

CHAPTER SEVEN

MITIGATION SUMMARY

The purpose of this chapter is to summarize the proposed mitigation measures, or other impact reduction measures, that could be implemented by the City of Chicago, with oversight by the FAA, to avoid or minimize the potential environmental impacts associated with the Build Alternatives, including Alternative C, the Preferred Alternative. The Preferred Alternative was previously identified in **Chapter 3, Alternatives**. The proposed mitigation measures developed for the Build Alternatives were a result of detailed analyses of the impacts identified in **Chapter 5, Environmental Consequences**, and through public and agency comments on the Draft EIS in accordance with agency policy and guidance. The FAA worked closely with the following EIS cooperating agencies in developing the proposed mitigation measures: United States Environmental Protection Agency (USEPA), Illinois Environmental Protection Agency (IEPA), United States Army Corps of Engineers (USACE), United States Fish and Wildlife Service (USFWS), and Federal Highway Administration (FHWA). In addition, the FAA worked closely with numerous other Federal, state, and local agencies throughout the EIS process, including Northeastern Illinois Planning Commission (NIPC), United States Department of Agriculture (USDA), Department of Interior (DOI), National Park Service (NPS), Advisory Council on Historic Preservation (ACHP), Illinois Historic Preservation Agency (IHPA), Illinois State Toll Highway Authority (ISTHA), Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), Regional Transportation Authority (RTA), and Chicago Area Transportation Study (CATS).

A summary of the proposed mitigation measures, and other impact reduction measures, for each alternative are discussed for the following environmental resource categories:

- Noise
- Compatible Land Use
- Surface Transportation
- Social Impacts
- Air Quality
- DOT Section 4(f)/6(f) Lands
- Historical, Architectural, Archaeological, and Cultural Resources
- Wetlands
- Construction Impacts
- Environmental Justice

If a Build Alternative is selected, FAA will identify mitigation measures to be implemented by the City in the Record of Decision (ROD).

7.0 BACKGROUND AND METHODOLOGY

7.0.1 Regulatory Context

FAA Order 1050.1E, Paragraph 506 h. Mitigation, states the following:

An EIS describes mitigation measures considered or planned to minimize harm from the proposed action. The following types of mitigation measures will be considered: design and construction actions to avoid or reduce impacts; design measures that reduce impacts; management actions that reduce impacts during operation of the facility; and replacement, restoration (reuse, conservation, preservation, etc.), and compensation measures...

7.1 NOISE

The following sections summarize the Airport's existing noise abatement programs, and identify noise abatement measures that could be implemented to mitigate significant impacts of the Build Alternatives. Existing and potential land use compatibility measures to mitigate significant impacts are discussed in **Section 7.2, Compatible Land Use**.

7.1.1 Existing Noise Abatement Programs

This Section summarizes the Airport's existing noise abatement programs. See **Appendix F, Noise**, for a more detailed description of these current programs.

7.1.1.1 O'Hare Noise Compatibility Commission

In 1996, the City initiated the formation of the O'Hare Noise Compatibility Commission (ONCC) to oversee noise mitigation efforts around O'Hare. The Commission is comprised of representatives of various communities and public school districts located within the O'Hare area. The ONCC participates in the planning of noise relief projects to be implemented, in the O'Hare area, oversees the operation of O'Hare's noise monitoring system, and advises the City on O'Hare-related noise issues.

7.1.1.2 Fly Quiet Program

In June 1997, the City, in cooperation with the ONCC, user airlines, and the FAA implemented the Fly Quiet Program at O'Hare. The program consists of a series of voluntary noise abatement flight and operating procedures designed to reduce the impact of aircraft noise during the nighttime hours (10 PM to 6:59:59 AM). The three main elements of the Fly Quiet Program are (1) preferential runway use, (2) arrival and departure flight procedures, and (3) ground run-up procedures.

7.1.1.3 Ground Run-Up Enclosure

There is currently a ground run-up enclosure that is used during maintenance of aircraft. This facility is a state-of-the-art facility designed to reduce noise levels during engine run-up testing.

7.1.2 Potential Noise Abatement Measures

Particularly with respect to noise impacts related to the project, NEPA and CEQ require that FAA consider mitigation of significant adverse impacts that are reasonably foreseeable. In addition, 49 USC 47106 (c)(1)(B) imposes a substantive obligation upon the Agency to document appropriate mitigation in such context. Accordingly, the FAA could require the City to take steps to minimize significant noise impacts as a result of any Build Alternative, if selected.

Significant noise impacts are anticipated to be reduced with specific noise abatement techniques. Such techniques could include the following:

- All eligible residences and schools within the Build Out 65 DNL and greater noise contour for a Build Alternative, but outside of the Build Out 65 DNL and greater noise contour for No Action, if approved by FAA's issuance of a ROD, would be insulated by the City of Chicago by the time Build Out would occur. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for a Build Alternative would be insulated by the time Build Out would occur.
- After Build Out occurs, the City of Chicago would produce a 65 DNL noise contour based on the operational characteristics of the Build Out configuration but with forecasted operational levels five years in the future from when Build Out occurs, thus creating a new contour referred to as Build Out +5 Forecast Contour (BO +5 F). The City would then insulate all eligible residences and schools within the BO +5 F 65 DNL and greater noise contour, but outside of the No Action (Alternative A) Build Out +5 65 DNL and greater noise contour presented in the FEIS, by the time Build Out +5 would occur. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for a Build Alternative would be insulated by the time Build Out +5 would occur.
- At this point it is not reasonable to either assume that there would be a new Fly Quiet Program or speculate about what a new Fly Quiet Program would be. FAA will, however, give consideration to suggestions for changes in the Fly Quiet Program developed by the ONCC and requested of the FAA by the City of Chicago. It is FAA's understanding that it is the City Chicago's intent to continue the existing Fly Quiet Program. The Fly Quiet Program would be modified by ONCC in the future only if needed; such modification would be done in consultation with the FAA and the City of Chicago Department of Aviation. Modification requiring FAA action would be subsequent to its prior approval, and any necessary environmental review. If FAA's ROD approves a Build Alternative, the existing Fly Quiet Program would remain in place, except as affected by runway decommissioning. The EIS discloses the potential effects of runway decommissioning on the Fly Quiet Program.
- Continuation of the ONCC to oversee noise mitigation efforts around O'Hare.
- Continued use of the ground run-up enclosure during engine run-up testing.

7.2 COMPATIBLE LAND USE

7.2.1 Existing Noise Mitigation Programs

7.2.1.1 School Sound Insulation Program

The School Sound Insulation Program (SSIP)¹ was voluntarily implemented by the City of Chicago to reduce aircraft sound levels in schools. The program provides schools with sound insulation that may include noise attenuating windows, additional roofing and ceiling insulation, improved doors, and related measures intended to reduce the transmission of aircraft noise into schools. The FAA assists in the SSIP with grant funding.

The City's SSIP is one of the most extensive programs of its kind in the world with 110 O'Hare-area schools having been sound-insulated and/or funded for upcoming insulation at a cost of \$246 million as of January 2004.

There is a growing body of literature that demonstrates the effects of high noise levels on learning. The FAA, the City of Chicago, and the ONCC have been engaged for a long period of time in sound insulating schools within areas exposed to high aircraft noise levels around O'Hare. Through these efforts, 62 schools within the project area² have been sound insulated as of June 2005. There is one eligible school, Socrates St. Sava Academy in Chicago, which would be within the 65 DNL Build Out + 5 noise contours for Alternatives C, D, and G that is currently eligible and has also requested sound insulation, but has not been completed. Funding has been approved and this school is scheduled to be sound insulated by the end of the summer 2005.

7.2.1.2 Residential Sound Insulation Program

The Residential Sound Insulation Program (RSIP)³ was voluntarily implemented by the City of Chicago to reduce the impact of aircraft noise in single-family homes surrounding O'Hare. The RSIP provides qualifying homes with sound insulation to reduce the transmission of outside noise into the homes. Under the current ONCC program, eligible homes for the RSIP must be single-family, owner-occupied, built before October 1, 1998,⁴ and within the 69 DNL and greater area of the 2000 noise contour.⁵ With the completion of the 2004 program, 5,925 homes will have been sound-insulated and/or funded for insulation, at a cost of \$189 million.

¹ City of Chicago School Sound Insulation Program Website:
http://www.ohare.com/cnrc/ohare/o_noise_school.shtm. (December 14, 2004).

² The project area for noise for this EIS is defined in **Chapter 4, Affected Environment, Section 4.1, Airport Location and Study Areas.**

³ City of Chicago Residential Sound Insulation Program Website:
<http://www.ohare.com/cnrc/ohare/ohareresidential.htm>. (December 14, 2004).

⁴ Final Policy on Part 150 Approval of Noise Mitigation Measures: Effect on the Use of Federal Grants for Noise Mitigation Projects, Federal Aviation Administration, 14 CFR 150.

⁵ DNL, Day Night Sound Level, is the FAA's required metric for assessing airport noise. It represents the total, cumulative noise exposure for an average day during the study year and includes an extra weight of 10 decibels for all nighttime noise (occurring after 10:00 p.m. and before 6:59:59 a.m.).

7.2.2 Potential Noise Abatement Measures

Particularly with respect to noise impacts related to the project, NEPA and CEQ require that FAA consider mitigation of significant adverse impacts that are reasonably foreseeable. In addition, 49 USC 47106 (c)(1)(B) imposes substantive obligation upon the Agency to document appropriate mitigation in such context. Accordingly, the FAA would require the City to take steps to minimize significant noise impacts as a result of any of the Build Alternatives, if selected.

In addition to noise abatement measures, other forms of mitigation could include the voluntary continuation of the following programs:

7.2.2.1 Continuation of the City's School Sound Insulation Program (SSIP)

The City could continue the existing voluntary SSIP and, in addition, provide impacted schools with noise attenuating windows, additional roofing and ceiling insulation, improved doors, and related measures to reduce the transmission of aircraft noise into schools.

7.2.2.2 Continuation of the City's Residential Sound Insulation Program (RSIP)

The City could continue the existing voluntary RSIP. For example, the City could provide sound insulation for eligible residences which are subject to a significant noise impact, or which would become incompatible, as a result of selecting any of the Build Alternatives (DNL 1.5 db increase within the 65 DNL or greater contour, or newly within the 65 DNL or greater noise contour), to reduce the transmission of outside noise into the homes.

7.3 SURFACE TRANSPORTATION

7.3.1 Potential Mitigation Measures

The following section outlines potential mitigation measures that could be implemented for any of the Build Alternative impacts in the Build Out + 5 phase. The potential mitigation measures would be the same for all Build Alternatives, and in each case could contribute to the improvement of the level of service (LOS) and volume-to-capacity (V/C) ratio for each significantly impacted intersection and roadway segment, respectively.

Intersection of Bessie Coleman Drive and Lot E North (Location 23): This intersection will be further evaluated by the City. The ultimate re-design and improvement of the intersection would produce a LOS of D or better, and could be incorporated as part of the proposed projects in each Build Alternative during Construction Phase I. The improvements may include additional turn lanes, adjustments to total cycle length, the addition of additional through turn lanes, or other modifications.

Intersection of Irving Park Road and Main Cargo Road (Location 21): Improvements that enhance capacity and improve the LOS of this intersection to D or better could potentially require the acquisition of additional right-of-way (ROW) by IDOT, the jurisdictional agency of

Irving Park Road. Adjacent land that may need to be acquired for the additional ROW is currently owned by the Airport. The City has committed to participate in cooperative planning with IDOT to address future improvements to this intersection required to improve the intersection LOS, which may include additional turn lanes or through lanes on Irving Park Road. Additionally, the City has committed to make available adjacent Airport-owned land that would need to be acquired by IDOT for ROW to facilitate these future improvements to the intersection and Irving Park Road.

Intersection of Bessie Coleman Drive and Higgins Road (Location 6): Improvements that enhance capacity and improve the LOS of this intersection to D or better could potentially require the acquisition of additional ROW by IDOT, the jurisdictional agency of Higgins Road. Adjacent land that may need to be acquired for the additional ROW is currently owned by the Airport. The City has committed to participate in cooperative planning with IDOT to address future improvements to this intersection required to improve the intersection LOS, which may include additional through lanes or turn lanes on Higgins Road. Additionally, the City has committed to make available adjacent Airport-owned land that would need to be acquired by IDOT for ROW to facilitate these future improvements to the intersection and Higgins Road.

Intersection of York Road and Irving Park Road Ramp (Location 37): There is an existing Intergovernmental Agreement between the City of Chicago, IDOT, ISTHA, and DuPage County for Preliminary Phase I engineering services related to the proposed relocation of this intersection. As part of these preliminary engineering services which are currently underway, an intersection design study (IDS) will be completed which will be reviewed by the City, IDOT, ISTHA, and DuPage County to ensure that upon implementation of the improvements, the relocated intersection would operate at LOS of D or better.

All other significantly impacted intersections and roadway segments (Build Out + 5): In addition to the four intersections listed above, the City is reviewing the feasibility of providing mitigation for the project-related impacts to the significantly impacted intersections and roadway segments. As part of this effort, the FAA is continuing discussions with the City to further identify appropriate mitigation initiatives to address the project-related surface traffic for the Build Alternatives. For example, the City could (1) establish and fund time-delimited escrow accounts to be controlled by the responsible transportation agency that owns and operates the significantly impacted intersection and roadway segment, or (2) contribute a prorated share of the project-related mitigation costs, including the total estimated costs of planning, designing, and constructing the required improvements, to the significantly impacted roadway segments and intersections. The prorated contribution could be based on the increase in project-related traffic at each location.

As a result of potential mitigation initiatives, a Memorandum of Agreement (MOA) could be developed between the City and each responsible transportation agency, which could include the following:

- Documentation of the project-generated traffic (for the No Action and Build Alternatives) at the significantly impacted intersections and roadway segments.
- Identification of the mitigation measures required.

- Estimates of the implementation costs of mitigation measures for the group of significantly impacted intersections and roadway segments.
- Identification of the events that would trigger the contribution of project-related mitigation funds.

Another option for providing mitigation for the project related impacts could be for the City to participate in cooperative planning with the entities having jurisdictional responsibilities over the facilities to address their respective share of intersection and roadway capacity improvements, and other potential mitigation measures, for each significantly impacted intersection and roadway segment.

7.3.2 Future Roadway Projects by Others

During the development of this EIS, assumptions were made regarding surface transportation improvements that would be in place for each of the construction phase years, based on the TIP for the Chicago metropolitan area. It is recognized that regional transportation planning is an ongoing and fluid process, and that implementation of any of the Build Alternatives would be expected to facilitate advancement of that planning. It is anticipated that a number of the adverse impacts that have been identified in this EIS could be reduced as a result of some of the surface transportation initiatives that are under consideration. However, specific impacts of the following projects will not be known unless and until they can be studied in detail. Some of these projects that are known to be in the early stages of planning at this point are summarized as follows:

West O'Hare Bypass: This project has been included in the Long Range Plan for ISTHA that was approved on September 30, 2004. It was included in the Plan as an "optional" project, contingent upon Federal approval and funding. The project, which has yet to be programmed for funding, would provide a six-lane expressway extending from I-94/I-294 south of the airport, and terminating near Thorndale Avenue west of the airport. This project has the potential to lessen some of the potential impacts of the alternatives occurring along York Road, Irving Park Road, Mannheim Road, and Thorndale Avenue.

York Road / Irving Park Road / UPRR / CNRR – Grade Separation: This project is included as part of this EIS surface transportation analysis as a project that was anticipated to be completed by others. Some very basic geometric assumptions were made to maintain connectivity between York Road and Irving Park Road, but it is anticipated that the preliminary engineering to be done by the sponsoring agency will more thoroughly analyze the need and potential impacts. This project has the potential to lessen some of the potential impacts of the alternatives occurring along York Road and Irving Park.

Elgin-O'Hare Expressway – East Extension: This project is part of the CATS 2030 RTP, but has yet to be programmed by IDOT. It would extend the Elgin-O'Hare Expressway from its existing east terminus at I-290 to the proposed west access to O'Hare, by converting existing Thorndale Avenue from a DuPage County arterial route to a limited access freeway. This project has the potential to lessen some of the potential impacts of the alternatives occurring along York Road, Irving Park Road, and Thorndale Avenue.

Metra STAR Line: The Northwest Corridor Segment of the STAR Line would provide commuter rail service on new alignment, connecting Hoffman Estates to O'Hare airport along I-90, then south along an existing freight railroad corridor. This project has the potential to lessen some of the potential impacts of the alternatives occurring on the west side and south side of O'Hare airport by providing an alternative to driving for airport trips from the west to the main and western terminals at the Airport.

CTA Blue Line - O'Hare Express: A feasibility study is underway for this project which would provide express service between downtown Chicago and O'Hare along the existing Blue Line corridor. It would include passenger terminals that can accommodate baggage handling, and improvements to tracks and signals to allow express trains to bypass local trains. Depending on the location of the express train terminal at O'Hare, this project has the potential to lessen some of the potential impacts of the alternatives occurring on the east side and south side of O'Hare by providing an alternative to driving for airport trips from the east to the main and western terminals at O'Hare.

DuPage County "J" Route Bus Rapid Transit: This project, which is included as part of the DuPage Area Transit Plan 2020, is intended to provide fully integrated multi-modal and regionally coordinated express bus transit service to serve DuPage County. It would provide a high-speed link from O'Hare and Schaumburg through Oak Brook, to Naperville and Aurora and to the proposed outer circumferential commuter rail service. The line would operate initially in priority lanes on surface streets. However, at full operation, the "J" route will provide high-speed service operating on an exclusive bus way. This project has the potential to lesson some of the potential impacts of the alternatives occurring on the west side and south side of O'Hare by providing an alternative to driving for airport trips from the west to the main and western terminals at O'Hare. Routes with impacts that could be affected include York Road/Elmhurst Road, Irving Park Road, and Thorndale Avenue.

7.4 SOCIAL IMPACTS

7.4.1 Residential Relocations and Business Acquisitions

A Draft Relocation Plan⁶ was prepared by the City of Chicago to assist displaced residents and businesses in relocating to new properties outside the proposed acquisition areas. This Relocation Plan was prepared in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), 49 CFR Part 24, and the FAA Advisory Circular/150/5100-17, dated September 7, 2001. This Relocation Plan would be implemented if a Build Alternative is selected.

As stated in the Relocation Plan, the following are the purposes of this plan:

- To inventory the characteristics and needs of the residences and businesses to be displaced;

⁶ Draft O'Hare Land Acquisition Relocation Plan, O.R. Colan, March 13, 2003.

- To investigate methods for minimizing the disruptions to households and businesses caused by their relocation;
- To inventory and demonstrate that an adequate number of properties similar to those being acquired by the airport currently exists within reasonable distances from the project area; and,
- To assure that all eligible property owners and tenants located within the project area will enjoy the full benefit of all protections and guarantees provided by Federal and state laws and regulations.

FAA is aware of the residents' concerns that the sale price established for their existing property (fair market value) would be insufficient to provide for purchase of comparable property in a new location. Provisions within the Uniform Act provide a mechanism to address these concerns.

Any impacted owner, tenant, or business in the proposed acquisition area would be afforded all appropriate rights established under the Uniform Act and FAA's Advisory Circular (AC) 150/5100-17. The Uniform Act will be implemented by the City of Chicago's O'Hare Land Acquisition Program with compliance assured by FAA.

In addition, because a large number of Spanish-speaking residents are within the acquisition areas, the City's Land Acquisition Consultant will provide a Spanish translator (translators for other languages will be provided if needed), with knowledge of 49 CFR Part 24 requirements, throughout the land acquisition process.

In addition to the above described mitigation measures, although not specifically required under the Uniform Act, the City of Chicago has committed to providing advisory services to those immediately adjacent to the acquisition area. **Appendix H, Social Impacts**, includes a copy of the City of Chicago's commitment letter.⁷

7.4.2 Cemetery Relocations

As a result of potential impacts to the St. Johannes and Rest Haven Cemeteries, Draft Memorandums of Agreement (MOAs), or Agreements (if either of the cemeteries are not determined to be eligible) are being developed which outline the steps that would be taken in mitigating the adverse impacts to these resources. At a minimum, the following mitigation measures will be implemented if a Build Alternative is selected in the ROD and implemented by the City:

- Map of the Cemeteries - Within 180 days of the FAA's issuance of a ROD, if a Build Alternative is approved, and the City of Chicago's decision to proceed with the proposed O'Hare Modernization, the City of Chicago would produce a professional level survey of all identified graves, and all historic features visible on the ground surface within St. Johannes Cemetery and the Rest Haven Cemetery.

⁷ Letter from City of Chicago to FAA, July 11, 2005.

- Photographic Recordation - The headstones and all other above ground features will be recorded with archival photography prior to their removal. The City of Chicago would prepare six to nine, 5" x 7", 35 mm, archivally-processed, black-and-white photographs of each headstone.
- A copy of documentation related to the MOAs will be provided to the Advisory Council on Historic Preservation, the National Park Service, the Illinois Historic Preservation Agency, the St. John's United Church of Christ, Rest Haven Cemetery Association, the City of Chicago, the Village of Bensenville, and the Bensenville Historical Commission.

7.4.3 Property Tax Loss

The total taxes that would be lost to the school districts and community colleges for one year would be approximately \$3,150,000 for Alternative C, and approximately \$3,020,000 for Alternatives D and G. Based on Section 21, Reimbursement for tax base losses of the O'Hare Modernization Act,⁸ tax loss reimbursement is outlined as follows:

(a) Whenever the City acquires parcels of property within any school district or community college district for the O'Hare Modernization Program, the City shall, for the following taxable year and for each of the 5 taxable years thereafter, pay to that district the amount of the total property tax liability of the acquired parcels to the district for the 2002 taxable year, increased or decreased each year by the percentage change of the district's total tax extension for the current taxable year from the total tax extension for the prior taxable year; provided that no annual increase shall exceed the lesser of 5% or the annual increase in the Consumer Price Index. Funds payable by the City under this Section shall be paid exclusively from non-tax revenues generated at airports owned by the City, and shall not exceed the amount of those funds that can be paid for that purpose under 49 U.S.C. 47107 (1)(2).

(b) Notwithstanding any other provision of this Section: (i) no funds shall be payable by the City under this Section with respect to any taxable year succeeding the 2009 taxable year; (ii) in no event shall such funds be payable on or after January 1, 2010; (iii) in no event shall the total funds paid by the City pursuant to this Section to all districts for all taxable years exceed \$20,000,000; and (iv) any amounts payable to a district by the City with respect to any parcel of property for any taxable year shall be reduced by the amount of taxes actually paid to the district for that taxable year with respect to that parcel or any leasehold interest therein.

⁸ O'Hare Modernization Act, Illinois Public Act 93-0450, August 6, 2003.

7.5 AIR QUALITY

The Build Alternatives would not have the potential to cause or contribute to a violation of the NAAQS, therefore no mitigation is required. However, through discussions with the USEPA, IEPA, and other agencies and organizations, several potential emission reduction measures have been identified. The measures would reduce pollutant emissions associated with both the operation and construction of the Airport. The measures (listed below) could be implemented by the City of Chicago for incorporation into the proposed improvements at O'Hare if a Build Alternative is selected.

- Continue the use of Best Management Practices (BMP) as outlined in the City's BMP Manual, and in **Section 5.6.5, Potential Emission Reduction Measures, of Section 5.6, Air Quality of Chapter 5, Environmental Consequences;**
- Provide Fuel Hydrant System access at all future gates to eliminate tanker fuel trucks;
- Provide Pre-Conditioned Air (PCA) at all future gates;
- Continue the use of aircraft idling time reduction at gates;
- Provide 400 Hz power at all future gates for aircraft use;
- Require that contractors limit the time that construction-related vehicles idle, when practicable and feasible;
- Implement diesel idling restrictions for delivery vehicles;
- Use newer, cleaner, and more fuel efficient engines in lieu of older diesel engines during construction;
- Use ultra low sulfur fuel for off-road diesel equipment prior to the year 2010 (use of this fuel is Federally mandated in the year 2010 for off-road equipment);
- Use ultra low sulfur fuel for on-road diesel equipment prior to the year 2007 (use of this fuel is Federally mandated in the year 2007 for on-road equipment);
- Use diesel emission traps and oxidation catalysts for off-road diesel equipment during construction;
- Continue the use of Stage II vapor recovery for refueling (ground support equipment and aircraft);
- Encourage the use of alternate fuel and retrofits for internal bus/shuttle transport;
- Provide a centralized and consolidated rental car facility with connection to the Airport Transit System (ATS);
- Extend the existing ATS to new and existing facilities;
- Lower construction haul trips offsite (and overall emissions) by utilizing onsite material and balancing earthwork and excavation to the maximum extent possible;
- Purchase and install three (3) air quality monitors at O'Hare;

- Implement components of the City's OMP Sustainable Design Manual during design, planning, and construction, which includes the following:
 - Use of active/passive solar energy where practicable and feasible.
 - Use of green building design and other Sustainable Design goals with energy efficiency features for new and existing buildings.
 - Use of low volatile organic compound emission paints and solvents during construction of OMP-related buildings and terminals.
 - Provide preferred parking for public and employees traveling to/from the Airport in alternatively fueled vehicles, in vanpools/carpools, and for rental car fleets using alternatively fueled vehicles.

Additional detail related to these potential emission reduction measures, and the estimates of resultant reductions in emissions, is provided in **Section 5.6.5, Potential Emission Reduction Measures**, in **Section 5.6, Air Quality**.

7.6 DEPARTMENT OF TRANSPORTATION SECTION 4(F) LANDS AND LAND AND WATER CONSERVATION FUND SECTION 6(F) LANDS

A Final Section 4(f)/LAWCON Section 6(f) evaluation has been completed and is included in **Appendix L, Section 4(f)/6(f) Evaluation**. As part of this evaluation, a land mitigation program was developed to address the direct and indirect/constructive use impacts as a result of the Build Alternatives.

The FAA determined that there were no Build Alternatives that would avoid use of the Section 4(f) resources. In consideration of the substantial similarity between the environmental impacts for Build Alternatives C, D, and G, the FAA has identified the alternative that best fulfills its statutory mission and responsibilities as the "Preferred Alternative."

Potential measures to minimize harm to Section 4(f) resources were then evaluated. Based on this evaluation, the mitigation measures for the proposed airport development were tailored to the specific requirements of either Section 4(f) and/or Section 6(f) as well as to the type of property affected.

FAA determined that appropriate measures to minimize harm from direct impacts to Section 4(f) resources will consist of fair market value payment for the Section 4(f) properties (parks and historic sites), and a commitment to provide replacement property for the Section 6(f) property, Schuster Park. The only potential indirect impacts on Section 4(f) resources would be the sound insulation to mitigate incompatibility due to aircraft noise. FAA determined that appropriate measures to minimize harm from indirect/constructive use impacts to Section 4(f) resources that are locally important would be proper facility sound insulation that follows the FAA guidelines for sound insulation and the Secretary of Interior's *Standards for the Treatment of Historic*

*Buildings.*⁹ There would be no indirect/constructive use impacts on parks or National Register of Historic Places (NRHP) sites. Further discussion of measures to mitigate impacts on Section 4(f) resources is included in the following sections

7.6.1 Direct Effects Mitigation

The following Section 4(f)/6(f) lands would be acquired by the Build Alternatives:

- Schuster Park (Bensenville Park District) (Section 6(f) Property);
- Bretman Park (Village of Bensenville);
- Silver Creek (DuPage County Forest Preserve District);
- St. Johannes Cemetery (St. John's Church of Christ);
- Rest Haven Cemetery (Rest Haven Cemetery Association);
- Schwerdtfeger Farmstead (City of Chicago); and
- Gas Service Station (Village of Bensenville).

7.6.1.1 Schuster Park (Bensenville Park District)

The FAA has coordinated with the Bensenville Park District, the Illinois Department of Natural Resources (IDNR), and the National Park Service (NPS) concerning the impact to Schuster Park to develop specific mitigation measures tailored to address the unique requirements of this property, as well as meet the requirements of Section 4(f) and Section 6(f). To address the direct acquisition of Schuster Park, a 4(f)/6(f) property, the FAA, in consultation with the Bensenville Park District, IDNR, and NPS, are considering the following mitigation measures if a Build Alternative is selected:

- Replacement in-kind of the recreational resource. The replacement of the recreational resources would occur in consultation with the Bensenville Park District to ensure that the recreational uses meet local needs, or
- Other options for securing replacement property as identified in working with the Bensenville Park District, IDNR, and the NPS.

Based on the location of this park, its assets, and size, this park appears to be a neighborhood park. The residences in close proximity to the park, whose occupants are likely the primary users of this park, would be acquired under any of the Build Alternatives. Schuster Park is a part of a system of parks within the Bensenville Park District boundaries and appears to provide facilities and a level of service similar to that of other parks within the Village of Bensenville and general vicinity. Therefore, the location of the replacement property would not necessarily need to be located in close proximity to the current park location. The impacts to this park would require mitigation under Section 4(f) as well as under Section 6(f). A specific mitigation plan will be developed in cooperation with the Bensenville Park District, IDNR, NPS,

⁹ Standards for the Treatment of Historic Buildings, U.S. Department of Interior, National Park Service, 1995.

and the FAA. Coordination with the Bensenville Park District, IDNR, and NPS is included in **Appendix L, Section 4(f)/6(f) Evaluation**.

7.6.1.2 Bretman Park (Village of Bensenville)

Based on the location of this park, its assets, and size, this park appears to be a neighborhood park. The residences in close proximity to the park, whose occupants are likely the primary users of this park, would be acquired under any of the Build Alternatives. Bretman Park is a part of a system of parks within the Village of Bensenville and appears to provide facilities and a level of service similar to that of other parks within the Village of Bensenville and general vicinity. Proposed mitigation would include acquisition of Bretman Park at the fair market value. Coordination with the Village of Bensenville is included in **Appendix L**.

7.6.1.3 Silver Creek (DuPage County Forest Preserve District)

The FAA has coordinated with the DuPage County Forest Preserve District concerning the impacted property to develop specific mitigation measures tailored to address the unique requirements of each property as well as meet the requirements of Section 4(f). At a meeting with the District, they indicated that there is an Intergovernmental Agreement with the Village of Bensenville that limits acquisition of this property to the condemnation process. It is through this condemnation process that the fair market value of the Silver Creek property would be determined. In consultation with the Forest Preserve District, it was discussed that the fair market value established as a result of a condemnation process would be adequate mitigation for the potential loss of the Silver Creek property. Coordination with the DuPage County Forest Preserve District is outlined in **Appendix L**.

7.6.1.4 St. Johannes Cemetery (St. John's Church of Christ)

Even though there is no final determination of eligibility at this time from the Keeper of the NRHP, for purposes of this EIS, FAA is treating St. Johannes Cemetery as a locally important historic property. As a result, the FAA has developed specific mitigation measures tailored to address the unique requirements of this property, as well as meet the requirements of Section 4(f). As a result of impacts to this Cemetery, a Draft MOA, or an Agreement (if the cemetery is not determined to be eligible), is being developed which outlines the steps that would be taken in mitigating the adverse impacts. At a minimum, the following mitigation measures will be implemented if a Build Alternative is selected in the ROD and implemented by the City:

- Map of the Cemetery - Within 180 days of the FAA's issuance of a ROD, the City of Chicago would produce a professional level survey of all identified graves, and all historic features visible on the ground surface within St. Johannes Cemetery.
- Photographic Recordation - The headstones and all other above ground features will be recorded with archival photography prior to their removal. The City of Chicago would prepare six to nine, 5" x 7", 35 mm, archivally-processed, black-and-white photographs of each headstone.

- A copy of documentation related to the MOA will be provided to the National Park Service, the St. John's United Church of Christ, the Village of Bensenville, and the Bensenville Historical Commission.

7.6.1.5 Rest Haven Cemetery (Rest Haven Cemetery Association)

Even though there is no determination of eligibility at this time from the IHPA, for purposes of this EIS, FAA is treating Rest Haven Cemetery as a locally important historic property. As a result, the FAA has developed specific mitigation measures tailored to address the unique requirements of this property, as well as meet the requirements of Section 4(f). As a result of impacts to this Cemetery, a Draft MOA, or an Agreement (if the cemetery is not determined to be eligible), is being developed which outlines the steps that would be taken in mitigating the adverse impacts. At a minimum, the following mitigation measures will be implemented if a Build Alternative is selected in the ROD and implemented by the City:

- Map of the Cemetery - Within 180 days of the FAA's issuance of a ROD, the City of Chicago would produce a professional level survey of all identified graves, and all historic features visible on the ground surface within Rest Haven Cemetery.
- Photographic Recordation - The headstones and all other above ground features will be recorded with archival photography prior to their removal. The City of Chicago would prepare six to nine, 5" x 7", 35 mm, archivally-processed, black-and-white photographs of each headstone.
- A copy of documentation related to the MOA will be provided to the National Park Service, the Rest Haven Cemetery Association, the Village of Bensenville, and the Bensenville Historical Commission.

7.6.1.6 Schwerdtfeger Farmstead (City of Chicago)

Even though there is no determination of eligibility at this time from the IHPA, for purposes of this EIS, FAA is treating Schwerdtfeger Farmstead as a locally important historic property. As a result, the FAA has developed specific mitigation measures tailored to address the unique requirements of this property, as well as meet the requirements of Section 4(f). As a result of impacts to this property, a Draft MOA, or an Agreement (if the cemetery is not determined to be eligible), is being developed which outlines the steps that would be taken in mitigating the adverse impacts. At a minimum, the following mitigation measures will be implemented if a Build Alternative is selected in the ROD and implemented by the City:

- Within 180 days of the FAA's issuance of a ROD, the City of Chicago (with oversight by FAA) will produce a Historic American Building Survey (HABS) document of the Schwerdtfeger Farmstead. This document will include:
 - Measured Drawings: The HABS document will include a set of measured drawings. The set of measured drawings will include plans, elevations, sections, details and a cover sheet with a site plan and written information.

- Large-Format Photographs: The HABS document will include a set of large-format black and white photographs that are perspective corrected. Photographs will include overall views, elevations and details of important exterior and interior features of the buildings.
- Written History: The HABS document will include an in depth critically developed historic context of the building. Archival Documentation: The HABS document will be produced in accordance with all archival requirements as outlined by the National Park Service.
- Copies of the HABS document will be distributed to the NPS, the City of Chicago, the Chicago Landmarks Commission, the Chicago Historical Society, and the IHPA.

7.6.1.7 Gas Service Station (Village of Bensenville)

To address the project-related impacts (acquisition) at this historic site, an MOA is being developed that outlines the proposed mitigation measures. At a minimum, the following mitigation measures will be implemented if a Build Alternative is selected in the ROD and implemented by the City:

- Within 180 days of the FAA's issuance of a ROD, the City of Chicago (with oversight by FAA) will produce a Historic American Building Survey (HABS) document of the Gas Service Station.
- Measured Drawings: The HABS document will include a set of measured drawings. The set of measured drawings will include plans, elevations, sections, details and a cover sheet with a site plan and written information.
- Large-Format Photographs: The HABS document will include a set of large-format black and white photographs that are perspective corrected. Photographs will include overall views, elevations and details of important exterior and interior features of the buildings.
- Written History: The HABS document will include an in depth critically developed historic context of the building. Archival Documentation: The HABS document will be produced in accordance with all archival requirements as outlined by the National Park Service.
- Copies of the HABS document will be distributed to the NPS, the IHPA, the Village of Bensenville, and the Bensenville Historical Commission.

7.6.2 Indirect Effects Mitigation

The following sites could experience potential indirect or constructive use impacts for the Build Alternatives:

- Locomotive Museum in Veteran's Park (Bensenville Park District)
- Additional Locally Important Sites

7.6.2.1 Locomotive Museum in Veteran's Park (Bensenville Park District)

Based on the uses of this facility, no mitigation appears to be warranted at this site since there would not be a substantial impairment of this resource.

7.6.2.2 Additional Locally Important Sites

Table 5.8-1 in Section 5.8, Department of Transportation Section 4(f) Lands and Land and Water Conservation Fund Section 6(f) Lands, of Chapter 5, Environmental Consequences, identifies the locally important sites that would exceed the FAA's noise compatibility guidelines with the Build Alternatives. These incompatible noise levels are not anticipated to substantially impair the use of these properties. Sound insulation would occur as the noise level is not compatible with residential uses. It is not needed due to the property having local importance. With any of the Build Alternatives, sound insulation following the Secretary of Interior's *Standards for the Treatment of Historic Buildings* and FAA guidelines would avoid adverse impacts to these sites. These sound insulation measures are identified in the following paragraphs.

As sound insulation to historic properties may constitute a Federal undertaking, a programmatic agreement would address all requisite requirements of Section 106. It would be expected that parties to the programmatic agreement would include: FAA, NPS, and the Illinois State Historic Preservation Office (SHPO). Provisions of the programmatic agreement could include:

- I. The mitigation options will be evaluated to comply with the Secretary of Interior's *Standards for the Treatment of Historic Buildings* (U.S. Department of Interior, National Park Service, 1995).
- II. The City of Chicago will ensure that the window mitigation project complies with the Secretary of Interior's *Standards for the Treatment of Historic Buildings* (U.S. Department of Interior, National Park Service, 1995). The City of Chicago will hire a qualified sound insulation/historic build restoration consultant, approved by the consulting parties, to ensure that the design and specifications for the undertaking are developed in compliance with the Secretary of the Interior's *Standards for Treatment of Historic Buildings*. No construction, alteration, remodeling or any other physical action to the facilities will be undertaken by the City of Chicago, which would affect the appearance or structural integrity of the facility without the express written permission of the NPS, FAA, and SHPO.

- III. The City of Chicago shall ensure that any change order to the project design required subsequent to the approval of the project will be developed in consultation with the NPS, FAA, and SHPO.
- IV. Should the SHPO object within 30 calendar days to any construction documents provided for review pursuant to the terms of this Agreement, the City of Chicago shall consult with NPS, FAA, and SHPO to resolve the objection. If the City of Chicago determines that the objections cannot be resolved, the City of Chicago shall request the further comments of the SHPO. Any SHPO comment provided in response to such a request shall be taken into account by the City of Chicago in accordance with 36 CFR §800.6(c)(2) with reference only to the subject of the dispute under this agreement. In the event that SHPO comments are not resolved, will refer the issue to the ACHP for resolution.
- V. Should the City of Chicago, NPS, FAA, and SHPO determine that the terms of a proposed programmatic agreement cannot be met or believes that a change is necessary, that signatory is responsible for immediately requesting that other signatories consider voiding, amending, or affecting an amendment to this programmatic agreement. Such an agreement or addendum shall be executed in the same manner as the original agreement.
- VI. DURATION. No sooner than 30 days after execution of the programmatic agreement, the City of Chicago shall initiate the process for mitigation outlined herein and proceed diligently and expeditiously to complete the mitigation project.
- VII. AMENDMENTS. If any signatory to the programmatic agreement, determines that its terms will not or cannot be carried out or that amendment to its terms must be made, that party shall immediately consult with the other parties to develop an amendment to this programmatic agreement pursuant to 36 CFR §800.6(c) (7) and §900.6 (c)(8). The amendment will be effective on the date a copy signed by all of the original signatories is filed with the ACHP. If the signatories cannot agree to appropriate terms to amend the programmatic agreement, any signatory may terminate the agreement for reason in accordance with Stipulation IX below.
- VIII. UNEXPECTED DISCOVERIES. The City of Chicago will notify the FAA as soon as practicable if it appears that an Undertaking will affect a previously unidentified property that may be historic, or affect a known historic property in an unanticipated manner. The City will stop sound insulation activities in the vicinity of the discovery, and take all reasonable measures to avoid or minimize harm to the property until FAA concludes consultation with the SHPO, and any Native American Tribe that might attach religious and cultural resource significance to the affected property. In the case of human remains, the City will also immediately notify the local law enforcement office and the county coroner/medical examiner.

7.7 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

The following section outlines the potential mitigation measures for impacts to each of the historic resources.

7.7.1 St. Johannes Cemetery

Even though there is no final determination of eligibility at this time from the Keeper of the NRHP, for purposes of this EIS, FAA is treating St. Johannes Cemetery as a locally important historic property. As a result, the FAA has developed specific mitigation measures tailored to address the unique requirements of this property, as well as meet the requirements of Section 4(f). As a result of impacts to this Cemetery, a Draft MOA, or an Agreement (if the cemetery is not determined to be eligible), is being developed which outlines the steps that would be taken in mitigating the adverse impacts. At a minimum, the following mitigation measures will be implemented if a Build Alternative is selected in the ROD and implemented by the City:

- Map of the Cemetery - Within 180 days of the FAA's issuance of a ROD, the City of Chicago would produce a professional level survey of all identified graves, and all historic features visible on the ground surface within St. Johannes Cemetery.
- Photographic Recordation - The headstones and all other above ground features will be recorded with archival photography prior to their removal. The City of Chicago would prepare six to nine, 5" x 7", 35 mm, archivally-processed, black-and-white photographs of each headstone.
- A copy of documentation related to the MOA will be provided to the National Park Service, the St. John's United Church of Christ, the Village of Bensenville, and the Bensenville Historical Commission.

7.7.2 Rest Haven Cemetery

Even though there is no determination of eligibility at this time from the IHPA, for purposes of this EIS, FAA is treating Rest Haven Cemetery as a locally important historic property. As a result, the FAA has developed specific mitigation measures tailored to address the unique requirements of this property, as well as meet the requirements of Section 4(f). As a result of impacts to this Cemetery, a Draft MOA, or an Agreement (if the cemetery is not determined to be eligible), is being developed which outlines the steps that would be taken in mitigating the adverse impacts. At a minimum, the following mitigation measures will be implemented if a Build Alternative is selected in the ROD and implemented by the City:

- Map of the Cemetery - Within 180 days of the FAA's issuance of a ROD, the City of Chicago would produce a professional level survey of all identified graves, and all historic features visible on the ground surface within Rest Haven Cemetery.
- Photographic Recordation - The headstones and all other above ground features will be recorded with archival photography prior to their removal. The City of Chicago would

prepare six to nine, 5" x 7", 35 mm, archivally-processed, black-and-white photographs of each headstone.

- A copy of documentation related to the MOA will be provided to the National Park Service, the Rest Haven Cemetery Association, the Village of Bensenville, and the Bensenville Historical Commission.

7.7.3 Gas Service Station (Village of Bensenville)

To address the project-related impacts (acquisition) at this historic site, an MOA is being developed that outlines the proposed mitigation measures. At a minimum, the following mitigation measures will be implemented if a Build Alternative is selected in the ROD and implemented by the City:

- Within 180 days of the FAA's issuance of a ROD, the City of Chicago (with oversight by FAA) will produce a Historic American Building Survey (HABS) document of the Gas Service Station.
 - Measured Drawings: The HABS document will include a set of measured drawings. The set of measured drawings will include plans, elevations, sections, details and a cover sheet with a site plan and written information.
 - Large-Format Photographs: The HABS document will include a set of large-format black and white photographs that are perspective corrected. Photographs will include overall views, elevations and details of important exterior and interior features of the buildings.
 - Written History: The HABS document will include an in depth critically developed historic context of the building. Archival Documentation: The HABS document will be produced in accordance with all archival requirements as outlined by the National Park Service.
 - Copies of the HABS document will be distributed to the NPS, the IHPA, the Village of Bensenville, and the Bensenville Historical Commission.

7.7.4 Schwerdtfeger Farmstead (City of Chicago)

Even though there is no determination of eligibility at this time from the IHPA, for purposes of this EIS, FAA is treating Schwerdtfeger Farmstead as a locally important historic property. As a result, the FAA has developed specific mitigation measures tailored to address the unique requirements of this property, as well as meet the requirements of Section 4(f). As a result of impacts to this property, a Draft MOA, or an Agreement (if the cemetery is not determined to be eligible), is being developed which outlines the steps that would be taken in mitigating the adverse impacts. At a minimum, the following mitigation measures will be implemented if a Build Alternative is selected in the ROD and implemented by the City:

- Within 180 days of the FAA's issuance of a ROD, the City of Chicago (with oversight by FAA) will produce a Historic American Building Survey (HABS) document of the Schwerdtfeger Farmstead. This document will include:
 - Measured Drawings: The HABS document will include a set of measured drawings. The set of measured drawings will include plans, elevations, sections, details and a cover sheet with a site plan and written information.
 - Large-Format Photographs: The HABS document will include a set of large-format black and white photographs that are perspective corrected. Photographs will include overall views, elevations and details of important exterior and interior features of the buildings.
 - Written History: The HABS document will include an in depth critically developed historic context of the building. Archival Documentation: The HABS document will be produced in accordance with all archival requirements as outlined by the National Park Service.
 - Copies of the HABS document will be distributed to the NPS, the City of Chicago, the Chicago Landmarks Commission, the Chicago Historical Society, and the IHPA.

7.8 WETLANDS

The FAA, working with the U.S. Army Corps of Engineers (USACE) and the Illinois Environmental Protection Agency (IEPA) as cooperating agencies, developed a Memorandum of Agreement (MOA)¹⁰ to facilitate the potential issuance of a Section 404 permit and the requisite Section 401 Water Quality Certification. This MOA was developed by the FAA in response to a City request that any required permits or certifications could be decided, coincident with completion of FAA's ROD if a Build Alternative were to be selected.

In accordance with the MOA, the USACE is reviewing and processing a Section 404 permit application and pre-discharge notification per the requirements of the Clean Water Act, as submitted by the City of Chicago Department of Aviation (DOA).¹¹ Similarly, the IEPA is reviewing anti-degradation (Water Quality Standards) and Section 401 Water Quality Certification information pertaining to potential project-related wetland impacts.¹² Further, in accordance with the MOA, all three of these decision-making agencies will use the information developed during this EIS process to reach decisions on project alternatives as near simultaneously as possible. In furtherance of this goal, the public hearings conducted for this EIS were hosted by the FAA, the USACE, and the IEPA for purposes of meeting these agencies'

¹⁰ Interagency Coordination Agreement Among U.S. Army Corps of Engineers, Chicago District, Federal Aviation Administration, Chicago Airports District Office, and Illinois Environmental Protection Agency, for Coordination of the O'Hare Airport Modernization Project, executed May 17, 2004.

¹¹ City of Chicago Department of Aviation Individual Permit Application to U.S. Army Corps of Engineers, November 2004.

¹² A copy of the Individual Permit Application also was sent to IEPA to obtain a Water Quality Certification.

decision-making requirements. The public hearings met the notification requirements of this EIS, as well as those associated with the Section 404 and Section 401 processes.

7.8.1 Potential Mitigation Measures

The guidelines associated with both the requirements for FAA approval and the USACE Section 404 permit process indicate that satisfactory mitigation must be provided if wetlands and/or non-wetland Waters of the United States (WUS) impacts could occur as a result of project implementation. Mitigation within the context of both the requirements for FAA approval and the USACE Section 404 permit program consists of at least three sequential steps: (1) avoidance of wetlands impacts where feasible; (2) minimization of impacts to the extent feasible; and (3) compensation for those wetlands impacts which cannot be avoided or further minimized. Although avoidance and minimization of project-related wetland impacts is a long-standing and well-understood requirement for all projects that require Federal approval, avoidance and/or minimization options for Alternatives C, D, or G are nonexistent. Therefore, in consultation with FAA, the City of Chicago, Department of Aviation (DOA) has developed a conceptual mitigation plan¹³ designed to compensate for the loss of wetlands and non-wetland WUS at the Airport. This mitigation strategy also takes into account the policies outlined in FAA Advisory Circular 150/5200-33A, *Hazardous Wildlife Attractants On or Near Airports* (dated July 27, 2004), which discusses requirements concerning the avoidance of hazardous wildlife attractants at Airports.

Wetlands frequently provide attractive habitat for many species of wildlife, and the use of active Airport property, including approach and departure airspace, by wildlife can pose an unacceptable safety threat to aircraft operations. The most common type of aircraft/wildlife interference includes collision with birds, specifically gulls, waterfowl, and raptors.¹⁴ Several species of birds use the Airport on a seasonal or transient basis. Overall, wetlands on or near the Airport increase the likelihood of an aircraft/wildlife collision. FAA recommends the following distances be established between the wildlife attractant and an airport's aircraft movement areas:

- 10,000 feet for jet-serviced airports
- 5,000 feet for propeller-serviced airports
- 5 miles for approach/departure airspaces

Therefore, the mitigation strategy encompasses the policies outlined in FAA Advisory Circular 150/5200-33A.

¹³ City of Chicago Department of Aviation Individual Permit Application to U.S. Army Corps of Engineers, November 2004.

¹⁴ Wildlife Hazard Mitigation Statement-Memorandum of Agreement between the FAA, the U.S. Air Force, the USEPA, the USFWS, and the USDA, July 29, 2003.

7.8.1.1 Conceptual Wetlands Mitigation Plan

The City's Conceptual Wetlands Mitigation Plan has been refined in response to comments received by the DOA from the Interagency Mitigation Review Team (MRT) during the Section 404 application review process. The MRT consists of the USACE, USEPA, IEPA, and the USFWS. The original Conceptual Wetlands Mitigation Plan was included within the USACE Section 404 Individual Permit Application. **Table 7-1** summarizes wetland and non-wetland WUS impacts at O'Hare with proposed mitigation ratios as suggested in consultation with the MRT.

**TABLE 7-1
PROPOSED WETLAND AND NON-WETLAND WUS MITIGATION CREDITS**

Water Resource Type	Classification	Impact (acres)	Mitigation Ratio	Mitigation Credits	Mitigation Category(a)
USACE Jurisdictional Wetlands (DuPage County)	Jurisdictional	11.3	1.5 : 1.0	17.0	I
USACE Jurisdictional Wetlands (Cook County)	Jurisdictional	15.4	1.5 : 1.0	23.1	II
WUS - Creeks/Ditches (Cook County) (b)(c)	WUS	23.0	5.0 : 1.0	115.0	IV
WUS - Creeks/Ditches (Cook County) (c)	WUS	3.0	1.5 : 1.0	4.5	IV
Isolated Wetlands (DuPage County)	Isolated	24.9	1.5 : 1.0	37.4	I
Isolated Wetlands (Cook County)	Isolated	14.5	1.0 : 1.0 (d)	14.5	III
Isolated – Critical Classification (DuPage County)	Isolated	10.7	3.0 : 1.0	32.1	I
In-Channel Wetlands (SW120 and SW121) (e)	Jurisdictional	24.8	5.0 : 1.0	124.0	IV
USEPA – Forested (DuPage County) (f)	Jurisdictional	22.2	3.0 : 1.0	66.6	I
USFWS – Forested (Cook County) (g)	Jurisdictional	4.4	3.0 : 1.0	13.2	II
Total		154.2	N/A	447.4 (h)	N/A

- Notes:
- (a) Refer to **Section 5.12.4.3, Mitigation Categories**, in **Section 5.12, Wetlands**, of **Chapter 5, Environmental Consequences**, for a description of the proposed approaches to meet mitigation requirements.
 - (b) Includes 1.0 acre of WUS in the potential southwest acquisition area.
 - (c) Mitigation ratios for specific creeks and ditches were reviewed by USACE.
 - (d) FAA concurrence from Michael MacMullen (FAA) to Carol Wilinski (DOA), dated January 16, 2002, for the 1.0: 1.0 mitigation ratio for the non-jurisdictional (isolated) wetlands associated with the O'Hare Express North Project.
 - (e) The USACE has indicated that mitigated Wetland SW120 and Wetland SW121 should be treated as WUS, as these wetlands provide conveyance for WUS (i.e., Bensenville Ditch).
 - (f) In comments provided by USEPA on the DEIS, USEPA indicated that wetlands NW28 and SW15 should be mitigated at a higher ratio of 3:1.
 - (g) In comments provided by USFWS on the DEIS, wetlands SE63, NE01, NE05, NE10, NE58, NW37B, NE08, SE64, and SW25 should be mitigated at a higher ratio of 3:1.
 - (h) 447.4 acres of credit are proposed.

Source: City of Chicago Department of Aviation Individual Permit Application to U.S. Army Corps of Engineers, November 2004 (Revised June 23, 2005).

The proposed conceptual wetland mitigation plan is intended to provide compensatory mitigation for wetlands and non-wetland WUS removed from O'Hare. The overall intent is to provide compensatory mitigation, which greatly improves the quality of the provided resources with respect to wildlife utilization, while also offering additional value to interested publics by providing access that is not possible at the Airport.

7.8.1.2 Compensatory Mitigation Site Selection Criteria

Criteria have been established for compensatory mitigation site selection. Sites will only be selected that can provide the necessary wetland mitigation credits that meet FAA's standards, as well as those of the regulatory agencies (i.e., the MRT). In addition, any site selected for mitigation must also be acceptable to that site's owner. Applicable site selection criteria include, but are not necessarily limited to, the following:

- Sites within the Des Plaines River Watershed are preferred.
- Sites with no impediments to immediate design, permitting, and construction are preferred.
- Project sites that conflict with the site selection criteria of the FAA's Advisory Circular 150/5200-33A, *Hazardous Wildlife Attractants On or Near Airports* (dated July 27, 2004) will not be selected.
- Larger sites are preferred to scattered, smaller sites in order to facilitate long term management for a composite of wetlands values.
- Compensatory wetlands will be provided via a mix of creation, restoration, and enhancement. Creation and restoration are preferred to enhancement.
- Sites providing for in-kind replacement for impacted wetlands and/or WUS are preferred.
- Sites supporting a diverse ecosystem with hydrologic connections to other ecosystems are preferred.
- Sites that provide a high plant ground cover and diversity, contain minimal invasive species, and improve the quality of the resource are preferred.
- Sites that have a high likelihood of success are preferred.

7.8.1.3 Mitigation Categories

Approximately 447.4 mitigation credits are proposed for the 154.2 acres of wetland/WUS impacts at O'Hare, see **Table 7-1**. The following proposed approach to provide compensatory mitigation includes four mitigation categories, one for DuPage County wetlands (Category 1), a second for USACE regulated Cook County wetlands (Category 2), a third for Cook County isolated wetlands (Category 3), and the fourth for non-wetland WUS (Category 4). The categories are further described below.

Category I

The DOA proposes to provide approximately 153.1 mitigation credits for the loss of 69.1 acres of USACE jurisdictional and isolated wetlands in DuPage County (see **Table 7-1**). The conceptual approach is to first pursue development of wetlands mitigation within DuPage County. The selected wetland developer would be responsible for long-term maintenance and monitoring of this mitigation area. The process for the selection and development of the compensatory sites

would be developed by the MRT for application to the wetland developer's suggested site(s), in consultation with DOA and FAA, and the details of this process will be set forth in the Section 404 permit. Adequate wetland mitigation is available.

Category II

For the loss of 19.8 acres of USACE jurisdictional wetlands in Cook County, the DOA proposes to provide approximately 36.3 acres of mitigation (see **Table 7-1**). The proposal is to provide off-site mitigation through a wetland developer. The wetland developer is to provide the off-site mitigation, concurrent with the Airport's construction process. The wetland developer is to proceed under a contract agreement to be executed with the DOA, and, thereafter, the developer would be responsible for development, maintenance, and monitoring of the compensatory wetlands. The criteria for the selection and development of the compensatory sites was developed by the MRT, in consultation with DOA and FAA, and the details of this process will be set forth in the Section 404 permit. Adequate wetland mitigation is available.

Category III

The DOA is proposing to provide approximately 14.5 acres of mitigation credit for the loss of 14.5 acres of isolated (i.e., non-jurisdictional) wetlands in Cook County. The conceptual approach is to pursue development of wetlands mitigation within the City limits of Chicago. The selected wetland developer would be responsible for long-term maintenance and monitoring of this mitigation area. The process for the selection and development of the compensatory sites was developed by the MRT, in consultation with DOA and FAA, and the details of this process will be set forth in the Section 404 permit. Adequate wetland mitigation is available.

Category IV

The DOA is proposing to provide approximately 243.5 mitigation credits for the loss of 50.8 acres of non-wetland WUS, see **Table 7-1**. The majority of non-wetland WUS impacts at O'Hare will be compensated at a 5.0:1 ratio. However, the USACE may allow a minimum 1.5:1 ratio for drainage ditches that provide minimal ecological function and/or have been modified or show no clear origin as a natural stream or tributary. Therefore, DOA proposes to mitigate three acres of man-made/low quality ditches at the 1.5:1 ratio. The remainder of the non-wetland WUS will be mitigated at the 5.0:1 ratio. DOA's proposal is to pursue off-site mitigation through a wetland developer. Dependent upon either the site or the developer selected, either the site owner or the developer would be responsible for long-term maintenance and monitoring of the mitigation area. The process for the selection and development of the compensatory sites is being developed by the MRT, in consultation with DOA and FAA, and the details of this process will be set forth in the USACE Section 404 permit.

Mitigation will be described in the USACE Section 404 Individual Permit when issued. Adequate wetland mitigation is available.

7.9 CONSTRUCTION IMPACTS

The City of Chicago has developed a program of construction environmental impact mitigation to eliminate or reduce construction impacts, if a Build Alternative is selected. There are three entities responsible for construction impact mitigation; the City, the City's Project Designer, and the City's Contractor. Additional detail on these three elements is provided in **Section 5.20, Construction Impacts**, in **Chapter 5, Environmental Consequences**.

7.9.1 City of Chicago

The City of Chicago Department of Aviation (DOA) has established operational requirements for the mitigation of construction impacts on past and current projects. The City of Chicago will ensure that these operational requirements will be conveyed to the City's Project Designers for inclusion in bidding and contract documents. In addition, the DOA has prepared an OMP Best Management Practices Manual, and an OMP Sustainable Design Manual. These two manuals provide procedures that will become requirements for construction impact mitigation as appropriate for each individual project, and are both included in **Appendix Q, Construction**. The DOA will also review bidding documents for environmental protection requirements and monitor construction to assure compliance.

7.9.2 City's Project Designer

The Project Designer will include applicable Best Practices and Sustainable Design procedures in all bidding and contract documents, as well as all requirements of local, State and Federal ordinances, regulations and permits. The Project Designer will include in project specifications, where applicable, the provisions of FAA Advisory Circular 150/5370-10A *Standards for Specifying Construction of Airports* that pertain to the reduction of construction impacts. FAA AC 150/5370-10A requires the Contractor to submit:

- Schedules for accomplishing erosion control work
- Plan for erosion and dust control on haul roads and at borrow pits
- Plan for disposal of waste materials

In addition, the Project Designer will require the Contractor to submit, prior to construction and implementation, the following plans for the City of Chicago's review and approval:

- Construction and Demolition Waste Management Plan
- Recycling and Salvage Plan
- Pollution Prevention Plan
- Hazardous Waste Disposal Plan
- Spill Prevention and Mitigation Plan
- Air Pollution Control Plan
- Fuel and Lubricants Control Plan.

7.9.3 City's Contractor

The City Contractors will be responsible for compliance with all permits and all contractual environmental requirements for both the Contractor operations and all work by subcontractors.

7.9.4 Project Schedule

The DOA should review the proposed schedules to evaluate schedule revisions to better balance the construction effort from Year 5 through Year 9 of the Original Schedule as shown in **Exhibit 5.20-4 in Section 5.20, Construction, of Chapter 5, Environmental Impacts**. It is anticipated that similar evaluations would be made for any of the other project schedules for each Build Alternative, if selected. A better balance of construction will not eliminate potential impacts, but would mitigate the severity of some potential impacts such as traffic volumes. Even noting differences associated with construction, the proposed construction schedules for Alternatives D and G are anticipated to be comparable to Alternative C.

7.9.5 Construction Coordination with Residents, Motorists, Municipalities, and Local Agencies

The example practices listed below have been used in the past for various DOA and City of Chicago construction activities, and are included in the City of Chicago's Construction Outreach Program¹⁵ for the O'Hare Modernization. These practices will be used as public-coordination devices for the Build Alternative projects.

Communication Outreach to General Public

- Post construction-related information on the OMP public web site at www.OhareModernization.org.
- Issue traffic alert bulletins to OMP public website to alert subscribers.
 - The OMP website currently has more than 550 individuals and organizations, including media outlets, signed up to receive updated news and information about the City's OMP. The OMP will conduct further outreach to alert the public of its existence and encourage them to sign up for the service.
- Display construction traffic information on static and dynamic signage for motorists to view as they travel near and enter the Airport roadways.
 - Such practices have already been implemented upon entering the O'Hare roadway system, along I-190 westbound, which displays construction and parking updates.
 - The OMP will coordinate with IDOT and ISTHA to utilize their communication tools to alert drivers about construction zones.

¹⁵ Construction Outreach Program for the O'Hare Modernization Program, City of Chicago, July 8, 2005 (included as **Attachment Q-3 in Appendix Q, Construction**).

- Distribute information to area City Halls and libraries, as well as providing construction information kiosks, for passengers traveling through the terminals at O'Hare.
 - Brochures will be updated frequently with accurate information.
- Continue to issue quarterly print or online editions of *O'Hare Modernization New* newsletter to residents and businesses near O'Hare.

Communication Outreach for Elected Officials, Area Businesses, and Local Governments

- Hold meetings with delivery companies, ground transportation companies, and the airlines at O'Hare to discuss O'Hare Modernization construction activities.
- Hold public outreach meetings to discuss O'Hare Modernization construction activities and answer questions.
 - Meetings will be held with local elected officials, community leaders, Rotary Clubs, Chambers of Commerce, and other business groups, allowing for feedback from the public.
- Work closely with area police and fire departments, notifying them of any road closures or heavy construction traffic.

Media Communication

- Work with local radio affiliates to include O'Hare Modernization construction updates, as necessary, during morning and afternoon traffic reports.
 - Radio stations include WBBM AM, WGN AM, and WYLL AM.
- Broadcast continuous construction traffic reports on dedicated O'Hare AM radio "station."
 - Options include 800 AM or a new dedicated station.
- Release O'Hare Modernization construction project outlook report at start of construction season to local media outlets.
 - Media outlets include *Chicago Tribune*, *Daily Herald*, *Chicago Sun-Times*, WLS TV, WMAQ TV, WBBM TV, WFLD TV, WGN TV, and WTTW TV.
- Work with the City of Chicago's Traffic Management Authority to post regular traffic updates.
- Hold press conferences and issue press releases in conjunction with construction changes and milestones.
- Coordinate special events (i.e., ribbon-cutting ceremonies) to announce project completions.

7.9.6 Pavement Recycling and Salvage

Crushing removed pavement would produce up to 400,000 tons of recycled aggregate for use in pavement, bases and subbases. In addition, crushing the removed asphalt pavement would produce recycled asphalt material that can be used in asphalt concrete production. Recycling pavements will be a requirement that will conserve natural resources and reduce off-site waste hauling and hauling in new aggregates.

Demolition of structures and infrastructure would be conducted using techniques that would result in salvage of construction materials to the maximum extent practical. Salvage of demolition materials would reduce off-site disposal, hauling and the volume of landfill waste and conserve resources such as structural steel.

7.9.7 Airfield Operation

Airfield construction projects are proposed within the Aircraft Operations Area (AOA). Careful planning and project implementation would be required to prevent construction/aircraft traffic conflicts. Some procedures that would minimize the volume of construction traffic in the AOA are:

- Maximum use of airport roads located outside the AOA for transport of material, personnel and equipment. See **Appendix Q, Construction**.
- Temporary fencing to exclude as much of the Build Alternative projects from the AOA as possible. See **Appendix Q**.
- Location of batch plants and material storage close to larger projects.
- Remote construction employee parking lots with bus transport to the jobsite.
- Construction gates at AOA entry points to limit traffic to only essential construction vehicles. See **Appendix Q**.

Construction operations in, adjacent to, or requiring construction traffic through the AOA will require a phasing plan. The purpose of the plan is to establish guidelines and constraints the Contractor must follow during construction within the AOA. The plan will be developed by the DOA and the Project Designer and will be included in the bidding and contract documents. The basic information in the phasing plan includes:

- AOA facilities that will be closed or partially closed during construction.
- Phasing that is required to maintain aircraft operations adjacent to or through the construction area, with those airfield facilities identified that will be opened and closed during each phase.
- Maximum duration of each phase (or closure).
- Time allowance between phases for preparation to redirect aircraft traffic.
- Requirements for temporary marking, lighting and signage.

Only the DOA can close, open, or restrict the use of any part of the O'Hare airfield. Any conditions that would prevent, restrict or present a potential hazard to arriving or departing aircraft requires notification to pilots. This notification to aircraft operators is accomplished by the Notice to Airmen (NOTAM) system. NOTAMS are submitted to the FAA for publication. Any change to facilities within the AOA caused by construction operations will be preceded by publication of a NOTAM to advise aircraft operators of a change in airfield conditions.

7.9.8 Noise

Noise caused by construction vehicles and equipment would temporarily increase at the sites of the Build Alternative projects. The construction activity is not expected to add significantly to current ambient noise levels attributable to Airport operations and traffic on the surrounding expressways and arterial streets. Given the relatively high traffic volumes already present along these roads, the additional temporary construction operations would not have a noticeable effect. However, the City's OMP Best Management Practices¹⁶ recommendation to require mufflers for construction equipment will be followed.

7.9.9 Surface Transportation

Measures have been identified to provide mitigation of potential impacts of the Build Alternative construction vehicle surface traffic on area expressways, arterial streets and intersections for any of the potential construction schedules.

- The public information program discussed in **Section 5.20.4.5, Construction Coordination with Residents, Motorists, Municipalities, and Local Agencies**, in **Section 5.20, Construction Impacts**, of **Chapter 5, Environmental Consequences**, provides advance notice of any modifications to existing streets and intersections by the Build Alternative and provides information regarding truck haul routes in use.
- The earth haul-away from the Airport was reduced from 9.4 MCY to 5.4 MCY. This reduction was possible due to a reevaluation of the Build Alternative earthwork program. **Exhibit 5.20-5** in **Section 5.20, Construction Impacts**, of **Chapter 5, Environmental Consequences**, illustrates the reduction of daily haul trips of up to 800 per day.

The DOA should review the project schedule, and the other potential construction schedules, to evaluate the potential to more evenly distribute the work activities, which may result in a decrease in peak Build Alternative traffic.

7.9.10 Secondary (Induced) Impacts

There would be significant socioeconomic benefits associated with construction operations because of temporary construction job creation and purchase of materials from area

¹⁶ Best Management Practices Manual, Chicago O'Hare International Airport, City of Chicago – Department of Aviation, March 2003.

manufacturers and suppliers (if a Build Alternative is selected). See **Section 5.5, Secondary (Induced) Impacts**, of **Chapter 5, Environmental Consequences**, for further information.

7.9.11 Air Quality

Additional detail related to these potential emission reduction measures, and the estimates of resultant reductions in emissions, is provided in **Section 7.5, Air Quality**, and **Section 5.6.5, Potential Emission Reduction Measures**, in **Section 5.6, Air Quality**, of **Chapter 5, Environmental Consequences**.

7.9.12 Solid Waste and Hazardous Materials

The collection and disposal of solid waste and hazardous materials are discussed in **Section 5.19, Solid Waste and Hazardous Materials**, of **Chapter 5, Environmental Consequences**.

7.9.13 Water Quality and Soil Erosion

The construction process exposes surface waters to the risk of pollution through the erosion of soils exposed during excavations. Both surface and groundwater could be affected if fuels and solvents used in construction are spilled. The contractor implementation of the construction practices addressed in the Fuel and Lubricant Control Plan (see **Section 7.9.2, City's Project Designer**) will reduce the potential for any fuel/lubricant spills and address the mitigation/remediation measures in the event of a spill. FAA AC 150/5370-10A, *Standards for Specifying Construction of Airports, Change 10, Item P-156 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control* describes Best Management Practices (BMP) for the control of erosion and water pollution during construction. These measures, supplemented by guidelines set forth in the BMP manual for O'Hare and the City's OMP Sustainable Design Manual,¹⁷ would be incorporated into the construction process to minimize the risks of soil erosion and water pollution. See **Appendix Q, Construction**.

Current and potential future construction activities at the Airport are covered under the City of Chicago's General Storm Water Permit for Small Municipal Separate Storm Sewer Systems (MS4). The IEPA received the MS4 permit application from the City on March 10, 2003 and after review and acceptance, issued the permit to the City on September 20, 2004. This permit is valid until February 29, 2008, before which time the City would seek to renew the permit.

Certain aspects of the Build Alternatives would require the relocation of storm water facilities and oil/water separators. The City will ensure that all water quality control facilities, including oil/water separators, remain in service during construction, or satisfactory temporary replacement facilities are installed to ensure that water quality is protected. To address these temporary floodplain impacts, the City would provide temporary flood storage capacity for use until the project elements are completed.

¹⁷ Sustainable Design Manual, City of Chicago O'Hare Modernization Program, December, 2003.

Areas impacted by mass grading would be accompanied by soil erosion and dust controls in order to minimize the potential for adverse air quality impacts.

The following is a list of potential BMPs that would be used, as appropriate, to improve water quality, reduce soil erosion, and reduce the amount of dust created in association with construction activities for the Build Alternative projects.

- Temporary oil-water separators
- Avoid paving operations during ongoing or intermittent rain
- Temporary covers or dikes for storm drains
- Re-plant disturbed vegetation as soon as possible
- Temporary mulching with or without seeding
- Rolled erosion control products (also known as erosion control blankets or mats) - Protects denuded soils from erosion and to create conditions to assist in vegetation establishment
- Temporary seeding - Temporarily stabilizes disturbed soils that are not at final grade or that will sit idle for longer than 14 days; also used to reduce runoff and erosion until permanent vegetation or other erosion control measures can be established
- Permanent seeding (vegetation) - Permanently stabilizes final graded or cleared areas to minimize erosion and decrease sediment from disturbed areas
- Sediment containment filter bag - Filters larger-diameter particles from sediment-laden water
- Silt fence barrier - Temporary containment structure on construction sites until disturbed areas are stabilized
- Rock-barrier check structure - Temporary containment structure during construction to reduce runoff velocities in drainage channels and to capture sediment
- Geosynthetic-check structure - Temporary containment structure during construction to reduce runoff velocities in drainage channels and to capture sediment
- Vehicle tracking pad - Temporary structure at the entrance/exit of a construction site to minimize or eliminate tracking of sediment onto public streets or right-of-ways
- Diversion dike - Intercepts and diverts storm water runoff away from disturbed areas towards a stabilized outlet or into a sediment trapping facility to minimize erosion
- Slope drain - Conveys concentrated runoff down the face of an erodible cut or fill slope to prevent erosion on or below the slope

- Rolled erosion control products (also known as erosion control blankets or mats) - Protects denuded soils from erosion and to create conditions to assist in vegetation establishment
- Inlet filters - Catches large-diameter suspended particles and reduce the amount of sediment entering the storm-sewer system
- Sediment basin with chemical treatment - Prevents and/or minimizes off-site sedimentation by intercepting storm water runoff and trapping sediments. A chemical flocculent agent may be added to help fine silts and clays settle-out
- Cellular confinement systems - Erosion protection from concentrated flow conditions on hillsides or in drainage channels or to act as a temporary stream crossing
- Mechanically stabilized earth walls (e.g., gabions, etc.) - Stabilizes stream banks and reduces erosion caused by erosive flowing water
- Vertical walls - Stabilizes stream banks and reduces erosion caused by erosive flowing water
- Lined aprons (also known as rock outlet protection) - Protects outlet structures, reduces scour erosion at the outlet, and reduces the likelihood of downstream erosion by dissipating runoff velocity and energy of concentrated storm water flows; also minimizes the effects of downstream sedimentation and turbidity
- Dust control - Reduces the blowing and movement of wind-born particles from disturbed soil areas, minimize on and off site damage, reduce health hazards, and improve traffic safety through the following actions
 - Regular street sweeping of interior airport roadways
 - Regular washing of construction vehicle tires
 - Cover or wet loose materials and exposed earth
 - Cover truck beds
 - Installation of pavement rumble strips to knock debris from truck wheels before leaving the work site
 - Temporary and/or permanent soil stabilization to reduce amount of debris reaching roadways and carried off-site by vehicles
 - Immediate on-site spill control to prevent debris from reaching roadways and/or being carried off-site by vehicles
 - Cover waste receptacles
 - Temporary fencing
 - Keep airport property grounds free of litter and debris through "good-housekeeping" practices

7.9.14 Security and Screening

Project logistics will be planned to maximize the amount of traffic that can be handled outside the AOA and thereby, minimize the Airport security required. Current personnel and vehicle security regulations, as defined by the Transportation Security Administration (TSA), will be enforced throughout the construction process.

On-site vehicles that will operate outside of the staging and parking areas will be limited to commercial vehicles and equipment that permanently bear the name, address (City), and phone number of the contractor, material supplier, or rental agency. Other vehicles and those not meeting this requirement will be subject to removal.

Perimeter fencing around construction areas will be installed in order to provide a security boundary deterring entry by traffic other than that required for construction activities. Security gates are to be provided and maintained by the Construction Manager. The Construction Manager would also be responsible for locking the gates when there is no work on the site, when the crew is minimal, and when no deliveries are anticipated. **Appendix Q, Construction**, contains exhibits that depict anticipated perimeter fencing by year.

All personnel and vehicles entering the AOA will be required to pass through a Guard Post and/or Construction Vehicle Inspection Area (CVIA).

CVIAs are multi-lane construction vehicle inspection areas, similar in appearance to a toll-plaza, that are staffed by unarmed security guards. Examples of security screenings performed at CVIAs include inspection of the underside of haul trucks using mirrors and checking haul trucks/loads against a delivery roster previously provided to security personnel by construction managers.

Ample paved areas are provided at CVIAs to ensure that trucks awaiting security screening are able to pull into the CVIA area and are not lined up on area roadways, causing congestion. In addition, security personnel are given advance warning if large numbers of haul trucks and/or large amounts of material are expected to arrive at a CVIA at the same time, allowing adequate security staff to be present for inspections and thereby reducing truck wait-time.

Existing DOA CVIA facilities will be used to the greatest extent possible for the Alternative C Projects, provided that construction traffic does not affect ongoing Airport operations. If necessary, DOA will construct temporary Guard Posts or CVIAs either due to the location of the work area or operational limitations at existing facilities. In some expected instances, where space would permit, existing Guard Posts will be expanded and used as temporary facilities dedicated to construction related vehicles. As construction work progressed and access points changed, elements of temporary facilities will be reused to the greatest extent possible. **Appendix Q, Construction** contains exhibits that depict anticipated CVIA locations by year.

All personnel and vehicles entering through a Guard Post or CVIA will be required to display proper identification. In the case of construction personnel, proper identification will be a DOA-issued badge. As is the current practice, construction employees at O'Hare will be required to display their DOA-issued badge prior to gaining access to the bus transporting them from the parking area to the worksite. In addition, employee names will be checked against the

personnel roster provided to security personnel by construction managers each day. Employees without a valid DOA-issued badge would be denied access to the work site, as would employees not listed on the daily personnel roster, even though he or she might have a valid DOA-issued badge. Vehicles would require a DOA-issued placard.

The O'Hare Central Field Office (CFO) currently houses a remote badge screening facility for contractors performing work at the Airport. This DOA facility will be expanded to accommodate ID Badging for O'Hare Modernization construction personnel and vehicles.

7.10 ENVIRONMENTAL JUSTICE

7.10.1 Potential Mitigation Measures

As stated by Executive Order 12898,¹⁸ Federal agencies must address potential environmental justice impacts. NEPA requires Federal agencies to identify measures to mitigate adverse effects of Federally funded, licensed, or approved projects. Additionally, other Federal laws, such as the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act) and Title VI of the Civil Rights Act, require Federal agencies to take steps to alleviate impacts from Federally-approved projects. Further, the DOT Order 5610.2 states, "In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that will be taken and all offsetting benefits to the affected minority and low-income populations may be taken into account..." Accordingly, the following sections identify mitigation measures for potential impacts on environmental justice populations.

The environmental justice mitigation strategies presented herein build on these considerations to mitigate potentially significant impacts from any of the Build Alternatives.

7.10.1.1 Mitigation for Residential and Business Acquisitions

Implementation of the Build Alternatives would necessitate the acquisition and relocation of residents and businesses as identified in **Section 5.21.3.1, Alternative C** and **Section 5.21.3.2, Alternatives D and G**, in **Chapter 5, Environmental Consequences**. Such relocation requires full compliance with the Uniform Act. The Uniform Act is a Federal statute that regulates the acquisition and relocation process and protects the interests of residents and business owners affected by the potential acquisitions. The Uniform Act requires that homeowners, business owners, and renters are provided with the following:

- Training in the acquisition process and an explanation of residents' rights, relative to the proceedings. (This training will be conducted in the language most familiar to the residents).

¹⁸ Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations, February 11, 1994.

- Help in identifying comparable residential housing and commercial properties. (Housing must be safe, decent, sanitary and comparable to their present homes and lifestyles).
- Payment of applicable relocation assistance and moving expenses, as well as guidance on determining the property's fair market value.

During the small group and outreach meetings for minority populations, the single biggest issue was related to the fair market value of property being contemplated for acquisition. FAA is aware of the residents' concerns that the sale price established for their existing property (fair market value) would be insufficient to provide for purchase of comparable property in a new location. Provisions within the Uniform Act provide a mechanism to address these concerns. FAA representatives at outreach meetings assured minority attendees that the Uniform Act would address these kinds of issues. Under the Build Alternatives, the Uniform Act will be implemented by the City of Chicago's O'Hare Land Acquisition Program with compliance assured by the FAA. The City established this office in July 2002, and it currently provides information through a website,¹⁹ written material, and a telephone hotline. In addition, the City of Chicago, under the supervision of the FAA, has developed a Draft Relocation Plan²⁰ for the OMP.

Section 15 of the O'Hare Modernization Act (OMA)²¹ identifies powers the City may utilize to acquire property within the proposed acquisition area. This includes condemnation authority by quick-take for the acquisition of various parcels of land associated with the redevelopment of O'Hare. The law describes this land area, which is included in **Attachment A-1 in Appendix A, Background**. This legislation enables Chicago to acquire properties as defined in the Act, faster than normal due in part to the authority granted by the State of Illinois. This legislation was signed into law on August 6, 2003.

Prior to the OMA in late 2001, the City began to pursue the acquisition of certain properties in the northwest acquisition area. As a result of the City's actions to acquire property in advance of a ROD, the FAA wrote three letters²² which state FAA's position that such actions were "solely at the City's own risk", "the EIS must evaluate that property from the perspective of the use of that property prior to its acquisition by the airport sponsor", and that "any property acquisition by the City will not influence the FAA's objective evaluation of impacts and alternatives such as may be found in forthcoming environmental documents pertaining to O'Hare." Copies of these three letters written by the FAA are included in **Appendix H, Social Impacts**.

¹⁹ City of Chicago Land Acquisition Program Website:
http://egov.cityofchicago.org/city/webportal/portalDeptCategoryAction.do?BV_SessionID=@@@@0251109114.1101308422@@@&BV_EngineID=ccceadddefhimmlcefecelldffhdfgn.0&deptCategoryOID=-536884668&contentType=COC_EDITORIAL&topChannelName=SubAgency&entityName=OHare+Modernization+Program&deptMainCategoryOID=-536884668

²⁰ O'Hare Land Acquisition Relocation Plan, O.R. Colan, March 13, 2003.

²¹ O'Hare Modernization Act, Illinois Public Act 93-0450, August 6, 2003.

²² Letters from FAA to City of Chicago Department of Aviation dated December 5, 2001, August 19, 2002, and May 28, 2003.

The City's proposal to acquire certain properties also generated opposition from certain communities. At present, a lawsuit is pending against the City and the FAA in which the communities and others are seeking to prevent the City's acquisition. On July 10, 2003, the City of Chicago and the Plaintiffs entered into an Agreed Order,²³ which limits property acquisition that can occur prior to completion of the EIS process within Bensenville and Elk Grove Village. The Agreed Order states:

IT IS HEREBY ORDERED THAT:

The City of Chicago agrees that the City voluntarily agrees that it will not acquire property in the Village of Bensenville and Elk Grove Village for the OMP, or acquire the Rest Haven or St. Johannes Cemeteries, unless and until the FAA has issued a Record of Decision following completion of an EIS for the OMP. The City also agrees that it will not acquire any property subject to NHPA or Section 4(f) until the FAA determines that the requirements of those laws have been satisfied for the OMP. This agreement does not include hardship cases that may arise in Bensenville or Elk Grove Village prior to the FAA's issuance of a Record of Decision. The City remains willing to acquire properties in hardship situations in Bensenville and Elk Grove Village prior to the FAA's decision on the OMP, as allowed by FAA guidance, with advance consent by Village Plaintiffs required to such acquisitions.

The status of the City's property acquisitions since late 2001 is depicted on **Exhibit H-1 in Appendix H, Social Impacts**. None of these properties are covered by the Agreed Order.

Due to the nature of this project, any impacted owner or tenant in the acquisition area will be afforded all appropriate rights established in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and various FAA Orders as identified in **Section 5.4.1.1, Regulatory Context in Chapter 5, Environmental Consequences**. In addition, the City of Chicago has developed of a Draft Relocation Plan²⁴ to ensure fair treatment of the acquired owners and tenants if property acquisition were to take place.

In addition, because a large number of Spanish-speaking residents are within the acquisition areas, the City's Land Acquisition Consultant will provide a Spanish translator (and other languages as needed), with knowledge of 49 CFR Part 24 requirements, throughout the land acquisition process.

7.10.1.2 Advisory Services for Businesses Adjacent to the Acquisition Area

The FAA entered into discussions with the City of Chicago regarding the provision of appropriate assistance to businesses adjacent to the acquisition area. Although not specifically required under the Uniform Act, the City has committed to providing advisory services to those who request such services.²⁵

²³ *St. John's United Church of Christ et. al. v. City of Chicago*, In the United States District Court for the Northern District of Illinois Eastern Division, Case No. 03-C-3726, July 10, 2003.

²⁴ Draft O'Hare Land Acquisition Relocation Plan, O.R. Colan, March 13, 2003.

²⁵ Letter from City of Chicago to FAA, July 11, 2005.

7.10.1.3 Mitigation for Noise Impacts on Environmental Justice Populations

Particularly with respect to noise impacts related to a Build Alternative, NEPA and CEQ require that FAA consider mitigation of significant adverse impacts that are reasonably foreseeable. Accordingly, the FAA could require the City to take steps to minimize significant noise impacts as a result of any of the Build Alternatives, if selected.

Significant noise impacts are anticipated to be reduced with specific noise abatement techniques. Such techniques could include the following:

- All eligible residences and schools within the Build Out 65 DNL and greater noise contour for a Build Alternative, if approved by FAA's issuance of a ROD, would be insulated by the City of Chicago by the time Build Out would occur.
- After Build Out occurs, the City of Chicago will produce a 65 DNL noise contour based on the operational characteristics of the Build Out configuration but with forecasted operational levels five years in the future from when Build Out occurs, thus creating a new contour referred to as Build Out +5 Forecast Contour (BO +5 F). The City would then insulate all eligible residences and schools within the BO +5 F 65 DNL and greater noise contour, but outside of the No Action (Alternative A) Build Out +5 65 DNL and greater noise contour presented in the FEIS, by the time Build Out +5 would occur. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for a Build Alternative would be insulated by the time Build Out +5 would occur.
- At this point it is not reasonable to either assume that there would be a new Fly Quiet Program or speculate about what a new Fly Quiet Program would be. FAA will, however, give consideration to suggestions for changes in the Fly Quiet Program developed by the O'Hare Noise Compatibility Commission (ONCC) and requested of the FAA by the City of Chicago. It is FAA's understanding that it is the City Chicago's intent to continue the existing Fly Quiet Program. The Fly Quiet Program would be modified by ONCC in the future only if needed; such modification would be done in consultation with the FAA and the City of Chicago DOA. Modification requiring FAA action would be subsequent to its prior approval, and any necessary environmental review. If FAA's ROD approves a Build Alternative, the existing Fly Quiet Program would remain in place, except as affected by runway decommissioning. The EIS discloses the potential effects of runway decommissioning on the Fly Quiet Program.
- Continuation of the ONCC to oversee noise mitigation efforts around O'Hare.
- Continued use of the ground run-up enclosure during engine run-up testing.

7.10.1.4 Mitigation for Surface Transportation Impacts on Environmental Justice Populations

Within environmental justice areas, there would be a total of two deficient intersections (#6 and #37) with any of the Build Alternatives, when compared to the No Action Alternative

(Alternative A) in the Build Out and Build Out + 5 phases. The following section outlines the potential mitigation measures that could be implemented for any of the Build Alternative impacts in the Build Out + 5 phase. The potential mitigation measures would be the same for all Build Alternatives, and in each case would contribute to the improvement of the level of service (LOS) for each significantly impacted intersection.

Intersection of Bessie Coleman Drive and Higgins Road (Location 6): Improvements that enhance capacity and improve the LOS of this intersection to D or better could potentially require the acquisition of additional ROW by IDOT, the jurisdictional agency of Higgins Road. Adjacent land that may need to be acquired for the additional ROW is currently owned by the Airport. The City has committed to participate in cooperative planning with IDOT to address future improvements to this intersection required to improve the intersection LOS, which may include additional through lanes or turn lanes on Higgins Road. Additionally, the City has committed to make available adjacent Airport-owned land that would need to be acquired by IDOT for ROW to facilitate these future improvements to the intersection and Higgins Road.

Intersection of York Road and Irving Park Road Ramp (Location 37): There is an existing Intergovernmental Agreement between the City of Chicago, IDOT, ISTHA, and DuPage County for Preliminary Phase I engineering services related to the proposed relocation of this intersection. As part of these preliminary engineering services which are currently underway, an intersection design study (IDS) will be completed which will be reviewed by the City, IDOT, ISTHA, and DuPage County to ensure that upon implementation of the improvements, the relocated intersection would operate at LOS of D or better.

7.10.1.5 Outreach/Public Involvement

NEPA guidance states it is important to "take steps to encourage and facilitate more active participation by low-income communities and minority communities in its NEPA process. This goal can be accomplished through careful identification of target audiences and aggressive community outreach beyond the traditional forms."²⁶ The environmental justice outreach process for this EIS provided information to the affected population and allowed significant interaction with Federal officials. On May 23, 2004, the FAA held its first environmental justice public meeting. A second environmental justice outreach meeting was held on August 29, 2004, at St. Alexis Church in Bensenville, and the third environmental justice outreach meeting was held on March 6, 2005, also at St. Alexis Church. In addition, over 30 small group meetings were held at various businesses and residences located in the acquisition area. At all of these outreach sessions, language translators (Spanish) were present to facilitate the communication process.

The public hearing on the Draft EIS was another vehicle for the environmental justice outreach process. Comments received during the public hearing comment period were reviewed and documented in this Final EIS. Answers to questions or comments raised related to

²⁶ Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses April 1998; Website: http://www.abanet.org/irr/committees/environmental/epa_guidance.doc.

environmental justice, including potential mitigation strategies are included in **Appendix U, Response to Comments**.

7.11 SUMMARY

Table 7-2 summarizes the potential environmental impacts for all resource categories for each of the alternatives, including the Preferred Alternative (Alternative C), and associated mitigation measures that could be implemented, if a Build Alternative is selected.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
NOISE		
Alternative A (No Action Alternative)		
1.1	Build Out	No mitigation.
There are a total of 5,199 residences (14,512 people) exposed to the 65 DNL and greater noise contour area, of which 2,458 have been sound insulated by the City of Chicago.		
1.2	Build Out + 5	No mitigation.
There are a total of 6,405 residences (17,500 people) exposed to the 65 DNL and greater noise contour area, of which 2,596 have been sound insulated by the City of Chicago.		
Alternative C		
1.3	Build Out	Significant noise impacts are anticipated to be reduced with specific noise abatement techniques. Such techniques could include the following: <ul style="list-style-type: none"> All eligible residences and schools within the Build Out 65 DNL and greater noise contour, but outside of the Build Out 65 DNL and greater noise contour for No Action, if approved by FAA's issuance of a ROD, would be insulated by the City of Chicago by the time Build Out would occur. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for a Build Alternative would be insulated by the time Build Out would occur. At this point it is not reasonable to either assume that there would be a new Fly Quiet Program or speculate about what a new Fly Quiet Program would be. FAA will, however, give consideration to suggestions for changes in the Fly Quiet Program developed by the ONCC and requested of the FAA by the City of Chicago. It is FAA's understanding that it is the City Chicago's intent to continue the existing Fly Quiet Program. The Fly Quiet Program would be modified by ONCC in the future only if needed; such modification would be done in consultation with the FAA and the City of Chicago Department of Aviation. Modification requiring FAA action would be subsequent to its prior approval, and any necessary environmental review. If FAA's ROD approves a Build Alternative, the existing Fly Quiet Program would remain in place, except as affected by runway decommissioning. The EIS discloses the potential effects of runway decommissioning on the Fly Quiet Program. Continuation of the O'Hare Noise Compatibility Commission (ONCC) to oversee noise mitigation efforts around O'Hare. Continued use of the ground run-up enclosure during engine run-up testing.
There are a total of 5,619 residences (16,218 people) exposed to the 65 DNL and greater noise contour area (but outside of the Build Out 65 DNL and greater noise contour for No Action), of which 1,102 have been sound insulated by the City of Chicago.		
There are approximately 1,368 additional residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area, outside of the area defined in the paragraph above, of which 439 housing units have been sound insulated.		
The total number of currently non-insulated residences within the areas defined in the paragraphs above is 5,446 residences (15,212 people).		

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
Alternative C (Continued)		
<p>1.4 There are a total of 1,647 residences (4,179 people) exposed to the 65 DNL and greater noise contour area (but outside of the Build Out 65 DNL and greater noise contour for No Action and outside of the Build Out 65 DNL and greater noise contour for Alternative C), of which 77 have been sound insulated by the City of Chicago.</p> <p>There are approximately 6 additional residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area, outside of the area defined in the paragraph above, outside of the Build Out, of which no housing units have been sound insulated.</p> <p>The total number of currently non-insulated residences within the areas defined in the paragraphs above is 1,576 residences (3,989 people).</p>	Build Out + 5	<p>Significant noise impacts are anticipated to be reduced with specific noise abatement techniques. Such techniques could include the following:</p> <ul style="list-style-type: none"> • After Build Out occurs, the City of Chicago would produce a 65 DNL noise contour based on the operational characteristics of the Build Out configuration but with forecasted operational levels five years in the future from when Build Out occurs, thus creating a new contour referred to as Build Out +5 Forecast Contour (BO +5 F). The City would then insulate all eligible residences and schools within the BO +5 F 65 DNL and greater noise contour, but outside of the No Action (Alternative A) Build Out +5 65 DNL and greater noise contour presented in the FEIS, by the time Build Out +5 would occur. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for a Build Alternative would be insulated by the time Build Out +5 would occur.
		<ul style="list-style-type: none"> • At this point it is not reasonable to either assume that there would be a new Fly Quiet Program or speculate about what a new Fly Quiet Program would be. FAA will, however, give consideration to suggestions for changes in the Fly Quiet Program developed by the ONCC and requested of the FAA by the City of Chicago. It is FAA's understanding that it is the City Chicago's intent to continue the existing Fly Quiet Program. The Fly Quiet Program would be modified by ONCC in the future only if needed; such modification would be done in consultation with the FAA and the City of Chicago Department of Aviation. Modification requiring FAA action would be subsequent to its prior approval, and any necessary environmental review. If FAA's ROD approves a Build Alternative, the existing Fly Quiet Program would remain in place, except as affected by runway decommissioning. The EIS discloses the potential effects of runway decommissioning on the Fly Quiet Program. • Continuation of the O'Hare Noise Compatibility Commission (ONCC) to oversee noise mitigation efforts around O'Hare. • Continued use of the ground run-up enclosure during engine run-up testing.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
Alternative D		
<p>1.5 There are a total of 5,766 residences (16,299 people) exposed to the 65 DNL and greater noise contour area (but outside of the Build Out 65 DNL and greater noise contour for No Action), of which 1,123 have been sound insulated by the City of Chicago.</p> <p>There are approximately 1,677 additional residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area, outside of the area defined in the paragraph above, of which 498 housing units have been sound insulated.</p> <p>The total number of currently non-insulated residences within the areas defined in the paragraphs above is 5,824 residences (16,074 people).</p>	Build Out	<p>Significant noise impacts are anticipated to be reduced with specific noise abatement techniques. Such techniques could include the following:</p> <ul style="list-style-type: none"> • All eligible residences and schools within the Build Out 65 DNL and greater noise contour, but outside of the Build Out 65 DNL and greater noise contour for No Action, if approved by FAA's issuance of a ROD, would be insulated by the City of Chicago by the time Build Out would occur. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for a Build Alternative would be insulated by the time Build Out would occur. • At this point it is not reasonable to either assume that there would be a new Fly Quiet Program or speculate about what a new Fly Quiet Program would be. FAA will, however, give consideration to suggestions for changes in the Fly Quiet Program developed by the ONCC and requested of the FAA by the City of Chicago. It is FAA's understanding that it is the City Chicago's intent to continue the existing Fly Quiet Program. The Fly Quiet Program would be modified by ONCC in the future only if needed; such modification would be done in consultation with the FAA and the City of Chicago Department of Aviation. Modification requiring FAA action would be subsequent to its prior approval, and any necessary environmental review. If FAA's ROD approves a Build Alternative, the existing Fly Quiet Program would remain in place, except as affected by runway decommissioning. The EIS discloses the potential effects of runway decommissioning on the Fly Quiet Program. • Continuation of the O'Hare Noise Compatibility Commission (ONCC) to oversee noise mitigation efforts around O'Hare. • Continued use of the ground run-up enclosure during engine run-up testing.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
Alternative D (Continued)		
<p>1.6 There are a total of 1,365 residences (3,794 people) exposed to the 65 DNL and greater noise contour area (but outside of the Build Out 65 DNL and greater noise contour for No Action and outside of the Build Out 65 DNL and greater noise contour for Alternative D), of which 95 have been sound insulated by the City of Chicago.</p> <p>There are approximately 36 additional residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area, outside of the area defined in the paragraph above, of which no housing units have been sound insulated.</p> <p>The total number of currently non-insulated residences within the areas defined in the paragraphs above is 1,306 residences (3,670 people).</p>	Build Out + 5	<p>Significant noise impacts are anticipated to be reduced with specific noise abatement techniques. Such techniques could include the following:</p> <ul style="list-style-type: none"> • After Build Out occurs, the City of Chicago would produce a 65 DNL noise contour based on the operational characteristics of the Build Out configuration but with forecasted operational levels five years in the future from when Build Out occurs, thus creating a new contour referred to as Build Out +5 Forecast Contour (BO +5 F). The City would then insulate all eligible residences and schools within the BO +5 F 65 DNL and greater noise contour, but outside of the No Action (Alternative A) Build Out +5 65 DNL and greater noise contour presented in the FEIS, by the time Build Out +5 would occur. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for a Build Alternative would be insulated by the time Build Out +5 would occur.
		<ul style="list-style-type: none"> • At this point it is not reasonable to either assume that there would be a new Fly Quiet Program or speculate about what a new Fly Quiet Program would be. FAA will, however, give consideration to suggestions for changes in the Fly Quiet Program developed by the ONCC and requested of the FAA by the City of Chicago. It is FAA's understanding that it is the City Chicago's intent to continue the existing Fly Quiet Program. The Fly Quiet Program would be modified by ONCC in the future only if needed; such modification would be done in consultation with the FAA and the City of Chicago Department of Aviation. Modification requiring FAA action would be subsequent to its prior approval, and any necessary environmental review. If FAA's ROD approves a Build Alternative, the existing Fly Quiet Program would remain in place, except as affected by runway decommissioning. The EIS discloses the potential effects of runway decommissioning on the Fly Quiet Program. • Continuation of the O'Hare Noise Compatibility Commission (ONCC) to oversee noise mitigation efforts around O'Hare. • Continued use of the ground run-up enclosure during engine run-up testing.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
NOISE (CONTINUED)		
Alternative G		
<p>1.7 There are a total of 5,240 residences (15,098 people) exposed to the 65 DNL and greater noise contour area (but outside of the Build Out 65 DNL and greater noise contour for No Action), of which 1,101 have been sound insulated by the City of Chicago.</p> <p>There are approximately 1,419 additional residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area, outside of the area defined in the paragraph above, of which 438 housing units have been sound insulated.</p> <p>The total number of currently non-insulated residences within the areas defined in the paragraphs above is 5,120 residences (14,325 people).</p>	Build Out	<p>Significant noise impacts are anticipated to be reduced with specific noise abatement techniques. Such techniques could include the following:</p> <ul style="list-style-type: none"> • All eligible residences and schools within the Build Out 65 DNL and greater noise contour, but outside of the Build Out 65 DNL and greater noise contour for No Action, if approved by FAA's issuance of a ROD, would be insulated by the City of Chicago by the time Build Out would occur. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for a Build Alternative would be insulated by the time Build Out would occur. • At this point it is not reasonable to either assume that there would be a new Fly Quiet Program or speculate about what a new Fly Quiet Program would be. FAA will, however, give consideration to suggestions for changes in the Fly Quiet Program developed by the ONCC and requested of the FAA by the City of Chicago. It is FAA's understanding that it is the City Chicago's intent to continue the existing Fly Quiet Program. The Fly Quiet Program would be modified by ONCC in the future only if needed; such modification would be done in consultation with the FAA and the City of Chicago Department of Aviation. Modification requiring FAA action would be subsequent to its prior approval, and any necessary environmental review. If FAA's ROD approves a Build Alternative, the existing Fly Quiet Program would remain in place, except as affected by runway decommissioning. The EIS discloses the potential effects of runway decommissioning on the Fly Quiet Program. • Continuation of the O'Hare Noise Compatibility Commission (ONCC) to oversee noise mitigation efforts around O'Hare. • Continued use of the ground run-up enclosure during engine run-up testing.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
Alternative G (Continued)		
<p>1.8 There are a total of 1,472 residences (4,078 people) exposed to the 65 DNL and greater noise contour area (but outside of the Build Out 65 DNL and greater noise contour for No Action and outside of the Build Out 65 DNL and greater noise contour for Alternative G), of which 90 have been sound insulated by the City of Chicago.</p> <p>There are no additional residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area, outside of the area defined in the paragraph above.</p> <p>The total number of currently non-insulated residences within the areas defined in the paragraphs above is 1,382 residences (3,825 people).</p>	Build Out + 5	<p>Significant noise impacts are anticipated to be reduced with specific noise abatement techniques. Such techniques could include the following:</p> <ul style="list-style-type: none"> • After Build Out occurs, the City of Chicago would produce a 65 DNL noise contour based on the operational characteristics of the Build Out configuration but with forecasted operational levels five years in the future from when Build Out occurs, thus creating a new contour referred to as Build Out +5 Forecast Contour (BO +5 F). The City would then insulate all eligible residences and schools within the BO +5 F 65 DNL and greater noise contour, but outside of the No Action (Alternative A) Build Out +5 65 DNL and greater noise contour presented in the FEIS, by the time Build Out +5 would occur. In addition, all eligible residences with a 1.5 DNL or greater increase within the 65 DNL and greater noise contour area for a Build Alternative would be insulated by the time Build Out +5 would occur. • At this point it is not reasonable to either assume that there would be a new Fly Quiet Program or speculate about what a new Fly Quiet Program would be. FAA will, however, give consideration to suggestions for changes in the Fly Quiet Program developed by the ONCC and requested of the FAA by the City of Chicago. It is FAA's understanding that it is the City Chicago's intent to continue the existing Fly Quiet Program. The Fly Quiet Program would be modified by ONCC in the future only if needed; such modification would be done in consultation with the FAA and the City of Chicago Department of Aviation. Modification requiring FAA action would be subsequent to its prior approval, and any necessary environmental review. If FAA's ROD approves a Build Alternative, the existing Fly Quiet Program would remain in place, except as affected by runway decommissioning. The EIS discloses the potential effects of runway decommissioning on the Fly Quiet Program. • Continuation of the O'Hare Noise Compatibility Commission (ONCC) to oversee noise mitigation efforts around O'Hare. • Continued use of the ground run-up enclosure during engine run-up testing.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
COMPATIBLE LAND USE		
Alternative A (No Action Alternative)		
2.1	Build Out	No mitigation. Increased exposure to DNL 65 and greater for housing units and 32 noise sensitive facilities including 16 public parks, 4 historic properties, 7 places of worship, 1 university, and 4 schools.
2.2	Build Out + 5	No mitigation. Increased exposure to DNL 65 and greater for housing units and 34 noise sensitive facilities including 19 public parks, 4 historic properties, 7 places of worship, 1 university, and 3 schools.
Alternative C		
2.3	Build Out	Continuation of the City's existing voluntary School Sound Insulation Program (SSIP) for schools affected by the updated DNL contours. Continuation of the City's existing voluntary Residential Sound Insulation Program (RSIP) for all homes affected by the updated DNL contours.
2.4	Build Out + 5	Continuation of the City's existing voluntary School Sound Insulation Program (SSIP) for schools affected by the updated DNL contours. Continuation of the City's existing voluntary Residential Sound Insulation Program (RSIP) for all homes affected by the updated DNL contours.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No.	Impacts	Impact Year	Mitigation
COMPATIBLE LAND USE (CONTINUED)			
Alternative D			
2.5	Increased exposure to DNL 65 and greater for housing units and 32 noise sensitive facilities including 11 public parks, 3 historic properties, 6 places of worship, 1 hospital, 2 libraries, 1 university, and 8 schools.	Build Out	Continuation of the City's existing voluntary School Sound Insulation Program (SSIP) for schools affected by the updated DNL contours. Continuation of the City's existing voluntary Residential Sound Insulation Program (RSIP) for all homes affected by the updated DNL contours.
2.6	Increased exposure to DNL 65 and greater for housing units and 44 noise sensitive facilities including 19 public parks, 3 historic properties, 8 places of worship, 1 hospital, 2 libraries, 1 university, and 9 schools.	Build Out + 5	Continuation of the City's existing voluntary School Sound Insulation Program (SSIP) for schools affected by the updated DNL contours. Continuation of the City's existing voluntary Residential Sound Insulation Program (RSIP) for all homes affected by the updated DNL contours.
Alternative G			
2.7	Increased exposure to DNL 65 and greater for housing units and 30 noise sensitive facilities including 9 public parks, 3 historic properties, 6 places of worship, 1 hospital, 2 libraries, 1 university, and 8 schools.	Build Out	Continuation of the City's existing voluntary School Sound Insulation Program (SSIP) for schools affected by the updated DNL contours. Continuation of the City's existing voluntary Residential Sound Insulation Program (RSIP) for all homes affected by the updated DNL contours.
2.8	Increased exposure to DNL 65 and greater for housing units and 44 noise sensitive facilities including 19 public parks, 3 historic properties, 8 places of worship, 1 hospital, 2 libraries, 1 university, and 9 schools.	Build Out + 5	Continuation of the City's existing voluntary School Sound Insulation Program (SSIP) for schools affected by the updated DNL contours. Continuation of the City's existing voluntary Residential Sound Insulation Program (RSIP) for all homes affected by the updated DNL contours.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
SURFACE TRANSPORTATION		
Alternative A (No Action Alternative)		
<p>3.1 The following intersections in the vicinity of the Airport would deteriorate from an LOS D or better to LOS E or F. (2002 Baseline vs. No Action). This comparison to 2002 Baseline is for informational use only and is not used as a basis for significant impact and/or mitigation analysis.</p> <ul style="list-style-type: none"> - Touhy Avenue & Elmhurst Road (52.8-D vs. 100.9-F) - Touhy Avenue & Mount Prospect Road (36.0-D vs. 139.4-F) - Touhy Avenue & Lee Street (West) (29.2-C vs. 124.4-F) - Touhy Avenue & Wolf Road (52.9-D vs. 134.5-F) - Bessie Coleman Drive & I-190 WB Ramps (21.7-C vs. 86.9-F) - Mannheim Road & Irving Park Road (48.4-D vs. 87.8-F) - Devon Avenue & Wood Dale Road (42.7-D vs. 105.3-F) - Thorndale Avenue & Prospect Avenue (42.1-D vs. 58.5-E) - Irving Park Rd & York Road Ramp (intersection does not exist in 2002 Baseline) (NA vs. 61.1-E) 	Build Out + 5	No mitigation.
<p>3.2 The following roadway segments in the vicinity of the Airport would deteriorate from under or near capacity ($V/C \leq 1.0$) to over-capacity ($V/C > 1.0$). (2002 Baseline vs. No Action). This comparison to 2002 Baseline is for informational use only and is not used as a basis for significant impact and/or mitigation analysis.</p> <ul style="list-style-type: none"> - NB Bessie Coleman Drive North of I-190 WB Ramps (0.99 vs. 1.28) - SB Bessie Coleman Drive North of I-190 WB Ramps (0.75 vs. 1.13) - NB Elmhurst Rd. between Touhy Ave. and I-90. (0.97 vs. 1.13) - EB Balmoral Ave East of Bessie Coleman Drive (roadway segment does not exist in 2002 Baseline) (NA vs. 1.02) - SB York Road between Irving Park Road and Thorndale Ave (0.96 vs. 1.09) - Ramp from EB I-190 to SB I-294 (0.83 vs. 1.28) 	Build Out + 5	No mitigation.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
SURFACE TRANSPORTATION (CONTINUED)		
Alternatives C, D, and G		
3.3	Build Out + 5	<p>The intersection of Bessie Coleman Drive and Lot E North will be further evaluated by the City. The ultimate re-design and improvement of the intersection would produce a LOS of D or better, and could be incorporated as part of the proposed projects during Construction Phase I. The improvements may include additional turn lanes, additional through lanes, adjustments to total cycle lengths, or other modifications.</p> <p>There is an existing Intergovernmental Agreement between the City, IDOT, ISTHA, and DuPage County for Preliminary Phase I engineering services related to the proposed relocation of the York Road and Irving Park Road intersection. As part of these preliminary engineering services which are currently underway, an intersection design study (IDS) will be completed which will be reviewed by the City, IDOT, ISTHA, and DuPage County to ensure that upon implementation of the improvements, the relocated intersection would operate at LOS D or better.</p> <p>Improvements that would enhance capacity and improve the LOS of the intersection of Irving Park Road and Main Cargo Road to D or better could potentially require the acquisition of additional right-of-way (ROW) by IDOT; the jurisdictional agency of Irving Park Road. Adjacent land that may need to be acquired for the additional ROW is currently owned by the Airport. The City has committed to participate in cooperative planning with IDOT to address future improvements to this intersection required to improve the intersection LOS, which may include additional through lanes or through lanes on Irving Park Road. Additionally, the City has committed to make available adjacent Airport-owned land that would need to be acquired by IDOT for ROW to facilitate the future improvements to the intersection and Irving Park Road.</p> <p>Improvements that enhance capacity and improve the LOS of the intersection of Bessie Coleman Drive and Higgins Road to D or better would require the acquisition of additional right-of-way (ROW) by IDOT, the jurisdictional agency of Higgins Road. Adjacent land that may need to be acquired for the additional ROW is currently owned by the Airport. The City has committed to participate in cooperative planning with IDOT to address future improvements to this intersection required to improve the intersection LOS, which may include additional through lanes or turn lanes on Higgins Road. Additionally, the City has committed to make available adjacent Airport-owned land that would need to be acquired by IDOT for ROW to facilitate the future improvements to the intersection and Higgins Road.</p>
The following intersections in the vicinity of the Airport would deteriorate from an LOS D or better to LOS E or F. (No Action vs. Build Alternatives)		
- Bessie Coleman Drive & Higgins Road (intersection does not exist with No Action) (NA vs. 107.6-F)		
- Balmoral Avenue & Des Plaines River Road (22.3-C vs. 118.0-F)		
- Mannheim Road & Montrose Avenue (23.0-C vs. 64.2-E)		
- Irving Park Road & Main Cargo Road (19.9-B vs. 74.9-E)		
- Bessie Coleman Drive & Lot E North (intersection does not exist with No Action) (NA vs. 55.0-E)		
- York Road & Green Street (50.2-D vs. 61.2-E)		
- Thorndale Avenue & Busse Road (42.7-D vs. 56.6-E)		
- Irving Park Road & Prospect Avenue (51.0-D vs. 90.1-F)		
- York Road & Irving Park Road Ramp (53.7-D vs. 201.8-F)		
- Irving Park Road & Wood Dale Road (49.9-D vs. 76.4-E)		

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
SURFACE TRANSPORTATION (CONTINUED)		
Alternatives C, D, and G (Continued)		
3.3	(Continued)	<p>The City could continue to participate in cooperative planning with the entities having jurisdictional responsibilities over the facilities to address their respective share of intersection and roadway capacity improvements, and other potential mitigation measures, for each significantly impacted intersection and roadway segment.</p> <p>The City could (1) establish and fund time-delimited escrow accounts to be controlled by the responsible transportation agency that owns and operates the significantly impacted intersection and roadway segment, or (2) contribute a prorated share of the project-related mitigation costs, including the total estimated costs of planning, design, and constructing the required improvements to the significantly impacted roadway segments and intersections. The prorated contribution could be based on the increased percentage of project-related traffic at each location. As a result of potential mitigation initiatives, a Memorandum of Agreement (MOA) could be developed between the City and each responsible transportation agency, which could include the following:</p> <ul style="list-style-type: none"> • Documentation of the project-generated traffic (for the No Action and Build Alternative) at the significantly impacted intersections and roadway segments. • Identification of the mitigation measures required. • Estimates of the implementation costs of mitigation measures for the group of significantly impacted intersections and roadway segments. • Identification of the events that would trigger the contribution of project-related mitigation funds.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
SURFACE TRANSPORTATION (CONTINUED)		
Alternatives C, D, and G (Continued)		
3.4	Build Out + 5	<p>The City could continue to participate in cooperative planning with the entities having jurisdictional responsibilities over the facilities to address their respective share of intersection and roadway capacity improvements, and other potential mitigation measures, for each significantly impacted intersection and roadway segment.</p>
		<p>The City could (1) establish and fund time-delimited escrow accounts to be controlled by the responsible transportation agency that owns and operates the significantly impacted intersection and roadway segment, or (2) contribute a prorated share of the project-related mitigation costs, including the total estimated costs of planning, design, and constructing the required improvements to the significantly impacted roadway segments and intersections. The prorated contribution could be based on the increased percentage of project-related traffic at each location. As a result of potential mitigation initiatives, a Memorandum of Agreement (MOA) could be developed between the City and each responsible transportation agency, which could include the following:</p> <ul style="list-style-type: none"> • Documentation of the project-generated traffic (for the No Action and Build Alternative) at the significantly impacted intersections and roadway segments. • Identification of the mitigation measures required. • Estimates of the implementation costs of mitigation measures for the group of significantly impacted intersections and roadway segments. • Identification of the events that would trigger the contribution of project-related mitigation funds.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No.	Impacts	Impact Year	Mitigation
SURFACE TRANSPORTATION (CONTINUED)			
Alternatives C, D, and G (Continued)			
3.5	<p>The following roadway segments in the vicinity of the Airport would deteriorate from under or near capacity ($V/C \leq 1.0$) to over-capacity ($V/C > 1.0$). (No Action vs. Build Alternatives)</p> <ul style="list-style-type: none"> - SB Elmhurst Road between Touhy Avenue and I-90 (0.90 vs. 1.10) - NB Elmhurst Road North of Thorndale Ave (0.96 vs. 1.06) - SB Elmhurst Road North of Thorndale Ave (0.99 vs. 1.17) - EB Thorndale Ave. between Wood Dale Road and Prospect Avenue (0.90 vs. 1.16) - Ramp from WB I-90 to SB I-294 (0.90 vs. 1.04) - EB Thorndale Ave. between Arlington Heights Rd. and I-290 (0.96 vs. 1.16) - Ramp from SB Mannheim Road to EB I-190 (0.63 vs. 1.03) 	Build Out + 5	<p>The City could continue to participate in cooperative planning with the entities having jurisdictional responsibilities over the facilities to address their respective share of intersection and roadway capacity improvements, and other potential mitigation measures, for each significantly impacted intersection and roadway segment.</p> <p>The City could (1) establish and fund time-delimited escrow accounts to be controlled by the responsible transportation agency that owns and operates the significantly impacted intersection and roadway segment, or (2) contribute a prorated share of the project-related mitigation costs, including the total estimated costs of planning, design, and constructing the required improvements to the significantly impacted roadway segments and intersections. The prorated contribution could be based on the increased percentage of project-related traffic at each location. As a result of potential mitigation initiatives, a Memorandum of Agreement (MOA) could be developed between the City and each responsible transportation agency, which could include the following:</p> <ul style="list-style-type: none"> • Documentation of the project-generated traffic (for the No Action and Build Alternative) at the significantly impacted intersections and roadway segments. • Identification of the mitigation measures required. • Estimates of the implementation costs of mitigation measures for the group of significantly impacted intersections and roadway segments. • Identification of the events that would trigger the contribution of project-related mitigation funds.
SOCIAL IMPACTS			
Alternative A (No Action Alternative)			
4.1	No significant impacts identified.		The No Action Alternative requires no land acquisition. No mitigation is necessary.
Alternative C			
4.2	As many as 2,631 residents from 539 housing units within the proposed land acquisition area would be acquired.	Construction Phase II	<p>Adherence to the O'Hare Land Acquisition Relocation Plan (in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 49 CFR Part 24, and FAA AC 150/5100-17.</p> <p>Provide a language translator (Spanish), as part of the City's Land Acquisition Consultant, with knowledge of 49 CFR Part 24 requirements throughout the land acquisition process. Translators would be available for other languages, if needed.</p>

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
SOCIAL IMPACTS (CONTINUED) Alternative C (Continued)		
4.3	197 businesses within the proposed land acquisition area, employing approximately 3,040 people, would be acquired.	<p data-bbox="370 75 396 1283">Construction Phase II</p> <p data-bbox="396 75 456 1283">Adherence to the O'Hare Land Acquisition Relocation Plan, in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 49 CFR Part 24, and FAA AC 150/5100-17.</p> <p data-bbox="456 75 578 1283">Provide a language translator (Spanish), as part of the City's Land Acquisition Consultant, with knowledge of 49 CFR Part 24 requirements throughout the land acquisition process. Translators would be available for other languages, if needed.</p>
4.4	Relocation of St. Johannes Cemetery and Rest Haven Cemetery.	<p data-bbox="610 75 695 1283">Construction Phase II</p> <p data-bbox="695 75 755 1283">Adherence to the O'Hare Land Acquisition Relocation Plan (in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 49 CFR Part 24, and FAA AC 150/5100-17. The Churches would be entitled to:</p> <ol data-bbox="755 75 781 1283" style="list-style-type: none"> 1) Fair market value of the real estate 2) Business re-establishment costs 3) Movement of personal property <p data-bbox="781 75 902 1283">As a result of the impacts to St. Johannes Cemetery and Rest Haven Cemetery, MOAs, or Agreements (if either of the cemeteries are not determined to be eligible) are being developed for each, which include the following mitigation measures:</p> <ul data-bbox="902 75 984 1283" style="list-style-type: none"> • Within 180 days of the FAA's issuance of a ROD, the City would produce a professional level survey of all identified graves, and all historic features visible on the ground surface within the cemetery. • The headstones and all other above ground features would be recorded with archival photography prior to their removal. The City would prepare six to nine, 5" x 7", 35 mm, archivally-processed, black-and-white photographs of each headstone. • A copy of documentation related to the MOA will be provided to the NPS, the IHPA, the St. John's United Church of Christ (for St. Johannes Cemetery only), the Rest Haven Cemetery Association (for Rest Haven Cemetery only), the City of Chicago, Village of Bensenville, and the Bensenville Historical Commission. <p data-bbox="984 75 1027 1283">Adherence to the City's Grave Relocation Plan, which would be part of a separate agreement, that would outline the requirements for removal and relocation of the graves and headstones from the cemeteries.</p>
		<p data-bbox="1027 75 1071 1283">Provide a language translator (Spanish), as part of the City's Land Acquisition Consultant, with knowledge of 49 CFR Part 24 requirements throughout the land acquisition process. Translators would be available for other languages, if needed.</p>

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
SOCIAL IMPACTS (CONTINUED)		
Alternative C (Continued)		
4.5	Over 180 businesses, including over 80 service-orientated businesses, adjacent to or near the future airport property line may lose business due to the acquisitions.	Construction Phase II The City will offer advisory services to these businesses as outlined in the City's letter to FAA dated July 11, 2005.
4.6	The total taxes that would be lost to the school districts and community colleges for one year would be as high as approximately \$3,150,000. - School District CC 59 (\$675,434) - High School District 214 (\$670,249) - Harper College District 512 (\$107,414) - Board of Education (\$94,607) - Chicago Community College District (\$7,437) - School Finance Authority (\$4,701) - Grade School District 2 (\$978,742) - High School District 100 (\$577,623) - School District 83 (\$21,249) - High School District 212 (\$13,188) - Triton College District 504 (\$2,049) - College of DuPage (\$82,551)	Construction Phase II Section 21, Reimbursement for tax base losses of the O'Hare Modernization Act, would be followed. OMA language indicates the following for the school and community college districts only: 1) The City will assume the property tax liability for each acquired parcel for the following taxable year and for each of the 5 taxable years thereafter. 2) No annual tax increase shall exceed the lesser of 5% or the annual increase in the Consumer Price Index. 3) No funds will be payable by the City with respect to any taxable year succeeding the 2009 taxable year. 4) Total payments will not exceed \$20,000,000.
4.7	The total taxes that would be lost to the other 36 taxing bodies (not including school districts and community colleges) for one year would be as high as approximately \$2,510,000.	Construction Phase II No mitigation beyond the OMA is required.
Alternatives D and G		
4.8	As many as 2,553 residents from 522 housing units within the proposed land acquisition area would be acquired.	Construction Phase II Adherence to the O'Hare Land Acquisition Relocation Plan (in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 49 CFR Part 24, and FAA AC 150/5100-17. Provide a language translator (Spanish), as part of the City's Land Acquisition Consultant, with knowledge of 49 CFR Part 24 requirements throughout the land acquisition process.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts		Impact Year	Mitigation
SOCIAL IMPACTS (CONTINUED)			
Alternatives D and G (Continued)			
4.9	164 businesses within the proposed land acquisition area, employing approximately 2,928 people, would be acquired.	Construction Phase II	<p>Adherence to the O'Hare Land Acquisition Relocation Plan, in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 49 CFR Part 24, and FAA AC 150/5100-17.</p> <p>Provide a language translator (Spanish), as part of the City's Land Acquisition Consultant, with knowledge of 49 CFR Part 24 requirements throughout the land acquisition process. Translators would be available for other languages, if needed.</p>
4.10	Relocation of St. Johannes Cemetery and Rest Haven Cemetery.	Construction Phase II	<p>Adherence to the O'Hare Land Acquisition Relocation Plan (in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 49 CFR Part 24, and FAA AC 150/5100-17. The Churches would be entitled to:</p> <ol style="list-style-type: none"> 1) Fair market value of the real estate 2) Business re-establishment costs 3) Movement of personal property <p>As a result of the impacts to St. Johannes Cemetery and Rest Haven Cemetery, MOAs, or Agreements (if either of the cemeteries are not determined to be eligible) are being developed for each, which include the following mitigation measures:</p> <ul style="list-style-type: none"> • Within 180 days of the FAA's issuance of a ROD, the City would produce a professional level survey of all identified graves, and all historic features visible on the ground surface within the cemetery. • The headstones and all other above ground features would be recorded with archival photography prior to their removal. The City would prepare six to nine, 5" x 7", 35 mm, archivally-processed, black-and-white photographs of each headstone. • A copy of documentation related to the MOA will be provided to the NPS, the IHPA, the St. John's United Church of Christ (for St. Johannes Cemetery only), the Rest Haven Cemetery Association (for Rest Haven Cemetery only), the City of Chicago, Village of Bensenville, and the Bensenville Historical Commission. <p>Adherence to the City's Grave Relocation Plan, which would be part of a separate agreement that would outline the requirements for removal and relocation of the graves and headstones from the cemeteries.</p>
			<p>Provide a language translator (Spanish), as part of the City's Land Acquisition Consultant, with knowledge of 49 CFR Part 24 requirements throughout the land acquisition process. Translators would be available for other languages, if needed.</p>

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
SOCIAL IMPACTS (CONTINUED)		
Alternatives D and G (Continued)		
4.11	Over 180 businesses, including over 80 service-orientated businesses, adjacent to or near the future airport property line may lose business due to the acquisitions.	Construction Phase II The City will offer advisory services to these businesses as outlined in the City's letter to FAA dated July 11, 2005.
4.12	The total taxes that would be lost to the school districts and community colleges for one year would be as high as approximately \$3,020,000. - School District CC 59 (\$675,434) - High School District 214 (\$670,249) - Harper College District 512 (\$107,414) - Board of Education (\$94,607) - Chicago Community College District (\$7,437) - School Finance Authority (\$4,701) - Grade School District 2 (\$895,693) - High School District 100 (\$528,610) - School District 83 (\$21,249) - High School District 212 (\$13,188) - Triton College District 504 (\$2,049) - College of DuPage (\$75,546)	Construction Phase II Section 21, Reimbursement for tax base losses of the O'Hare Modernization Act, would be followed. OMA language indicates the following for the school and community college districts only: 1) The City will assume the property tax liability for each acquired parcel for the following taxable year and for each of the 5 taxable years thereafter. 2) No annual tax increase shall exceed the lesser of 5% or the annual increase in the Consumer Price Index. 3) No funds will be payable by the City with respect to any taxable year succeeding the 2009 taxable year. 4) Total payments will not exceed \$20,000,000.
4.13	The total taxes that would be lost to the other 36 taxing bodies (not including school districts and community colleges) for one year would be as high as approximately \$2,275,000.	Construction Phase II No mitigation beyond the OMA.
SECONDARY (INDUCED) IMPACTS		
Alternative A (No Action Alternative)		
5.1	The secondary (induced) effects resulting from increases in employment and economic activity for the No Action Alternative is not expected to cause any significant adverse impact.	Build Out + 5 No mitigation.
Alternatives C, D, and G		
5.2	The secondary (induced) effects resulting from increases in employment and economic activity for the Build Alternatives are not expected to cause any significant adverse impact.	Build Out + 5 No mitigation.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
AIR QUALITY		
Alternatives A (No Action), C, D, and G		
6.1	None of the Alternatives would have the potential to cause or contribute to a violation of the NAAQS, but emission reduction measures should be considered to the maximum extent possible.	<p data-bbox="375 663 401 968">Use Best Management Practices.</p> <p data-bbox="435 75 488 968">Provide Fuel Hydrant System access at all future gates to eliminate tanker fuel trucks. 76% of existing tenants currently have access.</p> <p data-bbox="522 453 548 968">Provide Pre-Conditioned Air (PCA) at all future gates.</p> <p data-bbox="583 233 609 968">Provide 400 Hz power and electrify connections for aircraft at all future gates.</p> <p data-bbox="643 453 669 968">Continue use of aircraft idling time reduction at gates.</p> <p data-bbox="703 180 756 968">Require that contractors limit the time that construction-related vehicles idle, when practicable and feasible.</p> <p data-bbox="790 128 844 968">Use newer, cleaner, and more fuel efficient engines in lieu of older diesel engines during construction.</p> <p data-bbox="846 243 872 968">Use ultra low sulfur fuel for off-road diesel equipment prior to the year 2010.</p> <p data-bbox="906 243 932 968">Use ultra low sulfur fuel for on-road diesel equipment prior to the year 2007.</p> <p data-bbox="966 149 1019 968">Use diesel emission traps and oxidation catalysts for off-road diesel equipment during construction.</p> <p data-bbox="1053 138 1107 968">Continued use of Stage II vapor recovery for refueling (ground support equipment and aircraft).</p> <p data-bbox="1141 191 1167 968">Encourage the use of alternate fuel and retrofits for internal bus/shuttle transport.</p>

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
AIR QUALITY (CONTINUED)		
Alternatives A (No Action), C, D, and G (Continued)		
6.1	Continued	<p>Implement diesel idling restrictions for delivery vehicles.</p> <p>Implement components of the City's OMP Sustainable Design Manual during design, planning, and construction, which includes the following :</p> <ul style="list-style-type: none"> • Use of active/passive solar energy where practicable and feasible. • Use of green building design and other Sustainable Design goals with energy efficiency features for new and existing buildings. • Use of low volatile organic compound emission paints and solvents during construction of OMP-related buildings and terminals. • Provide preferred parking for public and employees traveling to/from the Airport in alternatively fueled vehicles, in vanpools/ carpools, and for rental car fleets using alternatively fueled vehicles. <p>Lower construction haul trips offsite (and overall emissions) by utilizing onsite material and balancing earthwork and excavation to the maximum extent possible.</p> <p>Provide a centralized and consolidate rental car facility with connection to the Airport Transit System (ATS).</p> <p>Extend the existing ATS to new and existing facilities.</p> <p>Purchase and install three (3) additional air quality monitors at O'Hare.</p>

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
DOT SECTION 4(F)/6(F) LANDS		
Alternative A (No Action Alternative)		
7.1	No significant impacts identified.	No mitigation.
Alternatives C, D, and G		
7.2	Direct Impacts – Acquisition and removal of as many as six (6) Section 4(f) lands and one (1) Section 4(f)/6(f) land as follows: -Schuster Park (Section 6(f) Property) (Bensenville Park District) -Bretman Park (Village of Bensenville) -Silver Creek (DuPage County Forest Preserve District) -St. Johannes Cemetery -Rest Haven Cemetery -Schwerdtfeger Farmstead (City of Chicago) -Gas Service Station (Village of Bensenville)	<p>Village of Bensenville's Bretman Park will be acquired at the fair market value.</p> <p>The 9.3 acres of Silver Creek, owned by the DuPage County Forest Preserve, would be acquired through a condemnation process, as a result of an existing Intergovernmental Agreement with the Village of Bensenville. A fair market value would be established as a result of the condemnation process.</p> <p>As a result of the impacts to St. Johannes Cemetery and Rest Haven Cemetery, MOAs, or Agreements (if either of the cemeteries are not determined to be eligible) are being developed for each, which include the following mitigation measures:</p> <ul style="list-style-type: none"> • Within 180 days of the FAA's issuance of a ROD, the City would produce a professional level survey of all identified graves, and all historic features visible on the ground surface within the cemetery. • The headstones and all other above ground features would be recorded with archival photography prior to their removal. The City would prepare six to nine, 5" x 7", 35 mm, archivally-processed, black-and-white photographs of each headstone. • A copy of documentation related to the MOA will be provided to the IHPA, the St. John's United Church of Christ (for St. Johannes Cemetery only), the Rest Haven Cemetery Association (for Rest Haven Cemetery only), the City of Chicago, Village of Bensenville, and the Bensenville Historical Commission.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No.	Impacts	Impact Year	Mitigation
DOT SECTION 4(F)/6(F) LANDS (CONTINUED)			
Alternatives C, D, and G (Continued)			
7.2	(Continued)	Construction Phase II	<p>As a result of the impacts (acquisition) to the Gas Service Station and the Schwerdtfeger Farmstead, an MOA for the Gas Station, and an MOA or Agreement (if Schwerdtfeger Farmstead is not determined to be eligible) is being developed for each. At a minimum, the following measures will be implemented if a Build Alternative is selected in the ROD and implemented by the City:</p> <ul style="list-style-type: none"> • Within 180 days of the FAA's issuance of a ROD, the City will produce a Historic American Building Survey (HABS) document. • The HABS document will include a set of measured drawings. These will include plans, elevations, sections, details, and a cover sheet with a site plan and written information. • The HABS document will include a set of large-format black and white photographs that are perspective corrected. Photographs will include overall views, elevations and details of important exterior and interior features of the buildings. • The HABS document will include an in depth critically developed historic context of the building. The HABS document will be produced in accordance with all archival requirements as outlined by the National Park Service. • Copies of the HABS document will be distributed to the NPS, the IHPA, the Village of Bensenville (Gas Station only), the Bensenville Historical Commission (Gas Station only), the Chicago Landmarks Commission (Schwerdtfeger Farmstead only), and the Chicago Historical Society (Schwerdtfeger Farmstead only).
7.3	Schuster Park Acquisition (Bensenville Park District) – This Section 4(f) and 6(f) land would be acquired as part of the southwest acquisition area.	Construction Phase II	<p>The FAA, in consultation with the Bensenville Park District, IDNR, and NPS, will develop a specific mitigation plan under Section 4(f) and Section 6(f) which will consider the following:</p> <ul style="list-style-type: none"> • Replacement in-kind of the recreational resource in consultation with the Bensenville Park District to ensure that the recreational uses meet local needs. • Other options for securing replacement property as identified in working with the Bensenville Park District, IDNR, and the NPS.
7.4	Indirect Impacts – The following three (3) Section 4(f) lands would experience constructive use/indirect impacts (65 DNL and greater): -Nobel-Seymour-Crippen House -Locomotive Museum in Veteran's Park (Bensenville Park District) -Chicago's Norwood Park community center	Construction Phase II	<p>Based on the uses of this facility, no mitigation appears to be warranted at this site since there would not be a substantial impairment of this resource.</p>

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No. Impacts	Impact Year	Mitigation
DOT SECTION 4(F)/6(F) LANDS (CONTINUED)		
Alternatives C, D, and G (Continued)		
7.5	Indirect Impacts – The following Section 4(f) land would experience constructive use/indirect impacts (65 DNL and greater): -Locomotive Museum in Veteran's Park (Bensenville Park District)	Build Out Based on the uses of this facility, no mitigation appears to be warranted at this site since there would not be a substantial impairment of this resource.
7.6	Indirect Impacts – The following Section 4(f) land would experience constructive use/indirect impacts (65 DNL and greater): -Locomotive Museum in Veteran's Park (Bensenville Park District)	Build Out + 5 Based on the uses of this facility, no mitigation appears to be warranted at this site since there would not be a substantial impairment of this resource.
7.7	Indirect Impacts – 133 locally important sites have been identified that would exceed the FAA's noise compatibility guidelines.	Build Out + 5 Incompatible noise levels are not anticipated to substantially impair the use of these properties. Sound insulation following the Secretary of Interior's Standards for the Treatment of Historic Buildings and FAA guidelines would avoid adverse impacts to these sites. Parties to a programmatic agreement would include FAA, NPS, and the Illinois SHPO.
HISTORIC, ARCHAEOLOGICAL, ARCHITECTURAL, AND CULTURAL RESOURCES		
8.1	No significant direct or indirect impacts identified.	Build Out + 5 No mitigation.
Alternatives C, D, and G		
8.2	Direct Impacts – Acquisition and removal of as many as four (4) historic properties as follows: -Gas Service Station -Rest Haven Cemetery -St. Johannes Cemetery -Schwertfeger Farmstead	Construction Phase II Historic American Building Survey (HABS) documentation for historic properties. Alternative mitigation for historic properties could also include museum exhibits, educational brochures or books, or internet based presentations. For mitigation of the cemeteries, see Impact/Mitigation for DOT Section 4(f)/6(f) Lands (No. 7.2).
WETLANDS		
9.1	Projects would result in the filling of 23.5 acres of wetlands and Waters of the U.S.	Construction Phase I These projects are ongoing, previously assessed, or have independent utility. No additional mitigation required.
9.2	Projects would result in the filling of 153 acres of wetlands and Waters of the U.S.	Construction Phase I Follow the USACE Section 404 Individual Permit, which 447.4 acres of wetland is proposed for compensatory mitigation offsite.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No.	Impacts	Impact Year	Mitigation
CONSTRUCTION IMPACTS			
Alternative A (No Action Alternative)			
10.1	While it is probable that some construction-related impacts would occur, the total construction activity would be substantially smaller in scope than for any of the Build Alternatives.	Construction Phase I	All applicable Best Management Practices and Sustainable Design procedures will be included in all bidding and contract documents, as well as all requirements of local, state, and Federal ordinances, regulations, and permits.
Alternatives C, D, and G			
10.2	The following short term impacts have been identified which are typical during large construction projects: -Potential for increased sedimentation/erosion -Local air quality, -Noise impacts on-site -Construction adjacent to airfield movement areas (temporary closures) -Local surface traffic congestion due to construction vehicles.	Construction Phase I	All applicable Best Management Practices and Sustainable Design procedures will be included in all bidding and contract documents, as well as all requirements of local, state, and Federal ordinances, regulations, and permits. City of Chicago Construction Outreach Program for the O'Hare Modernization. Project Designer to include in project specifications the provisions of FAA AC 150/5370-10A that pertain to the reduction of construction impacts such as: - Schedules for accomplishing erosion control work - Plan for erosion/dust control on haul roads and at borrow pits - Plan for disposal of waste material Recycling and Salvage Plan (City's Contractor submittal) Pollution Prevention Plan (City's Contractor submittal) Hazardous Waste Disposal Plan (City's Contractor submittal) Spill Prevention and Mitigation Plan (City's Contractor submittal) Air Pollution Control Plan (City's Contractor submittal) Fuel and Lubricants Control Plan (City's Contractor submittal)
10.3	62 Airport buildings and facilities and various onsite/offsite navoids to be demolished (solid/hazardous waste issue).	Construction Phase I	Phase I ESAs previously completed. Phase II ESAs will be completed where required. Asbestos treatment will be in conformance with applicable law.
10.4	Increased solid waste due to over 7 million square feet of airfield, roadway, and miscellaneous pavement removal (solid waste issue).	Construction Phase I	Construction and Demolition Waste Management Plan (City's Contractor submittal)

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No.	Impacts	Impact Year	Mitigation
CONSTRUCTION IMPACTS (CONTINUED)			
Alternatives C, D, and G (Continued)			
10.5	Increase sediment load and erosion due to over 21 million cubic yards of earth excavation (erosion control/water quality issue)	Construction Phase I	Contractors submit Erosion and Sedimentation Control Plan in addition to construction activity permits and other BMPs.
10.6	Off-site roadway damage due to haul/construction truck travel.	Construction Phase I	Complete pre-work inspection/survey and photographic record of roadways with IDOT State Engineer to determine existing conditions of roadways prior to use as truck haul route. Pavement repair in the event of pavement failure as a result of hauling activities.
ENVIRONMENTAL JUSTICE			
Alternative A (No Action Alternative)			
11.1	No significant impacts identified.		The No Action Alternative requires no land acquisition. No mitigation is necessary.
Alternative C			
11.2	Required acquisition of a predominantly minority community (1,575 by race, 1,599 by ethnicity, out of 2,682 residents) in Alternative C acquisition area.	Construction Phase I and II	Adherence to the O'Hare Land Acquisition Relocation Plan, in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 49 CFR Part 24, and FAA AC 150/5100-17, with direct supervision and follow-up by the FAA.
11.3	Businesses/minority owned businesses in the acquisition area.	Construction Phase I and II	Provide a language translator (Spanish, or other as required), as part of the City's Land Acquisition Consultant, with knowledge of 49 CFR Part 24 requirements throughout the land acquisition process. Conducted Public Outreach Activities – 3 Outreach Sessions and many small group meetings during the EIS process. Provided language translators (Spanish) at for all Public Outreach Activities and Hearings during the EIS process.
11.4	Businesses adjacent to acquisition area (17 out of 150 are minority-owned and/or cater specifically to minorities) negatively impacted by the loss of minority residents.	Construction Phase I and II	The City will offer advisory services to these businesses as outlined in the City's letter to FAA dated July 11, 2005.
11.5	Disproportionately high and adverse noise impact on low-income and minority (by race and ethnicity) populations.	Build Out and Build Out + 5	See Impact/Mitigation for Noise (No. 1.3 and 1.4), and Compatible Land Use (No. 2.3 and 2.4) in this table.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No.	Impacts	Impact Year	Mitigation
ENVIRONMENTAL JUSTICE (CONTINUED)			
Alternative C (Continued)			
11.6	Disproportionately high and adverse surface transportation impacts (intersections that experience deficient levels of service with a Build Alternative only) on low-income and minority (by race and ethnicity) census blocks. - Bessie Coleman Drive & Higgins Road - York Road & Irving Park Road Ramp	Build Out +5	Improvements that enhance capacity and improve the LOS of the intersection of Bessie Coleman Drive and Higgins Road to D or better may require the acquisition of additional right-of-way (ROW) by IDOT, the jurisdictional agency of Higgins Road. Adjacent land that would need to be acquired for the additional ROW is currently owned by the Airport. The City has committed to participate in cooperative planning with IDOT to address future improvements to this intersection required to improve the intersection LOS, which may include additional through lanes or turn lanes on Higgins Road. Additionally, the City has committed to make available adjacent Airport-owned land that would need to be acquired by IDOT for ROW to facilitate the future improvements to the intersection and Higgins Road.
There is an existing Intergovernmental Agreement between the City, IDOT, ISTHA, and DuPage County for Preliminary Phase I engineering services related to the proposed relocation of the York Road and Irving Park Road intersection. As part of these preliminary engineering services which are currently underway, an intersection design study (IDS) will be completed which will be reviewed by the City, IDOT, ISTHA, and DuPage County to ensure that upon implementation of the improvements, the relocated intersection would operate at LOS D or better.			
Alternatives D and G			
11.7	Required acquisition of a predominantly minority community (1,479 by race, 1,524 by ethnicity, out of 2,553 residents) in Alternative D and G acquisition area.	Construction Phase I and II	Adherence to the O'Hare Land Acquisition Relocation Plan, in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 49 CFR Part 24, and FAA AC 150/5100-17, with direct supervision and follow-up by the FAA.
11.8	Businesses/minority owned businesses in the acquisition area.		Provide a language translator (Spanish, or other as required), as part of the City's Land Acquisition Consultant, with knowledge of 49 CFR Part 24 requirements throughout the land acquisition process. Conducted Public Outreach Activities - 3 Outreach Sessions and many small group meetings during the EIS process. Provided language translators (Spanish) at for all Public Outreach Activities and Hearings during the EIS process.

**TABLE 7-2
O'HARE MODERNIZATION PROPOSED MITIGATION MATRIX (NO ACTION ALTERNATIVE, BUILD ALTERNATIVE C, D, AND G)**

No.	Impacts	Impact Year	Mitigation
ENVIRONMENTAL JUSTICE (CONTINUED)			
Alternatives D and G (Continued)			
11.9	Businesses adjacent to acquisition area (at least 17 out of 180 are minority-owned and/or cater specifically to minorities) negatively impacted by the loss of minority residents.	Construction Phase I and II	The City will offer advisory services to these businesses as outlined in the City's letter to FAA dated July 11, 2005.
11.10	Disproportionately high and adverse noise impact on low-income and minority (by race and ethnicity) populations.	Build Out and Build Out + 5	See Impact/Mitigation for Noise (No. 1.5 through 1.8), and Compatible Land Use (No. 2.5 through 2.8) in this table.
11.11	Disproportionately high and adverse surface transportation impacts (intersections that experience deficient levels of service with a Build Alternative only) on low-income and minority (by race and ethnicity) census blocks. - Bessie Coleman Drive & Higgins Road - York Road & Irving Park Road Ramp	Build Out +5	Improvements that enhance capacity and improve the LOS of the intersection of Bessie Coleman Drive and Higgins Road to D or better may require the acquisition of additional right-of-way (ROW) by IDOT, the jurisdictional agency of Higgins Road. Adjacent land that would need to be acquired for the additional ROW is currently owned by the Airport. The City has committed to participate in cooperative planning with IDOT to address future improvements to this intersection required to improve the intersection LOS, which may include additional through lanes or turn lanes on Higgins Road. Additionally, the City has committed to make available adjacent Airport-owned land that would need to be acquired by IDOT for ROW to facilitate the future improvements to the intersection and Higgins Road. There is an existing Intergovernmental Agreement between the City, IDOT, ISTHA, and DuPage County for Preliminary Phase I engineering services related to the proposed relocation of the York Road and Irving Park Road intersection. As part of these preliminary engineering services which are currently underway, an intersection design study (IDS) will be completed which will be reviewed by the City, IDOT, ISTHA, and DuPage County to ensure that upon implementation of the improvements, the relocated intersection would operate at LOS D or better.

Note: The following resources do not have any significant impacts or required mitigation identified with them, and hence were not included in the above table: Water Quality, Biotic Communities, Threatened and Endangered Species, Floodplains, Coastal Zone Management and Coastal Barriers, Wild and Scenic Rivers, Prime and Unique Farmland, Energy Supply and Natural Resources, Light Emissions, and Solid and Hazardous Waste.

7.12 CITY OF CHICAGO GREEN AIRPORT INITIATIVES

Attachment 7-1 is a preliminary draft document entitled *Green Airport Initiatives Environmental Best Management Practices (BMPs)*, which the FAA received from the City's Consultant Team (CCT) on December 10, 2004. CCT has indicated that this document is still being reviewed and will likely be revised.

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ATTACHMENT 7-1

**GREEN AIRPORT INITIATIVES ENVIRONMENTAL
BEST MANAGEMENT PRACTICES (BMPS) –
PRELIMINARY DRAFT**

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PRELIMINARY DRAFT

Chicago O'Hare International Airport

O'Hare Modernization Program

***Green Airport Initiatives
Environmental Best
Management Practices (BMPs)***

Preliminary Draft – For Discussions Purposes Only

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Printed - 12/14/2004

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PRELIMINARY DRAFT

Chicago O'Hare International Airport

O'Hare Modernization Program

Program Table 1. Actions the City is Already Doing.

#	Action	Source	Description/Comments
Air Quality Initiatives - General			
1	Providing 400 Hz Power at Gates/reduced APU usage	AQIP Sec. IV	75% of gates at O'Hare provide 400 Hz power at the gates, reducing the need to utilize aircraft auxiliary power units (APU's). DOA's policy is that all new gates have this type of power.
2	Providing Pre-Conditioned Air at Gates/reduced APU usage	AQIP Sec. IV	61% of gates at O'Hare have Pre-Conditioned Air units at the gates. These units supply hot and cold air to aircraft for climate control and also reduced the need to utilize aircraft auxiliary power units.
3	Increased Use of Alternative Fueled Vehicles - DOA	AQIP Sec. V	21% of the approximately 3,500 vehicles exclusively used on airport are alternatively fueled. DOA continues to pursue increased use of alternative fueled vehicles for which it has control. The DOA continues to work with airlines and other airport users to encourage use of alternative fueled vehicles.
4	Hydrant Fuel System	AQIP Sec. IV	Nearly 76% of Airport Tenants use fuel hydrant systems which reduce fuel vapor emissions. Hydrant fueling also eliminates the need for aircraft fueling trucks.
5	Alternative Fuel Vehicle Fueling Station at Airport	AQIP Sec. IV	CNG fueling station at O'Hare utilized by City-owned CNG-powered vehicles
6	Use of ARFF Training Facility	AQIP Sec. IV	Existing state-of-the-art ARFF training facility providing for controlled test fires utilizes clean propane fuel instead of kerosene.
7	Stage II Vapor Recovery during fueling	AQIP Sec. IV	Already in use. Stage II Vapor recovery reduces the release of fuel vapors to the atmosphere during fueling operations.
8	Increased Use of Alternative Fueled GSE	AQIP Sec. IV	More than 44% of GSE operate using alternative fuels: 24% electric; 20% jet fuel; and 0.5% propane. The DOA continues to work with airport tenants to increase the use of alternative fueled vehicles.
9	Reduction of Aircraft Engine Use During Delay	AQIP Sec. IV	Existing airline operating procedures that produce emissions and cost benefits.
10	Use of GSE tugs for aircraft pushback from gates	AQIP Sec. IV	Existing airline operating procedures as practicable, producing emissions and cost benefits.
11	Ground Service Equipment Shut Down When Not in Use	AQIP Sec. IV	Dependent upon airport tenant operating practices/procedures. Results in emissions and cost benefits, but difficult to enforce.
Air Quality Initiatives - Construction			
12	Less Off-Site Dirt Hauling - City today stores dirt on-site	Existing	When feasible, excavated materials (soil) that are removed during construction are stored on-site (instead of hauling the material off-site via haul trucks). Dependent upon space availability, regional needs, and cost.
13	Construction Air Quality - Dust Control	BMP 202	Existing practices
14	Require Dust Control Plan (each project)	BMP 202	Existing practices
15	Use of dust suppression agents on loose materials/exposed earth	BMP 019 & 202	Existing practices
16	Use of soil stabilizers on loose materials/exposed earth	BMP 202	Existing practices
17	Use of covers for stockpiles - cover loose materials and	BMP 202	Existing practices

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	earth		
18	Vehicle washing when leaving site / rumble strips	BMP 001	Existing practices
19	Public roadway dust control measures	BMP 104	Existing practices
20	Regularly scheduled street sweeping	BMP 104	Existing practices
21	Cover truck beds	BMP 019	Existing practices
22	Use of dust palliatives or asphalt on haul roads	Existing	Existing practices
23	Hydro- seeding	BMP 202	Existing practices
Surface Transportation Initiatives			
24	Public/Employee/Passenger Transportation Access Options	AQIP Sec. VII	Airport and tenant employees and passengers are provided multiple access options to the airport. These multi-modal opportunities are identified in (actions 25-30) listed below. Each serves to reduce the number of private vehicles entering the terminal core, reducing congestion, and hence vehicle idling and emissions.
25	CTA Blue Line to Airport	AQIP Sec. IV	The Chicago Transit Authority operates a commuter light rail system (Blue Line), which passengers and employees can travel to/from O'Hare instead of using private automobiles.
26	Regional Bus Service Access at Airport	AQIP Sec. IV	Regional Bus Service is available in the Terminal core at the Bus/Shuttle Transportation Center..
27	Pace Suburban Bus Service Access at Airport	AQIP Sec. IV	Pace Suburban Bus Service is available with direct access to Terminal core.
28	Metra Commuter Rail Service Access at Airport (Lot F)	AQIP Sec. IV	The Metra Commuter Rail line serving Chicago-Antioch has a station at the Airport near Lot F – connecting to the Terminals via the Airport Transit System (ATS) people mover
29	Kiss-n-fly Lot E Access at Airport	AQIP Sec. IV	The City provides "Kiss-n-Fly" service. By facilitating the drop-off of passengers prior to the terminal area, motor vehicle congestion (and idling) is reduced in the terminal areas. Passengers using this service access the Airport terminals via the Airport Transit Systems (ATS), an electric rail system that operates between the remote parking lots and each terminal.
30	Automated Transit System (ATS) at Airport	AQIP Sec. IV	Airport Transit System (ATS): Electric-powered light rail system connecting remote parking lots to each Terminal.
31	Improvements to Terminal Roadway Flow	AQIP Sec. IV	Split-grade terminal curb fronts and pass-through lanes
32	Commercial Vehicle Holding Area - centralized staging area	AQIP Sec. IV	Taxis & limos hold here until released to Terminal Core Area- minimizing vehicle congestion and idling at the Terminal curb fronts.
33	Bus/Shuttle Transportation Center -- consolidates buses, shuttles	AQIP Sec. IV	Centralized multi-modal transportation center – which consolidates numerous hotel, parking and regional bus and shuttle services at the Bus/Shuttle Transportation Center located outside of the Terminal Core – reducing congestion and hence, vehicle idling and emissions.
34	Parking Rate Structure - encourages short-term parking vs. circling	AQIP Sec. IV	Reduced rates for meeters & greeters, encouraging use of parking and reducing vehicle congestion in the terminal core.
35	Airport Transit System (ATS) Access at Lot E	AQIP Sec. IV	ATS connects directly from remote public parking Lot E to Terminal core – eliminating the need for passenger shuttle buses from the remote lots to the Terminal core.
36	Traffic Flow Monitoring	AQIP Sec. IV	Airport staff regulate and maintain traffic flow in terminal core – reducing congestion.
37	Chicago Vehicle Inspection Program	AQIP Sec. IV	Ensures compliance with emission and operational control systems for passenger vehicle fleets using conventional fuels
38	Elevated Parking Structure Pay Booths - added	AQIP Sec. IV	Added pay booths and lanes to reduce exiting traffic congestion and idling

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	lanes/booths		
39	Pay and Go parking kiosks	AQIP Sec. IV	Pay for parking prior to getting to parked car - avoid waiting in parking queues for cashier
40	Automated Vehicle Identification System (AVI)	AQIP Sec. IV	Eliminates commercial vehicle queue and idling for accessing terminal curb fronts
Water Quality/Storm Water Management Wetland Management			
41	Connection to MWRDGC - all contaminated wastewater treated	Existing	O'Hare is unique in that all glycol contaminated runoff is collected and sent to the MWRDGC for treatment
42	Storm Water flood control and storm water detention facilities	Existing	O'Hare has extensive flood control and storm water detention facilities that both reduce on-airport flooding as well as provide a regional benefit in reducing downstream flooding.
43	SWPP - Storm Water Pollution Prevention Plan	SWPP	Active BMP program.
44	SPCC - Spill Prevention Control and Countermeasures Plan	SPCC	Active BMP program
45	SESC - Soil Erosion and Sedimentation Control plan	SESC	Active BMP program
46	Underground Storage Tank Management Plan	BMP 010, 020 & 018	Active BMP program
47	Update of Best Management Practices Manual (March 2003)	BMP	Updated as additional BMPs identified; update of March 2003 manual in progress
48	Equipment Vehicle Washing Restrictions	BMP 001	Active BMP program
49	Equipment Vehicle Fueling Controls	BMP 002	Active BMP program
50	Equipment Vehicle Maintenance Requirements	BMP 003	Active BMP program
51	Equipment/Scrap Material Storage Requirements	BMP 004	Active BMP program
52	Vehicle Parking Restrictions/Requirements	BMP 005	Part of overall traffic flow and monitoring program
53	Aircraft Fueling Controls	BMP 006	Active BMP program
54	Aircraft Washing Procedures	BMP 007	Active BMP program
55	Aircraft Maintenance Procedures	BMP008	Active BMP program
56	Aircraft Deicing Procedures / Restrictions	BMP 009	Active BMP program and operating procedures. See also BMP 102
57	Discontinued use of ethylene glycol (EG) as deicing agent	Completed	City has not used EG deicing for years.
58	Use of Sodium Formate (solid) on Runway 22R	BMP test program	Active BMP test program and operating procedures used in a limited area in which runoff is not currently collected.
59	Restrictions on Aircraft Parking and Deicing	BMP 009	Active BMP program and operating procedures
60	Former Military Ramp - Mechanical removal only - no aircraft deicing	BMP 009	Active BMP program and operating procedures
61	Test Program: Glycol recovery project	BMP test program	Pilot test program underway.
62	Test Program: Exploring	BMP test	On-going test program to evaluate alternative deicing procedures

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	use of other deicers (potassium acetate)	program	
63	Test Program: Exploring use of other deicers (polymer overlay)	BMP test program	On-going test programs to evaluate alternative deicing procedures
64	Underground Storage Tank Equipment Requirements / Spills	BMP 010	Active BMP program
65	Above Ground Storage Tank Equipment Requirements / Spills	BMP 011	Active BMP program
66	Mobile Tank Trucks (petroleum) Requirements	BMP 012	Active BMP program
67	Chemical Handling / Storage Requirements / Procedures	BMP 013	Active BMP program
68	Drum Storage Procedures	BMP 014	Active BMP program
69	Battery Storage Procedures	BMP 015	Active BMP program
70	Floor Wash-down Procedures	BMP 016	Active BMP program
71	Truck Loading / Unloading Procedures / Spill Control	BMP 017	Active BMP program
72	Spill Control Kits and Spill Response	BMP 017	Active BMP program
73	Good Housekeeping Procedures / Waste Storage	BMP 019	Active BMP program
74	Storm Drain Protection/Identification	BMP 020	Active BMP program
75	Cargo Handling and Transport Across Airfield of Hazardous Materials	BMP 021	Active BMP program
76	Disposal of Water Containing Glycol	BMP 022	Active BMP program; Virtually all glycol-contaminated water is collected and treated.
77	Trench Drain and Oil / Water Separator Cleaning	BMP 023	Active BMP program
78	Pesticide, Fertilizer, and Herbicide Application Procedures	BMP 024	Active BMP program
79	Training (SWPP)	BMP 025	Active BMP program
80	Sanitary and Storm Sewer Manhole Inspection	BMP 103	Active BMP program
81	Street Sweeping	BMP 104	Active BMP program
82	Runway Maintenance Practices	BMP 105	Active BMP program; Practices include power washing, vacuum sweeping and (for 9R/27L only) chemical treatment for removing tire debris that reduces runway friction.
	Landside Elevated Structure Parking Structure	BMP 106	Active BMP program; Use of mechanical equipment to remove as much snow as possible, reserving the use of deicing agents as a last resort. The elevated parking structure is generally not subject to the use of runway or aircraft deicing fluids
83	Parking Lot Deicing Practices	BMP 107	Active BMP program; Use of mechanical equipment to remove as much snow as possible, reserving the use of deicing agents as a last resort
84	Paving and Grinding Operations - Restrictions	BMP 201	Active BMP program
85	Soil and Erosion Control Procedures	BMP 202	Active BMP program
86	Oil-water separators	BMP 023	Active BMP program

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87	Avoid paving operations during ongoing/intermittent rain	BMP 201	Active BMP program
88	Temporary erosion & pollution controls for unforeseen conditions	BMP 201	Active BMP program
89	Install curb breaks and drainage ditches and bioswales	Existing	Various locations. Includes recent facility improvement to control runoff from apron area in Southwest Cargo area.
90	Install landscaping to reduce runoff	BMP 202	Active BMP program
91	Reduce Use of Potable Water	Existing	Throughout existing terminals, City has already installed equipment that reduces use of potable water (actions 92-93).
92	Use of low-flow toilets	Existing	Existing terminal lavatories have automatic low-flow cutoff systems to minimize use of water
93	Use of low-consumption plumbing fixtures	Existing	Existing lavatories have automatic low-flow cutoff systems to minimize use of water
Energy Efficiency			
94	Energy Conservation / Green Lights Program	AQIP Sec. VII	New light packs outside Terminals 2 & 3 reduce energy consumption by 40%
95	Use of Solar Powered Roadway Signs	AQIP Sec. IV	In-use as available and practicable.
96	Renewable energy resource credits (Green Power Certificates)	Existing	DOA purchases renewable energy credits of 10% of power used.
Recycling / Waste Management			
97	Construction material recycling:	Existing	City has an active / successful construction waste/debris reuse program
98	Concrete, Asphalt, Metal, Brick, Wood, Drywall, Cardboard, fixtures	Existing	City crushes and reuses concrete as aggregate fill material. City also utilizes asphalt screenings from CDOT on-airport for service roads, etc.
99	Centralized location for storage/crushing of construction debris	Existing	City utilizes a remote, designated area to crush transported construction materials as applicable
100	Record disposal of and receipt of all materials (source, quality)	Existing	OMP using a Contractor Disposal form for demolition to track disposal - so far, 89% of materials recycled
101	Develop Waste Management Plan (each project)	Existing	Active BMP program
102	City/Airport-Wide Recycling Program - Paper, glass, and aluminum can	Existing	Citywide (Blue Bag): O'Hare and Midway Airports recycle 52 tons of waste each month.
103	Cardboard recycling	Existing	Active recycling program
104	Magazine and phone book recycling	Existing	Active recycling program
105	Scrap metal recycling	Existing	Active recycling program
106	Hazardous materials and spent-solvent recycling	Existing	Active recycling program
107	Battery Recycling	Existing	Active recycling program
108	Tire recycling	Existing	Active recycling program
109	Light bulb recycling	Existing	Includes fluorescent light bulb - mercury recovery

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110	Water/grease/sludge recycling	Existing	Active recycling program
111	Replaced toxic chemicals with non-toxic chemicals	Existing	Many cleaning solutions are biodegradable and low VOC emitting
112	Discontinued use of lead-based paint	Existing	Active program
113	Hazardous waste containment areas	Existing	Active program
114	Mulch/chip vegetative matter	Existing	All yard waste (grass clippings) are left on ground; wood chips composted on-site
Other Environmental Considerations: Noise, Environmental			
115	Airport Noise Monitoring System	Fly Quiet Program	Over 50 permanent and portable noise monitors utilized in active noise monitoring program
116	Fly Quiet Program (FQP)	Fly Quiet Program	Innovative program defined by stakeholders
117	Compatible Land Use Planning	Fly Quiet Program	Community outreach program
118	Residential Sound Insulation Program	Fly Quiet Program	City has sound insulated 6,400 residential homes (ORD & MDW)
119	School Sound Insulation Program	Fly Quiet Program	City has sound insulated 102 schools (ORD & MDW)
120	Aircraft Ground Run-Up Enclosure	Fly Quiet Program	Insulates surrounding neighborhoods from routine aircraft maintenance noise (ORD); high utilization rate
121	Community Outreach Vehicle	Fly Quiet Program	CNG powered information/educational vehicle
122	Community Noise Resource - Web site	Fly Quiet Program	Information resource
123	Web-based noise contour property locator program	Fly Quiet Program	Information resource
124	Outdoor Upper Level Terminal Smoking Ban	AQIP Sec. IV	Smoking is allowed outside on the lower level only.
125	Indoor Smoking Ban	AQIP Sec. IV	Existing City ordinance
126	HVAC Air Filtering Systems - Indoor Air Quality	AQIP Sec. IV	Existing facilities employ HVAC air filtering systems to prevent outdoor impurities from entering the terminal buildings.
127	Construction Noise Mitigation Requirements	Existing practice	Active BMP program

Program Table 2. Actions the City is Already Committed to Attempt to Implement.

#	Action	Source	Description/Comments
Actions the City is Already Committed to Attempt to Implement			
<i>Air Quality Initiatives - General</i>			
128	Alternative Fuel Vehicles & Parking	OMP-SDM 1.5	This option would provide preferred parking for alternatively fueled vehicles, vanpools/carpools, and for rental car fleets (Actions 129 – 133).

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129	Indoor cargo vehicles to use alternative fuels	OMP-SDM 1.5	Airline / tenant own equipment. City continues to encourage use of alternative fueled vehicles.
130	Parking for public/employee vehicles using alternative fuels	OMP-SDM 1.5	This option would provide preferred parking for alternatively fueled vehicles.
132	Parking for vanpools and carpools	OMP-SDM 1.5	This option would provide preferred parking for alternatively fueled vehicles.
133	Preferred parking for rental fleets using alt fuels	OMP-SDM 1.5	This option would provide preferred parking for alternatively fueled vehicles
134	Alternative Fuel Vehicle Fueling Station at Airport for tenants and public use	OMP-SDM 1.5	City continues to explore opportunities. This option is being explored for funding under the FAA's VALE Program.
135	Future airport layout to reduce aircraft delays	With OMP	OMP suggests substantial delay reduction by reconfiguring a more efficient runway and taxiway structure. This would reduce aircraft jet emissions.
136	Future gates: Provide 400 Hz Power at Gates/reduce APU usage	With OMP	75% of gates at O'Hare already have 400 Hz power. DOA policy: is that all new gates be provided with 400 Hz power. This option is being explored for funding under the FAA's VALE Program.
137	Future gates: Provide Pre-Conditioned Air (PCA) at Gates/reduce APU usage	With OMP	61% of gates at O'Hare already have Pre-Conditioned Air (PCA) available at gates. New gates will be provided with PCA. This option is being explored for funding under the FAA's VALE Program.
138	Future gates: Provide Fuel Hydrant System access	With OMP	76 % of O'Hare tenants already use underground fuel hydrant systems. New gates will be provided with hydrant fueling, thereby eliminating tanker fuel trucks. This option is being explored for funding under the FAA's VALE Program.
139	Prepare VALE Application for Airport Emission Reduction Credit Projects	In-progress	DOA is currently preparing a VALE application for various projects; Anticipated for submittal early 2005 for Fiscal Year 2006.
140	Diesel Idling Restrictions Delivery Vehicles	City Ordinance Pending	The City has a draft ordinance covering diesel idling restrictions. This draft ordinance would exempt construction vehicles.
Air Quality Initiatives – Construction			
141	Clean Fuel Construction Vehicles	OMP-SDM 8.5	The City is exploring the options of clean fuel construction vehicles.
142	Require use of diesel emission traps/oxidation catalysts	OMP-SDM 8.5	The City is exploring the options of after-market retrofit technology to reduce construction exhaust emissions.
143	Require use of Ultra Low Sulfur Diesel (ULSD) for on-road trucks	OMP-SDM 8.5	The City is exploring the requirement for ULSD to apply to all contractor's on-road vehicles.
144	Require use of Ultra Low Sulfur Diesel (ULSD) for off-road equipment	OMP-SDM 8.5	The City is exploring the requirement for ULSD to apply to all contractor's non-road vehicles.
145	Require clean fuel engines in lieu of diesel	OMP-SDM 8.5	The City is exploring the use of clean fuel engines in lieu of diesel. Identified that clean fuel engines cannot replace all diesel engines.
146	Require construction vehicles to limit idle time	OMP-SDM 8.5	To date, the City has determined that it is difficult to enforce/City cannot control - can be part of an overall program.
147	Consider requiring particulate filters	OMP-SDM 8.5	The City is exploring the options of after-market retrofit technology for existing construction vehicles. Limited experience at other airports and potential engine warranty issues have been identified.
148	Consider use of Construction Materials Conveyor	OMP-SDM 8.7	OMP will consider as opportunities arise. Initial evaluation has determined that this option would not be cost effective due to short distances transported on-site and the type of material transported ('sticky' clay which is not conducive to this type of action).
	Use of low-VOC Paints and Solvents	OMP-SDM 5.6	The City is exploring the option of requiring low-VOC paints and solvents for construction of OMP-related buildings and terminals, where practicable and feasible.

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Surface Transportation Initiatives			
149	Public/Employee/Passenger Transportation Access (increased)	OMP-SDM 1.3	OMP will provide increased public access opportunities with a Western terminal
150	Extension of ATS to new and existing facilities	With OMP	OMP plans for extension of electric ATS to new/existing facilities. This option is being explored for funding under the FAA's VALE Program.
151	Western Access / reconfigured roadways with OMP	With OMP	OMP plans for western airport access and access improvements on east/north
152	Bicycle Storage and Changing Rooms	OMP-SDM 1.4	This options is being explored for employees at O'Hare under the AQIP program, independent of OMP. Limited opportunity due to O'Hare's location; tenant opportunity.
153	Alternative Transportation During construction - remote bussing for construction employees.	OMP-SDM 8.6	OMP includes on-site bussing from central locations
154	Consolidated rental car facilities	With OMP	OMP proposed CRC facility - reducing shuttle buses; plus connect to ATS
Water Quality /Storm Water Management Wetland Management			
155	Strict Adherence to BMPs to protect water quality	WGP ROD	WGP Record of Decision commitment. Continuation with OMP.
156	Comply with wetland mitigation requirements	WGP ROD	WGP Record of Decision commitment. Continuation with OMP.
157	Provide compensatory flood storage	WGP ROD	WGP Record of Decision commitment. Continuation with OMP.
	Measurement and Verification of Water consumption	OMP-SDM 3.6	Accountability and optimization water consumption
158	Erosion & Sedimentation Control	BMP 202/Consider OMP-SDM 1.1	Active BMP program; OMP SDM maintains emphasis
159	Storm Water Management - Rate and Quantity	OMP-SDM 1.6	Expansion of BMP goals
160	Consider Use of Green Roof systems	OMP-SDM 1.6	Potential incompatibility as a wildlife attractant with airport operations
161	Use of rainwater cisterns for irrigation	OMP-SDM 1.6	Water collected in cisterns is used for landside irrigation during growth season and stored in cisterns for irrigation during dry periods.
162	Install landscaping to reduce runoff	BMP 202/ OMP-SDM 1.6	Active BMP - City implementing today (Runway 22R BMP); consider opportunities with OMP
163	Install curb breaks and drainage ditches and bioswales	OMP-SDM 1.6	Active BMP - City implementing today - FedEx Cargo Area; consider opportunities with OMP
164	Storm Water Management and Treatment	OMP-SDM 1.7	Consider additional opportunities with OMP
165	Capture and recycle glycol deicer	OMP-SDM 1.7	Existing BMP test program; City continues to evaluate capture and reuse options
166	Water Efficient Landscaping	OMP-SDM 2.1	Consider opportunities with OMP
167	Reduce Use of Potable Water	OMP-SDM 2.1;T6 Design	Active BMP program; OMP SDM consider opportunities with OMP
168	Use of low-flow toilets	OMP-SDM 2.3	Consider opportunities with OMP - lavatories have automatic low-flow cutoff systems to minimize water use
169	Use of low-consumption plumbing fixtures	OMP-SDM 2.3	Consider opportunities with OMP - lavatories have automatic low-flow cutoff systems to minimize water use
170	Reclaimed waste water for	OMP-SDM 2.2	Consider opportunities with OMP

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	outdoor landscaping		
171	Construction Equipment Maintenance	BMP 003 OMP-SDM 8.9	Active BMP program; apply to OMP
Energy Efficiency			
172	System Commissioning - designed as planned (for energy efficiency)	OMP-SDM 3.1	Consider opportunities with OMP
173	Establish minimum energy efficiency	OMP-SDM 3.2	Consider opportunities with OMP
174	CFC Reduction - zero use of CFC and HCFC based refrigerants	OMP-SDM 3.3	Consider opportunities with OMP
175	Optimize Energy Performance in buildings	OMP-SDM 3.4;T6 Design	Apply Sustainable Design in New Terminals / buildings;. DOA, in initiating design for Terminal 6, incorporated SDM 3.4 goals.
176	Use High efficiency HVAC	OMP-SDM 3.4;T6 Design	Apply Sustainable Design in New Terminals / buildings; planned DOA, in initiating design for Terminal 6, incorporated SDM 3.4 goals
177	Use energy saving light fixtures	OMP-SDM 3.4;T6 Design	Apply Sustainable Design in New Terminals / buildings; planned DOA, in initiating design for Terminal 6, incorporated SDM 3.4 goals
178	Use active/passive solar energy	OMP-SDM3.4;T6 Design	Apply Sustainable Design in New Terminals / buildings; DOA, in initiating design for Terminal 6, incorporated SDM 3.4 goals
179	Encourage use of Renewable Energy (for buildings)	OMP-SDM 3.5	Apply Sustainable Design in New Terminals
180	Measurement and Verification of energy consumption	OMP-SDM 3.6	Apply Sustainable Design in New Terminals
181	Use of renewable energy technologies	OMP-SDM 3.5, 3.7	Apply Sustainable Design in New Terminals
182	Landscape/Exterior Design to Reduce Heat Islands	OMP-SDM 1.8, 1.9	Apply Sustainable Design in New Terminals / use of light-colored roofing materials
183	Use low-emissive glass windows to reduce heat	OMP-SDM 3.4;T6 Design	Apply Sustainable Design in New Terminals / buildings; planned with T6 design
184	Insulate walls/ceilings to enhance thermal efficiency	OMP-SDM 3.4;T6 Design	Apply Sustainable Design in New Terminals / buildings; planned with T6 design
185	Increase renewable energy resource credits (Green Power Certificates)	OMP-SDM 3.7	DOA plans to increase renewable energy credits to 20% from current 10% of power used.
Recycling/ Waste Management			
186	Reduce waste generated by building occupants	OMP-SDM 4.1	City-wide recycling program
187	Structure and Building Reuse	OMP-SDM 4.2	Opportunities limited; difficulties include meeting City building codes
188	Construction Waste Management	BMP 019/OMP-SDM4.3	City currently implements through BMP; consider opportunities with OMP
189	Specify Recycled Content in Building products	OMP-SDM 4.4;T6 Design	Apply Sustainable Design in New Terminals / Buildings
190	Use Local / Regional materials in Construction	OMP-SDM 4.5;T6 Design	Apply Sustainable Design in New Terminals / Buildings
191	Rapidly Renewable Materials (reduce use of raw materials)	OMP-SDM 4.6;T6 Design	Apply Sustainable Design in New Terminals / Buildings
192	Use Certified Wood	OMP-SDM 4.7;T6 Design	Apply Sustainable Design in New Terminals / Buildings

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193	Salvaged Materials and Resources (Re-use)	BMP 004/ OMP-SDM 7.1	Active BMP program; Apply Sustainable Design in New Terminals / Buildings
194	Planning for Deconstruction (Re-use)	OMP-SDM 7.2	Consider opportunities with OMP
Other Environmental Considerations: Noise; Environmental			
195	Provide shielded lighting for residential areas	WGP ROD	WGP Record of Decision commitment
196	Conduct Phase I assessments (prior to demolition)	WGP ROD	OMP/DOA completes Phase I's for all affected buildings
197	Light Pollution Reduction	OMP-SDM 1.10	Consider opportunities with OMP
198	Brownfield Redevelopment (remediation plan)	OMP-SDM 1.2	Develop remediation plan for contaminated areas
199	Minimum Indoor Air Quality Performance	OMP-SDM 5.1	Consider opportunities with OMP
200	Tobacco Smoke Control	OMP-SDM 5.2	Active program; consider opportunities with OMP
201	Carbon Dioxide Monitoring	OMP-SDM 5.3	Consider opportunities with OMP
202	Ventilation Effectiveness	OMP-SDM 5.4	Consider opportunities with OMP
203	Construction Indoor Air Quality Mgmt. Plan	OMP-SDM 5.5	Consider opportunities with OMP
204	Use Low Emitting Materials	OMP-SDM 5.6;T6 Design	Apply Sustainable Design in New Terminals / Buildings
205	Indoor Chemical and Pollutant Source Control	(OMP-SDM 5.7	Apply Sustainable Design in New Terminals / Buildings
206	Controllability of Systems	OMP-SDM 5.8	Apply Sustainable Design in New Terminals / Buildings
207	Thermal Control	OMP-SDM 5.9	Apply Sustainable Design in New Terminals / Buildings
208	Provide Daylight and Views to Building Occupants	OMP-SDM 5.10;T6 Design	Apply Sustainable Design in New Terminals / Buildings
209	Fuel Vapor Monitoring	OMP-SDM 5.11	Consider opportunities with OMP
210	Limit Noise Transmission in Sensitive Terminal and Office Spaces	OMP-SDM 5.12	Consider opportunities with OMP
211	Maintenance Equipment Upkeep	BMP 003/ OMP-SDM 6.1	Active BMP program; consider opportunities with OMP
212	Furniture, Fixtures and Equipment (non-releasing)	OMP-SDM 6.2	Apply Sustainable Design in New Terminals / Buildings
213	Minimize Impact of Pesticide use	OMP-SDM 6.3	Consider opportunities with OMP
214	Brownfield Prevention Program	OMP-SDM 6.4	Consider opportunities with OMP
215	Construction Noise and Acoustical Quality	OMP-SDM	Consider opportunities with OMP

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