

- iv. The FAA will distribute the revised plans to the Signatories and Invited Signatories to this Agreement for review and comment. Signatories and Invited Signatories will have fifteen (15) calendar days from the date of receipt to review and comment.
- v. The FAA and SpaceX will take all comments into consideration when updating the revised plans. The FAA will coordinate a meeting with the Signatories and the Invited Signatories to resolve comments and review the updated plans. The FAA will share with all Signatories and Invited Signatories the comments of the others. If the FAA cannot resolve the comments, the FAA will follow the procedures under Stipulation X.b-d.
- vi. The FAA will submit a final draft version of each plan to the Signatories and Invited Signatories to this Agreement for a five (5) business day review and written concurrence. If no written concurrence is received from the Signatories or Invited Signatories by the end of the 5-day review period, the FAA will proceed on the final draft version.
- vii. The FAA will notify the Signatories and Invited Signatories of approval of any plans, and will provide copies of the final versions to Signatories and Invited Signatories.
- viii. SpaceX has primary responsibility for implementation of approved plans, and the FAA has responsibility for the oversight of these actions.
- ix. SpaceX is responsible for any additional permits and compliance (Federal, State, and local) beyond the authority of the PA.

IV. ASSESSMENT OF EFFECTS

- a. The FAA will assess the effects on historic properties in the APE from implementing the actions specified in any plan associated with this Undertaking. The effects assessment will apply the Criteria of Adverse Effect, as described at 36 CFR § 800.5(a)(1).

Review process:

- i. The FAA will present the determination of effects for each plan in a cover letter and distribute it with the associated plan to all Signatories and Invited Signatories to this Agreement for review and comment. The cover letter will include documentation that evidences how the FAA considered avoidance and minimization alternatives prior to making a final effect determination. Signatories and Invited Signatories will have thirty (30) calendar days from the date of receipt to review and comment.

- ii. Within the 30-day review period, the FAA will coordinate a meeting with the Signatories and Invited Signatories to this Agreement to facilitate comments on the determinations of effects. The FAA will share with all Signatories and Invited Signatories the comments of the others.
 - iii. The FAA and SpaceX will take all comments into consideration. The FAA will coordinate a meeting with the Signatories and the Invited Signatories to resolve an objection to an effects determination. If the FAA cannot resolve the objection, the FAA will follow the procedures under Stipulation X.b–d.
 - iv. For each plan, the FAA will submit a final determination of effects in a cover letter with the final draft version of the associated plan to the Signatories and Invited Signatories to this Agreement for a five (5) business day review and written concurrence. If no written concurrence is received from the Signatories or Invited Signatories by the end of the 5-day review period, the FAA will proceed on the determination of effects.
 - v. If any Signatories and Invited Signatories provide the FAA with a written objection regarding a No Adverse Effect determination within the 5-day review period, the FAA will consult with the Signatories to resolve the objection. If the FAA cannot resolve the objection, the FAA will follow the procedures under Stipulation X.b–d.
- b. If the FAA determines, through consultation, that an effect will be adverse, the FAA will resolve adverse effects to historic properties in accordance with the procedures under Stipulation V.

V. RESOLUTION OF ADVERSE EFFECTS

- a. Adverse effects would be resolved through the consultation process outlined in 36 CFR § 800.6.
 - i. The FAA will consult with the Signatories, Invited Signatories and other consulting parties recognized by the FAA to seek ways to avoid or minimize adverse effects.
 - ii. After avoidance and minimization measures are agreed to by the Signatories and Invited Signatories, if an adverse effect remains, the FAA will execute an MOA(s) with the Signatories and Invited Signatories to document mitigation measures.
 - iii. The FAA will submit a copy of any executed MOA to the ACHP.
 - iv. The FAA will ensure that the Undertaking is carried out in accordance with the MOA(s).

VI. POST-REVIEW DISCOVERIES

- a. Prior to the start of construction activities, SpaceX will develop an Unanticipated Discoveries Plan that will specify the exact procedures to be followed in the event that previously unidentified properties are discovered or unanticipated effects on historic properties are identified during implementation of the Project. The Unanticipated Discoveries Plan will be developed in consultation as described under Stipulation III.

VII. COORDINATION WITH OTHER FEDERAL REVIEWS

- a. In the event that SpaceX applies for federal funding or approvals for the Undertaking from another agency and the Undertaking remains unchanged, such funding or approving agency may comply with Section 106 by agreeing in writing to the terms of this Agreement and notifying and consulting with Texas SHPO and ACHP. Any necessary modifications will be considered in accordance with Stipulation XI.

VIII. PROJECT CHANGES

- a. The FAA will not change the Undertaking without first affording the parties (refer to Attachment F) to this Agreement the opportunity to review the proposed change and determine whether it will require revisions be made to this Agreement. If revisions are needed, the FAA will consult in accordance with Stipulation XI to make such revisions.

IX. MONITORING AND REPORTING

- a. Each year following the execution of this Agreement, the FAA will provide the Signatories and Invited Signatories an annual report detailing work undertaken pursuant to its terms. The FAA will distribute the report to all parties (refer to Attachment F) to this Agreement at least fifteen (15) calendar days prior to the Annual Meeting (described below).
 - i. The annual report will include scheduling changes proposed, any problems encountered, and any disputes and objections received in FAA's efforts to carry out the terms of this Agreement.
 - ii. The annual report will include a section to be prepared by SpaceX of activities as they relate to compliance with the stipulations of this Agreement. The annual report will include the following:
 - 1) A description of the past year's efforts and anticipated upcoming efforts for identification, evaluation, mitigation, and protection of historic properties.
 - 2) An evaluation of the progress of mitigation activities.
 - 3) A description of any known or expected changes to the Undertaking.

- b. Annual Meeting: For the life of this Agreement, the FAA will coordinate a meeting of the Signatories and Invited Signatories to be held each year in February or March, or another mutually agreed upon date, to discuss activities carried out pursuant to this Agreement during the preceding year and activities scheduled for the upcoming year.
 - i. The FAA will evaluate the effectiveness of this Agreement and whether any amendments or changes are needed based on SpaceX's progress reports or project modifications and provide its evaluation to Signatories and Invited Signatories prior to the Annual Meeting.
 - ii. The meeting will be held in a location agreed upon by consensus of the Signatories and Invited Signatories, and parties may participate by telephone if they so desire. The FAA will distribute minutes of the meeting to all Signatories and Invited Signatories within two weeks of the meeting.

X. DISPUTE RESOLUTION

- a. Should any Signatory or Invited Signatory object to any plans or actions pursuant to this Agreement or the manner in which the terms of this Agreement are implemented, the objecting party will provide written notice to the FAA. The FAA will take the objection into account and consult, as needed, within ten (10) business days with the Signatories and Invited Signatories to resolve the objection. Copies of written objections will be submitted simultaneously to all Signatories.
- b. If the FAA determines that the objection cannot be resolved, the FAA will forward all documentation relevant to the dispute to the ACHP and request that the ACHP provide its advice on the resolution of the objection. The ACHP will provide the FAA with its advice on the resolution of the objection within thirty (30) calendar days of receiving adequate documentation.
- c. The FAA will prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, Signatories, and Invited Signatories and provide them with a copy of this written response. The FAA will then proceed according to its final decision.
- d. Any ACHP comment provided in response to such a request will be taken into account by the FAA, in accordance with 36 CFR § 800.6(c)(2), with reference only to the subject of the dispute. All responsibilities to carry out actions under this Agreement that are not subject to the dispute will remain unchanged.

XI. DURATION, AMENDMENT, AND TERMINATION

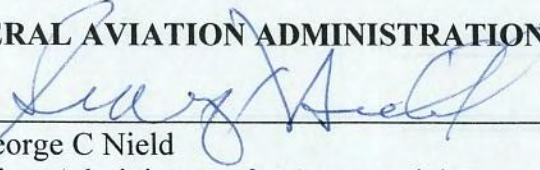
- a. This Agreement will become effective upon execution by the FAA, Texas SHPO, NPS, ACHP, SpaceX, USFWS, and TPWD, and will remain in effect for a term of

- ten (10) years from its date of execution, at which time the FAA or SpaceX may seek to extend this Agreement for an additional period of time.
- b. Any Signatory or Invited Signatory to this Agreement may request the other Signatories and Invited Signatories consider amending it, in which case the parties will consult to consider the proposed amendment(s). The amendment will be effective on the date a copy is signed by all of the Signatories and Invited Signatories.
 - c. If any Signatory or Invited Signatory to this Agreement determines that its terms will not or cannot be carried out, that party will immediately consult with the other parties to attempt to develop an amendment per Stipulation XI.b. If within thirty (30) calendar days (or another time period agreed to by all Signatories) an amendment cannot be reached, any Signatory or Invited Signatory may terminate the Agreement upon written notification to the other Signatories and Invited Signatories.
 - d. A year prior to the expiration of the Agreement, the Signatories and Invited Signatories will consult to determine whether the Agreement should be extended for a period to be determined. If the term of the Agreement is not extended through an amendment, then the Agreement will expire at the end of the duration period set forth in Stipulation XI.a.
 - e. Once the Agreement is terminated, and prior to work continuing on the Undertaking, the FAA must either execute a new Agreement pursuant to 36 CFR § 800.6, or request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. The FAA will notify the Signatories and Invited Signatories as to the course of action it will pursue.

Execution of this Agreement by the FAA, Texas SHPO, NPS, ACHP, SpaceX, USFWS, and TPWD, and implementation of its terms by the Signatories and Invited Signatories, is evidence the FAA has taken into account the effects of the Undertaking on historic properties.

SIGNATORIES

FEDERAL AVIATION ADMINISTRATION

By: 
Dr. George C Nield
Associate Administrator for Commercial Space Transportation

Date: 5/13/2014

TEXAS STATE HISTORIC PRESERVATION OFFICER

By: Mark Wolfe
Mark Wolfe

Date: 5/12/14

NATIONAL PARK SERVICE

By: Jana E. Joss
Acting For Sue E. Masica, Director, Intermountain Region

Date: May 22, 2014

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: John M. Fowler
John M. Fowler
Executive Director

Date: 5/16/14

INVITED SIGNATORIES

SPACE EXPLORATION TECHNOLOGIES CORP.



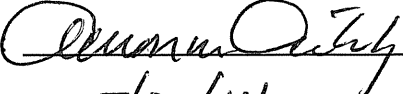
By: _____

Steven Davis

Director of Advanced Projects, Space Exploration Technologies

Date: May 15, 2014_____

UNITED STATES FISH AND WILDLIFE SERVICE

By  **Aaron M. Archibeque**
Regional Chief, NWRS

Date: 5/30/14

TEXAS PARKS AND WILDLIFE DEPARTMENT

By: 

Ross Melinchuk, Deputy Executive Director- Natural Resources

Date: May 20, 2014

ATTACHMENT A. PROJECT DESCRIPTION

As part of FAA's Proposed Action of issuing launch licenses and/or experimental permits to SpaceX, SpaceX would construct a vertical launch area and a control center area to support up to 12 commercial launch operations per year. The vehicles that would be launched include the Falcon 9, Falcon Heavy (up to two launches per year), and a variety of smaller reusable suborbital launch vehicles. Launch operations include not only launches, but also pre-flight activities such as mission rehearsals and static fire engine tests. SpaceX would be required to apply for the appropriate launch licenses and/or experimental permits to be issued by the FAA. SpaceX would be the exclusive user of the site.

The proposed vertical launch area is currently undeveloped and is located directly adjacent to the eastern terminus of SH 4 (Boca Chica Boulevard) and to Boca Chica State Park and Lower Rio Grande Valley National Wildlife Refuge lands. It is located approximately 3 miles north of the U.S/Mexico border on the Gulf Coast and approximately 5 miles south of Port Isabel and South Padre Island. Access to the area is from SH 4. Proposed facility and infrastructure construction at the vertical launch area would include an integration and processing hangar; a launch pad and stand with its associated flame duct; a water tower; lightning protection towers (four total); a retention basin for deluge water; propellant storage and handling areas; a workshop and office area; a warehouse for parts storage; and roads, parking areas, fencing, security, lighting, and utilities. The parcel where the vertical launch area would be located is 56.5 acres; however, development of the vertical launch area would only comprise approximately 20 acres.

The proposed control center would be located immediately adjacent to Boca Chica State Park and Boca Chica Village, approximately 2 miles west of the proposed vertical launch area and north of SH 4. Proposed facility and infrastructure construction at the control center area would include two launch control center buildings; two payload processing facilities; a launch vehicle processing hangar; two radio frequency transmitter/receivers; generators and diesel storage facilities; roads, parking areas, fencing, security, lighting, utilities; and a satellite fuels storage facility. In addition, new power lines would be installed underground in the SH 4 road right-of-way from the control center area to the vertical launch area.

The Falcon 9 is a medium-lift class launch vehicle with a gross lift-off weight of approximately 1,100,000 pounds (lbs) with an approximate length of 224 feet (ft). The Falcon 9 uses liquid oxygen (LOX) and highly refined kerosene, also known as rocket propellant-1 or refined petroleum-1 (RP-1), as propellants to carry payloads into orbit. The Falcon Heavy is a heavy-lift class launch vehicle with a gross lift-off weight of approximately 3,400,000 lbs. It has a width of 36 ft and an overall length of approximately 224 ft.

All Falcon 9 and Falcon Heavy launches would be expected to have payloads, including satellites or experimental payloads. In addition to standard payloads, the Falcon 9 and Falcon Heavy may also carry a capsule, such as the SpaceX Dragon capsule. Most payloads would be commercial; however, some could be Department of Defense payloads, National Aeronautics and Space Administration (or NASA) payloads, or a Federal contribution to a commercial payload. All launch trajectories would be to the east over the Gulf of Mexico.

During launch operations, access to the Boca Chica area, including SH 4 and Boca Chica State Park, would be closed to the general public for safety and security reasons (refer to Exhibit A-1). The closures would occur up to 12 times a year for a period of up to 15 hours each time, with 6 hours being the closure time for a nominal launch. The 15-hour closure period allows for potential aborts and contingencies. A closure for a wet dress rehearsal or static fire engine test would be shorter than a closure for a launch. Closures for a wet dress rehearsal or static fire engine test would typically be 3 hours or less. The total number of closures and closure hours for wet dress rehearsals, static fire engine tests, and actual launches would fall within SpaceX's proposed 12 launch operations per year or annual maximum of 180 hours of closure per year.

FAA LICENSES, PERMITS, REGULATIONS, AND APPROVALS

The FAA statutory and regulatory requirements pertaining to commercial launches and individual launch operators are described in 14 CFR Chapter III, Parts 400-450. Under the Proposed Action, SpaceX would be the exclusive user of the site. Therefore, SpaceX is not required to apply for and obtain a Launch Site Operator License (14 CFR Part 420). SpaceX could apply for and obtain the following types of licenses and/or experimental permits:

- Launch-Specific License — “authorizes a licensee to conduct one or more launches, having the same launch parameters, of one type of launch vehicle from one launch site” (14 CFR §Part 415.3[a]). A licensee's authorization to launch terminates upon completion of all launches authorized by the license or the expiration date stated in the license, whichever occurs first.
- Launch Operator License — “authorizes a licensee to conduct launches from one launch site, within a range of launch parameters, of launch vehicles from the same family of vehicles transporting specified classes of payloads” (14 CFR §Part 415.3[b]). A launch operator license remains in effect for five years from the date of issuance.
- Experimental Permit — “authorizes launch and reentry of a reusable suborbital rocket” (14 CFR §Part 437.7). An experimental permit lasts for one year from the date it is issued.

Only those activities and operations under the Proposed Action would be authorized and governed by the FAA through the above licenses and permit. These activities and operations include: construction of a vertical launch area and a control center area; operations to support up to 12 launches per year, including the temporary closure of designated offshore and onshore areas; and the underground installation of a new power line in the right-of-way of SH 4 between the vertical launch and control center areas.

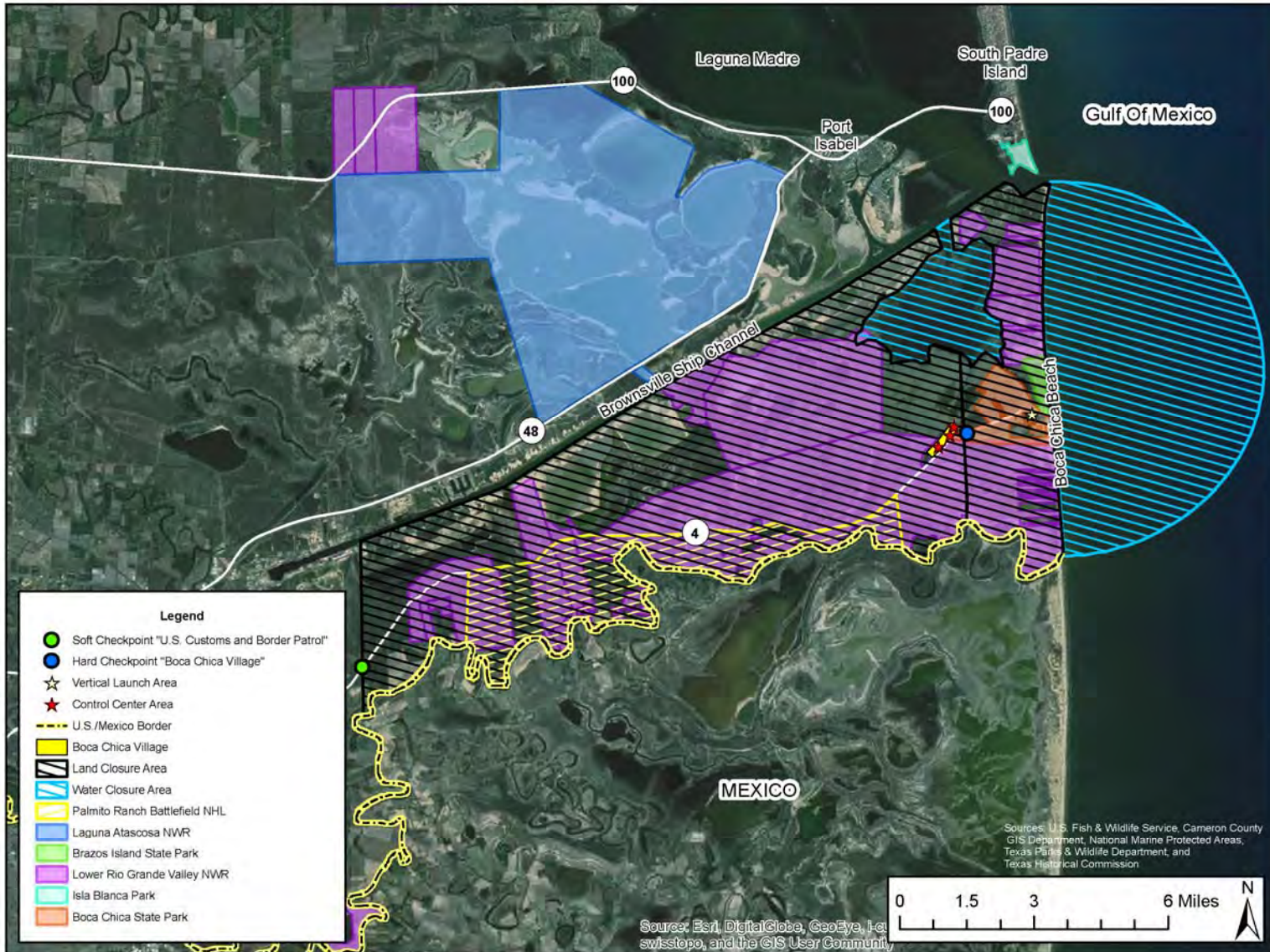


Exhibit A-1. Proposed Launch Operations Closure Areas

ATTACHMENT B. AREA OF POTENTIAL EFFECTS

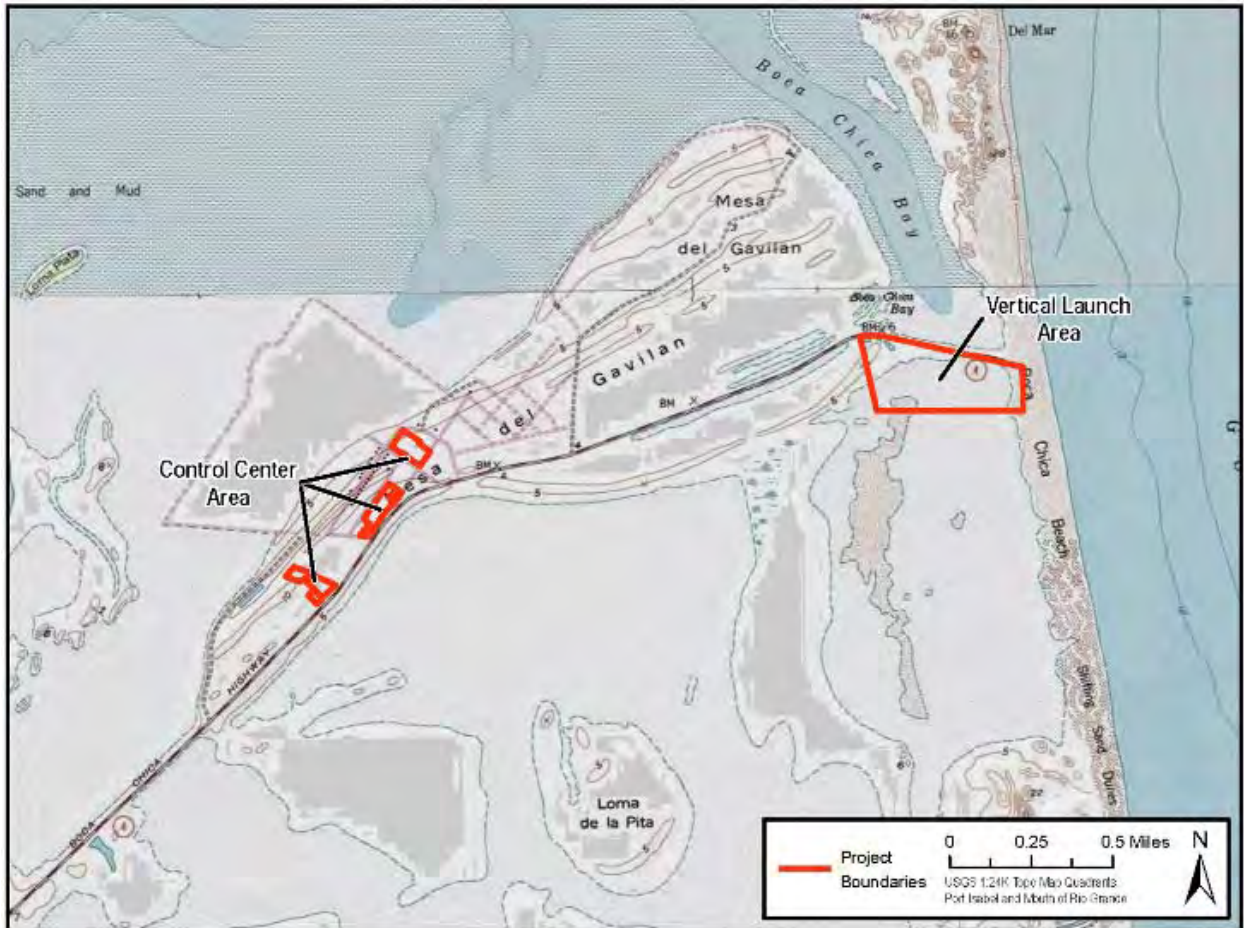


Exhibit B-1. Area of Potential Effects for Direct Effects

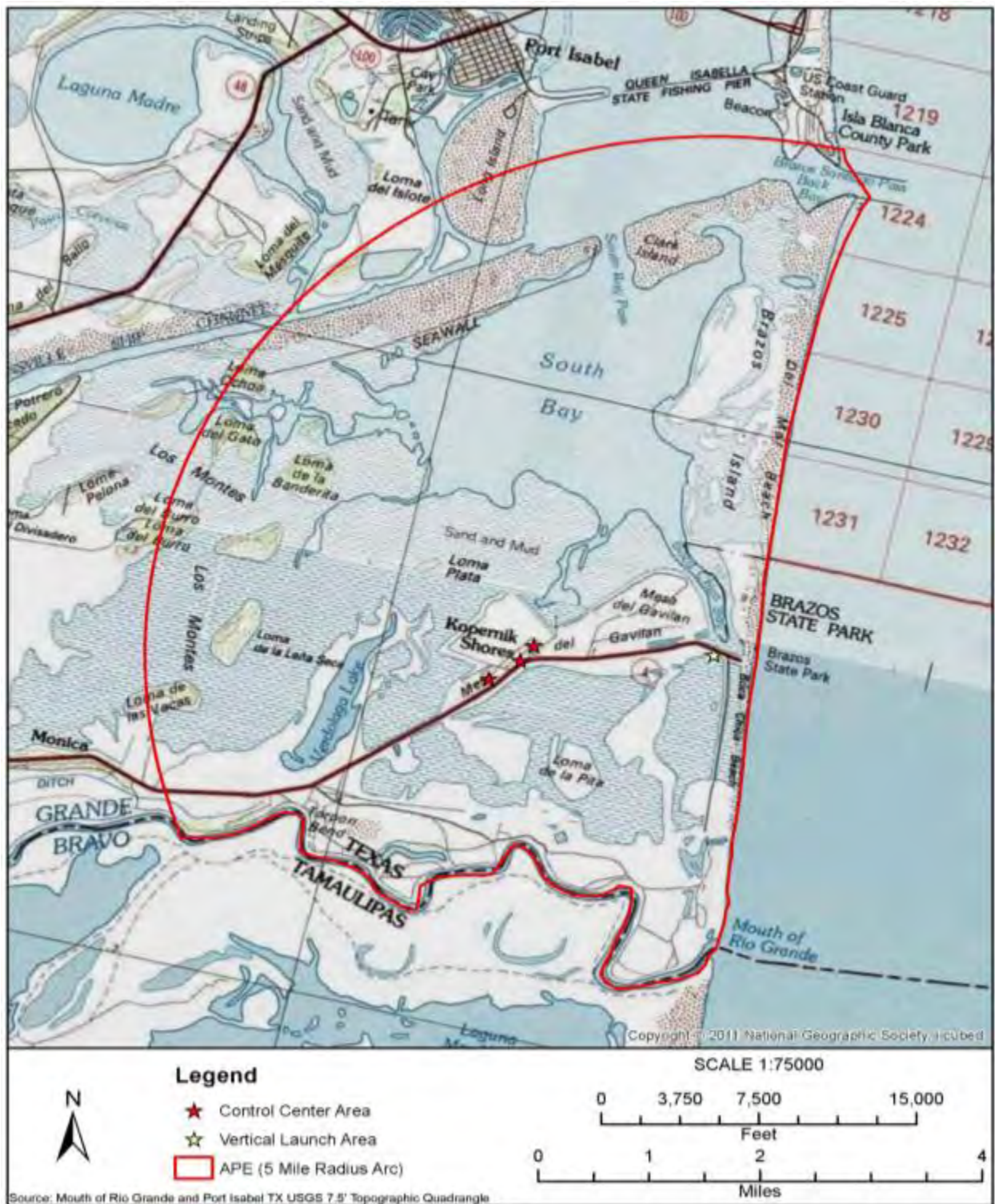


Exhibit B-2. Area of Potential Effects for Indirect Effects

ATTACHMENT C. HISTORIC PROPERTIES IDENTIFIED IN THE DIRECT AND INDIRECT APEs

Summary Table of Historic Properties Identified in the APEs for the SpaceX Texas Launch Site.							
Resource #	Resource Name	Site Type	National Register Eligibility	Historic Value	FAA Determination of Effect¹		
					Direct	Indirect	Secondary (Induced)
41CF93	Palmito Ranch Battlefield NHL	Civil War Battlefield	Listed; Designated an NHL	Landscape, setting, and feeling that contribute to the integrity and interpretation of the site; intact physical remains (e.g., features, artifacts, datable materials), including potential subsurface remains	No effect	Adverse effect from visual intrusions to setting and feeling associated with construction	Adverse effect from increased vehicular traffic (i.e., fuel and water trucks) associated with the construction and operation of the facility, as well as from increased foot and vehicular traffic associated with anticipated influx in visitors to the area
41CF4	Brazos Santiago Depot	1840-1870 Military depot and camp	Listed	Intact physical remains (e.g., features, artifacts, datable materials), including potential subsurface remains	No effect	No effect	No effect
41CF6	White's Ranch	Civil War camp	Eligible	Intact physical remains (e.g., features, artifacts, datable materials), including potential subsurface remains	No effect	No effect	No effect

Summary Table of Historic Properties Identified in the APEs for the SpaceX Texas Launch Site.

Resource #	Resource Name	Site Type	National Register Eligibility	Historic Value	FAA Determination of Effect ¹		
					Direct	Indirect	Secondary (Induced)
41CF7	Clarksville	1847-1874 Townsite	Eligible	Intact physical remains (e.g., features, artifacts, datable materials), including potential subsurface remains	No effect	No effect	No effect
41CF19	--	Prehistoric camp	Potentially Eligible	Intact physical remains (e.g., features, artifacts, datable materials), including potential subsurface remains	No effect	No effect	No effect
41CF117.1	Cypress Pilings	1846 Floating bridge pilings	Eligible	Intact physical remains (e.g., features, artifacts, datable materials)	Potential adverse effect from vibration associated with launch operations	No effect	Adverse effect from increased foot and vehicular traffic associated with anticipated influx in visitors to the area
41CF117.2	Pilings Site	Historic campsite	Treated as Eligible	Intact physical remains (e.g., features, artifacts, datable materials)	No effect	No effect	Adverse effect from increased foot and vehicular traffic associated with anticipated influx in visitors to the area
41CF125	Boca Chica Beach Wreck	Shipwreck	Potentially Eligible	Intact physical remains (e.g., features, artifacts, datable materials), including potential subsurface remains	No adverse effect	No effect	No effect

Summary Table of Historic Properties Identified in the APEs for the SpaceX Texas Launch Site.

Resource #	Resource Name	Site Type	National Register Eligibility	Historic Value	FAA Determination of Effect ¹		
					Direct	Indirect	Secondary (Induced)
41CF184	Boca Chica #2	Shipwreck	Potentially Eligible	Intact physical remains (e.g., features, artifacts, datable materials), including potential subsurface remains	No adverse effect	No effect	No effect
No number	Palmetto Pilings	1865 Railroad Pilings	Eligible	Intact physical remains (e.g., features, artifacts, datable materials)	Potential adverse effect from vibration associated with launch operations	No effect	Adverse effect from increased foot and vehicular traffic associated with anticipated influx in visitors to the area
No number	Palmetto Pilings Historical Marker	1936 Granite Marker	Eligible	Associated with the long-standing tradition and one of the largest formal programs of commemoration in the state of Texas	Potential adverse effect from vibration associated with launch operations	No adverse effect	Adverse effect from increased foot and vehicular traffic associated with anticipated influx in visitors to the area

Note: 1 Direct Effect = impacts that would have an immediate effect on the physical character of a property, and are primarily associated with construction activities; Indirect Effect = impacts such as visual or auditory that affect more aesthetic aspects of a historic property (e.g., setting); Secondary (Induced) Effect = impacts that are caused by the Undertaking, but occur later in time and/or farther removed in distance, but are foreseeable.

ATTACHMENT D. SPACE X TEXAS LAUNCH SITE PLANS

1. In collaboration with the FAA, SpaceX is developing the following plans:
 - a. Lighting Management Plan
 - b. Facility Design Plan
 - c. Vibration Monitoring Plan
 - d. Unanticipated Discoveries Plan
 - e. Hurricane Plan
 - f. Construction Stormwater Pollution Prevention Plan
 - g. Operation Stormwater Pollution Prevention Plan
 - h. Spill Pollution and Prevention Plan
 - i. Hazardous Materials Emergency Response Plan
 - j. Emergency Action Plan
 - k. Security Plan

ATTACHMENT E. SUMMARY OF TRIBAL CONSULTATION AND INVOLVEMENT DURING ENVIRONMENTAL IMPACT STATEMENT DEVELOPMENT AND SECTION 106 PROCESSES FOR THE PROPOSED SPACEX TEXAS LAUNCH SITE

The FAA identified the following five tribes as having religious or cultural affiliation with the Project area: Apache Tribe of Oklahoma, Comanche Nation of Oklahoma, Kiowa Tribe of Oklahoma, Mescalero Apache Tribe of New Mexico, and Tonkawa Tribe of Oklahoma. The FAA provided each of them with the following information and opportunities to participate in the Section 106 process:

- The FAA sent consultation letters (dated 2 May 2012) describing the Undertaking and inviting tribes to participate in consultation. The FAA received no response from any of the tribes.
- The FAA sent the *Draft Environmental Impact Statement, SpaceX Texas Launch Site* inviting tribes to comment on the findings of effects on cultural resources. The FAA received no response from any of the tribes.

ATTACHMENT F: CONSULTING PARTY CONTACTS

For the life of this Agreement, each party will provide updates to the list of contacts below, as needed, to the FAA. The FAA will distribute the updated list of contacts to all parties within five (5) business days of receipt of the update.

Signatories

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Environmental Protection Specialist
Federal Aviation Administration
Office of Commercial Space Transportation
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Director of Advanced Projects
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(SpaceX)
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Theresa A. de la Garza
Project Reviewer – South Texas Region
Division of Architecture
Texas Historical Commission
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Rob Jess
Project Leader
U.S. Fish and Wildlife Service
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Cheryl Eckhardt
Environmental Protection Specialist/Regional
S106 Coordinator
National Park Service
Intermountain Region
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Najah Duvall-Gabriel
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