

Bridges and culverts can facilitate wildlife movement. Proposed roadway bridges and/or culverts will be evaluated for their ability to accommodate the movement of wildlife (and aquatic biota) as part of preliminary engineering in Tier Two. Also, the need for wildlife crossings along the project corridor will be evaluated independent of roadway bridge or culvert openings. If required, stand-alone wildlife crossings would be implemented with the project. As practical, these structures will be designed to support habitat connectivity and animal movement.

4.5.3 Threatened and Endangered Species

Based on correspondence from the USFWS (dated January 29, 2009), the study area includes two known locations of the federal-threatened eastern prairie fringed orchid (*Platanthera leucophaea*). The eastern prairie fringed orchid is also a state-endangered species. Neither known location is in or near the proposed alternatives. Possible habitat for the orchid includes mesic prairie, sedge meadows, marsh edges, and bogs. Any moderate to high quality wetland habitat within the study area could support the species. There is no known critical habitat for the species within the study area (Rogner, 2009).

According to information provided by the IDNR and the Illinois Natural Heritage Database (dated December 12, 2008), the build alternatives and south bypass connection options do not directly affect any recorded state-listed threatened or endangered species sites. The nearest recorded sites are more than 3,500 feet from Alternatives 203 and 402 and are associated with a state-endangered bird at a privately owned natural area located near the southwest corner of the Ned Brown Preserve, and a state-threatened plant species at the Ned Brown Preserve. The Ned Brown Preserve and the privately owned natural area will not be directly affected by the proposed improvements.

The accuracy of available data does not allow a conclusive determination of specific impact to the state- and federal-listed species. As part of Tier Two, additional studies will be conducted to determine potential presence and potential impacts to threatened and endangered species. Future work associated with the preferred alternative would include detailed threatened and endangered species field surveys (if necessary) and the required consultation with IDNR and USFWS.

4.6 Section 4(f)

Significant publicly-owned parks, recreational areas, wildlife and waterfowl refuges, and historic sites of national, state, or local significance, are afforded special protection under Section 23 CFR 774, *Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites (Section 4(f))*. An evaluation of the project's potential impacts to these resources is being conducted under §774.7(e), which allows for a preliminary Section 4(f) approval for first tier documents. To receive a preliminary Section 4(f) approval, a Section 4(f) determination must be made for affected properties, and potential impacts to such properties must be described. Further, feasible and prudent avoidance alternatives, if any, should be identified, and all possible planning to minimize impacts by the build alternatives (to the extent that the Tier One level of engineering allows) must be included. The documentation should reflect that opportunities remain for minimizing harm to Section 4(f) resources in the subsequent tier.

Based on the information provided in this section, the preliminary Section 4(f) approval for this project will be provided in the Tier One ROD.

As mentioned in Section 2.11, no historic sites qualifying as Section 4(f) properties are located within the study area. However, three resources meeting the criteria for protection under Section 4(f) are located along the proposed improvements.

4.6.1 Section 4(f) Applicability

A property qualifies for Section 4(f) protection if it is a significant publicly-owned park, recreational area, wildlife or waterfowl refuge area, or a historic site of national, state, or local significance. If a publicly-owned property has multiple uses, at least one of which is not recreational in nature, Section 4(f) only applies to the portion of the land that functions as a significant public park, recreational area, or wildlife or waterfowl refuge (§774.11[d]). Section 4(f) permits the Secretary of Transportation to approve a transportation program or project that would use land from a significant publicly-owned park, recreational area, wildlife or waterfowl area, or land from a significant historic site (regardless of ownership) only if there is no prudent or feasible alternative to using that land and all possible planning has been done to minimize harm to these properties by the build alternatives.

A project could “use” land from a Section 4(f) resource under one of three circumstances:

- When land is permanently incorporated into a transportation facility;
- When there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose as determined by the criteria in §774.13(d); or
- When there is a constructive use of a Section 4(f) property as determined by the criteria in §774.15 (§774.17).

If an alternative avoids Section 4(f) resources and is prudent and feasible to construct, then it must be selected. If no prudent and feasible avoidance alternatives exist, only the alternative that causes the least overall harm and includes all possible planning to minimize harm to Section 4(f) property may be approved (§774.3[a][2] and [c][1]). The following factors are to be considered when conducting the least harm analysis (§774.3[c][1][i-vii]):

- Ability to mitigate adverse impacts to each Section 4(f) property
- Relative severity of remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each property for Section 4(f) protection
- Relative significance of each Section 4(f) property
- Views of the officials with jurisdiction over each Section 4(f) property
- Degree to which each alternative meets the project purpose and need
- After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f)
- Substantial differences in costs between the alternatives

Based on the seven factors above, in cases where all project alternatives would cause substantially the same harm, FHWA may select any of the remaining alternatives.

Section 23 CFR 774.7(e) defines the parameters for evaluating Section 4(f) impacts in a tiered document such as this one. This Section 4(f) analysis is being conducted in accordance with these regulations.

4.6.2 Description of Section 4(f) Properties

Readily available information was used to identify potential Section 4(f) properties in the study area. Properties within the proposed project footprints were evaluated to determine the applicability of Section 4(f). Based on the level of engineering used in the Tier One Draft EIS, nine potential Section 4(f) properties were identified as being potentially impacted. In this Final EIS, three Section 4(f) properties have been identified that may be impacted by Alternatives 203 and 402 (see Exhibits 4-1 and 4-8).

Refinements to the roadway design in the Final EIS resulted in the elimination of impacts to four of the original nine properties identified in the Draft EIS. The proposed improvements were modified to remain within the existing right-of-way, therefore avoiding those four properties (i.e., Alexian Field, Shenandoah Park, Salt Creek Marsh Forest Preserve, and Legends of Bensenville Golf Course).

Two publicly-owned parcels are still expected to be impacted, but do not meet Section 4(f) criteria. The Elk Grove Detention Pond is in Elk Grove Village located on the southeast corner of Coyle Avenue and Carmen Drive (see Exhibit 4-8). The primary function of the property is detention for stormwater runoff from the Rogers Industrial Park in Elk Grove Village and Des Plaines. No formal recreational facilities have ever been developed at the site, nor does Elk Grove Village plan to do so in the future. Its location is within an industrial area; therefore, it is not conducive to recreational uses and does not attract any users. The Elk Grove Detention Pond is not identified on the Elk Grove website as a public park. Impact to this property is discussed in Section 4.7 below.

The other public land, the Majewski Athletic Complex, is owned by MWRDGC for potential future expansion of the Kirie Wastewater Treatment Plant, and currently leased to the Mount Prospect Park District (MPPD). The MPPD uses the property for field sports. The lease was originally established in 1980, extended in 1992 and again in 2000, with a renewal date of 2012. The lease does provide for the MWRDGC to recover the property for the agency's corporate purposes with the provision that one-year notice be supplied. The recapture clause in the lease categorically defines the property as a temporary recreational area; the lease is not considered a long term lease for Section 4(f) purposes; and the land being temporarily used for recreational purposes could be recaptured by the property owners with a 1-year notice. Therefore, FHWA does not consider the Majewski Athletic Complex a Section 4(f) resource. However, there is the possibility that the lease could be converted to a long term arrangement in the future and qualify the property as a Section 4(f) resource. Therefore, this property is considered a potential future Section 4(f) property and is discussed further in Section 4.6.6.

There are three properties that remain of the original nine (as discussed in the Draft EIS) that are Section 4(f) properties and may be impacted by the proposed improvements. They include the DuPage County forest preserve (Medinah Wetlands Forest Preserve) and two trails (Salt

Creek Greenway Trail and North Central DuPage Regional Trail) (see Table 4-23 and Exhibits 4-1 and Exhibit 4-8). These properties are described below.

As explained in the Draft EIS, two other properties within the proposed build alternative footprints include Bretman Park (owned by the Village of Bensenville) and Silver Creek Forest Preserve (owned by FPDDC and maintained by the Village of Bensenville). Both properties have been acquired by the O'Hare Modernization Project (an FAA project), and a Section 4(f) analysis was completed for the acquisition of those properties. Therefore, effects to these properties have been accounted for under the Section 4(f) process undertaken for the federally-approved OMP EIS and those properties are not considered impacted by this project (FAA, 2005).

4.6.2.1 Medinah Wetlands Forest Preserve

Forest Preserves, by Illinois Statute, are public recreational areas and are, therefore, considered Section 4(f) resources by FHWA. The Medinah Wetlands Forest Preserve qualifies as a Section 4(f) property. It is a 23-acre FPDDC property located in the southwest quadrant of Elgin O'Hare Expressway and Meacham Road, and is used for wetland habitat preservation. There are currently no amenities or parking provided; however, an observation deck is planned for this property and a trail connecting users from Medinah Road to this deck is under construction. Two potential encroachments are anticipated: 1) along Medinah Road and 2) along the improved eastbound ramp terminal at Medinah Road from the Elgin O'Hare Expressway.

4.6.2.2 Salt Creek Greenway Trail

The Salt Creek Greenway Trail is considered a Section 4(f) resource because it is a significant recreational area. When complete, it will be an approximately 35-mile long multi-purpose recreational trail primarily following Salt Creek in west central Cook County and also east DuPage County connecting Ned Brown/Busse Woods on the north and Brookfield Zoo on the south. The route of the trail travels through multiple recreational areas. The construction of the trail is a joint effort by the FPDDC, local communities, and park districts. The sections of the trail that cross the proposed improvements have been constructed. The proposed roadway improvements intersect the trail in two locations: 1) as it crosses Thorndale Avenue along Mittel Boulevard/Mittel Drive, and 2) where it veers north as it travels east/west along the south side Thorndale Avenue between Prospect Avenue and Mittel Drive.

4.6.2.3 North Central DuPage Regional Trail

The North Central DuPage Regional Trail also qualifies as a Section 4(f) property because it is a significant recreational area. It is also a 35-mile long multi-purpose recreational trail that will travel through multiple communities to connect the Illinois Prairie Path-Elgin Branch with Cook County's Ned Brown/Busse Woods Forest Preserve and the Schaumburg bikeway system. When complete, users will be able to access the Fox River Trail in Kane County via the Illinois Prairie Path. It is being implemented by several entities including local park districts, the FPDDC, the DuPage County DOT, and IDOT. In the vicinity of the proposed roadway improvements, the trail crosses the Elgin O'Hare Expressway along Plum Grove Road. This section of the trail has been constructed.

TABLE 4-23
Potential Impacts to Section 4(f) Properties

Property Name	Location	Size/Length	Description	Size of Potential Impact (area or length/percent of entire property)	Proposed Improvements in the Vicinity
Medinah Wetlands Forest Preserve (FPDDC)	Southwest quadrant of Elgin O'Hare Expressway and Medinah Road	23 acres	Wetland habitat; no amenities or parking (trail under construction and observation deck planned)	0.75 acre/1.3% of entire forest preserve (0.48 acre of the impact is wetland, which is 0.71% of entire wetland)	Southbound shift of eastbound Elgin O'Hare Expressway exit ramp; widening from two to three lanes in each direction along Medinah Road approaching Elgin O'Hare Expressway on east side of property.
Salt Creek Greenway Trail (within the study area)	Across Thorndale Avenue along Mittel Boulevard/Mittel Drive South side of Thorndale Avenue, on the north side of Salt Creek Marsh Forest Preserve	35 miles	Multi-purpose recreational trail	Two potential impacts: 1) temporary disruption across Thorndale Avenue during construction, and 2) 600 feet (0.2 acre)/ 0.3% of entire trail	Construct a two-lane one-way westbound frontage road on the existing Thorndale Avenue alignment; construct an access-controlled facility with five lanes in each direction (extension of the Elgin O'Hare Expressway); and construct a new two-lane eastbound frontage road.
North Central DuPage Regional Trail (within the study area)	Across Elgin O'Hare Expressway along Plum Grove Road	35 miles	Multi-purpose recreational trail	Temporary disruption across Elgin O'Hare Expressway during construction	Add one lane and two auxiliary lanes in each direction to Elgin O'Hare Expressway and lengthen Plum Grove Road bridge to accommodate widening.

4.6.3 Potential Impacts to Section 4(f) Properties

In addition to the No-Action Alternative, a total of 15 roadway system strategies were evaluated, as documented in Appendix E. Five roadway system strategies (Alternatives 101, 102, 301, 302, and 601) were eliminated from further study because they did not address the purpose and need of the project.

Of the remaining ten roadway system strategies, three strategies (Alternatives 201, 204, 205) were eliminated because they had higher potential relocations relative to the other alternatives (Appendix E, Table 4). The impacts to Section 4(f) resources associated with these three strategies were about the same or greater than the seven alternatives carried forward in the analysis.

The seven finalist alternatives were then evaluated on a comprehensive range of engineering and environmental factors. The result of the analysis was the identification of two build alternatives to analyze in detail (Alternative 203 and Alternative 402) and dismissing five alternatives (Alternatives 202, 401, 403, 404 and 501) from further analysis. The alternatives that were retained had among the lowest relative impacts to Section 4(f) properties (see Table 5 in Appendix E).

The build alternatives (203 and 402) have the same impacts to the three Section 4(f) properties. The resources are located along the east-west element of the proposed improvements (the Elgin O'Hare Expressway/Thorndale Avenue corridor), which is common to both alternatives. The impacts presented below are a result of engineering considered in Tier One and may be lessened in Tier Two when more detailed design occurs. Potential impacts to Section 4(f) properties based on Tier One engineering are shown on Exhibits 4-1 and 4-8.

4.6.3.1 Medinah Wetlands Forest Preserve

Travel demand developed in Tier One indicates the need for widening Medinah Road from two to three lanes in each direction as it approaches the Elgin O'Hare Expressway. It would require a narrow strip of land measuring 0.28-acre from the east side of Medinah Wetlands Forest Preserve. The northern part of the narrow longitudinal strip take is emergent wetland (0.01 acre, which is 0.01 percent of the entire wetland). The southern part is upland habitat and includes a section of a trail currently being constructed to access a planned observation deck. The completed trail would not be disrupted; the only impact would be the trailhead at the edge of the existing roadway would be moved westward with the expansion of the roadway. Detailed traffic analysis in Tier Two may demonstrate less travel demand and less capacity improvements, thereby reducing the impact to the forest preserve along Medinah Road.

A second small strip take (impacting approximately 0.47 acres of wetland, which is less than one percent of the entire wetland) would be required in the northeast corner of the forest preserve for the improved eastbound to southbound turning lane at the eastbound exit ramp terminal. Combined, the roadway improvements in this locale would impact a total of 0.75 acre of the Medinah Wetlands Forest Preserve.

4.6.3.2 Salt Creek Greenway Trail

The Salt Creek Greenway Trail is co-located along Mittel Boulevard/Mittel Drive crossing Thorndale Avenue on a north-south alignment. The bike trail would be temporarily disrupted

with the construction of the proposed improvements at this location, a freeway section with frontage roads on both sides with an overall cross-section of approximately 400 feet. During Tier Two, efforts will be made to satisfy the temporary occupancy exception requirements pursuant to 23 CFR 774.13(d). Specifically, it is anticipated any disruption to the trail at this location will be less than the time needed to construct the project. In addition, there will be no change in ownership to the land; the scope of the work affecting the trail will be minor and the change to the Section 4(f) property will be minimal; there are no anticipated permanent adverse physical impacts and the trail continuity will be maintained or re-routed during construction; and the land will be fully restored after the construction is completed. Coordination with the Official with Jurisdiction will be completed during Tier Two to ensure these criteria are satisfied.

The Salt Creek Greenway Trail is also located on an east-west alignment parallel to the proposed eastbound frontage road between Prospect Avenue and Mittel Drive. A portion of the trail (approximately 600 feet or 0.2 acre) would require a shift to the south to allow for the construction of the frontage road. Available information indicates that the Salt Creek Greenway Trail in this location is on property owned by IDOT.

4.6.3.3 North Central DuPage Regional Trail

The North Central DuPage Regional Trail is co-located along Plum Grove Road across the Elgin O'Hare Expressway. The trail could be temporarily disrupted during the proposed widening of the Elgin O'Hare Expressway and lengthening of the Plum Grove Road bridge in order to accommodate the widening. During Tier Two, efforts will be made to satisfy the temporary occupancy exception requirements pursuant to 23 CFR 774.13(d). Specifically, it is anticipated that any disruption to the trail at this location will be less than the time needed to construct the project. In addition, there will be no change in ownership to the land; the scope of the work affecting the trail will be minor and the change to the Section 4(f) property will be minimal; there are no anticipated permanent adverse physical impacts and the trail continuity will be maintained or re-routed during construction; and the land will be fully restored after the construction is completed. Coordination with the Official with Jurisdiction will be completed during Tier Two to ensure these criteria are satisfied.

4.6.4 Avoidance Alternatives

The No-Action Alternative would avoid impacts to Section 4(f) properties; however, this alternative does not meet the purpose and need for the project. The following is a description of site specific avoidance alternatives that have been identified to determine if feasible and prudent adjustments to the proposed improvements could avoid the Section 4(f) properties. The option of no action was considered but dismissed because it does not meet the purpose and need.

4.6.4.1 Medinah Wetlands Forest Preserve

The Medinah Wetlands Forest Preserve would be impacted on the north side of the property by widening the Elgin O'Hare Expressway to five lanes in each direction. It would also be impacted on the east side of the property from the widening of Medinah Road from two to three lanes in each direction.

Shifting the mainline of the Elgin O'Hare Expressway to the north and the interchange to the east would avoid impact to the property, but would cause the displacement of approximately five residences and one industrial business in the northeast quadrant. Two industrial businesses in the southeast quadrant would be displaced. Further, it would cause the mainline to encroach on the 0.2 acre of wetlands on the north side of the Elgin O'Hare Expressway east of Meacham Road.

4.6.4.2 Salt Creek Greenway Trail

The Salt Creek Greenway Trail could be temporarily disrupted while planned improvements to Thorndale Avenue and Mittel Boulevard/Mittel Drive are being constructed. Again, Section 4(f) impact to this property could be avoided if the disruption is temporary, trail continuity is maintained, and the trail is reinstated in the same or better condition. Trail continuity could be maintained in one of two ways, either reroute the trail along alternate roadways during construction, or stage construction such that one lane of Mittel Boulevard/Mittel Drive could be kept open at all times, thus allowing continued trail operation along the existing route. The trail operation would also be disrupted by the proposed eastbound frontage road between Prospect Avenue and Mittel Drive. Shifting the alignment of the freeway and frontage road cross-section to the north was evaluated. However, the shifted alignment would encroach approximately 50 feet onto another potential Section 4(f) property, the Salt Creek Golf Club (under the jurisdiction of the Wood Dale Park District), and impact approximately 1.5 acres. The frontage road could be shifted to the north to make it closer to the eastbound lanes of the mainline, but this would require a retaining wall.

4.6.4.3 North Central DuPage Regional Trail

The North Central DuPage Regional Trail could experience temporary disruption while the proposed improvements to the Elgin O'Hare Expressway and Plum Grove Road bridge are being constructed. Section 4(f) impact to this property could be avoided if the disruption is temporary, trail continuity is maintained, and the trail is reinstated in the same or better condition. Trail continuity could not be maintained with staging construction because the trail is on a bridge that would be out of service while being reconstructed to accommodate improvements to the Elgin-O'Hare Expressway. It is likely that users will be rerouted during construction, and all of these conditions would be met.

4.6.5 Measures to Minimize Harm

During Tier One, measures were taken to minimize harm to Section 4(f) properties. Alternatives with greater impacts to Section 4(f) resources were eliminated from consideration during the process. Further, even though the build alternatives are at a conceptual level of detail in Tier One, measures were taken to minimize impacts to Section 4(f) properties. During Tier Two, considerable refinements to the roadway design will occur and a full range of minimization measures will be evaluated. The following subsections describe minimization measures identified in Tier One for further development and consideration in Tier Two.

4.6.5.1 Medinah Wetlands Forest Preserve

Multiple opportunities exist to minimize adverse impacts to the Medinah Wetlands Forest Preserve. The design already includes a retaining wall along the mainline to minimize the angle between the mainline and the eastbound exit ramp, which would limit the

improvements' footprint. This angle cannot be reduced further to minimize impact to the forest preserve and remain consistent with IDOT and AASHTO design standards.

Several options exist to avoid impact to the north side of the property. A retaining wall could be implemented on the south side of the proposed improvements and avoid wetlands, thereby minimizing impacts to the property. Another option could be to redesign the eastbound exit ramp as a loop in the southeast quadrant. However, two industrial buildings would be displaced, parking at a third industrial building would be removed, and loading access at a fourth industrial building would need to be altered. Alternatively, the eastbound exit ramp could be eliminated, resulting in a partial access only interchange. This solution would impair the functionality of the interchange and cause out-of-direction travel. This is inconsistent with the project's purpose of improving travel efficiency, and adds to travel inefficiencies in the area caused by too many interchanges with only partial access.

To minimize right-of-way required on the north side of the property, a guardrail could be implemented on the south side of the proposed improvements. This would avoid wetlands and reduce impacts to the property.

Opportunities to avoid impacting the property along Medinah Road exist as well. Realigning approximately ½ mile of Medinah Road to the east would avoid the east side of the forest preserve, but it would result in the displacement of a business along Medinah Road. Narrowing the median along Medinah Road would avoid impacting the forest preserve at this location, but it would be incompatible with lane configuration of the eastbound ramp intersection to the north.

Along Medinah Road, the median could be narrowed slightly to minimize encroachment onto the forest preserve property. Impact to the forest preserve along Medinah Road could also be minimized by deferring median channelization until closer to the eastbound ramp intersection and then increasing the rate of channelization above design standards. However, this would compromise safety because it would not provide motorists with an adequate distance to shift before the median is introduced.

4.6.5.2 Salt Creek Greenway Trail

It is FHWA's policy to minimize disruption to the continuity of existing and designated trails. All reasonable efforts would be made to maintain the continuity and operation of the trail. During the construction of the improvements to Thorndale Avenue and Mittel Boulevard/Mittel Drive, it is reasonable to assume that users would be rerouted onto nearby public roads. However, if at least one lane of Mittel Boulevard/Mittel Drive can stay open during construction, the trail can remain in use on its existing alignment. It is likely that the portion of the trail located along the proposed eastbound frontage road between Prospect Avenue and Mittel Drive could be reconstructed to the south before the frontage road is constructed. The trail would be replaced in the same or better condition. If this were to occur, trail continuity could be maintained and trail users would not experience a disruption in use or degradation in the facility. Another option could be to incorporate the trail alongside the frontage road. Reasonable efforts would be made to limit disruption to the trail and reinstate it in the same or better condition.

4.6.5.3 North Central DuPage Regional Trail

FHWA's policy is to limit disruption to the continuity of existing and designated trails. It is reasonable to assume that trail continuity could be maintained during construction by temporarily rerouting users onto nearby public roads. Reasonable efforts would be made to limit this disruption and reinstate the trail in the same or better condition.

4.6.6 Potential Future Section 4(f) Resources in the Study Area

Four properties along the build alternative corridors are not currently considered Section 4(f) resources but could potentially qualify as Section 4(f) properties in the future (see Exhibit 4-8). These include the Legends of Bensenville Golf Course owned by the Village of Bensenville, a parcel to the west of the Medinah Wetlands Forest Preserve, the O'Hare Cup Site owned by MWRDGC and leased to the MPPD in the southwest quadrant of the interchange at I-90 and Elmhurst Road, and the Majewski Athletic Complex owned by MWRDGC and leased to the MPPD in the northeast quadrant of the interchange at I-90 and Elmhurst Road. Alternative 203 could affect all of the potential future Section 4(f) resources, and Alternative 402 would affect all but the Majewski Athletic Complex property.

The Legends of Bensenville Golf Course is located on the northwest corner of County Line Road and Grand Avenue and is currently owned by the Village of Bensenville. Its previous use was a public golf course, but it is no longer in operation and the Village has been marketing the sale of the property. Because the property has no public recreational use, it no longer qualifies as a Section 4(f) resource. However, there is a possibility that Bensenville could return the property to recreational use, thus qualifying the property as a Section 4(f) resource. Currently, proposed improvements to reconstruct County Line Road and Grand Avenue adjacent to the Legends of Bensenville Golf Course property would be entirely within existing right-of-way limits. However, if added roadway features at this location would result in direct impacts to this property and the property had been returned to a public recreational use, then the prudence and feasibility of avoidance alternatives would be analyzed in the Tier Two documents.

The FPDDC is currently in the process of completing the purchase of the 34-acre parcel west of the Medinah Wetlands Forest Preserve. The parcel is expected to be in FPDDC ownership by May 2010. The FPDDC will expand the Medinah Wetlands Forest Preserve to include this parcel; therefore, this property would qualify as a Section 4(f) resource. The proposed improvements adjacent to this property include lane additions to the Elgin O'Hare Expressway that would be contained within the existing right-of-way and no impacts are anticipated from the proposed improvements.

MWRDGC owns a property on the south side of I-90 and west of the Elmhurst Road interchange, known as the O'Hare Cup Site. It is leased to the MPPD. The conditions of the lease state that MWRDGC can terminate the lease with 30-days' notice. No recreational amenities currently exist on the property, but the Park District has indicated interest in constructing recreational facilities on the property in the future. The property does not currently serve a recreational purpose. Because the property currently does not serve as a recreational area or public park and the short term nature of the existing lease, the property does not qualify as a Section 4(f) resource. If MPPD develops recreational facilities and provides access to the property, and the length of the lease term was changed allowing a long-term use, it would likely become a Section 4(f) resource. At this level of detail, the

improvements for I-90 would require a narrow strip of land from the north side of the property. If Section 4(f) were applicable, the property could be avoided if a retaining wall was implemented rather than a sloped embankment. Shifting the alignment of I-90 to the north was also considered as an avoidance measure, but it would cause the displacement of numerous commercial and industrial buildings on the north side of I-90.

MWRDGC owns a property in the northeast quadrant of the interchange at I-90 and Elmhurst Road and leases it to the MPPD (the Majewski Athletic Complex). A 0.78 acre strip take from the south side of the property adjacent to I-90 would be required to accommodate the installation of a collector-distributor facility to link freeway movements between the proposed O'Hare West Bypass/I-90 system interchange and the proposed full Elmhurst Road/I-90 service interchange. No amenities would be affected; the land that would be transferred to transportation use is grassland along the edge of the property. The alignment of the collector-distributor could not be shifted south without compromising roadway design standards. The proposed roadway cross-section is required to maintain acceptable LOS along the roadway; reducing the cross section would lower LOS to unacceptable levels.

4.6.7 Least Overall Harm Analysis

As stated in §774.3(c)(1), if there are no feasible and prudent avoidance alternatives, an analysis must be completed to identify the alternative that results in the least overall harm to Section 4(f) resources. The least overall harm is determined by balancing the following list of factors:

- Ability to mitigate adverse impacts to each Section 4(f) resource
- Relative severity of the remaining harm, after mitigation, to the protected activities and attributes or features
- Relative significance of each Section 4(f) property
- Views of the Officials with Jurisdiction over each Section 4(f) property
- Degree to which each alternative meets the purpose and need
- After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f)
- Substantial differences in costs among alternatives

Based upon the information examined in Tier One, the build alternatives (Alternatives 203 and 402) emerged from an exhaustive analysis of many alternatives that all impacted Section 4(f) properties to varying degrees. Alternative 203 and 402 (build alternatives) were among the least impactful to Section 4(f) resources, and with additional engineering efforts in the latter stages of Tier One, the Section 4(f) impacts were reduced to the same three properties for each alternative with a total impact of about one acre. The impacts consist of a 0.75 acre impact to Medinah Wetlands Forest Preserve, an approximate 0.2 acre impact to the Salt Creek Greenway Trail, and temporary disruption to the Salt Creek Greenway and North Central DuPage Regional Trails across Thorndale Avenue and the Elgin O'Hare Expressway, respectively, during construction. The effect on the Medinah Wetlands Forest Preserve involves the displacement of a narrow strip of land that would directly impact a wetland

resource no more than 0.5 acres, which is less than one percent of the resource. The effect to the trail resources would be temporary, and use can be maintained throughout construction.

Properties that have the potential to become future Section 4(f) properties were examined in Section 4.6.6. A total of four resources were identified with one affected by Alternative 402 and two properties affected by Alternative 203. The property affected by both alternatives is an undeveloped parcel of land leased by the MWRDGC to the MPPD (the O'Hare Cup Site). Alternative 203 could potentially affect an additional property, the MWRDGC property leased to the MPPD for the Majewski Athletic Complex. If these properties qualified as Section 4(f) resources, Alternatives 203 and 402 would impact the O'Hare Cup Site the same (about three acres). Additionally, Alternative 203 would require a 0.78 acre strip along the south side of the Majewski Athletic Complex property. The Legends of Bensenville Golf Course and the property to be added to the FPDDC would not be impacted by the build alternatives.

In another comparison of the two build alternatives, Alternative 203 offers better travel performance than Alternative 402, in every category (i.e., regional travel efficiency, reduced congestion on secondary roads, improved travel times and speed, and improved access to freeway connections), and therefore, better meets the project's purpose and need. For the two alternatives, natural resource impacts only differ by a few acres, approximately three acres for wetlands, surface waters, and floodplains combined. Communities favor Alternative 203 because it would preserve businesses and jobs, improve traffic flow, focus traffic to major roads, and preserve existing land use patterns. The location of Alternative 203 on the western edge of O'Hare Airport property avoids conflict with the proposed OMP improvements and minimizes displacement of valued industrial and commercial properties in Elk Grove Village, City of Des Plaines, Village of Bensenville, and Village of Franklin Park. Both alternatives have the potential to create a total economic effect that is greater than the initial roadway investment. However, the spending and consumption of project investment dollars would be greater under Alternative 203 with an added value to the regional economy of \$1 billion over Alternative 402. Short-term and long-term job creation is also greater under Alternative 203 as a result of the higher initial roadway investment. Alternative 203 would provide 5,000 more jobs than Alternative 402 during the three-year construction period of the project. In 2030, Alternative 203 is expected to have added 13,500 jobs in the study area over those created by Alternative 402.

Based on the information provided above, Alternatives 203 and 402 result in the least harm to actual or potential future Section 4(f) resources. Because the remaining two alternatives cause the same degree of harm to Section 4(f) properties either alternative could be selected. When balancing other factors into the decision, however, Alternative 203 would result in the least overall harm because it better addresses the project purpose and need, results in comparable adverse impacts to non-Section 4(f) resources, and has substantially greater economic benefits and land use compatibility.

The identification of Alternative 203 as the preferred alternative has included all possible planning to minimize harm at the level of detail afforded by the Tier One process. As this alternative advances to Tier Two of the process, design details will be examined in a Section 4(f) Tier Two analysis to determine further means to avoid or reduce harm to Section 4(f) properties. In the event that there are no prudent or feasible alternatives for complete avoidance of Section 4(f) properties, a least harm analysis will be prepared addressing the more detailed design measures used to reduce impact.

The preliminary Section 4(f) approval would be subject to a re-evaluation if new or more detailed information becomes available in Tier Two. The final Section 4(f) approval may be made in the Tier Two Final EIS.

4.7 Non-Section 4(f) Special Lands and Section 6(f) and OSLAD Considerations

As mentioned in Section 4.6, the Elk Grove Detention Pond is noted as a special land, but does not qualify as a Section 4(f) property. The property would be impacted by the proposed improvements included in Alternative 203, but is avoided by Alternative 402. The mainline alignment of Alternative 203 (O'Hare West Bypass, north section) is located diagonally across much of the southeastern part of the detention pond, with part of the northwest corner of the pond remaining. The size of the potential impact is 2.0 acres.

Section 6(f) of the Land and Water Conservation Fund Act (LWCFA) also provides protection to properties purchased with LWCFA funds. No properties affected by the proposed improvements were purchased with funds allocated by the LWCFA (Nation, 2009a; 2009b); therefore, no Section 6(f) involvement exists in this project.

Additional protection is provided for properties purchased with OSLAD Act funds, a program overseen by IDNR. A review of relevant data showed that one property purchased with OSLAD funds (Medinah Wetlands Forest Preserve) could be affected by the proposed improvements (Nation, 2009a, personal communication; Nation, 2009b, personal communication).

4.8 Noise

4.8.1 Traffic Noise Impact Analysis

As noted in subsection 2.10.1, noise modeling to determine existing and design-year dBA at noise sensitive receivers was not undertaken during Tier One but will be during Tier Two. Rather, residential areas that could approach, meet, or exceed the NAC were identified using available information on the property types along the corridor. Noise-sensitive non-residential noise receptors within 500 feet of the proposed improvements, such as churches, schools, or parks, were also identified (see Exhibits 4-1A through 4-1E, Exhibit 4-9, and Table 4-24).³¹ Of the 49 noise-sensitive residential areas and 30 noise-sensitive non-residential receptors identified in the study area, 43 noise-sensitive residential areas and 26 noise-sensitive non-residential receptors were identified along Alternative 203. Alternative 402 has relatively fewer noise-sensitive residential areas (39) and noise-sensitive non-residential receptors (24) adjacent to the proposed footprint. These areas include both single- and multi-family residences, churches, and parks. Roselle, Des Plaines, Elk Grove Village, Medinah, Schaumburg, and Mount Prospect have the highest number of noise-sensitive residential areas for Alternatives 203 and 402. Schaumburg, Itasca, and Elk Grove Village have the greatest number of noise-sensitive non-residential receptors along both proposed corridors.

³¹ Other potential noise receptors near the proposed improvements include wildlife species (e.g., migratory birds). Refer to subsection 4.5.2.