ENVIRONMENTAL ASSESSMENT/HABITAT CONSERVATION PLAN FOR ISSUANCE OF AN ENDANGERED SPECIES SECTION 10(A)1(B) PERMIT FOR THE INCIDENTAL TAKE OF THE DESERT TORTOISE (*GOPHERUS AGASSIZII*)

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CHAPTER ES
EXECUTIVE SUMMARY

This Environmental Assessment/Habitat Conservation Plan (EA/HCP) analyzes the potential environmental impacts resulting from issuance of an incidental take permit by the U.S. Fish and Wildlife Service (USFWS), pursuant to Section 10(a) of the federal Endangered Species Act of 1973 (ESA), to Hyundai Motor America (Hyundai) and to the City of California City (City) for potential take of the federally listed desert tortoise (*Gopherus agassizii*) that could result from construction and operation of Hyundai's proposed automotive test course facility (facility) and the City's water pipeline extension to service the facility (collectively, the proposed project). The purpose of this EA/HCP is to evaluate the environmental impacts of the proposed project and alternatives. Hyundai and the City have submitted applications under the ESA for a Section 10 (a)(1)(B) permit to allow the incidental take of the desert tortoise.

Hyundai and the City propose to construct the project on a 4,340-acre site. The City proposes to extend an existing municipal water line for 2 miles along an existing dirt road to serve the proposed facility, and Hyundai will build an access road from Highway 58 to the proposed facility site boundary. The proposed project site is located in the City limits, in Kern County, California, approximately 60 miles southeast of downtown Bakersfield and approximately 0.5 miles north of State Highway 58.

The proposed project would result in impacts to or loss of approximately 4,368.5 acres of desert tortoise habitat due to construction impacts, installation of desert tortoise exclusion fencing around the perimeter of the 4,340-acre project site, installation of the City water line, and construction of the off-site access road from Highway 58. Hyundai and the City propose to compensate for the loss of that habitat by acquiring higher quality desert tortoise habitat at a ratio of 1 acre to 1 acre. Hyundai and the City also have proposed minimization measures to reduce project impacts to, and potential take of, desert tortoise during project construction and operations.

CHAPTER 1.0
INTRODUCTION

This Environmental Assessment/Habitat Conservation Plan (EA/HCP) evaluates the environmental effects of the issuance of an incidental take permit by the U.S. Fish and Wildlife Service (USFWS), pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973 (ESA) and its implementing regulations. Hyundai and the City seek authorization from USFWS for the incidental take of the desert tortoise (*Gopherus agassizii*), a federally and state-listed threatened species that currently occupies the proposed project site. Hyundai and the City concurrently have submitted to the California Department of Fish and Game (CDFG) an application for an incidental take permit, pursuant to Section 2081 of the California Endangered Species Act (CESA), for the state listed Mohave ground squirrel, which also occupies the site, and will request from CDFG a determination under Section 2080.1 of CESA that the ESA Section 10(a)(1)(B) incidental take permit for desert tortoise is consistent with CESA .

Hyundai and the City have submitted applications to the USFWS for an incidental take permit under ESA Section 10(a)(1)(B). This EA/HCP provides the USFWS with the required environmental analysis pursuant to the National Environmental Policy Act (NEPA) and the ESA for issuance of the Section 10(a)(1)(B) permit. This EA/HCP proposes to compensate for impacts to desert tortoise by acquiring higher quality desert tortoise habitat at a ratio of 1 acre to be acquired for every 1 acre that is disturbed. Land to be acquired and managed to compensate for desert tortoise impacts would be approved prior to acquisition by USFWS and CDFG and would be managed by CDFG or by a third-party conservation organization acceptable to USFWS and CDFG.

The purpose of Hyundai's proposed automotive test course facility (facility) is to test and evaluate the safety, performance, and handling of concept, prototype, and production automobiles manufactured by Hyundai at its Birmingham, Alabama plant, which currently is under construction. Construction of the proposed facility is planned to occur in two phases (Figure 1-1, *Proposed Project Phase 1 and Phase 2 Elements*). Phase 1 consists of installation of the 6.4-mile oval track, a spanning bridge over the oval track, the southern access road, the security and desert tortoise fencing, the support building and associated utilities, the Hill-Up Road and the 2-mile water line. Phase 2 consists of the installation of the vehicle dynamic area (VDA), winding track, a 12-lane special surface area, four-lane vehicle stability testing area, and a choppy road.

The oval test track and the other Phase 1 facilities are required to be operational by July 2004 to prepare the test facility for the first test automobiles manufactured at Hyundai's Alabama automobile manufacturing facility. The construction of that manufacturing plant is on schedule for completion. The first test automobiles produced at the Alabama plant are to be sent to the proposed facility for initial testing of the power train, primary chassis stability, and handling. The results of these tests will be used to refine the factory production process so that the final production model automobiles meet quality and safety standards. The testing and refining of the test automobiles can take several iterations before the test model can be moved to the final refinement of the manufacturing process prior to manufacturing a production model automobile suitable for market.

Phase 2 facility construction is scheduled to be completed by November 2004, with automobile testing scheduled to begin shortly thereafter on the VDA, winding track and special surface roads.

This EA/HCP addresses listed species present on the proposed project site. Hyundai and the City have had numerous meetings and telephone calls with USFWS representatives between February 14, 2002 and May 22, 2003, to discuss the scope of the EA/HCP. The EA/HCP also incorporates required conditions set forth in the Biological Opinion for Western Mojave Land Tenure Adjustment Project, dated September 10, 1998;[1] directed surveys for the land exchange;[2] on-site habitat assessments; and directed surveys for desert tortoise.

The EA/HCP has been organized into the following Chapters:

Executive Summary

Chapter 1. **Introduction.** Provides a brief overview of the EA/HCP.

Chapter 2. **Description of Proposed Project.** Provides a complete project description of the proposed project.

Chapter 3. **Purpose and Need for the Proposed Action.** Describes the purpose and need for the requested permit pursuant to ESA Section 10(a) and the related regulatory framework.

Chapter 4. **Description of the Affected Environment.** Describes the existing conditions at the proposed project site.

Chapter 5. **Alternatives.** Describes alternatives to the proposed action.

Chapter 6. **Environmental Consequences.** Provides an assessment of the expected environmental impacts of the proposed project and project alternatives considered.

Chapter 7. **Habitat Conservation Plan.** Describes conservation measures that would be implemented by Hyundai and the City to ensure that the permitted incidental take will not appreciably reduce the likelihood of survival and recovery of the desert tortoise. Includes Biological Goals and Objectives, Adaptive Management, Monitoring, Permit Duration and Public Participation.

Chapter 8. **Funding.** Describes the responsibilities and timing for funding the implementation of the conservation measures.

Chapter 9. **Unforeseen Circumstances.** Describes the process for resolving issues related to changing and unforeseen circumstances.

Chapter 10. **List of Preparers.** Lists the technical specialists, agency staff, and applicant.

Chapter 11. **References.** Lists the documents cited in this EA/HCP.

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[1] U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, 10 September 1998a. *Memorandum. Subject: Biological Opinion for Western Mojave Land Tenure Adjustment Project (684440)(CA-063.50)(1-9-98-F-60R).* Contact: District Manager, California Desert District, Bureau of Land Management, Riverside, California. Prepared by: U.S. Fish and Wildlife Office, Ventura Field Office, 2493 Portola Road, Suite B, Ventura, CA 93003.

[2] City of California City, 2002b. *MFR: Results of Directed Surveys for Desert Tortoise within the Proposed Automotive Test Course Project Area, Kern County, California.* Contact: 21000 Hacienda Boulevard, California City, 93505. Prepared by: Sapphos Environmental, Inc., 133 Martin Alley, Pasadena, CA 91105.

CHAPTER 2.0
DESCRIPTION OF PROPOSED PROJECT

Hyundai's proposed automotive test course facility (facility) would be used to test and evaluate the safety, performance, and handling of concept, prototype, and production automobiles to be manufactured by the automotive assembly and manufacturing plant currently being constructed by Hyundai in Birmingham, Alabama. No racing vehicles or motorcycles would be tested at the facility and the courses would be driven by professional drivers under strictly controlled circumstances. The facility will be used for approximately 30 years.

In April 2002, Hyundai broke ground on a Birmingham automotive assembly and manufacturing plant. Test vehicles will be available from the plant in 2004 and will create about 2,000 production jobs in addition to 13,000 jobs in auto-related industries. By 2005, the plant's estimated production capacity will be 94,000 vehicles, composed of the next–generation Sonata sedan and Santa Fe sport utility vehicle (SUV). The estimated sales revenues from production are $10 million per day. To ensure that the facility is opened by July 2004, an incidental take permit for the facility must be issued by January 2004.

Hyundai is headquartered in Fountain Valley, California, and employs more than 520 Americans at its headquarters, regional offices in Illinois, New Jersey, Georgia, and other facilities. The proposed facility would add an estimated $50 million investment in U.S. projects, including a $25 million design and technical center in California and a $17 million regional office and parts distribution center in Illinois.

Hyundai is a member of the California Fuel Cell Partnership and has worked with American partners to design a cutting-edge fuel cell-powered vehicle based on its Santa Fe SUV. Hyundai continues to work with American partners to develop a "super ultra-low emissions" vehicle and fuel cell vehicles for everyday use by 2005, contributing to the reduction of vehicle air emissions and petroleum fuel consumption in California and throughout the United States.

2.1 AUTOMOTIVE TEST COURSE FACILITY

Hyundai proposes to construct the proposed facility on 4,498 acres located approximately 0.5 mile north of State Highway 58 (Figure 2.1-1, *Proposed Project*). This location is depicted on the USGS 7.5-minute series Sanborn topographic quadrangle (Township 11 North, Range 11 West, Sections 9,10,11,14, 15, 16, and portions of Sections 22, 23, and 24).[1]

Development of the proposed facility requires a site consisting of approximately six sections of land to accommodate the largest element of the facility, a 6.4-mile-long oval test course. An additional 8.5 acres outside of the proposed project site boundary would be developed to provide an access road off Highway 58 to the proposed facility site (Table 2.1-1, *Project Element Grading Footprint)*. An additional 20 acres would be impacted by the City's proposed water line extension

[1] U.S. Geological Survey, 1973 (Photo inspected 1980). *Sanborn 7.5-Minute Series Topographic Quadrangle*. Scale. 1:24,000.

and access road work along Joshua Tree Boulevard. Development would occur on BLM Category III desert tortoise habitat.[2,3] Impacts to approximately 1,140 acres of desert tortoise habitat within the project site previously were mitigated as part of the Western Mojave Land Tenure Adjustment Project (LTA), a private party land exchange with BLM.[4] Additional habitat compensation for impacts to desert tortoise on those 1,140 acres is not required under the terms of the Biological Opinion for Western Mojave Land Tenure Adjustment Project (6844440 (CA-063.50)) (1-8-98-F-60R), dated September 10, 1998. Potential impacts to desert tortoise habitat on portions of the remaining proposed project site are addressed in this EA/HCP.

The entire proposed facility site will be enclosed by desert tortoise exclusion fencing. Desert tortoise exclusion fencing will be installed because the facility will be used for high speed vehicle testing and thus has the potential to generate take of desert tortoise. To avoid such take, desert tortoises on the project site will be translocated to an off-site translocation area. The proposed project therefore will permanently impact 4,498 acres on the facility site, plus 8.5 acres outside of the proposed facility boundary. An additional 20 acres would be impacted by the City's proposed the water line extension along Joshua Tree Boulevard. Therefore, the proposed project is anticipated to impact a total of 4,526.5 acres of desert tortoise habitat (Table 2.1-1). Impacts for each of the proposed project elements were calculated by overlaying the project grading foot print onto a topographic map of the proposed project site and using CAD to calculate the acres impacted by each project element. Fencing installation was estimated using a ten-foot-wide tract of land, with 2 additional acres for staging and storage. Revegetation of the project site following construction, as required under the Final Environmental Impact Report, Redevelopment Area Expansion, Detachment, Annexation, and Automotive Test Course Project, California City, dated October 4, 2002 and certified by the City in October 2002, also will impact a small area of desert tortoise habitat on the facility site.

[2] Bureau of Land Management,1989. *Map of Categories of Habitat for the Desert Tortoise*. Bureau of Land Management, Riverside, CA.

[3] Bureau of Land Management and California Department of Fish and Game, November 1990. *California Statewide Desert Tortoise Management Policy*. Bureau of Land Management, Riverside, CA.

[4] U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, 10 September 1998a. *Memorandum. Subject: Biological Opinion for Western Mojave Land Tenure Adjustment Project (6844440 (CA-063.50)) (1-8-98-F-60R).* Contact: District Manager, California Desert District, Bureau of Land Management, Riverside, CA. Prepared by U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, CA 93003.

TABLE 2.1-1
PROJECT ELEMENT GRADING FOOTPRINT

Project Element	Ground Disturbance (acres)
Automotive Test Course	
Access Road South	21
Access Road East	19
On-Site Water Line	1
6.4-Mile Oval Course (including berms, swales, adjacent carwash and fueling station, chain-link safety and security fencing, and bridge)	487
Winding Track	72
Vehicle Dynamics Area	81
Hill Up Road	40
Support Building/Lot	8
Straight Stability Road	72
Perimeter Security/Desert Tortoise Exclusion Fencing	18
Temporary Exclusion Fencing	0
Total Ground Disturbance for Test Course	**819**
Waterline Extension	
California City Access Road (Joshua Boulevard) and Waterline Extension (including water pipeline)	20
Total Ground Disturbance for Waterline Extension	**20**
Impacts Outside of Test Course Project Boundary	
Highway 58 Access Road	8.5
Total Ground Disturbance for Highway 58 Access Road	**8.5**
Total Ground Disturbance	**847.5**

The proposed facility includes the development of access roads, test tracks, a support building, an enclosed car wash, and perimeter security/desert tortoise exclusion fencing. These areas have been surveyed by qualified biologists and are described below.

Access Roads (Phase I)

A paved access road off Highway 58 (Hwy 58 access road), approximately 2 miles in length, would be constructed from Post Mile 120.99, the Section line located approximately 0.84 mile west of the existing access from Highway 58. This access road would be constructed outside of the proposed project boundaries and would connect the facility to Highway 58. The proposed access road location provides an existing paved crossover with eastbound and westbound left turn lanes, in addition to adequate sight distances and a longer median crossover. The Highway 58 access road would be designed as two 14-foot-wide lanes with acceleration lanes. Caltrans right-of-way at this location would be "access prohibited" and road access at this location would be temporary. At the time the Mojave Freeway interchange is built at the Section line location, all access would occur via frontage roads.

A paved emergency access road, approximately 2.5 miles long, would be constructed parallel to the eastern boundary of the proposed facility. This road also would be used as the Hill-Up testing

road described below. A 1-mile access road (Access Road East) connecting the southern end of the Hill-Up Road to the support building also would be constructed.

On-Site Water Line

A water line extension will be constructed to service the facility and will extend from the support building northeast to the City's water line extension. This water line will begin at the building and will extend north to the oval track. The water line will be underground.

Test Tracks

The facility includes a 6.4-mile oval course, a loop track, a shorter winding track, a Vehicle Dynamics Area (VDA), and paved hill roads that simulate the diverse conditions under which production vehicles must be tested.

Oval Test Track (Phase 1)

The 6.4-mile oval course would be approximately 50 feet wide. The prevailing southwest to northeast direction of the winds at the proposed project site requires that the oval track be oriented with the long sides of the track parallel to the prevailing wind conditions. The 6.4-mile oval course would be designed for a maximum speed of 125 miles per hour.

Winding Track (Phase 2)

A loop track (Winding Track) with various simulated surfaces and a shorter 2- to 3-mile-long winding track would be located inside the longer 6.4-mile oval course. The winding track would be less than 50 feet wide and would be designed with standard curves that meet Caltrans highway specifications.

Vehicle Dynamic Area (Phase 2)

The VDA would be an asphalt surface, approximately 300 feet wide at its western end, 1,200 feet wide at its eastern end and 3,000 feet in length, and would be constructed inside and parallel to one of the straightaways inside the larger oval course.

Hill-Up Road (Phase 1)

The facility would include one long, paved Hill-Up Road, approximately 2.5 miles long. The Hill-Up Road would be located approximately 100 feet south of the northern boundary of the property and 100 feet west of the eastern boundary of the property.

Support Building (Phase 1)

A 28,000-square-foot support building for interior tests and a 150-space parking lot would be constructed on 8 acres located close to the test course but at sufficient elevation to provide the required visibility of the exterior test facilities. A fuel storage area, fuel pumps, and car wash would

be constructed in proximity to the parking lot. Fuel would be used as needed to support the facility. Storage tanks equipped with an automatic fill system for fire protection would be provided at a location acceptable to the City Fire Department. Fluids used in operation and maintenance of vehicles would be transported to an appropriate off-site disposal location.

Car Wash and Fueling Station

An enclosed car wash will be constructed approximately 200 feet north of the support building, approximately 23 feet by 40 feet in size, and will be used to wash test automobiles only. Adjacent to the car wash will be a fueling station with fuel tanks. The fueling station will be an open structure surrounded by four walls. Grading impacts for the car wash and fueling station are included in the impact acreage for the oval track.

Facility Fencing (Phase 1)

Perimeter Security/Desert Tortoise Exclusion Fencing (Phase 1)

Applicants will fence the entire perimeter of the proposed project site with permanent hog wire or three stranded barbed wire fence and desert tortoise exclusion fencing. The perimeter fence will be constructed prior to initiating clearance activities for desert tortoises and will be maintained by the applicants for the life of the permit. The wire fence would be constructed along the proposed property boundary to mark the edge of the project site and deter trespassing. The desert tortoise exclusion fence will be installed separately, and the two fences will be designed to ensure that they do not impede movement of other wildlife species. The fences will be designed to inhibit birds that prey on desert tortoises from perching on their components. For example, to prevent birds from perching on fence posts, fence posts would be topped with nixalite, sharp, intertwined, stainless steel spikes standing at upward angles, with an upright, 8-inch metal spike welded in the center of each fencepost. To prevent birds from perching on the fencing, two flexible wires would be loosely strung between the metal spikes on the fence posts, with one wire approximately 3 inches above the top of the fence, and the other wire approximately 8 inches above the fence.

Permanent desert tortoise exclusion fencing also will be installed around several hundred acres north of the oval track in the northwest portion of the project site, to provide a holding area for desert tortoises exhibiting clinical signs of illness, in accordance with the Translocation Program, attached as Appendix A, *Draft Desert Tortoise Translocation Program*. This area will be exclusion fenced and cleared of healthy desert tortoises prior to moving clinically ill desert tortoises into the area.

The desert tortoise exclusion fencing will be built to specifications agreed to by the USFWS and the CDFG and will be constructed of 1\2-inch mesh hardware cloth. Vertical burial will be 12-18 inches with an 18-24 inch aboveground extension. Supporting stakes will be sufficiently spaced to maintain fence integrity. The desert tortoise exclusion fence will run along the inner edge of the perimeter security fence.

If ground disturbance activities occur prior to the clearance of desert tortoise from the project site, Hyundai and the City will construct temporary desert tortoise exclusion fencing around the exterior

and interior of the oval track, the perimeter of staging areas, and the perimeter of all other project components, including the water line leading to the project site and access from Highway 58, prior to initiation of ground disturbance. This temporary exclusion fence may be silt fencing or other temporary fencing, buried 12-18 inches with an 18-24 inch aboveground extension. Supporting stakes will be sufficiently spaced to maintain fence integrity, and temporary fencing will remain in place until all tortoises have been cleared from the project site and translocated in accordance with the Translocation Program (Appendix A).

Chain-Link Fencing

Prior to commencement of facility operation, chain-link security and safety fencing will be constructed around the oval track. Fencing will be composed of standard chain-link fencing 8 feet in height, with 8-foot spacing between posts. Entry gates would be provided in the fence at the designated road entry point for the oval test course, and at three specified points along the oval test track. The three additional gates would be used only by authorized personnel for situations that require rapid access to the interior of the oval test track.

Operations

The facility would operate for 30 years, 350 days per year, and would have a regular year-round staff of approximately 35 to 40 employees. Approximately 50 to 65 employees would work at the project site during a peak period from mid-July to late August for summer, hot-weather testing. As many as 100 people, consisting of employees, visitors, and media representatives, would be present during several days of special programming per year.

Hazardous waste, including used motor oil waste and coolant, would be stored and transferred in a manner consistent with applicable regulations and guidelines, including those mandated by the California Environmental Protection Agency (EPA), Caltrans, the California Regional Water Quality Control Board Lahontan Region, and the City of California City Fire Department. The use of herbicides, pesticides and chemicals that could be harmful to desert tortoise would be discouraged on the project site, and are understood not to be activities covered under the incidental take permit.

Rain Gauges

Three rain gauges will be installed on the project site to measure rainfall. One will be installed at the building, one at the northern end of the Hill-Up Road, where it intersects the roadway and waterline extension, and one along the perimeter desert tortoise exclusion fence at the northwest boundary of the property. The rain gauges will serve as an indicator of when the desert tortoise exclusion fencing should be checked for damage. During heavy rainfall, there is an increased likelihood of damage to the fencing due to washouts or debris piling up along the fence. Because rainfall in the desert can be very sporadic, the rain gauges will ensure that a rain event will not go unnoticed. During the rainy season, rain gauges should be checked twice monthly, and when rain has collected, a check of the exclusion fence shall be initiated.

Property Ownership

The proposed project site consists of 4,498 acres of vacant land. On December 13, 2002, Hyundai purchased 2,880 acres from SF Pacific Properties, Inc. (Catellus Property). The remaining acres are being acquired by the Redevelopment Agency of The City of California City (RDA) and will be transferred to Hyundai pursuant to the terms of the Owner's Participation Agreement (OPA) between Hyundai and the RDA. On July 1, 2003, the RDA adopted Resolutions of Necessity to exercise its powers of eminent domain to acquire the remaining parcels at fair market value.

2.2 CITY WATER LINE EXTENSION (PHASE 1)

The City is proposing to construct a paved access road and extend a water pipeline to the northeast corner of the proposed project site by improving two miles of Joshua Tree Boulevard (California City Access Road). This access road would run from the northeast corner of the proposed facility site, extending easterly along the Section line for a distance of approximately 2 miles to join the existing roadway system at the intersection of Joshua Tree Boulevard and Airway Boulevard. The existing unimproved 12–foot-wide Joshua Tree Boulevard would be improved to an asphalt-paved road 24 feet in width, 12 feet on each side of the proposed center line, resulting in 12 feet of new grading for the road improvement on each side of the existing roadway. An additional 18 feet of graded shoulder would be constructed on each side of the road. The remaining portion of the street right-of-way (approximately 25 feet on each side) would remain undisturbed, except for that section temporarily disturbed for the installation of the water pipeline. The ultimate street right-of-way dedication would be 110 feet (Figure 2.2-1, *Water Pipeline Extension Detail*). The improvements to Joshua Tree Boulevard would provide access to emergency vehicles to the facility. The 2-mile water line extension will be buried, will not include any water valves or hydrants and will service only the proposed facility. There are currently no plans for additional projects along the water pipeline and road extension. The proposed water line extension would run 38 feet south of the proposed center line of the Joshua Tree Boulevard right-of-way (Figure 2.2-1). The line would consist of 16-inch high-density plastic pipe, pursuant to City and fire department standards. A permanent access road along the water pipeline would not be needed. At least 25 feet from the north edge of the graded shoulder to the north of the proposed road way would not be graded as a part of this project. The City will have responsibility for construction and maintenance of the water line extension, and for mitigation of all impacts associated with the water line extension.

2.3 PROJECT IMPACT AVOIDANCE AND MINIMIZATION MEASURES

This EA/HCP includes the following five types of impact avoidance and minimization measures for desert tortoise:

- Preconstruction minimization measures
- Translocation
- Construction and operations avoidance measures
- Common Raven Management
- Postconstruction monitoring

Proposed compensation for impacts to desert tortoise and measures to promote recovery are discussed in Section 7.0 (Habitat Conservation Plan).

2.3.1 Preconstruction Measures

DT-1. As a means of minimizing impacts to desert tortoise, Hyundai and the City shall require that all proposed construction staging areas, parking areas, and project elements be surveyed, staked and clearly flagged by a registered surveyor prior to the initiation of preconstruction surveys. Compliance shall be verified by an authorized biologist or biological monitor. A written report shall be submitted to the USFWS and the CDFG by an authorized biologist or biological monitor verifying compliance with this measure, within 30 days of completion of the surveying, staking and flagging.

"Authorized biologist" and "biological monitor" are persons working pursuant to a Memorandum of Understanding and Section 10(a) permit issued for the proposed project by CDFG and USFWS. An authorized biologist has a thorough knowledge of desert tortoise behavior, natural history and ecology, has demonstrated substantial field experience and training and is approved by the USFWS to handle tortoises or conduct other activities that could result in take. A "monitor" is a person or persons with some education and experience in detecting the presence of desert tortoise, but who has no authority to handle a desert tortoise.

DT-2. As a means of minimizing impacts to desert tortoise, prior to the initiation of construction activities, Hyundai and the City shall require that an authorized biologist develop and administer a worker education program for all construction personnel. Construction crews, foremen, contractors, subcontractors and other personnel potentially working on the proposed project site shall undergo the education program to familiarize themselves with the particular biological restrictions and conditions of the area.

Practices and information covered by this program shall include speed limits, firearm prohibition, encounters with desert tortoise, staying within designated construction areas, pet prohibition, agency notification, checking under vehicles, trash and litter management, training on special status species within the project area, species and habitat identification, techniques to avoid impacts to species, consequences of taking a listed species, and reporting procedures when encountering listed or sensitive species. An incentive program will be implemented into the worker education program to encourage on-site workers to report observations of tortoise to an authorized biologist. The text of the worker education program shall be submitted to the USFWS and the CDFG at least 10 working days prior to the initiation of construction.

Workers shall receive a sticker or certificate that they have completed the training. A construction monitoring notebook shall be maintained on site throughout the construction period and shall include, at a minimum, a copy of the Section 10(a) permit for incidental take, a copy of the CESA Section 2081(b) incidental take permit, the Habitat Conservation Plan, the Mitigation Monitoring and Reporting Plan adopted by the City, and a list of signatures for all personnel who have successfully completed the worker education program. The authorized biologist shall demonstrate compliance with this measure by sending a copy of the education program and a copy of the construction monitoring notebook, including a list of the names of workers who have completed the required worker education program, to the USFWS and the CDFG on an annual basis.

DT-3. Preconstruction surveys shall be undertaken in three phases: (1) the oval track and oval track interior, which would then be surrounded by temporary desert tortoise exclusion fencing; (2) the alignment of the perimeter desert tortoise exclusion and safety fencing; and (3) the remainder of the project site. The authorized biologist shall submit proof of compliance with this measure, including a survey report, to the CDFG and USFWS. Temporary exclusion fencing will remain in place until the entire project site has been cleared and the desert tortoise exclusion fencing around the perimeter of the site has been installed.

All desert tortoise burrows, as well as large mammal burrows that could be used by desert tortoise, shall be flagged in work, staging and construction areas, rights-of-way within the proposed project site and the water line extension site. The authorized biologist shall submit proof of compliance with this measure to the USFWS and CDFG.

2.3.2 Translocation

DT-4. As a means of minimizing impacts to desert tortoise, the authorized biologist shall translocate all desert tortoise encountered within the proposed project site in accordance with the Translocation Program (Appendix A).

The authorized biologist for the Translocation Program shall report project data to the USFWS and CDFG, including but not limited to, individual tortoise data, maps of locations, disease analyses and translocation information. An annual report will be prepared and submitted to USFWS and CDFG on or before January 31 of each year that will include an analysis of data collected the previous year, annual and cumulative results and conclusions, and recommendations. Following the final year of the Translocation Program, a comprehensive report will be written to encompass the entire study and will be submitted to USFWS and CDFG on or before January 31 of the following year.

2.3.3 Construction and Operations Avoidance Measures

Hyundai and the City shall implement the following measures to avoid impacts to desert tortoise during construction and operation of the proposed project.

DT-5. As a means of minimizing impacts to desert tortoise, Hyundai and the City shall construct desert tortoise exclusion fencing prior to initiating any ground-disturbing activity within the proposed project site. The locations and types of fencing have been described above [see *Facility Fencing (Phase I)*]. All fence construction will be accompanied by monitors and an authorized biologist to ensure that no tortoises are harmed.

All construction staging shall be undertaken in areas of lower quality habitat or areas that exhibit signs of disturbance. All staging areas and fencing shall be inspected and approved by an authorized biologist prior to the initiation of construction activities. Additionally, an authorized biologist will be present during all construction activities to inspect the staging areas on a regular basis and to inspect the underside of vehicles prior to moving. Proof of compliance with this measure shall be verified by an authorized biologist and shall be submitted in writing to the USFWS and the CDFG within 30 days following completion of all construction activities.

DT-6. As a means of minimizing impacts to desert tortoise, an authorized biologist shall survey all work, staging and construction areas, rights-of-way within the proposed project site and water line extension site after tortoise exclusion fences are built and move all desert tortoise found within those areas prior to the start of construction activities (i.e., grubbing, grading, trenching) to ensure maximum avoidance of impacts to desert tortoise and their burrows. Tortoises will be moved as explained in the Translocation Program (Appendix A).

DT-7. As a means of minimizing impacts to desert tortoise, Hyundai and the City shall have an authorized biologist present on the project site throughout the construction period to move any additional desert tortoises encountered during construction for both the facility and water line extension. Desert tortoises encountered during construction shall be moved in accordance with the Translocation Program (Appendix A). The authorized biologist will have the authority to halt construction activities that have the potential to impact a desert tortoise until the desert tortoise can be moved. Desert tortoises encountered during construction shall be moved in accordance with the Translocation Program (Appendix A).

Night time construction will be permitted (1) after an area has been exclusion- fenced and (2) after desert tortoises have been moved from fenced construction and work areas. All construction equipment will remain within the fenced area.

DT-8. As a means of minimizing impacts to desert tortoise, Hyundai and the City shall post speed limits of 20 miles per hour (mph) and strictly enforce speed limits within the project construction area for the entire construction period. However, should the air temperature rise above 35°C (95° F) at 5 cm above the ground surface (http://ventura.fws.gov/SurveyProt/de_tortoise_prtstatement. htm) prior to 12:00 p.m., an authorized biologist shall be allowed to suspend the 20 mph speed limit for that day, or until the air temperature falls to 35°C (95° F)or below.

DT-9. As a means of minimizing impacts to desert tortoise, Hyundai and the City shall prohibit firearms and pets within the proposed project site.

DT-10. As a means of minimizing impacts to desert tortoise during construction, Hyundai and the City shall implement dust control measures on access roads and construction areas.

DT-11. As a means of minimizing impacts to desert tortoise during routine operation and maintenance of the proposed project, Hyundai and the City shall conduct an annual worker education program, as described in DT-3, for regularly scheduled on-site personnel for five years following completion of construction ; conduct post–construction monitoring as prescribed in DT-13, and have an authorized biologist on call to move any desert tortoises encountered during project operation in accordance with the Translocation Program (Appendix A). A Hyundai Environmental Compliance Officer (ECO) would be educated in basic tortoise handling procedures, permitted to handle tortoises on the project site, and coordinate with an authorized biologist to move tortoises found during project operation. Hyundai also shall maintain the security and desert tortoise exclusion fencing throughout the life of the proposed project.

2.3.4 Common Raven Management Plan

DT-12. To minimize impacts to desert tortoise during construction and operation of the facility, Hyundai and the City shall undertake the following measures to prevent an increase in the common raven (*Corvus corax*) population in the vicinity of the proposed project site and to decrease the attractiveness of the proposed project site to common ravens.

- Hyundai and the City shall implement a trash and litter management program that reduces the availability of solid waste. Trash receptacles on site shall be covered with a solid lid at all times, and instructional signage shall be placed in public areas of the site to encourage proper disposal of trash. Proof of compliance with this measure shall be verified by the authorized biologist and submitted in writing to the USFWS and CDFG.

- The security fencing and above ground utility structures shall be designed to inhibit Common Ravens and birds of prey from using them as perch sites. To prevent birds from perching on fence posts or utility structures, the fence posts and structures would be topped with nixalite, sharp, intertwined, stainless steel spikes standing at upward angles, with an upright, 8-inch metal spike welded in the center of each fencepost or structure. To prevent birds from perching on the fencing, two flexible wires would be loosely strung between the metal spikes on the fence posts, with one wire approximately 3 inches above the top of the fence, and the other wire approximately 8 inches above the fence.

- Sources of standing water such as leaking faucets, irrigation lines, stock tanks, or car wash stations shall be avoided and eliminated whenever possible, as these unnatural sources of water may attract common ravens.

- Road kill wildlife found within the project site shall be immediately removed and properly disposed.

- Anti-common raven measures, such as hazing, will be undertaken following construction, and other non-lethal measures shall be undertaken to control the presence of common ravens that are thought to be preying on juvenile tortoises, including the removal of inactive common raven nests within and adjacent to the facility. Any common raven nest will be removed by a wildlife biologist approved by the USFWS and CDFG.

2.3.5 Postconstruction Measures

DT-13. Hyundai and the City shall conduct postconstruction clearance and monitoring beginning in the autumn following the initial clearance and translocation of all desert tortoises (except sequestered, clinically ill tortoises), thereby minimizing potential take. If the prior spring has poor forage and there is relatively no summer rain, the first annual postconstruction monitoring and clearance should be postponed until the next activity season when there has been sufficient rainfall for tortoises to be active. Post construction surveys shall consist of surveys of the entire project site

using 10-foot transects to assure 100 percent coverage. Any desert tortoise encountered during postconstruction surveys shall be processed in accordance with the Translocation Program (Appendix A). An authorized biologist shall submit the results of the survey to USFWS and CDFG within 30 days of the completion of each year of postconstruction clearance surveys. Performance of two consecutive postconstruction surveys during the active period of desert tortoise, without fresh evidence of tortoise presence, shall be considered sufficient for a preliminary declaration of a site free of tortoise. A final clearance survey shall be conducted of the project site in the fifth year following completion of the initial clearance and translocation of desert tortoises, to locate and translocate any desert tortoises that were too small to be seen during the initial clearance and may have grown to sufficient size to permit detection. When the site is declared free of tortoise, no more on-site monitoring or construction worker education shall be deemed necessary. However, a trained Hyundai Environmental Compliance Officer will be on call should a tortoise be observed during project operation (see DT-11). The authorized biologist shall notify the USFWS and CDFG in writing within 2 weeks of confirming that the site is free of tortoise.

The handling of desert tortoises shall be in compliance with USFWS and CDFG protocols and with the Translocation Program (Appendix A). All desert tortoises shall be processed in accordance with the specifications provided in the Translocation Program. Should any desert tortoise be encountered during postconstruction surveys, the authorized biologist shall notify the USFWS and CDFG within 24 hours.

DT-14. Hyundai and the City shall have an authorized biologist on call to remove any desert tortoise encountered during project operation, following completion of initial clearance and translocation of desert tortoises.. All regularly scheduled on-site personnel shall be instructed, as part of the worker education program, on the protocol for contacting the authorized on-call biologist to remove any desert tortoise encountered in a work area.

DT-15. Hyundai and the City shall maintain the security/desert tortoise exclusion fencing and rain gauges, throughout the life of the project. Hyundai and the City shall inspect the security/desert tortoise exclusion fencing and rain gauges on a monthly to twice-monthly schedule during the first year following commencement of project construction, and monthly throughout the life of the project unless USFWS and CDFG concur that fence inspection may occur less frequently, and shall replace or repair the fencing and gauges as necessary to exclude desert tortoises from the project site. Temporary desert tortoise exclusion fencing shall be inspected weekly. All fencing shall be inspected after storm events that are accompanied by surface flow. An approved biologist shall submit annual inspection reports to the USFWS and CDFG. A copy of the annual inspection shall be retained on site and shall be available for inspection by the USFWS and CDFG within two working days of a request for review.

2.3.6 Estimate of Take

Surveys performed in May 2003, spaced at 20-foot intervals, located 8 live desert tortoises in approximately two-thirds of the site (Appendix B, *2003 Desert Tortoise Survey Report*). A separate survey of the entire Hyundai project site was completed in October 2003 using tortoise searchers spaced at 5-meter intervals. Twenty tortoises were found.

The desert tortoise population in this region of the Mojave Desert is not expected to incur significant impacts from construction and operation of the facility, loss of habitat, and take of the tortoises located within the proposed project site. Desert tortoise currently located within the proposed project site will be translocated to an area outside of the proposed site but still within the population. Maintaining the proposed project's desert tortoises as part of the area's breeding population is important to increase population viability, especially in light of recent declines in the western Mojave tortoise population. Furthermore, the tortoise population at the Hyundai site already is potentially at risk for two reasons. First, the densities are very low, less than 10 desert tortoises per square mile. The Desert Tortoise (Mojave Population) Recovery Plan[5] considers such low densities to be at risk to become extinct from factors such as difficulty in finding mates, or severe population fluctuations due to environmental conditions such as droughts.

Second, the habitat at the site is compromised by on-site and adjacent anthropogenic factors. On site, sheep are grazed and the predator population (coyotes, ravens) appears to be relatively high, probably subsidized by the sheep grazing as well as the close proximity of California City. The site is also adjacent to both Highway 58 and the Mojave Bypass. Such anthropogenic factors result in population fragmentation, subsidized predator populations, and increased tortoise mortality. Translocating the desert tortoise from the proposed project site to an area with higher quality habitat (historic high densities, protected, larger area) and better connectivity within the population may increase population viability.

Regional effects are also not anticipated to be significant. The proposed project site is now within the limits of California City (City). The proposed project site will eventually become isolated from adjacent suitable habitat as the City continues to grow and expand. This would prohibit movement of animals from the project site to adjacent habitat, as well as prohibit emigration of animals into the project site, serving to isolate the population genetically. The project site is not located within a critical habitat unit, and therefore would not benefit from agency habitat management policies designed to promote population growth in areas designated as critical habitat.

Compensation for take of tortoise in association with construction of the facility has been developed through coordination with the USFWS and CDFG, and will benefit the tortoise by placing into conservation over 3,000 acres of higher quality desert tortoise habitat and by translocating the resident population to lands in the vicinity of the Desert Tortoise Research and Natural Area (DTRNA). This area is a desirable location due to higher quality of habitat, management policies designed specifically for the tortoise, and a preexisting population of tortoise that share similar genetic origin. Further, the translocation plan provides for scientific study of the effects and effectiveness of translocation as a conservation tool and is anticipated to have valuable applications for tortoise populations in the future.

[5] U.S. Fish and Wildlife Service, 1994. Desert Tortoise (Mojave Population) Recovery Plan. U.S. Fish and Wildlife Service, Portland, Oregon.

CHAPTER 3.0
PURPOSE AND NEED FOR THE PROPOSED ACTION

3.1 PURPOSE AND NEED FOR THE PROPOSED ACTION

3.1.1 Purpose of the Proposed Action

The purpose of the proposed action--issuance of an incidental take permit pursuant to Section 10(a)(1)(B) of the ESA--is to enable Hyundai and the City to develop an automotive test course facility (facility) and water line extension in eastern Kern County, California on a site occupied by the federally and state-listed threatened desert tortoise.

Pursuant to Section 10(a)(1)(B), the USFWS must determine that the following conditions have been met:

- The taking would be incidental to an otherwise lawful activity.
- The applicant would implement measures to minimize and mitigate to the maximum extent practicable.
- The applicant would ensure that adequate funding would be available to implement the HCP.
- The taking would not appreciably reduce the survival and recovery of the species in the wild.
- There are no further measures that should be required prior to issuance of a permit.

The USFWS may choose to do any of the following:

- Issue a permit conditioned on implementation of the HCP as submitted by the applicant.
- Issue a permit conditioned on implementation of the HCP as submitted together with other measures specified by the USFWS.
- Deny the permit.

3.1.2 Need for the Proposed Action

Under Section 9 of the ESA, unauthorized impacts to a species listed as endangered or threatened may constitute a take and are prohibited. Take of a listed species that is incidental to an otherwise lawful activity can be authorized under Section 10 of the ESA. The proposed project would impact habitat occupied by the desert tortoise (*Gopherus agassizii*), a federally and state-listed threatened species. Hyundai and the City jointly have applied to the USFWS for issuance of an incidental take permit pursuant to Section 10(a)(1)(B) of the ESA for the proposed project, have submitted a Habitat Conservation Plan in support of that application, and have incorporated measures into the proposed project to avoid, minimize, and compensate for adverse effects to desert tortoise.

3.2 REGULATORY FRAMEWORK

3.2.1 National Environmental Policy Act

NEPA and its supporting federal regulations establish certain requirements that must be met for any project that is "...financed, assisted, conducted, or approved by a federal agency...." The USFWS is the lead agency pursuant to NEPA for the issuance of a permit for incidental take pursuant to Section 10(a) of the ESA. In making a decision on the issuance of a federal permit for the proposed project, the USFWS is required under NEPA to "...determine whether the proposed action may significantly affect the quality of the human environment." This EA/HCP satisfies that requirement.

3.2.2 Federal Endangered Species Act of 1973, as Amended

The purposes of the ESA are to provide a means to conserve the ecosystems that endangered and threatened species depend on and to provide a program for conservation and recovery of these species. The ESA provides regulatory protection for species listed as threatened or endangered under the ESA. Section 9 of the ESA prohibits the take of listed species. The ESA and its implementing regulations define "take" as "...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct." "Harm" is further defined by regulation as "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering."[1] Section 10(a) of the ESA includes provisions authorizing take that is incidental to, but not the purpose of, otherwise lawful activities. Section 10(a)(1)(B) provides for the issuance of permits for take that is incidental to a lawful activity that does not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

The desert tortoise, a federally and state-listed threatened species, occupies the proposed project site. Hyundai and the City jointly have submitted to the USFWS an application for a permit, pursuant to Section 10 (a)(1)(B) of the ESA, to authorize the incidental take of the desert tortoise. The implementing regulations for Section 10(a) specify the criteria by which a permit allowing the incidental take of a threatened species may be obtained.[2] A Habitat Conservation Plan (HCP) is required to support issuance of a permit, and has been submitted by Hyundai and the City.

[1] Office of the Federal Register National Archives and Records Administration, October 2000. *Code of Federal Regulations*. 50 CFR 17.3. Washington, DC: U. S. Government Printing Office.

[2] Ibid.

3.2.3 Section 404 of the Clean Water Act

Based on a review of the USGS 7.5-minute series Sanborn, California topographic quadrangle,[3] the National Wetland Inventory Map Sanborn, California quadrangle[4] and aerial photos of the proposed project area, it was determined that there are no areas on the proposed project site subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps). A letter dated August 14, 2002[5] was transmitted to the Corps to notify and obtain verification that the proposed project contains no Corps jurisdictional areas. This letter indicated that the isolated dry desert washes present on site do not connect to, and are not associated with, any larger rivers or lakes subject to the jurisdiction of the Corps pursuant to Section 404 of the Clean Water Act. The only named and identified blue-line stream on the Sanborn topographic quadrangle is Cache Creek, which does not run through the proposed project site. Plant community mapping in the field indicates that no riparian or wetland habitat is present within the proposed project site. All isolated dry desert washes consist of sandy bottoms and do not support riparian or wetland plant species. All isolated dry desert washes appear to carry water only during rain events and drain to low points within the proposed project site. In its letter dated September 27, 2002, the Corps determined that the proposed project site is not subject to Corps jurisdiction.[6]

3.2.4 California Endangered Species Act

The CESA is administered by the CDFG and its requirements closely parallel those of the ESA. CESA prohibits the taking of listed species except as otherwise provided by state law. CESA also applies take prohibitions to species petitioned for listing (state candidates). CDFG is required to coordinate with the USFWS for actions that involve both federally and state-listed species.

The Mohave ground squirrel and desert tortoise, both state-listed threatened species, have been found on the proposed project site and are protected under CESA. Hyundai and the City intend to request from CDFG, pursuant to Section 2080.1 of the CESA, a determination that the federal Section 10(a)(1)(B) incidental take permit is consistent with CESA and USFWS and CDFG have been coordinating on the ESA Section 10(a)(1)(B) permit. Hyundai and the City also have submitted an application to CDFG for issuance of an incidental take permit for the proposed project, pursuant to Section 2081 of the CESA, for impacts to Mohave ground squirrel. Section 2081 of the CESA

[3] U.S. Geological Survey, 1973 (Photo inspected 1980). Sanborn, CA 7.5-Minute Topographic Quadrangle. Denver, CO: U.S. Department of the Interior Geologic Survey.

[4] National Wetlands Inventory Map, August 1986 (Aerial photography, revised 1995). Sanborn, California. Scale 1:24,000.

[5] Sapphos Environmental, Inc., 14 August 2002. (Letter to Mr. Aaron Allen, Senior Project Manager, U.S. Army Corps of Engineers). Contact: Sapphos Environmental, Inc., 133 Martin Alley, Pasadena, CA 91105.

[6] U.S. Army Corps of Engineers, 17 September 2002 (Letter to Sapphos Environmental, Dr. Brad Blood. Contact: Sapphos Environmental, Inc. 133 Martin Alley, Pasadena, CA 91105). Prepared by: U. S. Army Corps of Engineers, David Castanon, Chief, North Coast Section Regulatory Branch, Ventura Field Office, 2151 Alessandro Drive, Suite 110, Ventura, CA 93001.

provides for the issuance of an incidental take permit for activities that are incidental to a lawful activity and does not jeopardize the survival and recovery of the species in the wild.

Section 1603 of the California Fish and Game Code

All diversions, obstructions, or changes to the natural flow, bed, channel, or bank of any river, stream, or lake in California that supports fish or wildlife resources are subject to the regulatory authority of the CDFG pursuant to Sections 1600 through 1603 of the California Fish and Game Code (Code). Specifically, Section 1603 of the Code governs private party individuals. Under the Code, a stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. CDFG's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. CDFG must be contacted for a streambed alteration agreement for any project that may impact a streambed or wetland. CDFG has maintained a "no net loss" policy regarding potential impact, and has required replacement of lost habitats on at least an acre-for-acre basis.

Portions of the project may affect a small area of desert wash that may be subject to CDFG jurisdiction. On September 19, 2002, Hyundai and the City submitted to CDFG an application for a Streambed Alteration Agreement (SAA), pursuant to Section 1603 of the Code, to construct those portions of the project. A Final Addendum to the Notification of Lake or Streambed Alteration for Automotive Test Course Facility Project, California City, California was submitted to CDFG on October 16, 2003, and CDFG currently is finalizing the SAA for the proposed project.

3.3 RELATIONSHIP OF PROPOSED PROJECT SITE TO WESTERN MOJAVE LAND TENURE ADJUSTMENT PROGRAM

On January 12, 1991, BLM issued a Record of Decision (ROD) for the Western Mojave Land Tenure Adjustment Project (LTA Project).[7] The LTA Project area covered 2.8 million acres, including approximately 522,000 acres of public lands managed by BLM and approximately 6,700 acres managed by the State of California. By exchanging publicly held lands for private lands, the LTA Project provided a means to consolidate large areas of sensitive habitat into public ownership. The ROD for the LTA Project was issued following completion of consultation under Section 7 of the ESA, between BLM and USFWS, and issuance of a Biological Opinion dated September 4, 1990.[8] The ROD for the adopted LTA Project states:

> "The desert tortoise and Mohave ground squirrel, having previously undergone consultation and conference, will not need additional consultation or conferences unless significant change in their status, habitat, or potential impacts to them from implementation of the LTA Project becomes apparent. Both Federal and State

[7] Bureau of Land Management, 1991. *Western Mojave Land Tenure Adjustment Project Record of Decision*. Contact: BLM, California Desert District, Barstow Resource Area, Ridgecrest Resource Area, 150 Coldwater Lane, Barstow, CA 92311.

[8] Ibid.

> wildlife agencies concur that the implementation of the LTA Project results in a net benefit to both species through consolidation of manageable habitat."

The 1990 Biological Opinion indicated that land owners participating in the exchange program would be exempt from the need to obtain a Section 10(a)(1)(B) permit from the USFWS under the ESA. On September 10, 1998, the USFWS issued a second Biological Opinion clarifying that developers of land acquired through the LTA Project must obtain an incidental take permit and implement measures to minimize the extent of incidental take of desert tortoises.

The September 10, 1998 Biological Opinion specifically addressed the land exchange between BLM and Catellus Development Corporation (Catellus). The land exchange included the addition of approximately 816 acres known as the I-15/SH-58, I-15/SH-58 Connector, Barstow, and Barstow Heights properties to the LTA Project area. Catellus received 4,810 acres of BLM lands in exchange for 14,800 acres of critical habitat of the desert tortoise in the Black Mountain and Fossil Canyon areas, north and northwest of Barstow. The Black Mountain and Fossil Canyon areas are both within the known range of the Mohave ground squirrel.

Three of the parcels, totaling 1,140 acres, exchanged to Catellus are located within the proposed project area (Figure 2.1-1) (USGS 7.5-minute series California City topographic quadrangle, T11N, R11W, south half of Section 10, Section 14, and east third of east half of Section 22). In the 1998 Biological Opinion, the USFWS determined that although developers of exchanged lands are required to obtain a Section 10(a)(1)(B) permit from the USFWS for incidental take of desert tortoises, developers of exchanged lands are not required to provide any additional compensation in the form of land.

CHAPTER 4.0
DESCRIPTION OF THE AFFECTED ENVIRONMENT

This description of the affected environment for the proposed project is based on the Final Environmental Impact Report (Final EIR),[1] literature review,[2,3] archive and records search, site reconnaissance, directed surveys for federally listed species[4] undertaken on February 12 and 14, and March 18 through May 3, 2002, and May 5 to 14, 2003, and consultations with agency representatives and other recognized experts.

4.1 PROPOSED PROJECT

4.1.1 Location

The proposed project site is located approximately 60 miles southeast of downtown Bakersfield, approximately 9 miles east of the community of Mojave, and within the southern-most limits of the City of California City (City) (Figure 4.1.1-1, *Regional Vicinity*). Hyundai proposes to construct an automotive test course facility on a 4,498-acre site, located in southeastern Kern County (Figure 4.1.1-2, *Project Location*). The site is currently accessible from State Highway 58 via an unsigned street that exits north off State Highway 58 approximately 9 miles east of the town of Mojave adjacent to an AT&T radio tower facility. Several existing dirt roads provide access to the interior of the site. The site has a City General Plan Designation of Light Industrial and Research and is zoned M-1-Light Industrial District, which allows an automotive test course facility. The proposed project site is depicted on the USGS 7.5-minute series Sanborn, California topographic quadrangle[5] within Township 11 North, Range 11 West, Sections 9, 10, 11, 14, 15, 16, and portions of Sections 22, 23, and 24 (Figure 4.1.1-3, *Topographic Map)*.

[1] City of California City, 4 October 2002. Final EIR: Redevelopment Area Expansion, Detachment, Annexation, and Automotive Test Course Project, California City. Contact: 21000 Hacienda Boulevard, California City, CA 92505. Prepared by: Sapphos Environmental, Inc.,133 Martin Alley, Pasadena, CA 91105.

[2] Jones and Stokes and Associates, 20 August 1997. Results of Biological Surveys of Lands for Bureau of Land Management and SF Pacific Properties, Inc. Land Exchange. Contact: SF Pacific Properties, Inc. 304 South Broadway, 4th Floor, Los Angeles, CA 90013.

[3] AMEC Earth & Environmental, Inc., November 2001. Baseline Biological Resources Review for a Project Near California City, California. Contact: Wateridge Capital Group, LLC., 221 Town Center West, Suite 106, Santa Maria, CA 93458. Prepared by: AMEC Earth & Environmental, Inc., 1 East Anapamu Street, Santa Barbara, CA 93101.

[4] City of California City, 2002b. MFR: Results of Directed Surveys for Desert Tortoise within the Proposed Automotive Test Course Project Area, Kern County, California. Contact: 21000 Hacienda Blvd., California City, CA 93505. Prepared by: Sapphos Environmental, Inc., 133 Martin Alley, Pasadena, CA 91105.

[5] U.S. Geological Survey, 1973. USGS 7.5-minute series Sanborn, CA topographic quadrangle. Denver, CO.

4.1.2 Existing Conditions

4.1.2.1 Aesthetics

The existing visual character of the proposed project site is defined by vacant land that supports native desert plant communities. The site has been partially degraded by past and current agricultural uses, mineral extraction, and military and utility activities. These activities have left graded gravel and dirt roadways on site. There are no designated scenic vistas in the proposed project site area. There are no state-designated scenic highways passing through or adjacent to the proposed project site. Existing sources of light and glare include urban and residential lighting in the Civic Center in downtown California City to the north, Edwards Air Force Base to the east, street lighting (at intersections) and vehicular traffic along State Route 58 to the south, and State Route 14 to the west.

4.1.2.2 Air Quality

The analysis of existing conditions related to air quality includes a summary of pollutant levels prior to implementation of each component of the proposed project. All of the project components are located within the Mojave Desert Air Basin and all air quality data and analysis are presented as an aggregate of the entire project area.

The Kern County Air Pollution Control District (KCAPCD) is responsible for monitoring air quality in the Kern County portion of the Mojave Desert Air Basin and for adopting controls in conjunction with the California Air Resources Board (CARB) to improve air quality. The Mojave Desert Air Basin is in attainment for all Environmental Protection Agency (EPA) air quality criteria pollutants except ozone and PM_{10}.[6] The Basin's climate is hot in the summer and cold in the winter compared to the coastal basins where the climate is moderated by the adjacent ocean. Rainfall is light, averaging about 5 inches per year in Mojave. Most of the air basin is sparsely populated and produces little air pollution. Prevailing winds are from the south and west, and rapid daytime heating of the lower air leads to convective activity (mixing of lower and upper air masses). Although separated by mountains from the much more heavily populated San Joaquin Valley and the South Coast air basins, prevailing winds provide sufficient transport through passes such as the Tehachapi Pass to cause occasional exceedance of the state ozone standard. Readings for ozone and PM_{10} applicable to the proposed project were taken at the KCAPCD's Mojave air monitoring station (Figure 4.1.2.2-1, *Air Quality Monitoring Station Location*). Readings for the past five years, together with the applicable state and national standards, are shown in Table 4.1.2.2-1, *Summary of Air Quality Data Mojave (Poole Street) Air Monitoring Station*.

[6] The subscript number associated with the acronym "PM" indicates the minimum diameter, in microns, of the particulate matter.

TABLE 4.1.2.2-1
SUMMARY OF AIR QUALITY DATA
MOJAVE (POOLE STREET) AIR MONITORING STATION

Pollutant Standards	1997	1998	1999	2000	2001
Ozone (O_3)					
State standard (1-hr. avg. 0.09 ppm)					
National standard (1-hr avg. 0.12 ppm)					
National standard (8-hr avg 0.08 ppm)					
Maximum 1-hr concentration (in ppm)	0.119	0.134	0.119	0.113	0.119
Maximum 8-hr concentration (in ppm)	0.096	0.117	0.100	0.095	0.101
Number of days state standard exceeded	22	43	39	25	13
Number of days national 1-hr standard exceeded	0	2	0	0	0
Number of days national 8-hr standard exceeded	19	40	34	15	15
Suspended Particulates (PM_{10})					
State standard (24-hr avg. 50 mg/m^3)					
National standard (24-hr avg. 150 mg/m^3)					
Maximum 24-hr concentration	130	41	45	44	43
Samples exceeding state standard	1	0	0	0	0
Samples exceeding national standard	0	0	0	0	0
Suspended Particulates ($PM_{2.5}$)					
National standard (24-hr avg. 65 mg/m^3)					
Maximum 24-hr concentration	NM	NM	27.6	28.7	15.3
Samples exceeding national standard			0	0	0

NOTE:
avg. = average
ppm = parts per million
mg/m^3 = micrograms per cubic meter
NM = Not Monitored
SOURCE: California Air Resources Board –1997 through 2001.[7]

The national 1-hour ozone standard is rarely exceeded at the KCAPCD's Mojave air monitoring station. Data indicate that the number of days that the national 8-hour ozone standard would be exceeded is similar to the number of days that the state 1-hour standard is exceeded in every year but 2000.[8] Because PM_{10} and $PM_{2.5}$ samples are only taken every six days, the data may not be fully indicative of the highest PM readings in the area. Nevertheless, it does appear that all of the particulate standards may be attained since there has been only one reading where any of the standards-- the state PM_{10} standard--was exceeded in the past five years.

[7] California Air Resources Board, 2 February 2002. "Air Quality Data Statistics." Available at: http://www.arb.ca.gov/adam/welcome.html.

[8] Ibid.

4.1.2.3 Biological Resources

Biological resources at the proposed project site were evaluated through a search of the California Natural Diversity Database (CNDDB)[9] for the USGS 7.5-minute series topographic quadrangles (Sanborn)[10] and all adjacent 7.5-minute topographic quadrangles, including Mohave NE, Cache Peak, Mojave, California City South, California City North, Edwards, Bissell, and Soledad Mountain; a review of published literature, unpublished reports,[11,12] coordination with USFWS,[13] consultation with persons knowledgeable about the biological resources of the area, and directed field surveys.[14,15]

The vegetation communities within the proposed project site were determined and mapped to assess the presence of potentially suitable habitats for those federally listed plant and wildlife species identified on the CNDDB as having the potential to occur within the vicinity of the proposed project. The potential for federally listed plant and wildlife species to occur within the proposed project site was then analyzed based on the location of the proposed project, the vegetation communities present, and whether required habitat elements for the listed species being considered were available within the proposed project site.

A review of the National Wetland Inventory Map for the USGS 7.5-minute series Sanborn, California topographic quadrangle[16] was performed to determine the potential presence of wetlands, intermittent stream courses, or other features that may be subject to U.S. Army Corps of Engineers (Corps) jurisdiction under Section 404 of the Clean Water Act.

4.1.2.3.1 Plant Communities

The proposed project site supports three common Mojave Desert plant communities: desert saltbush scrub, Mojave creosote bush scrub, and Joshua tree woodland (Figure 4.1.2.3.1-1, *Plant Community Map*). Mojave creosote bush scrub is the dominant plant community within the area, as determined by literature review; archive and records search; a review of the following U.S.G.S. 7.5-minute topographic quadrangle maps: Galileo Hill, Saltdale, California City North, and Cantil; and the

[9] California Department of Fish and Game, 2002. *Rarefind 2: A Database Application for the California Natural Diversity Database*. Sacramento, CA.

[10] U.S. Geological Survey, 1973. USGS 7.5-minute series Sanborn, CA topographic quadrangle. Denver, CO.

[11] AMEC Earth & Environmental, Inc., 2001.

[12] Jones and Stokes and Associates, 1997.

[13] George Walker, *Personal Communication*, 14 February 2002. U.S. Fish and Wildlife Service.

[14] City of California City, 2002b.

[15] U.S. Fish and Wildlife Service, January 1992. Field Survey Protocol for any Non-Federal Action That May Occur Within the Range of the Desert Tortoise.

[16] U.S. Fish and Wildlife Service, 1986. USGS 7.5-minute series Sanborn, CA, National Wetland Inventory Map.

Desert Tortoise (Mojave Population) Recovery Plan. This description of the vegetation at the proposed project site is based on field surveys and a query of the CNDDB[17] for the potential presence of state-designated sensitive habitats. Additional information may be found in Appendix C, *Results of Directed Surveys for Desert Tortoise*, which provides further analysis of the area. A plant community is defined as a regional element of vegetation characterized by the presence of certain dominant species.[18] The plant communities present on the proposed project site are described in accordance with the *Preliminary Descriptions of the Terrestrial Natural Communities of California*[19] and *A Manual of California Vegetation*.[20]

Plant communities were mapped in the field onto a topographic map (scale: 1 inch = 600 feet) of the proposed project site. Preliminary plant community boundaries were assessed in the field while conducting directed surveys for desert tortoise on March 18 through March 22, 2002 by Sapphos Environmental, Inc. (B. Blood, B. Baker, M. Helton, C. Watson, M. Ross, D. Bise, and M. McGovern). Plant community boundaries mapped in the field were transferred to an aerial photograph (scale: 1 inch = 400 feet). This preliminary plant community map was ground truthed in the field by Sapphos Environmental, Inc. on April 15 through April 19, 2002. Dominant shrubs were identified during field surveys to the lowest possible taxonomic category. All plant species observed were identified to the lowest possible taxonomic category either in the field or by the use of a dichotomous vegetation key upon return to the office.[21]

The distribution of plant species observed during the course of field surveys within the proposed project area was relatively homogeneous and included Mojave aster (*Xylorhiza tortifolia* var. *tortifolia*), flat-topped buckwheat (*Eriogonum deflexum*), birdnest buckwheat (*Eriogonum nidularium*), prince's plume (*Stanleya pinnata*), Mormon tea (*Ephedra nevadensis*), burrobrush (*Hymenoclea salsola*), fiddleneck (*Amsinckia tessellata*), Mediterranean grass (*Schismus arabicus*), desert trumpet (*Eriogonum inflatum*), cholla (*Opuntia* sp., most likely e*chinocarpa*; however, due to the ease with which golden cholla hybridizes with most co-occurring chollas, it is possible that this specimen is a hybridized *Opuntia echinocarpa*), cryptantha (*Cryptantha micrantha*), California buckwheat (*Eriogonum fasciculatum*), yellow pepper grass (*Lepidium flavum*), blazing star (*Mentzelia* sp.), goldfields (*Lasthenia* sp.), wild rhubarb (*Rumex hymenosepalus*), saltgrass (*Distichlis spicata*), horsebush (*Tetradymia stenolepis*), creosote bush (*Larrea tridentata*), Joshua tree (*Yucca brevifolia*), four-wing saltbush (*Atriplex canescens*), saltbush (*Atriplex polycarpa*), Russian thistle (*Salsola tragus*), thistle sage (*Salvia carduacea*), Mojave woolly-star (*Eriastrum densifolium* ssp. *mohavense*), winter fat (*Krascheninnikovia lanata*), storksbill (*Erodium* sp.), Indian rice grass

[17] California Department of Fish and Game, 2002. *RareFind 2: A Database Application for the Use of the California Natural Diversity Database*. Sacramento, CA.

[18] P. A. Munz and D.D. Keck, 1949. "California Plant Communities." *El Aliso* 2(1): 87-105.

[19] R.F. Holland, 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Game, Sacramento, CA.

[20] John O. Sawyer and Todd Keeler-Wolf, 1995. *A Manual of California Vegetation*. Sacramento, CA: California Native Plant Society.

[21] James C. Hickman (ed.), 1993. *The Jepson Manual*. University of California Press, Berkeley and Los Angeles, California.

(*Achnatherum hymenoides*), hopsage (*Grayia spinosa*), spiny boxthorn (*Lycium cooperi*), rabbit brush (*Chrysothamnus nauseosus*), and cheese weed (*Malva* sp.).

Desert Saltbush Scrub

Desert saltbush scrub is the primary plant community, accounting for 2,019 acres (approximately 46 percent) of the proposed project site. Characteristic plant species of the desert saltbush scrub plant community that were identified in the proposed project site include saltbush, hop-sage, burrobrush, California buckwheat Mormon tea, and saltgrass.

The desert saltbush scrub plant community (Element Code 36110)[22] corresponds to the hop-sage series[23] and is characteristic of bajadas and alluvial outwash plains in the Mojave Desert. Desert saltbush scrub is not a state-designated sensitive plant community. This plant community is usually characterized by low, grayish, and microphyllous shrubs of 0.3 to 1 meter in height, with some succulent species. Plants are widely spaced with bare ground between, and stands are typically dominated by a single species of saltbush. Characteristic species of this community include saltbush, hop-sage, burrobrush, musty molly *(Kochia californica),* desert thorn, honey mesquite *(Prosopis glandulosa),* and seepweed *(Suaeda occidentalis).*

Mojave Creosote Bush Scrub

Mojave creosote bush scrub is a secondary plant community, accounting for 1,927 acres (approximately 44 percent) of the proposed project site. Plant species identified on site that are representative of the Mojave creosote bush scrub community include creosote, burro-weed, burrobrush, cholla (*Opuntia* sp.), hopsage, Mormon tea, and saltbush.

The Mojave creosote bush scrub plant community (Element Code 34100)[24] corresponds to the creosote bush series.[25] Mojave creosote bush scrub is the dominant plant in the Mojave Desert at elevations below 3,000 to 4,000 feet. Mojave creosote bush scrub is not a state-designated sensitive plant community. This plant community is normally characterized by shrubs of usually 0.5 to 3 meters in height and widely spaced with bare ground between plants. It occurs in areas of well-drained secondary soils on slopes, fans, and valleys. It is typically dominated by creosote and is characterized by white bursage *(Ambrosia dumosa),* spiny senna (*Cassia armata),* Mormon tea, and burrobrush.

[22] R.F. Holland, 1986.

[23] J.O. Sawyer and T. Keeler-Wolf, 1995.

[24] R.F. Holland, 1986.

[25] J.O. Sawyer and T. Keeler-Wolf, 1995.

Joshua Tree Woodland

Joshua tree woodland is a secondary plant community, accounting for 332 acres (approximately 8 percent) of the proposed project site. Characteristic plant species of the Joshua tree woodland plant community that were identified within the proposed project site include Joshua tree, Mormon tea, California buckwheat, creosote, spiny boxthorn, and rabbit brush.

The Joshua tree woodland plant community (Element Code 73000)[26] corresponds to the Joshua tree series[27] and is characteristic of well drained gentle alluvial slopes in the Mojave Desert, typically at elevations between 2,500 and 5,000 feet. Joshua tree woodland is a CDFG state-designated sensitive plant community, but is not a listed plant species under the ESA or CESA. Joshua tree woodland is a community of open woodland with numerous shrub species between 1 and 4 meters in height. During most of the year, little or no understory is present. Stands are dominated by numerous species including sclerophyllous evergreen trees and shrubs *(Yucca* sp.*)*, microphyllous evergreen shrubs *(Juniperus* sp.*)*, semideciduous shrubs *(Eriogonum* sp.*, Tetradymia* sp.*)*, semisucculents *(Lycium* sp.*)*, and succulents *(Opuntia* sp.*)*. Other characteristic species include hopsage, creosote bush, desert needlegrass (*Achnatherum speciosa),* Mormon tea, menodora (*Menodora spinescens),* and bladdersage (*Salazaria mexicana)*.

Disturbed Areas

A network of dirt roads crosses the property, accounting for 62 acres (approximately 1 percent) of the proposed project site. Field survey observations also documented signs of disturbance by humans, including scattered shotgun shells and bullet casings, trash, abandoned camp sites, abandoned automobiles and sheep grazing. Additionally, signs of historical military uses are found throughout the site, including ammunition casings and at least one aircraft crash site. Representatives of Edwards Air Force Base Explosive Ordinance Disposal Unit performed a site assessment on September 12, 2002, and determined that all ordnance observed by the unit were "dummy" rounds used for targeting and contained no explosives. Therefore, there are no anticipated impacts to biological resources from unexploded ordnance.

4.1.2.3.2 Threatened and Endangered Species

Plants

The CNDDB[28] review did not identify any federally listed plant species with the potential to occur within the proposed project site.[29] Coordination with the USFWS (Mr. Tim Thomas) resulted in the

[26] R.F. Holland, 1986.

[27] J.O. Sawyer and T. Keeler-Wolf, 1995.

[28] California Department of Fish and Game, 2002. *Rarefind 2: A Database Application for the Use of the California Natural Diversity Database*. Sacramento, CA.

[29] "Listed species" is defined as threatened or endangered species under the federal Endangered Species Act.

identification of one potentially occurring federally listed threatened plant species, Hoover's woolly-star (*Eriastrum hooveri)*. Hoover's woolly-star populations currently are found in Fresno, King, San Luis Obispo, and western Kern Counties, with most occurrences in foothill areas. Populations of Hoover's woolly-star occur in alkali sinks, washes, on both north-and south-facing slopes, and on ridgetops. This species occurs in a wide variety of plant communities. Most are characterized by shrubs such as common Saltbbush (*Atriplex polycarpa*), seepweed (*Suaeda moquinii*), and matchweed (*Gutierrezia californica*), but shrub cover in occupied habitats typically is less than 20 percent. Herbaceous plant species frequently found in association with Hoover's woolly-star include red brome (*Bromus madritensis* ssp. *rubens*), goldfields (*Lasthenia* spp.), many-flowered eriastrum (*Eriastrum pluriflorum*), and red-stemmed filaree (*Erodium cicutarium*). Hoover's woolly-star may reinvade disturbed soil surfaces such as well pads and dirt roads within 1 year after the disturbance ceases if seed sources remain in the vicinity. This species may benefit from some soil disturbances in areas that are densely vegetated by exotic plants. Reported elevations for this species range from 50 to 915 meters (164 to 3,002 feet).

There are no known occurrences of Hoover's woolly-star within the immediate vicinity of the proposed project area. Based on consultation with USFWS (Ms. Judy Hohman), the nearest known population in the Mohave desert is a recently discovered population in the City of Rosamond, approximately 13 miles from the project site.[30] Additionally, an important habitat characteristic required for the germination and growth of Hoover's woolly-star is the presence of open alkali sink habitats, ideally with a cryptogamic crust.[31] There are no alkali sinks on the project site, and vegetative cover is generally greater than 20 percent on much of the site. Biologists conducting 2003 protocol surveys for desert tortoise did not find any evidence of Hoover's woolly-star. Optimal habitats for this species are characterized by stabilized silty to sandy soils, a low cover of competing herbaceous vegetation, and the presence of cryptogamic crust (a layer of moss, lichen, and algae). However, Hoover's woolly-star also has been found on loamy soils, in areas of dense vegetation, and in areas lacking cryptogamic crust. The plant was not found during 2003 desert tortoise surveys of the project site. The 2003 survey took place after a winter of normal rainfall for this portion of the desert and a normal bloom of desert annual plants, therefore it is considered unlikely that the Hoover's woolly star occurs on the site. Moreover, Hoover's woolly-star was delisted by USFWS on October 7, 2003.

Wildlife

Based on reconnaissance surveys,[3233] a query of the CNDDB,[34] coordination with resource agencies, and a review of other references with location data for sensitive species in the vicinity of the proposed project site, one federally listed wildlife species (desert tortoise) and one state-listed

[30] Russ Lewis, *Personal Communication*, 18 September 2002. Bureau of Land Management, Bakersfield, CA.

[31] Judy Hohman, *Personal Communication,* 28 May 2003. U.S. Fish and Wildlife Service, Ventura, CA.

[32] AMEC Earth & Environmental, Inc., November 2001.

[33] Jones and Stokes and Associates, 1997.

[34] California Department of Fish and Game, 2002.

wildlife species (Mohave ground squirrel) have the potential to occur within the proposed project area. The proposed project site was also determined to support suitable habitat for the desert tortoise and Mohave ground squirrel (Table 4.1.2.3.2-1, *Listed Wildlife Species with the Potential to Occur in the Vicinity of the Proposed Project*).

TABLE 4.1.2.3.2-1
LISTED WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR IN THE VICINITY OF THE PROPOSED PROJECT

Species /Status	Habitat Requirements
Desert Tortoise *(Gopherus agassizii)*	
FT, ST	The desert tortoise can be found primarily within creosote bush scrub vegetation, but also in succulent scrub, cheesebush scrub, blackbush scrub, hop-sage scrub, shadscale scrub, microphyll woodland, and Mojave saltbush-allscale scrub. Tortoises eat primarily annual forbs, but also perennials (e.g., cacti and grasses). They prefer surfaces covered with sand and fine gravel versus course gravel, pebbles, and desert pavement. Friable soil is important for digging burrows.
Mohave Ground Squirrel (*Spermohilus mohavensis*)	
ST	The Mohave ground squirrel occupies all major desert scrub habitats in the western Mojave Desert. However, the presence of shrubs that provide reliable forage during drought years may be a critical habitat feature. Mohave ground squirrels feed on a variety of foods, but primarily on the leavesand seeds of forbs and shrubs.

KEY:
FT = Federally listed as threatened according to the federal Endangered Species Act of 1973.
ST = State listed as threatened according to the state Endangered Species Act.

Desert Tortoise

Directed surveys for the desert tortoise were undertaken by Sapphos Environmental, Inc. (B. Blood, M. Ross, D. Bise, C. Watson, B. Baker, M. Helton, B. Vanherweg, and M. McGovern)(Appendix C).[35] Surveys were conducted on March 18 through April 4, 2002 across all areas of potential project impact (Figure 4.1.2.3.2-1, *2002 Desert Tortoise Survey Area*)**.** Areas within the proposed project and a surrounding buffer area of up to 0.25 mile that were proposed for development were surveyed. The recommended USFWS protocol for desert tortoise surveys was followed with one modification.[36] One-hundred-foot transect intervals were utilized, rather than 30-foot transect intervals,[37] because presence of desert tortoise had been determined by an earlier survey[38] and the

[35] City of California City, 2002b.

[36] Thomas Egan, 1999. Memorandum. Subject: Desert tortoises and the Bureau of Land Management, a biological consultant's guide; Endangered species act compliance, biological survey protocol, and biological assessment format. Contact: Bureau of Land Management, Barstow Resource Area, Barstow, CA.

[37] U.S. Fish and Wildlife Service, January 1992. "Field Survey Protocol for any Non-Federal Action That May Occur Within the Range of the Desert Tortoise."

[38] AMEC Earth & Environmental, Inc., November 2001.

goal of this survey was to assess the extent of utilization of the proposed project site by desert tortoise. The 100-foot transect survey method allowed the assessment of desert tortoise utilization and potential presence to be determined throughout the survey area and was approved by USFWS during a meeting on February 14, 2002. Of the 4,498-acre site, approximately 2,500 acres (approximately 55 percent) were surveyed for desert tortoise. As a result of directed surveys,[39] it was determined that desert tortoise occupy the entire proposed project site.

Surveys were undertaken within all plant communities present in the study area. All observed desert tortoise and diagnostic signs were recorded, flagged, and the location recorded using a hand-held GPS unit. Field notes recorded specifications for burrows, carcasses, and live tortoises following classifications provided by the desert tortoise field survey forum. Observations made during surveys included signs of human disturbance, Common Ravens, and other species of wildlife. Desert tortoise survey forms were completed. During surveys, weather conditions were mild and calm with clear skies, with temperatures ranging from 45° F to 87° F. The proposed site for the City's water pipeline extension was assessed for desert tortoise habitat on September 7, 2002 (Figure 4.1.2.3.2-1).

Two live desert tortoises were observed during directed surveys; additionally, a third observation of a live desert tortoise was made on April 4, 2002, during the performance of Mohave ground squirrel surveys (Figure 4.1.2.3.2-2, *2002 Desert Tortoise Survey Results*). All observed tortoises seemed healthy. Two Class 1,[40] 8 Class 2,[41] 10 Class 3,[42] 86 Class 4,[43] and 84 Class 5[44] burrows were observed and mapped during directed surveys, and 11 carcasses of dead tortoises were also observed during directed surveys (Figure 4.1.2.3.2-2). Carcasses consisted of Class 1, 4, and 5. The age of remains could not be determined; all remains were left where found. Tortoise scat was also observed. A species account for desert tortoise is included as Appendix D, *Species Accounts for Hoover's Woolly-Star and Desert Tortoise*.

The habitat assessment performed along the Highway 58 access road route and the City's water pipeline extension route determined that these areas support potentially suitable desert tortoise habitat.

An additional survey for desert tortoise on the proposed project site was performed in May 2003, at the request of the USFWS and CDFG, by Mr. William Vanherweg (Appendix B, *2003 Desert Tortoise Survey Report*). USFWS protocol for performance of desert tortoise surveys was used in surveying all areas proposed for development, including the oval track and its interior, roads, and

[39] City of California City, 2002b.

[40] Class 1, currently active, with tortoise or recent tortoise sign.

[41] Class 2, good condition, definitely tortoise; evidence of recent use.

[42] Class 3, deteriorated condition; definitely tortoise.

[43] Class 4, deteriorated condition; possibly tortoise.

[44] Class 5, good condition; possibly tortoise.

the water pipeline. A total of 2,898.7 acres were surveyed. All areas were surveyed following line transects spaced at 30 foot intervals or less depending on visibility. The survey was conducted May 5 through May 14, 2003. The survey team consisted of 14 experienced biologists (C. Bjurlin, C. Halley, T. Rado, J. Dockins, J. Jennings, M. Vaughn, R. Eisenbart, E. LaRue, J. Weir, G. Goodlett, M. Luhrs, P. Wood, G. Goodlett, and M. McGovern), and led by Mr. Steve Boland, with Mr. Vanherweg as the survey coordinator.

Most of the live desert tortoises and active sign observed during the spring 2003 desert tortoise survey were found in the west half of the test track property (Figure 4.1.2.3.2-3, *2003 Desert Tortoise Survey Results*). The primary soil type in this area is Cajon-Garlock sands.[45] This soil type is very deep and derived from granitic rock. Perennial vegetation is composed of creosote bush and white bursage on the Garlock portions with a more diverse shrub component including spiny hopsage, winterfat and Indian ricegrass occurring on the Cajon portions.[46] Estimated total annual forage production on this unit of soil ranges from 150 lbs/ac in dry years to 400 lbs/ac in wet years.[47]

A large portion of the eastern half of the project area is dominated by DeStazo sandy loam and soil. This soil type is dominated by alkaline-tolerant shrubs like saltbush and spiny hopsage and produces only 75 lbs of forage per acre in dry years and 150 lbs. in wet years (USDA 1981). Many of the older tortoise carcasses and very little active sign was found in the vicinity of this soil type. Herbivores, like desert tortoise, living on this soil unit would be more severely affected by prolonged drought than those living on more productive soils. The remainder of the flat portion of the project area in the east half contains Cajon loamy sand (USDA 1981). Cajon loamy sand soil is similar to the Cajon-Garlock sand soils in vegetation, forage production and soil properties.

The hillside portion in the southeast corner of the property has very shallow Muroc-Randsburg sandy loam soil. Although this soil has reasonable forage production of 150-300 lbs/ac, it has limited effective rooting depths of 8-20 inches (USDA 1981). That shallow depth would make it difficult for tortoises to dig very substantial burrows which probably accounts for the low amount of tortoise sign encountered along the linear facilities in this portion of the project area.

During the survey, GPS recordings were made of all desert tortoise sign, including live and dead tortoise, burrows, and scat, Table 4.1.2.3.2-2, *2003 Desert Tortoise Survey Results*. The survey resulted in the following observations: 8 live tortoises, 43 tortoise carcasses, 18 active burrows, 57 burrows classed as "good, inactive", and 54 "poor inactive" burrows. Desert tortoise sign was observed across the entire proposed oval track area. Observations also included other plant and wildlife species observed.

An additional survey performed by Dr. Alice Karl and crew in October 2003 located 19 adult and 1 juvenile desert tortoise and 43 active burrows. The survey was conducted for the purpose of finding

[45] U.S. Department of Agriculture, 1981. *Soil Survey of Kern County Southeastern Part.* U.S. Department of Agriculture, Soil Conservation Service, in cooperation with University of California, Agricultural Experiment Station. 195 pp.

[46] Ibid.

[47] Ibid.

all tortoises, applying transmitters to tortoises of sufficient size, and collecting data on clinical signs, as well as collecting blood and nasal samples for determining health status of the population. All tortoises were strong and heavy, and results from blood and nasal samples were seronegative for 17 of the 19 adult tortoises. (Appendix B).

The proposed project site is located in an area that has been described as habitat that is not essential to maintenance of viable populations, contains low to medium tortoise population densities, is not contiguous with medium- or high-density tortoise areas and has a stable or decreasing population.[48]

TABLE 4.1.2.3.2-2
2003 DESERT TORTOISE SURVEY RESULTS

Details	Tortoise Sign Count						
	Track	Off-Track	Road	Waterline	Building	Subtotal	Total
Tortoise							
Female	2					2	8
Male	5					5	
Unknown		1				1	
Carcass							
< 1 year since death	3	3				6	43
1-2 years since death	3					3	
> 2 years since death	26	5	3			34	
Burrow							
Active	15	3				18	160
Good inactive	31	24	2			57	
Fair inactive	40	14				54	
Poor inactive	9	17	2			28	
Pallet	2	1				3	
Scat							
This year	225	41	6			272	461
Not this year	97	73	6			176	
Unknown	11	2				13	
Total sign count	**469**	**184**	**19**				**672**

SOURCE: William J. Vanherweg

Mohave Ground Squirrel

Directed surveys were performed by Sapphos Environmental, Inc. (Mr. William Vanherweg, Dr. Brad Blood, Mr. David Bise, and Ms. Melissa Ross). All survey sessions were conducted by Mr. William Vanherweg, who holds a Memorandum of Understanding (MOU) from CDFG to perform surveys for Mohave ground squirrel. Mr. Vanherweg was assisted by two additional biologists who worked

[48] Bureau of Land Management, 1992. *California Statewide Desert Tortoise Management Policy*. Bureau of Land Management, Barstow, CA; and California Department of Fish and Game, Region 4, Fresno, CA; and Region 5, San Diego, CA.

directly under Mr. Vanherweg's supervision. Directed surveys for Mohave ground squirrel followed the protocol established by CDFG.[49]

Six survey grids were established across the breadth of the proposed project (Figure 4.1.2.3.2-4, *Mohave Ground Squirrel Survey Area Map*). Grid sites were chosen so as to sample portions of those areas mapped as part of the project footprint. Each survey grid consisted of 100 15-inch Sherman live traps deployed in 4 lines of 25 traps each. Traps were spaced 25 meters apart. Traps were covered with a cardboard shade and oriented so that the traps' opening faced north. Traps were opened at 8:00 a.m. daily for five consecutive days. Traps were checked at least twice daily and closed each day starting at 4:00 p.m., and so were open for at least six consecutive hours.

Three five-day survey sessions were conducted between April 1 and May 3, 2002. Session 1 was performed April 1 to April 5, session 2 was performed April 15 to April 20, and session 3 was conducted April 29 to May 3, 2002. Two survey grids were surveyed during each session. Grids No. 1 and No. 2 were surveyed during session 1, grids No. 3 and No. 4 were surveyed during session 2, and grids No. 5 and No. 6 were surveyed during session 3.

Two Mohave ground squirrels were identified during directed surveys. One individual was observed approximately 100 meters north of Grid 6 (Figure 4.1.2.3.2-5, *Mohave Ground Squirrel Survey Results)*. However, this individual was not captured, and visual identification was made by Mr. Vanherweg. A single male individual was trapped during two consecutive trap checks on a single day. The first capture occurred on April 4, 2002 adjacent to Grid 1. The same individual was captured again on April 4, 2002 later the same afternoon. The captured individual was determined to weigh approximately 170 grams, which indicates near readiness for summer aestivation. This individual was also non-scrotal, indicating it was not engaged in reproductive activity.

The habitat assessment performed along the Highway 58 access road route and the City's water pipeline extension route determined that these areas support potentially suitable habitat for Mohave ground squirrel. No Mohave ground squirrels were observed during the habitat assessment.

4.1.2.3.3 Wetlands and Desert Washes

The National Wetland Inventory map for the USGS 7.5-minute series Sanborn, California topographic quadrangle was reviewed for potential wetland areas and blue-line features. No named or identified blue-line streams are present within the proposed project site. The National Wetlands Inventory Map[50] identified 11 features classified as palustrine, unconsolidated shore, intermittently flooded. These areas vary in size from approximately 100 square feet to 1 acre and appear to be shallow depressions that collect and retain runoff from the surrounding landscape for short periods

[49] California Department of Fish and Game, 1989. *Mohave Ground Squirrel Guidelines*. Contact: 1416 Ninth Street, Sacramento, CA 95814.

[50] National Wetlands Inventory Map, August 1986 (Aerial photography, revised 1995). Sanborn, California.

of time following winter storm events. Observations during field surveys indicate that these areas do not support riparian wetland vegetation.[51]

The Corps was notified of desert washes existing on site and determined that the proposed project area is located in an area that supports several isolated desert wash systems that do not have a substantial interstate commerce connection and therefore are not subject to Corps jurisdiction under Section 404 of the Clean Water Act.[52] The Corps letter dated September 17, 2002, states that the proposed project site does not include any areas subject to Corps jurisdiction.[53]

4.1.2.4 Cultural Resources

The City determined in its *Initial Study*[54] that the proposed project site could have potential impacts to cultural resources and has fully analyzed this issue in its Final EIR. Cultural resources encompass historic, archaeological, and paleontological resources, and human remains of prehistoric or historic origin. The analysis identified suggested measures to avoid, reduce, or otherwise mitigate potential significant impacts to cultural resources.

Setting

The western Mojave Desert was used by various Native American groups during the prehistoric period approximately 13,000 years to 7,000 years ago, and was bisected by a major cultural and linguistic boundary. This boundary extended from the western foothills of the Tehachapi Mountains across the desert to Twentynine Palms. Takic speaking Native American groups inhabited the area south of the boundary, and Numic speaking Native American groups were located in the north. The low-lying desert areas, however, were used in similar ways by both Takic and Numic groups, and were part of a wide range of annual subsistence cycles that also included upland and higher altitude resource areas, although the upland zones were generally considered the core zones of settlement and resource use. Several other groups also lived in the western Mojave Desert or in the surrounding area, including the Kawaiisu, Chemehuevi, Allikik (Tataviam), Kitanemuk, Vanyume, and Serrano. Native settlement and subsistence systems and the demography of the western Mojave

[51] Hyundai Corporation of America, 20 September 2002. *Draft Notification of Lake or Streambed Alteration for Automotive Test Course Facility Project, California City, California*. Prepared by: Sapphos Environmental Inc. 133 Martin Alley, Pasadena, CA 91105. Contact: City of California City, 21000 Hacienda Blvd., California City, CA 92505.

[52] Sapphos Environmental, Inc., 14 August 2002 (Letter to Mr. Aaron Allen, Senior Project Manager, U.S. Army Corps of Engineers). Contact: Mr. Aaron Allen, Sr. Project Manager, U.S. Army Corps of Engineers, 2151 Alessandro Drive, Suite 110, Ventura, CA 93001. Prepared by: Sapphos Environmental, Inc. 133 Martin Alley, Pasadena, CA 91105.

[53] U.S. Army Corps of Engineers, 17 September 2002 (Letter to Sapphos Environmental, Dr. Brad Blood. Contact: Sapphos Environmental, Inc. 133 Martin Alley, Pasadena, CA 91105). Prepared by: U.S. Army Corps of Engineers, David Castanon, Chief, North Coast Section Regulatory Branch, Ventura Field Office, 2151 Alessandro Drive, Suite 110, Ventura, CA 93001.

[54] California City, 4 April 2002a. *Initial Study: Annexation, Detachment, Sphere of Influence Amendment, Redevelopment Area Expansion, General Plan Update (including the Housing Element), and Automotive Test Course Project, California City*. Contact: 21000 Hacienda Blvd., California City, CA 93505. Prepared by Sapphos Environmental, Inc., 133 Martin Alley, Pasadena, CA 91105.

Desert were altered drastically as a result of the Spanish missionization of California and later settlement by Euro-Americans.

By the 1830s, Native American communities in the Mojave Desert had become much smaller, fewer in number, and were composed of mixed populations that were highly influenced and disrupted by the Euro-American population influx. However, Euro-American settlement of the Antelope Valley area did not begin in earnest until after the discovery of gold in the 1840s and 1850s, and the bulk of the valley was not settled until the 1870s after establishment of the first rail line.

The earliest recorded western arrival in the Mojave area is documented in the Spanish diary of Captain Pedro Gages during an expedition through the Antelope Valley in 1772. Father Francisco Garces traveled through the region in 1776, accompanied by Mojave Indians acting as guides. In addition, Garces makes reference to the Vanyume tribe occupying a large area of the Antelope Valley. Despite these early travels through the area, most of the Mojave Desert remained mostly out of reach of the Spanish for several decades.

Permanent Euro-American settlement of the area did not begin until after the discovery of gold in California in the 1840's and 1850's. The arrival of the railroad during the 1870's brought about the bulk of Euro-American settlement during the 19th century. During this time, American miners and trappers arrived to the area, which along with the Spanish population, quickly decimated the Native American population of the area. During the 1880s, land in the area became available for homesteading and brought a great influx of Americans from the Midwest and the East Coast. As the area came into the 20th century, the area experienced high and low periods of sporadic bursts of settlement, such as during the 1930's when many families attempted to recover from losing farms in the Midwest as a result of the Stock Market Crash of 1929. Again, settlement in the area increased during the 1950's as a result of the establishment of Edwards Air Force Base (EAFB). Today, much of the Antelope Valley and Mojave Desert population relies heavily on EAFB for employment and owes much to EAFB for its economy.

Methodology

The analysis of cultural resources includes existing conditions of the proposed project area, anticipated impacts, mitigation measures, and level of significance after mitigation. The potential for impacts to cultural resources were analyzed in accordance with the data compiled by ASM Affiliates, Inc.,[55] which included an archival and record search at the Bakersfield Archaeological Information Center, located at California State University Bakersfield. ASM Affiliates, Inc., directed pedestrian transects conducted between May 13 and May 22, 2002, and were performed in accordance with protocols and standards for such surveys.[56]. Sapphos Environmental, Inc. conducted a query of the Buena Vista Museum of Natural History for paleontological resources.

[55] ASM Affiliates, Inc., May 2002c. *Cultural Resources Survey for the Proposed Hyundai Test Track*. Contact: Sapphos Environmental, Inc., 133 Martin Alley, Pasadena, CA 91105. Prepared by ASM Affiliates, Inc., 543 Encinitas Blvd., Suite 114, Encinitas, CA 92024.

[56] Office of Historic Preservation, 12 June 2002. "About OHP." Available at: http://ohp.parks.ca.gov.

Paleontological Resources

The proposed project area is characterized by geologic formations that have a low potential to contain fossils: Quaternary Alluvium (Qal), Dune Sand (Qs), Mesozoic granitic rocks (gr), Pleistocene non-marine (Qc), and Middle or Lower Pliocene marine deposits (Pml) (Figure 4.1.2.5-1, *Regional Geologic Map*). Two types of information were obtained to characterize the existing conditions related to paleontological resources; (1) searches for existing records for paleontological resources within one mile of the boundary of the proposed project site, and (2) searches for known fossils from the geologic formations and rock units mapped within the proposed project site. Records were searched, by a qualified paleontologist, at the Natural History Museum of Los Angeles County, the University of California at Los Angeles, California State University at Bakersfield, and the Kern County Museum.[57] This records search was further augmented by a query of the Buena Vista Natural History Museum for the proposed project area.[58,59]

The Western Mojave Desert province is a Cenozoic feature (65 million years ago to present), probably formed during movement along the San Andreas and Garlock faults. The broad alluvial basins that dominate the region today have been created by eroded materials from adjacent mountain ranges and isolated areas of Mesozoic granitic rocks. Alluvial sediments reach a maximum depth of 4,000 feet in the Antelope Valley, and have been measured at about 1,000 feet in the California City area. [60] The small hills, or buttes, that rise above the alluvial fill are remnants of ancient eroded mountains, and there are a number of playas, or dry lake beds, marking valley portions of the desert floor where imperceptible rises block drainage routes. The near surface deposits in the project area are comprised of a sandy layer which makes these soils susceptible to constant blowing; therefore, the proposed project area is considered to have low sensitivity for yielding scientifically viable paleontological resources.

Archaeological Resources

A records search was conducted to define the existing archeological resources recorded in the project area and to determine if any sites are currently listed on local, state, or national registers. This data was used to assess the percentage of each area that has been previously examined and to make some inferences regarding the type, number, density, distribution, and significance of sites that might occur in remaining areas. The records and archival research was further augmented by Phase I pedestrian transects completed for the facility in May 2002.

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[57] Cogstone Resource Management Inc., 26 February 2002, *Paleontological Resources Assessment for the Hyundai Test Track Project, Kern County, California*. Contact: 1801 E. Parkcourt Place, D200, Santa Ana, CA. Prepared for Sapphos Environmental, Inc., 133 Martin Alley, Pasadena, CA 91105.

[58] Buena Vista Natural History Museum, 4 June 2002. Available at: http://www.sharktoothhill.com.

[59] John Alderson, *Personal Communication*, 4 June 2002. Associate Curator, Paleontology, Buena Vista Natural History Museum, 2018 Chester Avenue, Bakersfield, CA, 93301.

[60] U.S. Department of Agriculture Natural Resources Conservation Service,1976. *Soil Survey of Kern County California, Southeastern Part*. Contact: California State Office, 430 G Street, #4164, Davis, CA 95616.

The records search was conducted, by a ROPA- certified archeologist meeting the Secretary of Interior's Standards in the field of archeology and having specific knowledge and experience with the Western Mojave Desert. A preliminary records search for the facility was completed by the Southern San Joaquin Valley Information Center in October 2001. A complete records and archival search for the proposed project area, at the Southern San Joaquin Valley Information Center, California State University Bakersfield, was completed on March 18-19, 2002. All information on previous archaeological studies and previously recorded sites within the proposed project area and an additional one-mile wide buffer was compiled and reviewed (Table 4.1.2.4-1, *Archeological Studies and Previously Recorded Prehistoric Sites*).

There are six previously recorded archeological sites within the area of potential effect (APE) for the proposed facility. None of these sites is eligible for listing on the California Register of Historical Resources or the National Register of Historic Places. Twenty-six additional archaeological sites were identified within the proposed project site as a result of directed surveys. (*Table 4.1.2.4-2, Newly Recorded Prehistoric Sites within the Proposed Facility Area*). Twenty-five of these archaeological sites were identified as being prehistoric; one site was identified to be of historic origin. It was determined that four of the newly recorded sites do not have the potential to constitute significant archeological or historic resources. Archaeological sites that were identified during the record search are identified in the following Table.

TABLE 4.1.2.4-1
ARCHEOLOGICAL STUDIES AND PREVIOUSLY RECORDED PREHISTORIC SITES

USGS 7.5-Minute Series Topographic Quadrangle/ Township/ Range	Sections	Sites	Comments
Sanborn			
T 11 N, R11W	2 (E½)	KER-5056H KER-5059 20 Isolates	Two sites are located within the proposed Annexation Area: **KER-5056H** consists of a trash dump with domestic debris including 70 pieces of ceramic ware have been exposed to fire in a 1600-m^2 area. The materials appear to date to the 1940s or 1950s. **KER-5059** consists of a small scatter of chalcedony flakes and fire-affected rock in a 120-m^2 area.
	6 (portions)	None	
	10 (S½)	6 Isolates	
	12 (all)	None	
	14 (all)	KER-3951H KER-3952H KER-3953H 5 Isolates	Three sites are located within the proposed Redevelopment Expansion Area, Annexation Area, and Automotive Test Course Facility Site: **KER-3951H** consists of an historic trash scatter that appears to be less than 50 years old. **KER-3952H** consists of an historic trash scatter that appears to be more than 50 years old. **KER-3952H** consists of an historic trash scatter that appears to be more than 50 years old.
	22 (E½)	KER-5053 KER-5054 KER-5055 2 Isolates	Three sites are located within the proposed Redevelopment Expansion Area, Annexation Area, and Automotive Test Course Facility Site: **KER-5053** consists of a scatter of flakes and approximately 30 pieces of fire-affected rock in a 20-m^2 area. Three STPs were excavated. **KER-5054** consists of a scatter of artifacts including a flake, a bifacial core tool, and a metate, with a scatter of 50 or more pieces of fire affected rock in a 140-m^2 area. Six STPs were excavated. **KER-5055** consists of a bedrock milling complex containing at least nine mortars and one slick formed in a granitic exposure an historic trash scatter in a 576-m^2 area

Newly recorded prehistoric archaeological sites, identified during the field survey by ASM Affiliates, Inc., are shown in the following Table.

TABLE 4.1.2.4-2
NEWLY RECORDED PREHISTORIC SITES WITHIN THE PROPOSED FACILITY AREA

USGS 7.5-Minute Series Topographic Quadrangle/Trinomial	Site Type
ASM-1	Lithic Scatter
ASM-3	Small Lithic Scatter
ASM-5	Large Lithic Scatter
ASM-6	Small Lithic Scatter
ASM-7	Small Lithic Scatter
ASM-9	Large FAR Scatter
ASM-10	Small Lithic Scatter
ASM-12	Small FAR Scatter
ASM-13	Small Lithic Scatter
ASM-14	Small FAR Scatter
ASM-15	Small FAR Scatter
ASM-16	Small Lithic Scatter
ASM-17	Small Lithic Scatter
ASM-18	Large FAR Scatter
ASM-19	Small Lithic Scatter
ASM-20	Small Lithic Scatter
ASM-21	FAR Scatter
ASM-22	Lithic Scatter
ASM-23	Lithic Scatter
ASM-24	FAR Scatter
ASM-25	FAR Scatter
ASM-26	FAR Scatter

To ensure that impacts to the remaining 26 newly recorded archaeological sites are minimized to the maximum extent practicable prior to the initiation of construction activities, the Final EIR requires completion of a Phase II cultural resource investigation to make a determination of significance for ASM-1 through -26. Those sites that are determined to be eligible for listing in the National Register of Historic Places or the California Register of Historical Resources will be treated in accordance with one of the three feasible measures described in the "CEQA and Archeological Resources", *CEQA Technical Advice Series*: capping or covering the site with a level of soil prior to construction over the site, incorporation into open space areas of the project site, or excavation where the first two measures are not feasible. These measures also will provide the protection to cultural resources required by Section 106 of the National Historic Preservation Act.

Historic Resources

Historic resources are defined by the Office of Historic Preservation, as those items that are at least 45 years of age or older that represent a significant time, place, origin, event, or work of a master. Historic resources may be identified as structures and as archaeological sites. There are five recorded historic archaeological sites in the proposed project area (Table 4.1.2.4-3, *Historic Sites within the Proposed Project Area)*. The site records for locations of all previously and newly recorded sites for historic resources are mapped on USGS 7.5-minute topographic quadrangle and are on file with the City and available on a "need to know" basis only. The site records have been suppressed to protect extant historic resources from vandalism. It has been determined that all previously identified archaeological sites that occur on-site are not eligible for inclusion under the OHP.[61] No historic structures or features were identified on the proposed project site. The historic archaeological sites are identified in the Table below. ASM-11 is a newly recorded historic archaeological site identified by ASM Affiliates, Inc.

TABLE 4.1.2.4-3
HISTORIC SITES WITHIN THE PROPOSED PROJECT AREA

USGS 7.5-Minute Series Topographic Quadrangle/ Trinomial	Site Type	Automotive Test Course Facility
CA-KER-3951H	Historic shed with an associated trash scatter	√
CA-KER-3952H	Historic trash scatter	√
CA-KER-3953H	Historic trash scatter	√
CA-KER-5056H	Glass & Ceramics	√
ASM-11	Potential WWII Desert Training or Military Disposal Items	√

Native American Sacred Sites

As part of the records and archival investigation, the Native American Heritage Commission was contacted regarding the potential presence of Native American sacred lands or other resources within the proposed project site. The Native American Heritage Commission responded that there are no recorded Native American sacred sites or other resources known in the proposed project site. The Native American Heritage Commission provided a list of local Native American individuals and organizations that may have knowledge of Native American resources within the proposed project area. Letters requesting information were provided to the following points of contact, but no responses were received:

[61] Cherilyn Widell, *Personal Communication*, 1997. Office of Historic Preservation.

Kern Valley Indian Community
Ron Wermuth, Chairperson
P.O. Box 168
Kenrville, CA 93238

Tehachapi Indian Tribe
Charlie Cook
32835 Santiago Road
Acton, CA 93510

Delia Dominguez
981 North Virginia
Covina, CA 91722
(Representing the Yowlumne and Kianemuk tribes)

Eugene Albitre
3401 Aslin Street
Bakersfield, CA 93312
(Representing the Diegueno tribe)

Dr. Robert Yohe, Coordinator
California State University, Bakersfield
9001 Stockdale Highway
Bakersfield, CA 93311

4.1.2.6 Geology and Soils

The proposed project is located within the Antelope Valley portion of the Mojave Desert Geomorphic Province. There are several mapped surface fault zones in this portion of Kern County, the most important of which is the potentially active Garlock Fault Zone located approximately 10 miles to the west and northwest.[62] The topography of the proposed project area consists of a broad, shallow basin characterized by a gently undulating ground surface with isolated buttes and mountain masses with low to moderate relief irregularly distributed across the desert floor. The soil types in the area include the Rosamond-DeStazo series, the Randsburg-Muroc series, and the Garlock-Neuralia series[63] (see Figure 4.1.2.5-1). The proposed project site is not subject to surface fault rupture, seismic-related ground failure (including liquefaction), landslides, or expansive soils. The primary source of natural soil erosion in this area of the Mojave Desert is blowing sand. Vehicular traffic on State Route 58 and the numerous existing paved and dirt roads within the

[62] California Department of Conservation, Division of Mines and Geology, 1994. *Fault Activity Map of California and Adjacent Areas with Locations and Ages of Recent Volcanic Eruptions*. Compiled and Interpreted by Charles W. Jennings.

[63] Wateridge Capital Group, LLC, 7 March 2002. *Preliminary Geotechnical Investigation and Geological Hazard Report, Hyundai/Kia Testing Facility, Kern County, California*. Contact: 221 Town Center West, Suite 106, Santa Maria, CA 93458. Prepared by David Jones Associates, 155 Montgomery Street, Suite 510, San Francisco CA 94104.

proposed project area contribute to soil erosion through the creation of fugitive dust. Geotechnical testing performed throughout the proposed project area indicates that some of these soils have a mild to moderate potential to collapse with the addition of water. These soils were found to exist to a depth of 15 feet below the existing ground surface. Groundwater has been identified at a depth of approximately 130 feet below the surface. Surface water is a product of seasonal precipitation events only; there is no standing water in the proposed project area. These factors reduce the susceptibility of hydro-collapsing soils.

Physiography and Topography

The proposed project is located within the Antelope Valley portion of the Mojave Desert Geomorphic Province. The Antelope Valley is separated from the Sierra Nevada Mountains by the Garlock Fault Zone to the north and from the Transverse Ranges and coastal areas by the San Andreas Fault Zone to the southwest. The topography of the proposed project site consists of a broad, shallow basin characterized by a gently undulating ground surface with isolated buttes and mountain masses with low to moderate relief irregularly distributed across the desert floor. The average elevation of the proposed project site is approximately 2,500 feet above mean sea level (msl).

Geologic and Soil Units

The substrate beneath the proposed project is composed of more than 700 feet of unconsolidated Pleistocene and Holocene alluvium overlying consolidated sedimentary and crystalline basement rocks. The geologic conditions of the area are regional in nature. Unconsolidated sediments are more conducive to propagating seismic waves relative to sedimentary and crystalline basement rocks. Sediment thickness and composition contributes to seismic ground shaking intensity during an earthquake.

The proposed project site is underlain by Recent Alluvium (Qal). This material is composed primarily of medium brown silty sand derived from the Tehachapi Mountains. Geotechnical borings performed specifically in the automotive test course facility area noted an increased silt and/or sand content; caliche was also noted in some of the borings.

Granitic rocks are exposed in hills south of the proposed project site. These hills also contribute material to Qal present locally surrounding each hill. Lager granitic blocks are buried beneath these alluvial deposits.

Three soil types are identified on the proposed project site. Rosamond-DeStazo series covers most of the facility area; Garlock-Neuralia series underlies eastern portions of the project site; and Randsbury-Muroc series covers much of the southern portion of the project site (Figure 4.1.2.5-2, *Regional Fault Map*).

Hydrology, Shallow Groundwater and Flooding

Soil types present in the proposed project site have a low to moderate water capacity, resulting in minimal water retention. The *Kern County General Plan Eastern Section Map*[64] does not indicate any zones within the proposed project site that are designated potential risk of geological hazards due to shallow groundwater if the land is developed. In the proposed project site, groundwater is identified at a depth of approximately 130 feet below the surface of the proposed project site.[65] Minimal surface or near surface water in the proposed project site diminishes the potential for seismic-related ground failure.

Seismicity

Plate tectonics, the movement of plates within the earth's crust, is experienced as an earthquake when there is a sudden release of energy along a fault line. The fault ruptures to accommodate this energy, propagating the energy throughout the land area surrounding the epicenter. Depending on the intensity of the earthquake, the propagation of energy creates strong ground motion and other potential seismic hazards such as surface fault rupture, ground failure (including liquefaction), and landslides. Ground motion or ground shaking intensity is described by the Modified Mercalli Intensity (MMI) Scale. Values in the MMI scale are dependent on several factors: earthquake size, type, depth, distance to fault, subsurface geologic conditions, and direction of motion.

The proposed project site is not located within an Alquist-Priolo Special Studies Zone Map[66] or Seismic Hazard Zone Map.[67] The nearest Alquist-Priolo Earthquake Fault Zone is the Garlock Fault Zone which has segments that are classified as either active or potentially active. However the proposed project site is located more than 15 kilometers from the Garlock Fault, allowing less restrictive building requirements and decreased seismic hazard relative to areas in closer proximity to a Type A fault.

The California Building Code defines Type A sources as faults that are capable of a moment magnitude greater than 7.0 and a slip rate greater than 5 mm/year. The Garlock Fault is a Type A fault. The maximum credible earthquake along this fault has been estimated at a magnitude of 7.8. The County is entirely included within California Building Code Seismic Zone 4. California Building Code Seismic Zone 4 is the highest level hazard zone.

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[64] County of Kern Planning Department, 1994. [Formerly Department of Planning and Development Services.] General Plan: Land Use, Open Space and Conservation Element. Contact: 2700 "M," Bakersfield, CA 93301-2323.

[65] David Jones Associates. 2001. *Report of Geotechnical Feasibility*. Contact: 155 Montgomery Street, Suite 510, San Francisco, CA, 94104. Prepared for Wateridge Capital Corporation, LLC, 221 Town Center West, Suite 106, Santa Maria, CA 93458.

[66] California Department of Conservation, California Geological Survey, 29 March 2002."Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of May 1, 1999." Available at: http://www.consrv.ca.gov/dmg/rghm/a-p/affected.htm.

[67] Ibid.

The two most relevant fault zones in the region that have demonstrated historic movement (during the past 200 years) are the San Andreas fault zone and the Kern Canyon-Breckenridge-White Wolf fault system. The northwest-trending San Andreas fault zone is approximately 34 miles southwest of the proposed project site. The Kern Canyon-Breckenridge-White Wolf fault system, trending roughly parallel to the Garlock Fault Zone, is approximately 29 miles northwest of the proposed project site. The Kern Canyon-Breckenridge-White Wolf fault system has also generated the nearest accumulation of magnitude (M) 5.5 or greater epicenters.[68] The 1952 M 7.5 Kern County earthquake resulted from a rupture along the White Wolf Fault.[69]

Additional important faults in the region with demonstrated historic movement include the Sierra Nevada fault zone and the Lockhart fault. Both faults are within 35 miles of the proposed project site. One unnamed potentially active (Quaternary) fault is present immediately south of the City.

The Muroc fault trends northwest and is approximately 1 mile northeast of the proposed project site. This fault has not demonstrated Holocene movement (during the past 11,000 years); therefore, it is not currently classified as active or potentially active.[70]

Surface Fault Rupture

There are no known faults defined as active or potentially active intersecting the proposed project area; therefore, the site is not subject to surface fault rupture.

Seismic Ground Shaking

The proposed project site is subject to moderate to intense seismic ground shaking from earthquakes generated in nearby fault zones.

Seismic-Related Ground Failure/Liquefaction

The proposed project site is not subject to seismic-related ground failure, including liquefaction.

Landslides

The proposed project site is not subject to seismic-related landslides.

[68] U.S. Geological Survey, National Earthquake Information Center, 1992. Southern California Earthquakes. (By Susan Gower).

[69] Southern California Earthquake Data Center, 21 February 2002. "Kern County Earthquake." Available at: http://www.scecdc.scec.org/kerncoun.html.

[70] Ibid.

Soil Erosion

The proposed project site is subject to mild soil erosion as a product of fugitive dust.

Stability of Geology and Soils

The proposed project site is subject to potentially unstable soils. Geotechnical testing performed within the proposed project site indicated that some soils have a mild to moderate potential to collapse with the addition of water. These soils were found to exist to a depth of 15 feet below the existing ground surface.

Expansive Soils

The proposed project site does not contain expansive soils.

Waste Water Disposal

The proposed project site includes soils capable of supporting a septic tank or alternative waste water disposal system.

4.1.2.6 Hazards and Hazardous Materials

The proposed project site is located entirely within the High Altitude Supersonic Aircraft Corridor used by Edwards Air Force Base.[71] A review of current applicable federal, state, and local environmental regulatory databases was conducted in support of the Initial Study[72]and the *Phase I Environmental Site Assessment of the Proposed Automotive Test Course*[73]to ascertain whether any part of the proposed project site currently is affected by or could be affected by on-site or off-site unauthorized releases of hazardous materials. The review indicated that there were no current hazardous materials sites requiring further action within the boundaries of the proposed project. However, biological field surveys undertaken within the proposed project site identified the presence of potential unexploded ordnance. A site assessment was performed by representatives of Edwards Air Force Base Explosive Ordnance Disposal Unit on September 12, 2002. It was determined that all ordnance observed by the unit were "dummy" rounds used for targeting and contained no explosives.

[71] City of California City Planning Department, 1993. *General Plan 2012*. Contact: 21000 Hacienda Boulevard, California City, CA 93505.

[72] City of California City, 4 April 2002a.

[73] Wateridge Capital Group, LLC, April 2002. *Phase I Environmental Site Assessment of the Automotive Test Course Project.* Contact: 221 Town Center West, Suite 106, Santa Maria, CA 93458. Prepared by Sapphos Environmental, Inc., 133 Martin Alley, Pasadena, CA 91105.

4.1.2.7 Hydrology and Water Quality

The proposed project is located within the jurisdiction of the California Regional Water Quality Control Board, Lahontan Region.[74] Based on a review of existing available data for groundwater resources in the vicinity of the proposed project area,[75]existing domestic water sources are both groundwater extracted from local wells and imported water from the Antelope Valley East Kern Water Agency. A limited review of well records indicated that the groundwater table is approximately 130 feet below the ground surface in the vicinity of the proposed project site.[76] Storm water that is tributary to the proposed project site flows in a southeasterly direction through the site. The entire tributary area consists of vacant desert terrain with little undulation or visible streambed definition.[77] The elevation difference from the easternmost location of the tributary area to the westernmost location of the tributary area is 650 vertical feet through a total travel distance of 60,000 feet. Examination of the USGS 7.5-minute series Sanborn topographic quadrangle and aerial photos for the proposed project site identified colored lines indicating drainage locations.[78],[79] These "colored" drainages were identified as ephemeral drainages. Due to present conditions of the terrain in the proposed project area, these "minor ephemeral" drainage locations did change during storm water runoff events.[80] Therefore, examination of the USGS 7.5-minute series Sanborn topographic quadrangles for the proposed project site identified five main ephemeral drainages that are tributary to the site, labeled as Tributary 1 through 5 (Figure 4.1.2.7-1, *Proposed Automotive Test Course Project Site: Existing Drainage Conditions*).[81],[82] Examination of the drainage tributary areas shows that approximately 9,200 acres is tributary to the entire proposed project site boundary. Of the approximately 9,200 acres of tributary flow area that flow to the property boundary from the west, roughly 6,000 acres of tributary flow area currently pass through the proposed project site through three identified ephemeral drainages. The southernmost drainage would also include an additional 1,200 acres, which, although not directly impacting the site, would pass through the proposed undisturbed southeastern corner of the site and on the Cache Creek further downstream. The two remaining ephemeral streams pass to the north of the site. The northernmost stream and

[74] California Regional Water Quality Control Board, Lahontan Region, 1995. *Water Quality Control Plan for the Lahontan Region; North and South Basins*. Contact: 2092 Lake Tahoe Blvd., South Lake Tahoe, CA 96150.

[75] Wateridge Capital Group, LLC, 2001. *Report of Geotechnical Feasibility*. Contact: 221 Town Center West, Suite 106, Santa Maria, CA 93458. Prepared by David Jones Associates, 155 Montgomery Street, Suite 510, San Francisco, CA 94104.

[76] Hyundai Corporation of America, 20 September 2002.

[77] Ibid.

[78] U.S. Geological Survey, 1973. USGS 7.5-Minute Series Sanborn, CA Topographic Quadrangle. Denver, CO: U.S. Geological Survey.

[79] Roland Rothman, *Personal Communication*, 13 May 2002. Rothman Engineering.

[80] Ibid.

[81] Hyundai Corporation of America, 2002.

[82] U.S. Geological Survey, 1973.

corresponding tributary area incorporates the southernmost reaches of flood zone "A" for Cache Creek, which lies to the north of the site (Figure 4.1.2.7-1).[83] Examination of National Flood Insurance Program Flood Insurance Rate Maps for Kern County, California[84]and conversation with both Kern County and City personnel have indicated that the site does not adversely impact Cache Creek or its identified 100-year flood zone limits.[85] The Corps has determined that it does not have jurisdiction over any of the desert washes within the proposed project area. [86]

Implementation of the proposed project would have the potential to result in the alteration of surface water quality due to the erosion of soils and other pollutants during the construction process. The project site would not substantially impact the existing drainage pattern of the area. The manner in which storm water would be conveyed around the site and back into the natural flow pattern would not result in substantial erosion or siltation on or off site because the proposed facility is designed to direct storm water flows along existing drainage patterns. Storm water flow arriving along the western side of the site would be routed to the north and south sides of the test track through riprap-reinforced, earthen channels. The channels would combine along the eastern side of the site where storm water would be channeled into each of the three identified ephemeral streams located along the eastern side of the site. The channeled storm water would be distributed to each of the existing streams through a spreading channel outlet system designated to maintain City- and County-designated velocity and flow requirements. The proposed project is not expected to significantly increase the rate or amount of runoff currently generated on the proposed project site. Downstream, existing conveyance systems are adequate to handle the runoff from the proposed project. The northernmost portion of the proposed project site is located within the projected 100-year flood zone for Cache Creek. At this time, no structures that would impede or redirect flood flows are proposed for this area.

Hyundai submitted an application to CDFG for a Streambed Alteration Agreement (SAA), pursuant to Section 1603 of the California Fish and Game Code, on September 19, 2002. A Final Addendum to the Notification to a Lake or Streambed Alteration was submitted to CDFG on October 16, 2003. This document identifies permanent impacts to seven of the 13 dry desert washes, as a result of cut and fill from the installation of riprap pads and/or culverts, that are subject to regulation under Section 1603.

100-Year Flood Zone

Of the two streams that pass to the north of the site, the northern-most stream and corresponding tributary area incorporates the southern-most reaches of flood zone "A" for Cache Creek, which lies to the north of the site. Examination of National Flood Insurance Program Flood Insurance Rate

[83] Hyundai Corporation of America, 2002.

[84] Federal Emergency Management Agency, 1986. *Flood Insurance Rate Map, Kern County, California; Panel 1625 of 2075 and 1600 of 2075*. Effective September 29, 1986.

[85] Hyundai Corporation of America, 2002.

[86] U.S. Army Corps of Engineers, 17 September 2002.

Maps for Kern County, California[87] and conversations with both County and City personnel have indicated that the site does not adversely impact Cache Creek or its identified 100-year flood zone limits. The proposed site is not located in a 100-year flood hazard area and no structures associated with the proposed project would be placed such that they would impede or redirect flood flows.

The northern-most portion of the proposed automotive test course area would be within the projected 100-year flood zone for Cache Creek. No structures are proposed within the projected 100-year flood zone for Cache Creek that would impede or redirect flood flows.

Any road or structure constructed within the "existing high water mark" of the ephemeral streams would be constructed in such a manner as not to expose people to a significant risk of loss, injury or death involving flooding. This would be done in one of two ways: roads and/or structures would be constructed a minimum of 2 feet above the high water mark or where velocities are considered low enough to be safe, and Arizona crossings for roads would be employed.

4.1.2.8 Land Use and Planning

On April 22, 2003, the City annexed the proposed 4,498-acre automotive test facility site. The City amended the City's General Plan, and adopted a California City Zoning Ordinance for the Annexation Area that included the proposed project site. The proposed project site has a City General Plan Designation of Light Industrial and Research and is zoned M-1-Light Industrial District. This allows an automotive test course facility.

Property Ownership

The proposed project site consists of 4,498 acres of vacant land. On December 13, 2002, Hyundai purchased 2,880 acres from SF Pacific Properties, Inc. (Catellus Property). The remaining acres are being acquired by the Redevelopment Agency of The City of California City (RDA) and will be transferred to Hyundai pursuant to the terms of the Owner's Participation Agreement (OPA) between Hyundai and the RDA. On July 1, 2003, the RDA adopted Resolutions of Necessity to exercise its powers of eminent domain to acquire the remaining parcels at fair market value.

4.1.2.9 Noise

The existing noise environment in the vicinity of the project site is minimal, characterized by low ambient noise levels generated by vehicular traffic on nearby State Highway 58, occasional aircraft flyway, and natural sounds. The proposed project area is within the High Altitude Supersonic Corridor used by Edwards Air Force Base.

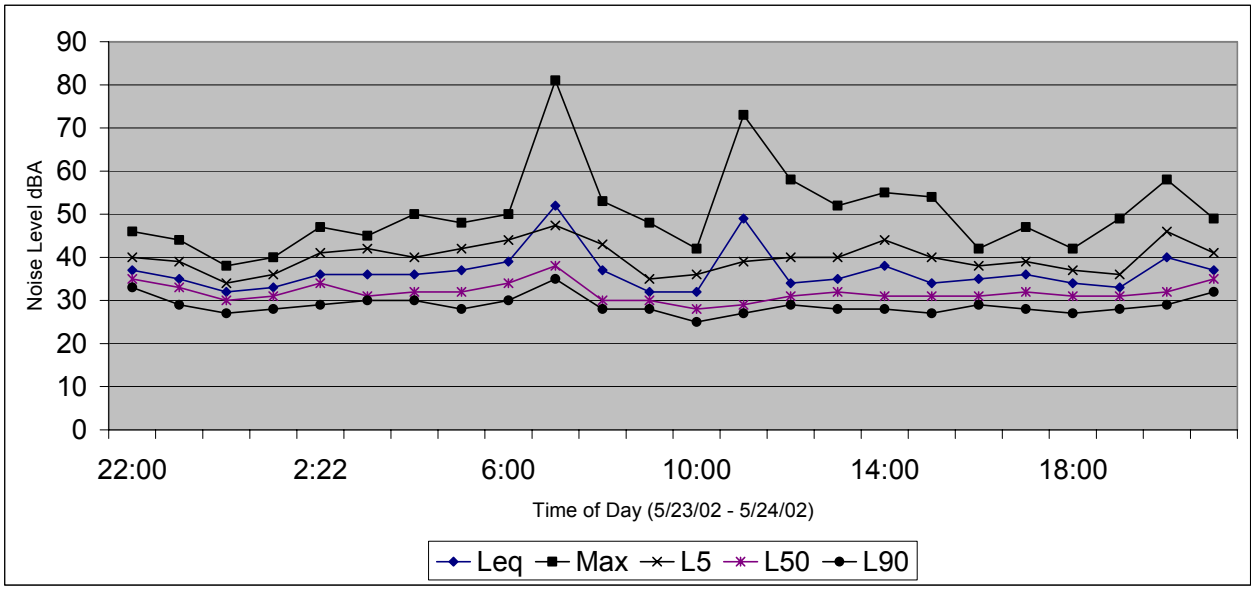
To characterize the existing noise environment at the proposed project site, ambient noise measurements were made during a typical weekday period between May 23 and 24, 2002, at four measurement sites. The sites are on the edge of the dirt road that starts at the AT&T Tower at approximately 1.0, 1.5, 2.0, and 3.0 miles north of State Highway 58. The measurements at miles

[87] Federal Emergency Management Agency, 1986.

1.0, 2.0, and 3.0 were taken over one-hour periods and at the 1.5-mile locations over a 24-hour period (Figure 4.1.2.9-1, *Noise Monitoring Station Location*).

The results of the noise measurements are shown graphically in Table 4.1.2.9-1, *Existing Noise Levels*. The measurement results are presented in terms of the equivalent (L_{eq}), maximum (L_{max}), L_5, L_{50} and L_{90} noise levels. Measurements were made using an automated system placed inside a car with a cable to the microphone outside the car. The ambient L_{eq} and L_{max} levels peak at 7:00 a.m., 11:00 a.m., and 8:00 p.m.

TABLE 4.1.2.9-1
EXISTING NOISE LEVELS



4.1.2.10 Utilities and Service Systems

The development of the proposed facility would require the construction of on-site wastewater conveyance and treatment, potable water conveyance, and storm water drainage facilities. A septic tank system to handle wastewater will be installed between the main building and the fuel storage area within the existing grading footprint. A leach field of approximately 5,500 square feet will be located approximately 300 feet north of the fuel storage area. Potable water supplies will be delivered by the City's proposed municipal water line extension project, described in Chapter 2, *Project Description*. Electricity will be provided by Southern California Edison from existing service lines.

4.2 PROPOSED COMPENSATION LAND

This description of the land proposed to be acquired as compensation lands is based on literature review; archive and records search; a review of the following USGS 7.5-minute topographic quadrangle maps: Galileo Hill, Saltdale, California City North, and Cantil; the Desert Tortoise

(Mojave Population) Recovery Plan;[88] and the *2003 Desert Tortoise Preserve Committee Management Plan, Desert Tortoise Natural Area & Adjacent Lands*, attached as Appendix E.

4.2.1 Location

The proposed compensation land area is located within portions of the USGS 7.5-minute topographic quadrangle maps: Galileo Hill, Saltdale, California City North, and Cantil, and is north of the Randsburg/Mojave Road, east of Cache Creek, south of Koehn Lake, and west of Chrysler Road, in the general vicinity of the Rand Mountains, (Figure 4.2.1-1, *General Location of Proposed Mitigation Lands*). Proposed compensation lands are also located at sites north of the City of California City and south and east of the Desert Tortoise Research and Natural Area (DTRNA).

4.2.2 Existing Conditions

4.2.2.1 Plant Communities

Mojave Creosote Bush Scrub

The Mojave creosote bush scrub plant community (Element Code 34100)[89] corresponds to the creosote bush series.[90] Mojave creosote bush scrub is the dominant plant in the Mojave Desert at elevations below 3,000 to 4,000 feet. Mojave creosote bush scrub is not a state-designated sensitive plant community. This plant community is normally characterized by shrubs of usually 0.5 to 3 meters in height and widely spaced with bare ground between plants. It occurs in areas of well-drained secondary soils on slopes, fans, and valleys. It is typically dominated by creosote *(Larrea tridentata)* and is characterized by burro-weed *(Ambrosia dumosa),* spiny senna (*Cassia armata),* Mormon tea, and burrobrush. Creosote bush scrub is described as being the "by far the most important and widespread desert vegetation type.[91]

4.2.2.2 Threatened and Endangered Species

Potentially suitable habitat for the desert tortoise and Mohave ground squirrel consists primarily of creosote bush scrub vegetation, but also succulent scrub, cheesebush scrub, blackbush scrub, hop-sage scrub, shadscale scrub, microphyll woodland, and Mojave saltbush-allscale scrub. Tortoises eat primarily annual forbs, but also perennials. They prefer surfaces covered with sand and fine gravel versus course gravel, pebbles, and desert pavement. Friable soil is important for digging burrows.

The proposed compensation lands are located north of the City of California City and south and east of the Desert Tortoise Research and Natural Area (DTRNA) and will be situated away from State

[88] U.S. Fish and Wildlife Service, 1994.

[89] R.F. Holland, 1986.

[90] J.O. Sawyer and T. Keeler-Wolf, 1995.

[91] U.S. Fish and Wildlife Service, 1994.

Highway 58 and other major highways that could result in tortoise or Mohave ground squirrel mortalities and fragmentation of tortoise and Mohave ground squirrel populations. As described in Appendix E, these lands include a broad range of biological resources, including Mohave creosote bush scrub habitat, which is known to support desert tortoise and Mohave ground squirrel populations. Surveys conducted in 2000 indicated the presence of desert tortoises and Mohave ground squirrel. A Property Analysis Record (PAR) recently conducted by the DTPC in an area adjacent to the proposed acquisition area also describes the presence of these species. (Appendix F, *Desert Tortoise Preserve Committee Property Analysis Record*). The compensation lands would further protect the core desert tortoise populations within the DTRNA by providing a larger buffer between the DTRNA and lands that are proposed for development or other uses not compatible with desert tortoise use or occupation. Overall, the value of the compensation lands will be greater than those that would be impacted by the proposed project due to the location of the compensation lands (adjacent to areas being managed for desert tortoise), the higher quality of the habitat, and the isolation of the compensation lands from major highways and urban areas that reduce the suitability of lands to support desert tortoise populations.

Because these compensation lands will be managed for the benefit of desert tortoise and Mohave ground squirrel, their value to the species will be increased by the implementation of enhancement measures, which may include fencing, removal of garbage and debris and other measures. Accordingly, there will no adverse impact to the compensation lands from their acquisition by Hyundai and the City for the purpose of compensation for the proposed project's impacts to desert tortoise to Mohave ground squirrel.

CHAPTER 5.0
ALTERNATIVES

This section provides a description and analysis of the reasonably practicable alternatives available to the USFWS. Alternatives for the project were developed in accordance with Section 10(a) of the Endangered Species Act and the National Environmental Policy Act. Five alternatives to issuance of a Section 10(a)(1)(B) permit for the proposed project (the preferred alternative) were analyzed: (1) a no action alternative pursuant to which the USFWS would not issue a Section 10(a)(1)(B) permit for an automotive test course facility; (2) an On-Site Fencing Alternative; (3) issuance of a Section 10(a)(1)(B) permit for an alternative site in San Bernardino County; (4) issuance of a Section 10(a)(1)(B) permit for an alternative site in Riverside County; and (5) a More Mitigation Alternative. Only a single no action alternative was considered because the proposed project site and the two alternative site locations are potentially occupied by species listed as endangered or threatened pursuant to the ESA.

5.1 NO ACTION ALTERNATIVE

Under the no-action alternative, the USFWS would not issue a Section 10 incidental take permit for the facility. The proposed project would not be developed, and the objectives of the proposed project would not be met. Existing conditions at the proposed project sites analyzed in this document would remain unchanged. Without issuance of the incidental take permit, the HCP would not be implemented and compensation acreage of higher quality desert tortoise habitat east and south of the Desert Tortoise Research and Natural Area would not be purchased and transferred into conservation.

Ability to Achieve Project Goals

Without issuance of the incidental take permit, Hyundai would be unable to complete the safety testing required to support new production vehicles, Table 5.1-1, *Summary of Adequacy of Proposed Project and Alternatives to Attain Project Objectives*.

TABLE 5.1-1
SUMMARY OF ADEQUACY OF PROPOSED PROJECT AND ALTERNATIVES TO ATTAIN PROJECT OBJECTIVES

Alternative	Preferred Alternative/Proposed Project	No Action	On-Site Perimeter Fencing Alternative	Proposed Alternative/San Bernardino Site Location	Proposed Alternative/Riverside Site Location	More Mitigation Alternative
Automotive Test Course Objectives						
1. Provide site security by locating test course outside of the view shed from the nearest public access						
	Yes	No	Yes	No	No	Yes
2. Provide accessibility to an improved roadway						
	Yes	No	Yes	No	No	Yes
3. Maintain a site size of at least six sections						
	Yes	No	Yes	Yes	No	Yes
4. Provide a site with a cost-effective land value						
	Yes	No	Yes	Yes	No	Yes
5. Provide a geotechnically suitable site (low rupture potential)						
	Yes	No	Yes	No	No	Yes
6. Provide a site of less than 2 percent slope to accommodate 1 percent slope build out						
	Yes	No	Yes	No	No	Yes
7. Provide a site with access to utilities within 2 miles of the site						
	Yes	No	Yes	Yes	No	Yes
8. Provide a site located outside 100-year FEMA flood plain						
	Yes	No	Yes	No	Yes	Yes
9. Provide a site located within 15 miles of existing urban areas, but no less than 3 miles from residential uses						
	Yes	No	Yes	No	No	Yes
10. Provide a site located within a City corporate boundary for access to services						
	Yes	No	Yes	No	Yes	Yes
11. Provide a site located within restricted air space to facilitate security						
	Yes	No	Yes	No	No	Yes
12. Provide a site at least 2 miles from sensitive receptors						
	Yes	No	Yes	No	Yes	Yes
13. Avoid/minimize impacts to dedicated critical habitat						
	Yes	Yes	Yes	Yes	No	Yes
14. Provide a site suitable for construction of a test course						
	Yes	No	Yes	No	No	Yes
15. Provide a site with no major crossing of utility transmission lines or easements						
	Yes	No	Yes	Yes	No	Yes
16. Provide a site not affected by significant drainage courses						
	Yes	Yes	Yes	No	No	Yes
17. Allow for economically feasible mitigation						
	Yes	N/A	No	Yes	No	No

5.2 ON-SITE FENCING ALTERNATIVE

The on-site fencing alternative would be similar to the proposed project. As part of the on-site alternative, approximately 12 miles of three-stranded barbed-wire fencing would be installed around the proposed project site for security. The barbed-wire fence would be constructed along the proposed property boundary to mark the edge of the project site and deter trespassing. Security fencing and desert tortoise exclusion fencing would be constructed around the outer perimeter of the oval test course and surrounding swales and berms. Entry gates would be provided in the fence at the designated road entry point for the oval test course, and at three specified points along the oval test track. The three additional gates would be used only by authorized personnel for situations that require rapid access to the interior of the oval test track. Desert tortoise exclusion fencing also would be constructed along the east and west sides of the Hill-Up Road.

To facilitate movement across the project site, wildlife undercrossings would be constructed. One undercrossing would be constructed at a point along the southern entry road within the project boundaries. The position of the wildlife undercrossing would be determined by topography so as to provide a more natural route for wildlife to avoid crossing the entry roadway. Wildlife undercrossings would also be positioned along the Hill-up Road to facilitate the movement of wildlife across the eastern portion of the project area. Each wildlife undercrossing would consist of a 4-foot-high by 6-foot-wide corrugated metal structure. The entry points for the wildlife undercrossing would be reinforced with natural rock and planted with native vegetation to provide shade and cover near the entry points.

Hyundai and the City would conduct preclearance surveys for the oval track and its interior, areas adjacent to the test track on the proposed project site and all areas proposed for grading; would move desert tortoise occupying those areas to adjacent areas; and would mitigate all grading impacts, the oval track, and the interior of the track.

Ability to Achieve Project Goals

The probability of ongoing take of desert tortoise during project operations due to exclusion fencing failure, recruitment of tortoise into the site, or failure to move residents in the site out of harms' way was determined to be too high for this alternative to be utilized.

5.3 ALTERNATIVE B-1: SAN BERNARDINO COUNTY SITE

Location

In the process of evaluating potential sites for development of the proposed project, Hyundai considered a site of approximately 4,340 acres, occupying nearly seven sections, located in an unincorporated area of San Bernardino County. The San Bernardino County Site Alternative is within the Landers USGS 7.5-minute series topographic quadrangle adjacent to the southwestern boundary of the U. S. Marine Corps Air Ground Combat Training Center, east of State Highway 247, and north of the City of Landers (Figure 5.3-1, *Regional Location of the San Bernardino County Alternative Site*). The San Bernardino County Site Alternative is accessible from State Highway 247 by the Reche Road exit, running east-west, approximately 3 miles to the south.

Description

The facility design would be similar to that discussed in the proposed project. The San Bernardino County Site Alternative does not include the project elements pertaining to the City, such as extension of the water pipeline. This alternative would result in permanent impacts to approximately 2,218 acres (826 acres of grading plus 1,392 acres of habitat within an oval test tract design). There has been no previous mitigation effort for impacts to desert tortoise at this alternative site.

Existing Biological Conditions

To determine which federally listed plant and wildlife species have the potential to occur within the San Bernardino County Site Alternative, the California Natural Diversity Database[1] (CNDDB) was searched for the USGS 7.5-minute topographic quadrangle in which the alternative site occurs (Landers) and all surrounding USGS 7.5-minute topographic quadrangles (Bighorn Canyon, Melville Lake, Hidalgo Mountain, Goat Mountain, Joshua Tree North, Yucca Valley North, and Rimrock). The CNDDB query results indicate that the San Bernardino County Site Alternative may provide potentially suitable habitat for one federally listed plant species and one federally listed wildlife species. These species are listed in Table 5.3-1, *Federally Listed Plant and Wildlife Species with the Potential to Occur at the San Bernardino County Site Alternative*. Field reconnaissance performed by Sapphos Environmental, Inc. biologists on June 3, 2002 determined that the site consists mostly of a single plant community: Joshua tree woodland, a state-designated sensitive plant community.[2,3] The results of the CNDDB review and field reconnaissance indicate that the San Bernardino County Site supports potentially suitable habitat for both Parish's daisy and desert tortoise.

Ability to Achieve Project Goals

The San Bernardino County Site Alternative would meet only five of the objectives of the proposed project: the land would be cost-effective to purchase, the site would be within 2 miles of available utility connections, impacts to designated critical biological habitat would be avoided because no such habitat exists at the San Bernardino County Site Alternative, and no major utility transmission lines or easements cross the site. The other 12 objectives of the facility would not be met by this proposed alternative, as shown in Table 5.1-1. The San Bernardino County Site Alternative would not provide site security by locating the test course outside of the viewshed of the nearest public access, provide accessibility to an improved roadway, maintain a site size of at least six sections, provide a geotechnically suitable site (low rupture potential), provide a site of less than 2 percent slope to accommodate 1 percent slope build-out, provide a site located outside 100-year flood

[1] California Department of Fish and Game, 2002. *Rarefind 2: A Database Application for the Use of the California Natural Diversity Database*. Sacramento, CA: California Department of Fish and Game.

[2] Ibid.

[3] R.F. Holland, 1986. *Preliminary Descriptions of the Terrestrial Communities of California*. Sacramento, CA: California Department of Fish and Game.

plain, provide a site located within 15 miles of existing urban areas but no less than 3 miles from residential uses, provide a site located within a City corporate boundary for access to services, provide a site located within restricted air space to facilitate security, provide a site at least 2 miles from sensitive receptors, provide a site suitable for the construction of a test course, or provide a site not affected by significant drainage courses.

TABLE 5.3-1
FEDERALLY LISTED PLANT AND WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR AT THE SAN BERNARDINO COUNTY ALTERNATIVE SITE

Species	Sensitivity Status
Plant	
Parish's daisy *(Erigeron parishii)*	FT, CNPS1B
Wildlife	
Desert tortoise *(Gopherus agassizii)*	FT, ST

KEY:
CNPS1B = California Native Plant Society listings from its January 2000 edition of *Inventory of Rare and Endangered Vascular Plants of California*. List 1B (CNPS1B) indicates plants considered rare, threatened, or endangered in California and elsewhere by the California Native Plant Society.
FT = Federally listed as threatened according to the Federal Endangered Species Act of 1973.
ST = State-listed as threatened according to the California Endangered Species Act.

5.4 ALTERNATIVE B-2: RIVERSIDE COUNTY SITE

Location

In the process of evaluating potential sites for development of the proposed project, the project applicant considered a site occupying nearly seven sections located in an unincorporated area of Riverside County. The Riverside County Alternative Site is located in Riverside County within the Indio USGS 7.5-minute series topographic quadrangle north of Interstate 10 and east of the community of Indio, California (Figure 5.4-1, *Regional Location of the Riverside County Alternative Site*). The Riverside County Site Alternative is not currently accessible from Interstate 10 or other surface streets.

Description

The facility design would be similar to the proposed project. The Riverside County Alternative Site does not include the project elements pertaining to the City of California City, such as extension of the water pipeline. This proposed alternative would also result in permanent impacts to approximately 2,218 acres (826 acres of grading plus 1,392 acres of habitat within an oval test track design). There has been no previous mitigation of impacts to listed species at this alternative site.

Existing Biological Conditions

To determine which federally listed plant and wildlife species have the potential to occur within the Riverside County Alternative Site, the California Natural Diversity Database[4] (CNDDB) was searched for the USGS 7.5-minute topographic quadrangle in which the alternative site occurs (Indio) and all surrounding USGS 7.5-minute topographic quadrangles (La Quinta, Myoma, West Berdoo Canyon, Rockhouse Canyon, Thermal Canyon, Mecca, Valerie, and Martinez Mountain). As a result of the CNDDB query, it was determined that the Riverside County Alternative Site may provide potentially suitable habitat for two federally listed plant species, six federally listed wildlife species, and one wildlife species proposed for listing (Table 5.4-1, *Federally Listed Plant and Wildlife Species with the Potential to Occur at the Riverside County Alternative Site*). Field reconnaissance performed by Sapphos Environmental, Inc. biologists on June 3, 2002 determined that this site consists mostly of a single plant community: Mojave creosote bush scrub.[5] Results of the CNDDB review and field reconnaissance indicate that the Riverside County Site Alternative supports potentially suitable habitat for the two potentially occurring listed plant species, and for all of the potentially occurring listed wildlife species as well as those propose for listing, except for Yuma clapper rail.

Ability to Achieve Project Goals

The Riverside County Alternative Site would meet only three of the objectives of the proposed project: the land would be located outside of the 100-year FEMA flood plain, located within a city corporate boundary providing access to services, and would be at least 2 miles away from sensitive receptors. The other 14 objectives of the facility would not be met by this alternative, as shown in Table 5.1-1. The Riverside County Alternative Site would not provide site security by locating the test course outside of the viewshed of the nearest public access, provide accessibility to an improved roadway, maintain a site size of at least six sections, provide a site with cost-effective land value, provide a geotechnically suitable site (low rupture potential), provide a site of less than 2 percent slope to accommodate 1 percent slope build out, provide a site with access to utilities within 2 miles, provide a site located within 15 miles of existing urban areas, but no less than 3 miles from residential uses, provide a site located within restricted air space to facilitate security, avoid or minimize impacts to dedicated critical biological habitat, provide a site suitable for the construction of a test course, provide a site with no major crossings of utility transmission lines or easements, provide a site not affected by significant drainage courses, or allow for economically feasible mitigation.

[4] California Department of Fish and Game, 2002.

[5] City of California City, 2002b. MFR: Results of Directed Surveys for Desert Tortoise within the Proposed Automotive Test Course Project Area, Kern County, California. Contact: 21000 Hacienda Blvd., California City, CA 93505. Prepared by: Sapphos Environmental, Inc., 133 Martin Alley, Pasadena, CA 91105.

TABLE 5.4-1
FEDERALLY LISTED PLANT AND WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR AT THE RIVERSIDE COUNTY ALTERNATIVE SITE

Plant	
Triple-ribbed milk-vetch *(Astragalus tricarinatus)*	FE, CNPS1B
Coachella valley milk-vetch *(Astragalus lentiginosus* var *coachellae)*	FE, CNPS1B
Wildlife	
Desert slender salamander *(Batrachoseps major aridus)*	FE, SE
Desert tortoise *(Gopherus agassizii)*	ST, FT
Flat-tailed horned lizard *(Phrynosoma mcalli)*	CSC
Coachella valley fringe-toed lizard *(Uma inornata)*	FT, SE
Peninsular bighorn sheep *(Ovis canadensis cremnobates)*	FE, ST

5.5 MORE MITIGATION ALTERNATIVE

The More Mitigation Alternative would be similar to the proposed project, and would occupy the same project site. The USFWS would issue a Section 10(a) incidental take permit for desert tortoise. The facility design would be identical to the proposed project, and would result in unmitigated impacts to 3,386.5 acres of occupied desert tortoise habitat. As part of the mitigation measures under this alternative, Hyundai and the City would propose compensation for land at a 3:1 ratio. Compensation for 3,386.5 acres of land at 3:1 would result in a total of 10,159.5 acres being purchased, with additional fees per acre allotted for endowment and enhancement of the purchased lands. Compensation lands would be purchased in the vicinity of the Desert Tortoise Research and Natural Area, and would be transferred to a third-party conservation organization or CDFG, to be managed specifically for the desert tortoise. Hyundai and the City also would be responsible for initial enhancement of the compensation lands.

Conservation Easement

As part of the more mitigation alternative, Hyundai would create a conservation easement on the project site. A conservation easement on the site would dedicate the land to be conserved for the desert tortoise. Following the expiration of the 30-year incidental take permit, ownership of the land would revert to the USFWS or third-party conservation organization for management, with the caveat that the land not be developed further.

Ability to Achieve Project Goals

This alternative did not meet several of the project's objectives. Purchase of 10,159.5 acres of compensation land and funding enhancement and long term management for that amount of

acreage would render the proposed project economically infeasible. Hyundai calculated the economic cost of the proposed project based on a cost of $870/acre for acquisition of the compensation land and a total of $550/acre to fund the initial enhancement and creation of an endowment to fund the long term management of those lands. These amounts were based on recent past costs for acquisition, enhancement and long term management of compensation lands for similarly situated projects. Applying those figures to 10,159.5 acres results in a cost in excess of $13 million for compensation, which Hyundai has determined would result in a negative return on Hyundai's investment in the project, thereby rendering the project economically infeasible.

Although there are no current plans for development of the site beyond what is described in the project description, dedication of the site as permanent conservation area would prohibit any future development of the remainder of the site.

The project site also would be inadequate as a reserve for the desert tortoise under a conservation easement due to the planned future development of adjacent lands and the construction of desert tortoise exclusion fencing around the perimeter of the project site. Desert tortoise within the fencing would have no connections to adjacent habitat, effectively isolating the habitat within the proposed project area, and the adjacent habitat is zoned for future development, rendering it unlikely to support desert tortoise in the future.

CHAPTER 6.0
ENVIRONMENTAL CONSEQUENCES

This section analyzes the potential environmental effects of each of the six alternative actions analyzed: (1) the no action alternative; (2) the proposed action—proposed project (preferred alternative); (3) the proposed action—on-site fencing alternative; (4) a proposed action—San Bernardino alternative; (5) a proposed action—Riverside alternative; and (6) a more mitigation alternative. Direct and indirect effects were analyzed pursuant to 40 CFR Section 1508.8 of NEPA. Cumulative effects were analyzed pursuant to 40 CFR Section 1508.7 of NEPA. The significance of potential environmental effects was analyzed based on the "context and intensity test" pursuant to 40 CFR Section 1508.27 of NEPA.

6.1 ALTERNATIVES

6.1.1 No Action Alternative

Under the no action alternative, no incidental take permit would be issued by USFWS. Under this alternative, the existing conditions as described in Chapter 4 of this document would remain unchanged. The facility, Highway 58 access road, and water pipeline extension would not be constructed, and no impacts to the environment would occur. In addition, the HCP would not be implemented, compensation habitat would not be acquired for the desert tortoise (*Gopherus agassizii*) and no funds to enhance or manage the compensation habitat would be allocated.

6.1.2 Proposed Action: Proposed Project

Under this alternative, an incidental take permit would be issued by the USFWS for desert tortoise. The proposed facility, Highway 58 access road, and water pipeline extension would be constructed, and the HCP would be implemented. The analysis of impacts resulting from issuance of the permit includes the construction and operation of the proposed facility, the Highway 58 access road, and the water pipeline extension; implementation of the HCP; and implementation of all mitigation measures adopted by the City in the Final EIR.

Effects on Biological Resources

Effects on Desert Tortoise

Construction of the proposed project is anticipated to impact 4,526.5 acres of desert tortoise habitat through grading, development, and operation of the proposed facility; construction of the City's water line and the Highway 58 access road; and installation of desert tortoise exclusion fencing around the perimeter of the project site.

Construction of the proposed project would directly impact the proposed project site by fencing the entire perimeter with desert tortoise exclusion fencing and translocating all desert tortoise within the perimeter. Additional impacts to desert tortoise would be anticipated in areas adjacent to the perimeter security fencing and desert tortoise exclusion fencing due to loss of potential movement pathways through the proposed project area.

Installation of desert tortoise exclusion fencing around the site perimeter and all areas to be disturbed during construction, and translocation of all desert tortoises located on the project site, will avoid potential impacts to desert tortoise from construction and operation of the proposed project, including crushing of individuals by construction equipment, crushing of burrows by equipment and workmen, collision with vehicles on roadways within the proposed project site, increased predation by Common Ravens attracted to the construction site, increased lighting and increased human activity.

No impacts are anticipated from operation of the water pipeline extension project, because no activity is anticipated along the proposed water line route other than construction and routine maintenance. The proposed water line has been redesigned so that no connections or hydrants would be included except for the connection to the proposed facility. This design is anticipated to minimize the potential for breaks and emergency repairs.

Implementation of the measures included in Chapter 7 of the EA/HCP also will minimize and mitigate the loss of desert tortoise and desert tortoise habitat. Under the terms of the HCP, Hyundai and the City will acquire desert tortoise habitat and transfer fee title of the compensation lands to CDFG. On a case-by-case basis, a third-party approved by Hyundai, the City, USFWS and CDFG may hold title to compensation lands. If fee title to the compensation lands is held by an approved third party, a conservation easement over the compensation lands will be recorded in favor of CDFG and in a form approved by CDFG. Chapters 7, 8 and 9 also provide assurances for adequate funding for management and enhancement of the compensation lands.

Effects on Mohave Ground Squirrel

Construction of the proposed project is anticipated to impact 854.5 acres of habitat occupied by Mohave ground squirrels. Hyundai and the City are in the process of obtaining incidental take authorization for project impacts to Mohave ground squirrel from CDFG pursuant to Section 2081 of CESA. Impacts potentially resulting from construction of the proposed project include crushing of individuals by construction equipment, crushing of burrows by equipment and workmen, collision with vehicles on roadways within the proposed project site, and increased predation by ravens attracted to the construction site. Potential impacts resulting from operation of the automotive test course include collisions with vehicles on the entry road and test tracks, increased lighting at night that may disrupt ground squirrel activities, an increase in human activity, and potential loss of free movement across the proposed project site.

Implementation of the proposed project minimization and avoidance measures in the Final EIR and in the CESA 2081 permit application to CDFG is anticipated to reduce potential impacts resulting from construction of the proposed project and operation of the automotive test course to below the level of significance. Proposed avoidance and minimization measures include daily monitoring by a qualified biological monitor, a Mohave ground squirrel education program and follow-up monitoring. No impacts are anticipated from operation of the water pipeline extension project.

Implementation of the measures included in the Hyundai and City CESA 2081 permit application to CDFG are anticipated to reduce the impact of habitat loss and loss of Mohave ground squirrels to below a level of significance. The 2081 permit application also provides assurances for adequate funding for management of the compensation lands for the benefit of Mohave ground squirrels.

Effects on Plant Communities

Effects on three plant communities found on the proposed project site—desert saltbush scrub, Mojave creosote bush scrub and Joshua tree woodland--will be minimized and mitigated by implementation of the following measures in the Final EIR.

Measure Plant-1. As a means of minimizing impacts on mature Joshua trees, the City shall require the project applicant as part of the City's site plan review process to incorporate into final plans and specifications a plan to relocate and transplant, to the extent practical, mature Joshua trees with a diameter at breast height of 10 inches or greater. Prior to ground disturbance an inventory of all Joshua trees within the area of grading impact shall be conducted by a qualified botanist/habitat restoration specialist. All Joshua trees within the impact area with a DBH of 10 inches or greater will be individually marked and located on a map using GPS technology. All Joshua trees with a DBH of less than 10 inches shall be inventoried. Restoration planning will incorporate replacement of Joshua trees less than 10 inches in diameter at breast height and replacement of Joshua trees greater than 10 inches in diameter at breast height that do not survive transplanting. The restoration plan shall include a mix of plants of various age levels so as to increase the opportunity for successful revegetation. The relocation and transplantation plan must be approved by a qualified restoration specialist and commented on by CDFG prior to the granting of a grading permit by the City.

Measure Plant-2. As a means of minimizing impacts on desert plant communities, the City shall require the project applicant as part of the City's site plan review process to incorporate into final plans and specifications a plan to revegetate areas temporarily impacted by grading with a native plant palette composed of plant species native to the local area. The project applicant shall submit a revegetation plan written by a qualified restoration specialist to the City and to CDFG prior to the City's granting of a final grading permit for the proposed Automotive Test Track Project. The revegetation plan shall be approved by a qualified restoration specialist and commented on by CDFG prior to the granting of a grading permit by the City. Any permanent loss of desert plant community habitat, which is deemed significant, shall be compensated together with the compensation lands for the desert tortoise and Mohave ground squirrel mitigation lands.

Effects on Cultural Resources

Cultural Resources

The cultural resources present on the proposed project site were evaluated using guidelines and regulations from the following: Section 106 of the National Historic Preservation Act, National Register of Historic Places, National Register: Eligibility of Districts, Native American Graves Protection & Reparation Act of 1990, Effects on Historical Resources of the California Environmental Quality Act, Health and Safety Code, Section 702, California Penal Code, Section 622.5, California Public Resources Code, Section 5097.5, California Register of Historic Resources, State Historic Resources Commission and the Office of Historic Preservation, County of Kern General Plan, and the City of California City General Plan.

There are six previously recorded archeological sites within the area of potential effect (APE) for the proposed facility (Table 6.1.2-1, *Archeological Studies and Previously Recorded Sites*). None of these sites is eligible for listing on the California Register of Historical Resources or the National Register of Historic Places. Twenty-six additional cultural resource sites were identified within the proposed project site as a result of directed surveys (*Table 4.1.2.4-1, Archaeological Studies and Previously Recorded Prehistoric Sites*). It was determined that four of the newly recorded sites do not have the potential to constitute significant archeological or historic resources.

To ensure that impacts to the remaining 22 newly recorded cultural resources sites are minimized to the maximum extent practicable prior to the initiation of construction activities, the Final EIR requires completion of a Phase II cultural resource investigation to make a determination of significance for ASM-1 through -22. Those sites that are determined to be eligible for listing in the National Register of Historic Places or the California Register of Historical Resources will be treated in accordance with one of the three feasible measures described in the "CEQA and Archeological Resources", *CEQA Technical Advice Series*: capping or covering the site with a level of soil prior to construction over the site, incorporation into open space areas of the project site, or excavation where the first two measures are not feasible. These measures also will provide the protection to these cultural and paleontological resources required by Section 106 of the National Historic Preservation Act.

The 22 sites located on the proposed project site are described in Chapter 4.

TABLE 6.1.2-1
ARCHEOLOGICAL STUDIES AND PREVIOUSLY RECORDED SITES

USGS 7.5-Minute Series Topographic Quadrangle/ Township/ Range	Section	Site	Comment	Level of Significance after Mitigation
Sanborn				
T 11 N, R11W	14 (all)	KER-3951H KER-3952H KER-3953H 5 Isolates	Three sites are located within the proposed Redevelopment Expansion Area, Annexation Area, and automotive test course facility site: **KER-3951H** consists of a historic trash scatter that appears to be less than 50 years old. **KER-3952H** consists of a historic trash scatter that appears to be more than 50 years old. **KER-3953H** consists of a historic trash scatter that appears to be more than 50 years old.	It has been determined that these sites are not eligible for listing on the California Register of Historical Resources or the National Register of Historic Places; therefore, the proposed project would not result in significant impacts to these sites.
	22 (E½)	KER-5053 KER-5054 KER-5055 2 Isolates	Three sites are located within the proposed Redevelopment Expansion Area, Annexation Area, and automotive test course facility site: **KER-5053** consists of a scatter of flakes and approximately 30 pieces of fire-affected rock in a 20-square-meter area. Three STPs were excavated. **KER-5054** consists of a scatter of artifacts including a flake, a bifacial core tool, and a metate, with a scatter of 50 or more pieces of fire-affected rock in a 140-square-meter area. Six STPs were excavated. **KER-5055** consists of a bedrock milling complex containing at least nine mortars and one slick formed in a granitic exposure and historic trash scatter in a 576-square-meter area.	It has been determined that these sites are not eligible for listing on the California Register of Historical Resources or the National Register of Historic Places; therefore, the proposed project would not result in significant impacts to these sites.

Additionally, incorporation of the mitigation measures in the Final EIR for cultural resources are expected to reduce impacts to the 22 newly recorded sites to below a level of significance (see Table 6-2, Known and Potential Prehistoric Sites within the Proposed Project Area). Those measures are as follows:

> ***Measure Cultural-1.*** The City of California City Planning Department, as part of any application for discretionary permit or prior to issuance of a grading permit, shall ensure that a Phase I Archeological Investigation prepared by a qualified archeologist that determines that the site is free of significant cultural resources, or a Phase II Archeological Investigation that identifies the treatment of any significant resources identified for a project within Redevelopment Area Expansion, is submitted prior to deeming the application to be complete. Recommendations for treatments shall be in accordance with Section 15064.5 (e) of the State CEQA *Guidelines* and the "CEQA and Archeological Resources," *CEQA Technical Advice Series*. This requirement shall apply to construction and operation of development projects within the Redevelopment Area Expansion, in areas that have not been previously surveyed: Section 25 (all), Section 26 (all), Section 27 (SE1/4), Section 28 (SE1/4) of T32 S, R36E; Section 30 (SE1/4), Section 31 (all), Section 32 (S1/2), Section 33 (S1/2), T32 S, R37E; of the USGS 7.5 minute series Sanborn topographic quadrangle; and Section 7 (S1/2), Section 14 (all), Section 15 (E1/2), Section 13 (everything beyond the limits of the Southern Pacific Railroad right-of-way), Section T32S, R36E, on the USGS 7.5 minute series Mojave NE topographic quadrangle. Verification of compliance with this measure shall be monitored and enforced by the City of California City Planning Department.
>
> ***Measure Cultural-2.*** The City of California City shall ensure that impacts to the 26 newly recorded cultural resources sites are minimized to the maximum extent practicable prior to the initiation of grading in those areas that contain ASM-1 through -26. Prior to the initiation of grading in those areas, the City shall require that the project applicant complete Phase II investigations and make a determination of significance for ASM-1 through -26. Those sites that are determined to be eligible for listing in the National Register of Historic Places or the California Register of Historical Resources shall be treated in accordance with one of the three feasible measures described in the "CEQA and Archeological Resources," *CEQA Technical Advice Series*: capping or covering the site with a level of soil prior to construction over the site, incorporation into open space areas of the project site, or excavation where the first two measures are not feasible. Prior to issuance of grading permits for Sections 9, 10, 11, and 16, T11N, R11W, of the USGS 7.5 minute series Sanborn topographic quadrangle, the City shall require the applicant to submit the results of Phase II testing for ASM-1 through -26. For those sites determined to be eligible for listing, the applicant shall, prior to the issuance of grading permits for the 1/4 Section in which the eligible site is located, be required to submit the applicable treatment plan: (1) plans and specifications for capping or covering the site with a level of soil; (2) plans and specifications for the incorporation of the site into an open space area of the project site; or (3) a report of the research design and results of the excavation plan.

Measure Cultural-3. Kern County Planning Department, as part of any application for discretionary permit or prior to issuance of a grading permit, shall ensure that a Phase I Archeological Investigation prepared by a qualified archeologist that determines that the site is free of significant cultural resources, or a Phase II Archeological Investigation that identifies the treatment of any significant resources identified for a project within Detachment Area 1, is submitted prior to deeming the application to be complete. Recommendations for treatments shall be in accordance with Section 15064.5 (e) of the State CEQA *Guidelines* and the "CEQA and Archeological Resources," *CEQA Technical Advice Series*. This requirement shall apply to construction and operation of development projects within Detachment Area 1, in areas that have not been previously surveyed: Section 1 (S1/2), Section 2 (all), Section 3 (all), Section 4 (all), Section 5 (all), Section 6 (all), Section 8 (all), Section 9 (all), Section 10 (all) of T31S, R39E, and Section 33 (S1/2) and Section 35 (all), T30S, R39E, of USGS 7.5 minute series Saltdale SE topographic quadrangle; Section 8 (all), Section 9 (all), and Section 10 (all) of T31S, R39E, of the USGS 7.5 minute series Galileo Hill topographic quadrangle; and of Section 25 (S1/2), Section 36 (all), T30S, R39E, Section 1 (N1/2), T31S, R39E, Section 27 (S1/2), Section 28 (S1/2), Section 29 (S1/2), Section 30 (S1/2), Section 31 (all), Section 32 (all), Section 33 (all), Section 34 (all), Section 35 (all), Section T302S, R40E of USGS 7.5 minute series Johannesburg topographic quadrangle. Verification of compliance with this measure shall be monitored and enforced by the Kern County Planning Department.

Measure Cultural-4. Kern County Planning Department, as part of any application for discretionary permit or prior to issuance of a grading permit, shall ensure that a Phase I Archeological Investigation prepared by a qualified archeologist that determines that the site is free of significant cultural resources, or a Phase II Archeological Investigation that identifies the treatment of any significant resources identified for a project within Detachment Area 2, is submitted prior to deeming the application to be complete. Recommendations for treatments shall be in accordance with Section 15064.5 (e) of the State CEQA *Guidelines* and the "CEQA and Archeological Resources," *CEQA Technical Advice Series*. This requirement shall apply to construction and operation of development projects within Detachment Area 1, in areas that have not been previously surveyed: Section 5 (all), T32S, R33E of USGS 7.5 minute series California City North topographic quadrangle. Verification of compliance with this measure shall be monitored and enforced by the Kern County Planning Department.

Measure Cultural-5. Kern County Planning Department, as part of any application for discretionary permit or prior to issuance of a grading permit, shall ensure that a Phase I Archeological Investigation prepared by a qualified archeologist that determines that the site is free of significant cultural resources, or a Phase II Archeological Investigation that identifies the treatment of any significant resources identified for a project within Detachment Area 3, is submitted prior to deeming the application to be complete. Recommendations for treatments shall be in accordance with Section 15064.5 (e) of the State CEQA *Guidelines* and the "CEQA and Archeological Resources," *CEQA Technical Advice Series*. This requirement shall apply to construction and operation of development projects within Detachment Area 1, in areas that have not been previously surveyed: Section 34 (E1/2) and Section 35 (all), T12N, R39E, Section 26 (N1/2), Section 27 (N1/2), and Section 28 (all), T32S, R39E and Section 1 (all), Section (N1/2), Section 3 (all), T11N,

R9W of USGS 7.5 minute series North Edwards topographic quadrangle. Verification of compliance with this measure shall be monitored and enforced by the Kern County Planning Department.

Measure Cultural-6. The City of California City Planning Department, as part of any application for discretionary permit or prior to issuance of a grading permit, shall ensure that a Phase I Archeological Investigation prepared by a qualified archeologist that determines that the site is free of significant cultural resources, or a Phase II Archeological Investigation that identifies the treatment of any significant resources identified for a project within that portion of the Annexation Area, beyond the limits of the facility, is submitted prior to deeming the application to be complete. Recommendations for treatments shall be in accordance with Section 15064.5 (e) of the State CEQA *Guidelines* and the "CEQA and Archeological Resources," *CEQA Technical Advice Series*. This requirement shall apply to construction and operation of development projects within that portion of the Annexation Area, beyond the limits of the facility, in areas that have not been previously surveyed: Section 35 (all), Section 36 (W1/2), Section 1 (W1/2), Section 3 (all), Section 12 (W1/2), Section 13 (W1/2), Section 21 (all), Section 25 (W1/2), Section 26 (NW1/4), Section 27 (all), Section 28 (N1/2), T12N, R37E, T11N, R11W, of the USGS 7.5 minute series Sanborn Topographic quadrangle; and Section 36 (all), T12N, R11W, Section 1 (all), Section 12 (all), Section 13 (all), Section 25 (all), T11N, R11W, Section 7 (all), Section 8 (S1/2), Section 17 (all), Section 19 (all), Section 20 (W1/2), Section 25 (all), Section 29 (all), Section (all), T11N, R10W of the USGS 7.5 minute series California City South topographic quadrangle. Verification of compliance with this measure shall be monitored and enforced by the Kern County Planning Department.

TABLE 6.1.2-2
KNOWN AND POTENTIAL
PREHISTORIC SITES WITHIN THE PROPOSED PROJECT AREA

Site Name	Site Type
CA-KER-3951H	trash scatter, less than 50 years old.
CA-KER-3952H	trash scatter, more than 50 years old.
CA-KER-3953H	scatter that appears more than 50 years old.
CA-KER-5053	Lithic scatter with fire affected rock
CA-KER-5054	Artifact scatter with fire affected rock
CA-KER-5055	Bedrock milling complex
ASM-1	Lithic Scatter
ASM-2	Lithic Scatter
ASM-3	Small Lithic Scatter
ASM-4	Small Lithic Scatter
ASM-5	Large Lithic Scatter
ASM-6	Small Lithic Scatter
ASM-7	Small Lithic Scatter
ASM-8	Small Lithic Scatter
ASM-9	Large FAR Scatter
ASM-10	Small Lithic Scatter
ASM-12	Small FAR Scatter
ASM-13	Small Lithic Scatter
ASM-14	Small FAR Scatter
ASM-15	Small FAR Scatter
ASM-16	Small Lithic Scatter
ASM-17	Small Lithic Scatter
ASM-18	Large FAR Scatter
ASM-19	Small Lithic Scatter
ASM-20	Small Lithic Scatter
ASM-21	FAR Scatter
ASM-22	Lithic Scatter
ASM-23	Lithic Scatter
ASM-24	FAR Scatter
ASM-25	FAR Scatter

Construction and operation of the proposed project is not expected to result in impacts to paleontological resources due to the low sensitivity of the rock units within this area to yield fossils or human remains.

Effects on Socioeconomics

Construction and operation of the proposed facility would have a beneficial impact on the socioeconomics of southern Kern County. Construction of the proposed project would benefit the area by providing increased sales for restaurants, motels, and supplies of gasoline and construction supplies. Operation of the proposed facility would benefit the community of Mojave and the City by providing 35 to 40 full-time employees, and up to 100 during the summer. In addition, the operation of the proposed facility would provide increased needs for auto supplies, gasoline, supermarkets, and restaurants, thereby providing an overall boost to the local economy.

Effects on Other Environmental Areas

Aesthetics

The visual character of the area would be altered due to the conversion of vacant land to developed lands. In addition, the proposed facility would be partially visible from the nearest publicly accessible vantage point, State Highway 58, located approximately 1.4 miles to the south. The proposed facility would be most visible from the approximately 1.5-mile section of State Highway 58 at an elevation of 2,550 feet above mean sea level (MSL). This section of highway correlates to the areas of lower elevation between the highway and the proposed project site, which creates a line of sight from the highway. New sources of light and glare would be introduced into areas that potentially may be occupied by desert tortoise. Proposed project plans and specifications that would reduce the increase in light and glare include utilizing low-intensity fixtures and baffles on all light sources, directing all light into the property, and performing nighttime vehicle testing with the minimum amount of lighting required for safety. Potential impacts to aesthetics will be minimized by adoption of the following mitigation measures in the City's Final EIR.

Measure Aesthetics-1. The City of California City shall require that future projects constructed within the proposed Redevelopment Area Expansion (including the proposed project area) shall adhere to the City's zoning code as a means of reducing adverse effects to visual character specifications. The City of California City shall review the plans and specifications to ensure that new facilities adhere to the zoning code and any other applicable City regulations pertaining to the integration of new construction into the existing visual character of the surrounding area. The completion of this measure shall be monitored and enforced by the City Planning Department.

Measure Aesthetics-2. The City of California City shall specify the type, placement, and angle of lighting fixtures installed for future projects within the proposed Redevelopment Area (including the proposed project area) to ensure the protection of night views from public vantage points and to protect areas designated as sensitive wildlife habitat, as a means of minimizing increases in light and glare and the associated impacts to aesthetics. Project applicants shall submit plans and specifications to the City for review. The City shall review the plans and specifications to ensure that low-intensity light fixtures are utilized, appropriate in height, and that all light fixtures require

baffles or a comparable measure that meets the standard or equivalent. Implementation of this measure shall be monitored and enforced by the City Planning Department.

Measure Aesthetics-3. Special design shall be applied to the perimeter of the proposed facility in downslope areas that do not benefit from the shielding of the natural berm to ensure that alterations to the existing visual character are not visible from State Highway 58 to the south. The proposed facility applicant shall submit plans and specifications to the City for review. The City Planning Department shall review the plans and specifications for the proposed facility to ensure that the design includes the installation of a man-made berm to supplant the existing berm in the downslope portions of the proposed facility. This berm shall be landscaped with natural vegetation, including Joshua trees, to blend in with the natural surroundings. Completion of this measure shall be monitored and enforced by the City Planning Department.

Measure Aesthetics-4. Special design shall be applied to the proposed facility to ensure that additional light and glare do not exceed 10 percent of the existing light and glare sources in the area and that there will be no additional light and glare directed into adjacent sensitive wildlife habitat. The proposed facility applicant shall submit plans and specifications to the City for review. The City Planning Department shall review the plans and specifications for the proposed facility to ensure that all light sources utilize low-intensity fixtures, that all light is directed into the property, and that the light specifications require the use of baffles such that there is no additional light greater than 10 percent and no light directed into sensitive wildlife habitat, or a comparable measure that meets the standard or equivalent shall be implemented. This measure shall be monitored and enforced by the City Engineer's Office.

Measure Aesthetics-5. Prior to initiation of nighttime activities at the proposed facility, the City shall review the schedule of nighttime lighting to ensure that vehicle testing performed after sundown shall use the minimum necessary lighting for the safety of the on-duty staff to ensure the reduction of impacts related to the increase of light and glare greater than 10 percent, therefore resulting in an adverse effect on nighttime views, or a comparable measure that meets the standard or equivalent shall be implemented. This measure shall be monitored and enforced by the City Planning Department.

Air Quality

The proposed project may result in local and regional impacts to air quality during construction. Construction impacts could include airborne dust from grading, excavation, and dirt hauling, and gaseous emissions from the use of heavy equipment, delivery and dirt-hauling trucks, employee vehicles, and paints and coatings. Construction of the proposed project could generate PM_{10} emissions[1] that could interfere with the Kern County Air Pollution Control District (KCAPCD) PM_{10} attainment plan for anticipated annual amounts of dust from construction activities.[2] Any project

[1] The subscript number associated with the acronym PM indicates the minimum diameter, in microns, of the particles that make up the particulate matter.

[2] Kern County Air Pollution Control District, July 1999. *Guidelines for Implementation of CEQA*. Contact: 2700 M Street, Suite 302, Bakersfield, CA 93301.

that could generate 50 tons of PM_{10} a year would be considered to potentially conflict with implementation of the PM_{10} attainment plan. Grading activities, which are the primary source of particulate emissions during construction, would last 90 days, and total annual PM_{10} emissions would be well below the 50-ton annual limit. Long-term emissions from operation of the facility would not be sufficient to substantially contribute to a violation of any existing or projected air quality standard. Hyundai would be required to obtain construction and operating permits from the KCAPCD for fuel storage tanks and fuel-dispensing equipment, as well as any piston-operated emergency generators associated with the project. Potential impacts to air quality will be minimized by adoption of the following mitigation measures in the City's Final EIR.

The City shall require that all construction comply with mitigation measures recommended by the SCAQMD and accepted by the KCAPCD as meeting its requirements to control fugitive dust emissions, including Rule 402, which specifies that there shall be no dust impacts off site sufficient to cause a nuisance, and Rule 403, which restricts visible emissions from construction.[3] Specific measures required by Rule 403 to reduce fugitive dust shall include the following:

Measure Air-1. To reduce PM_{10} emissions generated from the construction of the facility by at least 60 percent as part of the City's site plan review prior to soliciting bids for construction of the facility, the developer shall ensure that the plans and specifications include the requirement for the construction contractor to ensure that soils are moistened prior to grading and soil moisture content is maintained at a minimum of 12 percent for all grading activities. The construction contractor shall demonstrate compliance with this measure through the submittal of weekly monitoring reports to the City.

Measure Air-2. To reduce PM_{10} emissions generated from the construction of the facility by at least 60 percent as part of the City's site plan review process prior to soliciting bids for construction of the facility, the developer shall ensure that the plans and specifications include the requirement for the construction contractor to ensure that surfaces that are more than 100 feet from the property line and all other exposed surfaces undergoing active grading be watered at least twice a day under calm conditions. Surfaces shall be watered as often as needed on windy days (when wind speed is less than 25 miles per hour) or during very dry weather to maintain a surface crust and prevent the release of visible emissions from the construction site. The construction contractor shall demonstrate compliance with this measure through the submittal of weekly monitoring reports to the City.

Measure Air-3. To reduce PM_{10} emissions generated from the construction of the facility by at least 60 percent as part of the City's site plan review process prior to soliciting bids for construction of the facility, the developer shall ensure that the plans and specifications include the requirement for the construction contractor to ensure that any area that will be exposed for extended periods will be treated with a soil conditioner to stabilize soil or will be temporarily planted with vegetation. The construction contractor shall demonstrate compliance with this measure through the submittal of weekly monitoring reports.

[3] Thomas Paxson, 25 February 2002. *Personal Communication with Jo Anne Aplet, JHA Environmental Consultants, LLC.* Air Pollution Control Officer, Kern County Air Pollution Control District.

Measure Air-4. To reduce PM_{10} emissions generated from the construction of the facility by at least 60 percent as part of the City's site plan review process prior to soliciting bids for construction of the test course, the developer shall ensure that the plans and specifications include the requirement for the construction contractor to ensure that chemical stabilizers are applied within five working days of ceasing grading or of water or dust suppressants being applied in sufficient quantity to maintain a stabilize surface. The construction contractor shall demonstrate compliance with this measure through the submittal of weekly monitoring reports to the City.

Measure Air-5. To reduce PM_{10} emissions generated from the construction of the facility by at least 60 percent as part of the City's site plan review process prior to soliciting bids for construction of the facility, the developer shall ensure that the plans and specifications include the requirement for the construction contractor to ensure that mud-covered tires and under-carriages of trucks are washed prior to leaving construction sites. The construction contractor shall demonstrate compliance with this measure through the submittal of weekly monitoring reports to the City.

Measure Air-6. To reduce PM_{10} emissions generated from the construction of the facility by at least 60 percent as part of the City's site plan review process prior to soliciting bids for construction of the facility, the developer shall ensure that the plans and specifications include the requirement for the construction contractor to provide for street sweeping, as needed, on adjacent roadways to remove dirt dropped by construction vehicles or mud that would otherwise be carried off by trucks departing project sites. The construction contractor shall demonstrate compliance with this measure through the submittal of weekly monitoring reports to the City.

Measure Air-7. To reduce PM_{10} emissions generated from the construction of the facility by at least 60 percent as part of the City's site plan review process prior to soliciting bids for construction of the facility, the developer shall ensure that the plans and specifications include the requirement for the construction contractor to ensure that loads of dirt are securely covered with a tight fitting tarp on any truck leaving or entering the construction sties to bring fill dirt to the site or to dispose of excavated soil. The construction contractor shall demonstrate compliance with this measure through the submittal of weekly monitoring reports to the City.

Measure Air-8. To reduce PM_{10} emissions generated from the construction of the facility by at least 60 percent as part of the City's site plan review process prior to soliciting bids for construction of the facility, the developer shall ensure that the plans and specifications include the requirement for the construction contractor to ensure that grading is ceased during periods when winds exceed 25 miles per hour.[4,5] The construction contractor shall demonstrate compliance with this measure through the submittal of weekly monitoring reports to the City.

[4] Ibid.

[5] Wind speed measurements shall be taken from an on-site anemometer or weather reports for the region from the Weather Service to determine if high winds are forecast. Grading must also be ceased when winds seem unusually high despite the forecast.

Measure Air-9. To reduce PM_{10} emissions generated from the construction of the facility by at least 60 percent as part of the City's site plan review process prior to soliciting bids for construction of the facility, the developer shall ensure that the plans and specifications include the requirement for the construction contractor to provide for permanent sealing of all graded areas at the earliest practicable time after soil disturbance. The construction contractor shall demonstrate compliance with this measure through the submittal of weekly monitoring reports to the City.

Geology and Soils

The proposed project could be subject to strong seismic ground shaking and is located on soils that have demonstrated the potential to collapse with the addition of water. Adherence to the California Building Code and design standards for construction in Seismic Zone 4 is expected to mitigate these geologic hazards. Construction of the proposed project would result in temporary impacts related to soil erosion and loss of topsoil. These impacts will be mitigated by incorporating a mitigation measure that requires the City to reduce the amount of soil erosion and loss of topsoil within the proposed facility by requiring the inclusion of procedures or comparable measures that meet the Kern County standards for erosion control, in the plans and specifications of the construction contractor. Implementation of the proposed project would not generate a risk of geologic hazards and/or soil erosion outside of the project boundaries. Potential impacts to geology and soils will be minimized by adoption of the following mitigation measures in the City's Final EIR.

Measure Geology-1. The City shall reduce the potential risk of loss, injury, or death to people or structures from strong seismic ground shaking, location on potentially unstable soils, and a substantial increase in soil erosion and loss of topsoil for any and all future projects within the proposed Redevelopment Area Expansion by requiring the completion of a site-specific geologic and geotechnical investigation prior to implementation. The geologic and geotechnical report shall include, but not be limited to, the following:

- Analysis of soils and soil conditions
- Analysis of erosion potential
- Erosion and sedimentation controls and locations
- Soil stability to be used in construction design excavation
- Excavation, grading, and fill compaction requirements

The applicant shall submit the geologic and geotechnical report to the City. The geologic and geotechnical report shall be reviewed and approved by a qualified engineering geologist prior to implementation of the proposed Redevelopment Area Expansion project. Completion of this measure shall be monitored and enforced by the City Planning Department.

Measure Geology-2. The City shall reduce the potential risk of loss, injury, or death to people or structures from strong seismic ground shaking, location on potentially unstable soils, and a substantial increase in soil erosion and loss of topsoil for any and all future projects within the proposed Redevelopment Area Expansion by requiring conformance to all existing Compliance with Codes and Standards for Proposed Project Elements Having Potentially Significant Impacts to Geology and Soils and described in the site-specific geological report required by mitigation

Measure Geology-1. The geologic and geotechnical report shall include, but not be limited to, the following:

- Seismic design
- Slope stability
- Foundation design
- Pavement/Sub-base Design
- Retaining Wall Design
- Erosion/Sediment control
- Excavation/Trench stability
- Compaction testing

The applicant shall submit the geologic and geotechnical report to the City. The geologic and geotechnical report shall be reviewed and approved by a qualified engineering geologist prior to implementation of the proposed Redevelopment Area Expansion project. Completion of this measure shall be monitored and enforced by the City Planning Department.

Measure Geology-3. The City shall reduce the amount of soil erosion and loss of topsoil within the proposed Redevelopment Area Expansion by requiring the inclusion of the following procedures or comparable measures that meet the standard in the plans and specifications of the construction contractor. These procedures shall include, but not be limited to, the following:

- Grading shall be balanced on-site
- Soils shall be moistened prior to grading, and soil moisture content shall be maintained at a minimum of 12 percent for all grading activities
- Vehicles and construction equipment shall be directed to remain on existing roadways or other necessary paths created to facilitate the construction process to the practicable extent possible. The number of additional paths created shall be the minimum necessary to facilitate completion of the proposed facility.
- Vehicles and construction equipment shall be cleaned of soil and dust prior to leaving the site either temporarily or permanently.

Application of these procedures shall be observed by a qualified engineering geologist. Completion of this measure shall be monitored and enforced by the City Engineer's Office.

Measure Geology-4. The City shall reduce the potential risk of loss, injury, or death from strong seismic ground shaking, location on potentially unstable soils, and a substantial increase in soil erosion and loss of topsoil for the proposed facility by requiring adherence to any and all geologic and geotechnical specification described in the *Preliminary Geotechnical Investigation and Geological Hazard Report; Hyundai/Kia Testing Facility, Kern County, California* or comparable measures that meet the standard or equivalent shall be implemented. As stated in the Geotechnical Report, application of these specifications shall be observed by a qualified engineering geologist. Completion of this measure shall be monitored and enforced by the City Engineer's Office.

Measure Geology-5. The City shall reduce the potential risk of loss, injury, or death to people or structures from strong seismic ground shaking, location on potentially unstable soils, and a

substantial increase in soil erosion and loss of topsoil for the proposed facility by requiring conformance to all existing building codes and regulations for construction in Seismic Zone 4, as shown in Table 3.5.4-1 for the Final EIR. The geologic and geotechnical report shall include, but not be limited to, the following:

- Seismic design
- Slope stability
- Foundation design
- Pavement/Sub-base design
- Retaining wall design
- Erosion/Sediment control
- Excavation/Trench stability
- Compaction testing

As stated in the Final EIR, application of these procedures shall be observed by a qualified engineering geologist. Completion of this measure shall be monitored and enforced by the City Engineer's Office.

Measure Geology-6. The City shall reduce the amount of soil erosion and loss of topsoil within the proposed facility by requiring the inclusion of the following procedures, or comparable measures that meet the standard, in the plans and specifications of the construction contractor. These procedures shall include, but not be limited to, the following:

- Grading shall be balanced on-site
- Soils shall be moistened prior to grading, and soil moisture content shall be maintained at a minimum of 12 percent for all grading activities
- Vehicles and construction equipment shall be directed to remain on existing roadways or other necessary paths created to facilitate the construction process to the practicable extent possible. The number of additional paths created shall be the minimum necessary to facilitate completion of the proposed facility.
- Vehicles and construction equipment shall be cleaned of soil and dust prior to leaving the site either temporarily or permanently.

Application of these procedures shall be observed by a qualified engineering geologist. Completion of this measure shall be monitored and enforced by the City Engineer's Office.

Hazards and Hazardous Materials

The proposed project could be subject to excessive noise and sonic booms generated during the use of the High Altitude Supersonic Corridor. During construction and grading of the proposed project, hazardous substances such as diesel and gasoline fuel, solvents, hydraulic fluid, and both fresh and waste oil would be used, generated, and stored on site. Operation of the proposed project would involve the routine transport, use, generation, and storage of hazardous materials such as automobile fuel, solvents, fresh oil, waste oil, coolant, and other related compounds that could be hazardous in certain quantities. The potential for an accidental release of these substances exists during the handling, transfer, and storage of these materials. Although construction activities

would not significantly change the existing potential for fire hazard, operation of the proposed project would expose people and improvements to risk of loss, injury, or death due to wild land fires in areas near flammable brush, grass, and trees. Potential impacts resulting from hazards and hazardous materials will be minimized by adoption of the following mitigation measures in the City's Final EIR.

Measure Hazards-1. Prior to construction, Hyundai and the City shall ensure through their construction permitting process or through enforcement of contractual obligations, that all contractors transport, store, and handle construction-required hazardous materials in a manner consistent with relevant regulations and guidelines, including those recommended by the California Department of Transportation (Caltrans, regulations regarding transport of hazardous materials), the California Regional Water Quality Control Board (CRWQCB), Lahonton Region (including National Pollution Elimination Discharge Permits for storm water), and the City Fire Department (fuel modification plan requirements). These agencies shall regulate through the permitting process and monitor and enforce the regulations and mitigations as required by law.

Measure Hazards-2. Throughout the construction period, the Hyundai and the City shall ensure through their construction permitting process or through enforcement of contractual obligation that all contractors immediately control the source of any unauthorized release of hazardous materials using appropriate release containment measures and remediate any unauthorized release using the methodologies mandated by the City. The City Fire Department shall monitor and enforce regulations pertaining to the containment disposal and unauthorized release of hazardous materials.

Measure Hazards-3. The City shall ensure through its business operation permitting process or through enforcement through the City Fire Department for its own projects that all municipal and private operations permitted to use, store, or generate hazardous materials do so in a manner consistent with relevant regulations and guidelines, including those mandated by the California Environmental Protection Agency (EPA), Caltrans, CRWQCB, Lahonton Region, and the California City Fire Department.

Measure Hazards-4. Prior to and during construction, Hyundai and the City shall ensure that the development and/or operation of the project minimizes the potential for significant impacts from exposure of people or structures to wildfires by adherence to all relevant methods for fire abatement and emergency preparedness authorized and enforced by the California City Fire Department. The required fuel modification plan and other fire prevention regulations shall provide the means to monitor and enforce wildfire abatement.

Measure Hazards-5. Prior to and during construction, Hyundai and the City shall ensure the compliance with all requirements and regulations mandated by the South Coast Air Quality Management District (SCAQMD) and the National Emission Standards for Hazardous Air Pollutants (NESHAP). These regulations include the inspection of buildings and building materials to be renovated or demolished for asbestos-containing materials (ACMs), and required methods for removal, disposal, containment in place, and public disclosure. The City and City Fire Department shall monitor and enforce these requirements.

Measure Hazards-6: Hyundai and the City shall ensure that ordnance surveys are conducted by the bomb disposal unit located at U.S. Army Fort Irwin prior to the construction of any improvements in the proposed project area. Hyundai and/or the City shall be responsible for contracting with the bomb disposal unit for ordnance surveys and shall submit a written report to the City containing the results of that survey.

Hydrology and Water Quality

Implementation of the proposed project would have the potential to result in the alteration of surface water quality due to the erosion of soils and other pollutants during the construction process. No groundwater quality impacts are anticipated from proposed sewage disposal facilities at the facility. Because groundwater is more than 130 feet deep in this area, sufficient soil material should be present to filter liquid waste. In addition, the proposed project does not include any extraction or use of local groundwater resources; therefore, there would be no direct impact to groundwater supply. The project site would not substantially impact the existing drainage pattern of the area. The manner in which storm water would be conveyed around the site and back into the natural flow pattern would not result in substantial erosion or siltation on or off site because the proposed facility is designed to direct storm water flows along existing drainage patterns. Storm water flow arriving along the western side of the site would be routed to the north and south sides of the test track through riprap-reinforced, earthen channels. The channels would combine along the eastern side of the site where storm water would be channeled into each of the three identified ephemeral streams located along the eastern side of the site. The channeled storm water would be distributed to each of the existing streams through a spreading channel outlet system designated to maintain City- and County-designated velocity and flow requirements. The proposed project is not expected to significantly increase the rate or amount of runoff currently generated on the proposed project site. Downstream, existing conveyance systems are adequate to handle the runoff from the proposed project. The northernmost portion of the proposed project site is located within the projected 100-year flood zone for Cache Creek. At this time, no structures that would impede or redirect flood flows are proposed for this area.

Hyundai submitted an application to CDFG for a Streambed Alteration Agreement (SAA), pursuant to Section 1603 of the California Fish and Game Code, on September 19, 2002. A Final Addendum to the Notification to a Lake or Streambed Alteration was submitted to CDFG on October 16, 2003. This document identifies permanent impacts to seven of the 13 dry desert washes, as a result of cut and fill from the installation of riprap pads and/or culverts, that are subject to regulation under Section 1603.

Potential impacts to hydrology and water quality will be minimized by adoption of the following mitigation measures, which also are contained in the City's Final EIR.

Measure Hydro-1. Prior to construction of the public improvements projects within the Redevelopment Area, the County of Kern Engineering and Survey Service Department and the City of California City Department of Public Works shall ensure that a hydrology report be prepared for those projects that would potentially result in significant impacts to water quality.

Measure Hydro-2. The County of Kern Engineering and Survey Service Department and the City of California City Department of Public Works shall require the construction contractor to avoid

erosion, transport of pollutants, and siltation during construction of the public improvements projects within the Redevelopment Area. Prior to final plans and specifications, the County of Kern Engineering and Survey Service Department and the City of California City Department of Public Works shall require that the construction contractor for the proposed public improvements projects within the Redevelopment Area be required to comply with the General Construction Activity Storm Water Permit. Such compliance measures would at a minimum include preparation and implementation of a Local Storm Water Pollution Prevention Plan. The General Construction Activity Storm Water Permit shall incorporate all applicable Best Management Practices (BMPs) described in the *California Storm Water Best Management Practice Handbook, Construction Activity* into the construction phase of the project. Where applicable, post-development BMPs shall also be incorporated into the operation of the public improvements projects.

Measure Hydro-3. Prior to construction of the proposed facility, the County of Kern Engineering and Survey Service Department and the City of California City Department of Public Works shall ensure that a hydrology report be prepared for the facility and is incorporated into the construction and operation of the facility.

Measure Hydro-4. Prior to final plans and specifications, the County of Kern Engineering and Survey Service Department and the City of California City Department of Public Works shall ensure that any connections of the routed storm flows around the proposed facility and back into their respective drainage paths are to be completed in such a manner as not to impact the velocity or flow originally identified in the existing conditions. This will be done through the use of spreading channels utilizing velocity or flow-reducing devices such as riprap in widened channel outlet areas or side flow outlet weirs. All devices shall be utilized to maintain existing conditions for the receiving streams within allowable tolerances as specified by the approving agency.

Measure Hydro-5. Prior to final plans and specifications, the County of Kern Engineering and Survey Service Department and the City of California City Department of Public Works shall ensure that all storm water flow from inside the proposed facility be routed to the existing streams through the employment of headwalls, appropriately sized culverts, and as needed, appropriately designed energy-dissipating devices. Flow from the culverts from the discharging facility would be placed in such a manner as not to cause significant erosion to the receiving stream.

Measure Hydro-6. The County of Kern Engineering and Survey Service Department and the City of California City Department of Public Works shall require the construction contractor to avoid erosion, transport of pollutants, and siltation during construction of the facility. Prior to final plans and specifications, the County of Kern Engineering and Survey Service Department and the City of California City Department of Public Works shall require that the construction contractor for the facility be required to comply with the General Construction Activity Storm Water Permit. Such compliance measures would at a minimum include preparation and implementation of a Local Storm Water Pollution Prevention Plan by Hyundai that shall include applicable Best Management Practices. The General Construction Activity Storm Water Permit shall incorporate all applicable BMPs described in the *California Storm Water Best Management Practice Handbook, Construction Activity* into the construction phase of the project. Where applicable, postdevelopment BMPs shall also be incorporated into the operation of the test course.

Measure Hydro-7. In the event of redevelopment and new housing development projects within the Redevelopment Area, the City of California City Department of Public Works shall acquire and review all available groundwater monitoring data annually. Data would be evaluated by a California Certified Hydrogeologist to determine if groundwater is within average annual "safe yield" volumes. If average annual "safe yield" is exceeded, the City would implement one or more of the following measures to balance supply with demand:

- Water conservation to reduce overall demand
- Obtain alternative water supplies
- Increase groundwater recharge

Land Use and Planning

Implementation of the proposed project would not result in direct or indirect impacts to land use or planning because land uses in the proposed project area are consistent with the California City General Plan and Zoning Ordinances. In addition, the proposed project would neither physically divide an established community nor conflict with any applicable habitat conservation plan or Natural Community Conservation Plan.

Noise

Significant noise impacts would not be expected from construction and operation of the proposed project. Activities at the proposed facility that would generate noise include the following:

- Test course operations
- Employees entering and leaving the project site
- Building operations, including noise from building mechanical systems and testing activities

The noise analysis conducted for the City's Final EIR assumed facility operation from 6:00 a.m. to 7:00 p.m. Noise from track operations and employees entering and leaving the facility was predicted using the Federal Highway Administration Highway Noise Prediction Model. The noise analysis determined that there would be an increase of 1 dB over existing levels. Construction noise would occur in discreet phases. Noise levels generated by construction activities decrease at a rate of approximately 6 dB per doubling of distance, away from the source. The nearest residential designation is located 2 miles from the project in the City; therefore, noise generated from the proposed project would not significantly increase the ambient noise levels at the nearest residential designation. Regular activities of the proposed project would not be expected to generate significant vibration levels that would result in levels higher than the criteria allowed. Noise levels would not rise to a level that would adversely impact desert tortoises and Mohave ground squirrel on adjacent land.

Transportation and Traffic

Daily traffic volumes estimated to be generated by the proposed project were based on the data obtained from the number of employees that would be at the facility and an approximate number

of service vehicles that would visit the site daily. At full build-out, it is estimated that the proposed project would generate an increase of approximately 180 vehicular trip ends per day.[6] Based on the traffic analysis,[7] the modest increase in traffic volumes would not have an adverse effect on level of service (LOS) and would not warrant street improvements or additional traffic signals at intersections or on streets in the City area. Potential impacts to transportation and traffic will be minimized by implementation of the following mitigation measure included in the City's Final EIR:

Measure Transportation-1. To reduce potential hazards from increased turning movements at the Entrance Road on State Route 58, prior to beginning construction of the facility entry road from State Route 58, the developer shall obtain required design approvals for highway and intersection facilities (including the installation of signs, any street lights, lane striping, and roadway channelization), and any necessary encroachment permits and Project Study Report (if required) from Caltrans. Design approvals, the encroachment permit, and Project Study Report (if required) shall be provided to the City as part of the City's site plan review process requirements.

Utilities and Service Systems

The development of the proposed project could require the construction of on-site wastewater conveyance and treatment, potable water conveyance, and storm water drainage facilities. In addition, the proposed project would generate solid waste during construction and operation that would be disposed of in accordance with the California Sold Waste Management Act of 1989. The Common Raven management plan would apply to the design and management of any utilities that may be required by the proposed project. Potential impacts to utilities and service systems will also be minimized by implementation of the following mitigation measure included in the City's Final EIR:

Measure Utilities-1. The City shall require the owners, developer, and/or successors-in-interest to pay all applicable connection fees and/or capital improvement fees required by City ordinance to fund the improvements necessary to provide potable water to the facility.

Measure Utilities-2. The City shall require the owners, developer, and/or successors-in-interest to construct a septic system to treat wastewater on site to limit the cumulative impact on the City wastewater treatment system.

Measure Utilities-3. The City shall require the owners, developer, and/or successors-in-interest to construct a water treatment/water recycling system on site for use in automobile washing and collection and use of storm water.

Measure Utilities-4. In accordance with the California Solid Waste Management Act of 1989, the California City Department of Public Works shall require the construction contractor to manage the

[6] Trip ends are one-way traffic movements entering or leaving.

[7] Sapphos Environmental, Inc., 26 February 2002b. *CEQA Checklist for Transportation/Traffic, Kern County, California.* Contact: 133 Martin Alley, Pasadena, CA 91105. Prepared by Crenshaw Traffic Engineering, 29950 Pinedale Drive, Tehachapi, CA 93561.

solid waste generated during construction of the project by diverting it from disposal in landfills, particularly Class III landfills, through source reduction, reuse, and recycling of construction and demolition debris. In addition, the City shall require the owners, developer, and/or successors-in-interest to comply with the City's Solid Waste Source Reduction Plan that requires mandatory preprocessing of all solid waste generated within the facility that would include on-site recycling, composting, or reuse programs.

6.1.3 Proposed Action: On-Site Fencing Alternative

Under this alternative, an incidental take permit would be issued by the USFWS for desert tortoise. The proposed facility, Highway 58 access road and City water pipeline extension would be constructed, and the HCP would be implemented. The analysis of impacts resulting from issuance of the permit includes the construction and operation of the proposed facility, Highway 58 access road and City water pipeline extension, implementation of the HCP and implementation of all mitigation measures adopted by the City in the Final EIR that apply to the facility, Highway 58 access road and City water pipeline extension. Security fencing and desert tortoise exclusion fencing would be constructed around the outer perimeter of the oval test course and surrounding swales and berms. Entry gates would be provided in the fence at the designated road entry point for the oval test course, and at three specified points along the oval test track. Desert tortoise exclusion fencing also would be constructed along the east and west sides of the Hill-Up Road. Wildlife undercrossings would be constructed along the southern entry road and along Hill-Up Road to facilitate movement across the project site. Desert tortoise occupying the oval track and its interior, areas adjacent to the test track and all areas proposed for grading would be relocated.

Effects on Biological Resources

Effects on Desert Tortoise

Construction of the on-site fencing alternative is anticipated to impact 847.5 acres of habitat occupied by desert tortoises through grading and development of the proposed facility. The undisturbed interior of the oval track (1,392 acres) also would be unavailable for use by desert tortoise for the life of the project due to construction of desert tortoise exclusion fencing around the oval track and removal of desert tortoise from the oval track interior. Potential impacts to desert tortoise from construction and operation of the proposed project include crushing of individuals by construction equipment, crushing of burrows by equipment and workmen, collision with vehicles on roadways within the proposed project site, increased predation by common ravens attracted to the construction site, increased lighting, increased human activity and loss of free movement across the proposed project site.

Effects on Mohave Ground Squirrel

The effects to the Mohave ground squirrel resulting from the on-site fencing alternative would be the same as for the proposed project.

Effects on Plants

The effects on plants resulting from the on-site fencing alternative would be the same as for the proposed project.

Effects on Cultural Resources

The effects on cultural resources resulting from the on-site fencing alternative are anticipated to be the same effects described for the proposed project, and will be minimized by the same mitigation measures applicable to the proposed project.

Effects on Socioeconomics

The effects on socioeconomics resulting from the on-site fencing alternative are anticipated to be the same effects described for the proposed project, and will be minimized by the same mitigation measures applicable to the proposed project.

Effects on Other Environmental Areas

Aesthetics

The effects on aesthetics resulting from the on-site fencing alternative are anticipated to be the same effects described for the proposed project, and will be minimized by the same mitigation measures applicable to the proposed project.

Air Quality

The effects on aesthetics resulting from the on-site fencing alternative are anticipated to be the same effects described for the proposed project, and will be minimized by the same mitigation measures applicable to the proposed project.

Geology and Soils

The effects on geology and soils resulting from the on-site fencing alternative are anticipated to be the same effects described for the proposed project, and will be minimized by the same mitigation measures applicable to the proposed project.

Hazards and Hazardous Materials

The effects from hazards and hazardous materials resulting from the on-site fencing alternative are anticipated to be the same effects described for the proposed project, and will be minimized by the same mitigation measures applicable to the proposed project.

Hydrology and Water Quality

The effects on hydrology and water quality resulting from the on-site fencing alternative are anticipated to be the same effects described for the proposed project, and will be minimized by the same mitigation measures applicable to the proposed project.

Land Use and Planning

The effects on land use and planning resulting from the on-site fencing alternative are anticipated to be the same effects described for the proposed project, and will be minimized by the same mitigation measures applicable to the proposed project.

Noise

The effects on noise resulting from the on-site fencing alternative are anticipated to be the same effects described for the proposed project, and will be minimized by the same mitigation measures applicable to the proposed project.

Transportation and Traffic

The effects on traffic and transportation resulting from the on-site fencing alternative are anticipated to be the same effects described for the proposed project, and will be minimized by the same mitigation measures applicable to the proposed project.

Utilities and Service Systems

The effects on utilities and service systems resulting from the on-site fencing alternative are anticipated to be the same effects described for the proposed project, and will be minimized by the same mitigation measures applicable to the proposed project.

6.1.4 Proposed Action: San Bernardino County Automotive Test Course Site

Under this alternative an incidental take permit would be issued by the USFWS, but the proposed facility would be built in San Bernardino County (Figure 5.3-1).

Effects on Federally and State Listed Species

Under this alternative, impacts to federally listed species related to the construction, operation, and implementation of the HCP would be similar to those described for Alternative 2, the proposed project. However, two federally listed species potentially occupy the San Bernardino County site: desert tortoise and Parish's daisy. Conservation measures would be proposed in the HCP for this site to fully mitigate impacts to Parish's daisy. No impacts to Mohave ground squirrel would occur under this alternative because Mohave ground squirrels do not occur in this region of the Mohave Desert.

Effects on Socioeconomics

Under this alternative, the number of permanent and seasonal jobs would remain the same. However, the socioeconomic benefits would be less because the region already benefits from the presence of active military installations.

Effects on Other Environmental Areas

Aesthetics

The San Bernardino alternative could result in impacts to aesthetics related to adverse changes to visual character, increases in light and glare, and introduction of light and glare into a sensitive receptor. In addition to these impacts, this alternative may result in impacts to scenic vistas and state-designated scenic highways. Although nearby scenic vistas and scenic highways are not in the immediate vicinity of the San Bernardino alternative proposed project area, there would be a high number of aesthetically important resources surrounding this alternative site in comparison to the proposed project site.

Air Quality

The San Bernardino alternative could result in impacts to air quality related to PM_{10} emissions from construction of the automotive test course facility. Those impacts would be similar to the impacts for the proposed project site.

Cultural Resources

The San Bernardino alternative could result in impacts to cultural resources as a result of grading activities, soil removal, potential loss of culturally important artifacts and in situ archaeological sites, direct effects to cultural resources related to increases in vehicular traffic, pedestrian traffic, and operations and maintenance of the facility. However, an archaeological pedestrian transect and database search would need to be completed before any final determination could be made.

Geology and Soils

The geologic and seismic conditions of the location of the San Bernardino alternative are similar to those at the proposed project. The San Bernardino alternative could be subject to seismic-related ground shaking and increased soil erosion. However, the potential for unstable soils is unknown, as site-specific testing was not performed. The San Bernardino alternative also may be subject to surface fault rupture and seismic-related landslides.

Hazards and Hazardous Materials

The San Bernardino alternative could result in impacts from hazards and hazardous materials due to the routine transport, use, generation, and storage of hazardous materials such as automobile fuel, solvents, fresh oil, waste oil, and other related compounds that would be hazardous in certain quantities.

Hydrology and Water Quality

The San Bernardino alternative could result in impacts to hydrology and water quality. The potential for impacts to groundwater is unknown, as site-specific testing was not performed for this site; however, if surface water quality were impacted, the potential would exist for percolating surface water to carry pollutants to groundwater. The site is currently undeveloped. Therefore, impacts to the quality of storm water runoff might occur due to the increase in impervious surfaces.

Land Use and Planning

The San Bernardino alternative would not include impacts resulting from land use designation and zoning changes. Changes in land ownership and designation would not be required for the site; therefore, no adverse land use or planning impacts would occur.

Noise

The San Bernardino alternative would not be expected to result in impacts to noise. Due to the lack of sensitive receptors in the vicinity of the project site, all construction and operational noise impacts would be less than significant.

Transportation and Traffic

The San Bernardino alternative would not be expected to result in impacts to transportation and circulation because of a low net increase in traffic.

Utilities and Service Systems

The San Bernardino alternative could result in potentially significant impacts to utilities and service systems. Development of this site also would require the construction of on-site wastewater conveyance and treatment, potable water conveyance, and storm water drainage facilities

6.1.5 Proposed Action: Riverside County Automotive Test Course Site

Under this alternative, an incidental take permit would be issued by the USFWS, but the proposed automotive test course would be constructed in Riverside County (Figure 5.4-1).

Effects on Federally and State Listed Species

Under this alternative, impacts to federally listed species related to the construction, operation, and implementation of the HCP would be greater than those described for the proposed project. The Riverside County alternative may provide potentially suitable habitat for two federally listed plant species, six federally listed wildlife species, and one wildlife species proposed for listing (Table 5.2-1), and therefore has the potential to have greater biological impacts. No impacts to Mohave ground squirrel would occur under this alternative because Mohave ground squirrels do not occur in this region of the Mohave Desert.

Effects on Socioeconomics

Under this alternative, the number of permanent and seasonal jobs would remain the same. However, in the closest city, Coachella, 29.1 percent of the families were below the poverty rate, and unemployment was 6.8 percent. When compared to the City of California City, the nearest city to the proposed project, with 12.5 percent of the families below the poverty rate in 1999, and an unemployment rate of 5.4 percent, the socioeconomic benefits may be greater for the Riverside alternative.

Effects on Other Environmental Issues

Aesthetics

The Riverside alternative could result in impacts to aesthetics related to adverse changes to visual character, increases in light and glare, and introduction of light and glare into a sensitive receptor. In addition to these impacts, this alternative may result in impacts to scenic vistas and state-designated scenic highways. Although nearby scenic vistas and scenic highways are not in the immediate vicinity of the project area, there are more aesthetically important resources surrounding this alternative site when compared with the proposed project site.

Air Quality

The Riverside alternative could result in impacts to air quality related to PM_{10} emissions from construction of the automotive test course facility. This portion of Riverside County is in the Salton Sea Air Basin and is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). It is a nonattainment area for state and national PM_{10} standards and for state and national ozone standards. CEQA significance thresholds recommended by the SCAQMD for the Coachella Valley are more stringent than the applicable CEQA standards in the Kern County Air Pollution Control District, where the proposed project is located. In addition to daily thresholds, the SCAQMD has established peak quarter construction thresholds for this area. NO_x emissions from construction of the project would exceed SCAQMD thresholds of significance. Implementation of mitigation measures, such as turning equipment off when not in use for longer than 5 minutes, would only reduce emissions by about 10 percent. Therefore, emissions would remain significant on both the peak day and peak quarter. The Riverside alternative could have a greater adverse impact on air quality than the proposed project because (1) the Coachella Valley is nonattainment for ozone, (2) at least some of that ozone is potentially from valley sources, and (3) there are differences in significance thresholds between the KCAPCD and the SCAQMD.

Cultural Resources

The Riverside alternative could result in impacts to cultural resources as a result of grading activities, soil removal, potential loss of cultural important artifacts and in situ archaeological sites, and direct effects to cultural resources related to increases in vehicular traffic, pedestrian traffic, and operations and maintenance of the facility. However, an archaeological pedestrian transect and database search would need to be completed before any final determinations could be made.

Geology and Soils

The geologic and seismic conditions of the location of the Riverside alternative are similar to those at the proposed project site. As with the proposed project, the Riverside alternative could be subject to strong seismic ground shaking and increased soil erosion. The potential for unstable soils is unknown and site-specific testing was not performed for this site. The Riverside alternative site also could be subject to seismic-related landslides.

Hazards and Hazardous Materials

The Riverside alternative could result in impacts resulting from hazards and hazardous materials due to the routine transport, use, generation, and storage of hazardous materials such as automobile fuel, solvents, fresh oil, waste oil, and other related compounds that would be hazardous in certain quantities.

Hydrology and Water Quality

The Riverside alternative could result in impacts to hydrology and water quality. The potential for impacts to groundwater is unknown, as site-specific testing was not performed for this site; however, if surface water quality were impacted, the potential would exist for percolating surface water to carry pollutants to groundwater. The site is currently undeveloped. Therefore, impacts to the quality of storm water runoff might occur due to the increase in impervious surfaces.

Land Use and Planning

The San Bernardino alternative would not include impacts resulting from land use designation and zoning changes. Changes in land ownership and designation would not be required for the site; therefore, no adverse land use or planning impacts would occur.

Noise

The San Bernardino alternative would not be expected to result in impacts to noise. Due to the lack of sensitive receptors in the vicinity of the project site, all construction and operational noise impacts would be less than significant.

Transportation and Traffic

The Riverside alternative would not be expected to result in impacts to transportation and circulation due to the low net increase in traffic.

Utilities and Service Systems

The Riverside alternative would require the construction of on-site wastewater conveyance and treatment, potable water conveyance, and storm water drainage facilities.

6.1.6 Proposed Action: More Mitigation Alternative

Under this alternative, the USFWS would issue an incidental take permit for desert tortoise. The proposed facility, Highway 58 access road and water pipeline extension would be constructed, and the HCP would be implemented. The analysis of impacts resulting from issuance of the permit includes the construction and operation of the proposed facility, the Highway 58 access road and the water pipeline extension, implementation of the HCP and implementation of all mitigation measures adopted by the City in the Final EIR. The environmental consequences would be the same as those analyzed for the proposed project, but additional mitigation for desert tortoise impacts, including the acquisition of additional compensation lands, would be required. Hyundai has determined that this is not economically feasible, and that the mitigation and compensation measures being provided for the proposed project will mitigate the project's impacts to the maximum extent practicable. (Chapter 7).

6.2 CUMULATIVE IMPACTS–PROPOSED PROJECT

Six projects were considered for the analysis of the proposed project's potential cumulative impacts: 1) the Kern River 2003 Expansion project, 2) the 9-mile long State Route 58 Mojave Freeway Project (Mojave Bypass), 3 the Inn at Tierra Del Sol, 4) the High Desert Bible Church Sanctuary, 5) the Church of Christ Sanctuary, and 6) the New Hope Church of the Nazarene Sanctuary. [8] These are closely related past, present or reasonably foreseeable, probable future projects in the area of the applicant's proposed project for which the Service is proposing to issue an incidental take permit.

A CEQA/NEPA EIR/EIS has been completed and certified for the Kern River 2003 Expansion project (a buried gas pipeline), and the project is under construction. Incidental take authorization for desert tortoise was issued by CDFG and USFWS.

The State Route 58 Freeway Project is a Caltrans project currently under construction. A Tier I CEQA/NEPA EIR/EIS and a Tier II IS/EA with a Finding of No Significant Impact (FONSI) have been certified for the project. The Mojave Bypass is approximately 2.5 miles west of the proposed project area.

The Inn and the three religious facilities are part of the redevelopment of lands within the City of California City and will undergo environmental review. The Inn will result in the construction of 25 hotel units. The religious facilities projects entail new construction for church sanctuaries. Each of these proposed projects will be less than 10 acres in size. These four proposed developments were identified by the City in its 2002 Final EIR as projects that may occur within the City limits. These projects are at least 2 miles east and outside of the proposed project area and are not associated with the applicant's proposed project.

[8] A CEQA Draft EIR (DEIR) has been prepared for the Mojave Specific Plan, which covers nearly 31,000 acres in eastern Kern County. The purpose of the Mojave Specific Plan is to provide a single cohesive plan for the development of land uses, infrastructure, housing, open space, and other resources within the planning area over a 20 year period. The planning area extends from 2 miles west of the proposed project site to west of the Mojave Bypass. Because the Mojave Specific Plan has not been adopted by Kern County and is only in preliminary stages of its CEQA review, and because any project approved pursuant to the plan, if the plan is adopted, will undergo separate environmental review, the Mojave Specific Plan is not included in this cumulative impact analysis.

Aesthetics

The Kern River 2003 Expansion is a buried gas pipeline and does not impact the visual character of the area. The Mojave Bypass is designed to meet current and future traffic volumes. The Bypass is a linear, largely ground level highway with less than significant impact on the area's visual character. The Bypass will likely increase the amount of nighttime lighting and glare this will impact the darkness of the nighttime desert. The inn and the religious facilities projects will be small in size relative to the surrounding landscape. The Inn and religious facilities projects will undergo environmental review and meet City architectural guidelines, and thus are expected to have less than significant impact on the visual character of the area.

There may be a minimal cumulative impact to aesthetics due to increase in nighttime light and glare from the proposed project and the six considered projects.

Air Quality

The Kern River 2003 Expansion project is a buried pipeline with no significant impact on air quality. The Mojave Bypass may impact air quality as it will accommodate future increases in traffic. Reduced traffic congestion in Mojave may offset increases in traffic on the Bypass. The Inn and the religious facilities projects are not expected to impact air quality due to their small size. Therefore, the proposed project and the six considered projects will not have a significant cumulative impact on air quality.

Biological Resources

The Kern River 2003 Expansion project is being constructed and mitigation measures have been and are being implemented. These measures include protection and enhancement of over 3,600 acres of desert tortoise habitat, habitat restoration, and minimizing direct take of tortoises. The Mojave Bypass is under construction and mitigations are being implemented. The mitigation measures include tortoise fencing along Highway 395 in high value tortoise habitat, purchase and protection of 1,800 acres of tortoise habitat, and avoidance of direct take of tortoises. The Inn and the religious facilities likely will be built on land that includes disturbed and fragmented habitat adjacent to existing development. The total acreage of habitat impacted by the six considered projects is small relative to the total acreage of habitat in the region and too far away from the direct impact site to be considered cumulative to the direct impact analysis.

There has been an extensive outreach program involving stakeholders and landowners involved with alternative sites for the proposed facility. The proposed project is consistent with the Desert Tortoise Recovery Plan, includes numerous mitigation measures including those contained in this proposed HCP. The proposed purchase of conservation lands will assist the recovery of the tortoise and provide protected habitat for the desert tortoise.

The proposed project and the six considered projects therefore are not expected to have a significant negative cumulative impact on biological resources given the proposed mitigation and avoidance measures that are planned or proposed to be implemented throughout the cumulative area of influence.

Cultural Resources

The Kern River 2003 Expansion project is being constructed and mitigation measures for cultural resources have been implemented. The Mojave Bypass is under construction and mitigations are being implemented. The Inn and the religious facilities will undergo environmental review and mitigation measures are expected to reduce any potential cultural impacts to less than significant levels. The proposed project and the six considered projects therefore are not expected to have a significant cumulative impact on cultural resources.

Geology and Soils

The Kern River 2003 Expansion project has incorporated federal and state design, construction and operation standards for geologic hazards. The Mojave Bypass has incorporated standard design and construction measures to minimize seismic, liquefaction, settling, and corrosion hazards from geology and soils. The Inn and the religious facilities will undergo environmental review, and if potential impacts to geology or soils are identified, mitigation measures are expected to reduce those impacts. Implementation of design and construction measures for the proposed facility also is expected to reduce or eliminate potential impacts to geology and soils. The proposed project and the six considered projects therefore are not expected to have a significant cumulative impact on geology and soils.

Hazards and Hazardous Materials

The Kern River 2003 Expansion project is being constructed and best management practices and mitigation measures for hazardous materials have been implemented. The Mojave Bypass is under construction and no locations of hazardous materials were found during environmental review. The Inn and the religious facilities will undergo environmental review, and if hazardous materials are located, appropriate mitigation measures are expected to reduce those hazards to less than significant levels. The proposed project and the six considered projects therefore are not expected to have a significant cumulative impact resulting from hazards or hazardous materials.

Hydrology and Water Quality

The Kern River 2003 Expansion project is being constructed using techniques to minimize impacts to groundwater, a Groundwater Monitoring Plan has been implemented, and floodplains in the region of the proposed project were not impacted. The Mojave Bypass is not expected to impact groundwater directly or from runoff due to groundwater depth (approximately 300 feet). The Mojave Bypass is expected to have a less than significant impact to floodplains in the region. The Inn and the religious facilities, due to their small sizes and locations, are not expected to cumulatively impact hydrologic resources or water quality in the area of proposed project influence. Additionally, the Inn and the religious facilities will be subject to environmental review and potential impacts to water resources and water quality are expected to be less than significant following any required mitigation. The proposed project and the six considered projects therefore are not expected to have a significant cumulative impact on hydrology or water quality.

Land Use and Planning

The proposed project site has a City General Plan Designation of Light Industrial and Research and is zoned M-1-Light Industrial District. The Kern River 2003 Expansion project is consistent with general plans and zoning. The inn and the religious facilities may require zoning changes in California City. The proposed project and the six considered projects will not preclude the implementation of an established Habitat Conservation Plan, Natural Community Conservation Plan or regional land use plan. Accordingly, the proposed project and the seven considered projects are not expected to have a significant cumulative impact on land use or planning.

Noise

The Kern River 2003 Expansion project is an underground pipeline and does not generate noise. The Mojave Bypass will generate traffic noise in areas that are not currently subject to traffic noise. The proposed inn and religious facilities, due to their small sizes and locations, are not expected to generate significant noise. The proposed project and the six considered projects therefore are not expected to have a significant cumulative impact on noise.

Socioeconomic Effects

The Kern River 2003 Expansion project is an underground pipeline with no impact to population, employment, housing, or recreation in the region. The Mojave Bypass is not expected to impact population, employment, housing, or recreation. The Bypass may impact commercial activity in the town of Mojave. The proposed Inn may have a minor impact on employment in California City. The religious facilities are not expected to impact population, employment, housing, or recreation in the region. The proposed project and the six considered projects therefore are not expected to have a significant cumulative impact on socioeconomics.

Transportation and Traffic

The Kern River 2003 Expansion project is an underground pipeline with no impact on traffic. The Mojave Bypass is expected to reduce traffic congestion in Mojave. The proposed Inn and religious facilities, due to their small sizes and local service area, are not expected to adversely impact traffic in the region. The proposed project and the six considered projects therefore are not expected to have a significant cumulative impact on transportation and traffic.

Utilities and Service Systems

The Kern River 2003 Expansion project is an underground pipeline with no impact to local utilities or services. The Mojave Bypass may educe emergency vehicle response time. The proposed inn and religious facilities are not expected to significantly impact local utilities and services due to their small size. Additionally the proposed Inn and religious facilities are expected to undergo environmental review and meet requirements for provision of local services. The proposed project and the six considered projects therefore are not expected to have a significant cumulative impact on utilities and service systems.

Cumulative Indirect Impacts

The proposed project combined with the six other projects considered in this document are not anticipated to generate significant indirect impacts. The 2003 Kern Expansion has been built and residual effects are anticipated to be ameliorated by revegetation and implementation of the project's mitigation measures. The proposed Mohave Bypass is currently under construction, and indirect impacts are not anticipated because the implementation of required mitigation measures such as revegetation are intended to reduce impacts to below a level of significance. The proposed Inn and religious facilities are not anticipated to generate indirect effects because they are sited on land that is disturbed and does not currently support suitable habitat for either desert tortoise or Mohave ground squirrel, the projects encompass small acreages, and the distance from the proposed project sites is too great to impact the site of the facility.

CHAPTER 7.0
HABITAT CONSERVATION PLAN

This Habitat Conservation Plan (HCP) proposes to minimize and mitigate the potential effects associated with the issuance of a permit for incidental take pursuant to Section 10(a) of the ESA, and to ensure that issuance of the proposed incidental take permit does not appreciably reduce the likelihood of the survival and recovery of the desert tortoise (*Gopherus agassizii*), a federally and state-listed threatened species, pursuant to 50 CFR Part 17.32(b)(1)(iii). The conservation measures included in this HCP will be implemented throughout the 30-year life of the proposed project. Hyundai is responsible for implementing mitigation measures pertaining to the proposed project, including the Highway 58 access road and the City is responsible for implementing mitigation measures pertaining to the water pipeline extension.

"Covered Activities" under this HCP include the following: all of the proposed activities associated with the facility, as described in Chapter 2; the access road from Highway 58, as described in Chapter 2; and the City water line extension and road improvements to Joshua Tree Boulevard, as described in Chapter 2.

7.1 BIOLOGICAL GOALS AND OBJECTIVES

The biological goals of the HCP are to enhance the long-term viability of desert tortoise populations in the region of the proposed project to enhance the probability of the recovery of the desert tortoise.

To meet the biological goals, the biological objectives of the HCP are to:

- Increase the area of protected and conserved habitat for the desert tortoise in the region of the proposed project;
- Enhance the value of the protected and conserved habitat for the desert tortoise;
- Provide for maintenance of the protected and conserved habitat for the desert tortoise in perpetuity, and;
- Avoid and minimize direct take of desert tortoise due to project construction and operation.

The following tasks are designed to meet the goals of the HCP:

- Translocate desert tortoises from the proposed project site to an off-site translocation area.
- Conduct worker education.
- Exclude tortoises from the project site following translocation.
- Implement measures to minimize adverse effects to desert tortoise from construction.
- Implement measures intended to prevent an increase in Common Raven predation.
- Provide monitoring as described Section 7.3 herein

Implementation of the following mitigation measures will satisfy the biological goals and objectives of the HCP.

7.1.1 Mitigation Measures

The following measures have been proposed by Hyundai and the City as part of the proposed project, to minimize and mitigate incidental take of desert tortoise:

- Preconstruction measures
- Translocation
- Construction and operations avoidance measures
- Common Raven Management Plan
- Postconstruction Measures
- Habitat compensation

7.1.1.1 Preconstruction Measures

DT-1. As a means of minimizing impacts to desert tortoise, Hyundai and the City shall require that all proposed construction staging areas, parking areas, and project elements be surveyed, staked and clearly flagged by a registered surveyor prior to the initiation of preconstruction surveys. Compliance shall be verified by an authorized biologist or biological monitor. A written report shall be submitted to the USFWS and the CDFG by an authorized biologist or biological monitor, verifying compliance with this measure, within 30 days of completion of the surveying, staking and flagging.

"Authorized biologist" and "biological monitor" are persons working pursuant to a Memorandum of Understanding and Section 10(a) permit issued for the proposed project by CDFG and USFWS. An authorized biologist has a thorough knowledge of desert tortoise behavior, natural history and ecology, has demonstrated substantial field experience and training and is approved by the USFWS to handle tortoises or conduct other activities that could result in take. A "monitor" is a person or persons with some education and experience in detecting the presence of desert tortoise, but who has no authority to handle a desert tortoise.

DT-2. As a means of minimizing impacts to desert tortoise, prior to the initiation of construction activities, Hyundai and the City shall require that an authorized biologist develop and administer a worker education program for all construction personnel. Construction crews, foremen, contractors, subcontractors and other personnel potentially working on the proposed project site shall undergo the education program to familiarize themselves with the particular biological restrictions and conditions of the area.

Practices and information covered by this program shall include speed limits, firearm prohibition, encounters with desert tortoise, staying within designated construction areas, pet prohibition, agency notification, checking under vehicles, trash and litter management, training on special status species within the project area, species and habitat identification, techniques to avoid impacts to species, consequences of taking a listed species, and reporting procedures when encountering listed or sensitive species. An incentive program will be implemented into the worker

education program to encourage on-site workers to report observations of tortoise to an authorized biologist. The text of the worker education program shall be submitted to the USFWS and the CDFG at least 10 working days prior to the initiation of construction.

Workers shall receive a sticker or certificate that they have completed the training. A construction monitoring notebook shall be maintained on site throughout the construction period and shall include, at a minimum, a copy of the Section 10(a) permit for incidental take, a copy of the CESA Section 2081(b) incidental take permit, the Habitat Conservation Plan, the Mitigation Monitoring and Reporting Plan adopted by the City, and a list of signatures for all personnel who have successfully completed the worker education program. The authorized biologist shall demonstrate compliance with this measure by sending a copy of the education program and a copy of the construction monitoring notebook, including a list of the names of workers who have completed the required worker education program, to the USFWS and the CDFG on an annual basis.

DT-3. Preconstruction surveys shall be undertaken in three phases: (1) the oval track and oval track interior, which would then be surrounded by temporary desert tortoise exclusion fencing; (2) the alignment of the perimeter desert tortoise exclusion and safety fencing; and (3) the remainder of the project site. The authorized biologist shall submit proof of compliance with this measure, including a survey report, to the CDFG and USFWS. Temporary exclusion fencing will remain in place until the entire project site has been cleared and the desert tortoise exclusion fencing around the perimeter of the site has been installed.

All desert tortoise burrows, as well as large mammal burrows that could be used by desert tortoise, shall be flagged in work, staging and construction areas, rights-of-way within the proposed project site and the water line extension site. The authorized biologist shall submit proof of compliance with this measure to the USFWS and CDFG.

7.1.1.2 Translocation

DT-4. As a means of minimizing impacts to desert tortoise, the authorized biologist shall translocate all desert tortoise encountered within the proposed project site in accordance with the Translocation Program (Appendix A, *Draft Desert Tortoise Translocation Program*).

The authorized biologist for the Translocation Program shall report project data to the USFWS and CDFG, including but not limited to, individual tortoise data, maps of locations, disease analyses and translocation information. An annual report will be prepared and submitted to USFWS and CDFG on or before January 31 of each year that will include an analysis of data collected the previous year, annual and cumulative results and conclusions, and recommendations. Following the final year of the Translocation Program, a comprehensive report will be written to encompass the entire study and will be submitted to USFWS and CDFG on or before January 31 of the following year.

7.1.1.3 Construction and Operations Avoidance Measures

Hyundai and the City shall implement the following measures to avoid impacts to desert tortoise during construction and operation of the proposed project.

DT-5. As a means of minimizing impacts to desert tortoise, Hyundai and the City shall construct desert tortoise exclusion fencing prior to initiating any ground-disturbing activity within the proposed project site. The locations and types of fencing have been described above [see *Facility Fencing (Phase I)*]. All fence construction will be accompanied by monitors and an authorized biologist to ensure that no tortoises are harmed.

All construction staging shall be undertaken in areas of lower quality habitat or areas that exhibit signs of disturbance. All staging areas and fencing shall be inspected and approved by an authorized biologist prior to the initiation of construction activities. Additionally, an authorized biologist will be present during all construction activities to inspect the staging areas on a regular basis and to inspect the underside of vehicles prior to moving. Proof of compliance with this measure shall be verified by an authorized biologist and shall be submitted in writing to the USFWS and the CDFG within 30 days following completion of all construction activities.

DT-6. As a means of minimizing impacts to desert tortoise, an authorized biologist shall survey all work, staging and construction areas, rights-of-way within the proposed project site and water line extension site after tortoise exclusion fences are built and move all desert tortoise found within those areas prior to the start of construction activities (i.e., grubbing, grading, trenching) to ensure maximum avoidance of impacts to desert tortoise and their burrows. Tortoises will be moved as explained in the Translocation Program (Appendix A).

DT-7. As a means of minimizing impacts to desert tortoise, Hyundai and the City shall have an authorized biologist present on the project site throughout the construction period to move any additional desert tortoises encountered during construction for both the facility and water line extension. Desert tortoises encountered during construction shall be moved in accordance with the Translocation Program (Appendix A). The authorized biologist will have the authority to halt construction activities that have the potential to impact a desert tortoise until the desert tortoise can be moved. Desert tortoises encountered during construction shall be moved in accordance with the Translocation Program (Appendix A).

Night time construction will be permitted (1) after an area has been exclusion- fenced and (2) after desert tortoises have been moved from fenced construction and work areas. All construction equipment will remain within the fenced area.

DT-8. As a means of minimizing impacts to desert tortoise, Hyundai and the City shall post speed limits of 20 miles per hour (mph) and strictly enforce speed limits within the project construction area for the entire construction period. However, should the air temperature rise above 35°C (95° F) at 5 cm above the ground surface (http://ventura.fws.gov/SurveyProt/de_tortoise_prtstatement. htm) prior to 12:00 p.m., an authorized biologist shall be allowed to suspend the 20 mph speed limit for that day, or until the air temperature falls to 35°C (95° F)or below.

DT-9. As a means of minimizing impacts to desert tortoise, Hyundai and the City shall prohibit firearms and pets within the proposed project site.

DT-10. As a means of minimizing impacts to desert tortoise during construction, Hyundai and the City shall implement dust control measures on access roads and construction areas.

DT-11. As a means of minimizing impacts to desert tortoise during routine operation and maintenance of the proposed project, Hyundai and the City shall conduct an annual worker education program, as described in DT-3, for regularly scheduled on-site personnel for five years following completion of construction ; conduct post–construction monitoring as prescribed in DT-13, and have an authorized biologist on call to move any desert tortoises encountered during project operation in accordance with the Translocation Program (Appendix A). A Hyundai Environmental Compliance Officer (ECO) would be educated in basic tortoise handling procedures, permitted to handle tortoises on the project site, and coordinate with an authorized biologist to move tortoises found during project operation. Hyundai also shall maintain the security and desert tortoise exclusion fencing throughout the life of the proposed project.

7.1.1.4 Common Raven Management Plan

DT-12. To minimize impacts to desert tortoise during construction and operation of the facility, Hyundai and the City shall undertake the following measures to prevent an increase in the common raven (*Corvus corax*) population in the vicinity of the proposed project site and to decrease the attractiveness of the proposed project site to Common Ravens.

- Hyundai and the City shall implement a trash and litter management program that reduces the availability of solid waste. Trash receptacles on site shall be covered with a solid lid at all times, and instructional signage shall be placed in public areas of the site to encourage proper disposal of trash. Proof of compliance with this measure shall be verified by the authorized biologist and submitted in writing to the USFWS and CDFG.

- The security fencing and above ground utility structures shall be designed to inhibit Common Ravens and birds of prey from using them as perch sites. To prevent birds from perching on fence posts or utility structures, the fence posts and structures would be topped with nixalite, sharp, intertwined, stainless steel spikes standing at upward angles, with an upright, 8-inch metal spike welded in the center of each fencepost or structure. To prevent birds from perching on the fencing, two flexible wires would be loosely strung between the metal spikes on the fence posts, with one wire approximately 3 inches above the top of the fence, and the other wire approximately 8 inches above the fence.

- Sources of standing water such as leaking faucets, irrigation lines, stock tanks, or car wash stations shall be avoided and eliminated whenever possible, as these unnatural sources of water may attract common ravens.

- Road kill wildlife found within the project site shall be immediately removed and properly disposed.

- Anti-common raven measures, such as hazing, will be undertaken following construction, and other non-lethal measures shall be undertaken to control the presence of common ravens that are thought to be preying on juvenile tortoises, including the removal of inactive common raven nests within and adjacent to the

facility. Any common raven nest will be removed by a wildlife biologist approved by the USFWS and CDFG.

7.1.1.5 Postconstruction Measures

DT-13. Hyundai and the City shall conduct postconstruction clearance and monitoring beginning in the autumn following the initial clearance and translocation of all desert tortoises (except sequestered, clinically ill tortoises), thereby minimizing potential take. If the prior spring has poor forage and there is relatively no summer rain, the first annual postconstruction monitoring and clearance should be postponed until the next activity season when there has been sufficient rainfall for tortoises to be active. Post construction surveys shall consist of surveys of the entire project site using 10-foot transects to assure 100 percent coverage. Any desert tortoise encountered during postconstruction surveys shall be processed in accordance with the Translocation Program (Appendix A). An authorized biologist shall submit the results of the survey to USFWS and CDFG within 30 days of the completion of each year of postconstruction clearance surveys. Performance of two consecutive postconstruction surveys during the active period of desert tortoise, without fresh evidence of tortoise presence, shall be considered sufficient for a preliminary declaration of a site free of tortoise. A final clearance survey shall be conducted of the project site in the fifth year following completion of the initial clearance and translocation of desert tortoises, to locate and translocate any desert tortoises that were too small to be seen during the initial clearance and may have grown to sufficient size to permit detection. When the site is declared free of tortoise, no more on-site monitoring or construction worker education shall be deemed necessary. However, a trained Hyundai Environmental Compliance Officer will be on call should a tortoise be observed during project operation (see DT-11). The authorized biologist shall notify the USFWS and CDFG in writing within 2 weeks of confirming that the site is free of tortoise.

The handling of desert tortoises shall be in compliance with USFWS and CDFG protocols and with the Translocation Program (Appendix A). All desert tortoises shall be processed in accordance with the specifications provided in the Translocation Program. Should any desert tortoise be encountered during postconstruction surveys, the authorized biologist shall notify the USFWS and CDFG within 24 hours.

DT-14. Hyundai and the City shall have an authorized biologist on call to remove any desert tortoise encountered during project operation, following completion of initial clearance and translocation of desert tortoises.. All regularly scheduled on-site personnel shall be instructed, as part of the worker education program, on the protocol for contacting the authorized on-call biologist to remove any desert tortoise encountered in a work area.

DT-15. Hyundai and the City shall maintain the security/desert tortoise exclusion fencing and rain gauges, throughout the life of the project. Hyundai and the City shall inspect the security/desert tortoise exclusion fencing and rain gauges on a monthly to twice-monthly schedule during the first year following commencement of project construction, and monthly throughout the life of the project unless USFWS and CDFG concur that fence inspection may occur less frequently, and shall replace or repair the fencing and gauges as necessary to exclude desert tortoises from the project site. Temporary desert tortoise exclusion fencing shall be inspected weekly. All fencing shall be inspected after storm events that are accompanied by surface flow. An approved biologist shall submit annual inspection reports to the USFWS and CDFG. A copy of the annual inspection shall

be retained on site and shall be available for inspection by the USFWS and CDFG within two working days of a request for review.

7.1.1.6 Habitat Compensation

DT-16. Hyundai and the City shall compensate at a ratio of 1:1 for impacts to desert tortoises. Hyundai shall compensate for approximately 3,366.5 acres of desert tortoise habitat within the proposed project site. Impacts to desert tortoise habitat, and required mitigation acreage to compensate for those impacts, were determined as follows: 4,498 acres of habitat that desert tortoise will be excluded from following fencing, plus 8.5 acres of impact outside of the project description for the new access road, minus 1,140 acres of land previously mitigated through the LTA, that for a total mitigation requirement of 3,366.5 . Thus, at a ratio of 1:1, Hyundai shall purchase a total of 3,366.5 acres.

The City shall be responsible for acquiring 20 acres to compensate for impacts to approximately 20 acres of desert tortoise habitat associated with construction of the proposed 118-foot-wide, approximately 2-mile-long water line extension.

In total, Hyundai and the City propose to mitigate for impacts to 3,386.5 acres of desert tortoise habitat. At a 1:1 ratio, compensation totals 3,386.5 acres.

Lands proposed for acquisition as compensation for desert tortoise impacts shall be approved by both the USFWS and CDFG prior to purchase, as set forth in Appendix H, *Draft Land Acquisition Plan*, and also shall be suitable as compensation lands for Mohave ground squirrel. Fee title to the compensation lands will be transferred to CDFG. On a case-by-case basis, a third party approved by Hyundai, the City, USFWS and CDFG may hold title to compensation lands. If fee title to the compensation lands is held by an approved third party, a conservation easement over the compensation lands will be recorded in favor of CDFG and in a form approved by CDFG. Hyundai and the City shall ensure adequate funding for acquisition and long-term management of the compensation lands in an amount to be agreed upon by USFWS, CDFG, Hyundai and the City.

The compensation lands will be acquired by Hyundai, acting on behalf of Hyundai and the City. In the alternative, and with prior approval by CDFG and USFWS, a third-party conservation group acting on behalf of Hyundai and the City may acquire the compensation lands. The compensation lands are proposed to be acquired in the vicinity of the Desert Tortoise Research and Natural Area and will be managed by CDFG or by a third-party conservation group upon agreement by USFWS and CDFG.

Lands cannot be transferred prior to project initiation because of the sensitive time line for the start of the proposed project. However, Hyundai has agreed to establish a letter of credit or set aside the necessary funds in an escrow account to provide the USFWS and the CDFG with assurance that the funding is in place for acquisition and long-term management of the compensation lands. The terms of any letter of credit or escrow account must be approved by USFWS and CDFG, and USFWS and CDFG must have access to any escrow account established to provide funding assurance for acquisition and long-term management of the compensation lands.

7.1.2 Acquisition of Compensation Habitat

Not later than 12 months after the initiation of any habitat-disturbing activities Hyundai, acting on behalf of Hyundai and the City, will acquire and transfer fee title to CDFG to 3,386.5 acres approved by USFWS and CDFG as having habitat value for desert tortoise and Mohave ground squirrel that is greater than the habitat value that will be impacted by the Covered Activities. On a case-by-case basis, a third party approved by Hyundai, the City, USFWS and CDFG may hold title to compensation lands. If fee title to the compensation lands is held by an approved third party, a conservation easement over the compensation lands will be recorded in favor of CDFG and in a form approved by CDFG. Hyundai also will provide, on behalf of Hyundai and the City, the capital to establish a permanent non-wasting endowment for the long-term management of the compensation lands. This financial assurance is described more fully in Chapter 8. Adequate funds will be provided in a letter of credit or placed in an escrow account to ensure that funding is available for the acquisition and long-term management of the proposed compensation lands.

Hyundai and the City will fund initial enhancement of each parcel, as set forth more fully in Chapter 8. Enhancement activities will be determined and agreed to by Hyundai, the City, USFWS and CDFG on a parcel by parcel basis prior to the close of escrow, and will be performed or fully funded by Hyundai and the City within nine (9) months of close of escrow. Either CDFG or a third party approved by USFWS and CDFG will handle long-term management of the compensation lands. Lands cannot be transferred prior to project initiation because of the sensitive time line for the start of the proposed project.

Hyundai and the City shall submit the following to the USFWS and CDFG for review and approval prior to the initiation of any habitat-disturbing activities:

- The specific habitat lands, the specific steps necessary to acquire and transfer land, and the specific steps necessary to provide enhancement and management funds for acquired lands.

- A contingency plan to be implemented in the event that off-site mitigation lands suitable for desert tortoises are not suitable or provide only marginal habitat for the desert tortoise. Should the proposed compensation lands not prove suitable for desert tortoise, Hyundai and the City will notify and work closely with the CDFG and USFWS to identify and acquire suitable compensation lands. Hyundai and the City have provided a Translocation Program (Appendix A), that includes translocation of tortoises to a translocation site that is part of the compensation lands and is approved by both the CDFG and USFWS. Translocation and compensation lands will not be purchased without prior approval of both the CDFG and the USFWS, and translocation will be accomplished only with permission of both agencies, in a manner approved by both agencies. A schedule for ensuring that the steps identified for acquisition of compensation habitat are completed no later than 12 months after the initiation of habitat-disturbing activities is included in Appendix A.

7.1.3 Replacement of Habitat Values With Compensation Lands

Habitat Values Lost

Issuance of the proposed incidental take permit and the subsequent implementation of the proposed project would result in impacts to 3,386.5 acres of desert tortoise habitat and impacts to individual desert tortoises. The proposed project site is located in an area that has been described as habitat that is not essential to maintenance of viable populations, contains low to medium tortoise population densities, is not contiguous with medium- or high-density tortoise areas and has a stable or decreasing population.[1]

The proposed measures in this HCP would minimize impacts to desert tortoises within the proposed project site through the use of preconstruction surveys to translocate all tortoises within the proposed impact area to appropriate habitat designated by USFWS and CDFG as suitable for translocation. All tortoises will be inspected for disease prior to translocation, and translocated, in accordance with the Translocation Program. Clinically ill tortoises that are seropositive will be temporarily placed in an exclusion-fenced area located in the northwest corner of the project site. These tortoises will be transmittered and monitored in the same manner as translocated tortoises. Adult females will be appropriately radiographed for egg production and their nests moved to the translocation site. All clinically ill tortoises transported to the disease control area will remain in the enclosure until they exhibit a lack of clinical disease signs over two consecutive weighing/measuring occasions (March, July, October). When free of clinical signs of illness, these tortoises will be translocated to the translocation site to become part of the study, in accordance with the Translocation Program. Those determined not to be suitable for translocation will be placed for adoption or in research programs, as described in the Translocation Program.

Habitat Values Gained through Compensation

Hyundai and the City shall acquire compensation lands at a 1:1 ratio for impacts to 3,386.5 acres from the proposed project, resulting in the acquisition of 3,386.5 acres of desert tortoise habitat that is of higher quality that the proposed project site and that is located adjacent to or in the vicinity of the existing Desert Tortoise Research and Natural Area (DTRNA). The compensation lands may include desert tortoise habitat that is essential to the maintenance of large, viable populations; has resolvable land use conflicts; and has medium to high density populations or low densities contiguous with medium or high density populations. The compensation lands will be managed for desert tortoise and other special-status floral and faunal species.

The proposed compensation lands are sites north of the City of California City and east and south of the Desert Tortoise Research and Natural Area and will be situated away from State Highway 58 and other major highways that could result in tortoise mortalities and fragmentation of tortoise populations. State Highway 58 is not intersected by other major highways within the project vicinity, thereby providing a natural buffer of the core desert tortoise population. As described in

[1] Bureau of Land Management, 1992. *California Statewide Desert Tortoise Management Policy*. Bureau of Land Management, Barstow, CA; and California Department of Fish and Game, Region 4, Fresno, CA; and Region 5, San Diego, CA.

Appendix E, *2003 Desert Tortoise Preserve Committee Management Plan, Desert Tortoise Natural Area & Adjacent Lands*, these lands include a broad range of biological resources, including Mohave creosote bush scrub habitat, which is known to support desert tortoise populations. Surveys conducted in 2000 indicated the presence of desert tortoises. A Property Analysis Record (PAR) recently conducted by the DTPC in an area adjacent to the proposed acquisition area also describes the presence of desert tortoise (Appendix F, *Desert Tortoise Preserve Committee Property Analysis Record*). The compensation lands would further protect the core desert tortoise populations within the DTRNA by providing a larger buffer between the DTRNA and lands that are proposed for development or other uses not compatible with desert tortoise use or occupation. Overall, the value of the compensation lands will be greater than those that would be impacted by the proposed project due to the higher quality of acreage, the location of the compensation lands in the vicinity of areas currently being managed for desert tortoise, and the isolation of the compensation lands from major highways and urban areas that reduce the suitability of lands to support desert tortoise populations.

7.2 ADAPTIVE MANAGEMENT

Adaptive management is a process that allows the established management practices of a conservation program to be modified during the life of the program. It provides a mechanism to incorporate new scientific information or respond to the results of monitoring to achieve the biological goals and objectives of the conservation program.

Adaptive management uses feedback from monitoring to assist in a decision-making process to modify management practices. Incorporating new monitoring information is necessary to effect changes in management to achieve the biological goals and objectives of this HCP and the compensation lands.

Future modifications to management practices, through the adaptive management process, may be needed as a result of the following:

- New information resulting from ongoing research, monitoring of mitigation measures, or monitoring of compensation lands or other lands supporting desert tortoise
- Recovery strategies set forth in updates or revisions to the USFWS Desert Tortoise Recovery Plan that could differ from the measures currently employed
- Minimization and mitigation measures described in the HCP that may need to be revised based on new information or monitoring data
- Significant land use changes outside of the compensation lands that result in a direct effect on the compensation lands

Each of these situations may result in new information, new approaches, or new recovery or conservation standards that would need to be incorporated into the management practices for the compensation lands.

When monitoring results or new scientific information indicate that existing management practices are not achieving the biological goals and objectives of this HCP or the compensation lands, the management practices should be modified in order to meet the goals and objectives. This adaptive management will be implemented by the managers of the compensation lands with the concurrence of USFWS and CDFG, or at the direction of the USFWS and CDFG. Any adaptive management that is necessary on compensation lands, including a baseline assessment and monitoring, will be instituted by CDFG as the conservation manager of the compensation lands, or by a third party approved by CDFG and USFWS. Because management of the compensation lands will not be under the direction or control of Hyundai or the City, the adaptive management measures described in this HCP are recommendations that should be adopted by the compensation land manager. Long-term management of the compensation lands will be funded through an endowment established by Hyundai and the City, as more fully described in DT-16 and Chapter 8.

The management practices will be modified as soon as practicable, and no later than 30 days, after determining that the goals and objectives of the HCP or the compensation lands are not being achieved. Adaptive management changes that may result in less mitigation for covered species will not be implemented unless the USFWS first provides written approval.

The adaptive management program will identify the probable reasons that goals and objectives are not being achieved, develop alternative management strategies based on the best available scientific information, assess the alternatives in light of site conditions, implement a preferred management strategy, monitor the results of the strategy, and revise the strategy if monitoring indicates that goals and objectives are still not being achieved. Criteria for assessing significant changes to the compensation lands habitat would include a 10 percent alteration of habitat including non-native invasive plants, drought that reduces plant cover by 10 percent, a 10 percent increase in the number of non-native wildlife, unauthorized human activities that disturb at least 10 percent of the habitat, or a 10 percent drop in the baseline population level of desert tortoise. Changes in habitat conditions shall be tracked annually through the use of aerial photographic surveys and desert tortoise population monitoring. The baseline aerial photograph is recommended to be flown at the time the compensation lands are fenced.

An approved biologist will recommend appropriate changes in management practices. Changes in management practices will be based on the best available scientific information.

A complete administrative record of all changes in management practices due to adaptive management should be maintained by the compensation lands manager.

7.3 MONITORING

Permittees' Responsibilities

Hyundai and the City shall be responsible for monitoring during all phases of project construction and operation. Monitoring shall be performed in accordance with the methods set forth in this EA/HCP, the Final EIR, and the Incidental Take Permit (ITP), as issued by the USFWS. Monitoring shall be funded by Hyundai and the City as described in Chapter 8 of this EA/HCP.

Hyundai and the City shall demonstrate compliance with monitoring responsibilities by submitting reports to the USFWS and CDFG, in accordance with the terms of this EA/HCP and the ITP. Should circumstances change, monitoring practices will assist in determining the nature and extent of any change, and are flexible to allow for modification as necessary, including incorporation of new scientific knowledge. Modification of monitoring practices would be accomplished in coordination with CDFG, USFWS, Hyundai, and the City.

Compensation Lands

Management of compensation lands will be accomplished by CDFG or by a third party approved by USFWS and CDFG. Monitoring will consider the effectiveness of the implementation of the HCP and will report on the progress of the biological goals and objectives.

7.4 PERMIT DURATION

The duration of the Section 10(a) permit issued by USFWS will be for 30 years, the proposed life of the project. Hyundai anticipates using the automotive test track facility for 30 years, and the project site is located within an area that is anticipated to be highly developed in the next 10-20 years. Impacts to desert tortoise resulting from the proposed project will occur primarily during the construction phase. A 30-year operating life for the permit therefore will not have a significant long-term impact on this species. The proposed compensation program for impacts to desert tortoise also will increase the long-term survivability of these listed species and enhance their habitats by providing compensations lands with a higher habitat value than the habitat impacted by the proposed project and by providing useful information on the translocation of desert tortoises.

7.5 PUBLIC PARTICIPATION

In accordance with 50 CFR 17, a Notice of Availability was published in the Federal Register on July 25, 2003, announcing the receipt of the completed HCP/EA and the commencement of a 60-day public comment period. The public comment period closed on September 23, 2003. Four comment letters were received during the public comment period.

7.6 VALUE OF MITIGATION AND COMPENSATION

The mitigation and compensation measures described in the EA/HCP fully mitigate, to the maximum extent practicable, the potential anticipated impacts on desert tortoise of the proposed project. The mitigation measures provide for the following: (1) acquisition of higher quality desert tortoise habitat that will replace lower quality habitat at the project site that is compromised by on-site factors, such as sheep grazing, and adjacent factors, including its adjacency to Highway 58, the Mojave Bypass and California City, that result in population fragmentation, subsidized predator populations and increased tortoise mortality; (2) impact avoidance and minimization measures to be undertaken during construction and operation of the proposed project; (3) surveys and monitoring; (4) a worker education program; (5) installation of permanent and temporary desert tortoise exclusion fencing to avoid impacts to desert tortoise during construction and operations; (6) programs to control litter and Common Ravens on the proposed project site; and (7) a Translocation Program that will remove the desert tortoises from the project site to an area with higher quality habitat (historic high densities, protected, larger area) and better connectivity, and

will keep the desert tortoises within the breeding population, thereby increasing population viability, as described more fully in Section 2.3.6. The Translocation Program also includes a study that will provide valuable information not currently available regarding translocation of desert tortoises. Finally, 82 percent (3,672 of 4,498 acres) of the proposed project site will be left in its natural state and will continue to provide Mohave ground squirrel habitat.

CHAPTER 8.0
FUNDING

Hyundai will provide funding for this EA/HCP to ensure full implementation of all minimization, mitigation, and compensation measures (including monitoring of compensation lands and implementation of the Translocation Program) specified in this EA/HCP associated with the issuance of the proposed Section 10(a)(1)(B) incidental take permit. Hyundai has entered into long-term contracts with consultants and authorized biologists to perform the entire Translocation Program and fulfill Hyundai's obligations to implement all minimization and mitigation measures under this EA/HCP.

As discussed previously, 4,526.5 acres of desert tortoise habitat on the proposed project site will be impacted by the proposed project. Desert tortoise impacts on 1,140 acres of the previously were mitigated as part of the prior land exchange between Catellus and BLM, pursuant to the Western Mojave Land Tenure Adjustment Project. Hyundai and the City therefore will acquire a total of 3,386.5 acres (3,366.5 acres for the Hyundai Facility and 20 acres for the City's proposed water line extension) to compensate for desert tortoise impacts.

Hyundai shall provide adequate funding for the purchase, enhancement and long-term management of 3,386.5 acres of compensation lands, as described below and in Appendix G, *Draft Implementing Agreement*, and Appendix H, *Draft Land Acquisition Plan*.

8.1 ACQUISITION OF COMPENSATION LANDS

Hyundai will acquire 3,386.5 acres of compensation lands, based on a 1:1 compensation ratio, for acreage of higher quality than the project site, to mitigate impacts resulting from the proposed project, as specified by the resource agencies. Fee title to the compensation lands will be transferred to CDFG. On a case by case basis, a third party approved by Hyundai, the City, USFWS and CDFG may hold title to compensation lands. If fee title to the compensation lands is held by an approved third party, a conservation easement over the compensation lands will be recorded in favor of CDFG and in a form approved by CDFG.

Prior to the initiation of habitat disturbing activities at the proposed project site, Hyundai shall provide financial assurance to the USFWS and CDFG to secure the performance of the obligations under the EA/HCP not later than 12 months after permit issuance. The financial assurance shall consist of establishing a trust or escrow account, furnishing an irrevocable letter of credit, or providing such other form of obligation as may be approved by USFWS and CDFG, in the amount of $4,639,505. This figure was calculated as follows: $2,946,255 for acquisition of 3,386.5 acres, at an average of $870/acre; and $1,693,250 to provide the capital for an endowment fund to manage the compensation lands in perpetuity, at a cost of $500/acre.

CDFG currently holds title to and manages 2,068 acres in the Western Mojave Desert for the long-term conservation of desert tortoise, Mohave ground squirrel and associated desert biota. CDFG also owns and manages 17,593 acres of endangered species habitat in the San Joaquin Valley. Most of these holdings are managed through the use of secured endowments.

Enhancement activities will be determined and agreed to by Hyundai, the City, USFWS and CDFG on a parcel by parcel basis prior to the close of escrow, and will be performed or fully funded by Hyundai and the City within nine (9) months of close of escrow. It is anticipated that in most cases, minor enhancement of the compensation lands will be necessary due to the isolated location of the proposed compensation lands and the lack of development in the area.

The kinds of enhancement activities envisioned include:

- Complete or partial fencing of acquired lands, including gates and signs
- Stabilization of erosion areas (if any)
- Hazardous materials removal (if any)
- Trash removal
- Removal of man-made features suitable for raven perching or nesting

Individual parcels may be eliminated from consideration as compensation lands if initial enhancement costs are excessive.

It is proposed to fund the long-term management of the compensation lands from the yield of a non-wasting endowment provided by Hyundai, at the rate of $500/acre of mitigation lands. This endowment would be held by the CDFG, and the lands managed by the CDFG as part of their other Western Mojave Desert conservation areas.

Management activities would be planned on multi-year cycles, but the extent and type of management actions would vary from year to year, allowing accrual of additional funds (and their compounded interest) for more costly but less frequent activities, or for response to changed circumstances, disasters or unforeseen events.

Management activities include but are not limited to fence line maintenance and repair, sign repair/replacement, gate repair/replacement, biotic surveys (vegetation and wildlife), exotic plant control, native plant management, adaptive management, GIS services, and law enforcement patrol.

For the first few years, most effort likely would be expended on trespass control, fence repair, initial GIS data layer preparation, and preliminary biotic inventories. In following years, expenses likely would shift towards long-term monitoring and adaptive management actions.

For planning purposes, the following distribution of costs could occur during a “typical” year:

Management actions = $64,000
(for example, this could fund 7,000 feet of fencing, 40 replacement signs, 30 days of patrol, 1,200 acres of inventory/GIS data)

Contingency = $6,400
(unanticipated costs due to vandalism or fire, disease outbreaks, special management needs, etc. Retained as interest-bearing expendable accrual in endowment if not needed)

Administrative Costs = $12,800
(supplies, equipment, communication, contract overhead, etc)

Total = $83,200 ($24.57/acre).

Assuming 3,386.5 acres of compensation lands are acquired, a management endowment of $500/acre would have a non-wasting principle of $1,693,250. The CDFG's 10-year average yield on long-term management endowments is ~ 7 percent, but CDFG is currently using a 5 percent annual yield for planning purposes. At 5 percent, the expected endowment would yield approximately $84,662.50/year or $25/acre.

This estimate is based on CDFG experience in managing similar lands in the West Mojave and was formulated by CDFG Lands' staff with this experience, much as they prepare cost estimates for lands managed by CDFG. This estimate is highly consistent with CDFG costs to manage lands in the San Joaquin Valley and Western Mojave Desert. Based on CDFG experience over the past five (5) years, the San Joaquin Valley–Southern Sierra Region, generalized expenditures on a per section per year basis were approximately $6,000 for fencing and facility maintenance; $9,000 for biological surveys and GIS work; $1,000 for patrol and response; and $600 on invasive plant control (spot control and selective measures). This is $16,600 per section or $25.94 per acre.

The land acquisition and long term management estimated costs were calculated in part based on a Habitat Planning in Perpetuity Property Analysis Record (PAR Analysis) prepared February 25, 2003 for a pipeline project located south of the proposed project site (see Appendix F, *Desert Tortoise Preserve Committee Property Analysis Record*). Because the pipeline project acquired compensation lands in the same area from which Hyundai and the City are intending to acquire compensation lands, it was determined that the pipeline PAR Analysis provided an adequate basis for estimating the land acquisition and long term management costs for the proposed project.

If an escrow or trust account is established, USFWS and CDFG shall have access to the account. The proposed compensation lands will be purchased by Hyundai, or by a third party approved by Hyundai, the City, USFWS and CDFG, and will be managed by CDFG or by a third party approved by USFWS and CDFG.

The monetary figures provided as financial assurance are estimates and do not alter the obligations of Hyundai and the City to acquire 3,386.5 acres of compensation lands, and to provide a $500/acre capital contribution to establish an endowment fund for the long-term management of the compensation lands. Any amounts remaining in an escrow or trust account established to provide the financial assurances described herein shall be relinquished to Hyundai upon performance of the habitat compensation obligations set forth in this EA/HCP. If an escrow account is used to provide the financial assurance for the acquisition and long term management of compensation lands, the escrow instructions shall provide for the use of the escrow funds for the performance of the habitat compensation and management obligations set forth in this EA/HCP.

8.2 INCIDENTAL TAKING MINIMIZATION AND MITIGATION

The measures described in this EA/HCP for avoiding or otherwise minimizing incidental take will be implemented through the performance of the contracts entered into by Hyundai for the construction, operation, and maintenance of the proposed project (as previously described in Section 2.0, Project Description). Copies of the contracts shall be provided to the USFWS and CDFG upon project permit approval and agreement on final permitting measures. The costs of such implementation will be embedded in the contract rates charged to Hyundai for the overall services provided under the respective contracts. Prior to the initiation of the construction of the proposed project, and thereafter on an annual basis, Hyundai will provide to the USFWS and CDFG a written, certified statement that Hyundai has budgeted for all such implementation costs for the annual period covered by the statement.

8.3 CHANGED CIRCUMSTANCES

As discussed in Chapter 9, because all desert tortoises will be removed from the project site, it is highly unlikely that any additional impacts to desert tortoise could occur on the project site due to Changed Circumstances. Furthermore, the Translocation Program addresses potential situations that could occur in the future and provides a process for addressing those situations. Accordingly, it is not necessary to provide any funding assurances for Changed Circumstances. Funding for Changed Circumstances that could occur on the compensation lands is included in the amount provided for long-term management of those lands.

CHAPTER 9.0
UNFORESEEN CIRCUMSTANCES

9.1 CHANGED CIRCUMSTANCES

Changed Circumstances are those changes in circumstances affecting a species or geographic area covered by the EA/HCP that can be reasonably anticipated by Hyundai, the City and/or the USFWS and CDFG as parties to the Implementing Agreement (IA) at the time of preparation of the EA/HCP, and for which the parties can plan (e.g., a natural catastrophic event in areas prone to such events). Section 10 regulations (50 C.F.R. 17.32(b)(1)(iii)) require that an HCP specify the procedures to be used for dealing with changed and unforeseen circumstances that may arise during HCP implementation.

Hyundai and the City have identified as potential Changed Circumstances the following events: earthquakes, wildfire, flood, sabotage, airplane or transportation accidents, test automobile accidents, and disease, predation, or impacts of exotic species. A catastrophic event would be an event either unforeseen or predicted that could overwhelm the facility because of the enormity of the event. Hyundai and the City have engineered the project to accommodate the predictable occurrence of natural events such as earthquakes and floods as reflected in the current building codes and design specifications for the project.

9.2 IMPACTS FROM CHANGED CIRCUMSTANCES

Proposed Project Site

The proposed project would move all desert tortoise from areas to be disturbed prior to habitat disturbance, and will translocate desert tortoises on the project site to an off-site translocation area. The proposed project site consists almost entirely of an asphalt test course and a few built facilities. Therefore, impacts from natural disasters and catastrophic events are anticipated to be below the level of significance. However, should impacts to desert tortoise result from any of the natural disasters or catastrophic events, those would be mitigated pursuant to Section 9.3 of this EA/HCP.

Off-Site Compensation Lands

Off-site compensation lands, including the translocation site, will be approved by the USFWS and CDFG under the terms and conditions of this EA/HCP. The compensation lands will be situated in areas that increase the opportunities for management of desert tortoises and decrease the opportunities for man-made events. Therefore, the potential for impacts to desert tortoise resulting from the above-mentioned natural disasters or events is anticipated to be very low. However, should impacts to desert tortoise result from any of the natural disasters or catastrophic events enumerated above, they would be mitigated pursuant to Section 9.3 of this EA/HCP.

9.3 RESPONSES TO CHANGED CIRCUMSTANCES

Proposed Project Site

The process for responding to Changed Circumstances will be initiated as soon as practicable, but no later than 30 days after monitoring reveals a Changed Circumstance. A Changed Circumstance is considered one of a significant nature detected during the monitoring or adaptive management process. A significant change in the environment shall be regarded as greater than 10 percent change in known vegetation composition as caused, for example, by unauthorized habitat destruction or substantial increased presence of non-native species. The process will consist of the following steps:

- An approved biologist will assess disturbed habitat areas to determine levels of take of covered species and the extent of habitat damage.
- The USFWS and CDFG will be notified within seven days of the determination of the existence of a Changed Circumstance, unless the event is a regional scale event that renders such site assessment and notification infeasible.
- The approved biologist will recommend appropriate take minimization and mitigation measures pursuant to Chapter 7 of this EA/HCP and will develop additional take minimization and mitigation measures as appropriate under the particular Changed Circumstance.
- The USFWS and CDFG will be consulted on the development of specific response actions and such actions will include any measures deemed necessary by the USFWS and CDFG, consistent with the requirements of ESA Section 10(a)(2)(B).
- Hyundai and the City will implement the response actions approved by the USFWS and CDFG.
- Impacts and responses will be summarized in an Incident Report and submitted to the USFWS and CDFG.

In the event that a non-covered species that may be affected by Covered Activities becomes listed under the ESA, Hyundai and the City will implement the "no take/ no jeopardy/ no adverse modification" measures identified by the USFWS until the permit is amended to include such species, or until the USFWS notifies the permittees that such measures are no longer needed to avoid jeopardy to, take of, or adverse modification of the designated critical habitat, if any, of the non-covered species.

Off-Site Compensation Lands

As a condition of USFWS approval, the specific management plan for off-site compensation lands will include adequate responses to Changed Circumstances.

9.4 UNFORESEEN CIRCUMSTANCES/NO SURPRISES POLICY

Unforeseen circumstances are changes in circumstances surrounding an HCP that were not or could not have been anticipated by Hyundai, the City and/or the USFWS that result in a substantial and adverse change in the status of a covered species. The USFWS shall not require the

commitment of additional land, additional funds, or additional restrictions on lands or other natural resources released for development or use, beyond the level of mitigation set forth in this EA/HCP if unforeseen circumstances should occur during the life of this EA/HCP, provided Hyundai and the City are adequately implementing or have implemented this EA/HCP in good faith. If additional mitigation measures subsequently are deemed necessary to provide for the conservation of a species that is otherwise adequately covered under this EA/HCP, and this EA/HCP is properly functioning, the obligation for such measures shall not rest with Hyundai or the City. The occurrence of unforeseen circumstances shall be addressed as follows, pursuant to 50 CFR 17.32(b)(5)(iii):

(A) In negotiating unforeseen circumstances, the Director [USFWS] will not require the commitment of additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources beyond the level otherwise agreed upon for the species covered by the conservation plan without the consent of the permittees.

(B) If additional conservation and mitigation measures are deemed necessary to respond to unforeseen circumstances, the Director [USFWS] may require additional measures of Hyundai and the City where the conservation plan is being properly implemented, but only if such measures are limited to modifications within conserved habitat areas, if any, or to the conservation plan's operating conservation program for the affected species, and maintain the original terms of the conservation plan to the maximum extent possible. Additional conservation and mitigation measures will not involve the commitment of additional land, water or financial compensation or additional restrictions on the land, water, or other natural resources otherwise available for development or use under the original terms of the conservation plan without the consent of the permittees.

In the event that any judicial decision or determination, including without limitation the decision from the District Court for the District of Columbia in *Spirit of the Sage, et al. v. Norton, et al.,* 98 CV-1873 (D.D.C. 2003), may hold that the Department of Interior's "No Surprises" assurances rule (or similar successive rule) is vacated, unenforceable or enjoined for any reason or to any extent, Section 9.4 shall be enforceable only to the degree allowed by any such decision or determination provided that the remainder of this EA/HCP shall remain in full force and effect to the maximum extent permitted by law. In the event that the "No Surprises" assurances rule may be vacated, unenforceable or enjoined by such decision or determination but is later reinstated, Section 9.4 shall likewise be automatically reinstated and apply to the entire term of this EA/HCP. If, in response to any such judicial decision or determination, the "No Surprises" assurances rule is revised, Section 9.4 shall be automatically amended in a manner consistent with the revised rule so as to afford the maximum protection to Hyundai and the City consistent with the revised rule.

CHAPTER 10.0
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CHAPTER 11.0
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