



Jefferson National Expansion Memorial

Environmental Assessment for Implementing
CityArchRiver Initiative Elements



January 2013

Executive Summary

PURPOSE OF AND NEED FOR ACTION

The purpose of the proposed action analyzed in this Environmental Assessment (EA) is to fulfill the goal of revitalizing Jefferson National Expansion Memorial, as called for by the selected action in the November 2009 Record of Decision (ROD) for the park's General Management Plan (GMP)/Environmental Impact Statement. While the GMP provided direction on the type of projects that could be implemented, the 2009 selected action called for the National Park Service (NPS), in close coordination with its partners, to initiate a design competition that would provide a wide breadth of ideas on how to meet this goal, and, ultimately, form the basis for the design of more specific projects.

The design competition began in December 2009 and the winning team and design were selected in September 2010. The NPS now needs to evaluate projects proposed by the winning team and park partners that have the potential to cause physical changes to the park grounds. Action is needed now so that projects may be finished in time for the 50th anniversary of completion of the Gateway Arch (October 28, 2015).

OBJECTIVES IN TAKING ACTION

The National Park Service considers objectives to be those goals that must be achieved to a large degree for the action to be considered a success (NPS 2001). All alternatives selected for detailed analysis must meet project objectives and resolve the purpose of and need for action. Many of the objectives developed by NPS for this action incorporate or reflect the goals

of the design competition relevant to those project components. Additionally, goals for the Central Riverfront have been identified by Great Rivers Greenway District, and are also integrated in the objectives listed below.

GENERAL

- Ensure that revitalization of the park reflects the iconic status of the Gateway Arch and embraces the Mississippi River, but does not violate requirements in the NPS Organic Act or NPS Management Policies 2006.
- Working with partners, catalyze increased vitality in the St. Louis region and create attractors to promote extended visitation to the Arch, the city, and the river.

CULTURAL RESOURCES

- Ensure that the revitalization of the park and improvements to the Central Riverfront preserve the integrity and honor the character-defining elements of the National Historic Landmark and relevant National Register Historic Districts.
- Avoid unacceptable impacts on the cultural landscapes, historic resources, and archeological resources as a result of revitalizing the park and improving the Central Riverfront.

VISITOR USE AND EXPERIENCE

- Ensure that revitalization of the park and the Central Riverfront improves connections amongst the city, the park, and the river.

- Enhance the experience at the park and along the Central Riverfront and reduce the adverse impacts from adjacent transportation systems.
- Ensure that visitor safety and accessibility for people with disabilities is improved and that the experience at the park and along the Central Riverfront is enhanced by creating a welcoming and accessible environment.

INTERPRETATION/EDUCATION

- Improve visitor understanding of the purpose of the park, including the story of St. Louis as the gateway to American westward expansion.
- Along the Central Riverfront, provide opportunities for education connected to the Mississippi River and the historic levee.

PARK MANAGEMENT AND OPERATIONS

- Incorporate sustainable methods into park management and operations while minimizing impacts of revitalization on financial resources, staffing requirements, and long-term maintenance requirements; improve Central Riverfront operations by reducing flood-related closures and cleanup activities.

ALTERNATIVES CONSIDERED

The alternatives under consideration include a required “no action” alternative and two action alternatives that were developed by an interdisciplinary planning team and through feedback from the public and the design team during the planning process. The alternatives are described below. There are a number of elements that would be common to all alternatives as well as common to just the action alternatives, which are described in detail in the “Alternatives” chapter of this EA.

NO- ACTION ALTERNATIVE

The no-action alternative primarily reflects current conditions and activities at the park and the Central Riverfront. Under the no-action alternative,

the National Park Service would landscape the surface of the Park Over the Highway structure across I-70 after its construction by the Missouri Department of Transportation (MoDOT). The other areas of the park and the Central Riverfront would continue to function much the way they do today. The no-action alternative “sets a baseline of existing impacts continued into the future against which to compare impacts of action alternatives” (NPS 2001). Long-term deferred maintenance projects could occur at the park over time as funding becomes available.

ACTION ALTERNATIVES

The action alternatives (alternatives 2 and 3) would: alter visitor accessibility both to and within the park and the Central Riverfront; create new and enhance existing programming opportunities; and improve plantings by implementing key unrealized parts of Dan Kiley’s 1964 Final Conceptual Planting Plan (Office of Dan Kiley 1964). Changes to the existing landscape would maintain the integrity of the original design intent as defined in the 2010 Cultural Landscape Report (NPS 2010), and the park’s designation as a National Historic Landmark (NHL).

ALTERNATIVE 2: MODERATE CHANGE

Under alternative 2, Luther Ely Smith Square would be re-graded to provide a large plaza at its western edge that slopes gently downward to the confluence of the extensions of the Processional Walks across the Park Over the Highway over I-70. Moving east, visitors would enter the lawn at its western edge, approaching a small rise before coming to a shallow valley that descends to the base of the Arch. The paths on either side of the lawn would be lower than the lawn with planted slopes of canopy trees on the exterior edges of the pathways that shield pedestrians from the noise and pollution of I-70. These paths would transition to meet with existing Processional Walks, creating an accessible link to the Arch across the Park Over the Highway. Plantings lining the paths from Luther Ely Smith Square and crossing over the Park Over the Highway would be comprised of shrubs that would not grow high enough to interfere with the Saarinen vista.

The Arch Parking Garage would remain under alternative 2 and the majority of new plantings in the North Gateway would be limited to the

northwest intersection, planting at or on the structure of the garage as feasible, and planting of the streetscape adjacent to the garage. An accessible route from the North Gateway to the existing Arch Parking Garage elevators would be provided for visitors with disabilities to access the park.

Changes to the highway and street infrastructure introduced by MoDOT would alter access to the garage. These changes would close Washington Avenue between 1st Street and Memorial Drive (at the northwest intersection). Access to the Arch Parking Garage would be provided through Laclede's Landing, Leonor K. Sullivan Boulevard, and via a "slip-lane" at the proposed northbound exit off the interstate highway at Memorial Drive.

Alternative 2 would renovate existing exhibit space at the Visitor Center/Museum. Accessible interior and exterior entrance and egress ramps would be added to supplement the existing ramps at the Arch legs entrances. Galleries and exhibits would also be renovated in the Old Courthouse and accessibility to and within the Old Courthouse would be improved with ramps on the exterior of the building and elevators on the interior of the building.

Two to four universally accessible paths would be integrated into the East Slopes from the park to the Central Riverfront. Plantings along the East Slopes would provide areas for sitting and gathering space. Universally accessible paths to and around the north and south reflecting ponds would be installed. Subtle grading and plantings would create swales to catch and detain stormwater runoff. The Processional Walks would be replaced to repair the subsurface and surface conditions. The adjacent ash trees would also be replaced with a more suitable species to protect against the loss of trees due to the emerald ash borer.

The elevation of Leonor K. Sullivan Boulevard would be raised to reduce the frequency of flood events and a multi-modal roadway would be established.

ALTERNATIVE 3: MAXIMUM CHANGE

Alternative 3 proposes that the West Gateway serve as a major point of arrival for visitors to the park across the Park Over the Highway landscape over I-70. It would provide outdoor

spaces for group orientation and gathering, and spaces for individual rest and relaxation in an expanded Luther Ely Smith Square. The West Gateway would act as both a conceptual and literal bridge between the park grounds, the Old Courthouse, and downtown St. Louis. A plaza and ground-level West Entrance to the Visitor Center/Museum complex beneath the Gateway Arch would be installed. Plantings directly in front of the West Entrance to the Visitor Center/Museum across the Park Over the Highway would be comprised of shrubs and small trees that would not grow higher than the berm or interfere with the Saarinen vista.

The Arch Parking Garage would be demolished under alternative 3, and replaced with a new landscape in the North Gateway that would take advantage of local adjacencies to the Laclede's Landing neighborhood to the north and the Washington Avenue/Convention Center corridor to the west. A parking strategy would be implemented to facilitate access to nearby parking for visitors, park staff, and others accessing the park and adjacent downtown activities. Demolition of the Arch Parking Garage would occur only after implementation of an alternative parking strategy.

The North Gateway slopes and valley between the park and the Eads Bridge would be a vegetated and mown area with scattered trees, which would preserve views into the park. A large lawn would use high-use turf intended to withstand heavy use. An "Explorers" garden would feature woodland plantings that would serve as educational tools, such as illustrating the botanical aspects of Lewis and Clark's journey.

Alternative 3 would create multiple accessible pedestrian passages between the park, the Washington Avenue corridor, Laclede's Landing, and the Mississippi riverfront. All four existing connections underneath the Eads Bridge between Laclede's Landing and the park would be made compliant for pedestrian accessibility, creating full access between the two downtown attractions. Washington Avenue between Memorial Drive and Leonor K. Sullivan Boulevard would be closed to through traffic, a drop-off area would be

established, and a shared pedestrian/bicycle path would be installed that would provide a pedestrian accessible route from the city to the Central Riverfront. Smaller paths off this route would make connections between Laclede's Landing and the rest of the park. An elevated walk installed in the North Gateway would make a connection over the bike path to create an accessible route from North 1st Street to the park. The intersection of Washington Avenue and Memorial Drive would become a four-way intersection with the closure of Washington Avenue to through traffic between Memorial Drive and Leonor K. Sullivan Boulevard. The new West Entrance would provide an accessible entrance and exit for visitors.

The existing spaces in the Visitor Center/ Museum beneath the Gateway Arch would be selectively renovated and an additional 35,000-50,000 square feet of space constructed, depending on design development. Accessible egress ramps would be added to supplement the existing ramps at the Arch legs entrances. Galleries and exhibits would also be renovated in the Old Courthouse and accessibility to and within the Old Courthouse would be improved with ramps on the exterior of the building and elevators on the interior of the building.

Two to four universally accessible paths would be integrated into the East Slopes from the park to the Central Riverfront. The East Slopes would be planted with areas for sitting and gathering space. Universally accessible paths to and around the north and south reflecting ponds would be installed. Subtle grading and plantings would create swales to catch and detain stormwater runoff. The Processional Walks would be replaced to repair the subsurface and surface conditions. The adjacent ash trees would also be replaced with a more suitable species to protect against the loss of trees due to the emerald ash borer.

The elevation of Leonor K. Sullivan Boulevard would be raised to reduce the frequency of

flood events and a multi-modal roadway would be established.

ENVIRONMENTAL CONSEQUENCES

The summary of environmental consequences considers the alternatives being proposed and the cumulative impacts to resources from occurrences inside and outside the park unit. The potential environmental consequences of the alternatives are addressed for: cultural resources; vegetation; soundscape; floodplains; water resources; visitor use and experience; socioeconomics; and management and operations. The table on the following pages summarizes the results of the impacts analysis for these topics.

Impact Topic	Alternative 1: No-Action Alternative	Alternative 2: Moderate Change	Alternative 3: Maximum Change
Historic Buildings, Structures, Sites, Objects, and Districts	<p>Parkwide and locally, construction-related impacts under the no-action alternative would result in short-term minor adverse impacts to character-defining features of the NHL District such as vegetation and topography. The addition of the Park Over the Highway landscaping would also have long-term minor adverse impacts to these features, but would also have long-term beneficial impacts for example on the setting of the NHL District.</p>	<p>Parkwide and locally, construction would result in short-term moderate adverse impacts to the NHL District due to, for example, addition of ramps at the Visitor Center/Museum, paths around the ponds and along the East Slopes, and the addition of the Park Over the Highway landscaping. Modifications for accessibility would occur at the Old Courthouse.</p> <p>This alternative would involve some alteration of historic buildings, structures, sites, objects, and districts through the addition of accessibility and security measures that alter the visual character of the resources and their settings and parkwide and local long-term moderate adverse impacts would occur. Negligible to minor short-term and long-term impacts on resources within the cultural resources impact area would occur along the riverfront, affecting the NHL District and Eads Bridge. Beneficial impacts would result from changes such as the replacement of the ash trees and repair of the Processional Walks.</p>	<p>Parkwide and locally, construction would result in short-term moderate adverse impacts to the NHL District due to, for example, the addition of the new West Entrance, ramps at the Visitor Center/Museum, paths around the ponds and along the East Slopes, and changes to the park landscape along the Central Riverfront. Modifications for accessibility would occur at the Old Courthouse.</p> <p>This alternative would involve some alteration of historic buildings, structures, sites, objects, and districts through changes addition of accessibility and security measures that alter the visual character of the resources and their settings and parkwide and local long-term moderate adverse impacts would occur. Negligible to minor short-term and long-term impacts on resources within the cultural resources impact area would occur along the riverfront, affecting the NHL District and Eads Bridge. Beneficial impacts would result from changes such as the replacement of the ash trees, repair of the Processional Walks and removal of the Arch Parking Garage.</p>
Cultural Landscapes	<p>Parkwide, the no-action alternative would have short-term minor adverse impacts due to construction activities that would disrupt the cultural landscape. The Park Over the Highway landscape alterations and retention of portions of the park landscape with non-historic appearances would have long-term minor adverse impacts; however, the Park Over the Highway would also have long-term beneficial impacts by enhancing the primary axial connection between the Old Courthouse, the park, and the river.</p>	<p>Parkwide, alternative 2 would have short-term moderate adverse impacts due to construction activities that would disrupt the cultural landscape. Long-term minor adverse parkwide and local impacts would occur due to the Park Over the Highway landscape alterations, the addition of paths at the ponds and the East Slopes, ramps at the Visitor Center/Museum, and changes to the North and South Overlooks and the Grand Staircase. Long-term beneficial impacts would occur due to changes that are in keeping with the Saarinen/Kiley design intent, such as the addition of the landscaped Park Over the Highway and the replacement of ash trees and repair of the Processional Walks.</p>	<p>Parkwide, alternative 3 would have short-term moderate adverse impacts due to construction activities that would disrupt the cultural landscape. Long-term moderate adverse parkwide and local impacts would occur due to changes required to construct the new West Entrance, paths around the ponds and at the East Slopes, ramps at the Visitor Center/Museum, and changes to the North and South Overlooks and the Grand Staircase. Long-term beneficial impacts would occur due to changes that are in keeping with the Saarinen/Kiley design intent, such as the addition of the landscaped Park Over the Highway and the replacement of ash trees and repair of the Processional Walks. Removal of the non-historic parking garage would and the reduction of flooding along the Central Riverfront would also contribute to beneficial impacts.</p>

Impact Topic	Alternative 1: No-Action Alternative	Alternative 2: Moderate Change	Alternative 3: Maximum Change
Archeological Resources	Ground-disturbing activities related to maintenance activities and the installation of the Park Over the Highway landscape in the no-action alternative could disturb as-yet unidentified archeological resources; however, mitigation measures would be implemented to minimize impacts and alternative 1 would result in minor adverse impacts to archeological resources.	Parkwide and along the Central Riverfront, ground disturbances related to the project elements including the Park Over the Highway could disrupt or displace as-yet identified archeological resources; however, mitigation measures would be implemented and alternative 2 would result in moderate adverse impacts to archeological sites.	Parkwide and along the Central Riverfront, ground disturbances related to the project elements including the Park Over the Highway, the new West Entrance, and the Visitor Center/Museum addition could disrupt or displace as-yet identified archeological resources; however, mitigation measures would be implemented and alternative 3 would result in moderate adverse impacts to archeological sites.
Museum Collections	Existing collections storage and exhibit spaces, access, and climate control conditions would remain and alternative 1 would result in minor short-term adverse and long-term negligible to minor adverse impacts to museum collections.	The temporary disruption in access to museum collections during construction under alternative 2 would result in short-term minor adverse impacts. The improvements to collections storage, exhibit, and interpretation spaces would have long-term beneficial impacts to museum collections.	The temporary disruption in access to museum collections during construction under alternative 3 would result in short-term minor adverse impacts. The expansion of and improvements to collections storage, exhibit, and interpretation spaces would have long-term beneficial impacts to museum collections.
Vegetation	The no-action alternative would result in minor short-term adverse impacts due to temporary disturbances during implementation of the planted landscape across the Park Over the Highway. There would be negligible long-term impacts to vegetation as regular maintenance and existing conditions would continue.	Alternative 2 would result in moderate short-term adverse impacts due to temporary disturbances of a relatively large amount of vegetation during construction. Minor long-term adverse impacts to vegetation would occur due to the permanent removal of a limited amount of vegetation. Long-term beneficial impacts would also occur due to an increase in vegetation health and diversity.	Alternative 3 would result in moderate short-term adverse impacts due to temporary disturbances of a relatively large amount of vegetation during construction. Long-term beneficial impacts would occur from a substantial increase in the amount of vegetation as well as an increase in vegetation health and diversity.
Soundscape	The no-action alternative would result in minor short-term adverse impacts to soundscapes from noise generated by the installation of the Park Over the Highway landscape. The continuation occasional operational noises above background conditions would cause minor long-term adverse impacts to soundscapes.	Alternative 2 would result in moderate short-term adverse impacts to soundscapes due to intermittent noise above background conditions generated by construction activities to implement project elements. The continuation of occasional operational noises above background conditions would cause minor long-term adverse impacts to soundscapes. The potential for sound attenuation from landscape additions to the park would create long-term beneficial impacts by reducing noise intruding on the park's soundscape.	Alternative 3 would result in moderate short-term adverse impacts due to intermittent noise above background conditions generated by construction activities to implement project elements. The continuation of occasional operational noises above background conditions would cause minor long-term adverse impacts to soundscapes. The potential sound for attenuation from landscape additions to the park and the removal of vehicular traffic noise sources in the North Gateway would create long-term beneficial impacts by reducing noise intruding on the park's soundscape.

Impact Topic	Alternative 1: No-Action Alternative	Alternative 2: Moderate Change	Alternative 3: Maximum Change
Floodplains	There would be no disturbance to floodplains and therefore no short- or long-term impacts to floodplains in alternative 1.	Construction-related activities under alternative 2 would not change floodplain functions or values and no short-term impacts would occur. The changes to the Central Riverfront would not alter the nature of the development in the floodplain or its functions and values and would have negligible long-term impacts to floodplains.	Construction-related activities under alternative 3 would not change floodplain functions or values and no short-term impacts would occur. The changes to the Central Riverfront would not alter the nature of the development in the floodplain or its functions and values and would have negligible long-term impacts to floodplains.
Water Resources	Construction-related impacts under the no-action alternative would result in short-term minor adverse impacts to water resources due to an increased potential for soil erosion and transport of surface pollutants into adjacent water bodies and storm sewers. As the site would continue to operate under current conditions, pollutants in stormwater runoff would enter the Mississippi River during storm events and long-term minor adverse impacts to water resources and water quality would occur.	Alternative 2 would result in minor short-term adverse impacts during construction due to an increased potential for soil erosion and transport of surface pollutants into adjacent water bodies and storm sewers. Minor long-term adverse impacts would occur due to an increase in water use for irrigation in the park and the continued stormwater runoff that contains pollutants entering the Mississippi River during storm events. Beneficial impacts would also occur as new methods used to reduce and treat stormwater and a reduction in the use of pesticides would be implemented.	Alternative 3 would result in moderate short-term adverse impacts to water resources during construction due to an increased potential for soil erosion and transport of surface pollutants into adjacent water bodies and storm sewers. Minor long-term adverse impacts would occur due to an increase in water use for irrigation in the park and the continued stormwater runoff that contains pollutants entering the Mississippi River during storm events. Beneficial impacts would also occur due to new methods used to reduce and treat stormwater, increased vegetation, and a reduction in the use of pesticides.
Visitor Use and Experience	Construction of the Park Over the Highway landscape under the no-action alternative would result in short-term negligible to minor adverse impacts as visitor access to the West Gateway would be limited during construction. Long-term negligible to minor adverse impacts to visitor use and experience would occur as new destinations, activities, and improvements would not be added to the park and flooding events would continue to limit access to the Central Riverfront. The Park Over the Highway landscape would have long-term beneficial impacts to visitor use and experience due to the improved landscaped pedestrian connection between downtown and the park.	Construction-related impacts under alternative 2 would result in short-term moderate adverse impacts to visitor access to activities and destinations within areas of the park that could be limited or changed to accommodate construction. In the long term, there would be beneficial impacts to visitor experience and satisfaction due to the increase in destinations, activities, and accessibility within the park and along the Central Riverfront and the improved landscaped pedestrian connection between downtown and the park. Minor adverse impacts to visitor use and experience would also occur due to a continued shortage of oversize and short-term vehicle parking.	Construction-related impacts under alternative 3 would result in short-term moderate adverse impacts to visitor access to activities and destinations within areas of the park that could be limited or changed to accommodate construction. Long-term minor adverse impacts to visitor use and experience would occur due to the change in the designed visitor's entry approach to the Visitor Center/Museum and a continued shortage of oversize and short-term vehicle parking. In the long term, there would be beneficial impacts to visitor experience and satisfaction due to the increase in opportunities, destinations, activities, and accessibility within the park and along the Central Riverfront and the new West Entry that would provide a direct pedestrian connection between downtown and the park.

Impact Topic	Alternative 1: No-Action Alternative	Alternative 2: Moderate Change	Alternative 3: Maximum Change
Socioeconomics	<p>Construction-related spending impacts from implementation of the Park Over the Highway landscape under the no-action alternative would have a short-term beneficial economic impact on the local economy as spending could generate revenue for individual businesses in the region. Long-term economic impacts in downtown St. Louis and the region would be negligible as no other broad changes in management, visitation, or operations would occur and visitorship levels and visitor spending in the local area would likely follow existing trends. There would be continued minor short- and long-term adverse impacts to socioeconomic resources as the livability benefits provided by the overall park would not be enhanced and periodic flooding along the Central Riverfront would continue. The park and the Central Riverfront would continue to have a short- and long-term local beneficial economic impact on the region driven by visitor spending and operational expenditures.</p>	<p>Construction-related spending impacts under 2 alternative would have a short-term beneficial economic impact on the local economy as spending would generate revenue for individual businesses in the region. Short-term minor adverse local impacts could also occur during construction if visitation declines while access to areas of the park is limited. Actions under alternative 2 would increase visitorship levels as well as visitor and operational spending by increasing and improving visitor facilities and infrastructure throughout the park and the Central Riverfront and connecting the park with the city and the river, which would have long-term beneficial economic impacts in downtown St. Louis and the region and would enhance the overall livability and social benefits the park and the Central Riverfront provide.</p>	<p>Construction-related spending impacts under 3 alternative would have a short-term beneficial economic impact on the local economy as spending would generate revenue for individual businesses in the region. Short-term local minor to moderate adverse impacts could also occur during construction if visitation declines while access to areas of the park is limited. Removal of the Arch Parking Garage would have long-term minor adverse impacts due to the loss of a revenue-generating facility. Actions under alternative 3 would increase visitorship levels as well as visitor and operational spending by increasing and improving visitor facilities and infrastructure throughout the park and the Central Riverfront and connecting the park with the city and the river, which would have long-term beneficial economic impacts in downtown St. Louis and the region and would enhance the overall livability and social benefits the park and the Central Riverfront provide.</p>
Operations and Management	<p>Operations impacts related to construction under the no-action alternative would include short-term minor adverse impacts as maintenance operations access to the Park Over the Highway construction areas would be limited. Flooding events would cause long-term minor to moderate adverse impacts on operations by limiting park maintenance access and require clean-up action by City of St. Louis staff. The lack of energy conservation and sustainable management practices would also contribute to the long-term adverse impacts.</p>	<p>Operations impacts related to construction under alternative 2 would include short-term minor to moderate adverse impacts due to increased use of energy and resources and limited access to areas of the park during construction. An increase in maintenance requirements would have a long-term minor adverse impact on park operations. Improved maintenance conditions, improved sustainability standards, and the potential for an overall reduction in energy and water use at the park would have long-term beneficial impacts</p>	<p>Operations impacts related to construction under alternative 3 would include short-term moderate adverse impacts due to increased use of energy and resources and limited access to areas of the park during construction. An increase in maintenance requirements and the loss of parking revenue would have a long-term minor adverse impact on park operations. Improved maintenance conditions, increased ticketing efficiency and revenue collection, improved energy efficiency and sustainability standards, and the potential for an overall reduction in energy and water use at the park would have long-term beneficial impacts.</p>

Table of Contents

Executive Summary.....	i
Purpose of and Need for Action.....	i
Objectives in Taking Action.....	i
Alternatives Considered.....	ii
Environmental Consequences.....	iv
 Purpose and Need for Action.....	 1
Introduction.....	1
Purpose and Need for Action.....	3
Objectives in Taking Action.....	3
Project Area and Scope of the NPS Environmental Assessment.....	5
Jefferson National Expansion Memorial Background.....	6
Scoping Process and Public Participation.....	9
Issues and Impact Topics.....	9
Issues Considered but Dismissed from Further Analysis.....	11
Related Laws, Policies, Plans, And Regulations.....	14
 Alternatives.....	 23
Introduction.....	23
Alternative 1: No-Action Alternative.....	25
Action Alternatives.....	28
Elements Common to All Action Alternatives.....	28
Alternative 2: Moderate Change.....	37
Alternative 3: Maximum Change.....	42
Mitigation Measures.....	50
How Alternatives Meet Objectives.....	54
Alternatives or Alternative Elements Considered but Not Carried Forward.....	65
Environmentally Preferable Alternative.....	68
NPS Preferred Alternative.....	68
 Affected Environment.....	 71
Introduction.....	71
Cultural Resources.....	71
Natural Resources.....	89
Visitor Use and Experience.....	95
Socioeconomics.....	101
Operations and Management.....	104

Environmental Consequences.....	107
General Methodology for Establishing Impact Thresholds and Measuring Effects by Resource.....	107
General Analysis Methods.....	107
Impact Thresholds.....	107
Cumulative Impact Analysis Methodology.....	108
Cultural Resources.....	114
Natural Resources.....	133
Visitor Use and Experience.....	149
Socioeconomics.....	155
Operations and Management.....	162
Consultation and Coordination.....	167
Cooperating Agencies.....	167
History of Public Involvement.....	167
The Scoping Process.....	168
List of Recipients of the Plan/Environmental Assessment.....	172
List of Preparers and Consultants.....	173
References.....	174
Glossary.....	180
Acronyms.....	183
Index.....	185

List of Figures

Figure: 1 2009 General Management Plan Selected Alternative Management Zones	1
Figure: 2 Framing a Modern Masterpiece: The City + The Arch + The River Winning Design	2
Figure: 3 Jefferson National Expansion Memorial location.....	4
Figure: 4 Map showing vicinity and urban location of the park.....	5
Figure 5: Alternative 1 site plan showing existing conditions and project areas.....	24
Figure 6: MoDOT vehicular movement changes to the North Gateway.....	27
Figure 7: Proposed North Pond Allée Planting	32
Figure 8: East Slopes.....	33
Figure 9: North and South Ponds.....	34
Figure 10: Central Riverfront Project Area.....	35
Figure 11: Central Riverfront Leonor K. Sullivan Concept Section.....	36
Figure 12: Alternative 2 Site Plan.....	37
Figure 13: Alternative 2 Proposed Security and Accessible Routes.....	38
Figure 14: Alternative 2 Proposed Plantings.....	39
Figure 15: Alternative 2 West Gateway.....	40
Figure 16: Alternative 2 North Gateway.....	41
Figure 17: Alternative 3 Site Plan.....	42
Figure 18: Alternative 3 Proposed Security and Accessible Routes.....	43
Figure 19: View of North Gateway and Eads Bridge.....	44
Figure 20: View of North Gateway and Eads Bridge.....	45
Figure 21: Alternative 3 Proposed Planting.....	46
Figure 22: Alternative 3 West Gateway.....	47
Figure 23: Alternative 3 North Gateway.....	49
Figure 24: Historic Architectural Resources within the Cultural Resources Impact Area.....	73
Figure 25: Gateway Arch and Reflecting Pond within the Park Grounds.....	74
Figure 26: The Old Courthouse and Luther Ely Smith Square.....	75
Figure 27: Lawn Directly Beneath the Gateway Arch.....	80

Figure 28: Reflecting Pond.....	83
Figure 29: Processional Walks and Allées of Uniform Trees along the Walks.....	89
Figure 30: Flooding along the Central Riverfront within the Floodplain.....	93
Figure 31: Project Area and 100-year Floodplain.....	94
Figure 32: Transportation and Circulation Existing Conditions.....	97
Figure 33: Pedestrian Bridge over I-70 across Memorial Drive.....	98
Figure 34: Accessible Walkways Existing Conditions.....	100
Figure 35: Visitors Gathering on the Grand Staircase and Central Riverfront.....	101
Figure 36: Central Riverfront along the Park.....	106

List of Tables

Table 1: Summary of Alternatives.....	55
Table 2: Summary of Environmental Consequences.....	61
Table 3: Annual Attendance, Jefferson National Expansion Memorial.....	95
Table 4: Graph of Annual Attendance, Jefferson National Expansion Memorial.....	95
Table 5: Cumulative Action Scenario.....	112

Appendices

Appendix A: Draft Floodplain Statement of Findings
Appendix B: U.S. Fish and Wildlife Correspondence
Appendix C: Tribal Consultations
Appendix D: Programmatic Agreement



1. Purpose and Need for Action

Jefferson National Expansion Memorial
Environmental Assessment for Implementing CityArchRiver Initiative Elements

Purpose and Need for Action

INTRODUCTION

The General Management Plan for Jefferson National Expansion Memorial (NPS 2009) established management zones and called for an international design competition to revitalize Jefferson National Expansion Memorial (the park) by improving connections to downtown St. Louis, Missouri and the riverfront and expanding programming, facilities and partnerships, while enhancing the visitor experience (Figure 1).

The winner of the design competition, Michael Van Valkenburgh Associates (MVVA) of New York, was selected by a jury from a field of five finalists in September 2010 (Figure 2). MVVA

presented updated information about the winning design to the public in January 2011 and January 2012 and has been refining their concept design through a series of discussions with the National Park Service (NPS) and the Great Rivers Greenway District (GRG). This project is part of a broader initiative known as the CityArchRiver 2015 Initiative, and is a unique and important opportunity to integrate the Gateway Arch, the park surrounding it, and the riverfront into the fabric of the city.

The park and the CityArchRiver 2015 Initiative are also identified as part of the America's Great Outdoors (AGO) initiative launched

Figure 1 2009 General Management Plan Selected Alternative Management Zones



by President Obama in 2011 to establish a 21st century conservation and recreation agenda and reconnect Americans to the outdoors. The CityArchRiver 2015 Initiative aligns with goals of the AGO by enhancing recreational access and opportunities, providing better access to the park's cultural resources, and creating partnerships with a variety of agencies and organizations.

As part of this effort, pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4332(2) (C)), the NPS has prepared an Environmental Assessment (EA) for an evaluation of alternatives to implement elements of the CityArchRiver 2015 Initiative and revitalize Jefferson National Expansion Memorial. The 2009 General Management Plan provided a broad analysis of potential impacts of the expansion of programs and facilities at the park; this EA provides a more site-specific analysis. The Council on Environmental Quality (CEQ) regulations (40 CFR 1502.20) encourage the use of a tiering process in these types of situations, thereby eliminating repetitive discussions of the same issues.

In addition, Department of the Interior regulations implementing NEPA (43 CFR 46.140) state that an "environmental assessment prepared in support of an individual proposed action can be tiered to a programmatic or other broader-scope environmental impact statement. Tiering to the programmatic or broader-scope environmental impact statement would allow the preparation of an environmental assessment and a finding of no significant impact for the individual proposed action, so long as any previously unanalyzed effects are not significant." This EA follows the tiering guidance in these regulations.

The proposed action involves physical changes to the park grounds and facilities and the Central Riverfront as a method for improving visitor access and experience, while better integrating the park into the downtown St. Louis area. The NPS and the Great Rivers Greenway District are using the EA process to engage the public, to develop a range of reasonable alternatives for implementing the proposed action, and to analyze the impacts of the alternatives.

Figure 2 Framing a Modern Masterpiece: The City + The Arch + The River 2015 Winning Design



THE JEFFERSON NATIONAL EXPANSION MEMORIAL 2009 GENERAL MANAGEMENT PLAN called for an international design competition to revitalize the park by improving connections to downtown St. Louis and the riverfront and expanding programming, facilities and partnerships, while enhancing the visitor experience. The design competition, Framing a Modern Masterpiece: The City + The Arch + The River 2015, explored approaches to facilitate this goal and led to the CityArchRiver 2015 Initiative elements assessed in this EA.

OBJECTIVES IN TAKING ACTION

The National Park Service considers objectives to be those goals that must be achieved to a large degree for the action to be considered a success (NPS 2001). All alternatives selected for detailed analysis must meet project objectives and resolve the purpose of and need for action. National Park Service objectives must be grounded in the park's enabling legislation, purpose, significance, and mission goals, and must be compatible with direction and guidance provided by the GMP, strategic plan, and/or other management guidance. Many of the objectives developed by NPS for this action incorporate or reflect the goals of the design competition relevant to those project components being considered in this EA. Additionally, goals for the Central Riverfront have been identified by the Great Rivers Greenway District, and are also integrated in the objectives listed below.

PURPOSE + NEED FOR ACTION

The purpose of the proposed action analyzed in this EA is to fulfill the goal of revitalizing Jefferson National Expansion Memorial, as called for by the selected action in the November 2009 Record of Decision (ROD) for the park's General Management Plan/ Environmental Impact Statement (GMP). While the GMP provided direction on the type of projects that could be implemented, the 2009 selected action called for the NPS, in close coordination with its partners, to initiate a design competition that would provide a wide breadth of ideas on how to meet this goal, and, ultimately, form the basis for the design of more specific projects.

The design competition began in December 2009 and the winning team and design were selected in September 2010. The NPS now needs to evaluate projects proposed by the winning team and park partners that have the potential to cause physical changes to the park grounds. Action is needed now so that projects may be finished in time for the 50th anniversary of completion of the Gateway Arch (October 28, 2015).

GENERAL

- Ensure that revitalization of the park reflects the iconic status of the Gateway Arch and embraces the Mississippi River, but does not violate requirements in the NPS Organic Act or NPS Management Policies 2006.
- Working with partners, catalyze increased vitality in the St. Louis region and create attractions to promote extended visitation to the Arch, the city, and the river.

CULTURAL RESOURCES

- Ensure that the revitalization of the park and improvements to the Central Riverfront preserve the integrity and honor the character-defining elements of the National Historic Landmark and relevant National Register Historic Districts.
- Avoid unacceptable impacts on the cultural landscapes, historic resources, and archeological resources as a result of revitalizing the park and improving the Central Riverfront.

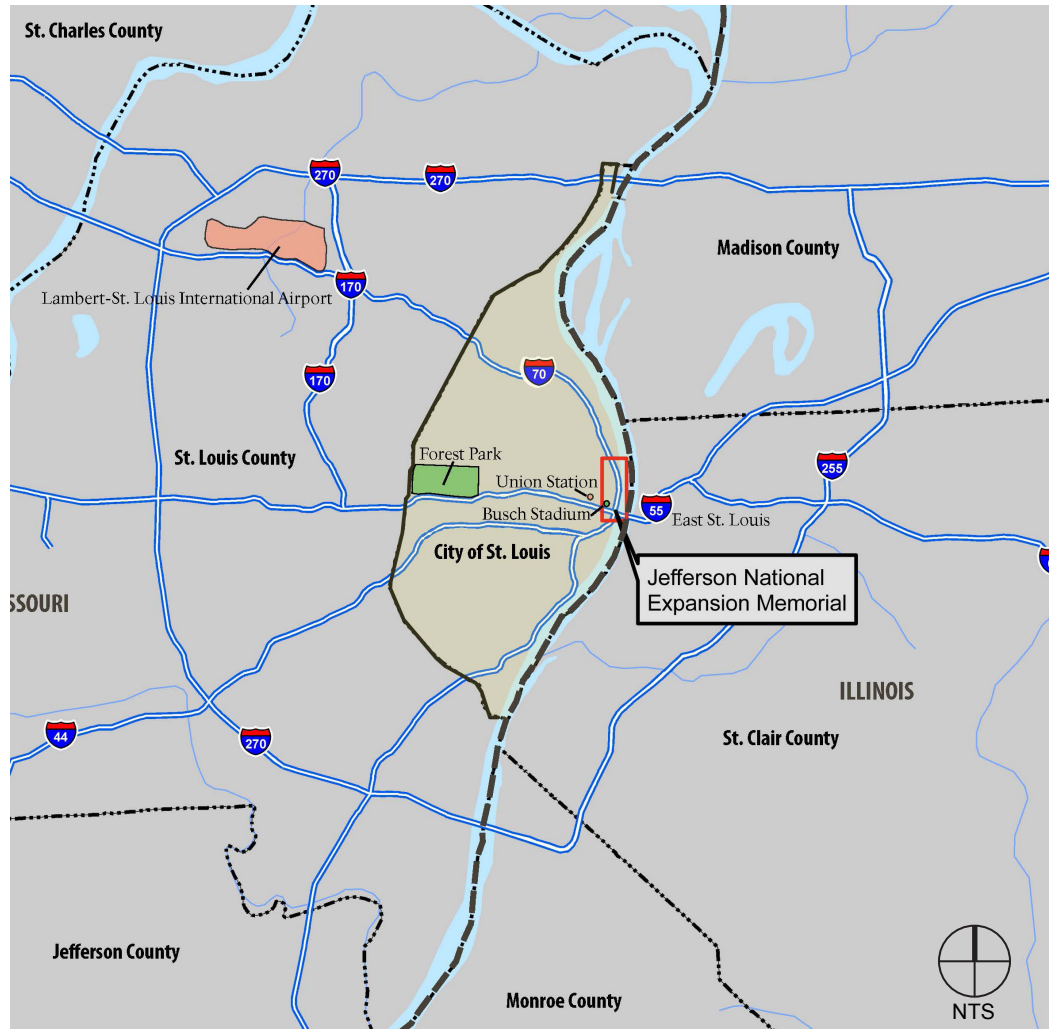


Figure 3 Jefferson National Expansion Memorial Location

VISITOR USE AND EXPERIENCE

- Ensure that revitalization of the park and the Central Riverfront improves connections amongst the city, the park, and the river.
- Enhance the experience at the park and along the Central Riverfront and reduce the adverse impacts from adjacent transportation systems.
- Ensure visitor safety and accessibility for people with disabilities is improved and that the experience at the park and along the Central Riverfront is enhanced by creating a welcoming and accessible environment.

INTERPRETATION/EDUCATION

- Improve visitor understanding of the purpose of the park, including the story of St. Louis as the gateway to American westward expansion.
- Along the Central Riverfront, provide opportunities for education connected to the Mississippi River and the historic levee.

PARK MANAGEMENT AND OPERATIONS

- Incorporate sustainable methods into park management and operations while minimizing impacts of revitalization on financial resources, staffing requirements, and long-term maintenance requirements; improve Central Riverfront operations by reducing flood-related closures and cleanup activities.

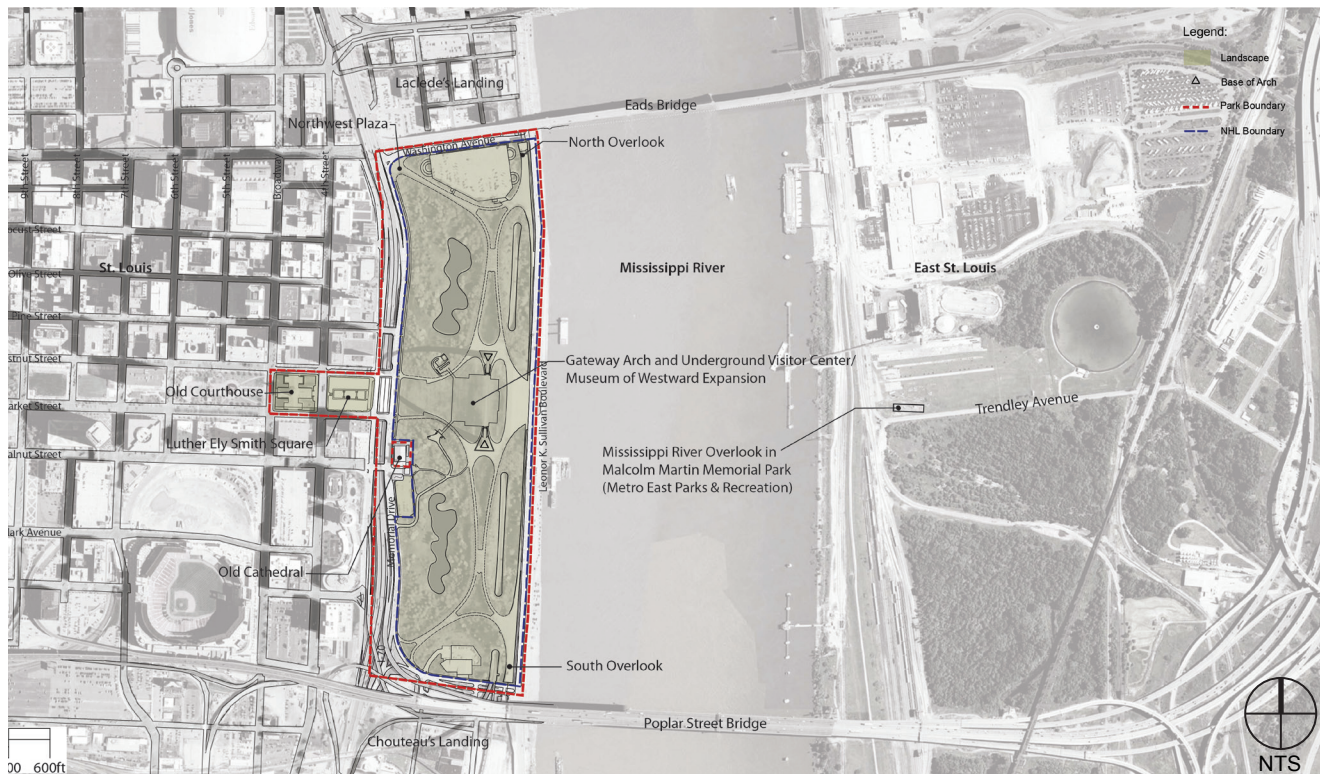


Figure 4 Map showing vicinity and urban location of the park

PROJECT AREA AND SCOPE OF THE NPS ENVIRONMENTAL ASSESSMENT

As described in the GMP, the Jefferson National Expansion Memorial is located entirely within the urban area of downtown St. Louis, Missouri (see Figures 3 and 4). It was the first Secretarial designation under the Historic Sites Act of 1935 (NPS 1994). The 91-acre park sits on the west bank of the Mississippi River and occupies what previously were forty city blocks between Eads Bridge and Poplar Street (NPS 1996a), bounded on the east by Leonor K. Sullivan Boulevard and primarily on the west by Memorial Drive, except for two blocks immediately west of Memorial Drive occupied by Luther Ely Smith Square and the Old Courthouse. The Central Riverfront is located along Leonor K. Sullivan Boulevard between the Mississippi River and the park, to the east and west, and Biddle Street and Chouteau Avenue on the north and south.

The projects being considered on park property and the Central Riverfront are part of the broader CityArchRiver 2015 Initiative. This initiative involves non-NPS projects and NPS projects on a longer-term planning horizon. For example, the Missouri

Department of Transportation (MoDOT) and the Federal Highways Administration (FHWA) are initiating a concurrent EA to assess the effects of proposed changes to I-70 and Memorial Drive, including the construction of a structure built over the depressed section of I-70 as well as changes to the freeway's ramp system. The surface of the structure would be available to and managed by the NPS to create a continuous landscape connection - a Park Over the Highway. The NPS and MoDOT/FHWA are formal cooperators on each agencies' NEPA documents, and will continue to work together to ensure the necessary compliance for these project elements are completed.

Other projects outside the park property associated with the CityArchRiver 2015 Initiative include proposed changes to Kiener Plaza. In addition, proposed changes to the East St. Louis side of the Mississippi River are still being considered, and are not ready for a decision at this time. While the projects noted above are not considered as part of the NPS proposed action, they have been addressed in this EA, where appropriate, as part of the cumulative impacts analysis in Chapter 4.

JEFFERSON NATIONAL EXPANSION MEMORIAL BACKGROUND

HISTORY OF THE PARK

Jefferson National Expansion Memorial was the brainchild of Luther Ely Smith, a prominent St. Louis attorney. Smith convinced the city mayor, Bernard Dickmann, and prominent St. Louis businessmen that “...a suitable and permanent public memorial to the men who made possible the western territorial expansion of the United States, particularly President Jefferson,” should be built on the St. Louis riverfront. On December 21, 1935, President Franklin D. Roosevelt signed Executive Order 7253 providing direction to the Secretary of the Interior for the acquisition and development of Jefferson National Expansion Memorial. Between 1939 and 1942, forty blocks of condemned buildings, remnants of the once-proud riverfront district, were razed. Only the Old Courthouse and the Old Cathedral are still standing today. Just as progress was being made on the park’s development, the United States was plunged into World War II, and work on the park was halted.

With the end of the Second World War, Luther Ely Smith resumed the project with an architectural competition. Held in two stages, the competition was judged by a jury of seven nationally recognized architectural and design professionals predisposed toward the Modern style. This predisposition influenced most of the entrants to assume a modern approach to their design submissions. The competition ended in February 1948 and, by secret ballot, the panel of seven unanimously chose design number 144, submitted by Eero Saarinen and the design team that included sculptor and artist Lily Saarinen (Eero’s spouse), landscape architect Dan Kiley, illustrator J. Henderson Barr, and designer Alexander Girard. The central feature of the design was a soaring stainless steel arch. Ground breaking for the Gateway Arch occurred on June 23, 1959, and the structure was completed in October of 1965. The GMP provides a more detailed description of the park’s administrative history in Chapter 1 (p. 1-3 and 1-4) and in Chapter 3 (p. 3-3 to 3-7). The full administrative history

The Gateway Arch is an inverted, weighted catenary curve (a type of curve created by supporting both ends of a hanging chain). It soars 630 feet from its base on a constructed landform on the bank of the Mississippi River. The site is recognized as a deliberate built experience, a complete design for a public monument, and a masterpiece composition of integrated structure, landscape, and interpretation.

of the park is covered in two Administrative History reports, one by Sharon A. Brown documenting the park’s administrative history between 1933 and 1980 and one by Bob Moore documenting the park’s history from 1980 to 1991. Both of these documents are available on the park’s website and are referenced in the bibliography of this EA.

PURPOSE AND SIGNIFICANCE OF THE PARK

Every unit within the national park system has specific reasons for its establishment as a national park. Purpose statements reaffirm the reasons each unit was designated, help reinforce the foundation for future management and use, and provide a rationale against which all proposed actions can be measured. These statements help visitors, cooperating agencies, partners, members of the community, and other users to understand the framework in which park managers make decisions. The following purpose statements have been refined over time and are based on Jefferson National Expansion Memorial’s designation by Executive Order 7253 and subsequent legislative history, as well as laws and policies governing the management of all national park system units. The full text of the executive order establishing the park, its purpose and significance, and other park legislative history can be found in Appendix A of the GMP.

- The park commemorates, through a designed memorial, Thomas Jefferson’s vision of building a unified continental nation and St. Louis’ role as a confluence

and gateway of the American westward expansion during the 19th century.

- The park interprets the key individuals and cultural groups involved in exploring, exploiting, and inhabiting the western lands from the Mississippi River to the Pacific Ocean.
- The park preserves the architecturally significant Old Courthouse as the site of the Dred Scott case, which divided North and South over the extension of slavery into the western territories and led to the American Civil War.

Significance statements capture the essence of the park's importance to our country's natural and cultural heritage and historical events that occurred at this location. Significance statements do not inventory resources, but rather describe the unit's distinctiveness and place the park within its regional, national, and international contexts. Defining significance helps managers make decisions and focus their efforts and funding on preserving the resources and values necessary to accomplish the park's purpose.

St. Louis was politically and geographically pivotal in the westward expansion of the United States during the 19th century. Significant historic events associated with westward expansion, exploration, and the fur trade occurred at the site, including the transfer of the Louisiana Territory from Spain to France and then to the United States, the negotiation of numerous treaties removing Indian tribes from their lands, and the provisioning and return of the Lewis and Clark expedition. St. Louis was the starting point for numerous explorers, fur traders, overland pioneers, and others who made the journey west.

In 1846, Dred and Harriet Scott sued for their freedom from slavery at the Old Courthouse in St. Louis. This historic case, argued in 1847, 1850, 1852, and 1854, resulted in an 1857 U.S. Supreme Court decision which determined that all "people of color," enslaved or free, could not become citizens of the United States, and removed restrictions on the extension

of slavery into the U.S. Western Territories, further dividing the North and South and eventually leading to the Civil War.

The Old Courthouse is a prime example of mid-19th century Greek Revival civic architecture, utilizing the very latest technological innovations and materials available at the time, including the first cast iron dome completed in the United States.

The park is recognized globally as an exceptional example of mid-20th century Modern design. The soaring Gateway Arch is one of the world's great architectural and engineering achievements. It is a tangible symbol of St. Louis' historical role as the "Gateway to the West," purposefully located on the footprint of the original 1764 village of St. Louis. The site is recognized as a deliberate built experience, a complete design for a public monument, and a masterpiece composition of integrated structure, landscape, and interpretation.

The museum objects and archival records in the park's collection document the westward expansion of the United States and the creation, planning, and building of the park. The collection is used in ongoing research by scholars and staff and is the basis of the historic site's interpretation programming and museum exhibits.

FUNDAMENTAL RESOURCES AND VALUES OF THE PARK

Fundamental resources and values are closely related to the park's designated purpose and warrant primary consideration in evaluating plans to revitalize the park, since they are critical to maintaining the park's purpose and significance. If these resources are allowed to deteriorate, the purpose and/or significance of the park could be jeopardized. A loss or major impact to a fundamental resource or value could constitute impairment, violating the 1916 NPS Organic Act. During the GMP process, the planning team, with assistance from resource specialists and public comment, identified the following fundamental resources and values for Jefferson National Expansion Memorial:

- Jefferson National Expansion Memorial Gateway Arch and designed landscape – a National Historic Landmark – integrated by a purposeful approach, scale, and aesthetic quality, including the relationship to the river and to the Old Courthouse and corresponding views.
- The Old Courthouse, site of the Dred Scott case and a tangible reminder of intangible concepts such as civil rights, citizenship, and freedom, as well as an innovative and outstanding example of mid-19th century civic architecture.
- The museum objects and archival records in the park collection, vital to the interpretation and education of the visiting public on the topic of the westward expansion of the United States.
- The iconic, inspirational, and transcendent nature of the Gateway Arch as one of the unique and enduring symbols of national identity.

PRIMARY INTERPRETIVE THEMES OF THE PARK

Primary interpretive themes are the most important stories, concepts, and ideas communicated to the public about the park. They are the core of all educational programs and media provided to visitors. From these themes, listed below, visitors can form intellectual and emotional connections with park resources and experiences.

- Thomas Jefferson's vision of the West as a land that would foster and sustain democratic values shaped U.S. policy, including the Louisiana Purchase and the Lewis and Clark Expedition, thus enabling the westward expansion of the 19th century.
- The Gateway Arch symbolizes the westward expansion of the 19th century, an unprecedented and rapid migration of people into the trans-Mississippi West which represented hope, opportunity, and promise for some and religious freedom for others, while also causing cultural clashes, environmental destruction, and the taking of land from American Indians.
- The design and scale of the Gateway Arch integrated with its setting elevates the timeless form of an arch into a structure that is among the world's architectural, artistic, and engineering marvels.
- The Dred Scott Decision was an important event in United States history which spotlighted the potential expansion of slavery into the American West and helped exacerbate regional tensions which led to the American Civil War.
- The architecturally significant Old Courthouse was a crucible of change that galvanized the struggle for civil rights, justice, freedom, and equality, and highlighted the rights and responsibilities of citizenship in St. Louis and the United States.
- The American West is both a symbol and a physical reality that attracts people the world over and continues to shape the national identity.

- St. Louis’ strategic location near the confluence of the Mississippi and Missouri Rivers made it a logical hub of exploration, commerce, military activity, cultural encounter, and transportation as the United States expanded westward during the 19th century.

SCOPING PROCESS AND PUBLIC PARTICIPATION

NEPA regulations require “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.” The scope of issues to be addressed was discussed at an internal scoping meeting on May 18, 2011, held with the NPS Interdisciplinary Planning Team convened for this plan, as well as many park staff, design team members, CityArchRiver 2015 Foundation representatives, and MoDOT representatives.

NPS published a Notice of Intent to prepare an EA in the Federal Register on July 26, 2011, and in July 2011 the Superintendent announced a 30-day public scoping period to solicit comments on the scope of the project. During this scoping period, the NPS invited the public and all interested parties to comment on all aspects of the project, including concerns or issues related to the project’s impacts. The NPS accepted comments via the NPS Planning, Environment and Public Comment (PEPC) website at www.parkplanning.nps.gov/jeff, by mail, and by hand delivery to the park. The public scoping process is ongoing throughout the planning process. The “Consultation and Coordination” chapter provides additional information on the scoping process.

National Historic Landmark — A district, site, building, structure, or object of national historical significance, designated by the Secretary of the Interior under authority of the Historic Sites Act of 1935 and entered in the National Register of Historic Places.

Scoping — An early and open process for determining the extent and variety of issues to be addressed and for identifying the significant issues related to a proposed action (40 CFR 1501.7).

ISSUES AND IMPACT TOPICS

This EA considers the proposed action and associated effects in light of the key resources that contribute to the physical, cultural, and human environment of Jefferson National Expansion Memorial and the Central Riverfront. To properly assess the relative impacts of the alternatives, specific topics that would be affected are evaluated. Through the internal and public scoping process, the NPS identified the following topics and issues associated with implementation of the alternatives for analysis in this EA.

CULTURAL RESOURCES

This topic considers the cultural resources that are present on the park site and within the surrounding area. Cultural resources include historic buildings, structures, sites, objects, and districts; cultural landscapes; archeological resources; and museum collections. As these resources exist within the park and along the Central Riverfront, and they could be affected by construction and renovation activities and new infrastructure and facilities, this impact topic was retained for further analysis in this EA. The Gateway Arch and Arch grounds are designated as a National Historic Landmark (NHL). Like all NHLs, the park’s historic resources are vitally important to its existence and purpose.

Agencies that have direct or indirect jurisdiction over historic properties are required by Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, to take into account the effect of any undertaking on properties listed or eligible for listing in the National Register of Historic Places. Consultation under Section 106 of the NHPA is ongoing as a separate but concurrent process with this EA. It is briefly described below; the “Consultation and Coordination”

chapter provides additional information on the Section 106 process.

Section 106 consultation regarding proposed changes at the park occurred during the GMP planning process and for the design competition, *Framing a Modern Masterpiece: The City + The Arch + The River* 2015. In January 2011, the NPS resumed consultation with the Missouri State Historic Preservation Officer, the Advisory Council on Historic Preservation, Tribal Governments, and other consulting parties. As part of the process, the NPS identified historic properties listed in or eligible for listing in the National Register of Historic Places within the broadly defined area of potential effects of the revitalization of the Jefferson National Expansion Memorial. However, due to the relative uncertainty of the nature of all of the potential projects or actions that may stem from the revitalization, the NPS and its consulting parties cannot yet fully assess the potential effects of these projects or actions on historic properties. Therefore, the NPS and its consulting parties entered into a programmatic agreement (PA) in order to establish a process to review site specific design as it becomes available and to assess and resolve adverse effects in accordance with 36 CFR 800.14(b)(1)(ii). The PA is included in Appendix D of this environmental assessment.

Therefore, this EA will document impacts to cultural resources as a result of implementing these projects on park properties and along the Central Riverfront. A separate assessment of effect under Section 106 of the NHPA will be made as appropriate.

NATURAL RESOURCES

The physical and biological resources of the park, the Central Riverfront, and its surrounding environment are an important component of the park. The park's physical setting on the banks of the Mississippi River shapes both the visitor experience and surrounding environmental context. Construction and renovation activities and new infrastructure and facilities could impact certain natural resources, including vegetation, soundscape, and water resources and stormwater management. Alternatives considered in this EA would require

construction within the floodplain of the Mississippi River. Therefore, this impact topic was retained for further analysis.

VISITOR USE AND EXPERIENCE

Visitor use and experience includes visitor opportunities and use such as information, interpretation, and education, as well as recreational activities. It also includes pedestrian and bicycle circulation, parking, and accessibility, or barrier free access. Visitor use and experience would be affected by construction and renovation activities and new infrastructure and facilities; therefore, this impact topic was retained for further analysis.

SOCIOECONOMICS

Because the park is located in downtown St. Louis, regional socioeconomic trends affect the park, and the park contributes to the regional economy. The park attracts millions of visitors each year. Given the importance of the park as a regional attraction, as well as a nationally and internationally recognized icon, social and economic considerations extend beyond the physical boundaries of the park. Construction and renovation activities as well as new infrastructure and facilities have the potential to affect socioeconomic resources and this topic was retained for further analysis.

NPS OPERATIONS AND PARTNERSHIPS

Each of the actions described in the proposed alternatives would affect the operation and management of the park in different ways. Changes in staffing levels, visitor use activities, new facilities, infrastructure improvements, and visitor attractions all have implications for NPS operations. These changes have the potential to affect education and interpretation programs and services, curatorial objects management, grounds and facility maintenance and management, law enforcement and security functions, overall administrative staffing and duties, and energy requirements and conservation/sustainability efforts. Therefore, this impact topic was retained for further analysis.

ISSUES CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS

Some impact topics that are commonly considered in an environmental assessment were not relevant to this assessment, because the proposed action would have no impact or a negligible to minor impact on the resource, or because the resource does not occur within the project area. These topics were identified as follows:

LAND USE

Land uses surrounding the park and the Central Riverfront would not be modified by the alternatives analyzed in this EA. Additionally, the proposed changes are consistent with local land use laws. Therefore, this topic was dismissed from detailed analysis.

ENVIRONMENTAL JUSTICE

Executive Order 12898, Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations, was published in February 1994 and requires federal agencies to identify and address disproportionately high and adverse human health or environmental impacts of its programs, policies, and activities on minority and low-income populations. In their guidance document, the Environmental Protection Agency (EPA) defines a community with potential Environmental Justice indicators as one that has a greater percentage of minority or low-income populations than an identified reference community (state or county) (EPA 2004). The EPA guidance defines a minority as “Individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. Minority populations are considered groups of minority individuals in which, “(a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis” (CEQ 1997).

EPA guidance further notes, “. . . Low-income populations in an affected area should be identified with the annual statistical poverty thresholds from the Bureau of the Census’ Current Population Reports, Series P-60 on Income and Poverty. In identifying low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect” (CEQ 1997). The Census Bureau defines a poverty area as a census tract with 20 percent or more of its residents below the poverty level (U.S. Census 2012).

According to the American Community Survey, the census tract surrounding the park has a minority population of less than 50 percent and is not considered a poverty area; however, the census tracts directly to the north and south of the park, into which the Central Riverfront extends, have minority populations greater than 50% and higher poverty levels. The census tract directly across the river in East St. Louis also has a minority population of greater than 50% and higher poverty levels (U.S. Census 2010). The City of St. Louis has higher percentages of individuals living in poverty and a higher percentage of minority populations than either St. Louis County or the State of Missouri. In addition, the City of East St. Louis has higher percentages of individuals living in poverty, and a higher percentage of minority populations than either St. Clair County or the State of Illinois (U.S. Census 2010).

As low income and minority populations exist within the City of St. Louis and the City of East St. Louis, the EPA’s “Environmental Justice in the NEPA Process” website (<http://www.epa.gov/compliance/nepa/nepaej/>) was consulted to determine how to consider potential impacts to Environmental Justice communities (EPA 2012). The Environmental Justice flowchart, provided in the U.S. Air Force guidance on Environmental Justice and available on EPA’s Environmental Justice NEPA website as a model framework, indicates that analysis of Environmental Justice does not need to occur if no impact would be caused

by the proposed action or if the impact is not considered adverse. The guidance defines an adverse impact as an impact that “would have a negative effect on human health or the environment that is significant, unacceptable, or generally above accepted norms” (U.S. Air Force 1997).

Adverse impacts, as defined by the U.S. Air Force, are not anticipated as a result of the proposed alternatives. It is also highly unlikely that the actions taken by the project would introduce materials into the environment that would have indirect adverse health impacts or impact the economic conditions of low income populations in St. Louis or East St. Louis. Any construction-related impacts from noise and air emissions would be short-term and temporary and best management practices would be implemented during construction. While there are communities with populations of minorities or low-income peoples in the vicinity of the project, they would not be directly affected by the alternatives and the alternatives would not result in any impacts that would be specific to a minority or low-income community.

Therefore, based on the EPA and U.S. Air Force guidance, Environmental Justice was dismissed as an impact topic requiring detailed analysis.

PRIME AND UNIQUE FARMLANDS

There are no farmlands within Jefferson National Expansion Memorial or along the Central Riverfront. Therefore, this topic was dismissed from detailed analysis.

WILD AND SCENIC RIVERS, ECOLOGICALLY CRITICAL AREAS, OR OTHER UNIQUE NATURAL RESOURCES

The park and the Central Riverfront have been heavily manipulated by human activity and development; as such, there are no existing ecologically critical areas or unique natural resources within the bounds of the park or the Central Riverfront. Thus, this impact topic was dismissed from detailed analysis.

SACRED SITES

Currently there are no known sacred sites in the general area of the park or Central Riverfront, but continued efforts to consult with interested groups will be made by the NPS through the NEPA and Section 106 processes. A sacred site must be identified by an Indian tribe or individual, as defined by Executive Order 13007:

any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site.

Because no sacred sites have been identified within the park, this issue was dismissed from further analysis. Should any sacred sites be identified after the publication of the EA, they would be treated in accordance with the applicable laws and policies, and appropriate consultation would be undertaken.

INDIAN TRUST RESOURCES

Indian trust resources are “those natural resources reserved by or for Indian tribes through treaties, statutes, judicial decisions, and executive orders, which are protected by a fiduciary obligation on the part of the United States” (NPS 2006). There are no Indian trust resources within Jefferson National Expansion Memorial and therefore the topic was dismissed from detailed analysis.

ETHNOGRAPHIC RESOURCES

Ethnographic resources are defined by the NPS as “the cultural and natural features of a park that are of traditional significance to traditionally associated peoples. These peoples are the contemporary park neighbors and ethnic or occupational communities that have been associated with a park for two or more generations (40 years), and whose interests in

the park's resources began before the park's establishment" (NPS 2006). No ethnographic resources have been documented or are known to be associated with the park. Thus, this topic was dismissed from detailed analysis. Should any ethnographic resources be identified after the publication of the EA, they would be treated in accordance with the applicable laws and policies, and appropriate consultation would be undertaken.

AIR QUALITY AND CLIMATE CHANGE

Existing emission sources in the vicinity of the park and the Central Riverfront include vehicular emissions from sources such as buses, visitors looking for parking, and visitor drop-offs and pick-ups; emissions from facility operations and park grounds maintenance and operations; and riverfront activities such as boat tours, shipping/commercial boating activities, and helicopter tours. Global climate change resulting from the accumulation of emissions of heat-trapping gases in the atmosphere has the potential to increase risks to human health and to terrestrial and aquatic ecosystems (EPA 1997). The Clean Air Act of 1963 (42 USC 7401 et seq.) was established to promote the public health and welfare by protecting and enhancing the nation's air quality. The Clean Air Act and the 1970 and 1990 Clean Air Act Amendments require public land managers, including NPS Park Superintendents, to protect air quality in national parks.

Construction activities associated with the alternatives have the potential to produce dust and result in short-term increases in vehicle emissions in the vicinity of the proposed site. However, these emissions would be temporary in nature (only during construction). To minimize potential effects, Best Management Practices (BMPs) related to vehicle and equipment emissions and dust suppression would be implemented. Construction emissions would not impact regional or global climatic patterns.

Increased emissions due to facility expansion and an increase in visitation could occur in the long term, but not to the point where there would be more than negligible effects from an increase in emissions and local

greenhouse gases or any measurable effects on global greenhouse gas levels. Sustainable maintenance and building practices would be implemented to minimize potential effects. Thus, short- and long-term impacts would be negligible and air quality and climate change were dismissed from further analysis.

WETLANDS

The National Wetlands Inventory (NWI) indicates that there are at least two wetlands in the park. Both of the wetlands are classified in the NWI as excavated wetlands, indicating they may be artificially created. A site visit was conducted as part of the GMP to verify the excavated wetlands illustrated on the NWI maps. The wetlands shown on the park grounds are the two designed reflecting pools. The reflecting pools are not wetlands as defined by the U.S. Army Corps of Engineers (USACE) and EPA and do not fall under the jurisdiction of the USACE. Therefore, wetlands were dismissed from detailed study.

SOILS AND GEOLOGIC RESOURCES

The alternatives would require excavation and site grading for proposed construction; however, to the extent feasible, excavated soils would be amended and stockpiled for reuse on the site. Best management practices would be utilized during construction to prevent soil erosion. Because the types of soils that may be impacted are either artificial fill or typical soils that have no important characteristics, this topic was dismissed from further consideration.

WILDLIFE

The park and the Central Riverfront are within a highly urbanized landscape and resident wildlife found in the park and along the Central Riverfront would be wildlife generally adapted to urban areas, including small mammals such as squirrels and raccoons as well as various birds and other transient wildlife. The Mississippi River is also a major corridor for migratory birds. The St. Louis chapter of the National Audubon Society forged an agreement with the National Park Service to turn off the lights that illuminate the Gateway Arch during the spring and fall

migration to minimize any interference with birds' ability to navigate at night.

There is limited habitat for wildlife within the park and no riparian habitat on the west bank of the Mississippi River along the Central Riverfront. The park grounds consist of well-maintained turf areas beneath an overstory of ash, oak, pine, and cypress trees. There is little cover and few sources of food available for wildlife other than tree seeds and acorns. Wildlife that utilizes the park and Central Riverfront as habitat or for food sources could be temporarily displaced during construction; however, after construction the urbanized landscape of the park and the Central Riverfront would be maintained. Any impacts to wildlife would be minimal due to a lack of habitat in the park and along the Central Riverfront. Therefore, this topic was dismissed from further analysis

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES

According to the U.S. Fish and Wildlife Service's website, the following listed threatened and endangered species are known to occur in St. Louis City, Missouri, St. Louis County, Missouri and St. Clair County, Illinois: Gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), Least tern (*Sterna antillarum*), Pallid sturgeon (*Scaphirhynchus albus*), Pink mucket (pearlymussel) (*Lampsilis abrupta*), Scaleshell mussel (*Leptodea leptodon*), Sheepnose mussel (*Plethobasus cyphus*), Snuffbox mussel (*Epioblasma triquetra*), Spectaclecase (*Cumberlandia monodonta*), Illinois cave amphipod (*Gammarus acherondytes*), Decurrent false aster (*Boltonia decurrens*), Mead's milkweed (*Asclepias meadii*), Eastern prairie fringed orchid (*Platanthera leucophaea*), and Running buffalo clover (*Trifolium stolonifereum*) (USFWS 2012).

While the above listed threatened and endangered species may be present at locations within St. Louis City and County, Missouri and St. Clair County, Illinois, the project area includes only those lands in downtown St. Louis within the existing park boundary and the adjacent Central Riverfront. No threatened and endangered species are known to be present within the project area. Due

to the urban environment and associated disturbances, it is highly unlikely that suitable habitat to support listed species would be available, now or in the future. Therefore, this topic was dismissed from further analysis

Additionally, although improvements to the east slopes of the park and the Central Riverfront would occur within the 100-year floodplain of the Mississippi River, the project must be designed to ensure no rise in the 100-year base flood elevation after improvements are constructed. This would minimize potential for any impacts to listed species which may occur in or near the river. The NPS sent a consultation letter to the U.S. Fish and Wildlife Service regarding the determination that the project would have no effect on listed species, their habitats, or proposed or designated critical (see Appendix B). Impacts to threatened and endangered species would be minimal as there are no known species within the project area and due to a lack of habitat in the park and along the Central Riverfront.

RELATED LAWS, POLICIES, PLANS, AND REGULATIONS

GUIDING LAWS AND POLICIES

Guiding legislative or judicial requirements and formal agency agreements are often established concurrently with the creation of a unit of the national park system, but can occur at a later date. The proposed action must work within the framework of these laws and policies. Relevant laws and policies include the following:

1916 Organic Act

The Organic Act (16 USC § 1) provides the fundamental management direction for all units of the national park system:

[P]romote and regulate the use of the Federal areas known as national parks, monuments, and reservations. . . by such means and measure as conform to the fundamental purpose of said parks, monuments and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the

same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

The national park system General Authorities Act (16 USC § 1a-1 et seq.) affirms that while all national park system units remain “distinct in character,” they are “united through their interrelated purposes and resources into one national park system as cumulative expressions of a single national heritage.”

The act makes it clear that the NPS Organic Act and other protective mandates apply equally to all units of the system. Further, amendments state that NPS management of park units should not “derogat[e]...the purposes and values for which these various areas have been established.”

The 1978 Redwood Amendment supplemented the General Authorities Act and amended the Organic Act to direct the NPS to protect, manage and administer park lands “in light of the high public value and integrity of the National Park System,” and to refrain from administering park lands in a way that degrades “the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress” (16 USC 1a-1).

National Environmental Policy Act, 1969, as Amended

NEPA is implemented through regulations of the Council on Environmental Quality (40 CFR 1500–1508). The Department of Interior has established regulations to use for compliance with NEPA and CEQ regulations (43 CFR 46.10–450). The NPS has in turn adopted procedures to comply with the act and the CEQ regulations, as found in Director’s Order 12: Conservation Planning, Environmental Impact Analysis, and Decision Making (NPS 2011), and its accompanying Handbook (NPS 2001). This EA complies with NEPA and the procedures outlined in Director’s Order 12.

CEQ regulations (40 CFR 1502.20), Department of Interior NEPA regulations (43 CFR 46.140), and Section 7.4 of the NPS DO-12 Handbook encourage the use of a

tiering process to establish a procedural connection between a large-scale planning document and the more site-specific projects being developed. CEQ regulations (40 CFR 1502.20) encourage the use of a tiering process to eliminate repetitive discussion of the same issues when a broader NEPA document was previously published. The Department of Interior NEPA regulations (43 CFR 46.140) provide more specific direction on tiering and state that an “environmental assessment prepared in support of an individual proposed action can be tiered to a programmatic or other broader-scope environmental impact statement. An environmental assessment may be prepared, and a finding of no significant impact reached, for a proposed action with significant effects, whether direct, indirect, or cumulative, if the environmental assessment is tiered to a broader environmental impact statement which fully analyzed those significant effects. Tiering to the programmatic or broader-scope environmental impact statement would allow the preparation of an environmental assessment and a finding of no significant impact for the individual proposed action, so long as any previously unanalyzed effects are not significant.” In addition, these regulations state that “to the extent that any relevant analysis in the broader NEPA document is not sufficiently comprehensive or adequate to support further decisions, the tiered NEPA document must explain this and provide any necessary analysis.”

National Historic Preservation Act (1966)

The NHPA of 1966, as amended, is the guiding legislation for the preservation of historic properties. As broadly defined by 36 CFR 800, historic properties are “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places.” Maintained by the NPS, the National Register of Historic Places is the nation’s official list of cultural resources worthy of preservation.

Pursuant to Section 106 of the NHPA, federal agencies are required to consider the effects of a proposed project on properties listed in, or eligible for listing in, the National Register of Historic Places. In the event that a project may affect a historic property the lead agency must

enter into consultation with the State Historic Preservation Officer, the Advisory Council on Historic Preservation, and other interested agencies and individuals to identify historic properties that could be potentially affected, assess potential adverse effects, and resolve the adverse effects through mutually agreed upon mitigation measures.

Section 110 of the NHPA sets out broad historic preservation responsibilities for federal agencies, ensuring that preservation is fully integrated into ongoing programs.

The Secretary of the Interior designated Jefferson National Expansion Memorial Gateway Arch an NHL in 1987. The government of the United States designates NHLs as places of exceptional national significance worthy of special protection under the National Historic Sites Act of 1935 and Section 110 (f) of the National Historic Preservation Act (NHPA) of 1966, as amended. The over 62-acre Jefferson National Expansion Memorial Gateway Arch National Historic Landmark includes the Gateway Arch and surrounding designed landscape.

Management Policies 2006

The NPS Management Policies 2006 (NPS 2006) is the basic NPS-wide policy document, adherence to which is mandatory unless specifically waived or modified by the NPS Director or certain Departmental officials, including the Secretary of the Interior. Actions under this EA are guided in part by these management policies. In addition to determining the environmental consequences of implementing the preferred and other alternatives, NPS Management Policies 2006 (Section 1.4) requires analysis of potential effects to determine whether or not proposed actions would impair a park's resources and values.

The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park resources and values.

However, the laws do give the National Park Service the management discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of the park. That discretion is limited by the statutory requirement that the National Park Service must leave resources and values unimpaired unless a particular law directly and specifically provides otherwise.

The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values (NPS 2006). Whether an impact meets this definition depends on the particular resources that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact on any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or;
- identified in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated. Impairment may result from visitor activities; NPS administrative activities; or activities undertaken by concessioners, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park.

Impairment findings are not necessary for visitor experience, socioeconomics, public health and safety, environmental justice, land use, and park operations, etc., because impairment findings relate back to park resources and values. Updated guidance in Non-Impairment Determinations and the NPS NEPA Process, issued in October 2011, requires the analysis of impairment be done only for the selected alternative and that the determination be appended to the decision document. An impairment finding for the selected alternative will be prepared based upon the analysis of impacts in this document and made part of the decision document.

Specific sections of the NPS Management Policies 2006 are particularly relevant to the proposed alternatives. The protection of Natural Resources, addressed in Section 4.1.3, Evaluating Impacts on Natural Resources, requires the NPS to ensure that the environmental costs and benefits of proposed operations and development are fully and openly evaluated before taking actions that may impact the natural resources of parks, and that mitigation measures that include principles of sustainable park management be included.

Floodplains are addressed in Section 4.6.4. This section states that the NPS will: “(1) manage for the preservation of floodplain values; (2) minimize potentially hazardous conditions associated with flooding; and (3) comply with the NPS Organic Act and all other federal laws and executive orders related to the management of activities in flood-prone areas, including Executive Order 11988 (Floodplain Management), the National Environmental Policy Act, applicable provisions of the Clean Water Act, and the Rivers and Harbors Appropriation Act of 1899.

Section 5.3.1 deals with the Protection and Preservation of Cultural Resources and notes that the NPS will protect cultural resources through effective means without compromising the integrity of the resources. The treatment of Archeological Resources, Cultural Landscapes, Historic and Prehistoric Structures, and Museum Collections are addressed in Section 5.3.5.1, Section 5.3.5.2, Section 5.3.5.4, and Section 5.3.5.5, respectively.

The proposed changes to the park would be subject to the requirements set forth for the protection of these resources.

Section 9.1.3 deals with Construction and requires the incorporation of sustainable principles and practices into design, siting, construction, building materials, utility systems, recycling of all unusable materials, and waste management. It also requires the implementation best management practices for all phases of construction activity.

Director’s Order 12: Conservation Planning, Environmental Impact Analysis, and Decision Making and Handbook

NPS Director’s Order 12 (NPS 2011) and its accompanying handbook (NPS 2001) provides the foundation for how the NPS complies with NEPA. Director’s Order 12 and its handbook set forth a planning process for incorporating scientific and technical information and establishing a solid administrative record for NPS projects. Director’s Order 12 requires that impacts to park resources be analyzed in terms of their context, duration, and intensity. It is crucial for the public and decision makers to understand the implications of those impacts in the short and long term, cumulatively, and within context, based on an understanding and interpretation by resource professionals and specialists.

Director’s Order 28: Cultural Resource Management

This director’s order sets forth the guidelines for management of cultural resources, including cultural landscapes, archeological resources, historic and prehistoric structures, museum objects, and ethnographic resources. This order calls for the NPS to protect and manage cultural resources in its custody through effective research, planning, and stewardship.

Director's Order 42: Accessibility for Visitors with Disabilities in National Park Service Programs and Services

This director's order was issued to establish operational policies and procedural guidance concerning accessibility for visitors with disabilities in NPS programs, facilities, and services. It is the goal of the NPS to ensure that all people have the highest level of accessibility that is reasonable to NPS programs, facilities, and services in conformance with applicable laws and regulations.

Director's Order 77-2: Floodplain Management

Director's Order 77-2: Floodplain Management was issued in response to Executive Order 11988, Floodplain Management. Director's Order 77-2 applies to all proposed NPS actions that could adversely affect the natural resources and functions of floodplains or increase flood risks. This includes those proposed actions that are functionally dependent upon locations in proximity to the water and for which non-floodplain sites are not practicable alternatives. For all proposed actions determined to be within a regulatory floodplain, a Statement of Findings (SOF) must be prepared. An SOF was prepared for this project and is located in Appendix A of this EA.

National Icons and Monuments

As a matter of national security, the Gateway Arch has been designated a National Icon by the U.S. Department of the Interior. Icons are internationally recognized symbols of national identity that are seen as potential terrorist targets. Increased security and antiterrorism measures have been instituted that will continue to influence management decision-making for the foreseeable future.

OTHER LAWS/EXECUTIVE ORDERS

Executive Order 11988 – Floodplain Management

This executive order requires federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with

Statement of Findings (SOF) – Separately identifiable document attached to NPS NEPA decision documents that explains why an action would adversely impact wetlands or floodplains, what alternatives were considered to avoid these impacts and why they are not suitable, mitigation measures to minimize adverse impacts, and what the effects would be on floodplain and/or wetland values. Preparation, review, and public disclosure of statements of findings are key elements of the NPS process for implementing Executive Order 11990, Protection of Wetlands, and Executive Order 11998, Floodplain Management.

construction within and modifications to floodplains. Federal agencies are to avoid direct and indirect support of floodplain development whenever there is a practicable alternative.

Executive Order 11593 – Protection and Enhancement of the Cultural Environment

This executive order directs the NPS to support the preservation of cultural properties, to identify and nominate to the National Register cultural properties within the park, and to “exercise caution . . . to assure that any NPS-owned property that might qualify for nomination is not inadvertently transferred, sold, demolished, or substantially altered.”

Executive Order 13514: Federal Leadership in Environmental, Energy, and Economic Performance

This executive order sets sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. The order expands on the energy reduction and environmental performance requirements identified in Executive Order 13423 Strengthening Federal Environmental, Energy and Transportation Management. It requires federal agencies to set a 2020 greenhouse gas emissions reduction target; increase

energy efficiency; reduce fleet petroleum consumption; conserve water; reduce waste; support sustainable communities; and leverage federal purchasing power to promote environmentally responsible products and technologies.

Architectural Barriers Act

This Act requires all buildings and facilities constructed or renovated with Federal funds to be accessible to, and usable by, physically disabled persons. The U.S. Architectural and Transportation Barriers Compliance Board (Access Board) was created to monitor and enforce compliance with the law. The Uniform Federal Accessibility Standards were established to provide uniform standards for the design, construction, and alteration of buildings so that individuals with disabilities will have ready access to and use of them in accord with the Architectural Barriers Act of 1968. All new and altered buildings and facilities must be designed and constructed in conformance with these standards unless otherwise exempt.

Americans with Disabilities Act

The Americans with Disabilities Act of 1990 prohibits discrimination in employment, telecommunications, transportation, access to facilities and programs provided by State and local government entities, and access to the goods and services provided by places of public accommodation such as lodging, health, and recreation facilities. Under the Act, buildings and facilities must be made accessible to and usable by people with disabilities. While the Act does not technically apply to the Federal Government, its more comprehensive accessibility design standards for buildings and facilities, the Americans with Disabilities Act Accessibility Guidelines, are used by the Department of the Interior unless the Uniform Federal Accessibility Standards provide a higher degree of accessibility.

International Building Code

The International Building Code is a model building code used throughout the United States. Chapter 11 of the code addresses accessible design and construction of facilities for physically disabled persons, including guidance for routes, entrance and egress, parking and passenger loading, and other features.

Public Rights of Way Accessibility Guidelines

The U.S. Architectural and Transportation Barriers Compliance Board (Access Board) publishes accessibility guidelines for public rights-of-way that cover pedestrian access to sidewalks and streets, including crosswalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way.

RELATED JEFFERSON NATIONAL EXPANSION MEMORIAL PLANNING DOCUMENTS

General Management Plan/Environmental Impact Statement

The park completed a GMP in 2009. The impacts of the GMP were evaluated in an EIS that was prepared concurrently with the GMP. The GMP outlined a series of management zones intended to articulate and implement long-term goals for resource conditions, visitor experience, and appropriate development that could occur on the park grounds. The preferred alternative identified in the GMP (the Selected Action in the Record of Decision) included the concept of revitalizing the park through expanded programming, facilities, and partnerships. A primary element of the preferred alternative was an international design competition (realized as Framing a Modern Masterpiece: The City + The Arch + The River 2015) that explored various approaches for revitalizing the park grounds and connections to surrounding downtown St. Louis, as well as East St. Louis, Illinois, located across the Mississippi River. The potential impacts associated with implementation of the winning design are being addressed in this EA.

The preferred alternative of the GMP (the Selected Action in the Record of Decision) directs that cultural resources at the park be managed to preserve and protect these important resources. The significant cultural resources and values of the park are to be protected, although sensitive rehabilitation of the designed landscape is permitted as long as the integrity of the NHL is preserved.

Rehabilitation, as defined by the Secretary's Standards for the Treatment of Historic Properties, involves protecting and maintaining the character-defining features of the designed landscape, but allowing the repair or replacement of deteriorated, damaged, or missing features and compatible new additions to accommodate new uses, provided they do not radically change, obscure, or destroy character-defining features. In support of the GMP, the Cultural Landscape Report (CLR) was developed to provide definitions and guidance for the character-defining features of the park.

Long Range Interpretive Plan

A Long Range Interpretive Plan provides a 5-7 year vision for a park's interpretive program and is consistent with other current planning documents. Interpretation seeks to make connections between a park's natural and cultural resources (those tangible and intangible treasures that a park was established to protect) and the lives, values, and experiences of park visitors.

The park's interpretive themes and the purpose of the park's museum collections are identified in the Draft Long Range Interpretive Plan, which drew from the 2009 GMP. The park's Draft Long Range Interpretive Plan also includes management goals and objectives for the park's natural and cultural resources.

Cultural Landscape Report

The NPS updated the CLR in 2010, documenting the park's landscape and analyzing its character-defining features. Specifically, the CLR documents the evolution of the Saarinen-Kiley plan and its implementation by the NPS, and describes the condition of landscape features and overall

character of the park grounds. The CLR evaluates the significance of the landscape based on the NHL nomination, assesses its integrity using National Register of Historic Places (National Register) standards, and identifies contributing and noncontributing features.

Landscape Preservation Maintenance Plan

The Landscape Preservation Maintenance Plan, completed in 2010, provides guidance for maintaining the character-defining woody vegetation and site structures of the park landscape in compliance with the Secretary of Interior's Standards and other NPS policies and guidance. It also provides a format for the recordation of ongoing maintenance practices at the park.

Emerald Ash Borer Environmental Assessment

The NPS completed an EA in 2011 that analyzed strategies for addressing the impact of the emerald ash borer (*Agrilus planipennis Fairmaire*) on the historic designed landscape at Jefferson National Expansion Memorial. Part of the strategy included identifying an appropriate tree species for replacing the Rosehill ash (*Fraxinus americana* 'Rosehill') trees in the historic planting along the walks with a different species that would be in keeping with the designed landscape, while minimizing the impact on NPS operations, and maintaining and enhancing the visitor experience (NPS 2011b).

OTHER FEDERAL AGENCY PLANS, POLICIES, AND ACTIONS

The Missouri Department of Transportation, in conjunction with FHWA, is conducting a concurrent EA to assess the effects of proposed changes to I-70 and Memorial Drive, including the potential for construction of a structure built over the depressed section of I-70 as well as changes to the freeway's ramp system. The NPS, MoDOT, and FHWA will continue to work together to ensure the necessary compliance for these project elements are completed.

In addition, the Illinois Department of Transportation (IDOT), MoDOT, and FHWA are in the process of constructing the new Mississippi River Bridge, to the north of the park. The bridge will provide a new connection between St. Louis and southwest Illinois, and includes the realignment and reconstruction of Interstate 70, as well as numerous local roadways on both sides of the river. The new bridge is anticipated to open in 2014.

STATE AND LOCAL LAWS, REGULATIONS, AND POLICIES

Easements, Permits, and Other Agreements

Easements exist for all railroad, street, and highway transportation corridors that cross the park boundaries, as well as utility and communication lines. Separate agreements for utility corridors and maintenance of associated infrastructure exist on a case-by-case basis. An indefinite permit authorized by the US Army Corps of Engineers (USACE) covers NPS buildings, retaining walls, planting areas, and levee roadway along the west bank of the river constructed before December 31, 1963.

A cooperative agreement between the NPS and the City of St. Louis permits redevelopment of the levee by the city and provides for joint control of its use following development. An easement agreement, signed in 1963 between the National Park Service, the State Highway Commission of Missouri, and the City of St. Louis, provides for the interstate highway infrastructure and its maintenance and repair within the park boundaries. Agreements with Metro Business Enterprises (Metro) cover the operation of the existing Arch Parking Garage and Arch tram, and agreements with Jefferson National Parks Association (JNPA) cover the supplementing of interpretation and education programs through the sale of theme-related books and merchandise. An agreement with the Archbishop of St. Louis provides for cooperation in the preservation and interpretation of the Old Cathedral.

City of St. Louis Land Use Planning

Planning actions at the park are exempt from local planning and permitting requirements; however, the park is an influential part of St. Louis' downtown fabric and the Gateway Arch is symbolic of the city. Local planning goals, policies, and plans for circulation, land use, recreation, and cultural resources may complement the park, and its goal to create better connections to the surrounding city.

