoid impacts to waters of the U.S. However, Alternative 2 is not engineeringly feasible and would be cost prohibitive in comparison with Alternative 1. Alternative 3 proposes a traditional, concrete-lined detention pond that would draw down within 24 to 48 hours following storm events. This concrete-lined detention pond, which would regularly not contain surface water, would consist of reinforced concrete and rip-rap along the existing flow lines of WAT-3 and WAT-4. Regular maintenance would include removal of infilling and vegetation within

the concrete detention pond. Based on the lack of permanent water and the regular maintenance, the concrete-lined pond would provide little, if any, environmental value. The concrete-lined detention pond would more greatly impact waters of the U.S. by filling WAT-3 and WAT-4 with concrete and rip-rap, as opposed to inundation under Alternative 1. Additionally, the concrete-lined detention pond would be cost prohibitive in comparison to Alternative 1. Alternative 1 is economically feasible, and the detention pond in Alternative 1 would provide treatment of storm water runoff from the site, whereas Alternatives 2 and 3 would not. For these reasons, Alternative 1 was chosen as the preferred alternative.

4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This Section describes the existing social, economic, and environmental setting for the area that may be affected by the construction of the CTA project alternatives. Assessments of the potential impacts of each feasible build alternative are also presented in this section. The feasible build alternatives are:

- Alternative 1 – Detention Pond (Preferred Alternative)
- Alternative 2 – Open Bottom Box Culvert System
- Alternative 3 – Concrete-Lined Detention Pond

The proposed action is the construction of a privately-funded GA reliever airport, as described in Section 1.0 of this document. The proposed CTA project is located in a rural setting on approximately 1,100 acres located south of FM 969 and FM 1704 in Bastrop County, Texas, approximately four miles east of Webberville, approximately 10 miles east of SH 130, and approximately 10 miles northwest of the City of Bastrop. The proposed CTA project area is an active cattle ranching operation with over 500 head of cattle. The property has been used as a cattle ranching operation for over 50 years. The proposed CTA project area is bordered to the east and west by agricultural land; to the south by the Colorado River, agricultural land south of the Colorado River, and rural residences; and to the north by FM 969, a church north of FM 969 at the intersection of FM 969 and FM 1704, and rural residences. The proposed project area is approximately two miles long and approximately one mile wide.

4.1 Air Quality

The Clean Air Act (1990) requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) (40 CFR part 50) for pollutants considered harmful to public health and the environment. Principal criteria pollutants include ground-level ozone, lead, carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter. These air pollutants can injure health, harm the environment, and cause property damage. The proposed project is within Bastrop County which is in an area in attainment of all NAAQS.

The primary air quality concern for Central Texas is the production of ground level ozone (O_3). There are two major emissions types which contribute to O_3 formation in Central Texas: Nitrous Oxides (NOX) and Volatile Organic Compounds (VOC). The major producers of NOX and VOC are on-road vehicles, non-road motors, biogenic matter, and point source (e.g., factories, brick yards, etc.). In general, it is widely accepted that reducing the vehicle miles traveled within the region and eliminating emissions blown in from other areas will have the most impact on improving Central Texas' air quality and ensure a continued attainment status of the NAAQS.

Alternatives 1, 2, and 3 – During the construction of the proposed CTA, temporary effects on air quality include additional dust generated from construction activities. Efforts will be made to mitigate for temporary air quality impacts during construction, including minimizing or eliminating unnecessary idling of construction vehicles and employing a combination of watering, chemical stabilization, and vehicle speed reduction techniques.

No processes associated with the construction of the proposed CTA are anticipated to raise the level of pollutants considered harmful to public health and the environment. No significant impacts to air quality are anticipated as a result of the construction of the proposed CTA.

4.2 Coastal Resources

Federal activities involving or affecting coastal resources are governed by the Coastal Barriers Resources Act (CBRA), the Coastal Zone Management Act (CZMA), and Executive Order 13089, Coral Reef Protection. The CZMA and the National Oceanic and Atmospheric Administration (NOAA) implementation regulations (15 CRF Part 930) provide procedures for ensuring that a proposed action is consistent with approved coastal zone management programs. Executive Order 13089 requires Federal agencies to ensure that any actions that they authorize, fund, or carry out will not degrade the conditions of coral reef ecosystems.

According to maps of coastal resources governed by the Coastal Barrier Resources Act found on the U.S. Fish and Wildlife Service (USFWS) Coastal Barrier Resource System, no coastal barrier resources are located on the proposed CTA site.

Alternatives 1, 2, and 3 – No coastal resources are located on the proposed CTA site; therefore, no impacts to coastal resources would result from the construction of the proposed CTA.

4.3 Construction Impacts

Local, State, Tribal, or Federal ordinances and regulations address impacts of construction activities, including dust and noise from heavy equipment traffic, disposal of construction debris, and air and water pollution.

The proposed action is the construction of a GA reliever airport for the Central Texas area, as described in Section 1.0 of this document. Existing agricultural structures would be demolished during construction activities. Demolished material resulting from this process will be segregated, and proper disposal will be the responsibility of the general contractor. Construction and demolition would occur on approximately 500 acres of the site.

The proposed project location is in a sparsely populated rural area. Construction traffic would likely use FM 969 to access the site.

Alternatives 1, 2, and 3 – The construction of the CTA GA airport is anticipated to generate minimal light outside the proposed project site. Most construction is anticipated during regular daylight hours. Best management practices will be employed for any requisite safety lighting to reduce, to the maximum extent practicable, impacts to the regional dark night sky.

Transportation Infrastructure

The Capital Area Metropolitan Planning Organization (CAMPO) is the Metropolitan Planning Organization (MPO) for the Bastrop, Caldwell, Hays, Travis, and Williamson Counties in Central Texas. The purpose of CAMPO is to coordinate regional transportation planning with counties, cities, and other transportation providers in the region, and to approve the use of federal transportation funds within the region.

The CAMPO 2035 Plan (adopted May 24, 2010) includes a future planned roadway improvement to FM 969 from the current geometry to a four-lane, divided arterial. In addition to the approved CAMPO 2035 Plan, Bastrop County has an adopted transportation plan. The Bastrop County Plan was the result of a two-year collaborative effort between Bastrop County, the Texas Department of Transportation, the Capital Area Council of Governments, the Texas Transportation Institute, and citizen input and volunteers. According to the Bastrop County plan, FM 969 should be upgraded to a four-lane, divided arterial (consistent with the CAMPO Plan) and FM 1704 should be upgraded to a four-lane, divided arterial as well. Both FM 969 and FM 1704 are recognized by the County as having a high level of importance for the County and the region.

All Bastrop County taxpayers, including CTA, pay a Road and Bridge Tax. The funds collected by the County are distributed to each County Precinct according to the amount

of roadways and bridges within the Precinct. With the expected increase in real property tax value, and the economic growth associated with CTA, Bastrop County and the affected Bastrop County Precinct should realize an increase in Road and Bridge Tax funds.

In coordination with TxDOT, CTA will be making initial improvements to FM 969 and FM 1704 in the immediate vicinity of the proposed project during the Phase 1 construction activities. Expected improvements include controlled intersections and additional turn lanes.

Alternatives 1, 2, and 3 – The construction of the CTA general aviation airport will generate additional traffic on FM 969. This may include, but not be limited to: construction personnel commuting to and from work and the delivery of construction equipment and materials intermittently. Based on review of the area metropolitan planning organization (CAMPO) project plan, the CAMPO 2035 Plan, increased traffic projections on FM 969 warrant increasing facility capacity from the existing two-lane facility to a four-lane divided arterial. Any additional construction traffic from the proposed CTA project is anticipated to fall well within the capacity of the CAMPO determined improvements.

4.4 Department of Transportation Act: Section 4(f)

The Federal statute that governs impacts in this category is commonly known as the Department of Transportation (DOT) Act, section 4(f) provisions. Section 4(f) of the DOT Act provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance or land from an historic site of national, State, or local significance as determine by the officials having jurisdiction thereof, unless there is no feasible and prudent alternative to the use of such land and such program, and the project includes all possible planning to minimize harm resulting from the use.

There are no publicly owned lands used as public parks, recreation areas, wildlife or waterfowl refuges, or historic sites located within the proposed project area. The nearest park, McKinney Roughs Nature Park, is located approximately 3 miles to the southeast of the proposed project area, off of State Highway 71. Wolfdancer Golf Club, which is part of the privately-owned Hyatt Lost Pines Resort and Spa, is located approximately 1.5 mile to the southeast of the proposed project area.

Alternatives 1, 2, and 3 – No section 4(f) resources are located on the proposed CTA site; therefore, no impacts to 4(f) resources would occur as a result of the construction of the proposed CTA.

4.5 Socioeconomics

The following section discusses various socioeconomic resources within the proposed project area, including land use, environmental justice, property values, displacement, and recreation.

Demographics

This evaluation addresses the requirements of Executive Order (EO) 12898, which mandates that federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects, including social and economic effects, of their programs on minority and low income populations.

The proposed CTA subject area is located within Block 3023, Block Group 3, Census Tract 9501, Bastrop County, Texas. *Census 2000* data at the census tract (CT) level was used for the demographic analyses because CT was the smallest level in which data was available for the proposed project area.

Bastrop County population grew from 38,263 in 1990 to 57,733 in 2000, an increase of 50.9 percent. This compares to the state's 22.8 percent population increase over the same period. According to *Census 2010* data, Bastrop County population grew to 74,171 in 2010, an increase of 28.5 percent. The population of Bastrop County is projected to be 192,599 in 2040, an increase of approximately 233 percent over 2000 (TSDC 2009). Population growth is projected to grow at a greater rate for the Austin-Round Rock Metropolitan Statistical Area (MSA) and Bastrop County relative to the rest of the State of Texas (Bastrop County 2010). Over the past 20 years, employment opportunities for Bastrop County have become more diverse, and additional commercial development has been generated by the growing population base (Bastrop County 2010). According to the Capital Area Council of Governments (CAPCOG), employment opportunities will continue to grow in Bastrop County (Bastrop County 2010).

Austin's growth extended east, toward and into Bastrop County, causing unprecedented growth in Bastrop County (Bastrop 2010). Even with the unprecedented growth, CAPCOG's 2005 Vacant Land Inventory found: 70 percent of Bastrop County is still farmed by the landowners; 10 percent has a non-intensive land use; and 20 percent has an intensive land use, mostly focused in the central and western portions of Bastrop County (Bastrop 2010).

<u>Age Distribution</u>

Age distribution of an area is one indication of its economic and income earning potential. An area with a higher percentage of working age residents (20 to 64 years) generally has greater income earning potential. Conversely, areas with greater percentages of dependent populations (ages 0 to 19 and 65 years and above), typically have lower earning potential.

Table 2 summarizes the age composition of Bastrop County and CT 9501. According to *Census 2000* data, working age residents (ages 20 to 64) comprised 59.1 percent of the population of Bastrop County and the median age was 35.4 years. Similarly, working age residents comprised 59.3 percent of the population of CT 9501. The percentage of the dependent population in CT 9501 (31.6 percent) was comparable to Bastrop County (30.5 percent).

Table 2. Age Composition of the Population – 1999.

AREA/CENSUS TRACT (CT)	TOTAL POPULATION	AGE 0 - 19		AGE 20 - 64		AGE 65+	
		Number	Percent	Number	Percent	Number	Percent
Bastrop County	57,733	17,625	30.5	34,181	59.1	5,927	10.2
CT 9501	7,286	2,309	31.6	4,318	59.3	659	9.0

Source: U.S. Census Bureau, *Census 2000*

Income and Poverty

As shown in Table 3, according to *Census 2000*, the percent of people living below the poverty level in Bastrop County was 11.6 percent. The percent of people living below the poverty level in CT 9501 was 10.5 percent. The percentage of the population below the poverty level in CT 9501 was approximately 1.1 percentage points lower than in Bastrop County.

Median family income in Bastrop County was $49,456. Median family income in CT 9501 was $49,198.

Table 3. Median Family Income and Poverty Status for Bastrop County and CT 9501 - 1999.

AREA/CENSUS TRACT (CT)	POPULATION	MEDIAN FAMILY INCOME ($)	PERCENT OF THE COUNTY MEDIAN	PERSONS BELOW POVERTY LEVEL	
				Number	Percent
Bastrop County	57,733	49,456	-	6,456	11.6
CT 9501	7,286	49,198	99.5	765	10.5

Source: U.S. Census Bureau, *Census 2000*

Unemployment

Unemployment rates are a key indicator of economic stability of a community. According to *Census* 2000, the unemployment rate in CT 9501 was 0.8 percentage points lower than in Bastrop County (Table 4).

Table 4. Unemployment Rates for Bastrop County and CT 9501 - 1999.

AREA/CENSUS TRACT (CT)	POPULATION 16 YEARS AND OLDER	POPULATION IN LABOR FORCE	TOTAL UNEMPLOYED	PERCENT UNEMPLOYED
Bastrop County	43,462	27,642	1,088	2.5
CT 9501	5,381	3,643	91	1.7

Source: U.S. Census Bureau, *Census 2000*

Housing

Table 5 shows housing data for CT 9501 and provides the county average for comparison. According to *Census* 2000, CT 9501 had a slightly lower vacancy rate than Bastrop County. The median value of homes in CT 9501 was slightly higher in CT 9501 than in Bastrop County.

Table 5. Housing Data for Bastrop County and CT9501 - 1999.

AREA/CENSUS TRACT (CT)	TOTAL HOUSING UNITS	TOTAL OCCUPIED HOUSING UNITS	VACANT	PERCENT VACANCY	MEDIAN VALUE ($)
Bastrop County	22,254	20,097	2,157	9.7	93,400
CT 9501	2,832	2,585	247	8.7	98,800

Source: U.S. Census Bureau, *Census 2000*

Racial and Ethnic Composition

According to *Census* 2000, Bastrop County and CT 9501 had minority populations less than 20 percent of the total population. Minorities accounted for 19.8 percent of the Bastrop County population and 13.8 percent of the CT 9501 population. As represented in Table 6, Hispanics and African Americans were the primary minority groups represented, together comprising approximately 33 percent of the population in Bastrop County and approximately 24 percent of the population in CT 9501.

Table 6. Racial and Ethnic Composition of the Population – 1999.

AREA/ CENSUS TRACT (CT)	TOTAL POPULATION	POPULATION OF ONE RACE/NOT HISPANIC OR LATINO					HISPANIC OR LATINO OF ANY RACE	PERCENT TOTAL MINORITY POPULATION
		White	Black or African American	American Indian/ Alaska Native	Asian	Pacific Islander		
Bastrop County	57,733	46,327	5,072	404	268	33	13,845	19.8
CT 9501	7,286	6,280	345	41	28	5	1,389	13.8

Source: U.S. Census Bureau, *Census 2000*

Limited English Proficiency Populations (LEP)

Based on *Census 2000* data, approximately 3.8 percent of households in Bastrop County are considered linguistically isolated (not English-proficient), which is comparable to approximately 5.2 percent in CT 9501. The primary language spoken by LEP persons within Bastrop County and CT 9501 is Spanish. Table 7 summarizes the number of linguistically isolated households in the Bastrop County and CT 9501.

Table 7. Racial and Ethnic Composition of the Population – 1999.

Area/ Census Tract (CT)	Total Households	English	Linguistically isolated				Linguistically Isolated Households (% of Total Households
			Spanish	Asian and Pacific Island Languages	Other Indo-European Languages	Other Languages	
Bastrop County	20,067	15,546	711	26	24	0	3.8
CT 9501	2,577	2,134	130	0	3	0	5.2

Source: U.S. Census Bureau, *Census 2000*

Land Use

The proposed CTA would be constructed on approximately 1,100 acres of land, which has been used as a cattle ranch for approximately 50 years. Specifically, the proposed CTA site is an operating cattle ranch hosting over 500 head of cattle. Adjacent land uses include agricultural rangeland, rural large lot residential home sites, sand and gravel mining operations and is permitted for rock crushing and concrete plant operations. A church is located north of the proposed project area, more than 600 feet southeast of the intersection of FM 969 and FM 1704. The Colorado River traverses the southern boundary of the proposed CTA site.

There are no publicly owned lands of national, state, or local significance within the proposed project limits. The proposed project area is not located within city limits.

Alternatives 1, 2, and 3 - Construction of the proposed CTA would occur on a portion of the 1,100-acre property, and would result in the direct conversion of approximately 500 acres of farmland to nonagricultural use. Please refer to Section 4.6 for Farmland Protection Policy Act (FPPA) impacts.

Economy and Employment

Alternatives 1, 2, and 3 - All feasible build alternatives, including the preferred alternative, would have direct economic effects to employment output and income, by generating jobs directly related to the construction of the proposed CTA. The specific number of jobs generated by the construction of CTA would be dependent upon the final contractor.

No Environmental Justice communities are located on the proposed CTA project area. Therefore, the proposed action would not have direct Environmental Justice impacts.

Displacements

One residence and associated agricultural operation are located on the proposed project area, which are planning to be moved to another location prior to project commencement.

Environmental Justice

This evaluation addresses the requirements of Executive Order (EO) 12898, which mandates that federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects, including social and economic effects, of their programs on minority and low income populations. This evaluation is based on the U.S. Department of Transportation strategy for environmental justice evaluations.

Based on guidelines developed by the Federal Highway Administration established in Order 6640.23, a CT was determined to have a high concentration of low-income persons if it: 1) has a meaningfully greater percentage of people in poverty based on the *Census 2000* definition of poverty, and/or 2) the median household income in the CT is 80 percent or less than the median household income for the county (approximately $43,578 in Bastrop County and approximately $46,737 in CT 9501). "Meaningfully greater" for the purposes of this evaluation was determined as twice the percentage of the regional average (Travis, Bastrop, Williamson, Hays, Blanco, Burnet, and Caldwell Counties) of the total population in poverty. The regional average of the population in poverty in 1999 for the *Census 2000* was 11.2 percent and the percentage of people in poverty in CT 9501 was 10.5.

Similarly, CTs with high concentration of minority populations were identified as those tracts where the minority (non-white) populations exceeded 50 percent. The percentage of total minority population in CT 9501 was 13.8.

Based on the thresholds above and *Census 2000* data, CT 9501 was not identified as an Environmental Justice area.

Alternatives 1, 2, and 3 - Based on current design information, no residential relocations or commercial or community facility displacements would be required for the construction of the proposed action. Neither a population increase nor decrease is anticipated as a result of the proposed action. Therefore, no impacts to community cohesion are anticipated from the proposed action. Additionally, no impacts to Environmental Justice populations would result from the proposed action.

Recreation
The property does not currently support a high recreational value based on the following information: 1) the property has been a cattle ranch for approximately 50 years; and 2) as a result of the cattle ranching, resources onsite are substantially degraded.

The Colorado River is the most recreationally significant feature related to the proposed CTA site. The southern boundary of the proposed Airport site abuts approximately 3,500 linear feet of Colorado River frontage. The proposed CTA avoids impacts to the Colorado River and its frontage. The closest development activity, an airport perimeter road, sets back from the Colorado River a minimum distance of approximately 450 feet. This avoidance provides a natural and native buffer from the proposed Airport to the river and associated recreational activities.

Additionally, the compensatory mitigation plan, included in Appendix D, proposes to create 17.2 acres of forested riparian corridor along 3,484 linear feet of the Colorado River and 4,000 linear feet of an oxbow of the Colorado River. A 26-acre pond with permanent open water and a vegetated bench within a detention area would provide open water functions. There are no existing riparian corridors or wetlands on the proposed project area. Therefore, the proposed compensatory mitigation would result in a net gain in wetlands and riparian corridor.

Alternatives 1, 2, and 3 – There is no recreational value associated with the proposed CTA site. No impacts to recreation are anticipated as a result of the construction of the proposed CTA.

4.6 Farmlands

The Farmland Protection Policy Act (FPPA) requires that federal agencies identify and consider the adverse effects of their programs on the preservation of farmlands. The FPPA applies to farmland defined as “prime” or “unique” in Section 1540(c)(1) of the Act, or to farmland of statewide or local importance as defined by the appropriate state or local agency.

The proposed action would affect land within the boundary of the approximately 1,100-acre proposed CTA site, which is an active cattle ranching operation with over 500 head of cattle. The property has been used as a cattle ranching operation for over 50 years.

Prime farmland soils are soils that have the best combination of physical and chemical characteristics for the production of food, feed, forage, fiber, and oilseed crops. In addition, prime farmland is located in areas with adequate and dependable water supply from precipitation or irrigation and favorable temperatures and growing seasons.

The following fourteen soil units are found in the proposed project area (SCS 1979):

- Axtell-Tabor complex, 1 to 8 percent slopes (AtD);
- Bosque loam (Bo);
- Crockett soils, 2 to 5 percent slopes, eroded (CsC2);
- Demona loamy fine sand, 1 to 5 percent slopes (DeC);
- Houston Black clay, 0 to 1 percent slopes (HoA);
- Krum silty clay, 0 to 1 percent slopes (KrA);
- Lincoln soils (Ls);
- Mabank loam, 0 to 1 percent slopes (MaA) and 1 to 3 percent slopes (MaB);
- Norwood silty clay loam (No);
- Shep clay loam, 3 to 8 percent slopes, eroded (SeD2);
- Ships silty clay (Sg);
- Smithville fine sandy loam (Sm);
- Vernia complex, 1 to 8 percent slopes (VeD); and
- Wilson clay loam, 1 to 3 percent slopes (WsB).

According to the Natural Resources Conservation Service, the following soils are considered prime farmland soils:

- Bosque loam (prime farmland soil if protected from flooding or not frequently flooded during the growing season);
- Houston Black clay, 0 to 1 percent slopes;
- Krum silty clay, 0 to 1 percent slopes;
- Norwood silty clay loam;
- Ships silty clay; and
- Smithville fine sandy loam.

Alternatives 1, 2, and 3 – The proposed action would impact approximately 812.6 acres (76.1 percent) of the approximately 1,100-acre proposed CTA site.

4.7 Wildlife

The proposed project is located in Bastrop County, which is in the Texan Biotic Province (Blair 1950). Common mammalian species known from the Texan biotic province include, but are not limited to: Virginia opossum (*Didelphis virginiana*), common mole (*Scalopus aquaticus*), fox squirrel (*Sciurus niger*), fulvous harvest mouse (*Reithrodontomys fulvescens*), cotton mouse (*Peromyscus gossypinus*), Baird's pocket gopher (*Geomys breviceps*), South Texas bobcat (*Lynx rufus texensis*), red fox (*Vulpes fulva*), raccoon (*Procyon lotor*), river otter (*Lutra canadensis*), and red bat (*Lasiurus borealis*). Lizards and snakes include, but are not limited to: Carolina anole (*Anolis carolinensis*), eastern glass lizard (*Ophisaurus ventralis*), six-lined racerunner (*Cnemidophorus sexlineatus*), blue racer (*Coluber constrictor*), black rat snake (*Elaphe*

obsoleta), diamond-backed water snake (*Natrix rhombifora*), eastern ribbon snake (*Thamnophis sauritus*), and western cottonmouth (*Agkistrodon piscivorus*) (Blair 1950).

Hazardous Wildlife Attractants

Per a request from the U.S. Army Corps of Engineers, Fort Worth District to the Applicant during the October 25, 2011 meeting, the following information is presented to address the projects compliance with Hazardous Wildlife Attractants on or near Public-Use Airports in accordance with FAA regulations.

The FAA Advisory Circular (AC) No. 150/5200-33 specifically states: "The holders of Airport Operating Certificates issued under Title 14, Code of Federal Regulations (CFR), Part 139 Certification of Airports, Subpart D (Part 139) may use the standards, practices, and recommendations contained in the AC to comply with the wildlife hazard management requirements of Part 139. Airports that have received Federal grant-in-aid assistance must use these standards."

The proposed action is a privately funded GA airport and associated facilities as described in Section 1.0 of this document, which has not and will not accept any Federal grant-in-aid assistance. Hence, CTA is not required to use these guidelines. Although CTA is not required to use these guidelines, CTA intends to facilitate hazardous wildlife controls at the proposed project area.

Additionally, AC No. 150/5200-33, Section 3 "Land Uses That May Be Compatible with Safe Airport Operations" discusses several items. Section 3-1 states "Even though they may, under certain circumstances, attract hazardous wildlife, the land use practices discussed in this section have flexibility regarding their location or operation and may even be under the airport operator's control. In general, the FAA does not consider the activities discussed below as hazardous to aviation if there is no apparent attraction to hazardous wildlife, or wildlife hazard mitigation techniques are implemented to deal effectively with any wildlife hazard that may arise."

Section 3-7 states: "The movement of storm water away from runways, taxiways, and aprons is a normal function on most airports and is necessary for safe aircraft operation. Detention ponds hold storm water for short periods, while retention ponds hold water indefinitely. Both types of ponds control runoff, protect water quality, and can attract hazardous wildlife. Retention ponds are more attractive to hazardous wildlife than detention ponds because they provide a more reliable water source."

Sections 3-1 and 3-7 specifically address the use of a detention pond at an airport facility. The proposed CTA detention pond is located to the east of the proposed airport site, and is far away from aircraft movement areas to minimize aircraft-wildlife interactions. A comprehensive flood study was completed and submitted to FEMA for review as part of the Applicant's CLOMR application request. The detention pond was

designed to meet the requirements of the pre-project flows, so that the post-project flows would not increase. As stated in the FAA Advisory Circular above, detention ponds are more desirable and manageable than retention ponds because they hold storm water for shorter periods of time. The Applicant will implement Best Management Practices and wildlife hazard mitigation techniques relative to the hazardous wildlife attractants associated with the on-site detention pond.

The Secured Airport Area will be protected by an extensive perimeter fencing and gate system. All airport operations areas need to be secured for several reasons, one being the hazardous wildlife control, and others being security and safety. All airport and site operations will to be continuously monitored to effectively maintain security and safety within the proposed project area and the community.

Alternatives 1, 2, and 3 - The property does not currently support a high wildlife value based on the following information: 1) the property has been a cattle ranch for approximately 50 years; and 2) as a result of the cattle ranching, water resources onsite are substantially degraded.

The entire property has been an intensively-operated cattle ranch for approximately 50 years and therefore currently supports a monoculture of coastal bermudagrass. Coastal bermudagrass, the dominant plant species on the property, is a non-native grassland species that is poor habitat for species other than livestock.

Continuous cattle ranching operations have degraded the quality of onsite water resources that may have been historically utilized by wildlife. The vast majority (8.55 acres, or approximately 91 percent) of the impacts to jurisdictional waters associated with the authorization of this permit are from the removal of a degraded man-made stock tank that is currently utilized by 500 head of cattle on a daily basis. The remainder of the impacts resulting from this development (0.87 acre) would be to ephemeral drainages that have long lost their natural and traditional character and are currently dominated by non-native coastal bermudagrass.

Minimal impacts to ground-dwelling species may occur as a result of loss of some open pasture areas. Less than five percent (5%) of the CTA site has canopy vegetation, and less than half of the canopy vegetation would be removed for the proposed CTA. There are no wetlands or riparian corridors on the proposed CTA site. No significant impacts to wildlife are anticipated as a result of the construction of the proposed CTA.

4.8 Migratory Birds

Under the Migratory Bird Treaty Act (MBTA), it is unlawful “by any means or manner, to pursue, hunt, take, capture, [or] kill” any migratory birds except as permitted by regulation (16 U.S.C. 703-704). Structures that may contain migratory birds, including bridges, are not within the proposed project area.

Wildlife strikes by aircraft occur en-route and in or near airport environments across the United States and throughout the world. It is estimated by the FAA that approximately 40 percent of actual wildlife strikes are reported.

According to the FAA Wildlife Strike Database, there were 858 reported strikes at nearby Austin Bergstrom International Airport (ABIA) from Feb 26, 1990 thru June 30, 2010. Typical strikes at ABIA included: doves, pigeons, hawks, bats, grackles, turkey vultures, etc.

Alternatives 1, 2, and 3 - Regular best management practices for bird abatement are planned to be implemented at the proposed CTA. In the event that migratory birds are encountered on-site during the proposed project construction, every effort would be made to avoid harm to protected birds, active nests, eggs, and/or young. No substantial impacts to migratory birds are anticipated as a result of the construction of the proposed CTA.

4.9 Threatened and Endangered Species

Federally threatened and endangered species evaluations were performed as required for submittal with the Application for a Department of the Army Permit. Species included: Houston toad, whooping crane, and Navasota ladies'-tresses. Although the bald eagle was delisted in 2007, the species was also evaluated.

Bald Eagle

The bald eagle is found primarily near seacoasts, rivers, and large lakes where food resources such as fish and waterfowl are readily available. Eagles typically build their nests in 40- to 120-foot tall trees; nests are usually in the tallest trees in an area with an unobstructed flight path. Nest sites are also commonly within 1 to 2 miles of large water bodies, such as lakes or reservoirs (Campbell 2003). The bald eagle is known to nest along the Colorado River in Bastrop County and along the Llano River in Llano County. The bald eagle is known to winter from early November to late March along major river systems of the eastern and central Edwards plateau. The Colorado River drainage, especially Lake Buchanan in Llano and Burnet Counties, is the area most likely to have wintering bald eagles in central Texas. No critical habitat has been designated in the 48 contiguous states for this species (USFWS 2007).

A database search of the Texas Natural Diversity Database (TXNDD), which includes federally and state listed and tracked Threatened, Endangered, and Rare species, was performed for the Utley and adjacent quadrangles to include the proposed project area. Review of the database search indicates that there are known bald eagle nesting sites approximately one mile east of the proposed project area.

Due to the potential for bald eagle activity, a bald eagle and bald eagle nest survey protocol was developed in accordance with the U.S. Fish and Wildlife Service Draft Post-Delisting Monitoring Plan for the Bald Eagle and the National Bald Eagle Management Guidelines (USFWS 2007b, 2007c). As there are historical nesting locations within one mile of the proposed project area along the Colorado River, surveys emphasized locating active and dormant bald eagle nests. Surveys were conducted on December 20, 2010, and consisted of two parts: boat survey and pedestrian survey. The boat survey was conducted by kayak along the Colorado River. The kayak survey focused on assessing the vegetation closest to shore as bald eagle nesting sites typically include at least one perch with a clear view of a nearby water body. The National Bald Eagle Management Guidelines (USFWS 2007c) recommend avoiding the operation of aircraft within 1,000 feet of a nest during the breeding season; therefore, the kayak survey included the Colorado River adjacent to the proposed project area, as well as 1,000 feet of the Colorado River to the west and east of the proposed project area. The pedestrian survey focused on inland areas of vegetation that were not clearly visible during the kayak survey. No nests or bald eagles were identified during the surveys.

Development projects are limited in the amount of protection they can provide for singular birds as they migrate or forage through a project area. Typically the greatest protection that can be afforded to bald eagles is to ensure a safe, undisturbed nesting and fledging area for their young. However since no nests were identified within close proximity of the proposed project area, it seems unlikely that any of the actions proposed would have any impact to bald eagles. Additionally, there are no activities planned within approximately 450 feet north of the Colorado River surrounding the proposed project area. A required perimeter road would be located approximately 450 feet north of the Colorado River, and the southern extent of the runway would be located approximately 1,900 feet north of the Colorado River.

Finally, in accordance with the Bald and Golden Eagle Protection Act requirements, if a nest is identified on the proposed project area, the proposed project will implement the recommended precautions and steps in order to meet the avoidance and minimization guidelines as outlined in the Bald and Golden Eagle Protection Act, particularly when activities commence proximate to the Colorado River riparian corridor, which provides the greatest potential for eagle nesting habitat.

Alternatives 1, 2, and 3 - No impacts to bald eagles are anticipated as a result of the construction of the proposed CTA.

Houston Toad

The Houston toad is a terrestrial amphibian, 2 to 3.5 inches long, and known to occur in nine Texas counties: Austin, Bastrop, Burleson, Colorado, Lavaca, Lee, Leon, Milam, and Robertson (Campbell 2003). The Houston toad requires deep, loose, sandy soils

for burrowing. For breeding, the toad requires still or slow-flowing water sources, such as ephemeral rain pools, flooded fields, seeps, springs, or more permanent shallow-water ponds (Hillis et al. 1984). These water sources must persist for at least 30 days (Campbell 2003). Juvenile Houston toads have been found within 50 meters of the metamorphosis habitat for the first 11 weeks following transformation (Greuter and Forstner 2002). Critical habitat has been determined in part of this species range. The areas determined to be critical habitat are located in Bastrop and Burleson Counties (USFWS 1978).

Review of the TXNDD search indicates that there are known Houston toad observations east of Highway 95. No observations were noted within the proposed project area.

Using GIS analysis, the proposed project area was studied for various habitat requirements for the Houston toad. These include:

- Geologic formations conducive to deep soil development provided in the USFWS Houston toad habitat geographic database and referenced by USFWS (1995b);
- Bastrop County sandy soil units determined to be potential Houston toad habitat (USFWS 2000);
- Native wooded, savannah, or bunch grass vegetation (based on field reconnaissance);
- Pools of water that persist 60 days during the spring breeding season (based on field reconnaissance and aerial photography); and
- Areas showing evidence of water on USGS maps and aerial photography.

Based on the analysis of Houston toad habitat within the proposed project area, the proposed project area contains two small areas of potential soils and areas of ponding water during the spring breeding season, but does not contain the necessary geology conducive to Houston toad habitat (USFWS 1995b). Therefore, the likelihood of the proposed project area being regularly utilized as Houston toad habitat is very low.

Alternatives 1, 2, and 3 - No effects to Houston toad are anticipated as a result of the construction of the proposed CTA.

Whooping Crane

The whooping crane is a migrant species whose flyway crosses through much of Texas from the coast and spans northwest through the panhandle. This flyway incorporates all of Bastrop County. The whooping crane typically breeds among rushes and sedges in marshes and meadows in Canada and winters on the estuarine marshes, shallow bays, and tidal salt flats of the Texas coast. During migration, the crane typically stops to rest and feed in open bottomlands of large rivers, marshes, and in agricultural areas. Whooping cranes are omnivorous feeders. Some of the more common food items taken are crabs, clams, shrimp, snails, frogs, snakes, grasshoppers, larval and nymph

forms of flies, beetles, water bugs, birds and small mammals (Campbell 2003). In Texas, critical habitat for the whooping crane is the area, land, and airspace of Aransas National Wildlife Refuge and vicinity (USFWS 1978b).

Based on the analysis of the whooping crane habitat within the proposed project area and the occurrence of open cropland along the Colorado River including various tributaries and ponds, the likelihood of the whooping crane utilizing the proposed project area during migration is low to moderate. However, the pasture is not grained-based, a commonly preferred attribute of stopover habitat.

Alternatives 1, 2, and 3 - No effects to whooping crane are anticipated as a result of the construction of the proposed CTA.

Navasota Ladies'-tresses

Navasota ladies'-tresses, a member of the orchid family, is an erect, slender stemmed perennial herb that ranges in height from 8 to 15 inches (USFWS 1984). This species is endemic to the Post Oak Savannah region of East Texas and is typically found in lightly wooded, naturally disturbed upland areas (250 feet above sea level) along the Navasota River and Brazos River drainages. This species has been observed at the onset of drainages between grassy fields and woodlands, along the edges of woods adjacent to hiking trails, and on the banks of natural drainages in wooded areas (Pelchat 2005). Navasota ladies'-tresses is typically observed in moderately well-drained soils with weak to moderate acidity, low availability of plant nutrients, and very low water holding capacity (TES 2001). No critical habitat has been designated for this species (USFWS 1984).

The proposed project area lies along the western border of Bastrop County. The nearest known populations of Navasota ladies'-tresses are located in Bastrop County at the University of Texas Stengl Lost Pines Biology Station north of Smithville, Texas (approximately 21 miles away). Much of the soil within the proposed project area consists of clay and clay loam that are typically acidic and have a high available water capacity and slow permeability. Based on the soil requirements of the species, the likelihood of the proposed project area containing Navasota ladies'-tresses is very low.

Alternatives 1, 2, and 3 - No effects to Navasota ladies'-tresses are anticipated as a result of the construction of the proposed CTA.

4.10 Vegetation

The proposed CTA site lies within the Crops and Post Oak Woods/Forest designation, as noted on the Texas Parks and Wildlife "Vegetation Types of Texas" map (McMahan et al. 1984). Crop areas generally include cultivated cover crops or row crops used for the purpose of producing food and/or fiber for either man or domestic animals. The majority of the proposed CTA site is inconsistent with this designation, consisting

primarily of coastal bermudagrass pastures, with very few trees, and is used for the grazing of approximately 500 head of cattle.

Post Oak Woods/Forest areas are generally located in sandy soils within the Post Oak Savannah. This designation is generally consistent with vegetation along the Colorado River and associated tributaries, which is less than 10 percent of the proposed CTA site.

Canopy vegetation observed along the Colorado River and tributaries includes, but is not limited to: pecan (*Carya illinoinensis*), cedar elm (*Ulmus crassifolia*), post oak (*Quercus stellata*), burr oak (*Quercus macrocarpa*), and mesquite (*Prosopis glandulosa*). The tree layer within the subject area has a height range of 15 to 40 feet and a canopy cover range of 30 to 70 percent. Vegetation within the shrub layer includes, but is not limited to: saw greenbriar (*Smilax bona-nox*), mustang grape (*Vitis mustangensis*), and rattlebush (*Sesbania drummondii*). Herbaceous layer vegetation observed within the subject area includes, but is not limited to: Texas prickly pear (*Opuntia spp.*), pencil cactus (*Opuntia leptocaulis*), annual sumpweed (*Iva annua*), broomweed (*Gutierrezia dracunculoides*), giant ragweed (*Ambrosia trifida*), coastal bermudagrass (*Cynodon dactylon*), and various other grasses and forbs.

Alternatives 1, 2, and 3 - The majority of the proposed CTA site consists of coastal bermudagrass pastures, with very few trees (less than 10 percent of the proposed site), and is used for the grazing of approximately 500 head of cattle. Less than half of the canopy vegetation on the site would be removed for the proposed CTA. Additionally, the southern boundary of the proposed Airport site abuts approximately 3,500 linear feet of Colorado River frontage; however, the proposed Airport would avoid impacts to the Colorado River and its frontage. The closest proposed development activity, an airport perimeter road, would set back from the Colorado River a minimum distance of approximately 450 feet, and the southern extent of the runway would be located approximately 1,900 feet north of the Colorado River. This avoidance would provide a natural and native buffer from the proposed Airport to the river and associated wetlands and wildlife.

Clearing of vegetation would be avoided or minimized where possible for the construction of the road and establishment of clear zones. Upon completion of earthwork operations, disturbed areas will be restored and seeded according to TCEQ General Permit Requirements.

Specific to Alternative 1, a 26-acre pond with permanent open water and a vegetated bench within a detention area would provide fringe and open water habitats.

During construction, efforts would be taken to avoid and minimize disturbance of vegetation and soils. Areas within the proposed CTA site, but outside the limits of

construction, would not be disturbed. Minimal impacts to vegetation within the area of construction would occur.

Per the requirements in the Texas Pollutant Discharge Elimination System (TPDES) General Permit, all disturbed areas are required to be re-vegetated to at least 70 percent coverage prior to removing all best management practices (BMPs) on the site.

Permittee-responsible compensatory mitigation is proposed for unavoidable adverse impacts to waters of the United States resulting from the proposed construction of the CTA. The compensatory mitigation plan proposes to create 17.2 acres of forested riparian corridor along 3,484 linear feet of the Colorado River and 4,000 linear feet of an oxbow of the Colorado River, which is jurisdictional (Appendix D). There are no existing riparian corridors or wetlands on the proposed project area. Therefore, the proposed compensatory mitigation would result in a net gain in wetlands and riparian corridor.

4.11 WATERS OF THE U.S. AND FEMA FLOODPLAIN

Currently, WAT-3 and WAT-4 drain across the proposed layout of the Airport. In order to construct the proposed Airport entirely outside of the floodplain, a portion of the effective floodplain would need to be filled in. The proposed plan calls for filling in the portion of the floodplain and conveying drainage from WAT-3 and WAT-4 via a culvert system and open channel system. The proposed culverts and open channels would drain to a proposed 26-acre detention pond, which would mitigate the flow generated by the proposed Airport development and reduce peak flows to predevelopment levels prior to releasing the flow into the existing tributary downstream of the proposed Airport property.

Details Relative to Loss of Floodplain

A CLOMR request was submitted to the Department of Homeland Security's Federal Emergency Management Agency (FEMA) on May 10, 2010 requesting that FEMA evaluate the effects that the proposed Central Texas Airport along Colorado River Tributary 8, Colorado River Tributary 9, and Unnamed Tributary to Colorado River Tributary 8 would have on the flood hazard information shown on the effective FIRM (Appendix C).

The proposed project along Colorado River Tributary 8 (WAT-3) includes a detention basin at the confluence with Colorado River Tributary 9 (WAT-4) and a 3,330 foot long, seven- barrel, 10 foot by 5 foot Reinforced Concrete Box (RCB) culvert just upstream of the pond. The proposed project along Colorado River Tributary 9 (WAT-4) includes channelization from approximately 820 feet upstream of the confluence with Colorado River Tributary 8 (WAT-3) to 4,010 feet upstream of the confluence with Colorado River Tributary 8 (WAT-3). The proposed project along Unnamed Tributary to Colorado River Tributary 8 includes channelization from the confluence with Colorado River Tributary 8 (WAT-3) to approximately 1,500 feet upstream of the confluence with Colorado River

Tributary 8 (WAT-3) and a 1,490 foot long, four-barrel, 8 foot by 4 foot RCB culvert just upstream of the channel. The area of the proposed project is shown on the Bastrop County, Texas, and Incorporated Areas FIRM panel number 48021C0200 E, dated January 19, 2006.

FEMA reviewed the submitted data and the data used to prepare the effective FIRM for the community, and determined that the proposed project met the minimum floodplain management criteria of the NFIP, and a CLOMR was issued by FEMA on September 28, 2010 (Appendix C).

According to the project engineers, the pre-CLOMR floodplain within the property boundaries is 261.26 acres and the post-CLOMR floodplain within the property boundaries is 148.16 acres.

Watershed Impact

The size of the immediate watershed of the unnamed tributary where the CTA is located is approximately 4,703 acres. There are no wetlands on the proposed project area; therefore, the proposed CTA would impact zero percent of wetlands in the immediate watershed. The amount of USGS blue lines in the immediate watershed is 117,882 linear feet (approximately 22 miles). CTA proposes to impact approximately 7,290 linear feet, equating to approximately 6 percent of the USGS blue lines in the immediate watershed.

Alternative 1 – Alternative 1 would involve filling in the FEMA floodplain and impacting waters of the U.S. to construct the proposed project. To minimize impacts, Alternative 1 has been designed to maintain pre-development flows on the proposed CTA site, and the proposed culverts/open channel system and detention pond have been designed to handle the 100-year event. According to the project engineers, the pre-CLOMR floodplain within the property boundaries is 261.26 acres and the post-CLOMR floodplain within the property boundaries is 148.16 acres.

Alternative 1 would implement a compensatory mitigation plan to avoid and minimize for impacts to hydrologic resources, and would mitigate for unavoidable impacts to waters of the U.S. When compared to the existing man-made stock tank and tributaries within the proposed CTA site, the proposed detention pond and culvert system would incorporate a naturalized channel design, to include plantings, which would increase the environmental quality of these waters.

Alternative 2 – Under alternative 2, the engineer investigated the feasibility of an open box culvert system to span all or part of the tributaries and man-made stock tank, at a height that allow water through flow. This alternative would result in no impact to waters of the U.S., as the goal would be to construct the structure over all or part of the tributaries and pond, allowing the drainages to flow in their natural fashion. However,

based on initial engineering review, this alternative was determined not economically and engineeringly feasible because of the associated engineering costs and operational hazards. This alternative would introduce a more complex system into the proposed project, which could result in opportunities for system breakdowns and associated costs.

Alternative 3 – Under Alternative 3, the project team discussed the option of engineering and constructing a traditional, concrete-lined detention pond that would draw down within 24 to 48 hours following storm events. This concrete-lined detention pond, which would regularly not contain surface water, would consist of reinforced concrete and rip-rap along the existing flow lines of WAT-3 and WAT-4. Therefore, the construction of a concrete-lined pond would provide little, if any, environmental value. The construction of the concrete-lined detention pond would more greatly impact waters of the U.S. by filling WAT-3 and WAT-4 with concrete and rip-rap, as opposed to fringe vegetation and open water inundation under Alternative 1. Additionally, the construction of the concrete-lined detention pond would be cost prohibitive in comparison to Alternative 1.

4.12 Water Quality/Quantity

The proposed project is located along Segment 1428 of the Colorado River, which is designated by the TCEQ as supporting exceptional aquatic life. Preserving the exceptional designation within and adjacent to the proposed project is paramount to the Applicant. However, there are no known water quality regulations for nonpoint source pollution in the area of the proposed CTA, except for the TCEQ's TPDES, which requires the use of BMPs associated with a Stormwater Pollution Prevention Plan (SWP3), which the proposed CTA would be required to satisfy.

In the absence of any water quality standards in the area, the Applicant anticipates utilizing elements of one of the two widely accepted water quality standards for nonpoint source pollution in the area, in an effort to minimize potential impacts to the Colorado River and other area water supplies, including: 1) Chapter 213 Subchapter A §213.1-§213.14 and Chapter 213 Subchapter B §213.20-§213.28 of the Texas Administrative Code, known locally as the Edwards Rules, or 2) Highland Lakes Watershed Ordinance Water Quality Management Technical Manual (July 2007). Use of Petroleum Storage Tanks (PSTs) for the proposed CTA would satisfy Texas Administrative Code Chapter 334, and the containment and management of hazardous materials for the proposed project would satisfy the requirements prescribed by the Texas Water Code, Chapter 26, Subchapter I and Subchapter K. Each standard is discussed below.

Edwards Rules

The TCEQ's Edwards Rules were considered by the Applicant for the following reasons: 1) the Edwards Rules are designed to protect the Edwards aquifer, which has been given the highest standards of protection by the TCEQ and federal government; 2) the

Edwards Rules are accepted by the U.S. Fish and Wildlife Service as protection to the Barton Springs salamander, one of the most endangered aquatic species in the United States; and 3) the Edwards aquifer provides drinking water to thousands of people. If the Edwards Rules are utilized for the proposed project, the proposed onsite stormwater facilities and detention pond would be designed to achieve 80 percent removal efficiency of total suspended solids load arising from the development through the installation of permanent BMPs.

Lower Colorado River Authority Highland Lakes Watershed Ordinance

The Lower Colorado River Authority Highland Lakes Watershed Ordinance, similar to the Edwards Rules, requires the management of stormwater runoff for water quality from development activities through the implementation of BMPs. The ordinance is being considered by the Applicant because it is designed for the protection of aquatic life, water supply, water quality, and recreation in the Highland Lakes watershed. If the Highland Lakes Watershed Ordinance is utilized for the proposed project, the Applicant proposes to implement an extended detention pond, vegetative filter strips, and a suite of other BMPs to achieve similar removal efficiencies identified in the Highland Lakes Watershed Ordinance Water Quality Management Technical Manual.

During Construction

Both the Edwards Rules and the Highland Lakes Watershed Ordinance dictate the use of specific temporary BMPs to limit the translocation of pollutants arising from construction activities. As previously mentioned, during construction, the site would have an SWP3 in place to minimize the potential discharge of suspended solids during storm events. The SWP3 would include provisions for installation, maintenance, and upgrading of BMPs throughout the construction process. The BMPs are designed to dissipate stormwater flow and capture suspended solids on site. Per the requirements in the TPDES General Permit, all disturbed areas are required to be re-vegetated to at least 70 percent coverage prior to removing BMPs on the site.

The Applicant would use applicable technologies selected from the following temporary stormwater BMPs during construction activities for erosion and sediment control:

- Filter Berms (Rock Berms),
- Silt Fences,
- Stabilized Construction Entrances,
- Straw or Hay Bales,
- Vegetated Buffers,
- Concrete Washout Areas,
- Vehicle Maintenance and Washing Area,
- General Site Waste Management,
- Spill Prevention Control and Countermeasure plan (SPCC), and
- Dust Control.

Colorado River Avoidance
The Colorado River is the most environmentally significant feature to the proposed CTA, as it is a navigable and jurisdictional waterway. The southern boundary of the Airport site abuts approximately 3,500 linear feet of Colorado River frontage. The Airport avoids impacts to the Colorado River and its frontage. The closest development activity, an airport perimeter road, sets back from the Colorado River a minimum distance of approximately 450 feet. Additionally, the airport runway would be located approximately 1,900 feet north of the Colorado River. This avoidance would provide a natural and native buffer from the proposed Airport to the river and associated wetlands and wildlife during the construction of the proposed CTA.

Compensatory Mitigation Plan
Permittee-responsible compensatory mitigation is proposed for unavoidable adverse impacts to waters of the United States resulting from the proposed construction of the CTA. The compensatory mitigation plan, included in Appendix D, proposes to create 17.2 acres of forested riparian corridor along 3,484 linear feet of the Colorado River and 4,000 linear feet of an oxbow of the Colorado River, which is jurisdictional. A 26-acre pond with permanent open water and a vegetated bench within a detention area would provide open water functions. There are no existing riparian corridors or wetlands on the proposed project area. Therefore, the proposed compensatory mitigation would result in a net gain in wetlands and riparian corridor.

Alternatives 1 – Alternative 1 would include a SWP3 and also incorporate permanent water quality attenuation detailed in the Edwards Rules and Highland Lakes Watershed Ordinance. The primary water quality attenuator would be the 26-acre water quality pond which would filter stormwater for onsite and upstream within the watershed. The specific water quality removal efficiency for the water quality pond is not known at this time, but it is anticipated to range between 75% and 93% in accordance with the TCEQ Edwards Rules performance summaries. Following the Edwards Rules calculations, the level of water quality attenuation under Alternative 1 would likely be much greater than that of the existing conditions onsite without the water quality pond and open water stock tank.

Alternative 2 – Under Alternative 2, the engineer investigated an open box culvert system to span the tributaries and pond, at a height that water would flow through. This alternative would result in lower impact to waters of the U.S., as the goal would be to construct the structure over the tributaries and pond, allowing the drainages to flow in their natural fashion. However, this alternative is not feasible because of the engineering costs. This alternative would also introduce a more complex system into the proposed project, which could result in opportunities for system breakdowns and associated costs. Alternative 2 would also not provide as high a level of water quality attention as Alternative 1 which includes a water quality pond.

Alternative 3 - Under Alternative 3, the project team discussed the option of engineering and constructing a traditional, concrete-lined detention pond that would draw down within 24 to 48 hours following storm events. This concrete-lined detention pond, which would regularly not contain surface water, would consist of reinforced concrete and rip-rap along the existing flow lines of WAT-3 and WAT-4. Therefore, the construction of a concrete-lined pond would provide little, if any, permanent water quality attenuation. The construction of the concrete-lined detention pond would more greatly impact waters of the U.S. by filling WAT-3 and WAT-4 with concrete and rip-rap, as opposed to fringe vegetation and open water inundation under Alternative 1. Additionally, the construction of the concrete-lined detention pond would be cost prohibitive in comparison to Alternative 1.

Alternatives 1, 2, and 3 – Effects to water quality will be minimized to the extent practicable through the implementation of BMPs incorporated into the proposed project construction plans and in the SWP3. Temporary erosion and sedimentation control BMPs will be incorporated into the proposed project construction plans, and in general the contractor will be required to employ controls taken from the TCEQ's Tier II BMP list. These will include: silt fences, rock filter dams, inlet and outfall protection, vegetative buffers, and grassy swales. The SWP3 will be in compliance with the Texas Pollutant Discharge Elimination System (TPDES) requirements.

4.13 Hazardous Materials

The containment and management of hazardous materials for the construction of the proposed CTA would satisfy the requirements prescribed by the Texas Administrative Code Chapter 334.

Hazardous Materials Containment and Management

Regulations and permitting of PSTs in Texas is the responsibility of the TCEQ. The TCEQ regulates PSTs under Texas Administrative Code Chapter 334, which has the stated purpose to:

- Provide a comprehensive regulatory program for hazardous substance and petroleum substance underground storage tank (UST) systems, and a limited regulatory program for petroleum product aboveground storage tanks (ASTs), as prescribed by the Texas Water Code, Chapter 26, Subchapter I and Subchapter K;
- Establish minimum standards and procedures to reasonably protect and maintain the quality of the state's groundwater and surface water resources from environmental contamination that could result from any releases of harmful substances stored in such tanks;
- Provide for the use of risk-based corrective action; and
- Generally provide for the protection of human health and safety, as well as the protection of the overall environment of the state.

Spill Prevention
A Spill Prevention Control and Countermeasure Plan (SPCC) would be in place during the construction of the proposed CTA and would include provisions for appropriate containment of all fuels, solvents, and waste by-products. If fuel products are on-site during construction, it would be contained in either ASTs, USTs, or fuel trucks.

The SPCC would include the following provisions:

- Monthly inspections to ensure integrity of all tanks, piping, valves, seals, secondary containment, and all other associated equipment;
- Conduction of Annual Employee Training regarding plan maintenance and implementation during a spill event to ensure quick and efficient emergency response to potential spills that may occur on the site; and
- Review and updating of the plan.

The SPCC would also include additional information regarding facility drainage patterns, emergency contacts, spill prevention systems, and information regarding appropriate transferring and pumping of all fuels, lubricants, solvents, and waste products on site.

Alternatives 1, 2, and 3 – No environmental impact is anticipated associated with hazardous materials for any of the three build alternatives.

4.14 Noise

Standard noise abatement procedures for arriving and departing aircraft have been developed by the Aircraft manufacturers and the National Business Aviation Association. For example, noise abatement procedures during takeoff and landing make for quieter airport operations. Such procedures consist of a faster takeoff speed and a steeper climb, quickly followed by slowing the engine and reducing rate of climb, once airborne over a populated area. Once beyond or significantly above the populated area, the engines return to climb settings and normal flight operations are resumed. This lessons the amount of engine noise over the populated area without adversely affecting the flight. These standard noise abatement procedures are planned to be implemented at CTA.

Additionally, CTA will establish operating requirements and rules for utilizing the CTA airport runway and facilities. CTA intends to restrict touch-and-go aircraft operations except for based aircraft that are conducting aircraft sales test rides or pilot proficiency tests and such. CTA will require full-stop landings to discourage aircraft that represent nuisance activities to our customer base at CTA or the community. Student pilots and military flyovers are examples of that unsuitable activity.

Once the operational rules and specific based aircraft information are established, the noise contours will be mapped. The current projected aircraft mix shows the 65

day/night average sound level (DNL) noise level, at which land use is considered potentially affected, is completely located within the boundaries of the airport property. The Applicant plans to mitigate any noise related issues that could potentially affect the community.

Alternatives 1, 2, and 3 – Construction normally occurs during daylight hours when occasional loud noises are more tolerable. Provisions will be included in the plans and specifications that require the contractor to make reasonable efforts to minimize short-term construction noise through abatement measures, such as work-hour controls and proper maintenance of muffler systems. Additionally, the CTA has been designed to follow FAA recommendation for containing 65 DNL noise contours wholly within the boundaries of the proposed project area.

4.15 Cultural Resources

A records search was conducted at the Texas Archeological Laboratory (TARL) and the Texas Historical Commission (THC) to locate any previously-recorded prehistoric and historical archeological sites and completed surveys within the proposed project area. No archeological or historic sites had been recorded within the proposed project area, which may reflect either a lack of cultural material in the area of potential effect (APE) or a lack of study, as no archeological surveys had been completed in the proposed project area previous to the current effort.

In preparation for the construction of the proposed CTA and the application process for the individual permit, project archeologists assessed two jurisdictional waters for the possible presence of cultural remains through pedestrian survey, shovel testing, and backhoe trenching. No intact prehistoric or historic deposits were discovered, and only one fragment of debitage was recovered from one shovel test; it appeared to have been redeposited and out of its original context. Please refer to Appendix A, Figure 9 for the locations of the shovel tests.

The man-made stock tank west of the tributaries is also considered to be jurisdictional, as is the ephemeral drainage that connects this pond with WAT-3. Due to access issues, this area was not tested archeologically. However, an informal reconnaissance of the area indicates extensive and, in places, deep surface disturbance. The man-made stock tank is located in a hayfield that clearly has been leveled. The landowners have confirmed that the man-made stock tank was bulldozed into its present configuration within the last 10 years. The man-made stock tank has been expanded and deepened from its previous state, berms have been created, and overflow pipes have been installed. The landscape in this area is clearly heavily modified, and it is unlikely that intact cultural deposits might still remain. Based on the negative results of this archeological survey, including the excavation of seven backhoe trenches, and the disturbed nature of the areas that were not tested archeologically, no further archeological work is recommended. However, if cultural materials or human remains

are discovered during the preconstruction and construction periods, the Applicant should contact the THC or a qualified archeologist about the discovery.

Alternatives 1, 2, and 3 – Based on the cultural resources survey conducted, no impacts to cultural resources are anticipated during the construction of the proposed CTA.

4.16 Section 303d, Impaired Waterways

Section 303(d) of the 1972 CWA requires states to develop lists of impaired waters every two years. Section 303(d) impaired waters do not meet water quality standards and do not attain one or more standards for their use, including aquatic life use, recreation, public water supply, or fish consumption (TCEQ 2010b). No impaired waters under Section 303(d) of the CWA are within the proposed CTA project area.

4.17 Light Emissions and Visual Impacts

Order 1050.1E CHG 1 directs the FAA to consider the extent to which lighting associated with the proposed action creates an annoyance or interferes with normal activities among people in the vicinity. The Order also directs FAA to consider the extent to which the proposed development contrasts with the existing environment and whether the agency considers this contrast objectionable, based on public input.

The proposed action would occur in rural setting approximately 17 miles east of Austin, Texas, approximately 10 miles northeast of Bastrop, Texas, and approximately 10 miles southwest of Elgin, Texas. The lighting in the area is typical of a rural ranch road setting.

4.18 Natural Resources, Energy Supply, and Sustainable Design

Executive Order 13123, Greening the Government Through Efficiency Management (64 FR 30851, June 8, 1999) encourages federal agencies to expand the use of renewable energy within their facilities and activities and requires a reduction of petroleum use, total energy use, air emissions, and water consumption by federal agencies in their facilities. It is also the policy of the FAA to encourage the development of facilities that exemplify the highest standards of design including principles of sustainability.

The proposed CTA is designed to be a green airport demonstration project, conceived and developed to achieve balance between technology and nature. The proposed CTA is designed to provide a privately owned and operated business facility and environment that recruits third-party businesses to demonstrate new and emerging technologies in alternative renewable energies; patent-pending energy management and communications applications; and integrated environmental design and development standards. The proposed CTA is designed to provide convenient, safe, and efficient general aviation accessibility to the Central Texas region.

The proposed CTA plans to implement unique environmentally compatible design features, and utilize demonstrations by other parties with renewable energy generations and management capabilities and scalable smart grid communications infrastructure. The smart grid network proposes to provide secure and efficient infrastructure connectivity for the airport buildings and businesses, offering real-time, point-source energy consumption data collection and management capabilities for individual buildings or the entire airport.

A local Bastrop County company has been recruited to utilize the roof surface areas of the hangars and other structures on the airport for rainwater collection and harvesting for commercial reuse and bottling. Airports such as the proposed CTA do not have high water requirements so utilizing gray water systems for irrigation and other uses offer a potential model for sustainability.

Landscape planners propose utilization of certain trees, plants, and grasses for carbon mitigation and deterrents to undesirable bird species. CTA will consider these proposals and may implement testing areas to determine the effectiveness of these practices. Many airports utilize vegetation and mowing practices that attract wildlife species that are not suitable for airport environments. CTA is not bound by governmental guidelines or practices for such activities and plans to utilize best management practices.

4.19 Safety

The proposed project location is in a sparsely populated rural area surrounded by ranch land, rural residential property, and a church, which is northeast of the project area and more than 600 feet southeast of the intersection of FM 969 and FM 1704.

The proposed CTA is designed to contain all airport component operations within the private airport boundaries, including noise levels and RPZs, trapezoid-shaped areas extending off the ends of runways, to promote a compatible and safe land use envelope.

Alternatives 1, 2, and 3 – Based on the design of the proposed CTA, no impacts to safety are anticipated during the construction of the proposed CTA.

4.20 Wild and Scenic Rivers

Section 7 of the Wild and Scenic Rivers Act requires all federal agencies to consult with the appropriate land management agency if a proposed action may affect a designated or study river in the Wild and Scenic Rivers System. CEQ guidance also requires federal agencies to consult with the NPS when a proposed action may affect a river included in the Nationwide River Inventory. This inventory identifies rivers which have the potential for designation under the Wild and Scenic Rivers Act.

According to information published by the USFWS (USFWS 2011), one Wild and Scenic River is located in the State of Texas. A 191.2-mile segment of the Rio Grande River, in West Texas near the Texas-Mexico border, is in the Wild and Scenic Rivers System. This segment of the Rio Grande River is more than 300 miles from the proposed project area.

A 99-mile segment of the Pedernales River, from its confluence with the Colorado River in Travis County, through Hays, Blanco, and Gillespie Counties is included in the Nationwide Rivers Inventory (NPS 2010). This segment of the Pedernales River is approximately 40 miles from the proposed project area.

Alternatives 1, 2, and 3 – No Wild and Scenic Rivers are located on or near the proposed project area, and no rivers included in the Nationwide River Inventory are located on or near the proposed site. The proposed action will not have an impact on Wild and Scenic Rivers or rivers included in the Nationwide River Inventory.

4.21 Indirect and/or Cumulative Impacts

The Council on Environmental Quality (CEQ) defines direct effects as those which are caused by the action and occur at the same time and place [40 CFR § 1508.8].

The CEQ defines indirect effects as those which are caused by the action and are later in time and farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems [40 CFR § 1508.8]. As such, indirect effects of the proposed CTA project may occur outside of the defined project area.

As presented in the various sections of the affected environment, Bastrop County and the greater Central Texas region are undergoing change and are anticipated to continue to do so within the reasonably foreseeable future. Numerous regional planning strategies are in place to manage the anticipated changes. A few of these include the CAMPO 2035 plan and the Bastrop County transportation plan

4.21.1 Air Quality

As stated in the direct impacts, during the construction of the proposed CTA, temporary effects on air quality include additional dust generated from construction activities. Efforts will be made to mitigate for temporary air quality impacts during construction, including minimizing or eliminating unnecessary idling of construction vehicles and employing a combination of watering, chemical stabilization, and vehicle speed reduction techniques.

Indirect effects to air quality may occur to a lesser extent outside the proposed project area during the proposed action. The efforts made to minimize the impacts on site during the proposed action would be effective for the indirect impacts, as they are for the direct impacts.

4.21.2 Coastal Resources

As stated in the direct impacts, no coastal resources would be directly impacted by the proposed action on site. Additionally, no impacts to coastal resources would occur during the proposed action outside the proposed project area. Therefore, indirect impacts to coastal resources are not anticipated from the construction of the CTA.

4.21.3 Construction Impacts

As stated in the direct impacts, during the construction of the proposed CTA, construction impacts would occur on site. Efforts will be made to minimize construction impacts on site during the proposed action.

Construction impacts that occur during the proposed action on site may occur to a lesser extent outside the proposed project area during the proposed action. The efforts made to minimize the construction impact on site during the proposed action would be as effective in minimizing construction impacts outside the proposed project area during the proposed action.

4.21.4 Transportation Infrastructure

Both FM 969 and FM 1704 are important roads to Bastrop County and the region. As mentioned in Section 4.3, the CAMPO 2035 Plan includes a future planned roadway improvement to FM 969 from the current geometry to a four-lane, divided arterial. In addition to the approved CAMPO Plan, Bastrop County has an adopted transportation plan. According to the Bastrop County plan, FM 969 should be upgraded to a four-lane, divided arterial (consistent with the CAMPO Plan) and FM 1704 should be upgraded to a four-lane, divided arterial as well.

Any indirect effect the proposed action would have on transportation infrastructure would be required to comply with the appropriate local, state, and federal requirements.

4.21.5 Department of Transportation Act: Section 4(f)

As stated in the direct impacts, no Department of Transportation Act: Section 4(f) resources would be directly impacted by the proposed action on site. Additionally, no impacts to Department of Transportation Act: Section 4(f) resources would occur during the proposed action outside the proposed project area. Therefore, indirect impacts to Department of Transportation Act: Section 4(f) resources are not anticipated from the proposed action.

4.21.6 Socioeconomic Impacts

As discussed in the direct impacts sections, the CTA's socioeconomic beneficial effects derive from the investment of private capital in a privately funded GA airport. The CTA airport may also indirectly contribute to socioeconomic benefit within the region.

Similar to the potential for indirect socioeconomic benefit, the three build alternatives may cumulatively contribute to economic stimulus within the region to the benefit of those of Bastrop County and Central Texas. It is reasonable to anticipate that other actions within the foreseeable future would be required to comply with applicable local, state, and federal regulations managing potential adverse environmental impacts. The additive or cumulative impacts to the resources discussed in this document are not anticipated to rise to the level of significant impacts.

Economy and Employment

According to findings in a study by The Perryman Group of Waco, Texas, the State of Texas could expect the following indirect economic benefits. Operations of CTA and related services would generate ongoing positive economic effects, including $878 million in annual spending, $398 million in output, and 4,739 jobs. Activity would be concentrated in the immediate area, with spillover effects to the region and beyond.

Table 7 summarizes the impacts of construction of the proposed CTA and related facilities for Texas, Austin/Round Rock MSA, and Bastrop County, based on The Perryman Group study.

Table 7. Impacts of Construction of the Proposed CTA and Related Facilities

Impacts of Construction of the Proposed CTA and Related Facilities (Monetary Values in Billions of 2008 Dollars)					
	Total Expenditures	**Gross Product**	**Personal Income**	**Retail Sales**	**Person-Years of Employment**
Texas	$0.379	$0.178	$0.121	$0.047	2,281
Austin/Round Rock MSA	$0.292	$0.146	$0.101	$0.040	1,912
Bastrop County	$0.259	$0.128	$0.090	$0.040	1,766

Source: The Perryman Group 2009

Environmental Justice

The proposed CTA project is not adjacent to Environmental Justice areas. Therefore, no Environmental Justice impacts would occur outside the proposed CTA project area during the proposed action.

Property Values

A preliminary analysis was conducted in order to determine the loss in value, if any, to properties located in proximity to the proposed CTA. Methodology reflects the modern capacity to collect large amounts of data relating to property assessments around any given location.

The approach was based on the proposition that homeowners and property owners in the vicinity of the airport will avail themselves of any advantages with regard to the assessments which are pertinent to their particular property. That is to say, if there is a disadvantage to airport proximity of the magnitude of over 25 percent, it will certainly be reflected in the tax assessments for property which is in the vicinity of the airport as opposed to property which is located further away from the airport. The consideration of the airport will either be reflected in the assessment as a Detrimental Condition, or alternatively, will likely be appealed by a prudent owner if not considered by the original assessment. This is based on the economic principle that taxpayers want to pay as little tax as possible.

The assessment included three airports in Texas which cater to a GA constituency, and have similar types of runway and taxiway configurations that are planned for the CTA. These airports include David Wayne Hooks Airport, Addison Airport, and Sugar Land Regional Airport. These airports are located in areas which have similar, or superior demographic characteristics to those which exist in the general Austin-Bastrop region. In the case of residential property, all three locations do not exhibit any significant difference in the assessment applied to residential housing in each of the three areas based on commonality of characteristics, as a result of proximity to the airport. Variations in assessments were generally between 3 and 5 percent. This result was both positive and negative, with residences in the airport's vicinity, in many cases, developing relative assessments which were greater than comparable property outside the airports defined area of influence for this study.

Displacements
As stated in the direct impacts section, no displacement would occur on site during the proposed action. Additionally, no displacement would occur outside the proposed project area during the proposed action. Therefore, no indirect impacts related to displacements are anticipated as a result of the proposed action.

Recreation
As stated in the direct impacts section, no impacts to recreation resources would occur on site during the proposed action. Additionally, no impacts to recreation resources would occur outside the proposed project area during the proposed action. Therefore, no indirect impacts to recreation resources are anticipated as a result of the proposed action.

4.21.7 Land Use
As mentioned in Section 4.5 of this document, Bastrop County has been experiencing unprecedented growth. Twenty percent of Bastrop County has an intensive land use, mostly focused in the central and western portions of Bastrop County. The CAMPO 2035 Plan and the Bastrop County transportation plan forecast that FM 969 and FM 1704 will warrant upgrades to four-lane, divided arterials. Based on these forecasts, the

land use within the region, including the CTA project area, is changing, primarily driven by the regional population growth. It is reasonable to anticipate that the land use surrounding and including the CTA project area will change independent of the proposed action.

The proposed action will include direct land use conversion of agricultural/rural residential land use to commercial. Any future development in the area would be governed by local, state, and federal regulations, which may include individual city zoning and permitting, county permitting, state requirements, environmental requirements, and federal regulations including Section 404 of the CWA. Therefore, any indirect effects the proposed action would have on land use outside of the proposed project area would be required to comply with the appropriate local, state, and federal requirements and would occur within the context of regional planning, which anticipates land use transitions in the near future.

4.21.8 Farmlands

As stated in the direct impacts, direct conversion of farmland will occur on site during the proposed action. However, no impacts to farmland resources would occur during the proposed action outside the proposed project area. Therefore, the proposed action would not have indirect effects on farmland resources.

4.21.9 Wildlife

The proposed action is not anticipated to have direct effects to wildlife on the proposed project area or outside the proposed project area during the proposed action. Therefore, no indirect effects to wildlife are anticipated from the proposed action.

4.21.10 Hazardous Wildlife Attractants

As stated in the direct impacts, the Applicant intends to facilitate hazardous wildlife controls at the proposed project site. Additionally, the proposed action is not anticipated to result in hazardous wildlife attractant effects outside the proposed project site during the proposed action. Therefore, the proposed action is not anticipated to have an indirect effect as it relates to hazardous wildlife attractants.

4.21.11 Migratory Birds

As stated in the direct impacts, the Applicant does not anticipate impacts to migratory bird during the proposed action within the proposed project area. Additionally, the proposed action is not anticipated to result in effects to migratory birds outside the proposed project site. Therefore, the proposed action is not anticipated to have an indirect effect as it relates to migratory birds.

4.21.12 Threatened and Endangered Species

As stated in the direct impacts, the Applicant does not anticipate impacts to threatened and endangered species during the proposed action within the proposed project area. Additionally, the proposed action is not anticipated to result in effects to threatened and endangered species outside the proposed project site. Therefore, the proposed action is not anticipated to have an indirect effect as it relates to threatened and endangered species.

4.21.13 Vegetation

During the proposed action, no vegetation outside the proposed project area would be impacted. Therefore, the proposed action is not anticipated to have an indirect effect to vegetation.

4.21.14 Waters of the U.S. and Floodplains

The entire proposed CTA site has been an intensively-operated cattle ranch for over 50 years and continuous cattle ranching operations have degraded the quality of onsite water resources. WAT-3, WAT-4, and the area occupied by the man-made stock tank (Pond-1) were classified as intermittent streams, based on the USGS blue lines. However, the USACE conducted a jurisdictional waters assessment during the site visit in December 2010 and determined that approximately 9.42 acres of waters of the U.S., including 5,390 linear feet of ephemeral stream (approximately 0.87 acre) and an approximately 8.55-acre man-made stock tank, are located on the proposed CTA site (Appendix A, Figure 2). The December 2010 waters determination and site visit by the USACE found that several of the USGS blue lines on-site do not equate to jurisdictional waters of the U.S.

As mentioned in Section 1.2 of this document, the proposed layout for the CTA covers an area which is bisected by an existing Federal Emergency Management Agency (FEMA) 1% Annual Chance Floodplain. In order to construct the Airport entirely outside of the floodplain, a portion of the effective floodplain would need to be filled in. The CLOMR issued by FEMA reflected the plan to address the controlled drainage at the proposed project area with drainage structures constructed with both grass-lined bottoms and concrete-lined bottoms. These structures were specifically designed to address the existing topography and were approved by FEMA. As part of the CLOMR application to FEMA, a floodplain study was prepared, submitted, and approved by FEMA. The Flood Plain Study reflected the pre-development flows and the CLOMR reflects that those pre-development flows will be maintained. By designing the pond to release at pre-development rates, the proposed project would avoid impacts to waters of the U.S. downstream of the outfall both onsite and offsite within WAT-3, and subsequently the Colorado River.

The size of the immediate watershed of the unnamed tributary where the CTA is located is approximately 4,703 acres. There are no wetlands on the proposed project area; therefore, the proposed CTA would impact zero percent of wetlands in the immediate watershed. The amount of USGS blue lines in the immediate watershed is 117,882 linear feet (approximately 22 miles). CTA proposes to impact approximately 7,290 linear feet, equating to approximately 6 percent of the USGS blue lines in the immediate watershed.

The proposed action would not impact waters of the U.S. outside the proposed project area during the proposed action. Therefore, the proposed action would not have an indirect effect on waters of the U.S. and floodplains.

4.21.15 Waters Quality/Quantity

The entire proposed CTA site has been an intensively-operated cattle ranch for over 50 years and continuous cattle ranching operations have degraded the quality of onsite water resources.

The specific water quality removal efficiency for the detention pond in Alternative 1 is not known at this time, but it is anticipated to range between 75 percent and 93 percent, in accordance with the TCEQ Edwards Rules performance summaries. Following the Edwards Rules calculations, the level of water quality attenuation under Alternative 1 would likely be much greater than that of the existing conditions onsite. Therefore, the proposed action is anticipated to have a positive indirect effect to water quality.

Additionally, Alternative 1 has been designed to maintain pre-development flows on the proposed CTA site. Therefore, no indirect effects related to water quantity would occur.

4.21.16 Hazardous Materials

As stated in the direct impacts, the containment and management of hazardous materials for the proposed action would satisfy the requirements prescribed by the Texas Administrative Code Chapter 334. Abiding by these requirements during the proposed action would be as effective on site as off site. As the Applicant does not anticipate environmental impacts associated with hazardous materials on site during the proposed action, the Applicant also does not anticipate environmental impacts associated with hazardous materials outside the proposed project area during the proposed action.

4.21.17 Noise

As stated in the direct impacts, construction would occur during daylight hours when occasional loud noises are more tolerable. Provisions will be included in the plans and specifications that require the contractor to make reasonable efforts to minimize short-term construction noise through abatement measures, such as work-hour controls and proper maintenance of muffler systems. As these impacts are anticipated to occur on

site during the proposed action, they would occur to a lesser extent off the proposed project area during the proposed action. All efforts made to minimize these impacts on site would be as effective for minimizing these impacts outside the proposed project area.

Standard noise abatement procedures are planned to be implemented for arriving and departing aircraft at CTA. Additionally, CTA will establish operating requirements and rules for utilizing the CTA airport runway and facilities. CTA intends to restrict touch-and-go aircraft operations except for based aircraft that are conducting aircraft sales test rides or pilot proficiency tests and such. CTA will require full-stop landings to discourage aircraft that represent nuisance activities to our customer base at CTA or the community. Student pilots and military flyovers are examples of that unsuitable activity.

Once the operational rules and specific based aircraft information are established, the noise contours will be mapped. The current projected aircraft mix shows the 65 day/night average sound level (DNL) noise level, at which land use is considered potentially affected, is completely located within the boundaries of the airport property. The Applicant plans to mitigate any noise related issues that could potentially affect the community.

4.21.18 Cultural Resources

As stated in the in the direct impacts, cultural resources are not anticipated to be directly impacted by the proposed action. Similarly, cultural resources are not anticipated to be impacted during the proposed action outside the proposed project area. Therefore, no indirect impacts to cultural resources are anticipated.

4.21.19 Section 303d, Impaired Waterways

As stated in the in the direct impacts, Section 303d, Impaired Waterways would not be directly impacted by the proposed action on site. Similarly, Section 303d, Impaired Waterways are not anticipated to be impacted during the proposed action outside the proposed project area. Therefore, no indirect impacts to Section 303d, Impaired Waterways are anticipated.

4.21.20 Light Emissions and Visual Impacts

The proposed action is anticipated to generate minimal light outside of the proposed project site. Most construction is anticipated during regular daylight hours. Best management practices will be employed for any requisite safety lighting to reduce, to the maximum extent practicable, impacts to the regional dark night sky.

Best management practices used to minimize light on the proposed project area during the proposed action will be as effective at minimizing light outside the proposed project area during the proposed action.

4.21.21 Natural Resources, Energy Supply, and Sustainable Design

Consistent with the direct impacts discussion, the proposed action is designed to be a green airport demonstration project, conceived and developed to achieve balance between technology and nature. The proposed CTA plans to utilize patent-pending energy management and communications applications, as well as, integrated environmental design and development standards.

4.21.22 Safety

The proposed action would provide an additional safe landing facility proximate to ABIA, and may also indirectly increase safety for ABIA and regional air traffic (general, commercial, and cargo).

4.21.23 Wild and Scenic Rivers

As stated in the in the direct impacts, Wild and Scenic Rivers would not be directly impacted by the proposed action on site. Similarly, Wild and Scenic Rivers would not be impacted during the proposed action outside the proposed project area. Therefore, no indirect impacts to Wild and Scenic Rivers would occur as a result of the proposed action.

4.21.24 Cumulative Impacts

Cumulative impacts are those of the proposed action when taken into consideration with other actions in past, present, or reasonably foreseeable future. All direct impacts associated with the CTA would occur onsite. As discussed earlier in this EID, these direct impacts are not anticipated to rise to the level of significant impacts.

Alternatives 1, 2, and 3 – Similar to the potential for indirect socioeconomic benefit, the three build alternatives may cumulatively contribute to economic stimulus within the region to the benefit of those of Bastrop County and Central Texas. It is reasonable to anticipate that other actions within the foreseeable future would be required to comply with applicable local, state, and federal regulations managing potential adverse environmental impacts. The additive or cumulative impacts to the resources discussed in this document are not anticipated to rise to the level of significant impacts.

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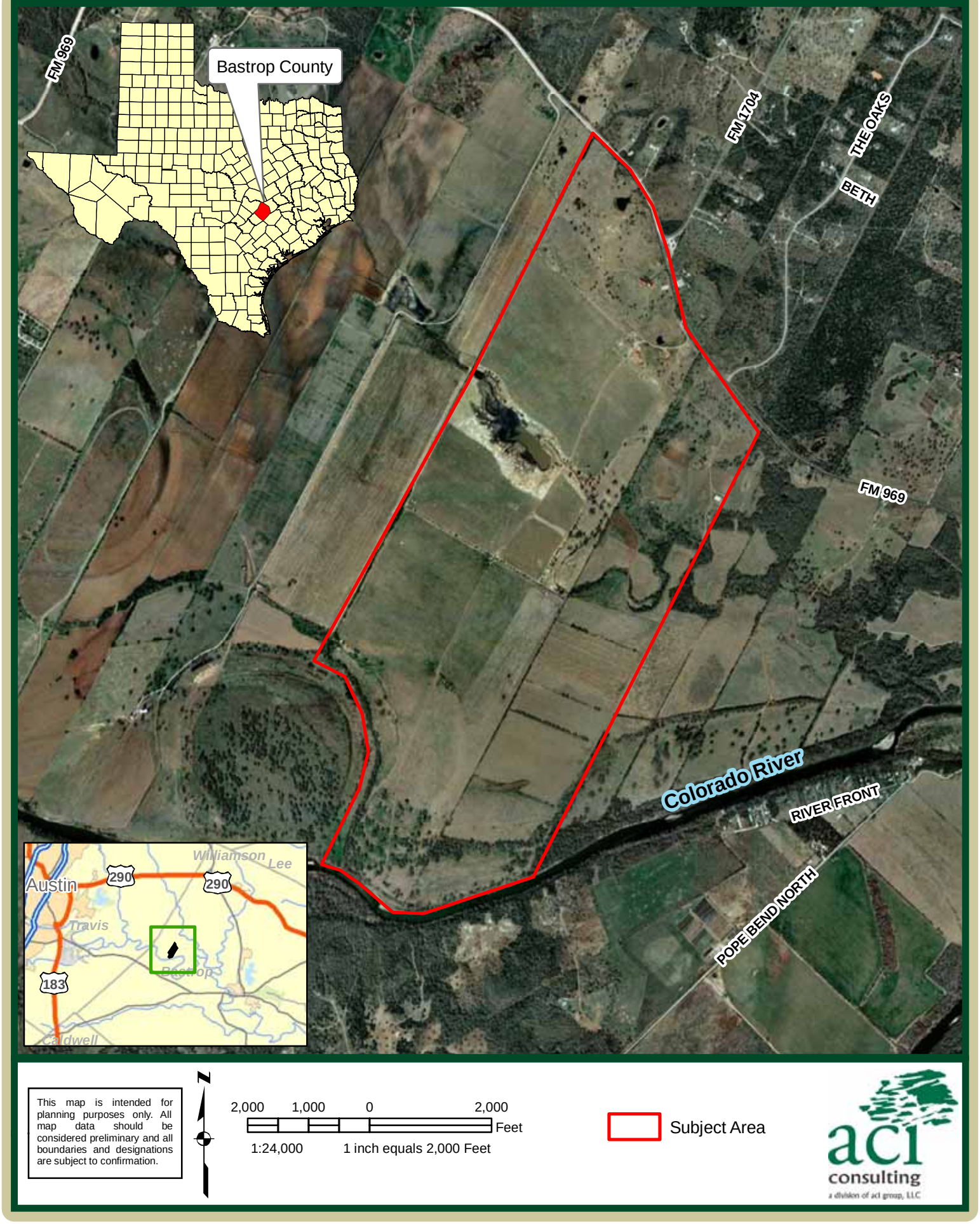
APPENDIX A

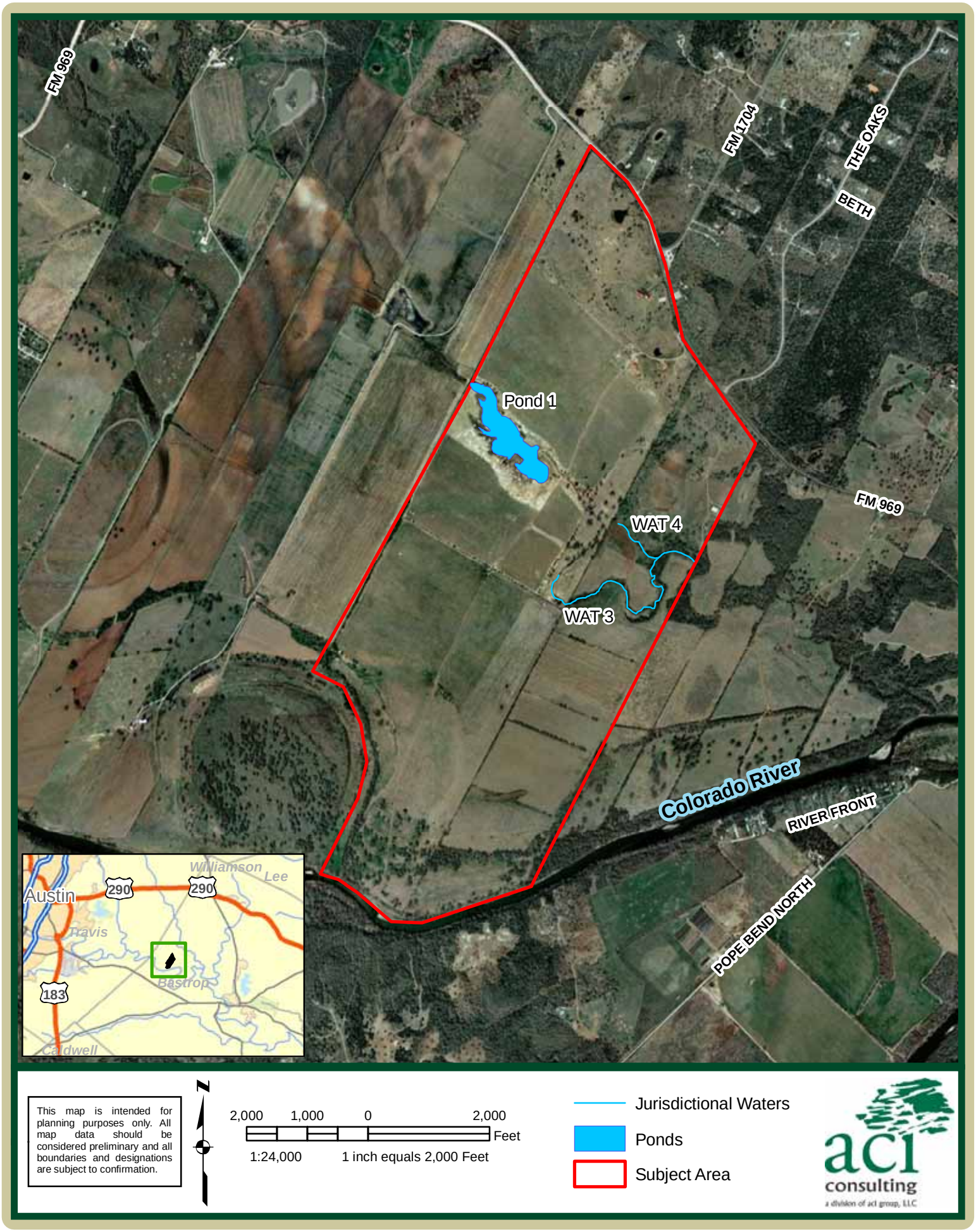
FIGURES



Central Texas Airport

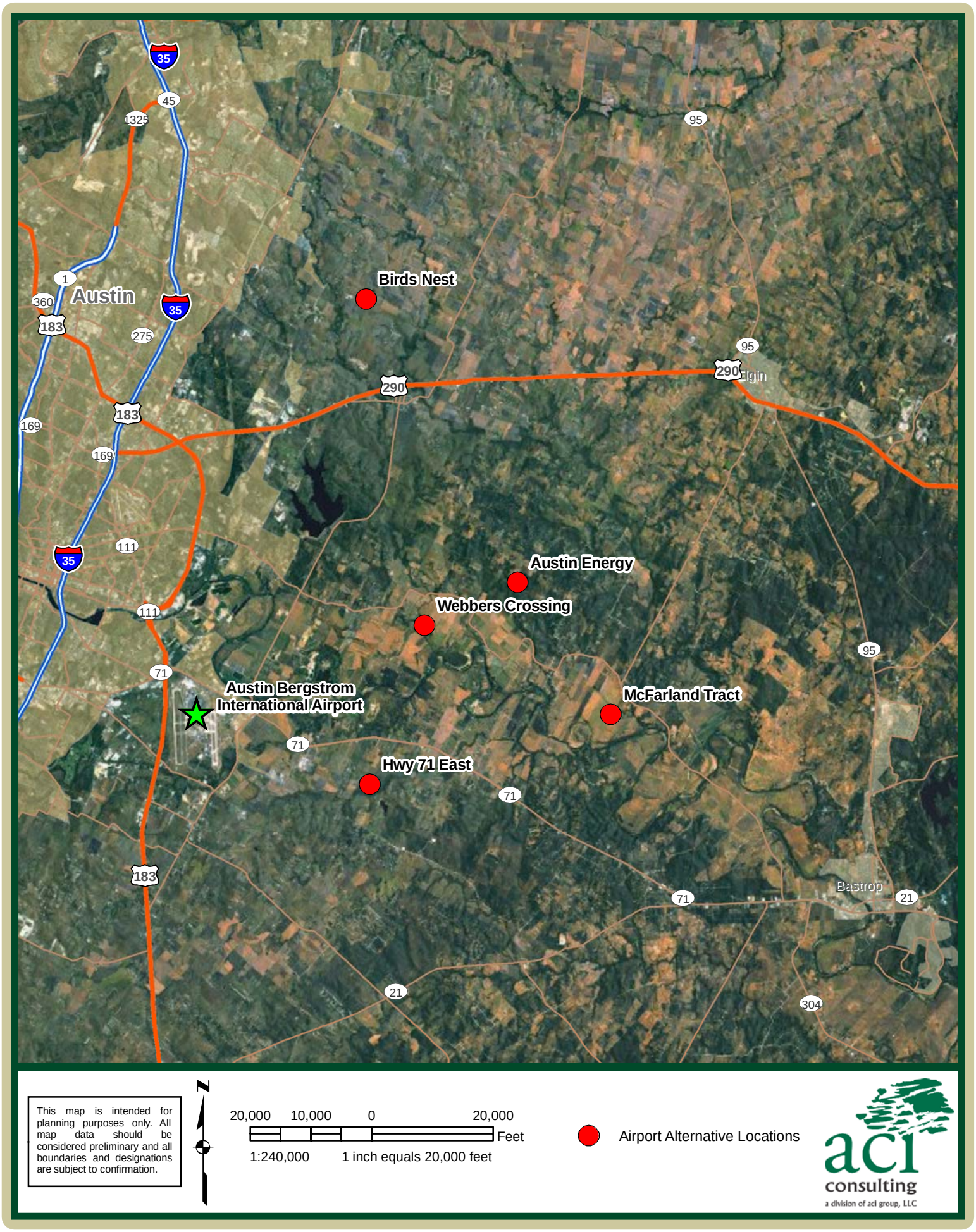
January 2012

Appendix A, Figure 1: Project Location Map



Central Texas Airport
Appendix A, Figure 2: Jurisdictional Waters of the U.S.

January 2012



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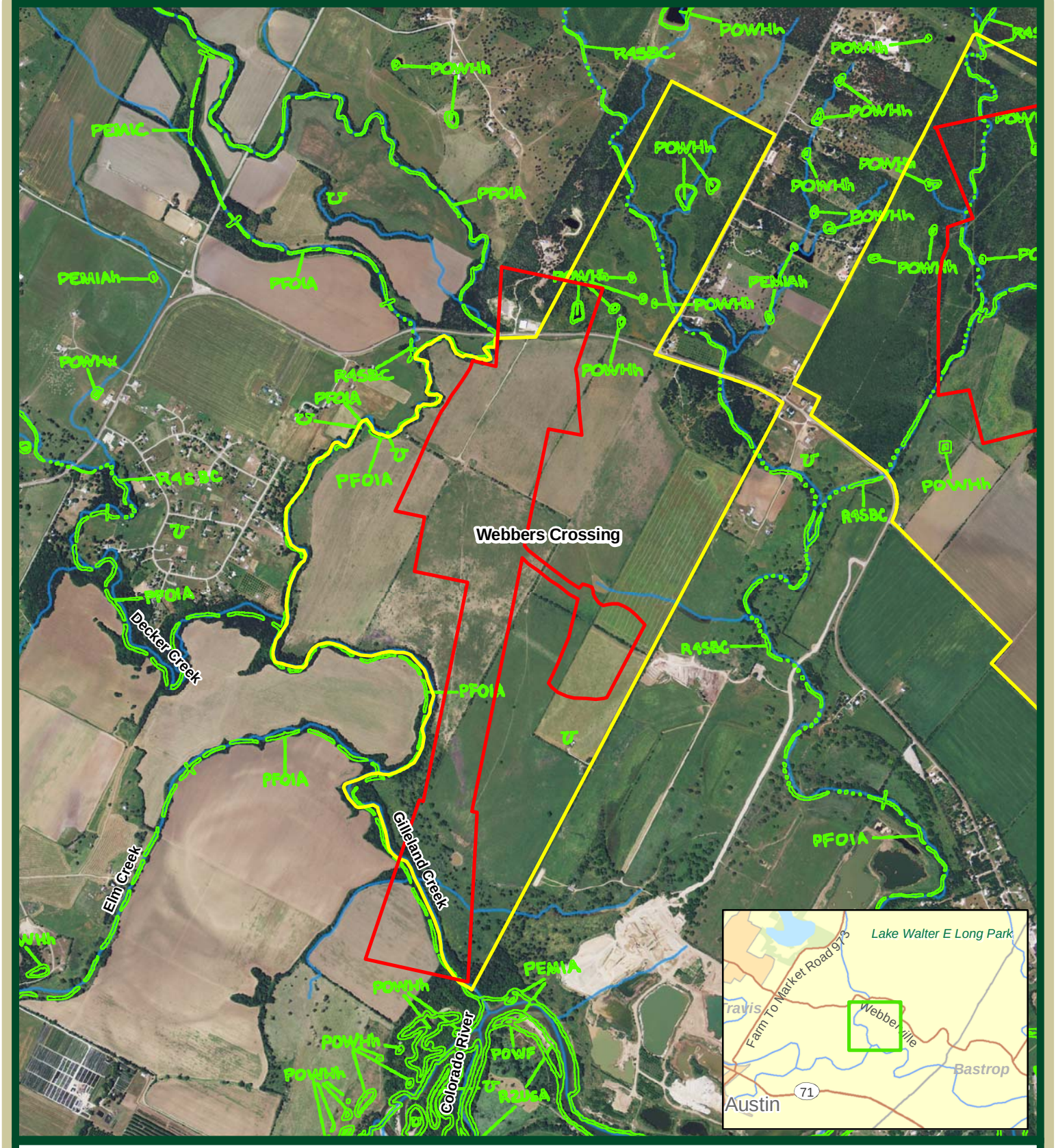
Appendix A, Figure 3: Five Alternative Site Locations



This map is intended for planning purposes only. All map data should be considered preliminary and all boundaries and designations are subject to confirmation.

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2,000 1,000 0 2,000 Feet

1:24,000 1 inch equals 2,000 feet

NWI Wetlands

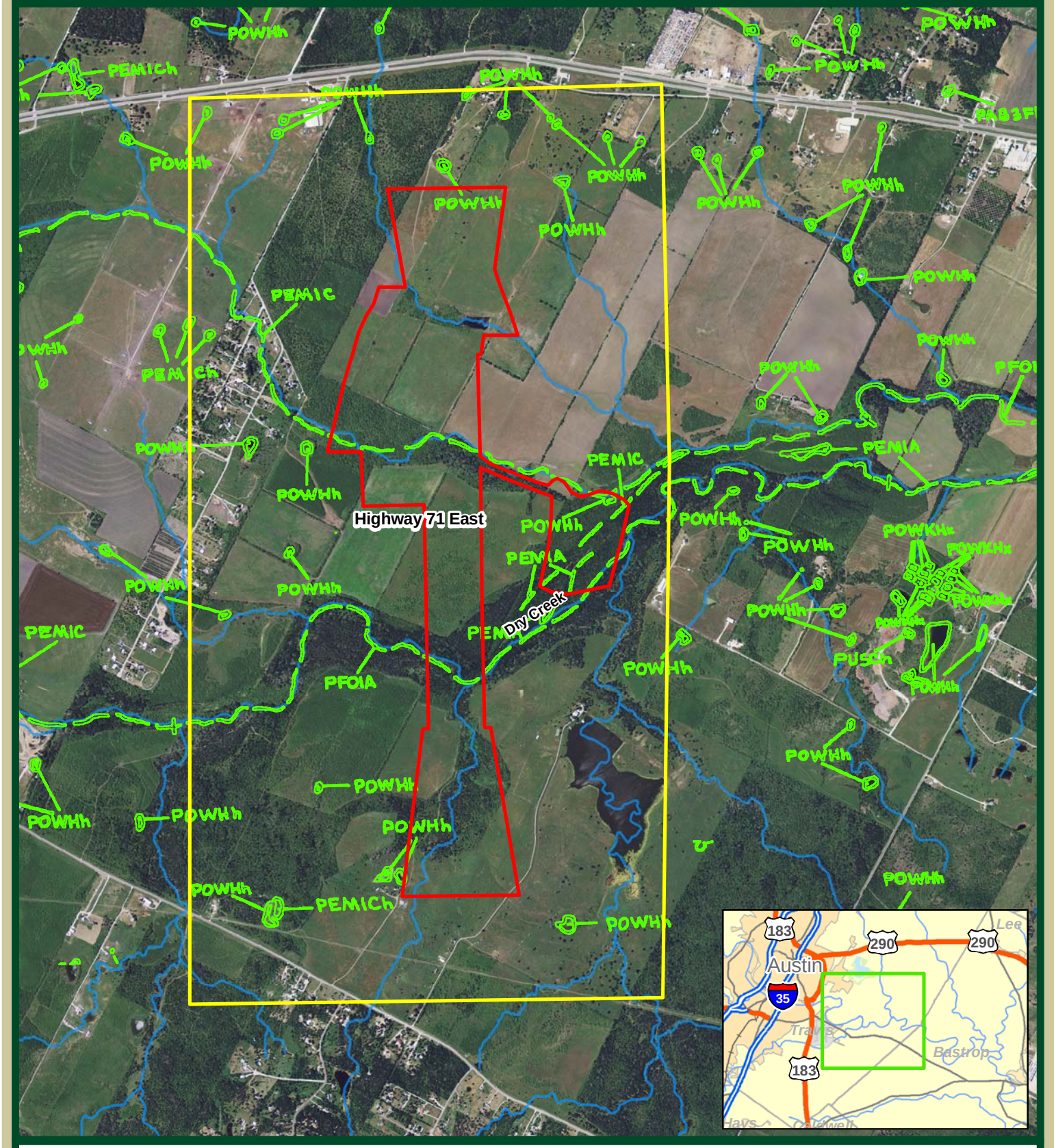
Central Texas Airport Alternatives

Runway Development

aci consulting
a division of aci group, LLC

Central Texas Airport **January 2012**

Figure 4: Webbers Crossing



This map is intended for planning purposes only. All map data should be considered preliminary and all boundaries and designations are subject to confirmation.

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2,000 1,000 0 2,000 Feet

1:24,000 1 inch equals 2,000 feet

NWI Wetlands

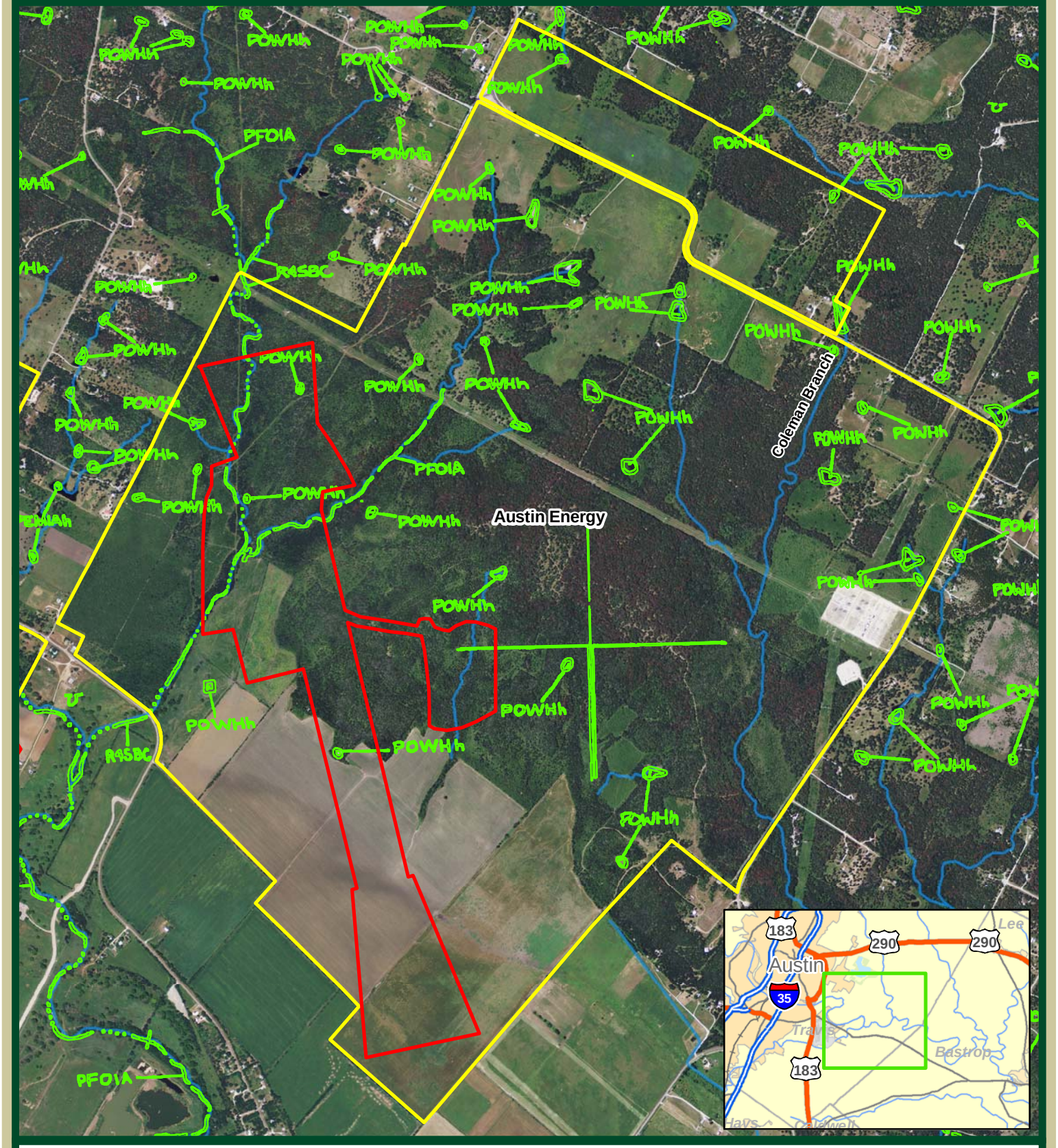
Central Texas Airport Alternatives

Runway Development

aci consulting
a division of aci group, LLC

Central Texas Airport **January 2012**

Figure 5: Highway 71 East



This map is intended for planning purposes only. All map data should be considered preliminary and all boundaries and designations are subject to confirmation.

2,000 1,000 0 2,000 Feet

1:24,000 1 inch equals 2,000 feet

NWI Wetlands

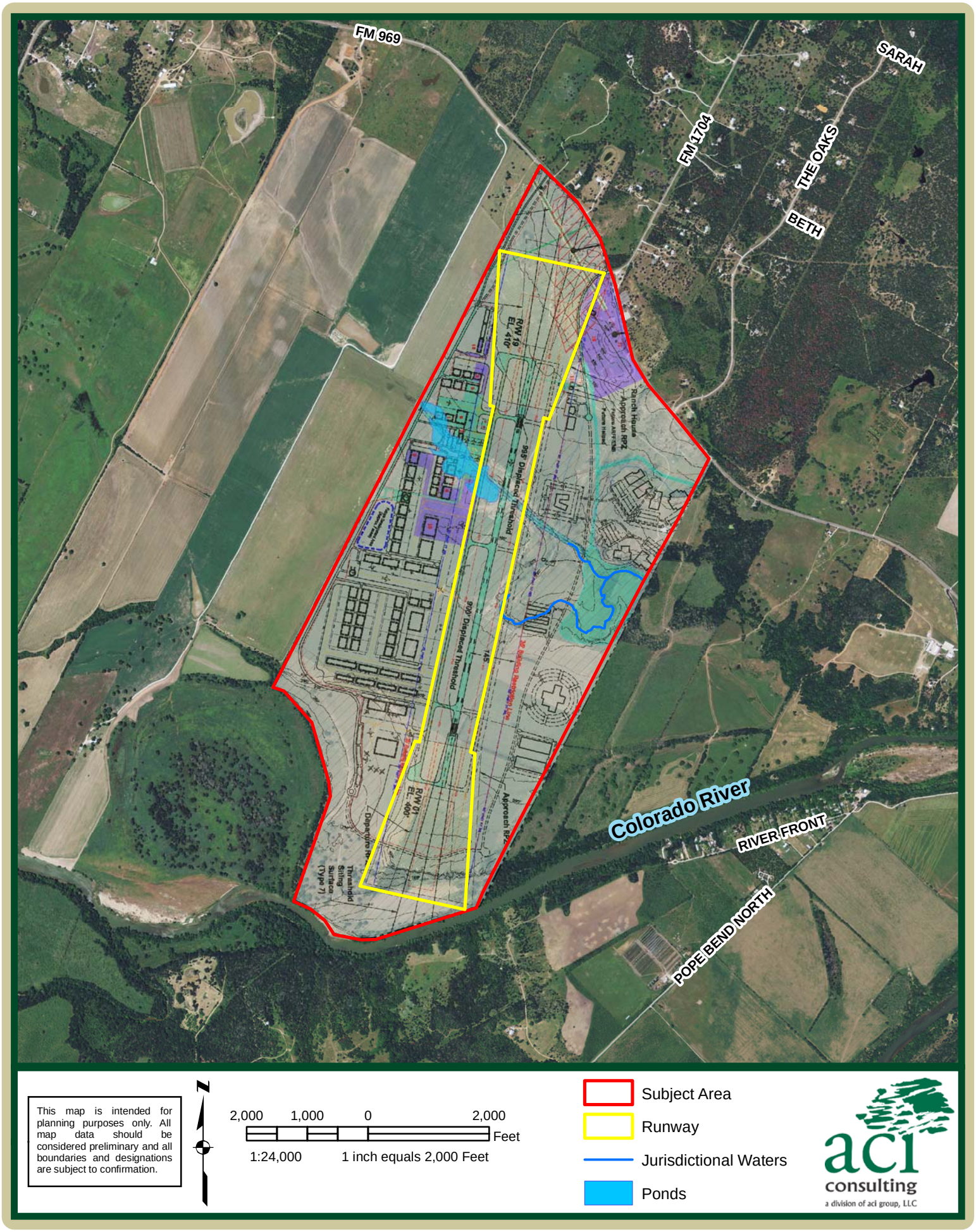
Central Texas Airport Alternatives

Runway Development

aci consulting
a division of aci group, LLC

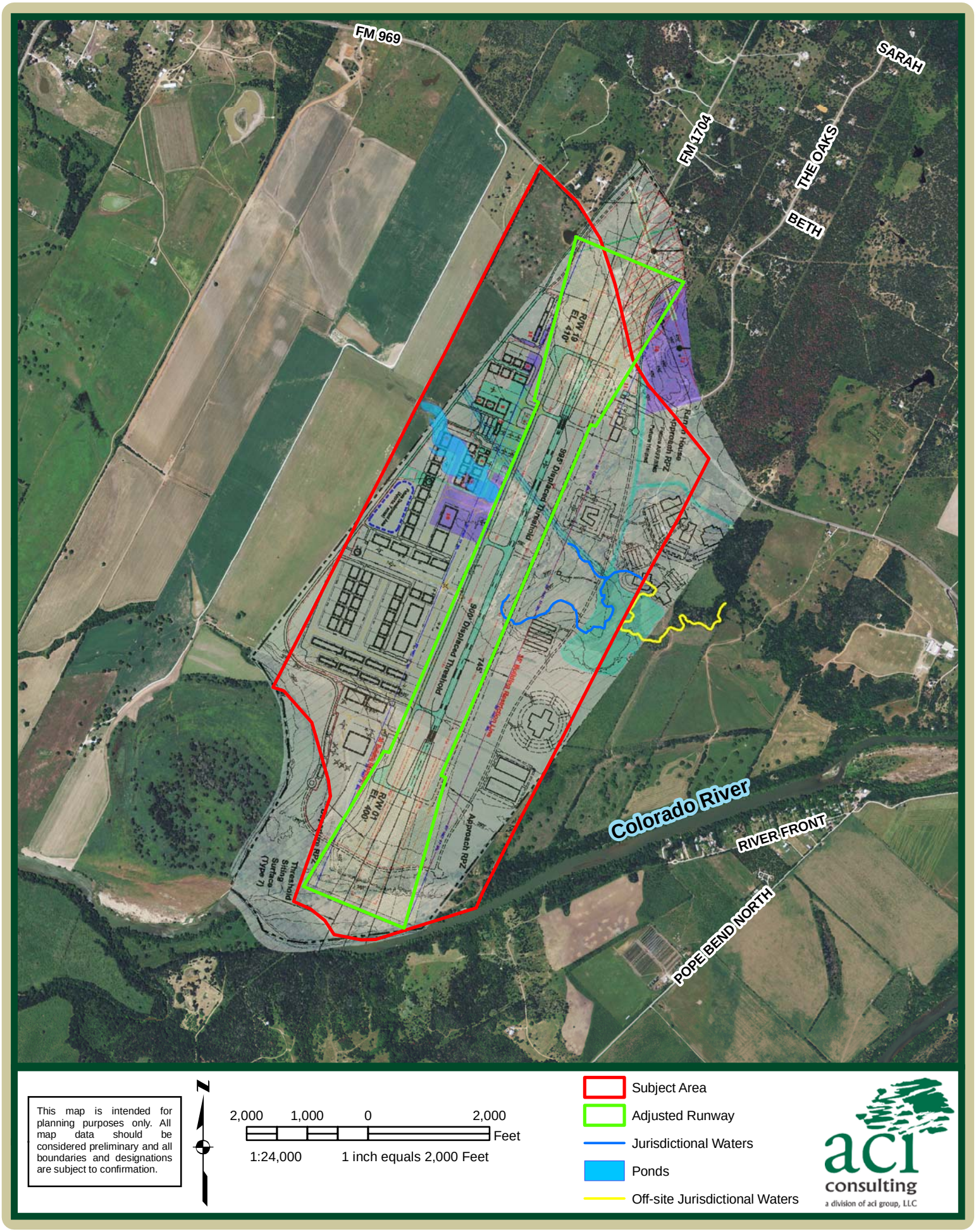
Central Texas Airport **January 2012**

Figure 6: Austin Energy



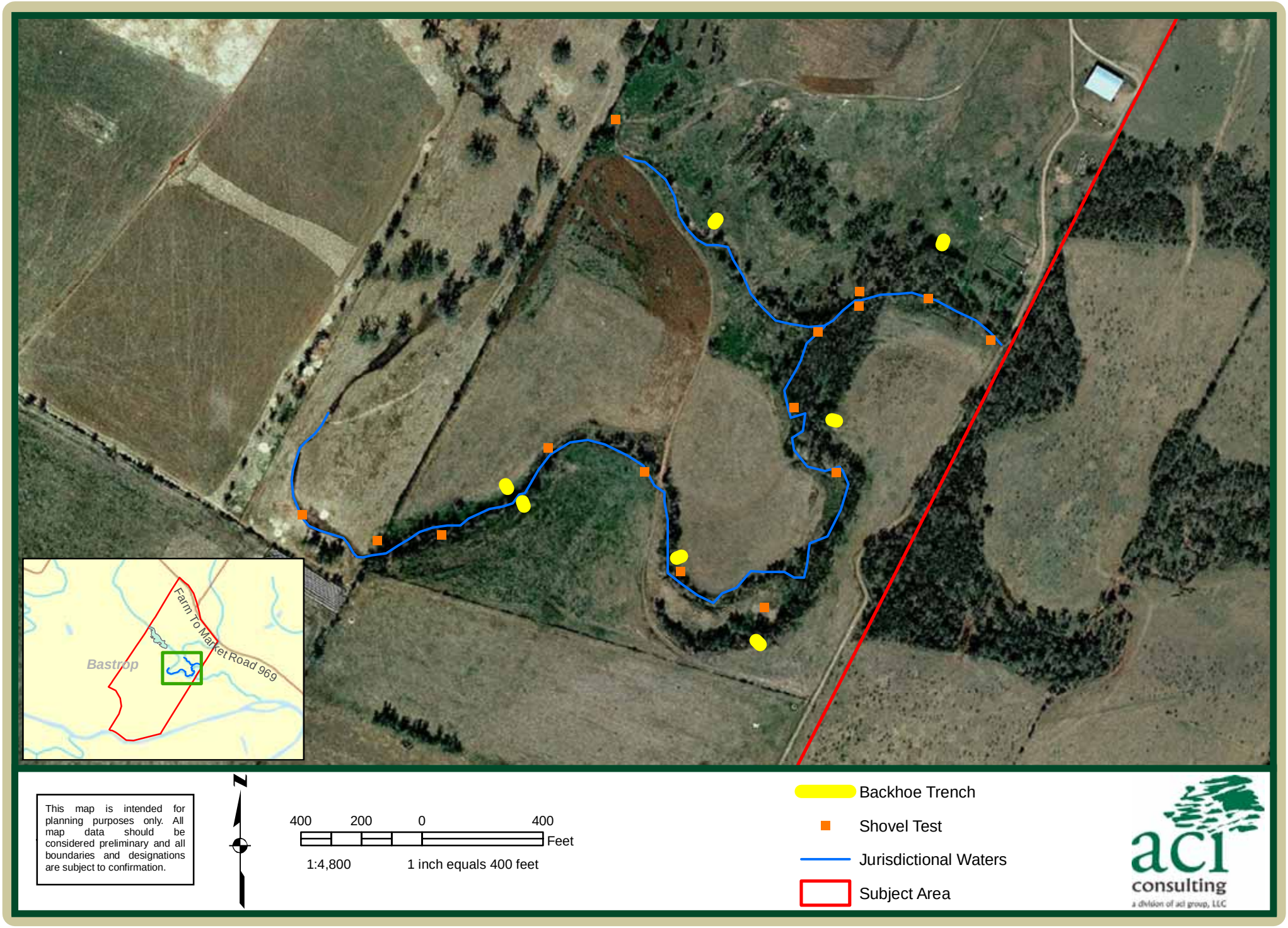
Central Texas Airport **January 2012**

Appendix A, Figure 7: Onsite Configuration 1



Central Texas Airport **January 2012**

Appendix A, Figure 8: Onsite Configuration 2



Central Texas Airport

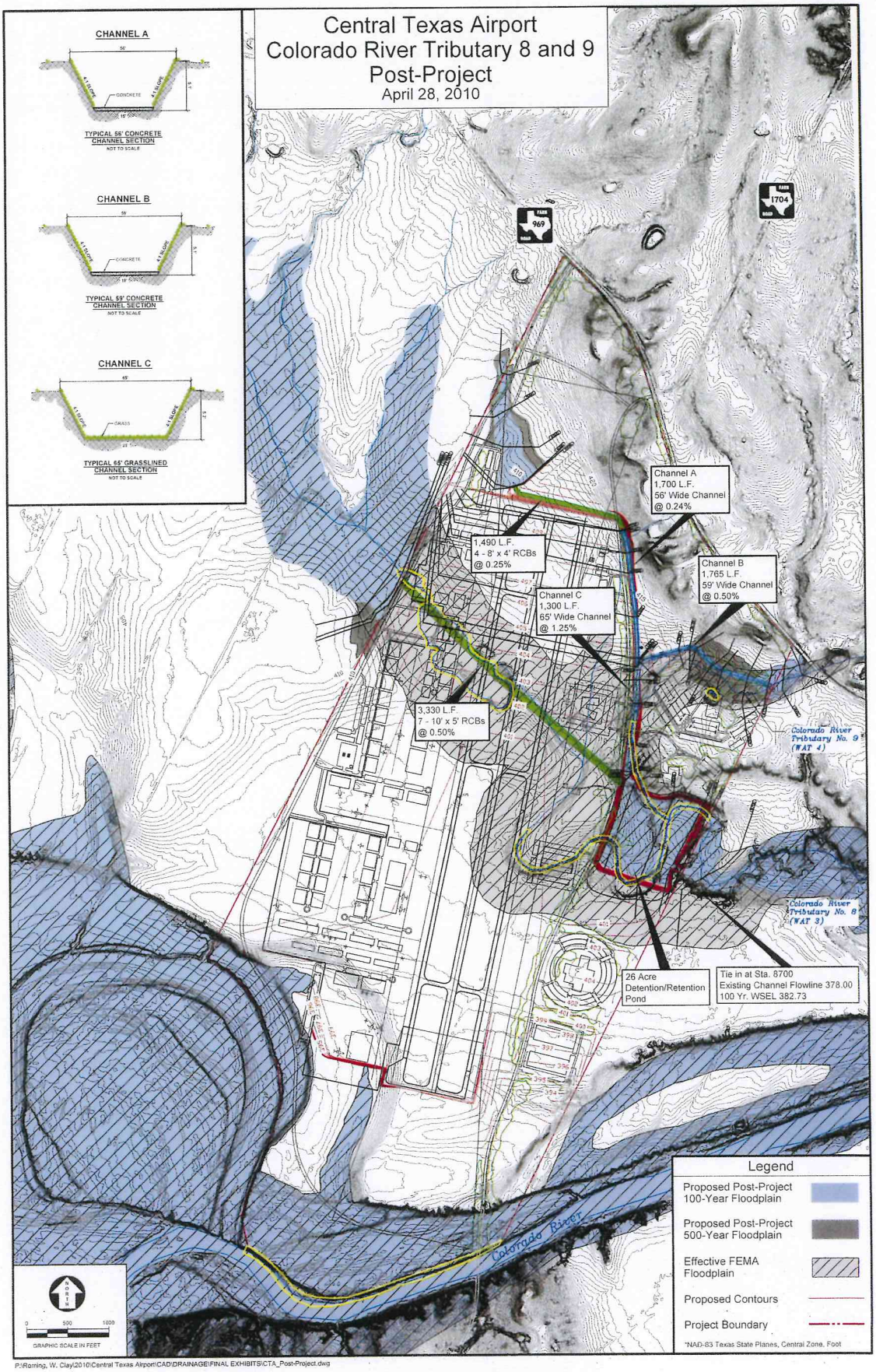
January 2012

Appendix A, Figure 9: Locations of shovel tests and backhoe trenches excavated

APPENDIX B

ILLUSTRATIONS OF THE PROPOSED PROJECT

Appendix B, Figure 1

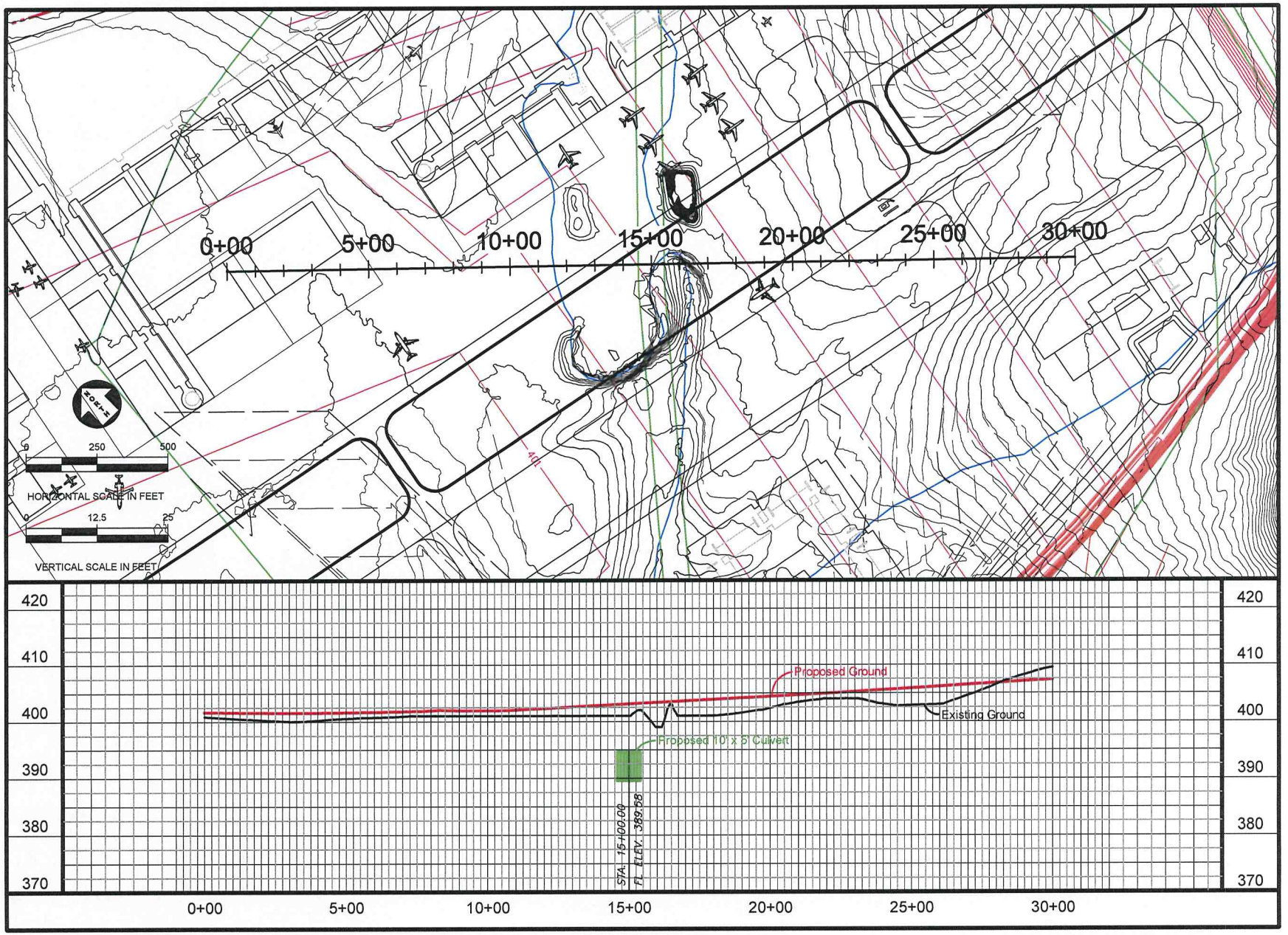


Central Texas Airport
Central Texas Airport, LLC

January 3, 2011
SWF 2010-506

Exhibit GI 2
Plan View

Appendix B, Figure 2

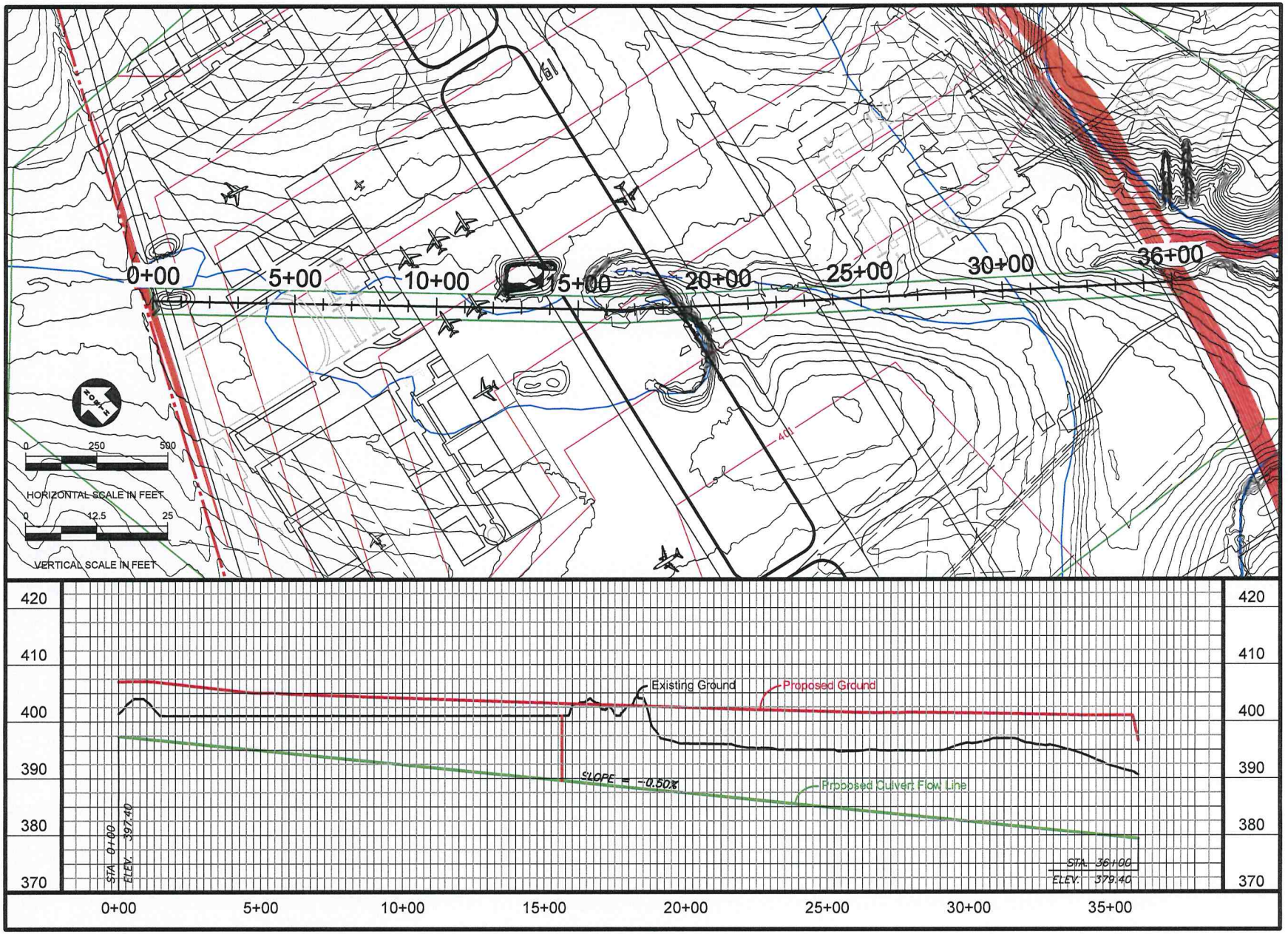


Central Texas Airport
Central Texas Airport, LLC

January 3, 2011
SWF 2010-506

Exhibit GI 3
Box Culverts - X-Section

Appendix B, Figure 3

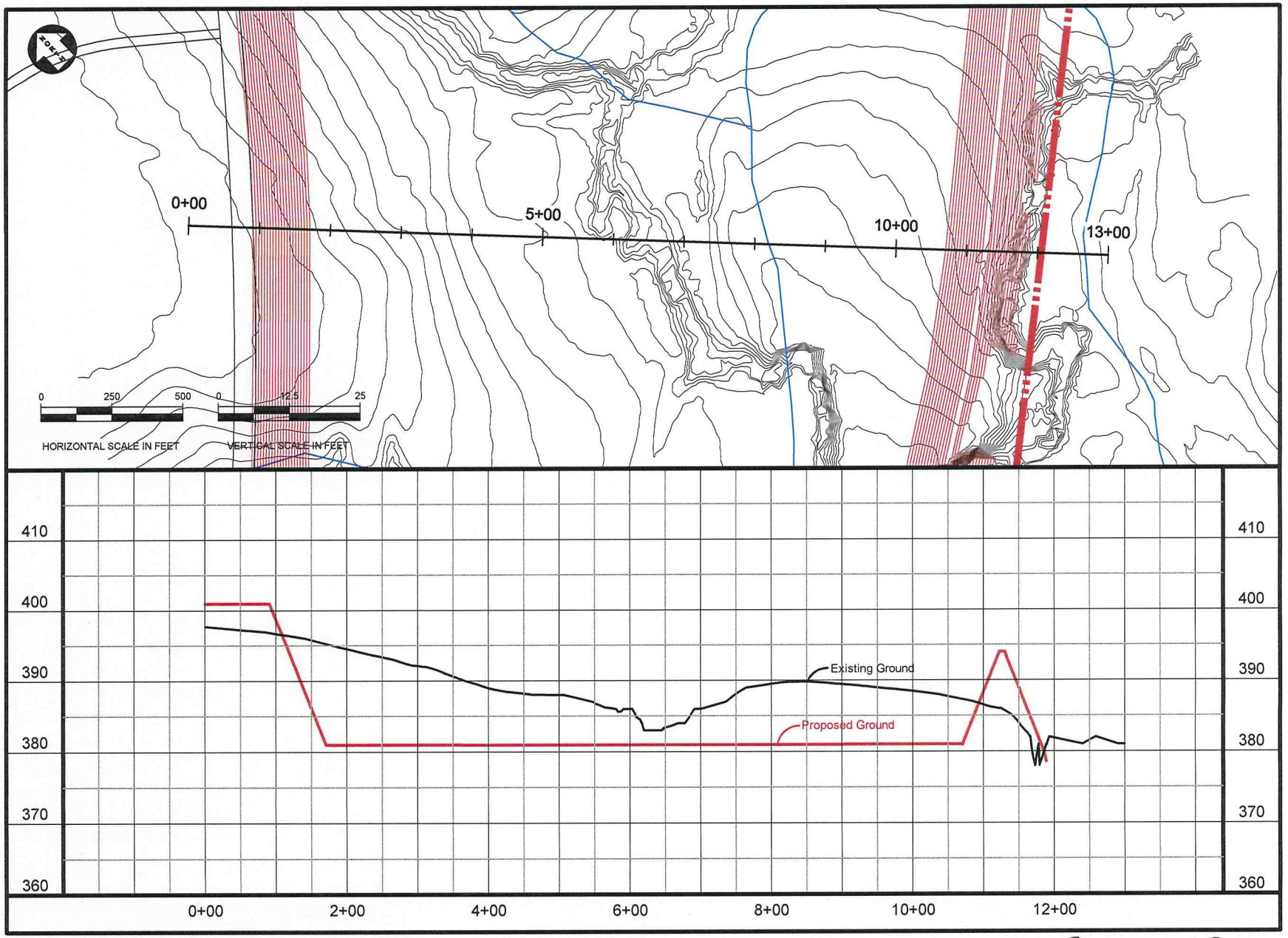


Central Texas Airport
Central Texas Airport, LLC

January 3, 2011
SWF 2010-506

Exhibit GI 4
Box Culverts - Profile

Appendix B, Figure 4



Central Texas Airport,

Central Texas Airport, LLC

January 3, 2011

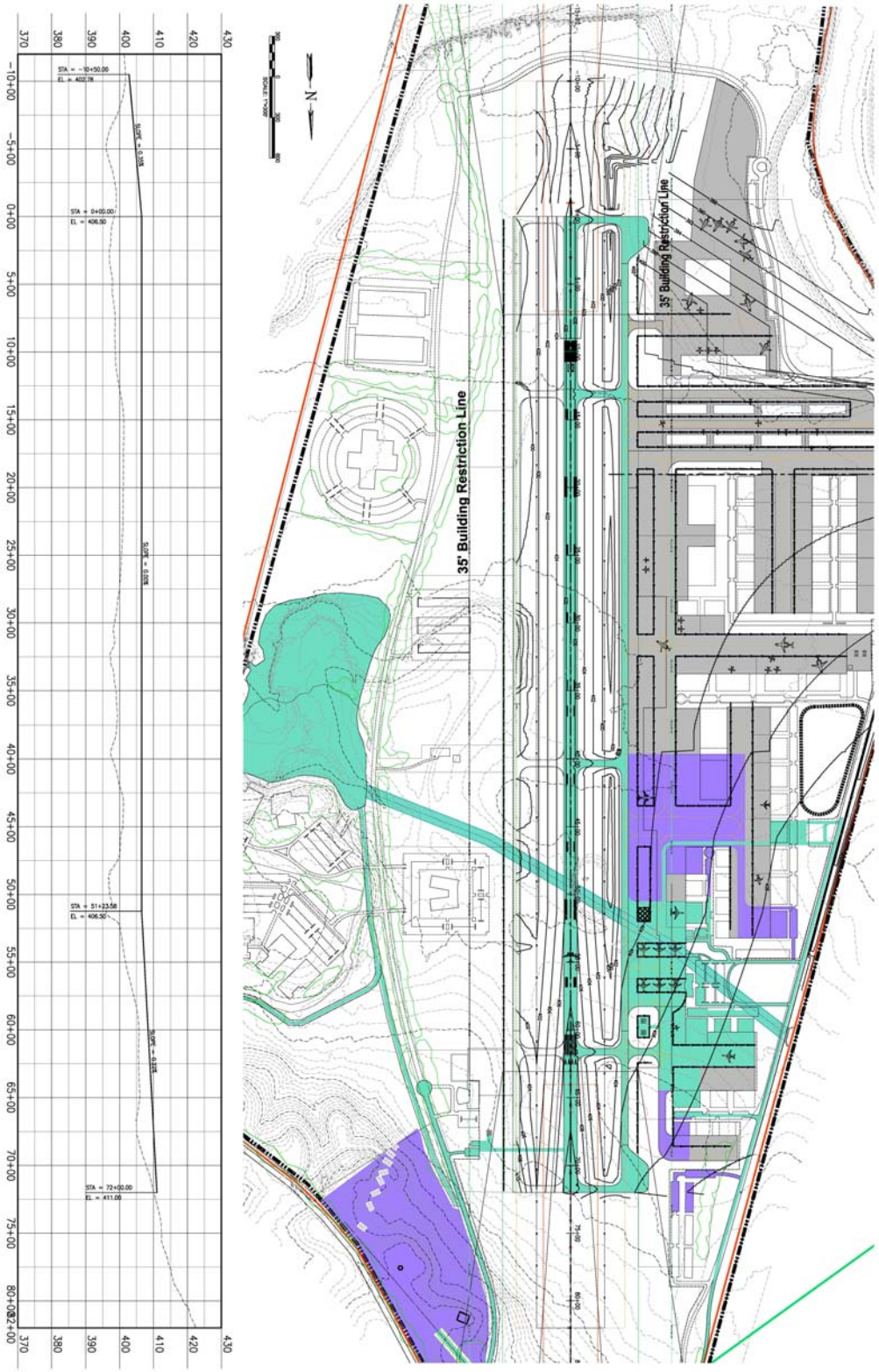
SWF 2010-506

Exhibit GI 5

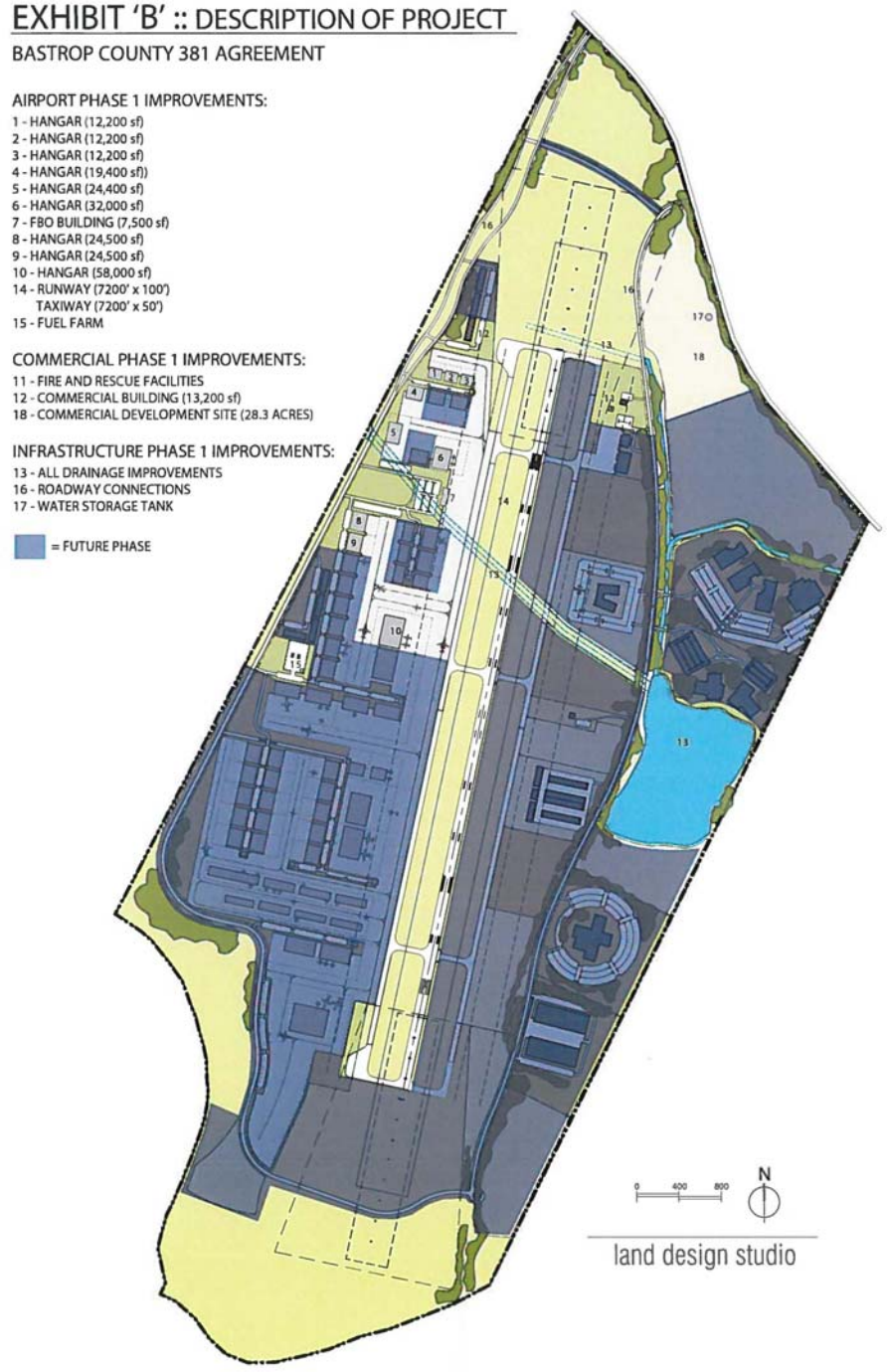
Typical Detention

Pond x-Section

Appendix B, Figure 5
(Plan and Profile of Runway and Taxiway)



Appendix B, Figure 6



APPENDIX C

FEMA AND FAA CORRESPONDENCE

Federal Emergency Management Agency

Washington, D.C. 20472

September 28, 2010

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

IN REPLY REFER TO:
Case No.: 10-06-2395R

The Honorable Ronnie McDonald
Bastrop County Judge
804 Pecan Street
Bastrop, TX 78602

Community: Bastrop County, TX
Community No.: 481193

104

Dear Judge McDonald:

This responds to a request that the Department of Homeland Security's Federal Emergency Management Agency (FEMA) comment on the effects that a proposed project would have on the effective Flood Insurance Rate Map (FIRM) for Bastrop County, Texas, and Incorporated Areas, in accordance with Part 65 of the National Flood Insurance Program (NFIP) regulations. In a letter dated May 10, 2010, Mr. John A. Simcik, P.E., CFM, of Kasberg, Patrick & Associates, LP, requested that FEMA evaluate the effects that the proposed Central Texas Airport along Colorado River Tributary 8, Colorado River Tributary 9, and Unnamed Tributary to Colorado River Tributary 8 would have on the flood hazard information shown on the effective FIRM.

The proposed project along Colorado River Tributary 8 will include a Detention Basin at the confluence with Colorado River Tributary 9 and a 3,330 foot long, seven-barrel, 10 foot by 5 foot Reinforced Concrete Box (RCB) culvert just upstream of the pond. The proposed project along Colorado River Tributary 9 includes channelization from approximately 820 feet upstream of the confluence with Colorado River Tributary 8 to 4,010 feet upstream of the confluence with Colorado River Tributary 8. The proposed project along Unnamed Tributary to Colorado River Tributary 8 includes channelization from the confluence with Colorado River Tributary 8 to approximately 1,500 feet upstream of the confluence with Colorado River Tributary 8 and a 1,490 foot long, four-barrel 8 foot by 4 foot RCB culvert just upstream of the channel. The area of the proposed project is shown on the Bastrop County, Texas, and Incorporated Areas FIRM panel number 48021C0200 E, dated January 19, 2006.

All data required to complete our review of this request for a Conditional Letter of Map Revision (CLOMR) were submitted with letters from Mr. Simcik.

We reviewed the submitted data and the data used to prepare the effective FIRM for your community, and determined that the proposed project meets the minimum floodplain management criteria of the NFIP. The submitted existing conditions HEC-RAS hydraulic computer model, dated September 15, 2010, was used as the base conditions model in our review of the proposed conditions model for this CLOMR request. We believe that, if the proposed project is constructed as shown on the submitted plans entitled "Typical Channel Section," prepared by Kasberg, Patrick & Associates, LP, and dated September 2009, and the plans entitled "Multiple Box Culverts," prepared by the Texas Department of Transportation and dated February 2010, and the data listed below are received, the boundaries of the base (1-percent-annual-chance) floodplain will be delineated as shown on the submitted topographic work map entitled "Central Texas Airport Colorado River Tributary 8 and 9 Post Project," prepared by Kasberg, Patrick & Associates, LP, and dated September 2009.

Colorado River Tributary 8

As a result of the proposed project, the water-surface elevations (WSELs) of the base (1-percent-annual-chance) flood will increase and decrease compared to the existing conditions base flood WSELs for Colorado River Tributary 8. The maximum increase in base flood WSEL, 0.1 foot, will occur approximately 8,770 feet upstream of the confluence with Colorado River Tributary 9. The maximum decrease in base flood WSEL, 2.4 foot, will occur approximately 490 feet downstream of the confluence with Colorado River Tributary 9.

As a result of the proposed project and updated topographic information, the width of the Special Flood Hazard Area (SFHA), the area that would be inundated by the base flood, along Colorado River Tributary 8 will increase and decrease compared to the effective SFHA width. The maximum increase in SFHA width, approximately 650 feet, will occur approximately 150 feet downstream of the confluence with Colorado River Tributary 9. The maximum decrease in SFHA width, approximately 2,250 feet, will occur approximately 4,010 feet upstream of the confluence with Colorado River Tributary 9.

Colorado River Tributary 9

As a result of the proposed project, the base flood WSELs will increase and decrease compared to the existing conditions base flood WSELs for Colorado River Tributary 9. The maximum increase in base flood WSEL, 3.2 feet, will occurs approximately 2,660 feet upstream of the confluence with Colorado River Tributary 8, and will be contained in the channel. The maximum decrease in base flood WSEL, 2.6 feet, will occurs approximately 2,000 feet upstream of the confluence with Colorado River Tributary 8.

As a result of the proposed project and updated topographic information, the width of SFHA will decrease compared to the effective SFHA width along Colorado River Tributary 9. The maximum decrease in SFHA width, approximately 650 feet, will occur approximately 1,880 feet upstream of the confluence with Colorado River Tributary 8.

Unnamed Tributary to Colorado River Tributary 8

As a result of the proposed project, the base flood WSELs will increase and decrease compared to the existing conditions base flood WSELs for Unnamed Tributary to Colorado River Tributary 8. The maximum increase in base flood WSEL, 0.2 foot, will occur approximately 4,380 feet upstream of the confluence with Colorado River Tributary 8. The maximum decrease in base flood WSEL, 0.6 foot, will occur approximately 3,910 feet upstream of the confluence with Colorado River Tributary 8.

As a result of the proposed project and updated topographic information, the width of SFHA will increase in some areas and will decrease in other areas compared to the effective SFHA width along Unnamed Tributary to Colorado River Tributary 8. The maximum increase in SFHA width, approximately 670 feet, will occur approximately 3,170 feet upstream of the confluence with Colorado River Tributary 8. The maximum decrease in SFHA width, approximately 360 feet, will occur approximately 1,060 feet upstream of the confluence with Colorado River Tributary 8.

Upon completion of the project, your community may submit the data listed below and request that we make a final determination on revising the effective FIRM and FIS report.

- Detailed application and certification forms, which were used in processing this request, must be used for requesting final revisions to the maps. Therefore, when the map revision request for the area covered by this letter is submitted, Form 1, entitled "Overview and Concurrence Form," must be included. (A copy of this form is enclosed.)

- The detailed application and certification forms listed below may be required if as-built conditions differ from the preliminary plans. If required, please submit a new form (copy enclosed) or annotated copies of the previously submitted forms showing the revised information.

  Form 2, entitled "Riverine Hydrology and Hydraulics Form"

  Form 3, entitled "Riverine Structures Form"

  Hydraulic analyses for as-built conditions of the base flood, together with a topographic work map showing the revised floodplain boundaries and how they tie into the effective base floodplain boundaries at the upstream and downstream ends of the revision area, must be submitted with Form 2.

- As-built plans, certified by a registered professional engineer, of all proposed project elements.

- Community acknowledgment of the map revision request.

- A copy of the annotated FIRM, at the scale of the effective FIRM, showing the revised base floodplain boundary delineations and how they tie into the effective floodplain boundary delineations shown on the effective FIRM at the downstream and upstream limits of the revised reach.

- Documentation of the individual legal notices sent to property owners adversely affected by any increases in width or shifting of the base floodplain along Colorado River Tributary 8, Colorado River Tributary 9, and Unnamed Tributary to Colorado River Tributary 8. Legal notice may take the form of certified mailing receipts or certification that all property owners have been notified, with an accompanying mailing list and a copy of the letter sent.

- An officially adopted maintenance and operation plan for the Detention Pond. This plan, which may be in the form of a written statement from the community Chief Executive Officer, an ordinance, or other legislation, must describe the nature of the maintenance activities, the frequency with which they will be performed, and the title of the local community official who will be responsible for ensuring that the maintenance activities are accomplished.

Effective January 13, 2010, FEMA revised the fee schedule for reviewing and processing requests for conditional and final modifications to published flood information and maps. In accordance with this schedule, the current fee for this map revision request is $5,000, and must be received before we can begin processing the request. Please note, however, that the fee schedule is subject to change, and requesters are required to submit the fee in effect at the time of the submittal. Payment of this fee shall be made in the form of a check or money order, made payable in U.S. funds to the National Flood Insurance Program, or by credit card (Visa or MasterCard only). The payment, along with the revision application, must be forwarded to the following address:

FEMA LOMC Clearinghouse
7390 Coca Cola Drive, Suite 204
Hanover, MD 21076

After receiving appropriate documentation to show that the project has been completed, FEMA will initiate a revision to the FIRM.

The basis of this CLOMR is, in whole or in part, a culvert/channelization project. NFIP regulations, as cited in Paragraph 60.3(b)(7), require that communities assure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into your community's existing floodplain management regulations. Consequently, the ultimate responsibility for maintenance of the modified culvert and bridge rests with your community.

This CLOMR is based on the minimum floodplain management criteria established under the NFIP. Your community is responsible for approving all floodplain development and for ensuring all necessary permits required by Federal or State law. State, county, and community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction in the SFHA. If the State, county, or community has adopted more restrictive or comprehensive floodplain management criteria, these criteria take precedence over the minimum NFIP criteria.

If you have any questions regarding floodplain management regulations for your community or the NFIP in general, please contact the Consultation Coordination Officer (CCO) for your community. Information on the CCO for your community may be obtained by calling the Director, Mitigation Division, of FEMA in Denton, TX, at (940) 898-5127. If you have any questions regarding this CLOMR, please call our Map Information eXchange (FMIX), toll free, at 1-877-FEMA MAP (1-877-336-2627).

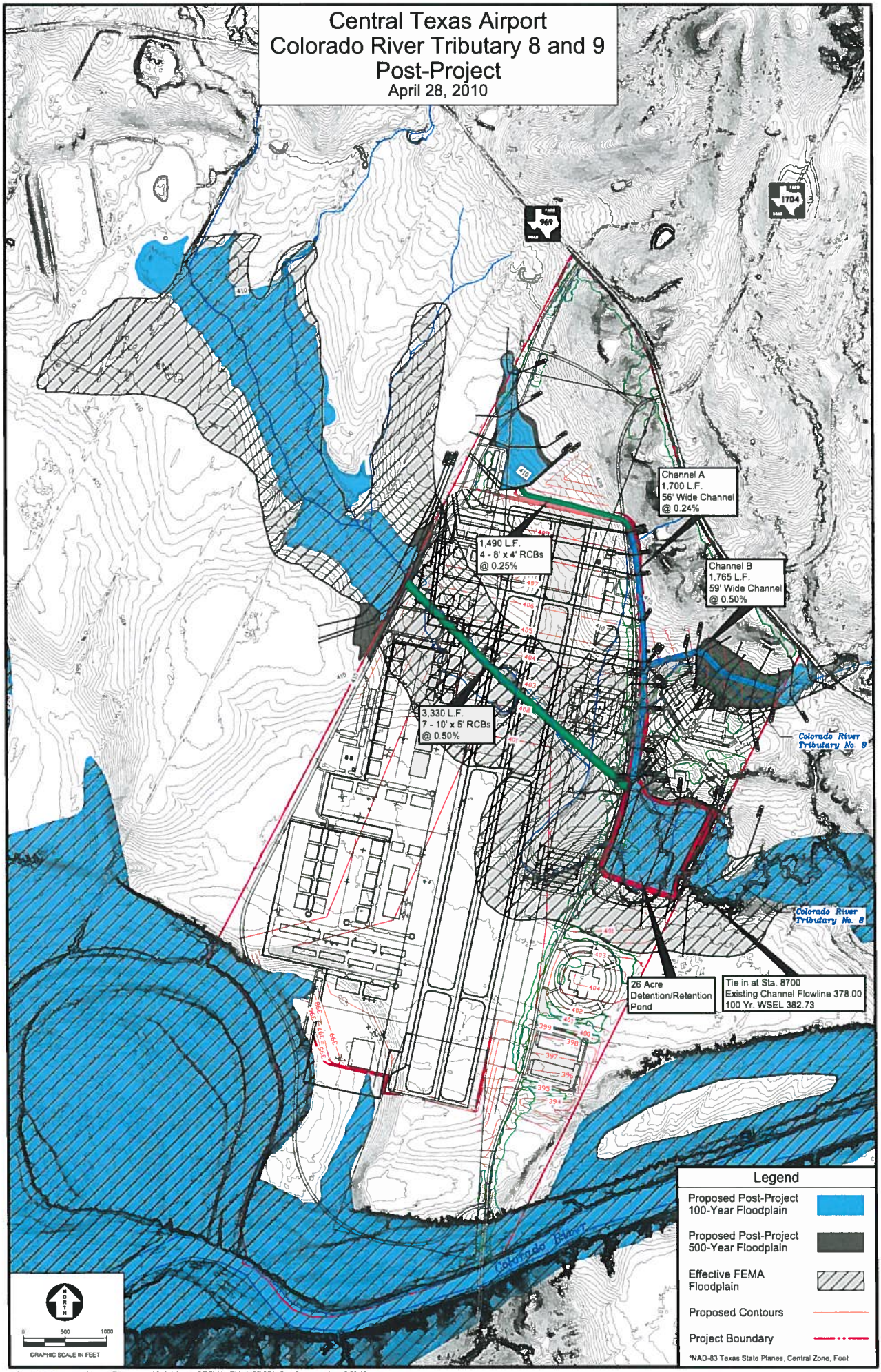
Sincerely,

Michael J. McGinn, Program Specialist
Engineering Management Branch
Mitigation Directorate

For: Roy E. Wright
Deputy Director, Risk Analysis
Federal Insurance and Mitigation Administration

cc: Mr. Vickie Box, CFM
Floodplain Administrator
Bastrop County

Mr. John A. Simcik, P.E, CFM
Kasberg, Patrick & Associates, LP



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CONFIDENTIAL

U.S. Department
of Transportation
Federal Aviation Administration

Airports Division
Southwest Region
Arkansas, Louisiana,
New Mexico, Oklahoma,
Texas

Fort Worth, Texas 76193

September 18, 2007

Mr. James R. Carpenter
Colorado Riverland Ranch Airport
925-B South Capital of Texas Highways, Suite 115
Austin, Texas 78746

Dear Mr. Carpenter:

The Federal Aviation Administration (FAA) has conducted an Aeronautical Study (2007-ASW-751-NRA) for the establishment of **the Colorado Riverland Ranch Airport** near Elgin, Texas. It was determined that the airport would not be objectionable from an airspace utilization standpoint.

We recommend you contact the Fort Worth Flight Procedures Office (Mr. Al Mastello) 2 years prior to needing instrument approach procedure to assure a place in the queue for development.

Please complete the enclosed FAA Form 5010-5 and return to us as soon as possible. This will allow us to obtain a location identifier for the heliport. **It is only by the completion of this form do we register your facility.**

If you have any questions, please do not hesitate to contact me at (817) 222-5614.

Sincerely,

Ben Guttery
Senior Program Manager
Texas Airports Development Office

Enclosure (5010)

CONFIDENTIAL

U.S. Department
of Transportation
Federal Aviation Administration

Texas Airports Development Office
Airports Division, Southwest Region

Fort Worth, Texas 76193-0600

January 2, 2009

Mr. Jim Carpenter
Central Texas Airport
925-B South Capital of Texas Hwys
Suite 115
Austin, TX 78746

Dear Mr. Carpenter:

We have restudied your Central Texas Airport based on the updated runway end coordinates (attached). This was known as Aeronautical Study 2008-ASW-1292-NRA. We continue to have no objections to your proposal.

Enclosed is FAA Form 5010-5, Airport Master Record, for you to complete and return to us. **It is only by returning this form to us that we can continue with the processing of the data for you airport and issue a location identifier.**

If you have any questions, please do not hesitate to contact me at (817) 222-5614.

Sincerely,

Ben Guttery
Senior Program Manager
Texas Airports Development Office

Enclosure (map and FAA Form 5010)

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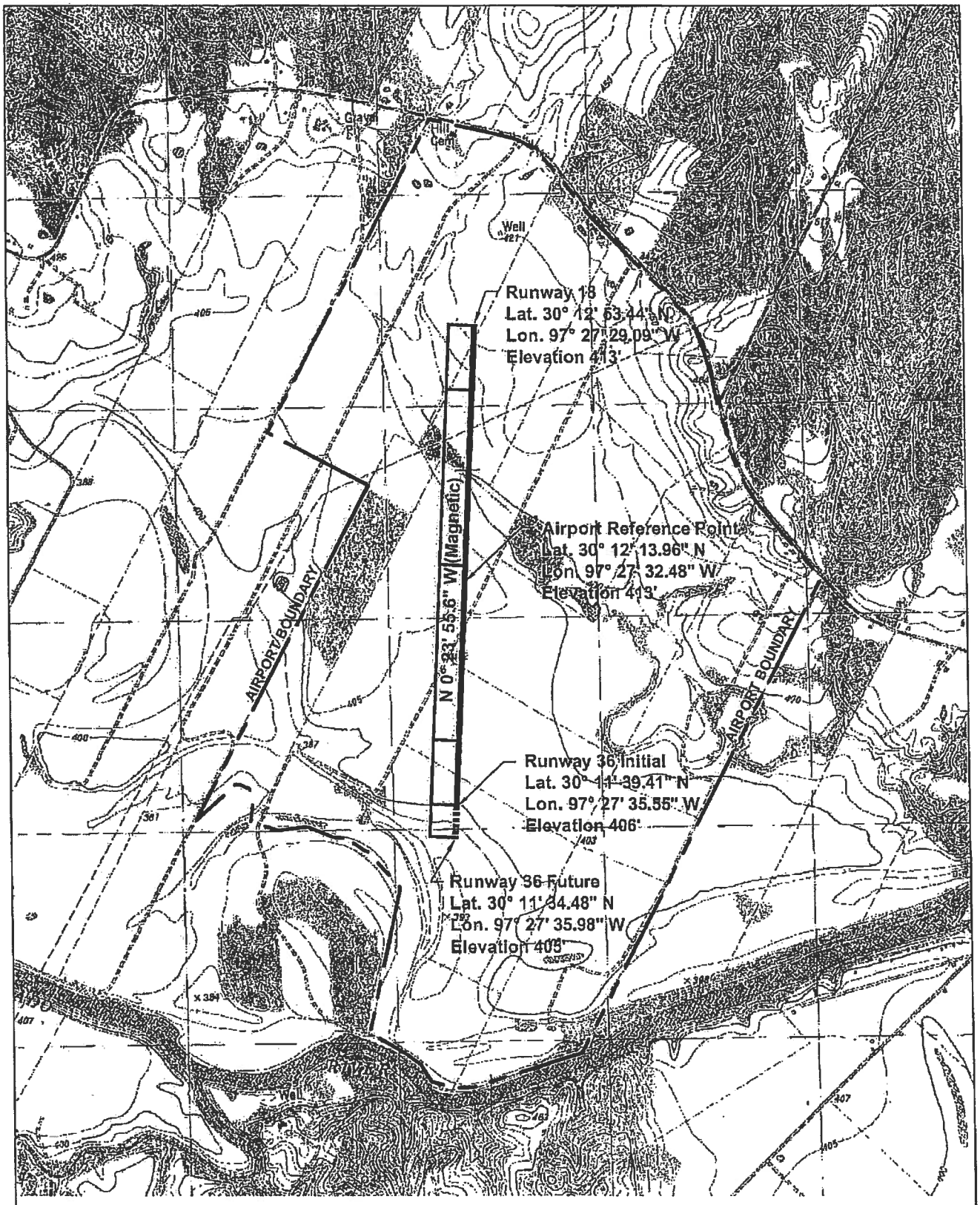

Source: USGS Quadrangle Map, Batrop County, TX Composite

Central Texas Airport

Estimated Runway Coordinates

CONFIDENTIAL

U.S. Department
of Transportation

**Federal Aviation
Administration**

Federal Aviation Administration
Fort Worth, TX 76137

May 12, 2010

Central Texas Airport
Attn: James Carpenter
925-B South Capital of Texas Hwys
Suite 115
Austin, TX 78746

RE: *(See attached Table 1 for referenced case(s))*
DETERMINATION OF LANDING AREA PROPOSAL

Table 1 - Letter Referenced Case(s)

ASN	Prior ASN	Location	Latitude (NAD83)	Longitude (NAD83)	AGL (Feet)	AMSL (Feet)
2010-ASW-354-NRA	2008-ASW-1292-NRA	AUSTIN, TX	30-11-55.17N	97-27-11.66W	0	405

Description: Proposed new Public Airport, Central Texas Airport. Airport Sponsor has revised the runway length and orientation (bearings) since prior studies 2008-ASW-1292-NRA and 2007-ASW-751-NRA.

We have determined that the proposed public use landing area, will not adversely affect the safe and efficient use of the navigable airspace by aircraft, provided:

- All operations are conducted in VFR weather conditions.

We recommend that:

- A clear 20:1 approach slope be established. If there are obstructions that penetrate the 20:1 approach surface, they should be removed or lowered. If the penetrating obstructions cannot be removed or lowered, we recommend that the thresholds be displaced and appropriately marked, so as to provide a clear 20:1 approach slope surface to each runway end.
- The centerline of an airport runway should have a lateral separation of at least 60 feet from roads and other objects for aircraft with approach speeds less than 50 knots and 120 feet for airplanes with approach speeds of 50 knots or greater.
- Since previous landing area notifications submitted to the FAA indentified a request for Instrument Flight Rules (IFR) procedure would be pursued, orientation of the runway should be the same as the runways at Austin-Bergstrom International Airport (if future IFR procedures are anticipated).

Please note that roads are defined as obstructions by FAR, Part 77. Private roads are the greater of a 10 foot obstruction or the highest mobile object that normally traverses the road. Public roads are considered a 15 foot

obstruction, interstate highways are a 17 foot obstruction, railroads are 23 foot obstructions and waterways are the highest mobile object that traverses the waterway.

It is essential that each airport runway threshold meet the siting standards shown in Figures A2-1, A2-2, and A2-3 of FAA Advisory Circular (AC) 150/5300-13, Airport Design.

Please note that roads are defined as obstructions by FAR, Part 77. Private roads are the greater of a 10 foot obstruction or the highest mobile object that normally traverses the road. Public roads are considered a 15 foot obstruction, interstate highways are a 17 foot obstruction, railroads are 23 foot obstructions and waterways are the highest mobile object that traverses the waterway.

Please notify the FAA within 15 days of completing the landing area by calling the FAA Area Flight Service Station (AFSS) serving your landing area to let them know you are activating the landing area while the Airport Master Record Form is being processed. Please tell the Flight Service Station representative that you have received an aeronautical determination from the FAA, and supply them with the name of your landing area and the coordinates.

Please return the enclosed Airport Master Record form to this office. When the processing of the Airport Master Record form is completed, your landing area will have a site number and a permanent location identifier. Indicate whether or not you would like to have your landing area shown on aeronautical charts. Charting also depends on the amount of "clutter" already on the charts near your site.

In order to avoid placing any unfair restrictions on users of the navigable airspace, this determination is valid until November 12, 2011. Should the facility not be operational by this date, an extension of the determination must be obtained by 30 days prior to the expiration date of this letter.

This determination does not constitute FAA approval or disapproval of the physical development involved in the proposal. It is a determination with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground.

In making this determination, the FAA has considered matters such as the effects the proposal would have on existing or planned traffic patterns of neighboring airports, the effects it would have on the existing airspace structures and projected programs of the FAA, the effects it would have on the safety of persons and property on the ground, and the effects that existing or proposed manmade objects (on file with the FAA), and known natural objects within the affected area would have on the airport proposal.

The FAA cannot prevent the construction of structures near an airport. The airport environs can only be protected through such means as local zoning ordinances, acquisitions of property in fee title or aviation easements, letters of agreement, or other means.

This determination does not preempt or waive any ordinance, law, or regulation of any other governmental body or agency.

Enclosures:

- Airport Master Record form, Tables A2-1 thru A2-3

CONFIDENTIAL

If you have any questions concerning this determination contact Glenn A. Boles, , (817) 222-5627, glenn.a.boles@faa.gov.

Glenn A. Boles
DivUser
Mr. Michael H. Talbot
City Manager
904 Main Street
Bastrop, TX 78602

Steve Murray
Superintendent of Schools
906 Farm Street
Bastrop, TX 78602

APPENDIX D

COMPENSATORY MITIGATION PLAN

Compensatory Mitigation Plan for the Central Texas Airport in Bastrop County, Texas

January 2012

ABSTRACT

The Central Texas Airport project proposes to impact waters determined by the USACE to fall within their jurisdiction under Section 404 of the Clean Water Act. These impacts would include 5,390 linear feet of ephemeral tributary and approximately 8.55 acres of an open water stock tank complex. To mitigate these impacts CTA, LLC (the Applicant) proposes onsite mitigation consisting of three elements:

- Mitigation Area A - riparian corridor creation along the Colorado River spanning 3,484 linear feet and 8.0 acres;
- Mitigation Area B - riparian corridor creation along an oxbow, primary tributary to the Colorado River spanning 4,000 linear feet and 9.2 acres; and
- Mitigation Area C - creation of a vegetated bench and permanent open water habitat within the 26-acre project detention pond.

This mitigation plan has been developed based on avoidance, minimization, and then, mitigation of jurisdictional impacts in accordance with USACE guidelines. Additionally, alternatives for the proposed mitigation are discussed within. These alternatives include the unavailability of a USACE-approved mitigation bank and possible offsite mitigation. The locations, dimension, vegetative species, plant survival requirement, and reporting requirements are outlined within the plan.

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TABLES

APPENDICES

Compensatory Mitigation Plan for Central Texas Airport in Bastrop County, Texas

January 2011

1.0 BASELINE INFORMATION

CTA, LLC, the Applicant, is proposing to construct a privately funded, general aviation reliever airport on an approximately 1,100-acre tract in Bastrop County, Texas. The closing of both City of Austin Robert Mueller Municipal and Austin Executive Airports in 1999 resulted in the displacement of over 400 general aviation aircraft, along with virtually all associated maintenance, repair, and support businesses, creating the operational need for a general aviation reliever airport in the Austin metropolitan region. The proposed Airport would fill the need for a general aviation reliever airport in the greater Austin metropolitan region. The proposed Central Texas Airport would serve the Austin metropolitan area, the 15th largest metropolitan population in the U.S.

The proposed Airport would be one component in the proposed development by Green Corporate Centers Holdings, Inc. (GCCH). GCCH is headquartered in Austin, Texas, and was formed to develop a privately constructed, approximately 1,000-acre "green" business site with a privately owned and operated general aviation reliever airport as the economic engine at its core.

This mitigation plan provides an overview of the avoidance and minimization measures proposed by the Applicant during the alternative development selection, as well as compensatory and voluntary mitigation measures. The proposed design has been revised numerous times to incorporate measures to avoid and minimize impacts to hydrologic resources; however, some impacts to jurisdictional waters are unavoidable. The Applicant proposes to compensate for impacts to jurisdictional waters through compensatory and voluntary mitigation efforts.

Desktop Functional Assessment of Mitigation Areas A, B, and C

Based on recommendations by USACE during the October 25, 2011 meeting, **aci consulting** conducted a desktop functional assessment of the Mitigation Areas A, B, and C based on the Texas Rapid Assessment Method (TXRAM) metrics and scoring (USACE 2010). The desktop assessment was completed using photographs taken in the field between 2008 and 2011, Google Earth imagery, and GIS software.

Mitigation Area A

Mitigation Area A is approximately 3,484 linear feet of Colorado River frontage consisting of bermudagrass pastures with few interspersed cottonwood, sycamore, pecan, and cedar elm trees. The current desktop assessment score of Mitigation Area A is 56.

Mitigation Area B
Mitigation Area B is approximately 4,000 linear feet along an ephemeral oxbow that flows to the Colorado River. The oxbow area is primarily bermudagrass pastures with a narrow band of sparse trees consisting predominantly of cottonwood, hackberry, and cedar elm. The current desktop assessment score of Mitigation Area B is 23.

Mitigation Area C
Mitigation Area C is presently two ephemeral channels (WAT-3 and WAT-4) totaling approximately 5,390 linear feet. Mitigation Area C is primarily bermudagrass with a narrow band of sparse trees and understory growth. The current desktop assessment score (average of the two channels) of Mitigation Area C is 53.

1.1 Avoidance

The Applicant's preferred alternative would avoid impacts to water resources, including the Colorado River and associated floodplain areas, compared to other feasible alternative improvement plans. The design plan considered the magnitude and type of impact to jurisdictional water resources while planning the proposed facility.

There are two major avoidance principals inherent in the Airport site design:

1) Colorado River avoidance, and
2) Detention pond flood control.

1) Notably, the Colorado River is the most environmentally significant feature on the project site, as it is a navigable and jurisdictional waterway. The southern boundary of the Airport site abuts approximately 3,500 linear feet of Colorado River frontage. The Airport avoids impacts to the Colorado River and its frontage. The closest development activity, an airport perimeter road, sets back from the Colorado River a minimum distance of approximately 450 feet. This avoidance provides a natural and native buffer from the proposed Airport to the river and associated wetlands and wildlife.

2) As designed, the 26-acre project detention pond contains the capacity to collect, hold, and slowly release, at pre-development rates, all project stormwater. By designing the pond to release at pre-development rates, the project would avoid impacts to waters of the U.S. downstream of the outfall both onsite and offsite within WAT-3, and subsequently the Colorado River.

1.2 Minimization

As designed, the 26-acre project detention pond incorporates a permanent pool within the feature. The pond also contains the capacity to collect, hold, and slowly release, at pre-development rates, all project stormwater. This stormwater capacity would be accommodated within the pond feature above the constant pool elevation. As opposed to a traditional detention pond, which fully drains over a 24 to 48 hour period following a storm event, this detention pond's constant pool would minimize impacts to waters of the U.S. by providing onsite open

water habitat. The 26-acre pond is situated on and around the confluence of WAT-3 and WAT-4 onsite. By choosing a soil-lined, permanent-pool detention pond, the Applicant has minimized impacts in comparison to a concrete-lined, regularly drained detention pond.

1.3 Proposed Impacts

1.3.1 Temporary Impacts

During construction of the Airport, minor temporary impacts to waters would occur. The site would implement and maintain a Storm Water Pollution Prevention Plan (SWP3) in accordance with Texas Commission on Environmental Quality (TCEQ) guidelines. Throughout the duration of the construction phase of the proposed development, temporary erosion and sedimentation controls will be implemented in accordance with Texas Pollution Discharge Elimination System (TPDES). The pre-construction measures may include perimeter silt fences and stabilized construction entrances. Control measures during construction may include rock berms, additional silt fencing, slope stabilization, permanent erosion controls, and site restoration. All temporary sedimentation controls will be considered a minimum, and will be regularly monitored and maintained. If, during construction, the measures are determined to not be working effectively, immediate steps will be taken to upgrade the installation.

The Applicant will prepare and maintain a SWP3 and file a Notice of Intent (NOI) and Notice of Termination (NOT) with the TCEQ prior to and after construction completion in accordance with the TPDES requirements for a General Construction Permit (GCP)(TXR 150000).

1.3.2 Permanent Impacts

Permanent impacts to waters of the U.S. would occur as a result of: 1) a culvert collection beneath the runway and taxiways and 2) a project detention pond.

1.3.2.1 Culvert System

As presented in the IP Application, a 3,300 linear-foot long culvert system would be constructed to convey storm water under the Airport complex (including runway, taxiways, administrative buildings, and infrastructure) to the 26-acre project detention pond. The culvert system would include seven (7) parallel 10-foot by 5-foot reinforced concrete box culverts. This culvert system would traverse the project draining from west to east.

The culvert system would cross the area of Pond-1 and bypass a section of WAT-3. The total impacts to jurisdictional waters from the culvert would equal 403,366 square feet or 9.26 acres. This estimate is based on best available information from the project engineer and current land plans.

1.3.2.2 Project Detention Pond

As discussed in the IP Application, the Airport project includes a 26-acre project detention pond. This pond would be constructed at the confluence of WAT-3 and WAT-4 near the eastern perimeter of the project. Both WAT-3 and WAT-4 would be impacted by the excavation and

grading associated with the construction of the detention pond and impoundment of surface water during the operation phase of the Airport. Impacts to waters of the U.S. resulting from the project detention pond would total approximately 6,795 square feet and 0.16 acre. This estimate is based on best available information from project engineer and current land plans.

1.3.2.3 Total Permanent Impacts

Based on current and best available data, the 1,100-acre Airport project has a total of **410,161** square feet or **9.42** acres of jurisdictional waters impacted due to proposed construction, operation, and occupation (Table 1-3). The total linear feet of ephemeral stream impacts is 5,390, which is also included in Table 1-3.

1.3.3 Excavation

There is currently no additional excavation planned, except for that which is attributed to the laying of the culvert system and detention pond construction, which already accounted for in the current impacts analysis.

1.4 Proposed Mitigation Area

The proposed mitigation consists of three areas onsite: 1) approximately 3,484 linear feet and 8.0 acres of plantings along the Colorado River, 2) approximately 4,000 linear feet and 9.2 acres of plantings along an oxbow tributary of the Colorado River, and 3) the 26-acre detention pond (Figure 1). All three mitigation areas are contained within the 1,100-acre Airport project.

1.4.1 Colorado River Frontage Mitigation Area

The Colorado River mitigation area currently consists of floodplain bermuda pastures with interspersed select cottonwood, sycamore, pecan, and cedar elm trees. As shown in Figure 2 and Photo 1, the Colorado River frontage onsite currently does not possess a riparian corridor onsite. The Applicant proposes to enhance the river frontage onsite by planting the immediate frontage with canopy, midstory, and understory native vegetation. This enhancement corridor would span the entire frontage of the Colorado River onsite (approximately 3,484 linear feet) along a 100-foot wide corridor, totaling 8.0 acres. The riparian planting layout is attached as Figure 3 and detailed planting plan is included in Section 4.4 of this document.

Table 1-3. Total Potential Impacts

Waterbody ID[1]	Resource Type[2]	Linear Feet in Project Area	Acres in Project Area	Impact Type[3]	Linear Feet of Impact	Acres of Impact	Cubic Yards of Material to be Discharged	Activity Type[4]
WAT-3	ES	4,423	0.71	D/P	4,423	0.71	43,300	CH
WAT-4	ES	967	0.16	D/P	967	0.16	2,500	CH
Pond-1	I	1,250	8.55	D/P	1,250	8.55	151,700	FP
NFW subtotal								
FW subtotal								
PS subtotal								
IS subtotal								
ES subtotal		5,390	0.87		5,390	0.87	45,800	
I subtotal		1,250	8.55		1,250	8.55	151,700	
TOTAL		6,640	9.42		6,640	9.42	197,500	

[1] Waterbody ID may be the name of a feature or an assigned label such as "W-1" for wetland.

[2] Resource Types: NFW – Non-forested wetland, FW – Forested wetland, PS – Perennial stream, IS – Intermittent stream, ES – Ephemeral stream, I – Impoundment

[3] Impact Types: D/P – Direct* and Permanent, D/T – Direct and Temporary, I/P – Indirect** and Permanent, I/T – Indirect and Temporary
* Direct impacts are here defined as those adverse affects caused by the proposed activity, such as discharge or excavation.
** Indirect impacts are here defined as those adverse affects caused subsequent to the proposed activity, such as flooding or effects of drainage on adjacent waters of the U.S.

[4] Activity Types: BP – Building or Well Pad, RC – Road Crossing, DC – Dam Construction, IN – Inundation, CH – Channelization, BS – Bank Stabilization, UL – Utility Line Installation, DR – Dredging, CL – Clearing, FP – Fill Placement, MA – Mining Activities, or Other

1.4.2 Oxbow Mitigation Area

Immediately west of the Colorado River frontage mitigation area, the Applicant proposes additional plantings along an oxbow that presumably was a historical alignment of the Colorado River. As shown on Figure 2, the oxbow is located within the immediate floodplain of the river. Enhancement plantings along the oxbow would provide additional riparian corridor continuation onsite where no such corridor currently exists. The southern extent of the planting area would begin at the confluence of the oxbow and the Colorado River, and would span from that point northward. From east to west, this planting area would encompass land within the Airport property along the oxbow to the western property line. In total, the oxbow mitigation area would span approximately 4,000 linear feet along a 100-foot wide corridor, totaling approximately 9.2 acres. The riparian planting layout is attached as Figure 3 and detailed planting plan is included in Section 4.4 of this document.

1.4.3 Detention Pond Mitigation Area

As presented in the IP Application, the project includes a 26-acre detention pond near the confluence of WAT-3 and WAT-4. As mitigation for impacts to waters of the U.S., specifically Pond-1, the Applicant proposes to create a permanent surface water body within the detention pond structure and to create a vegetated bench along the perimeter of the detention pond. By design, the detention pond would maintain storm water discharge from the project at pre-development flow rates. In contrast to a traditional detention pond, which fully drains over a 24 to 48 hour period following storm events, the permanent pool would provide a substantially larger surface water feature currently not present onsite.

The detention pond would be planted with aquatic vegetation along the perimeter. A conceptual layout of the detention pond, including its vegetated perimeter bench, is attached as Figure 4. The perimeter bench would extend approximately 20 feet from the 4:1 slope shoreline of the detention pond; a typical profile of the pond cross-section is included as Figure 5. The permanent pool would include approximately 19.5 acres of surface water, including 1.5 acres and 3,200 linear feet of vegetated perimeter bench. The detailed planting plan is included in Section 4.4 of this document.

2.0 SITE SELECTION

USACE guidelines state that the type of compensatory mitigation should be similar to the respective impact type. The jurisdictional impacts from the construction and operation of the Airport are to ephemeral streams (WAT-3 and WAT-4) and one inundated stock tank (Pond-1); there are no impacts to jurisdictional wetlands.

At the confluence of WAT-3 and WAT-4, the Applicant anticipates approximately 2.5 acres of riparian impacts from the construction of the project detention pond discussed above. These ephemeral streams which are to be impacted are currently degraded and semi-degraded channels in improved bermuda pastures. As discussed with the USACE during the December 15, 2010

site visit, the upper 2,822 linear feet of WAT-3 leading to the Pond-1 complex contains no apparent OHWM (see Photo 2), and was determined to not be jurisdictional in this area. Pond-1 is an operating stock tank serving the historical and current cattle operations onsite with no riparian vegetation, vegetated bank or bench apparent (see Photo 3). Most areas on the project have been maintained for cattle operations and have been altered from their original topography and drainage. Additionally, the diversity and proportion of native vegetation has been historically greatly reduced by cattle grazing and hay production operations (see Photo 4).

2.1 Type Alternatives

Three alternatives for the type of compensatory mitigation to be used to offset the impacts to waters were originally proposed: 1) mitigation banking; 2) offsite mitigation preservation and 3) onsite mitigation areas in the form of riparian enhancement/rehabilitation and pond creation (Preferred Alternative).

1) Mitigation Banking

Mitigation banking is the restoration, creation, enhancement, and preservation of wetlands and/or other aquatic resources expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources. Because USACE approved mitigation banks must have approved mitigation plans before credits can be used, USACE guidance gives preference to their use over other forms of wetland mitigation. However, mitigation banks have predetermined service areas and geographic limits to their applicability: banks should ideally be located within the same watershed or county where the bank is expected to provide appropriate compensation for impacts, but might still be considered beyond that service area on a case-by-case basis. As of January 2012, there are no mitigation banks that fit these criteria in the Colorado River watershed available to the Airport project.

2) Offsite Preservation

As there are no mitigation banks available in the area, the Applicant assessed the potential for offsite preservation of jurisdictional waters. Several areas within the Colorado River watershed were discussed and assessed for their viability as offsite mitigation areas. Each of these areas included its own complications of access, preservation, and limitations. Ultimately, the Applicant looked in great detail for ways to incorporate onsite mitigation into the project in order to implement the mitigation as close to the impacts as possible and solely manage the implementation and maintenance of the mitigation measures.

3) Onsite Preservation and Enhancement (Preferred Alternative)

As there are no mitigation banks available in the area and offsite preservation proved complicated, the only logical option left to the Applicant is to offset unavoidable impacts with the preservation and enhancement of onsite riparian corridors and pond features. The enhancement of riparian corridors along the Colorado River and an oxbow tributary to the river, and the creation of a high quality, vegetated permanent pool within the project detention pond were selected as the best option for project mitigation.

2.2 Preferred Alternative

Several mitigation sites were proposed and reviewed; however, as the site selection process has moved forward, many sites were determined impracticable. The site and location that shows the greatest amount of viability is the proposed mitigation area along the Colorado River and an oxbow to the river (Figure 2). This site is considered ideal for seven reasons:

1) Location in the floodplain;
2) Ability to preserve riparian corridors;
3) Access to water;
4) Ability to be partitioned from development;
5) Major collector of site drainage;
6) Ability to survive high-water or flood events; and
7) Ability to be constructed in a timely manner to coincide with the development of the first phases of the project.

In addition to preserving and enhancing a valuable riparian corridor along the Colorado River, creation of a vegetated bench and permanent pool within the detention pond would also improve biodiversity onsite and better attenuate project storm water prior to exiting the project. The replacement of the current primary vegetation (exotic and non-native) with diverse, native and beneficial species will improve wildlife habitat (both aquatic and terrestrial) and allow for better water infiltration.

3.0 GOALS AND OBJECTIVES

This mitigation plan is proposed to compensate for the unavoidable impacts to jurisdictional waters of the U.S. The objectives of this plan within the mitigation area are to:

- Create and preserve 7,484 linear feet and 17.2 acres of riparian corridor along the Colorado River and an oxbow to the river;
- Create 3,200 linear feet and 1.5 acres of vegetated bench along the detention pond; and
- Create 18 acres of permanent, open water habitat within the detention pond onsite.

It is the purpose of this plan to create a sustainable, healthy riparian corridor and buffer of diverse, native vegetation and to create a stable bed and bank that improves water quality and wildlife habitat.

4.0 MITIGATION WORK PLAN

The mitigation area totals approximately 36.7 acres, and is divided into three areas (Figure 1):

- Mitigation Area A, Colorado River: This area consists of 8.0 acres and 3,484 linear feet along the Colorado River. The Applicant proposes to plant native canopy, midstory, and

understory vegetation along this section of the Colorado River to restore the riparian corridor within the project site.

- Mitigation Area B, Oxbow: This area consists of 9.2 acres and 4,000 linear feet and surrounds a historical channel of the Colorado River that currently serves as a primary tributary and backwater flood area. Mitigation Area B is proposed as a continuation of the riparian vegetation enhancement in Mitigation Area A. Mitigation Area B would include the area along the existing side bank of the oxbow tributary.
- Mitigation Area C, Detention Pond: This area consists of 18.0 acres of open water habitat and 3,200 linear feet and 1.5 acres of vegetated bench along the pond perimeter. The perimeter vegetation bench would be planted with native aquatic vegetation.

4.1 Ground Disturbance

Minimal ground disturbance is planned for the planting along Mitigation Areas A and B (near the Colorado River) and substantial ground disturbance is required for the excavation of the project detention pond (Mitigation Area C).

4.1.1 Riparian Plantings

The majority of Mitigation Areas A and B is bermuda grass pasture with native forbs interspersed with native canopy individuals. The bermuda grass in these areas will need to be removed prior to native grass installation. To do this, the ground will be tilled or disked, then immediately covered with mats to prevent soil displacement. Prior to native plantings, the soil will be tilled again and, depending on seed type and season, either re-covered with mats until seed establishment or given way to immediately germinating herbaceous cover.

4.1.2 Detention Pond Plantings

No additional ground disturbance would be required specific to the plantings of the vegetated bench within the detention pond's permanent pool. All ground disturbances (excavation and grading) of the detention pond would be executed and completed prior to the installation of vegetated bench plant species.

4.2 Hydrology

The water bodies along Mitigation Areas A and B are the Colorado River and a primary tributary to the river, respectively. The detention pond, Mitigation Area C, is located at the confluence of tributaries to the Colorado River. The proposed mitigation plan includes planting activities within Mitigation Areas A and B and grading activities within Mitigation Area C. For the purposes of establishing vegetation, supplemental water may be supplied for at least two years, or as necessary, until the plants are able to withstand natural weather conditions (heat, drought). Supplemental water may be brought in, supplied by an existing well, or with an additional well, as deemed practical by current conditions.

4.3 Substrate and Supplemental Soil

The proposed Mitigation Areas A and B are comprised of two soil types (Figure 6) (SCS 1979):

- Lincoln (Ls), slopes less than 0.5 percent;
- Norwood silty clay loam (No), slopes less than 0.5 percent; and

The Lincoln and Norwood series are described below:

Lincoln Soils

The Lincoln series consists of deep, nearly level, excessively drained, sandy soils. These soils are on crescent-shaped floodplains in bends of the river on bottom lands. They formed in sandy, mixed sediment of recent age. The native vegetation is coarse bunchgrasses and scattered willow and cottonwood trees.

Norwood Series

The Norwood series consists of deep, nearly level, well drained, loamy soils. These soils are on protected floodplains on bottomlands along the river. They formed in calcareous, loamy alluvial sediment of mixed origin. The native vegetation is pecan, elm, oak, cottonwood and hackberry trees with an understory of bunchgrasses.

In a representative profile the surface layer is brown silty clay loam about 12 inches thick. The next lower layer, to a depth of 24 inches, is light-brown silty clay loam. The next lower layer, to a depth of 60 inches, is light-brown silt loam thinly stratified with fine sandy loam.

The proposed Mitigation Areas A and B overlay Quaternary Alluvium (Qal) geology (Figure 7) (Barnes 1974). Qal includes floodplain deposits consisting of clay, silt, sand, and gravel; and silt and clay. This unit is calcareous to the surface, and dark gray to dark brown. The sand is largely quartz.

4.4 Planting Plan

The proposed plan involves the planting of shade trees, midstory trees, shrubs, grasses, and other herbaceous species in zones around the river and oxbow corridors. In Mitigation Areas A and B, seedlings, shrubs, and shade trees will be planted using USACE recommended guidelines of no less than 300 bare root seedlings and 400 shrubs per acre (USACE 2003). Grasses and other herbaceous species will be installed at a rate most likely resulting in a minimum of 80 percent ground cover in all practicable areas of Mitigation Areas A and B.

Final species determination will be dependent upon the final layout and local species availability at the time of planting. Native American Seed from Junction, Texas produce habitat specific seed mixes that are applicable to the proposed mitigation areas (see Figure 8). The planting may include some of the following species:

Woody Species: black willow (*Salix nigra*), cedar and American elm (*Ulmus crassifolia, americana*), live oak (*Quercus fusiformis*) and other various oaks (*Quercus* spp.), pecan (*Carya*

illinoensis), sycamore (*Platanus occidentalis)*, flameleaf sumac (*Rhus lanceolata*), Mexican plum (*Prunus mexicana*), yaupon holly (*Ilex vomitoria*), possum haw (*Ilex decidua*), rattlebox (*Sesbania punicea*), water hickory (*Carya aquatica*), river birch (*Betula nigra*), bald cypress (*Taxodium distichum*), and water locust (*Gleditsia aquatica*).

Herbaceous Species (transitional and submersible varietals): bushy bluestem (*Andropogon glomeratus*), switchgrass (*Panicum virgatum*), little bluestem, (*Schizachryium scoparium*), big muhly (*Muhlenbergia lindheimeri*), duckweed (*Lemna* spp.), pondweed (*Potamageton* spp.), sedges/caric sedges (*Carex* spp.), flat sedges (*Cyperus* spp.), spike-rushes (*Eleocharis* spp.), rushes (*Juncus* spp.), southern naiad (*Najas guadalupensis*), maidencane (*Panicum hemitomon*), smartweeds and knotweeds (*Polygynum* spp.), bladderwort (*Utricularia* spp.), and bulrushes (*Schoenplectus* spp.).

Species will be chosen and placed with an emphasis on diversity, compatibility and locally adapted specimens. The plantings will be designed to mimic a natural mosaic that will serve as wildlife habitat, a visual buffer, a water quality filter, and shade. All plantings will be done under the supervision of a person knowledgeable in native restoration/landscaping during the optimal season. Woody species will be placed by hand to allow for flexibility in choosing appropriate species for each location. Seeds will be broadcast to maximize coverage, and other herbaceous plants will be installed by hand in a manner similar to woody species installation.

5.0 PERFORMANCE STANDARDS

5.1 Success Criteria

The status of the mitigation areas would be evaluated annually for the first five years (minimum) following the plantings. This would be accomplished by a combination of the following: photo point analysis, visual inspection, and/or vegetative sampling of the entire mitigation area.

Herbaceous plantings must exhibit a minimum of 80 percent ground cover three years after planting, or be replanted until that success is achieved at three years from the most recent planting. A species composition or relative dominance analysis must reveal that none of the three most dominant species are exotic, invasive, or noxious.

An 80 percent healthy survival rate for trees and shrubs would be required. Replanting would be done as needed in order to achieve the survival rates. Volunteer individuals would be included if they are of the same species detailed in the mitigation plan and are of minimum standards.

5.2 Performance Standards

The Applicant is required to meet the following performance standards within the mitigation area as outlined in the USACE Draft Mitigation Guidelines – December 24, 2003:

a) Waters of the U.S. meet the definition of a waters of the U.S. under the Regulatory Program regulations applicable at the time the project is authorized;

b) Both wetlands and waters of the U.S. meet the definition of a wetlands under the Regulatory Program regulations applicable at the time the project is authorized;
c) Waters of the U.S. are functioning as the intended type of waters of the U.S. and at the level of ecological performance prescribed in the mitigation plan; and
d) Buffer and riparian zones and other non-aquatic areas integral to the enhancement of the aquatic ecosystem function as the intended type of ecosystem component and at the level of ecological performance prescribed in the mitigation plan.

5.3 Project Maintenance and Management

The Applicant will be responsible for maintaining the created mitigation features to comply with any Special Conditions until such time as the Applicant provides documentation to, and receives verification from the USACE that areas within the mitigation area intended to become wetland vegetation, and other aspects integral to the enhancement of the aquatic system are functioning as the intended type of ecosystem component and at an acceptable level of ecological performance.

The applicant will establish and implement a self-monitoring program that includes the following actions:

1. Designation, in writing, of a responsible party to coordinate with the USACE Regulatory Branch, Fort Worth District concerning onsite inspection and compliance with permit conditions;
2. Notification to the USACE of the schedule of activities for each phase of the Airport project at least 30 days prior to the start of soil-disturbing activities; and
3. Implementation of a reporting program that will include annual written compliance reports to the USACE, due October 1 each year. The applicant will include in each report any schedule changes and a summary of all activities that occurred during the reporting period, including demonstration of the Applicant's compliance with the individual permit conditions and documentation of the progress and/or completion of all authorized work, including mitigation activities. Each report will address whether disturbed areas are revegetating adequately and not suffering erosion damage.

An initial inspection and report will be prepared and submitted to the USACE upon project completion documenting the state of the proposed mitigation area. Subsequent reports will be prepared annually for five years following project completion and submitted to the USACE for evaluation and approval.

Routine maintenance may include some or all of the following, but is not limited to: mowing, debris and litter removal, erosion control, nuisance control, and sediment removal.

The Applicant will implement the mitigation plan concurrently with the construction of the project. In addition, the Applicant will retain a qualified mitigation specialist (biologist/ecologist) to oversee project construction to the extent necessary to ensure compliance

with all mitigation requirements. The Applicant will have this mitigation specialist conduct all monitoring and produce all monitoring reports. The Applicant will designate, in writing, to the USACE the mitigation specialist 30 days following the initiation of construction.

6.0 COMPLIANCE WITH OTHER LEGAL REQUIREMENTS

6.1 Endangered Species Act

The IP Application submittal discussed the potential occurrence of three endangered or threatened species in Bastrop County: the whooping crane (*Grus americana*); Houston toad (Bufo *houstonenis*); and Navasota ladies'-tresses (Spiranthes parksii); and one protected species, the bald eagle (*Haliaceetus leucocephalus*).

As detailed in the January 2011 IP Application, based on the field investigations conducted by **aci consulting** scientists, no endangered or threatened species or their habitat have been identified within the limits of the Airport site, including the proposed mitigation area. Bald eagles, a delisted protected species, have historically utilized the Colorado River near the Airport. Detailed surveys by **aci consulting** concluded that there are no eagle nests located on or adjacent to the property, including the mitigation area. Any eagle nests encountered during construction or maintenance of the mitigation area will be protected in accordance with the National Bald Eagle Management Guidelines (USFWS 2007).

6.2 Cultural Resources

In December of 2010 and January of 2011, **aci consulting** conducted an intensive archeological survey of the jurisdictional waters (WATs) located within the Area of Potential Effect (APE) of the proposed Airport. The proposed project includes two tributaries and a stock pond that are considered jurisdictional waters of the U.S. **aci consulting** was retained by CTA, LLC to conduct this survey as part of the application for an IP from the USACE.

Archeologists from **aci consulting** excavated 12 shovel tests and 7 backhoe trenches in the eastern portion of the proposed project area. One shovel test yielded a single fragment of debitage, but it appeared to have been redeposited. None of the backhoe trenches yielded cultural material or evidence of cultural features. The western portion of the proposed project area, including the stock pond, was inaccessible to the crew due to cattle calving operations, but an initial reconnaissance suggests that this portion of the property has been heavily disturbed through modifications to the stock pond. The probability of encountering intact cultural materials in this area is considered to be very low. Based on the results of the pedestrian survey, shovel testing, backhoe trenching, and reconnaissance, **aci consulting** recommends no further archeological investigations.

As the project is currently planned, including the proposed mitigation site, there are no anticipated adverse effects to known eligible or potentially eligible National Register of Historic Places (NRHP) cultural resources. **aci consulting** has conducted intensive cultural resources

investigations within Mitigation Area C, the detention pond and may conduct minimal field investigations within Mitigation Areas A and B prior to commencement of grading and planting in order to verify the findings.

7.0 CONTINUING MANAGEMENT

Upon preliminary approval of the proposed mitigation location and activities, long-term management, monitoring and contingency plans will be submitted for approval by the USACE. These plans will include a preliminary schedule for activities, a detailed operation and maintenance plan, monitoring and reporting plans, and a contingency plan. Included in these plans will be the parties responsible for overseeing, implementing, and/or managing the duties outlined in the individual plans, both in the short-term and in perpetuity, as applicable. The mitigation site is to be protected as a permanent conservation easement, to be maintained financially by CTA, LLC.

8.0 REFERENCES

Barnes, V.E. 1974. Geologic Atlas of Texas, Austin Sheet. Bureau of Economic Geology, The University of Texas at Austin.

(SCS) Soil Conservation Survey. 1979. *Soil Survey of Bastrop County, Texas*. Austin: United States Department of Agriculture, Texas Agriculture Experiment Station.

(USACE) U.S. Army Corps of Engineers. 2003. Draft Mitigation Guidelines. Fort Worth District. December 24, 2003.

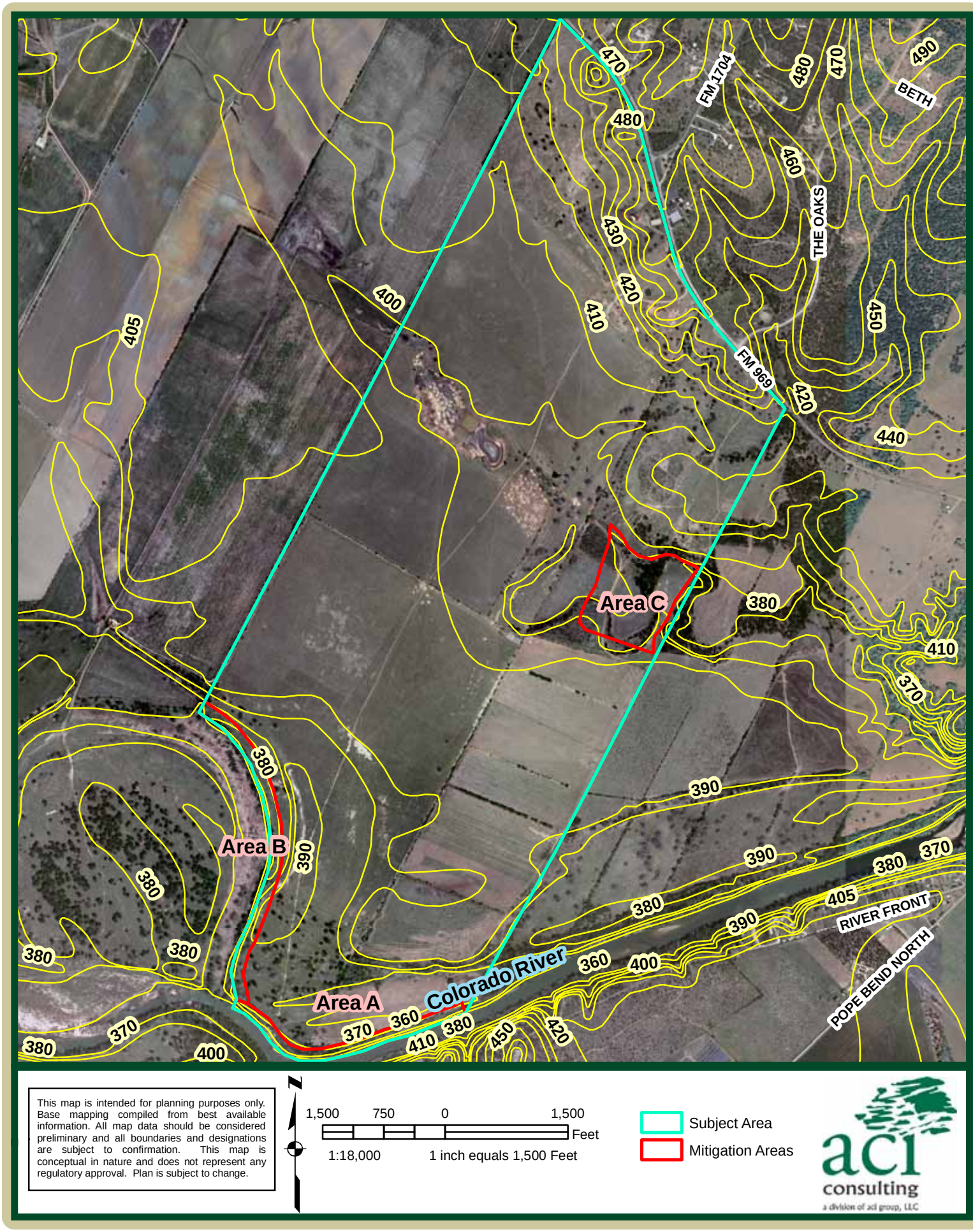
(USFWS) U.S. Fish and Wildlife Service. 2007. *National Bald Eagle Management Guidelines*.

APPENDIX A

MITIGATION FIGURES AND PHOTOGRAPHS

Central Texas Airport

Figure 1: Mitigation Area with Contours

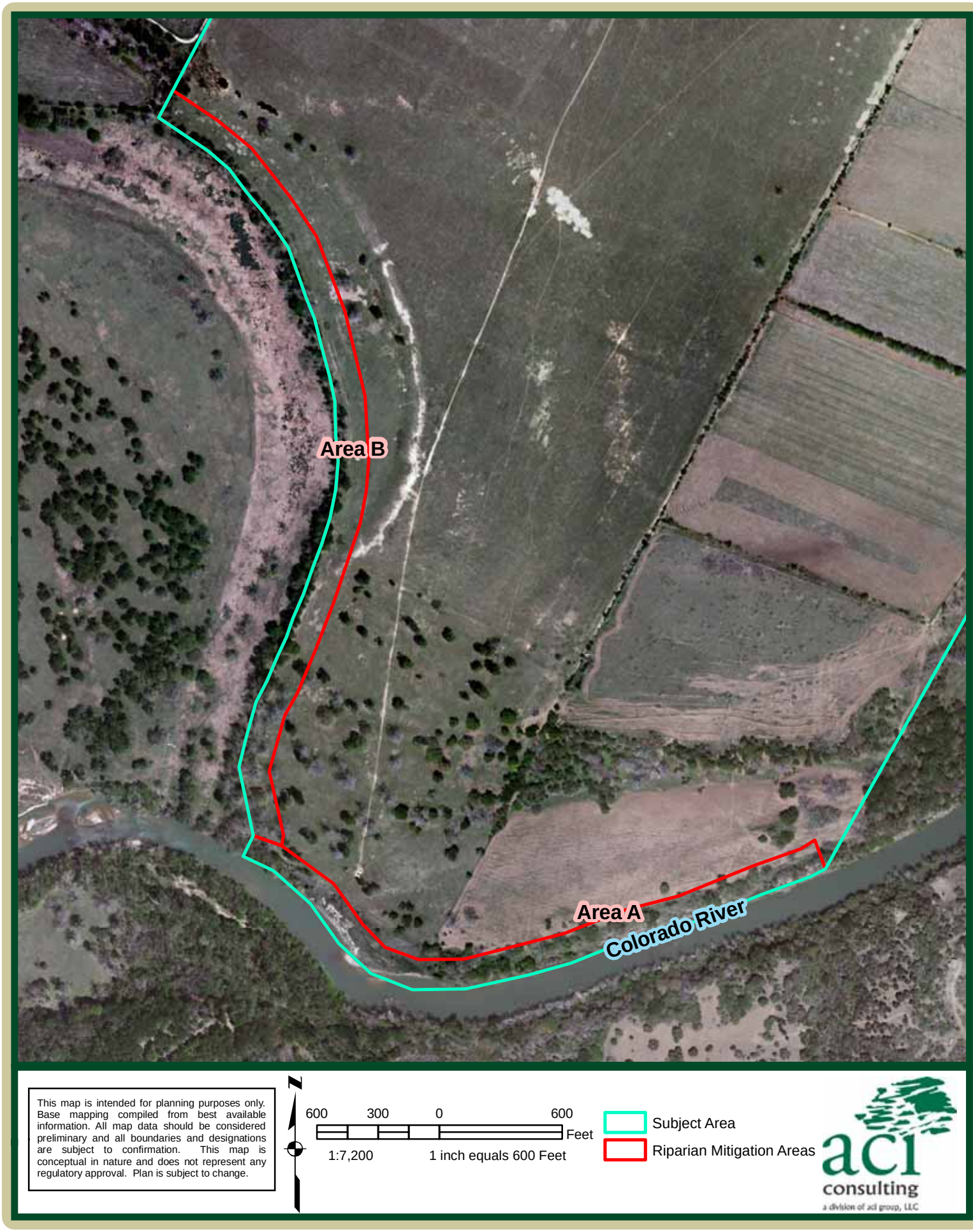


This map is intended for planning purposes only. Base mapping compiled from best available information. All map data should be considered preliminary and all boundaries and designations are subject to confirmation. This map is conceptual in nature and does not represent any regulatory approval. Plan is subject to change.

aci consulting
a division of aci group, LLC

Central Texas Airport

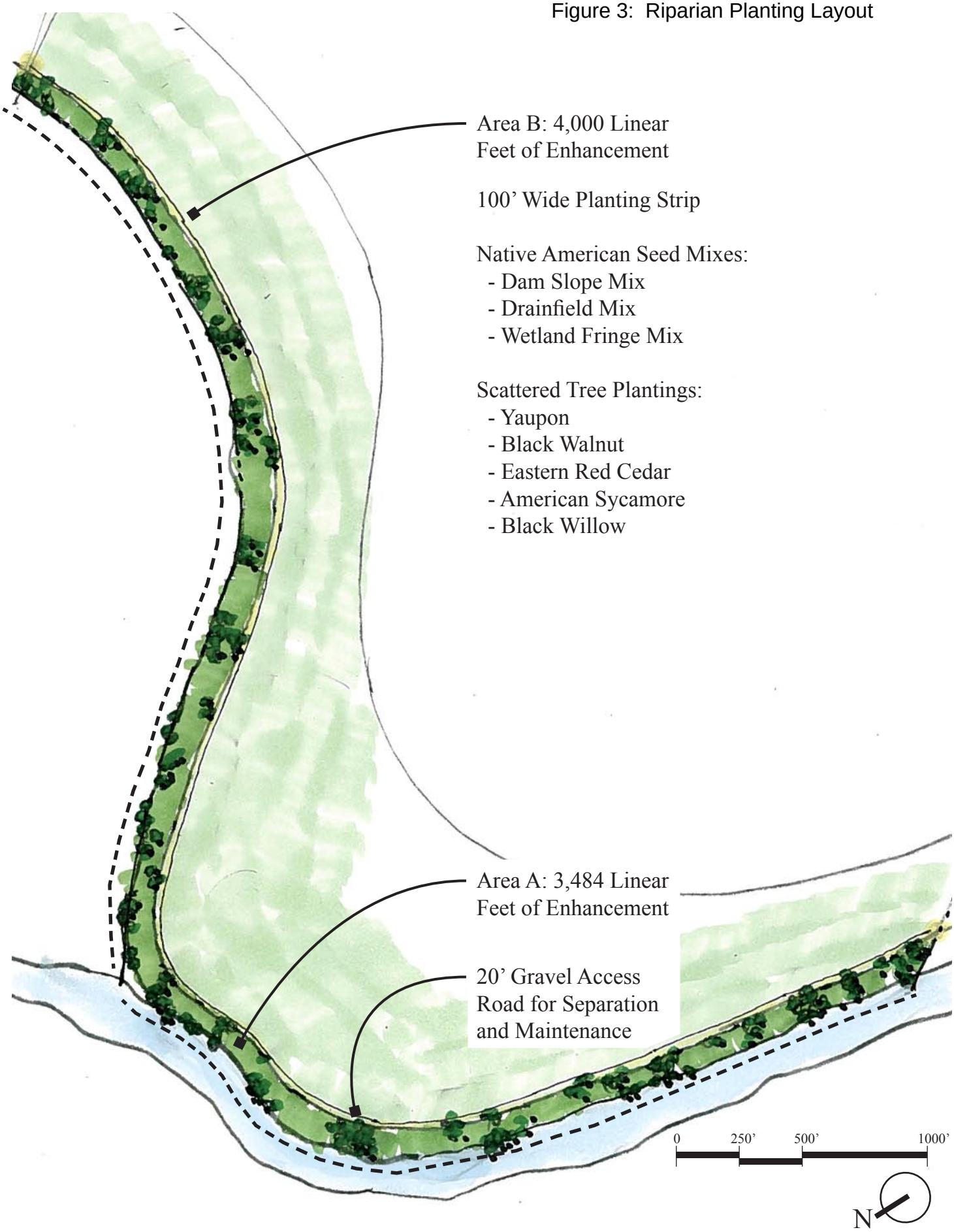
Figure 2: Riparian Mitigation Areas



Central Texas Airport
USACE Project No. SWF 2010-506

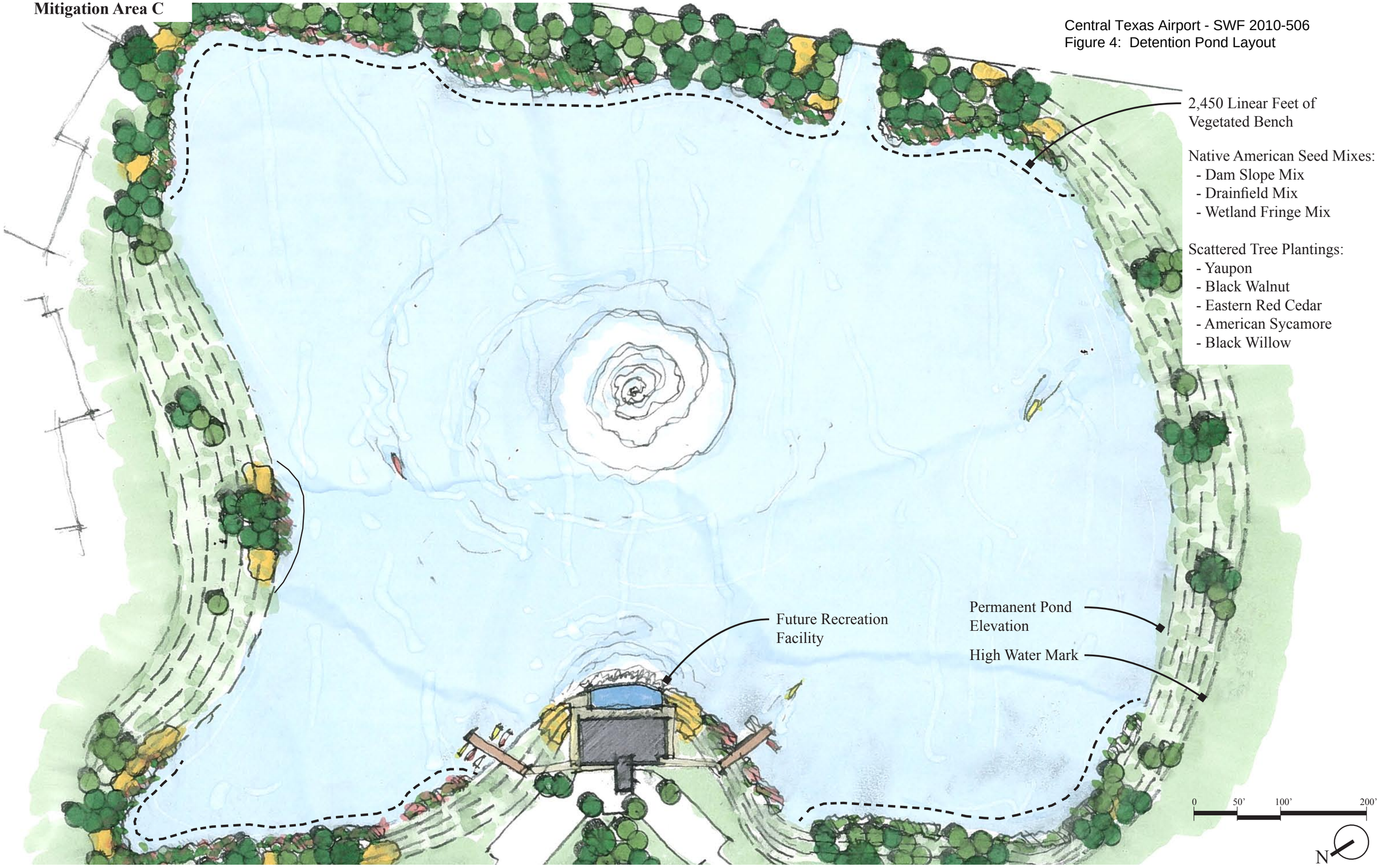
Mitigation Area A & B

Central Texas Airport - SWF 2010-506
Figure 3: Riparian Planting Layout



Central Texas Airport - SWF 2010-506
Figure 4: Detention Pond Layout

Mitigation Area C



Mitigation Area C Plantings

Figure 5: Detention Pond Cross-section

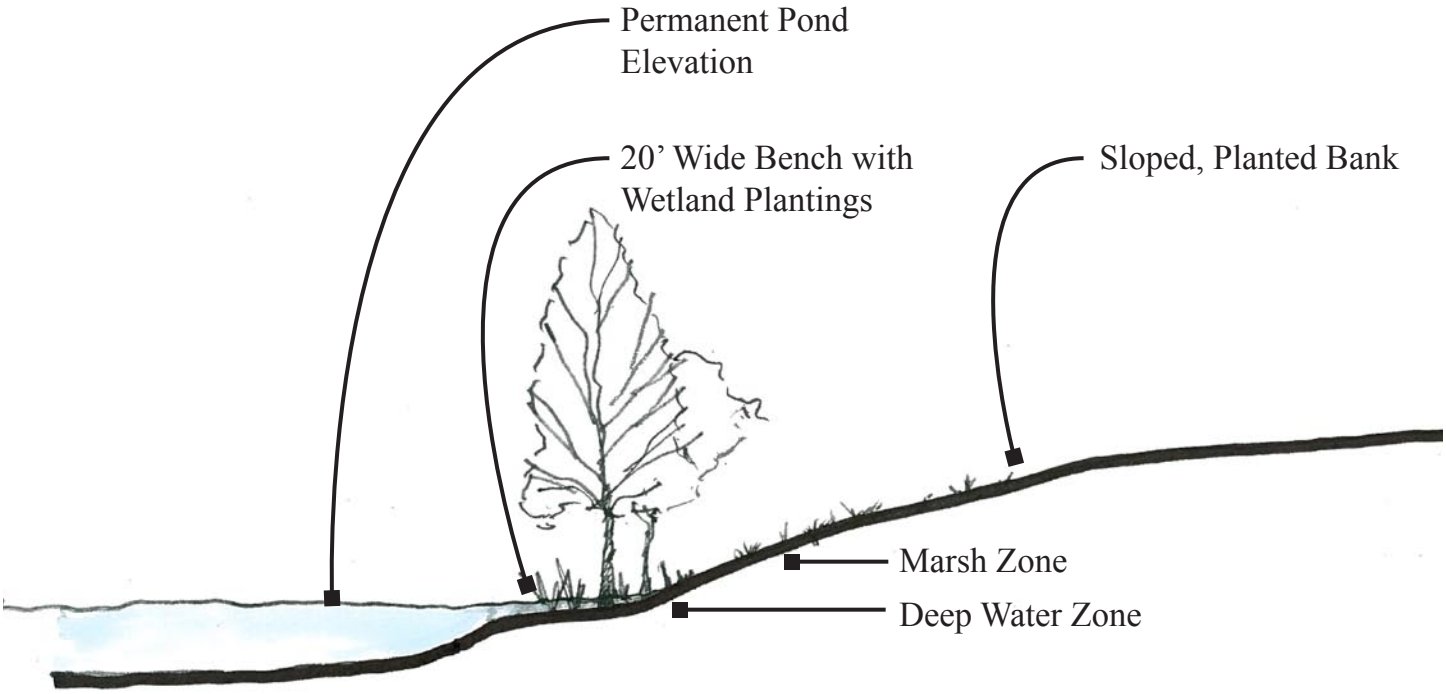


Table 1-9F
Marsh Zone Plants

Common Name	Latin Name	Height	Required	Comments and Planting
American water-willow	Justicia americana	3'	x	-3" to -12", forms solid mass
Arrowhead	Sagittaria platyphylla (lancifolia, latifolia, graminae)	2'	x	-3" to -12", wildlife value, white flowers
Canna lily (native)	Canna flaccida	2.5'		-3" to -12", yellow flowers
Hard-stem bulrush	Schoenoplectus acutus*	6'		-3" to -12"
Iris	Iris (fulva, hexagona, virginica)	3'		-3" to -12", colorful flowers
Pickerelweed	Pontederia cordata	3'		-6" to -12", flower spikes
Powdery thalia	Thalia dealbata	5'		-3" to -12", purple flowers
Spikerush (tall)	Eleocharis (rostellata, quadrangulata, cellulosa)	2.5'	x	-3" to -12", colonizing evergreen
Three-square bulrush	Schoenoplectus americanus*	4'		-3" to -12", triangular stems

* The genus which was formerly known as Scirpus is now known as Schoenoplectus

Figure 3: Riparian Planting Layout

Mitigation Area C Plantings

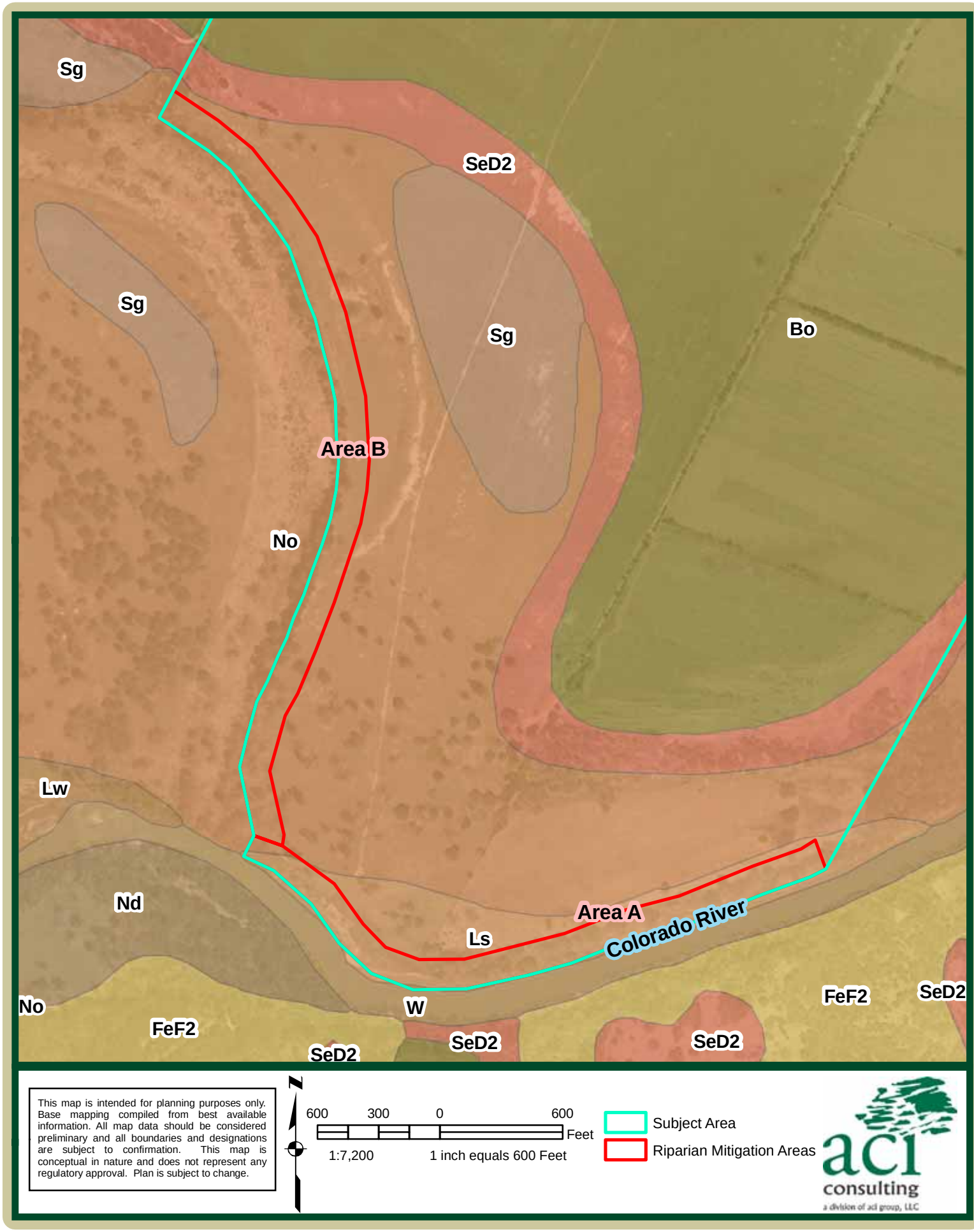
Table 1-9G
Deep Water Zone Plants

Common Name	Latin Name	Height	Required	Comments and Planting Information (Permanent Pool Elevation = 0")
American waterweed	Elodea canadensis	8'		Submergent oxygenator
Coontail	Ceratophyllum demersum	6'		Submergent for nutrients
Fanwort	Cabomba caroliniana	6'		Submergent oxygenator
Giant bulrush	Schoenoplectus* (tabernaemontani, californicus)	8'		Emergent 8 ht. Evergreen; 2 acre min. pond size
Pondweed	Potamogeton pectinatus (nodosus, diversifolia, illinoensis)	4'	x	Floating-leaved aquatic, benefits wildlife
Water lily	Nymphaea (odorata, elegans, mexicana)	8'		Floating-leaved aquatic; 2 acre min. pond size
Water-naiad	Najas guadalupensis	4'	x	Common submergent
Water star grass	Heteranthera dubia (Liebmannii)	5'		Submergent oxygenator

* The genus which was formerly known as Scirpus is now known as Schoenoplectus

Central Texas Airport

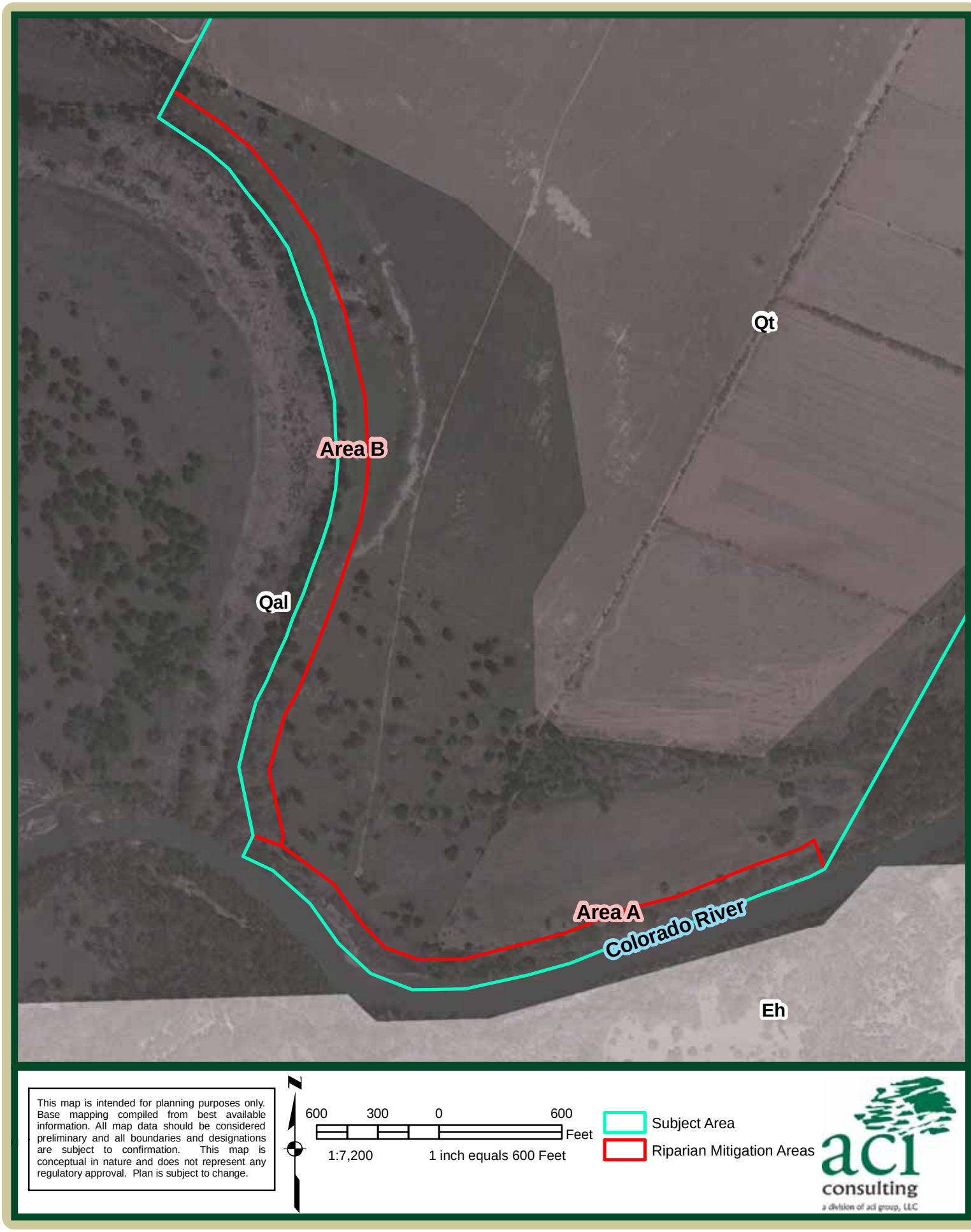
Figure 6: Riparian Mitigation Area Soils



Central Texas Airport
USACE Project No. SWF 2010-506

Central Texas Airport

Figure 7: Riparian Mitigation Area Geology



This map is intended for planning purposes only. Base mapping compiled from best available information. All map data should be considered preliminary and all boundaries and designations are subject to confirmation. This map is conceptual in nature and does not represent any regulatory approval. Plan is subject to change.

N

600 300 0 600 Feet

1:7,200 1 inch equals 600 Feet

Subject Area

Riparian Mitigation Areas

aci consulting
a division of aci group, LLC

Central Texas Airport
USACE Project No. SWF 2010-506

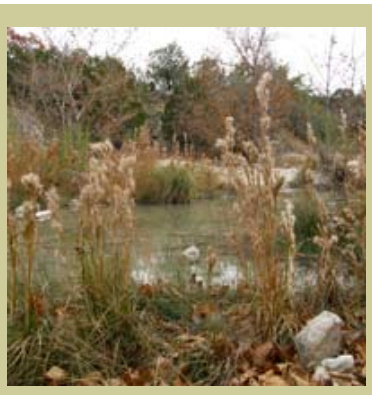
Grass Mixes for All Mitigation Areas

NATIVE AMERICAN SEED

Wetland Fringe Mix

Item #: 1807
Category: Wildflower Mixes
Habit: Annual & Perennial
Height: to 5'
Planting Rates:
20 lb. per acre
1/4 lb. per 500 sq. ft.
1 packet per 20 sq. ft.

SOIL TYPE				SUNLIGHT				Soil Moisture
Sand	Loam	Clay	Caliche	Full	Partial	Dappled	Shade	
X	X	X		X	X			Moist



Drainfield Mix

Item #: 2861
Category: Grass Mixes
Habit: Perennial
Height: to 5'
Pl

Figure 3: Riparian Planting Layout

30 lbs. per acre
1 lb. covers 1,290 sq. ft.
For denser and faster coverage, increase grass seeding rates 2-10 times.

SOIL TYPE				SUNLIGHT				Soil Moisture
Sand	Loam	Clay	Caliche	Full	Partial	Dappled	Shade	
X	X	X		X				Medium Moist

Dam Slope Mix

Item #: 2808
Category: Grass Mixes
Habit: Perennial
Planting Rates:
20 lbs per acre
1 lb covers 2,000 sq ft
D-Pak covers 200 sf.

SOIL TYPE				SUNLIGHT				Soil Moisture
Sand	Loam	Clay	Caliche	Full	Partial	Dappled	Shade	
X	X	X	X	X				dry, medium, moist

Photo 1: Colorado River frontage at the southern extent of the project area; facing south, toward the Colorado River

Photo 2: WAT-3, in main cattle pasture; facing west toward Pond-1

Photo 3: Downstream extent of Pond-1, facing east.

Photo 4: Main cattle pasture, facing west.