SECTION 5 - ENVIRONMENTAL OVERVIEW

5.1 INTRODUCTION

The purpose of this section is to provide an overview of potential environmental impacts associated with the proposed improvements depicted on the Preferred Airport Development Alternative for Collin County Regional Airport at **Exhibit 4.1**. This environmental overview will provide federal, state, and local officials and the public with an understanding of the potential environmental impacts of the proposed airport development during the 20-year planning horizon. The overview presented in this chapter is modeled after the format of an Environmental Assessment (EA), described in FAA Order 1050.1E, "Environmental Impacts: Policies and Procedures". Appendix A of Order 1050.1E lists 18 environmental impact categories that should be analyzed to determine impacts that may occur as a result of airport actions. These categories are as follows:

- Air Quality
- Coastal Resources
- Compatible Land Use
- Construction Impacts
- Department of Transportation Act: Section 4(f)
- Farmlands
- Fish, Wildlife, and Plants
- Floodplains
- Hazardous Materials, Pollution Prevention, and Solid Waste
- Historical, Architectural, Archeological, and Cultural Resources
- Light Emissions and Visual Impacts
- Natural Resources, Energy Supply, and Sustainable Design
- Noise
- Secondary (Induced) Impacts
- Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks
- Water Quality
- Wetlands
- Wild and Scenic Rivers

The information included in this section is not a formal Environmental Assessment (EA) or Environmental Impact Statement (EIS) as referred to in the National Environmental Policy Act of 1969 (NEPA) or the Airport and Airway Improvement Act (1982 as amended). However, this overview will point out those areas that may be potentially impacted by the proposed actions at Collin County Regional Airport and that may require further environmental study before project implementation. Several documents produced in conjunction with previous airport planning and development efforts were referenced in the development of this Section, including:

- Coffman Associates, Inc., *Final Environmental Assessment for Proposed Airport Improvements to Meet FAA Design Standards for Runway/Taxiway Separation and Associated Improvements*, June 2007.
- Environmental Science Associates, *14 CFR Part 150 Study, Noise Exposure Maps and Noise Compatibility Program for Collin County Regional Airport*, September 2005.
- Wilbur Smith Associates, Inc., *Airport Master Plan Update for Collin County Regional Airport*, October 2004.

5.2 ENVIRONMENTAL PROCESS

Airport improvement projects that are considered to be Federal actions or receive Federal funding must be assessed from an environmental standpoint in order to comply with NEPA, the Airport and Airway Improvement Act (1982), and other pertinent laws. Further guidance is provided in FAA Order 1050.1E, "Environmental Impacts: Policies and Procedures"; Order 5050.4B, "National Environmental Policy Act Implementing Instructions for Airport Projects"; as well as the Council on Environmental Quality's "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act", found in 40 CFR 1500-1508.

For any proposed airport action, the FAA performs an initial environmental determination that considers the type of action and its potential effect upon the environment. The result of the determination is the selection of one of the three following processes:

- An EIS is prepared for major Federal actions that are generally known to have the potential for significant environmental impacts. Actions that normally require an EIS include: initial Airport Layout Plan or airport location approval and Federal financial participation in or airport layout approval for a new runway capable of handling air carrier aircraft at a commercial service airport. An EIS involves thorough evaluation and documentation of the proposed action's purpose and need, alternatives, affected environment, and environmental consequences.

- An EA is prepared to determine whether a proposed action or its alternatives has the potential to significantly affect the environment. An EA requires similar analysis and documentation as an EIS, but with less detail and coordination. If the EA indicates that the proposed action will not result in significant impacts, the FAA will prepare a Finding of No Significant Impact (FONSI), or otherwise require the preparation of an EIS.

- A Categorical Exclusion (CATEX) applies when a proposed action is included in one of the categories of categorical exclusions in paragraphs 307-312 of Order 1050.1E and no extraordinary circumstances apply. If extraordinary circumstances apply, the FAA may need to conduct consultation with relevant oversight agencies and may need to make appropriate findings and recommendations.

When the FAA determines that an EA or EIS is required, FAA Order 5050.4B is used as a guide in the preparation of such studies.

5.3 EXAMINATION OF ENVIRONMENTAL IMPACT CATEGORIES

The Preferred Airport Development Alternative at **Exhibit 4.1** identifies a series of airfield and landside improvements at Collin County Regional Airport. This section provides a brief overview of the potential environmental impacts associated with these improvements.

5.3.1 AIR QUALITY

According to the FAA Environmental Desk Reference for Airport Actions, detailed air quality analysis is needed for a project that due to its size, scope or location has the potential to affect the attainment and maintenance of established air quality standards. Collin County Regional Airport is located in an area designated as being in moderate non-attainment for 8-hour ozone relative to National Ambient Air Quality

Standards (NAAQS)[13]. In addition, according to the FAA's *Environmental Desk Reference for Airport Actions*, an air quality analysis is required if the proposed improvements occur at an airport having more than 180,000 general aviation operations annually.

Because Collin County Regional Airport is forecast to have more than 180,000 annual general aviation operations during the planning period, an air quality analysis will likely be required as part of environmental reviews conducted for projects implemented at the airport. Additionally, in accordance with Title 49 U.S.C. 47106 (c) (1) (B), as amended, certification must be obtained from the Governor of Texas stating that the airport improvements will be located, designed, constructed, and operated in accordance with applicable air quality standards[14].

5.3.2 COASTAL RESOURCES

The Collin County Regional Airport is located in North Texas, which is inland. Therefore, this resource is not considered or applicable.

5.3.3 COMPATIBLE LAND USE

According to FAA Order 1050.1E, the compatibility of existing or future land uses in the vicinity of an airport is usually associated with noise impacts related to that airport. According to the City of McKinney's "Future Land Use Plan," existing land use within the airport boundary consists of "Government / Airport" land uses with surrounding properties designated as "Airport Industrial," "Industrial," various types of business and commercial uses, "Medium- and Low-Density Residential," and "Floodplain." There are also residential developments at the Towns of Fairview and Lowry Crossing that are near the Airport but beyond the limits of the City of McKinney.

The proposed improvements appear to be compatible with the existing and future land use plans and future plans for surface transportation and access. The areas identified for future improvements are located within airport property boundaries or on parcels adjacent to the Airport that must be acquired. The land acquisitions identified in **Exhibit 4.1** are all within "Airport Industrial" uses except for the small acquisitions on the north end of the field to secure Runway Protection Zones, which are within "Floodplain."

No noise analysis was performed in conjunction with this ALP Update. However, the City of McKinney performed a Part 150 Noise Study in September 2005 to evaluate noise generated by the Airport in its then-current configuration. Further noise analysis was performed in conjunction with the 2007 EA for airfield improvements. Based on limited review of these documents, it is reasonable to assume that a Noise Analysis will be required to accompany the environmental reviews conducted for projects implemented at the Airport. Other improvement actions beyond the planning period may also trigger noise analyses including the ultimate runway extensions and widening. Additionally, the change in air traffic mix that could result due to the start of commercial passenger service at the Airport could generate a requirement for further noise study.

[13] Coffman Associates, p3-5
[14] Wilbur Smith, p7-11

5.3.4 CONSTRUCTION IMPACTS

Construction impacts are commonly short-term and temporary in nature. Typical impacts resulting from an airport construction project include air, water, and noise pollution, as well as potential impacts resulting from generation and disposal of increased amounts of solid and/or hazardous waste. All on-site construction activities must be conducted in accordance with FAA AC 150/5370-10A, *Standards for Specifying Construction of Airports,* and incorporate best management practices into project plans. Construction must also comply with the requirements of the National Pollutant Discharge Elimination System (NPDES), including the filing of a Notice of Intent with the State of Texas prior to initiating construction that disturbs more than one acre. Implementing these measures will prevent or minimize most potential construction-related impacts to the environment and surrounding community.

5.3.5 DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F)

Section 4(f) of the Department of Transportation Act provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance or land from an historic site of national, State or local significance as determined by the officials that have jurisdiction thereof, unless there is no feasible and prudent alternative to the use of such land and such program, and the project includes all possible planning to minimize harm resulting from the use. There do not appear to be any properties meeting these criteria within the airport property limits or within the land areas identified for acquisition on **Exhibit 4.1**. However, further study of this item may be warranted in conjunction with future environmental assessments, especially if air traffic patterns are altered by proposed airport development.

5.3.6 FARMLANDS

Prime Farmland, as identified by the US Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion. According to the Farmland Protection Policy Act (PL 90-542), lands already committed to urban development, such as the Airport, do not meet the definition of prime or unique farmlands.

Some or all of the land surrounding the airport that is identified for acquisition may be designated as Prime Farmland based on a review of the Soil Survey of Collin County, Texas and coordination with the Natural Resource Conservation Service (NRCS). In compliance with the Farmland Protection Policy Act, the conversion of Prime Farmland to a nonagricultural use as a result of development at the Airport should be coordinated with the NRCS during the preparation of the Environmental Documentation prior to construction activities. Additionally, Form AD-1006, *Farmland Conversion Impact Rating*, should be completed to determine the extent of any farmland impacts[15].

5.3.7 FISH, WILDLIFE, AND PLANTS

No field investigations were made to determine the presence of sensitive biological resources or protected species or habitat in the proposed project area. Section 7 of the Endangered Species Act, as amended, requires coordination with Federal agencies to ensure that any action the agency authorizes, funds, or carries out is not likely to jeopardize the continued existence of threatened and endangered species or result in the destruction or adverse modification of critical habitat. Additionally, the Fish and Wildlife Coordination Act requires that Federal Agencies consult with State wildlife agencies and the U.S.

[15] Wilbur Smith, pp7-16 – 7-17

Fish and Wildlife Service concerning the conservation of wildlife resources when a stream or other water body will be controlled or modified as a result of Federal Action.

During the EA completed in June 2007, a field evaluation of the project area (including airport property and immediately adjacent lands) was conducted to identify sensitive biological resources and protected species. During this evaluation "It was determined that the project area consists of grassland with forested areas primarily confined to rivers, streams, and drainages. Dominant plant species include little bluestem and indiangrass, in addition to Bermuda grass and bahaigrass. Woody vegetation in the forested areas includes post oak, blackjack oak, water oak, winged elm, hackberry, and yaupon. All these habitat types are very common within the project area. During the field investigations, no sensitive biotic communities, federally threatened or endangered plant or animal species, or habitat for federally protected species was identified within the project study area[16]." The EA found that implementation of the proposed airfield improvements at that time would not create a significant impact to federally listed threatened or endangered species.[17]

In addition to consideration of the above, the 289-Acre Heard Natural Science Museum and Wildlife Sanctuary is located approximately 2 miles southwest of the Airport along Wilson Creek[18]. Due to the additional land acquisition proposed in conjunction with the Preferred Airport Development Alternative, which appears to stretch beyond previously-studied areas, and the potential for changes in physical features and shifts in animal populations over time, further study of this item may be warranted in conjunction with future environmental analyses.

5.3.8 FLOODPLAINS

The Collin County Regional Airport property is impacted by the 100-year floodplain of the East Fork of the Trinity River and its tributaries. Some of the development depicted on the Preferred Airport Development Alternative, particularly the airfield expansion and relocation of Enloe Road, appears to be located within the 100-year floodplain. This situation is not without precedent at the Airport.

The Runway 18-36 replacement project, which is under construction as of the publication of this report, impacted the 100-year floodplain of the East Fork Trinity River and its tributaries. The proposed impacts were modeled and submitted to FEMA for approval. FEMA issued Conditional Letter of Map Revision (CLOMR) approving the construction of the impacts. A Letter of Map Revision (LOMR) will be issued by FEMA at the conclusion of the project based on the as-built conditions of the runway and accompanying drainage structures and stormwater attenuation and treatment facilities. The LOMR will revise the effective FEMA mapping in the area to reflect the impact of constructed improvements on the floodplain.

Similar floodplain impacts due to improvements identified on the Preferred Airport Development Alternative will likely need to be addressed in further detail during the environmental review process. A Stormwater and Floodplain Management Master Plan is identified in the Capital Improvements Program as a strategy to effectively minimize and mitigate these floodplain and drainage impacts as the Preferred Airport Development Alternative is implemented over the planning period.

[16] Coffman, p3-6
[17] Coffman, p4-24
[18] Wilbur Smith Associates, p7-13

5.3.9 HAZARDOUS MATERIALS, POLLUTION PREVENTION, AND SOLID WASTE

5.3.9.1 Hazardous Materials

The Coffman Environmental Assessment (June 2007) noted that "Numerous Phase I Environmental Site Assessments have been undertaken at the airport prior to development projects and/or land acquisition. None of these studies have identified the presence of any hazardous materials; therefore, it is unlikely that earthwork will expose any hazardous materials (p4-27)." The Wilbur Smith Master Plan Update (October 2004) noted that a search of EPA databases identified no hazardous waste sites on airport property but did identify several sites in areas surrounding the Airport. Further analysis may be required in conjunction with environmental review of future development to determine if these circumstances have changed and if the presence of hazardous materials will impact future airport development.

5.3.9.2 Pollution Prevention

The Coffman Environmental Assessment (June 2007) also notes that "the City of McKinney maintains a Texas Pollution Discharge Elimination System (TPDES) General Permit for operation of the airport as an industrial facility." The implementation of development depicted on the Preferred Airport Development Alternative will likely generate a requirement to modify this permit to reflect additional impervious surface on airport property and associated impact mitigation measures. "A construction-related TPDES permit will be required prior to construction of the proposed improvements. This permit requires a Notice of Intent for all construction activities disturbing one acre or more of land. Construction-related water quality impacts are discussed under [Section 5.3.4], Construction, and [should] be minimized through the use of best management practices (BMPs)."

5.3.9.3 Solid Waste

In general, the proposed facility development does not appear to produce a significant increase in solid waste generation beyond what the City of McKinney may normally anticipate in planning for future municipal growth. However, the particular solid waste impacts of the Preferred Airport Development Alternative were not evaluated in detail as part of this ALP Update and should be fully analyzed in conjunction with environmental review of future development.

5.3.10 HISTORICAL, ARCHITECTURAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES

This category of impact must be in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470, et seq.), which seeks to ensure the preservation of cultural resources.

Research conducted during the Coffman Environmental Assessment (June 2007) revealed four previously recorded sites in the Texas Archaeological Research Laboratory within the Area of Potential Effect (APE) defined for the project. These sites were investigated further and it was determined "the four localities, by definition, are not eligible for inclusion in the [National Register of Historic Places] NHRP or [for designation as a State Archaeological Landmark]." (p3-7)

Since the APE for the implementation of the Preferred Airport Development Alternative will likely expand beyond the boundaries of the APE identified in the Environmental Assessment, and because the status of some of the identified sites may have changed or new sites may be evident since 2007, a study of these resources should be included in the environmental review for these future projects.

5.3.11 LIGHT EMISSIONS AND VISUAL IMPACTS

As noted in the Wilbur Smith Master Plan Update (October 2004), "Light emissions associated with general aviation airports are typically minimal…FAA order 5050.4A [indicates] light emissions do not result in impacts to adjacent residential communities unless there are unusual circumstances, such as high intensity strobe lighting aimed directly at an individual's house" (p7-17). Currently, the Airport is equipped with approach lighting and medium intensity runway lighting. Runway 18-36, upon completion, will feature high intensity runway lighting. Similar lighting systems can reasonably be expected to accompany future airfield expansion, which would not significantly alter lighting conditions. Although land uses of properties most likely to be impacted by light emissions are generally compatible with airport development, analysis of the light emissions that will accompany airport expansion should be evaluated in future environmental reviews.

5.3.12 NATURAL RESOURCES, ENERGY SUPPLY, AND SUSTAINABLE DESIGN

Airport development actions have the potential to change energy requirements or use consumable natural resources. Typical actions that could cause such impacts include airside/landside expansion, land acquisition, significant changes in air traffic and airfield operations, and significant construction activity. The proposed improvements at Collin County Regional Airport may cause an increase in demand for energy during construction and the Airport may experience an increase in energy demand over the planning period due to the forecast growth in air traffic operations and based aircraft and the commissioning of new facilities. Potential impacts in this category may need to be reviewed in conjunction with future environmental analysis related to the projects included in the Preferred Airport Development Alternative. Notably, the City of McKinney has taken active steps to make sustainable design a priority in its community. Sustainable design standards should be considered when possible and practicable in the design of future airport facilities.

5.3.13 NOISE

No noise analysis was performed in conjunction with this ALP Update. However, the City of McKinney initiated a Part 150 Noise Study in September 2005 to evaluate noise generated by the Airport in its then-current configuration. In addition, a noise analysis was conducted to evaluate airfield improvement alternatives in conjunction with the June 2007 Environmental Assessment by Coffman Associates. None of the near-term (PAL 1) airport improvement projects are anticipated to accompany or generate significant changes in aircraft type or operations that would alter or modify the findings of that analysis.

It is reasonable to assume that a Noise Analysis will be required as part of the environmental review of proposed airfield improvement projects, including the parallel 6002' x 100' runway (with planning / design at PAL 2 and construction at PAL 4), depicted on the Preferred Airport Development Alternative. Other noise analyses may be required for other airfield expansion projects beyond PAL 4 including the depicted runway extensions and runway widening. Additionally, the change in air traffic mix that could result due to the start of commercial passenger service at the Airport could trigger a requirement for further noise study.

5.3.14 SECONDARY (INDUCED) IMPACTS

Secondary (induced) socioeconomic impacts on communities surrounding airports include shifts in patterns of population movement and growth, public service demands, and changes in business and economic activity to the extent influenced by airport development. If land is acquired to expand the Airport eastward and roadway improvements are constructed as depicted in the Preferred Airport Development Alternative shown at **Exhibit 4.1**, some residences may be displaced and additional land could be made available and feasible for development of aviation-compatible businesses. Although the

overall economic impact of the Preferred Airport Development Alternative is anticipated to be positive with the generation of temporary construction-related jobs and an increase in the Airport's permanent job-creating capacity, its secondary (induced) impacts should be evaluated as part of a future environmental review.

5.3.15 SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

According to FAA Order 1050.1D, significant social impact thresholds include:

- Extensive relocation of residents is required, but sufficient replacement housing is unavailable.
- Extensive relocation of community businesses and that relocation would create economic hardship for the affected community.
- Disruptions of local traffic patterns that substantially reduce the levels of service of the roads serving the airport and its surrounding communities.
- A substantial loss in community tax base.

The proposed improvements at Collin County Regional Airport may require relocation of a small number of residences due to land acquisition and airfield expansion on the east side of the Airport. At this preliminary stage in the process, significance of impact cannot be determined and further analysis should be conducted when the projects are within five to seven years of construction, based on demand. The proposed improvements must meet 49 CFR Part 24 (Implementing the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970) requirements if an airport action requires purchasing real property or displacing people or businesses. It is anticipated that the proposed improvements would not significantly alter traffic patterns in the surrounding community or cause a substantial loss in the community tax base.

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations", provides that "each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations". The Council on Environmental Quality (CEQ) environmental justice guidance under NEPA was used to clearly define what a "disproportionately adverse effect to minority or low-income populations" would be. It states that a minority population should be identified where either the minority population of the affected area exceeds 50% or when the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population.

This analysis was not conducted as a part of this ALP Update and should be conducted as relevant components of the Preferred Airport Development Program are initiated in order to confirm the minority and low-income population percentages of the affected area are not greater than the minority and low-income population percentages in the general population, as defined by CEQ.

5.3.16 WATER QUALITY

As land is developed, surfaces are covered with non-porous materials such as concrete and asphalt. Without interception and depression storage, nearly all the rainfall on the impermeable surfaces (roofs, streets, driveways) becomes runoff, which dissolves or dislodges pollutants and discharges to creeks, rivers, lakes, drainage ditches and irrigation systems. The proposed improvements at Collin County Regional Airport will create new impervious surfaces that result increase stormwater runoff from the Airport. In addition, the proposed improvements as depicted in the Preferred Airport Development Alternative may impact streams and wetlands associated with the South Fork of the Trinity River and Wilson Creek.

The airport improvement project that was the subject of the Coffman's June 2007 Environmental Assessment impacted many of the same areas. According to the EA report, the following permits were required to be received or modified in conjunction with that project:

- U.S. Army Corps of Engineers (USACE) Section 404 permit;
- Texas commission on Environmental Quality (TCEQ) Section 401 Certification;
- TCEQ Texas Pollutant Discharge Elimination System (TPDES) General Permit 150000 for construction activities; and,
- TCEQ TPDES General Permit 050000 operational permit (p4-14).

The USACE Section 404 permit, the requirement for which is generated by the Federal Water Pollution Control Act (commonly known as the Clean Water Act), regulates the discharge of dredged, excavated, or fill material in wetlands, streams, rivers, and other U.S. waters. The U.S. Army Corps of Engineers is the federal agency authorized to issue Section 404 Permits for certain activities conducted in wetlands or other U.S. waters. TCEQ is the state agency that also reviews USACE Section 404 permits for discharge into wetlands and Waters of the U.S. The projects associated with future airport development will be reviewed under these permitting processes to ensure impacts to wetlands and waters of the U.S. are minimized.

The TPDES General Permit 15000 is issued after design and prior to construction to ensure TCEQ is notified before construction begins and that a proper Stormwater Pollution Prevention Plan (SWPPP) has been produced for the project. Finally, the Airport's existing TPDES General Permit 050000 relates to stormwater discharges from the Airport as an industrial activity. This permit must be updated after improvements are constructed to illustrate additional impervious surfaces and new runoff patterns.

It is reasonable to assume that, at a minimum, these permits will also be required in order to initiate the various projects that comprise the Preferred Airport Development Alternative over the planning period. A comprehensive review of water quality issues will be necessary as part of future environmental review(s) in order to demonstrate that water quality impacts have been minimized.

5.3.17 WETLANDS

A wetlands inventory review was not completed as part of this ALP Update. However, it appears the majority of the Airport property consists of uplands with wetlands found on airport property in the vicinity of tributaries and drainage outfalls associated with the East Fork of the Trinity River and Wilson Creek. A field wetland survey should be conducted in conjunction with future environmental reviews to determine or confirm the presence or absence of waters of the U.S., including wetlands, within the area(s) of proposed development. As described in Section 5.3.16, a USACE Section 404 permit will likely be required for airport improvements in the vicinity of identified wetlands.

5.3.18 WILD AND SCENIC RIVERS

The Federal Wild and Scenic Rivers Act (PL 90-542 as amended) describes those areas eligible to be included in a system afforded protection under the Act as free flowing and processing "…outstandingly remarkable, scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values". The Act restricts development within 1,000 feet of rivers identified as wild and scenic. Limited research of the National Wild and Scenic River System's National Inventory of Wild and Scenic Rivers indicates that there are no designated "Wild and Scenic Rivers" within a 1,000-foot radius of the Collin County Regional Airport.

SECTION 6 - CAPITAL IMPROVEMENTS PROGRAM AND FINANCIAL OVERVIEW

6.1 INTRODUCTION

This section provides an overview of the Capital Improvements Program (CIP) generated by the Preferred Airport Development Alternative selected by the MADC and depicted at **Exhibit 4.1**. Additionally, it identifies potential funding sources the Airport may engage to make the identified CIP projects a reality. The overall approach to the development of the CIP and financial plan included the following elements:

- Identify the individual projects that comprise the MADCs Preferred Airport Development Alternative
- Group individual projects according to Planning Activity Levels
- Develop conceptual site plans for each project
- Create a programmatic estimate for each project
- Review potential sources of public (grant) funding

6.2 CAPITAL FUNDING SOURCES

The projects identified in the Collin County Regional Airport's CIP will likely be funded by several sources. These sources include federal grants, state grants, net operating revenues/cash reserves, and other unidentified funding sources, including private funding. Each of these sources of funds is described in the following sections.

6.2.1 TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AVIATION DIVISION GRANTS

Collin County Regional Airport is identified in the FAA's National Plan of Integrated Airport Systems (NPIAS) and in the Texas Airport System Plan (TASP) as a Reliever Airport. As explained in the TASP, "TxDOT administers the FAA Airport Improvement Program for General Aviation Airports under the State Block Grant Program." Funds administered by TxDOT are derived from the Federal Airport and Airway Trust Fund and state appropriations for the Aviation Facilities Development Plan.

TxDOT Aviation Division administers funds to projects identified in its Aviation Capital Improvement Program (ACIP), a tentative three-year schedule of airport development projects. A project may be inserted into the ACIP with the airport sponsor's submittal of a written Letter of Interest explaining the project requirement. The project generated by the Letter of Interest is then categorized by the objective it addresses. The Texas Transportation Commission, the approval authority for TxDOT's ACIP, has assigned the following categorical priorities when evaluating an airport project for grant funding:

- Safety enhancement
- Preservation of existing facilities
- Response to a present need
- Provision for an anticipated need

TxDOT Aviation has established several grant programs through which its grant funding may be distributed on an annual basis. The various grant programs are applied based upon the type of project requested by an airport sponsor. Following is a brief explanation of the various grant programs administered by TxDOT Aviation Division.

6.2.1.1 Capital Improvement Projects (CIP) Grant Program

In general, projects funded under this grant program must be reflected in a current Airport Layout Plan on file with TxDOT Aviation Division. Projects approved for a CIP grant are funded on a 90% TxDOT / 10% local match, cost-sharing basis.

6.2.1.2 Routine Airport Maintenance Program (RAMP)

This grant program is intended to provide airport sponsors with funding assistance for "lower cost" airport improvements and regular maintenance that may not be reflected in a current ALP document. Projects affecting an airfield are given priority to receive funding over landside projects. These funds may be distributed on a 50% TxDOT / 50% local match, cost-sharing basis up to $100,000 per fiscal year. TxDOT Aviation maintains a representative list of project types that are eligible and ineligible for RAMP funding.

6.2.1.3 Terminal Building Program

TxDOT Aviation may distribute grant funds for eligible terminal building projects at TASP airports. The funds are administered as follows:

- 50% TxDOT / 50% local match, cost-share for building design and construction up to $1,000,000
- 50% TxDOT / 50% local match, cost-share for vehicle parking and entrance road up to $1,000,000
- 90% TxDOT / 10% local match, cost-share for aircraft parking apron in addition to the building grant amount

There are a few requirements an airport must meet in order to be eligible for this grant program:

- The property on which the facility will be constructed must be considered airport property that is publicly-owned or leased by a public entity for at least 20 years.
- The airport must have an airport manager or designated person on site on a regular basis during normal daylight business hours.
- The airport must have aviation fuel available for sale to the flying public.

6.2.1.4 Hangar Program

TxDOT Aviation may distribute grant funds to support hangar construction on a 90% TxDOT / 10% local match, cost sharing basis. TxDOT may contribute up to $600,000 on a single project if a NPIAS airport accumulates 4 years of Non-Primary Entitlement federal funds. Non-NPIAS airports are eligible for up to $600,000 in state funds for hangar projects. Additional funding for hangar access taxiway pavement can be had on a 90% TxDOT / 10% local match, cost-sharing basis. There are a few requirements an airport must meet in order to be eligible for this grant program:

- Airside needs must be met
- A justification exists for additional hangar space
- An approved ALP designating the hangar location
- An acceptable hangar lease and rate structure is in place
- Airport minimum standards have been adopted

6.2.1.5 Fuel Facility Development Program

TxDOT Aviation may distribute grant funds to support fuel facility development on a 75% TxDOT / 25% local match, cost-sharing basis. Funding for NPIAS airports comes from Non-Primary Entitlement federal funds while Non-NPIAS airports receive state funding. Grants may be used for installation of new systems (i.e. above-ground storage tanks, dispensing systems, self-service card readers) owned and

controlled by the airport sponsor. The use of grants for replacement systems will be evaluated and considered based on the systems' expired service life. There are a few requirements an airport must meet in order to be eligible for this grant program:

- Airside needs must be met
- In-place standards for fuel rates and flowage fees
- An approved ALP designating fuel facility location
- Evidence of compliance with environmental regulations, which includes a Storm Water Pollution Prevention Plan and Spill Prevention Control and Countermeasure Plan. Note that development of these plans is eligible for RAMP grant funding.
- Airport minimum standards have been adopted

6.2.2 FEDERAL AVIATION ADMINISTRATION (FAA) DISCRETIONARY FUNDING

In addition to the federal funds received through TxDOT Aviation's administration of the State Block Grant program, Collin County Regional Airport has been successful in receiving discretionary funding from the FAA's Southwest Regional Airports District Office via the TxDOT Aviation Division for projects on the Airport's approved ALP. For example, federal discretionary funds were distributed to the Airport in support of the environmental assessment, engineering, land acquisition, and construction for the Runway 18-36 Replacement Project. It is possible that such discretionary funding could be received from the FAA for future CIP projects at the Airport.

6.2.3 OTHER CAPITAL FUNDING SOURCES

In addition to the grant funding sources and the traditional local funding matches identified above, an airport may have the ability to engage other funding sources to design and construct projects on its CIP. These funding sources can be engaged on a case-by-case basis to supplement or, in lieu-of, traditional funding sources. These non-traditional funding sources can include:

- Airport Operating Revenues
- Municipal General Fund Revenues
- Bond Issues
- Private Funding
- Economic Development Organization Funding

6.2.3.1 Airport Operating Revenues / Cash Reserves

Collin County Regional Airport, operating as an Enterprise Fund within the City of McKinney, generally operates at a loss year-to-year as its operating expenses exceed operating revenues. This requires the City to subsidize a portion of the Airport's operating costs from the City's general fund[19]. Recurring losses year-to-year do not enable the Airport to maintain a sizeable cash reserve. Therefore, the Airport typically does not have cash on-hand to fund its own Capital Improvement Projects.

6.2.3.2 Municipal General Fund Revenues

In general, capital development expenditures from municipal general fund revenues have been somewhat difficult to obtain in recent years. One reason for this difficulty is the seemingly universal shortfall in local general fund revenues. Budgetary problems have created an environment where local funding is uncertain. The amount of general fund support for airport improvement projects varies by airport and is

[19] Tax revenues generated by the airport routinely exceed the portion of the airport's operating costs that must be subsidized from the City's general fund.

generally based upon the local tax base, priority of the development project, historical funding trends, and, of course, local attitudes concerning the importance of aviation.

Historically, Collin County Regional Airport has enjoyed strong support from its municipal leadership. In addition to grant funding matches, the City of McKinney has demonstrated a willingness to provide larger shares of funding for specific airport development projects at the appropriate opportunity.

6.2.3.3 Bond Issues

Airport authorities can issue bonds without approval from the city or county. However, they must use their own revenue to repay the bonds. Airport revenue is typically used to repay these bonds. The ability of Collin County Regional Airport to issue bonds is limited because of its tendency to operate at a loss year-to-year with subsidy from the City of McKinney.

City bond issues for funding the local share of airport development projects must compete with bond issues for other types of community improvements such as schools, highways, and sewer systems. As with the general fund apportionment, bond issues supporting airport development depend greatly on the priority assigned to such projects by the local community.

6.2.3.4 Private Funding

Items such as privately-operated storage and maintenance hangars are not typically eligible for federal or state grant funding at public airports. Collin County Regional Airport may work with private developers and other local businesses to fund these types of improvements in order to enhance the revenue-generating capability of the airport from ground leases, fuel flowage, etc.

6.2.3.5 Economic Development Organization Funding

The McKinney Economic Development Corporation (MEDC) is charged with fostering economic growth in the City of McKinney. The MEDC administers an annual budget generated from a half-cent City sales tax. These funds can be used to assist companies interested in basing in McKinney with infrastructure and other incentives. When prudent, these funds may be used to provide airport improvements associated with a specific project related to economic growth.

6.3 CAPITAL IMPROVEMENTS PROGRAM

Appendix B contains conceptual site plans that depict the development identified in the Preferred Airport Development Alternative in greater detail. These conceptual site plans group the recommended development into functional areas as follows:

- Exhibit 1 – Airfield Expansion
- Exhibit 2 – General Aviation Terminal Facility
- Exhibit 3 – Central Terminal Area
- Exhibit 4 – Hangar Campus Development
- Exhibit 5 – FM 546 / Airport Drive Improvements
- Exhibit 6 – Commercial Passenger Service Terminal
- Exhibit 7 – Enloe Road Improvements
- Exhibit 8 – East Airport Drive Improvements

This section and the tables found at **Appendix C** provide a summary of the Capital Improvements Program (CIP) that are necessary to implement the Preferred Airport Development Alternative. The CIP has three primary purposes:

- Identify improvement projects that will be required at an airport over a specific period of time;
- Estimate the order of implementation of the projects included in the plan; and
- Estimate the total costs of the projects.

It is important to note that the CIP becomes less detailed and more flexible in the future years of the planning period. Additionally, the CIP is typically modified on an annual basis and as new projects are identified and completed, requirements change, and financial environments evolve.

Within **Appendix C**, **Table 1** lists each project identified in the CIP grouped according to the functional area of the project. With few exceptions, the "Project Name" and "Item Number" correspond to a graphical depiction of the project found on the exhibits within **Appendix B**. **Appendix D** contains a number of project worksheets that provide a breakdown of the programmatic estimates listed on **Table 1**.

Each proposed capital improvement project over the 20-year planning horizon has been assigned to one of four specific planning milestones or Planning Activity Levels (PALs). The purpose of the PALs is to guide Airport staff and officials in determining when airport facilities need expansion or upgrades based on recorded aviation activity (i.e. based aircraft and annual operations), and not an arbitrary calendar year. The projects in the CIP are grouped according to the following PALs:

- PAL 1: 117,600 annual operations (forecast to occur in 2016)
- PAL 2: 154,000 annual operations (forecast to occur in 2021)
- PAL 3: 200,300 annual operations (forecast to occur in 2026)
- PAL 4: 230,000 annual operations (forecast to occur in 2031)

Table 2 graphically depicts the PAL at which each project in the CIP, grouped by functional area, should be initiated for preparatory work (such as environmental review, engineering, and design) and, ultimately, construction. Projects identified for construction in PAL 1 must also have the required preparatory work accomplished during PAL 1. **Table 3** provides the same information, but in a format that illustrates the CIP projects' sequential execution throughout the planning period.

Finally, **Table 4** provides a comprehensive summary of the CIP, tabulating the total programmatic estimates for all projects by PAL and by functional area. In addition to PALs described above, the Airport identified projects for inclusion in the CIP that are not generated by forecast aviation activity during the planning period. The MADC considers these projects to be in the best interest of its mission to "Develop the premier general aviation reliever airport in the D/FW Metroplex with future commercial service goals[20]." The programmatic estimates for these projects are tabulated under the column "Beyond PAL 4" since they were not identified as requirements during the planning period due to future projections of airport demand. As such, funding for these projects would likely come from sources other than TxDOT Aviation or the FAA until the projects can be justified based on aviation demand. Total programmatic estimates for the CIP, tabulated by functional area and PAL are provided at **Tables 6.1** and **6.2**, below.[21]

[20] MADC Strategic Plan, 2010

[21] The MADC requested guidance on the implementation of CIP projects assigned to PAL 1 before adopting this ALP Update. The implementation order for those projects, which was included in the Board's vote to recommend the City Council's adoption of the ALP Update, has been included for reference in Appendix C as "Table 5 – MADC Implementation Priorities."

Table 6.1– *Programmatic Estimates, by Airport Functional Area*

Functional Area	Description	Programmatic Estimate
Area 1	Airfield Expansion	$128,560,000
Area 2	General Aviation Terminal Facility	$22,768,000
Area 3	Central Terminal Area	$16,925,000
Area 4	South Hangar Campus Development	$19,304,000
Area 5	FM 546 / Airport Drive Improvements	$1,559,000
Area 6	Commercial Passenger Service Terminal	$43,068,000
Area 7	Enloe Road Improvements	$3,458,000
Area 8	East Airport Drive Improvements	$2,710,000
	Property Acquisition and Master Plans	$65,195,000
Total	Capital Improvement Program	$303,547,000

1) See Appendix C, Table 1

Table 6.2– *Programmatic Estimates, by Planning Activity Level*

PAL	Anticipated Time Period	Programmatic Estimate
PAL 1	2012 – 2016	$41,703,000
PAL 2	2017 – 2021	$61,297,000
PAL 3	2022 – 2026	$23,950,000
PAL 4	2027 – 2031	$94,495,000
Beyond PAL 4	Beyond 2031	$82,102,000
Total	Capital Improvement Program	$303,547,000

1) See Appendix C, Table 4