

**Environmental Assessment and Habitat Conservation Plan  
for Issuance of an Endangered Species Act Section 10(a)(1)(B) Permit  
for the Incidental Take of the Golden-cheeked Warbler (*Dendroica chrysoparia*)  
During Construction and Operation of a Mixed-use Development  
on a Portion of THE CROSSINGS Property, Austin, Travis County, Texas**

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**July, 2000**

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## COVER SHEET

Title for Proposed Action: Issuance of an Endangered Species Act Section 10(a)(1)(B) permit for the incidental take of the golden-cheeked warbler (*Dendroica chrysoparia*) during construction and operation of mixed-use development on a portion of The Crossings property, Austin, Travis County, Texas.

Unit of the U.S. Fish and Wildlife Service Proposing the Action: Regional Director, Region 2, U.S. Fish and Wildlife Service, Albuquerque, New Mexico.

Legal Mandate for Proposed Action: Endangered Species Act of 1973, as amended, Section 10(a)(1)(B), as implemented by 50 CFR 17.22.

Document Author: Scott Rowin, Ecological Services, U.S. Fish and Wildlife Service, 10711 Burnet Road, Suite 200, Austin, Texas 78758.

## **1.0 INTRODUCTION**

The Crossings (“Applicant”; Kenneth H. Beck), a limited partnership, has filed an application under Section 10(a)(1)(B) of the Endangered Species Act (Act) to allow the incidental take of the listed endangered golden-cheeked warbler (*Dendroica chrysoparia*) during the otherwise lawful construction and occupation of a conference and retreat complex, with associated access roads, utilities, and other improvements and facilities, on portions of the approximately 201.7-acre property known as The Crossings. The Crossings property is located north of F.M. 2769 on the north side of Lake Travis approximately 14.5 miles northwest of downtown Austin in western Travis County, Texas (Figure1). A habitat conservation plan (HCP) has been included as part of the proposed development plan. This plan (Section 6.0 of this document) will provide for the avoidance and minimization of, and mitigation for, potential impacts to the golden-cheeked warbler to the greatest extent practicable.

## **2.0 PURPOSE AND NEED FOR ACTION**

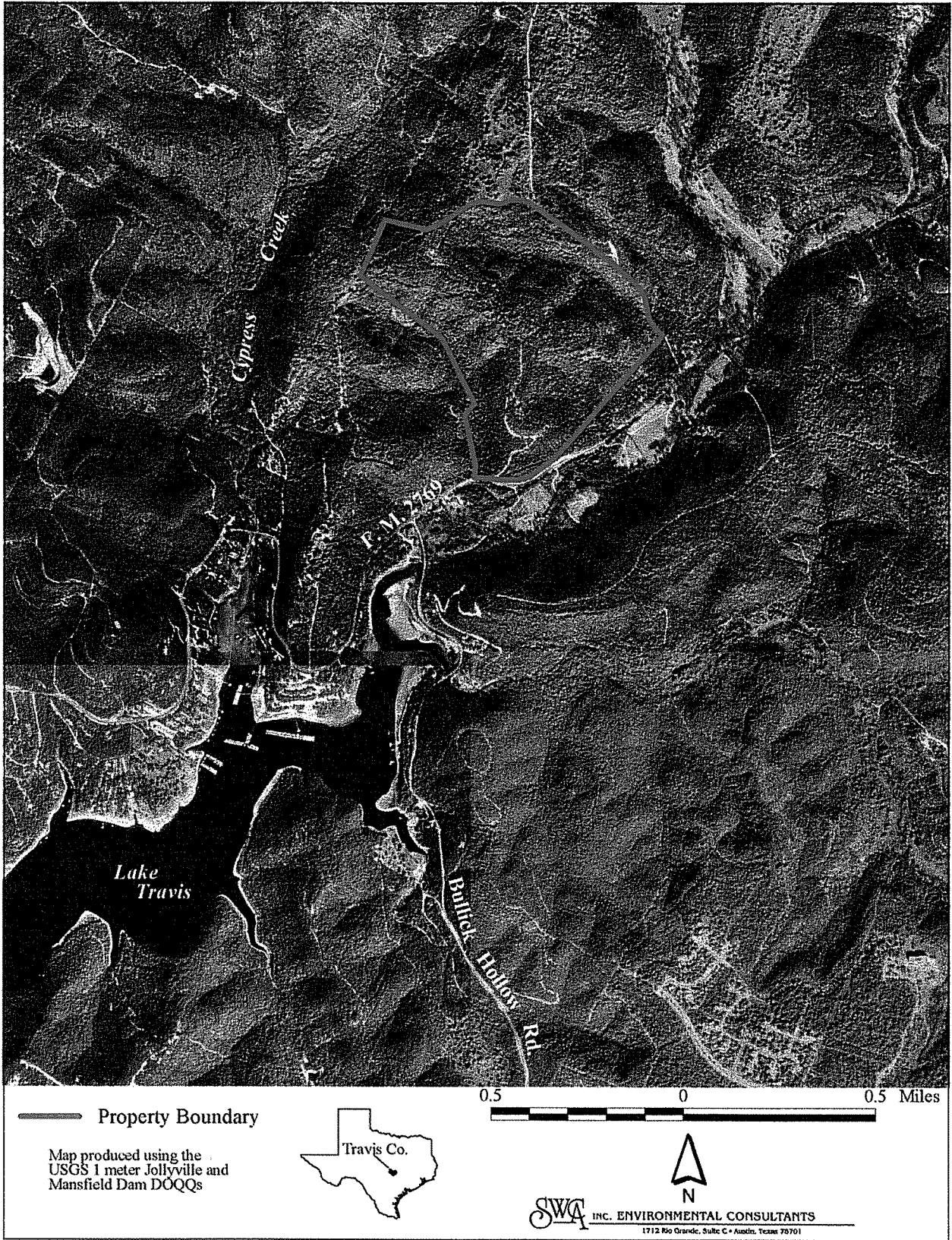
The purpose of this Environmental Assessment/Habitat Conservation Plan (EA/HCP) is to evaluate environmental impacts of the issuance of a section 10(a)(1)(B) permit for the preferred alternative and the other alternatives that are being considered. The permit would authorize the mixed-use development of a portion of The Crossings property and allow for the incidental take of the federally listed GCW. This EA/HCP will establish the conditions under which the Applicant will meet the requirements for a section 10(a)(1)(B) permit under the Endangered Species Act. The need for the permit is to minimize and mitigate for adverse impacts to the federally listed endangered golden-cheeked warbler (GCW), and thereby contribute to the species’ recovery, while allowing otherwise lawful development to proceed.

## **3.0 DESCRIPTION OF AFFECTED ENVIRONMENT**

### **3.1 VEGETATION**

Topography of the property is dominated by a large central ridge with steep-sided canyons present to the east and west. The top of the ridge is relatively flat and slopes gradually downward toward F.M. 2769 in the south-central portion of the tract.

Vegetation on the ridgetop consists of relatively dense woodland dominated by Ashe juniper (*Juniperus ashei*), with moderate densities of deciduous and live oak (*Quercus virginiana*) trees. Deciduous trees present include Texas oak (*Quercus texana*), cedar elm (*Ulmus crassifolia*), and shin oak (*Quercus sinuata* var. *breviloba*). Understory vegetation on the ridgetop is relatively sparse and primarily consists of dead juniper branches, that have been shaded out through tree growth, and a few shrubs. Shrub species present include Texas persimmon (*Diospyros texana*), agarita (*Berberis trifoliolata*), prickly pear (*Opuntia lindheimeri*), and elbowbush (*Forestiera pubescens*). An approximately 0.8-acre grassy opening is present in the northern portion of the ridgetop. This area was cleared in the past and now contains scattered burn piles with a few live



**Figure 1. The Crossings Project Location Map.**

oak and Ashe juniper saplings scattered around the periphery. The lower slope of the ridgetop and the eastern slope of the eastern canyon are more xeric due to poor soil development. Vegetation in these areas consists predominantly of scrubby Ashe juniper with scattered open rocky areas. Deciduous and live oak trees are present in extremely low densities in these areas.

Vegetation within the western canyon and remaining portions of the eastern canyon consists of a mixed Ashe juniper/live oak woodland with moderate densities of deciduous trees. Texas oak is the dominant deciduous tree species within these areas; other species present include cedar elm, shin oak, escarpment black cherry (*Prunus serotina* var. *eximia*), Arizona walnut (*Juglans major*), Texas ash (*Fraxinus texensis*), and hackberry (*Celtis laevigata*). In general, deciduous tree densities are higher on the floors of the canyon drainages and within small side tributaries to these drainages. Some canyon side slopes support almost pure stands of Ashe juniper. Shrub development within the canyons is low to moderate; shrub species present include Texas persimmon, agarita, common hop-tree (*Ptelea trifoliata*), rough-leaved dogwood (*Cornus drummondii*), redbud (*Cercis canadensis*), yaupon (*Ilex vomitoria*), and Carolina buckthorn (*Rhamnus caroliniana*).

### **3.2 WILDLIFE**

Bird surveys specifically designed to determine the status of the GCW were conducted on The Crossings property by SWCA, Inc. Environmental Consultants in 1999. To our knowledge, no other specific animal surveys have been conducted on the property but wildlife is expected to be typical of the area.

Common mammals observed incidentally by SWCA or expected to occur on the property include opossum (*Didelphis virginiana*), armadillo (*Dasypos novemcinctor*), fox squirrel (*Sciurus niger*), raccoon (*Procyon lotor*), feral hog (*Sus scrofa*), and white-tailed deer (*Odocoileus virginianus*). Common permanent resident bird species on the property include western scrub jay (*Aphelocoma coerulescens*), tufted titmouse (*Baeolophus bicolor*), Carolina chickadee (*Poecile carolinensis*), Bewick's wren (*Thryomanes bewickii*), and northern cardinal (*Cardinalis cardinalis*).

### **3.3 LISTED, PROPOSED, AND CANDIDATE SPECIES**

Nine animal species that occur in western Travis County are listed as endangered by the U.S. Fish and Wildlife Service (Service). These species include two birds, the golden-cheeked warbler and black-capped vireo (*Vireo atricapillus*), six cave-dwelling invertebrates, the Tooth Cave pseudoscorpion (*Tartarocreagris texana*), Tooth Cave spider (*Neoleptoneta myopica*), Tooth Cave ground beetle (*Rhadine persephone*), Kretschmar Cave mold beetle (*Texamaurops reddelli*), Bee Creek Cave harvestman (*Texella reddelli*), and Bone Cave harvestman (*Texella reyesi*), and one amphibian, the Barton Springs salamander (*Eurycea sosorum*). Of these nine species, only the GCW is known to occur on The Crossings property. Two other animals, the Jollyville Plateau salamander (*Eurycea* sp.) and Texas salamander (*Eurycea neotenes*), and two plants, bracted twistflower (*Streptanthus bracteatus*) and canyon mock-orange (*Philadelphus*



*ernestii*), are considered to be rare in Travis County and protection for some of these species is provided for in the Balcones Canyonlands Preserve (BCP), a regional habitat conservation plan for western Travis County (RECON and Service 1996).

The GCW was emergency listed in May 1990 and listed under the regular listing process in December of that same year. An estimated eight male GCWs were present on The Crossings in 1999; the birds were present in both the west and east canyons and in some ridgetop areas. The black-capped vireo was listed in November 1987. No potentially suitable habitat for the black-capped vireo is present on or adjacent to The Crossings property and no vireos were detected on the property by SWCA during the 1999 warbler survey.

The six species of endangered cave invertebrates are believed to be restricted to karst features formed within the Edwards geologic formation in Travis and Williamson counties. Upland portions of The Crossings property are underlain by Edwards limestone. Surveys for caves, sinkholes, and other significant karst features were conducted on the entire property by SWCA in the spring of 1999. No caves or other significant karst features were discovered on or immediately adjacent to the property. Therefore, the occurrence of any of the six cave invertebrates on The Crossings is considered unlikely.

The Barton Springs salamander is known only from four inter-connected springs located in or near a city park near downtown Austin, approximately 13.7 miles southeast of The Crossings property. These springs are fed by flow from the southern Edwards aquifer. The recharge zone for this aquifer consists of a portion of the surface outcrop of the Edwards limestone south of the Colorado River in Travis and northern Hays counties (the county directly south of Travis). Additional recharge is received from a contributing zone formed by the watersheds of creeks that lie upstream of the recharge zone. The Crossings property lies north of the Colorado River and outside of the recharge and contributing zones of the southern Edwards aquifer (Slade et al. 1986); therefore, surface water run-off from the property does not have the potential to adversely impact the Barton Springs salamander.

The Jollyville Plateau salamander was historically considered conspecific with the Texas salamander, a species that was designated as a Federal Category 2 Candidate in 1982. Based in part on subsequent taxonomic studies (summarized in Chippindale et al. 1994), the Service designated the "Jollyville Plateau salamander" as an undescribed species and a Federal Category 2 Candidate species in 1994. The Service discontinued its Category 2 Candidate designation in 1995 and, as a result, the Jollyville Plateau salamander currently has no Federal status. The salamander occurs at springs and in spring-fed creeks associated with the Edwards Formation in Travis and Williamson counties. The Crossings property lies within the general range of the Jollyville Plateau salamander and contains a few small springs. It is not known if the Jollyville Plateau salamander occurs on The Crossings property.

Texas salamanders are known to occur at only one location in Travis County, approximately 18.7 miles southwest of The Crossings property. The Crossings property and the Texas salamander

location are in different watersheds; therefore, any activities occurring on The Crossings do not have potential to adversely affect the Texas salamander.

No specimens of bracted twistflower or canyon mock-orange have been found on The Crossings property and no portions of the property have been identified as potential habitat for the two plants (McNeal 1989). The nearest known occurrence of bracted twistflower is approximately 7.3 miles to the southeast and the nearest known location of canyon mock-orange to the property is roughly 4.6 miles, also to the southeast.

### **3.4 GEOLOGIC FEATURES AND SOILS**

The Crossings property is located on rolling hills near the eastern end of the Edwards Plateau. Surface geology of the ridgetop consists of the basal unit of the Edwards Limestone Formation, which is generally conducive to the development of karst features. The Walnut Formation is exposed on the side slopes of the canyons and the Glen Rose Formation is exposed on the canyon bottoms. All three formations are of Lower Cretaceous age. Both the Walnut and Glen Rose Formations are composed of limestones, dolomites, and marls and are generally not conducive to the formation of karst features.

Three types of soils are found on The Crossings property. *Tarrant soils, rolling* are present on the upper ridgetop in the center of the tract. These soils consist of shallow to very shallow, well-drained, stony, clayey soils overlying limestone. *Tarrant soils and rock outcrops, steep* soils are present along steep rocky side slopes to canyons and drainages on the property. These soils are generally similar to the preceding soils. *Brackett soils and rock outcrop soils* are present in low portions of drainages and on the sloping toe of the central ridgetop in the southern portion of the property. These soils consist of light brownish-gray, gravelly, clay loams or gravelly loams that contain coarse limestone fragments.

### **3.5 LAND USES**

The Crossings property is bounded by undeveloped woodland to the north, west, and south and by open pastureland and undeveloped woodland to the east. Two mobile homes and associated outbuildings are present in the southeastern portion of the subject tract. A ranch access road is present along the eastern and northern boundaries of the tract. This road extends south through the center of the tract to provide access to F.M. 2769. Besides a few small cleared openings, refuse piles, and hunting blinds, the property is relatively undisturbed.

### **3.6 WETLANDS**

No wetlands that meet the definition established by the U.S. Army Corps of Engineers are known to occur on The Crossings property.

### **3.7 SURFACE WATER QUALITY**

The Crossings property lies within the Cypress Creek watershed, which feeds into the Cypress Creek Arm of Lake Travis approximately 0.3 miles downstream of the subject tract. Surface water flow on the property generally moves to the south through unnamed ephemeral tributaries of Cypress Creek. A few small springs and seeps are known to be present at the heads of some of these tributaries in the east-central portion of the tract. Other than these springs/seeps, no surface waterbodies are known to be present on The Crossings property. Quality of surface water run-off on the property is estimated to be good due to a well-developed vegetative cover

### **3.8 AIR QUALITY**

Travis County and the Austin metropolitan area are currently full attainment areas for all air quality criteria pollutants of the Texas Natural Resource Conservation Commission and the Environmental Protection Agency. However, any changes in attainment standards could affect Austin's future attainment status.

### **3.9 CULTURAL RESOURCES**

An archaeological background literature and records search was performed by SWCA as part of the research for this EA/HCP. The search included examining records at the Texas Archaeological Research Laboratory (TARL) and the Texas Historical Commission (THC). Site files, relevant maps, and National Register of Historic Places listings were investigated for previously conducted surveys and recorded archaeological sites located within the proposed project.

Results of the search indicate that The Crossings property has not been formally surveyed for archaeological resources and no recorded archaeological sites are located on the property. Previously conducted archaeological investigations on properties in the vicinity of the subject property have shown there to be a low to moderate density of prehistoric sites located in the area. A large tract of land directly north of the subject property was surveyed in 1979 for a Lower Colorado River Authority brush control project. Three sites were documented, 41TV174 and 41TV514-515, all of which are prehistoric campsites.

In general, sites in the vicinity of the subject property consist of rockshelters, burned rock middens, lithic scatters, and campsites. Recorded sites range in age from the Paleo-Indian Period to the Late Prehistoric Period (ca. 10,000 B.C. to A.D. 1600). In addition, several Historic Era sites (post 1600s) have been recorded in the general area.

### **3.10 SOCIOECONOMIC**

The greater Austin area is rapidly and steadily growing. In 1999, the greater Austin area grew at an annual rate of 3.5%; current population numbers for the area are 1.13 million people, up from

846,000 in 1990. Travis County, in which The Crossings property occurs, has had steady growth in the 1990s in the range of 3.1% to 3.8% per year; current population in the county (outside Austin city limits) stands at 731,000, up more than 20% since 1990, when the population was 576,000 people.

Government, service, trade, manufacturing, finance-real estate, and construction are the primary employment sectors according to the Austin Chamber of Commerce. Primary employers in the greater Austin area are the University of Texas at Austin followed closely by high-tech corporations, including Dell Computer Corporation, Motorola Inc., IBM Corporation and Advanced Micro Devices. Non-agricultural employment in the greater Austin area during the last decade has grown at an annual rate of approximately 5.3%. Unemployment currently stands at a low 3.1% in the greater Austin area. Residential real estate trends parallel growth and employment statistics with 12,500 homes sold in the greater Austin area in 1998 at a median price of \$144,150.

The Crossings property is located in an area which is being encroached upon by development and population growth. New jobs in the high-tech industry, which has in recent years been evolving and growing in the greater Austin area, attracts new residents every day. With these prospective homeowners comes new housing developments, improvements in infrastructure, and an increased tax base to Travis County and the City of Austin. The Crossings property is currently undeveloped, but with the increased demands for housing and employment, the area is being pressured for development.

#### **4.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION**

This section presents details of the proposed action and two other alternatives that were considered. The alternatives include: 1) proposed (preferred) action, 2) an alternate project design, and, 3) the no action alternative. The environmental consequences of the alternatives are presented in Section 5.0.

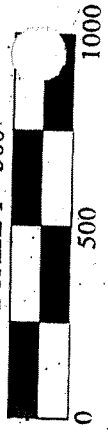
#### **4.1 ALTERNATIVE 1 - PROPOSED (PREFERRED) ACTION**

The proposed action is the issuance of a permit under Section 10(a)(1)(B) of the Act to authorize the potential incidental take of the endangered GCW during the development and use of The Crossings property.

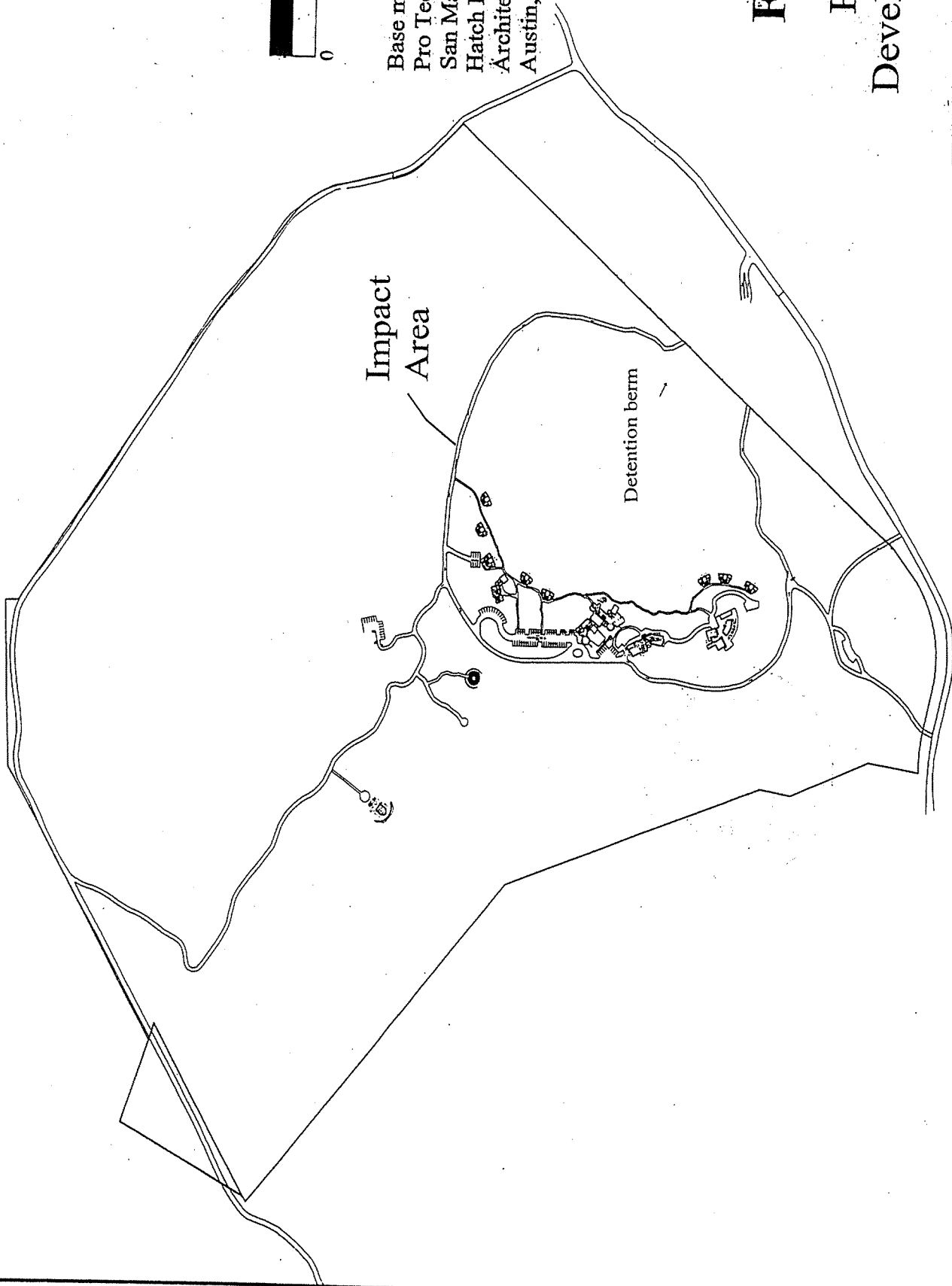
Issuance of the permit would authorize take of the GCW and allow the construction of a private retreat complex with associated buildings, gardens, attendant roads, and utilities within an approximately 26.17-acre development envelope on upland areas of the property (not including access roads). A storm water detention berm, southeast of the 26.17 acre development envelope is also included in this proposal. The detention berm will cover approximately 0.125 acres of land and will be designed to detain storm water behind the berm and release it over 30-60 minutes. The proposed development plan is shown on Figure 2. Final development configurations have not been determined at this time, although the dimensions of the



SCALE 1"=500'

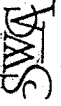


Base map provided by  
Pro Tech Engineering Group, Inc  
San Marcos, Tx. 78666 and  
Hatch Partnership, LLP  
Architects  
Austin, Texas 78701



## Figure 2

# Proposed Development Plan



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development envelope are not expected to change appreciably. Approximately 4.4 acres within the development envelope are currently proposed to be developed, though to allow for possible additional development and development modifications, it is assumed that the project will encompass the entire 26.17-acre envelope. This development envelope will confine future development, ensure protection of proposed GCW preserve areas, and allow flexibility of development configurations.

Of the approximately 26.17-acre development envelope, roughly 2.8 acres contain existing ranch roads. Thus, only approximately 23.37 acres of naturally vegetated area within the development envelope has the potential to be adversely impacted. Of the proposed development acreage, only approximately 8 acres, or 3 % of the total property, will contain impervious cover. It is proposed that the remaining 175.7 acres of the property will be left intact as a GCW preserve.

The general design of the project is based on incorporating existing open space between natural vegetation and geologic features. Building placement and shape will follow geologic boundaries and vegetation patterns to reduce the impact to ecological features.

A list of the types of development that could potentially be constructed on The Crossings property is presented below.

- Welcome Center
- Guest Lodges (8)
- Chapel
- Dining and Conference Center
- Spa/Bath Area
- Pavilions (3)
- Caretaker's House
- Rock Garden Theater
- Interior Roads
- Maintenance Building
- Theater-in-the Round
- Concert Hall

In addition to the placement of certain buildings and gathering places, various landscaped gardens will be designed throughout the retreat complex. For the most part, these landscaped areas will utilize native vegetation and emulate natural features so as to not detract from the intrinsic context of the proposed development.

A narrow walking trail would be placed along the perimeter of the slope break separating the upland ridge and the side slopes to canyons. It is proposed that this approximately 8,508-foot long trail will simply encircle the upland ridge and will not extend into the canyons. No cutting of trees is anticipated for the development of the walking trail, however, it will be necessary to remove some tree limbs and undergrowth (up to 10 feet in height) to accommodate ease of foot traffic.

Paved access roads for the project will be designed for one-way traffic and will be approximately 30 feet in width. This 30-foot width would incorporate a 25-foot roadway width with an additional 2.5-foot wide shoulder on each side of the road. The main complex entrance road will connect with F.M. 2769 by passing through an 8.7-acre tract located adjacent to the south-central

portion of the subject tract. Two other small access roads may be constructed off of F.M. 2769 to connect to the southwestern portion of the property upon the construction of the music hall. All other existing roads will be left unpaved. Besides extending up the southern slope of the property from F.M. 2769, the placement of all roads will be on the upland ridges and not in the steeper canyons. Approximately 2.8 acres of The Crossings property already contain roads that are approximately 15 feet in width. It is proposed that those roads will be widened to 30 feet to allow the passage of emergency vehicles. This extra 15 feet of roadway width throughout the project has been incorporated into the total development acreage.

All new utility, water, and wastewater lines would be placed within the 2.5-foot shoulders of the access roads. Water service is currently planned to be provided by a private water system. This system will be constructed as part of the development and will be used only for service to the project site. The system will consist of one or two wells, hydro-pneumatic tanks, storage and treatment facilities, and a distribution system. Distribution of water will be accomplished by a piping network. The preliminary plan is to place the water lines within the 2.5-foot shoulder of the interior roads. This will allow for vehicular traffic as well as minimizing the additional impact necessary for installation and maintenance of the water system.

Wastewater service for the project will be provided by an on-site septic system or systems which would be under the jurisdiction of the Lower Colorado River Authority (LCRA). The proposed plan is to have one centralized system with laterals collecting wastewater from outlying buildings. Laterals will also be placed within the 2.5-foot wide shoulders of the paved roads opposite the water lines. The system will probably utilize aerobic technology and effluent will be used to drip irrigate areas around the buildings and drives.

Dry utilities (electric and telephone) will be placed within conduits beneath the planned drives. The conduits will be placed during the construction of the drives and will provide reasonably spaced pull boxes for the installation and maintenance of all dry utilities. Electric service will be provided by Pedernales Electric Cooperative (PEC).

An HCP has been developed as part of the preferred alternative as mitigation for the potential incidental taking of the GCW associated with development, construction, and occupation of The Crossings property. The conservation plan includes the following:

- Approximately 175.7 acres of The Crossings property, which includes approximately 128.0 acres of GCW habitat, will be set aside and maintained as an on-site GCW preserve. This area would be provided with a conservation easement.
- On-site minimization of impacts to GCWs.

A more detailed description of the Habitat Conservation Plan is contained in Section 6.0 of this document.

## **4.2 ALTERNATIVE 2 - ALTERNATE PROJECT DESIGN**

Under this alternative, roughly 70.7 acres of The Crossings property would be residentially developed (Fig. 3). Final lot configurations have not been determined, the number of residential lots would likely number between 75 and 100, with development occurring on those areas with 0 to 15% slopes. Development and impervious cover limits would adhere to applicable local water quality ordinances. It is anticipated that water and wastewater service would be provided by the City of Austin and electric service would be provided by PEC. As with Alternative 1, all utility lines would be placed within road rights-of-way. Access to the development would be from F.M. 2769 similar to that of Alternative 1, although road rights-of-way would be 100 feet wide rather than 30 feet. Approximately 131 acres of land, primarily in canyons, would remain undeveloped under this alternative. Undeveloped lands could be managed in perpetuity for the GCW as described for Alternative 1. This alternative was rejected, because more land would be disturbed and the quality and configuration of the preserve habitat is less likely to benefit the GCW, as does the preferred alternative.

## **4.3 ALTERNATIVE 3 - NO ACTION**

This alternative assumed that the proposed development would not occur and that no application for incidental take would be processed. Choosing this alternative would not result in take of endangered species, nor would any development occur. However, no acreage would become part of the Balcones Canyonlands Preserve, and there would be no active management for the listed GCW, as proposed in the HCP. Further discussion of the ramifications of this alternative is presented in Section 5.3.

## **5.0 ENVIRONMENTAL CONSEQUENCES**

### **5.1 ALTERNATIVE 1 - PROPOSED (PREFERRED) ACTION**

#### **5.1.1 On-site Impacts**

##### **5.1.1.1 Vegetation**

Vegetation on approximately 23.2 acres of land within the 26.17 acre development envelope could be directly modified under this alternative. Approximately 2.8 acres of the proposed development plan includes existing 15-foot wide ranch roads that are already cleared of vegetation; however, some vegetation along these road sides will be modified as the roads are widened to 30 feet. Development would primarily occur in areas that currently support woodlands composed of Ashe juniper, Texas oak, shin oak, and live oak. Vegetation in development areas may be significantly disturbed as a result of grading for new roads, construction of buildings, and landscaping. However, the general design of the project is based on incorporating existing open space between natural vegetation types. Building placement and shape will follow vegetation patterns to reduce the impact to ecological features. Also,



Development  
Envelope



Figure 3

Alternate Project Design

Base map provided by  
Pro Tech Engineering Group, Inc.  
San Marcos, Tx. 78666

**SWA** INC. ENVIRONMENTAL CONSULTANTS  
1111 Rio Grande, Suite C7-Austin, Texas 78701

landscaped areas will utilize native vegetation and emulate natural features so as to not detract from the intrinsic context of the proposed development. It will be necessary to remove some tree limbs and understory vegetation along areas proposed for the walking trail.

#### **5.1.1.2 Wildlife**

Since no significant amount of land clearing will take place and landscaping will utilize native vegetation, little adverse impacts to local wildlife resources is anticipated to occur as a result of the proposed development. Minor displacement or reconfiguration of some animal home ranges may occur as a result of the proposed development.

The majority of the property, specifically canyon slopes and bottoms that support vegetation with the greatest wildlife value on the tract, will remain undisturbed and continue to provide habitat for the wildlife species that currently utilize the area. Direct and indirect effects of development on the plateau areas may result in slightly negative or positive impacts to the populations of some species on the property.

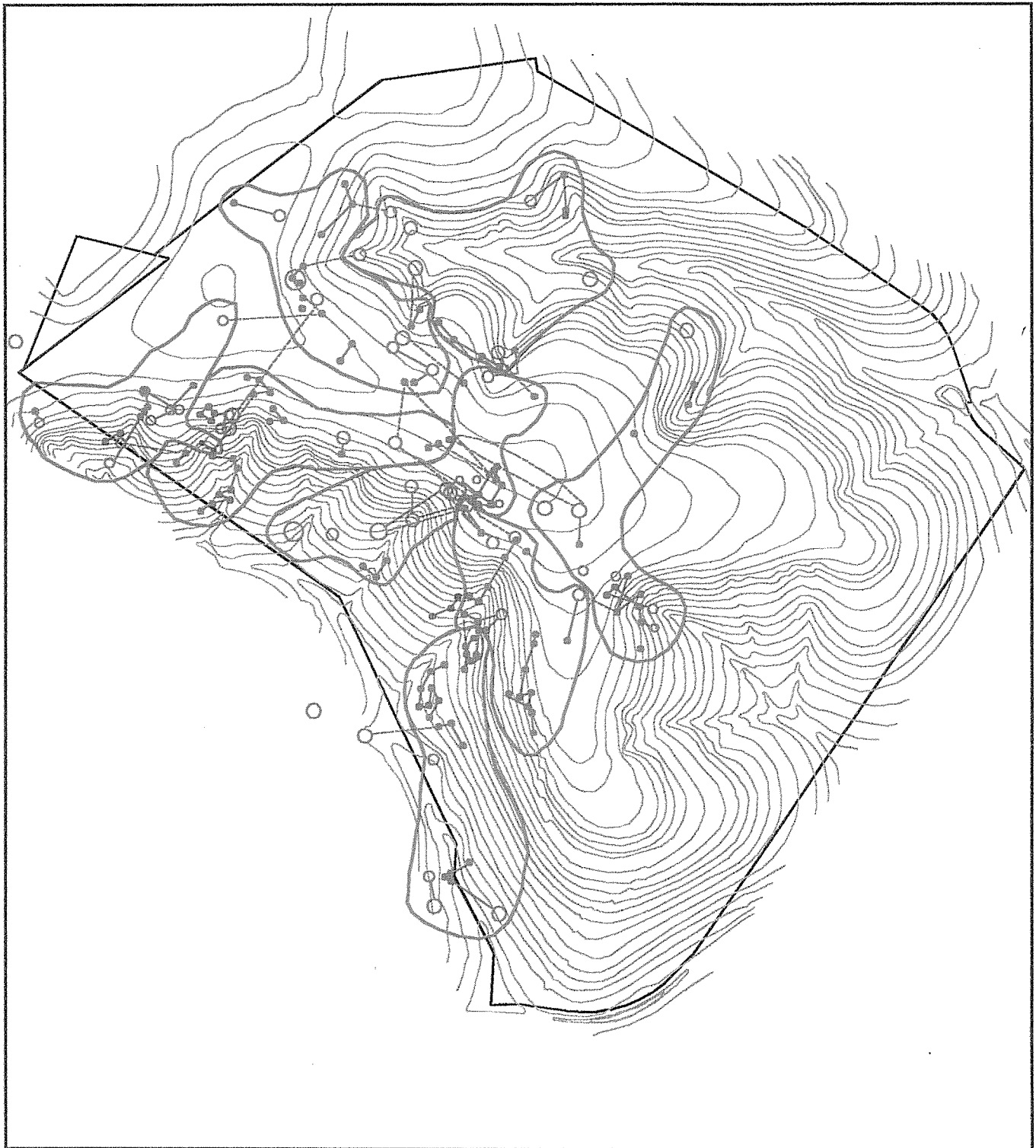
#### **5.1.1.3 Listed, Proposed, and Candidate Species**

The only listed species known or considered likely to occur in the project area is GCW. No species proposed for listing occur in the area or have the potential to be affected by the proposed alternative. One rare species, the Jollyville Plateau salamander, may occur on the property.

SWCA conducted a GCW habitat assessment in January 1999 and later surveyed the property for warblers during March, April, and May 1999. Locations of SWCA GCW observations are depicted on Figure 4. An estimated eight GCW territories were present on The Crossings property in 1999. Most warbler observations were made in and along the margins of the western and eastern canyons. Few observations were made on the south-facing slope in the southern portion of the tract or on the east side of the eastern canyon where deciduous trees are scarce and Ashe juniper trees are relatively short.

Based on the distribution of GCW observations and vegetation, SWCA delineated approximately 153 acres of warbler habitat on The Crossings property. Roughly 26 acres of GCW habitat are expected to be directly modified by completion of Alternative 1. Approximately 175.7 acres of the property would be set aside and managed as a GCW preserve.

The Jollyville Plateau salamander is not known to occur on The Crossings Property, but if it does occur, it would very likely be limited to the few small springs present in the upper reaches of the eastern canyon. These springs are up-gradient of all proposed development except for the proposed loop access road and are separated from the proposed road by several hundred feet of wooded slopes. Due to the overall small scale of the proposed project and the limited amount of traffic expected to occur on-site, coupled with the natural filtering of potential pollutants from



- GOLDEN CHEEKED WARBLER OBSERVATION
- FEMALE GOLDEN CHEEKED WARBLER OBSERVATION
- LESS PRECISELY LOCATED GOLDEN CHEEKED WARBLER OBSERVATION

SOLID LINES CONNECT SEQUENTIAL OBSERVATIONS. DASHED LINES CONNECT CONTEMPORANEOUS VOCALIZATIONS. OBSERVATIONS BELIEVED TO REPRESENT THE SAME INDIVIDUAL ARE ENCLOSED. LARGE DASHED LINES WITHIN ENCLOSED BIRD OBSERVATIONS DENOTE AREAS OF UNDETERMINED STATUS DUE TO LACK OF CONTEMPORANEOUS SIGHTINGS; THESE AREAS REPRESENT ONE OR TWO MALE WARBLERS. ENCLOSURES DO NOT REPRESENT TERRITORIAL BOUNDARIES.

**FIGURE 4**  
**RESULTS OF THE 1999 BIRD SURVEY**  
**ON THE CROSSINGS PROPERTY,**  
**TRAVIS COUNTY, TEXAS**



run-off from the access road that would be provided by the vegetated slopes, no significant adverse impacts to water quality are expected to occur at the spring locations. Thus, even if Jollyville Plateau salamanders do occur on the property, no significant adverse impacts to the salamander are expected from the proposed project.

#### **5.1.1.4      Assessment of Take**

Approximately 26.17 acres of GCW habitat would be directly modified by completion of the proposed development. In addition, the viability of another approximately 36.65 acres of warbler habitat may be reduced as a result of indirect effects associated with development. Therefore, a total of 62.82 acres of GCW habitat may be adversely affected by Alternative 1, which is expected to result in the take of up to 3-4 GCW territories. As part of the proposed action, an HCP has been proposed to minimize the potential adverse modification of habitat described above and assure that this action does not reduce the potential for survival and recovery of the GCW in the wild, as mandated by requirements of 50 CFR Part 17.22(b)(1)(iii). The HCP is detailed in Section 6.0. No take is anticipated for any other federally listed or proposed species.

#### **5.1.1.5      Geologic Features and Soils**

Grading for new construction will be minimal and will comply with Travis County construction codes for erosion and sedimentation control during the construction process.

Surface soil alterations would occur within development areas, but all alterations will comply with applicable Travis County construction codes for erosion and sedimentation control during the construction process.

#### **5.1.1.6      Land Uses**

In a region becoming more heavily urbanized, the proposed development of The Crossings property, with its low environmental impact and sound aesthetic design compatible with the context of the local environment, offers a unique development approach that contrasts with some other local development areas.

It is not anticipated that development of The Crossings property will significantly increase the overall development in the area beyond currently existing developments or planned developments.

#### **5.1.1.7      Wetlands**

No wetlands are known to occur on the tract and as such, no adverse impacts to wetlands are anticipated to occur as a result of the development of the proposed project.

### **5.1.1.8 Surface Water Quality**

Because surface water quality mitigation will be designed in accordance with applicable state and/or local ordinances, no significant impacts to local water quality are expected to occur as a result of the proposed project.

### **5.1.1.9 Air Quality**

Development of the property will contribute slightly to local traffic noise and exhaust emissions by increasing the number of people operating vehicles on the property. A slight reduction in the number of trees on the property may also slightly reduce local air filtering capabilities, although this reduction may be offset by future landscaping along the buildings. A temporary increase in noise and dust levels is expected during the construction process. However, none of these impacts is considered likely to have a significant effect on local or regional air quality.

### **5.1.1.10 Cultural Resources**

According to Texas Archaeological Research Laboratory (TARL) and Texas Historical Commission, Department of Antiquities Protection (THC) files, no significant archaeological sites are known to occur on The Crossings property. Due to the minimal nature of the proposed project, no significant impacts to cultural resources are expected to occur as a result of the proposed project design.

### **5.1.1.11 Socioeconomic**

The proposed development will result in an increase in the number of people on the premises. This will result in increased traffic congestion. A slight population increase in the immediate area may also be expected as a result of additional employment opportunities. This will result in a slight increase in property values.

## **5.1.2 Off-site Impacts**

Construction of the development access road will require the improvement of approximately 750 feet of existing ranch roads to connect the southern portion of The Crossings property to F.M. 2769. These roads currently are approximately 15 feet wide and would be improved to a width of 30 feet.

### **5.1.2.1 Vegetation**

Roughly 0.26 acres would be cleared in order to widen and pave the existing ranch road. Vegetation on either side of the ranch road primarily consists of live oak/Ashe juniper woodland. No other impacts to off-site vegetation are expected to occur as a result of the proposed alternative.

#### **5.1.2.2 Wildlife**

No significant off-site impacts to wildlife are expected as a result of the proposed project.

#### **5.1.2.3 Listed, Proposed, and Candidate Species**

Since the proposed development of The Crossings property would primarily occur on upland areas in the center of the tract, no adverse impacts to off-site GCW populations are anticipated to occur as a result of the proposed action.

No other listed threatened or endangered species are known to occur immediately adjacent to The Crossings property; therefore, no adverse off-site impacts to other listed species are anticipated to occur from development of the proposed action.

#### **5.1.2.4 Geologic Features and Soils**

Roughly 0.26 acres would be graded as a result of the proposed off-site road improvement. Road construction would comply with all applicable Travis County construction codes for erosion and sedimentation control.

#### **5.1.2.5 Land Uses**

Construction of a music hall would require the availability of off-site parking as no on-site parking areas are proposed to be constructed under Alternative 1. No potential sites for off-site parking have been identified at this time, but any parking area would likely need to be within a couple miles of The Crossings so that people could be shuttled to the property. The proposed alternative is fully compatible and comparable to current land use in the area.

#### **5.1.2.6 Wetlands**

No off-site impacts to wetlands are expected as a result of the proposed alternative.

#### **5.1.2.7 Air and Water Quality**

No significant impacts to local air and water quality are expected as a result of the proposed alternative.

#### **5.1.2.8 Cultural Resources**

No significant off-site impacts to cultural resources are expected to occur as a result of the proposed alternative.

### **5.1.2.9 Socioeconomic**

Development of the Crossings property is expected to result in an increase in the number of motorized vehicles in the area. This may result in an increase in traffic congestion. It would also result in a slight increase in the local population and local property values.

### **5.1.3 Cumulative Impacts Analysis**

This section considers past, present, and future non-federal projects, authorized or under review, that are considered to contribute to cumulative impacts.

#### **5.1.3.1 Vegetation**

The proposed action would result in the disturbance of vegetation on approximately 26 acres. That vegetation would primarily consist of juniper/live oak woodland. This would cumulatively contribute to disturbance and reduction of this vegetation type in Travis County resulting from development, road construction, and other land use projects.

#### **5.1.3.2 Wildlife**

The preferred alternative will contribute to a cumulative reduction of habitat for some wildlife species associated with oak/juniper habitat when added to impacts resulting from other development, road construction, and other land use projects in Travis County. Wildlife species associated with urban and suburban settings would likely increase while species intolerant of development would locally decrease.

#### **5.1.3.3 Listed, Proposed, and Candidate Species**

The GCW is a species which prefers large blocks of habitat with minimal urban disturbance. The preferred alternative will reduce the size of the habitat block and increase fragmentation of the habitat. This alternative will contribute to the total take of GCWs and/or their habitat in the region when added to other Section 10(a)(1)(B) incidental take permits that have been or will be issued by the Service. To date, 101 incidental take permits for the GCW have been issued in the Austin area. These permits cover approximately 11,213 acres, some of which are also within the area covered by the Balcones Canyonlands Conservation Plan regional 10(a)(1)(B) permit. A portion of these areas include GCW habitat. There are currently 12 active incidental take permit applications for the GCW being considered by the Service in the Austin area. These applications or pre-application consultations cover in excess of 3,007 acres, of which a portion is suitable GCW habitat. The level of impacts resulting from projects for which permits are currently being considered is dependent on the amount of take resulting from the actual number of these permits issued by the Service. Cumulatively, the anticipated take could, at some time in the future, reduce the probability of survival of the GCW and thus, each application is being evaluated with respect to its impact on the GCW population in Recovery Unit 5, as delineated in the Golden-Cheeked Warbler Recovery Plan (U.S. Fish and Wildlife Service, 1992).

#### **5.1.3.4 Geologic Features and Soils**

No cumulative impacts to geologic features and soils would occur as a result of the preferred alternative.

#### **5.1.3.5 Land Use**

The preferred alternative contributes to the ongoing conversion of undeveloped land to developed land in the Austin area. Past, present, and future developments must comply with all development codes. Austin is a rapidly growing city and development pressure is intense.

#### **5.1.3.6 Wetlands**

There are no impacts to wetlands as a result of the preferred alternative. Therefore, no cumulative impacts are anticipated.

#### **5.1.3.7 Surface Water Quality**

Although the project plans to limit impervious cover and comply with all applicable regulations, it is expected that some water quality degradation will unavoidably occur from pesticide and fertilizer use and run-off from roads. However, the construction of The Crossings property is not likely to affect water resources to any great degree.

#### **5.1.3.8 Air Quality**

The preferred alternative will contribute to degradation of air quality in the Austin area, primarily through an increase in automobile emissions. The significance of the impact will depend upon air quality requirements for construction activities and automobiles. The continued development of the area could result in an impact on air quality, cumulatively at some time in the future.

#### **5.1.3.9 Cultural Resources**

This project, because of its limited scope and nature of land disturbance, will not result in cumulative impacts to sites eligible for the National Register of Historic Places.

#### **5.1.3.10 Socioeconomic**

The proposed project will cumulatively contribute to an increased population and urbanization of the area. Because the preferred alternative will protect approximately 175.7 acres on-site, the project is expected to preserve the aesthetic and biological conditions in the area long into the future.



## **5.2 ALTERNATIVE 2 - ALTERNATE PROJECT DESIGN**

This alternative was rejected because it would result in greater impacts to GCW habitat as a result of increased development and a reduction in the amount of high quality land set aside as warbler preserves.

### **5.2.1 On-site Impacts**

#### **5.2.1.1 Vegetation**

Approximately 70.7 acres of land would be significantly disturbed under this alternative. Areas proposed for development primarily support woodlands composed of Ashe juniper, Texas oak, shin oak, and live oak.

#### **5.2.1.2 Wildlife**

Wildlife within those areas planned for development would largely be displaced to adjacent areas during the construction process. Following construction, landscape vegetation and preserved trees would provide habitat for those species tolerant to suburban development. Major portions of the property, specifically canyon slopes and bottoms that support vegetation with the greatest wildlife on the tract, would remain relatively undisturbed and continue to provide habitat for the wildlife species that currently utilize the area. It is expected that populations of some species, such as white-tailed deer and raccoon, may increase slightly, due to potential increases in availability of food near proposed development areas and a decrease in hunting pressure. Other species, such as some snakes, would be expected to decrease in number due to loss of habitat or human disturbance.

#### **5.2.1.3 Listed, Proposed, and Candidate Species**

Approximately 58.5 acres of GCW habitat would be directly modified by development under Alternative 2. It is anticipated that Alternative 2 would result in take of most, if not all of the current GCW territories on the property. Roughly 131 acres of woodlands would remain undisturbed and could be managed in perpetuity as a GCW preserve. However, due to the poor configuration of the remaining acreage, the Service believes the remaining 131 acres would not function as a viable habitat preserve.

The Jollyville Plateau salamander is not known to occur on The Crossings property, but if it does occur, it would very likely be limited to the few small springs present in the upper reaches of the eastern canyon. Under this alternative, upland areas above these springs would be residentially developed. It is unknown what effect this development would have on the Jollyville Plateau salamander, if present, as these salamanders occur elsewhere in Travis County at some springs in watersheds that are almost completely urbanized.

#### **5.2.1.4 Geologic Features and Soils**

Approximately 70.7 acres would be developed under Alternative 2. No significant impacts to geologic features or soils would be expected as result of completion of this alternative. All geologic and surface soil alterations will comply with applicable Travis County construction codes for erosion and sedimentation control during the construction process.

#### **5.2.1.5 Land Uses**

Approximately 70.7 acres would be converted from woodland to residential development. Such development is fully compatible and comparable to current land use in the area.

#### **5.2.1.6 Wetlands**

No wetlands are known to occur on the tract and as such, no adverse impacts to wetlands are expected as a result of completion of Alternative 2.

#### **5.2.1.7 Surface Water Quality**

Because surface water quality mitigation will be designed in accordance with applicable state and/or local ordinances, no significant impacts to local water quality are expected to occur as a result of the proposed project.

#### **5.2.1.8 Air Quality**

Impacts to air quality would generally be as described for Alternative 1.

#### **5.2.1.9 Cultural Resources**

No significant archaeological sites are known to occur on The Crossings property and as such, no adverse impacts to archaeological sites are expected to occur.

#### **5.2.1.10 Socioeconomic**

Impacts to the socioeconomic environment would be similar to that described for Alternative 1.

#### **5.2.2 Off-site Impacts**

Off-site construction would be as described for Alternative 1 except that existing 15-foot wide ranch roads would be improved to a width of 100 feet.

#### **5.2.2.1 Vegetation**

Under this alternative, roughly 1.46 acres would be cleared for off-site road improvement. Vegetation along the existing ranch roads consists primarily of live oak/Ashe juniper woodland.

#### **5.2.2.2 Wildlife**

No significant off-site impacts to wildlife are expected as a result of the proposed project.

#### **5.2.2.3 Listed, Proposed, and Candidate Species**

This alternative would result in the presence of residential development along the north and northeastern property boundaries and directly adjacent to off-site golden-cheeked habitat. Presence of this residential development could reduce the viability of roughly 26.5 acres of off-site warbler habitat as a result of indirect effects.

No off-site impacts to the Jollyville Plateau salamander are expected to occur as a result of this alternative.

#### **5.2.2.4 Geologic Features and Soils**

Roughly 1.46 acres would be graded for improvement of off-site roads. No significant impacts to geologic features or soils would be expected as a result of completion of this alternative. All geologic and surface soil alterations will comply with applicable Travis County construction codes for erosion and sedimentation control during the construction process.

#### **5.2.2.5 Land Uses**

This alternative would result in the addition of a residential neighborhood to the project area. While exact lot configurations have not been determined, the number of residential lots would likely number between 75 and 100. Therefore, this alternative would increase the number of families living in the general project area by that same number. This increase could facilitate an increase in the number of service-based businesses in the general area and likely would increase the use of local businesses and recreational facilities.

#### **5.2.2.6 Wetlands**

No off-site impacts to wetlands are expected as a result of the proposed alternative.

#### **5.2.2.7 Water and Air Quality**

No significant impacts to local water and air quality are expected as a result of completion of Alternative 2.

### **5.2.2.8 Cultural Resources**

No significant off-site impacts to cultural resources are expected to occur as a result of the proposed alternative.

### **5.2.2.9 Socioeconomic**

Off-site impacts to the socioeconomic environment would be similar to those described for Alternative 1.

## **5.2.3 Cumulative Impacts Analysis**

### **5.2.3.1 Vegetation**

The proposed action would result in the disturbance of vegetation for approximately 70.7 acres. That vegetation would primarily consist of juniper/live oak woodland. This would cumulatively contribute to disturbance and reduction of this vegetation type in Travis County resulting from development, road construction, and other land use projects.

### **5.2.3.2 Wildlife**

Cumulative impacts to wildlife would be slightly higher than those described in Alternative 1.

### **5.2.3.3 Listed, Proposed, and Candidate Species**

Cumulative impacts to listed proposed and candidate species would be similar to those described in Alternative 1.

### **5.2.3.4 Geologic Features and Soils**

Approximately 70.7 acres under Alternative 2 would be developed instead of 26 acres as described in Alternative 1.

### **5.2.3.5 Land Use**

Cumulative impacts to land use would be similar to those described in Alternative 1.

### **5.2.3.6 Wetlands**

Cumulative impacts to wetlands would be similar to those described in Alternative 1.

### **5.2.3.7 Surface Water Quality**

It is expected there would be a higher amount of impact to surface water quality from an increase

in the amount of pesticides used and the overall level of development.

#### **5.2.3.8      Air Quality**

Cumulative impacts to air quality are expected to be slightly higher because of the increase in the number of homes and products associated with these houses.

#### **5.2.3.9      Cultural Resources**

Cumulative impacts to cultural resources would be similar to those described for Alternative 1.

#### **5.2.3.10     Socioeconomic**

Cumulative impacts to the socioeconomic environment would be similar to those described for Alternative 1.

### **5.3      ALTERNATIVE 3 - NO ACTION**

Under this alternative, there would be no development on The Crossings property and there would be no potential take of GCWs. This alternative was rejected because abandonment of the proposed project would result in the loss of significant monies invested in the property and project planning, would cause significant economic loss to the Applicant, and would not result in the management of roughly 175.7 acres of the property as a GCW preserve.

### **6.0      HABITAT CONSERVATION PLAN**

This section contains the Applicant's specific conservation proposals for the proposed project. Any statements where the Service differs with these proposals will be in italics.

The goal of this HCP is to minimize and/or avoid adverse impacts to the GCW resulting from construction and operation of the Crossings development and to contribute to the long-term survival and recovery of the species.

The following measures are proposed to mitigate for impacts to GCW habitat on The Crossings property:

## ON-SITE

### LAND MANAGEMENT AND MITIGATION

#### Development Areas

- The Applicant or his assigns shall not clear vegetation in, or within 300 feet of, golden-cheeked warbler habitat during the time of the year when warblers are breeding unless breeding season surveys performed by a Service-permitted biologist indicate that no warblers are present within 300 feet of the desired activity. The breeding season for the golden-cheeked warbler is March 1 to August 1 each year.
- Building, utility infrastructure and street construction may be conducted year round as long as the construction activities promptly follow the clearing activities and/or were initiated before March 1 therefore being a continuous activity before the breeding season began.
- Clearing and construction by the Applicant within the proposed development areas shall be consistent with the current practices recommended by the Texas Forest Service to prevent the spread of oak wilt.
- The use of herbicides and pesticides by the Applicant will comply with the label guidelines for application.
- The Applicant shall attach deed restrictions which will prohibit the use of deer feeders, bird seed feeders and free-roaming cats and dogs within the conference center area and in the preserve areas.
- The Applicant shall minimize clearing for construction of impervious cover to the greatest extent practicable. Areas that are disturbed during construction, but are not occupied by impervious surfaces, shall be replanted with native oaks and other native vegetation.
- Imported red fire ants have been recently shown to prey upon the chicks of arboreal nesting birds. If fire ant mounds are encountered, then fire ants *shall* be controlled with an Integrated Pest Management program using approved chemicals and bait formulations. Fire ant control should be designed to minimize impact on native ants and other flora and fauna.

## Preserve Areas

Approximately 175.7 undeveloped acres of The Crossings will be preserved through fee simple or conservation easement to be held by Travis County. Travis County will be responsible for the operation and maintenance of the preserve acreage in a manner which will maintain the area as golden-cheeked warbler habitat. The following are conditions which the Applicant and Travis County will follow:

- The Applicant shall provide (fee simple or conservation easement) approximately 175.7 undeveloped acres which includes approximately 128 acres of golden-cheeked warbler habitat, as delineated by the Service, to Travis County. This 175.7 acres will be preserved and managed in perpetuity. The Applicant shall provide funding for the operation and maintenance of the approximately 175.7 acres as a preserve for GCWs. The amount of funding and its payment schedule will be agreed upon by the Applicant, and Travis County. The grant of the on-site preserve and funds for the operation and management of the preserve must be provided prior to any clearing activities or construction.
- The preserve will be managed by Travis County according to the Balcones Canyonlands Preserve (BCP) land management guidelines ( PRT-788841).
- After considering carefully the direct and indirect impacts of the development, construction, and occupation of The Crossings property, and taking into account the substantial avoidance of habitat areas on the property and the area the Applicant will maintain as a preserve, the Service has concluded that the lands considered for preserve represent mitigation of impacts to the golden-cheeked warbler in excess of that required to adequately mitigate for the impacts of the development project. Such excess mitigation is in the amount of 41.6 acres of golden-cheeked warbler habitat. The Applicant will be entitled to “bank” this excess mitigation in perpetuity for use in connection with possible future revisions to project envelopes or other projects pursued by the Applicant, or for transfer and sale to third-parties needing to provide mitigation for projects within the same recovery unit for the golden-cheeked warbler. The Applicant and the Service will establish a record-keeping system for tracking ownership and utilization of the excess mitigation credits. Each of the excess mitigation credits will be construed by the Service as providing the same mitigation value as a one-acre golden-cheeked warbler BCP Participation Certificate or one acre of golden-cheeked warbler habitat of long-term preserve quality.

In addition the Service will include the following conditions in any issued permit:

1. The Applicant shall inform the Service in writing upon completion of site development and construction which shall occur before permit expiration. An annual report shall be submitted by October 1 of each year to the U. S. Fish and Wildlife Service Field Office,

10711 Burnet, Suite 200, Austin, Texas 78758 and to the U. S. Fish and Wildlife Service, P.O. Box 1306 (Room 4201), Albuquerque, New Mexico 87103.

2. Upon locating a dead, injured, or sick golden-cheeked warbler, or any other endangered or threatened species, the Applicant is required to contact the Service's Law Enforcement Office, San Antonio, Texas, (210) 681-8419, for care and disposition instructions. Extreme care should be taken in handling sick or injured individuals to ensure effective and proper treatment. Care should also be taken in handling dead specimens to preserve biological materials in the best possible state for analysis of cause of death. In conjunction with the care of sick or injured endangered/threatened species, or preservation of biological materials from a dead specimen, the Applicant and its contractor/subcontractor have the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.
3. Conditions of this permit shall be binding on and for the benefit of the Applicant and their respective successors and assigns. If the permit requires an amendment because of change of ownership, the Service will process that amendment without the requirement of the Applicant preparing any new documents or providing any mitigation over and above that required in the original permit. The construction activities proposed or in progress under an original permit may not be interrupted provided the required special conditions of an issued permit are being followed.
4. If during the tenure of this permit the project design and/or the extent of the habitat impact described in the habitat conservation plan is altered, such that there may be an increase in the anticipated take of the golden-cheeked warbler, the Applicant is required to contact the Service and obtain authorization and/or amendment of the permit before commencing any construction or other activities that might result in take beyond that described in the EA/HCP.
5. The current "No Surprises" policy of the Service provides that additional mitigation requirements requiring additional land, water or financial obligations shall not be required of the Applicant or its successors or assigns beyond the level of mitigation provided for in this permit and the HCP if fully and completely complied with and implemented. With respect to this permit, the HCP and supporting documents adequately addresses the federally listed golden-cheeked warbler.
6. The authorization granted by the permit is subject to full and complete compliance with, and implementation of, the Environmental Assessment/Habitat Conservation Plan (EA/HCP) for The Crossings (Kenneth Beck) and the Service; and all specific conditions contained in this permit. These permit terms and conditions shall supersede and take precedence over any inconsistent provisions in the EA/HCP, or other permit documents.
7. The mitigation for this permit with the approval of the Service may fully support and



accrue full benefits to the Balcones Canyonlands Preserve, Permit PRT-788841.

8. The permit, appropriate attachments such as the transfer of deed or conservation easement for the mitigation acreage shall be recorded with the County Clerk, Travis County, Texas, prior to the beginning of development related activities. The Applicant shall return a recorded copy of this action to the Service within 30 days of recording.
9. Acceptance of the permit serves as evidence that the Applicant understands and agrees to abide by the terms of the permit and all applicable Sections of Title 50 Code of Federal Regulations Parts 13 and 17 pertinent to issued permits.

#### **6.1 AMENDMENT PROCEDURE**

It is necessary to establish a procedure whereby the Section 10(a)(1)(B) Permit can be amended. However, it is important that the cumulative effect of the amendment will not jeopardize any endangered species or other species of concern. Amendments must be evaluated based on their effects on the habitat as a whole. The Service must be consulted on all proposed amendments to The Crossings property which may affect any federally-listed species. The types of proposed amendments and the applicable amendment procedures are as follows:

#### **6.2 AMENDMENTS TO LOCALLY APPROVED DEVELOPMENT PLANS**

It is acknowledged that the state and/or local agencies having land use regulatory jurisdiction are authorized in accordance with applicable law to approve, without consulting the Service, amendments to development plans for the subject development area that do not encroach on any endangered species habitat that is not presently contemplated to be taken as a consequence of the development, and which do not alter the conditions set forth in the HCP.

#### **6.3 MINOR AMENDMENTS TO THE HCP**

Minor amendments involve routine administrative revisions, changes to the operation and management program, or minor changes to the development envelope, and which do not diminish the level or means of mitigation. Such minor amendments do not materially alter the terms of The Crossings Section 10(a)(1)(B) Permit.

Upon the written request of the Applicant, the Service is authorized to approve minor amendments to the HCP.

#### **6.4 ADJUSTMENTS TO DEVELOPMENT ENVELOPE**

It is acknowledged that design of the proposed project is at the preliminary stages and that project design must retain flexibility throughout the development process. The Applicant and Service anticipate that it may become necessary for the Applicant to make revisions to the

development that result in further encroachment in golden-cheeked warbler habitat areas. *Any encroachment in golden-cheeked warbler habitat over and above that described in the EA/HCP must be authorized by the Service prior to clearing or construction.*

## **6.5 ALL OTHER AMENDMENTS**

All other amendments will be considered an amendment to the Section 10(a)(1)(B) permit, subject to any other procedural requirements of federal law or regulation which may be applicable to amendment of such a permit.

## **7.0 DURATION**

This HCP is written in anticipation of issuance of a 10(a)(1)(B) permit for 30 years during construction and use of The Crossings property.

## **8.0 PUBLIC AND AGENCY COORDINATION**

The following agencies, organizations, and individuals were consulted or coordinated with during the process of addressing endangered species concerns for The Crossings property.

SWCA, Inc., Austin, Texas  
U.S. Fish and Wildlife Service, Austin, Texas  
U.S. Fish and Wildlife Service, Albuquerque, New Mexico  
Natural Area Preservation Association, Inc., Dallas, Texas  
Plateau, Dripping Springs, Texas  
Lower Colorado River Authority  
Travis County Natural Resources Program, Travis County, Texas  
City of Austin Parks and Recreation Department, Austin, Texas

This document was originally prepared by SWCA, Inc. Environmental Consultants on behalf of the Applicant. The Service has modified portions of the document, except for the proposed Habitat Conservation Plan in Section 6.0.

Public notification of the availability of the Draft Environmental Assessment/Habitat Conservation Plan was published in the *Federal Register* for a period of 30 days. All concerned agencies and entities were provided copies, as requested, for review and comment.

## 9.0 LITERATURE CITED

- Chippindale, P.T., D.M. Hillis, and A.H. Price. 1994. Relationships, status, and distribution of central Texas hemidactyliine plethodontid salamanders (*Eurycea* and *Typhlomolge*). Final Section 6 Report submitted to the Service, August 9, 1994.
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- RECON and Service. 1996. Final Environmental Impact Statement/Habitat Conservation Plan for proposed issuance of a permit to allow incidental take of the golden-cheeked warbler, black-capped vireo, and six karst invertebrates in Travis County, Texas. Service Regional Office, Albuquerque, New Mexico.
- Slade, R.M., M.E. Dorsey, and S.L. Stewart. 1986. Hydrology and water quality of the Edwards Aquifer associated with Barton Springs in the Austin area, Texas. U.S. Geological Survey Water-Resources Investigations Report 86-4036.
- Soil Conservation Service. 1974. Soil Survey of Travis County, Texas. United States Department of Agriculture. Texas Agriculture Experiment Station.
- U.S. Fish and Wildlife Service. 1992. Golden-cheeked warbler (*Dendroica chrysoparia*) Recovery Plan. Austin, Texas.