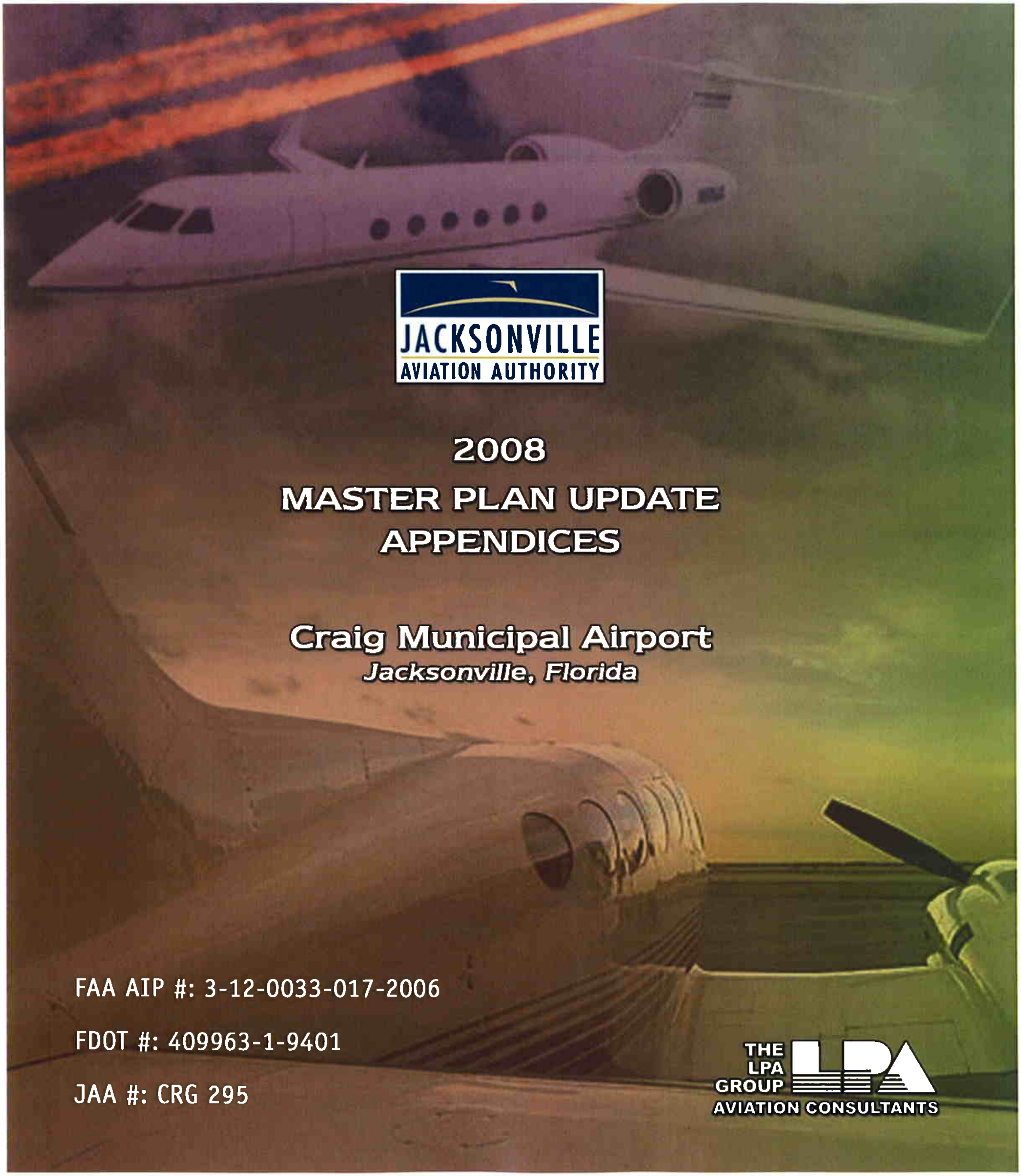


JACKSONVILLE
AVIATION AUTHORITY

2008
MASTER PLAN UPDATE
APPENDICES

Craig Municipal Airport
Jacksonville, Florida

FAA AIP #: 3-12-0033-017-2006

FDOT #: 409963-1-9401

JAA #: CRG 295

THE LPA GROUP
AVIATION CONSULTANTS

APPENDIX A
GLOSSARY OF TERMS

A

ABBREVIATED VISUAL APPROACH SLOPE INDICATOR SYSTEM (AVASI)

ABOVE GROUND LEVEL (AGL)

ACCELERATE-STOP DISTANCE AVAILABLE (ASDA) – The runway plus stopway length declared available and suitable for the acceleration and deceleration of an airplane aborting a takeoff (see Declared Distances).

ADVISORY CIRCULAR (AC) – Federal Aviation Administration Advisory Circular. This is an FAA document which provides guidance on aviation issues.

ADVISORY SERVICE – Advice and information provided by a facility to assist pilots in the safe conduct of flight and aircraft movement.

AIR CARGO - Freight, mail, and express packages transported by air. Includes perishable foods and livestock.

AIR CARRIER - Aircraft operating under certificates of public convenience and necessity issued by the FAA, which authorizes scheduled air transportation over specified routes, a limited amount of non-scheduled air transportation over specified routes, and a limited amount of non-scheduled flights.

AIR FORCE BASE (AFB)

AIR NAVIGATION AID FACILITY (NAVAID) – Any facility used or available for use as an aid to air navigation, including landing areas; lights; any apparatus or equipment for disseminating weather information, for signaling, for radio direction-finding, or for radio or other electronic communication; and any other structure or mechanism having a similar purpose for guiding or controlling flight in the air or during the landing or takeoff of aircraft.

AIR ROUTE SURVEILLANCE RADAR (ARSR) - Long-range radar that increases the capacity of air traffic control for handling heavy en route traffic. An ARSR site is usually some distance from the Air Route Traffic Control Center it serves. Its range is approximately 200 nautical miles. Also, called ATC Center Radar.

AIR ROUTE TRAFFIC CONTROL CENTER (ARTCC) - A facility providing air traffic control service to aircraft operating on an IFR flight plan within controlled airspace and principally during the en route phase of flight.

AIR TAXI - Aircraft operated by a company or individual that provides transportation on a non-scheduled basis over unspecified routes usually with light aircraft.

AIR TAXI - A FAR Part 135 certificated air carrier carrying passengers and cargo for hire and operating under exemption authority from the Civil Aeronautics Board; aircraft of 30 seats or less or maximum payloads of 7,500 lbs.

AIR TRAFFIC CONTROL CLEARANCE – An authorization by air traffic control for the purpose of preventing collision between known aircraft, or for an aircraft to proceed under specified traffic conditions within controlled airspace. A clearance is also a communicated authorization or approval from

ATC for an aircraft to conduct certain maneuvers, such as altering heading or altitude, taking off, and landing.

AIR TRAFFIC CONTROL SERVICE (ATC) – A service provided for the purpose of promoting the safe, orderly, and expeditious flow of air traffic, including airport, approach, and en route air traffic control services. ATC is provided by the Federal Aviation Administration, a branch of the federal government under the Department of Transportation.

AIR TRAFFIC CONTROL TOWER (ATCT) – A facility providing airport traffic control service to an airport and its associated airspace area.

AIR TRANSPORT ASSOCIATION (ATA)

AIRCRAFT APPROACH CATEGORY - A grouping of aircraft based on a speed of 1.3 times the stall speed in the landing configuration at maximum gross landing weight. An aircraft shall fit in only one category. If it is necessary to maneuver at speeds in excess of the upper limit of a speed range for a category, the minimums for the next higher category should be used. For example, an aircraft that falls in Category A, but is circling to land at a speed in excess of 91 knots, should use the approach Category B minimums when circling to land. The categories are:

Category A **-** Speed less than 91 knots;
Category B **-** Speed 91 knots or more but less than 121 knots;
Category C **-** Speed 121 knots or more but less than 141 knots;
Category D **-** Speed 141 knots or more but less than 166 knots; and,
Category E **-** Speed 166 knots or more.

AIRCRAFT CLASSES - For the purposes of wake turbulence separation minima, ATC classifies aircraft as heavy, large, and small as follows:

Heavy **-** Aircraft of 300,000 pounds or more maximum certification;
Large **-** Aircraft of more than 12,500 pounds but less than 300,000 pounds, maximum certificated takeoff weight; and,
Small **-** Aircraft of 12,500 pounds or less maximum certificated takeoff weight.

AIRCRAFT PARKING LINE LIMIT – An aircraft parking line limit is a line established by FAA AC 5300-13, beyond which no part of a parked aircraft should protrude.

AIRCRAFT RESCUE AND FIREFIGHTING FACILITIES (ARFF)

AIRCRAFT TYPES - An arbitrary classification system that identifies and groups aircraft having similar operational characteristics for the purpose of computing runway and terminal area capacity.

AIRPLANE DESIGN GROUP (ADG) (PHYSICAL CHARACTERISTICS) – The FAA airplane Design Group subdivides airplanes by wingspan. The airplane Design Groups are:

(1) Group I: Wingspan up to but not including 49 feet (15 m);
(2) Group II: Wingspan 49 feet (15 m) up to but not including 79 feet (24 m);
(3) Group III: Wingspan 79 feet (24 m) up to but not including 118 feet (36 m);
(4) Group IV: Wingspan 118 feet (36 m) up to but not including 171 feet (52 m);
(5) Group V: Wingspan 171 feet (52 m) up to but not including 197 feet (60 m);

(6) Group VI: Wingspan 197 feet (60 m) up to but not including 262 feet (80 m).

AIRPLANE DESIGN GROUP (ADG) - A grouping of airplanes based on wingspan. The groups are as follows:

Group I: Up to but not including 49 feet;
Group II: 49 feet up to but not including 79 feet;
Group III: 79 feet up to but not including 118 feet;
Group IV: 118 feet up to but not including 171 feet;
Group V: 171 feet up to but not including 214 feet; and,
Group VI: 214 feet up to but not including 262 feet.

AIRPORT AIRSPACE ANALYSIS (AAA)

AIRPORT DESIGN (AD)

AIRPORT DEVELOPMENT AID PROGRAM (ADAP) – A program originally established by the Airport and Airway Development Act of 1970 to provide federal funds for certain airport improvements and new airport development; the original legislation has been revised on various occasions, resulting in the present day Airport and Airway Improvement Act of 1982. This program has been replaced by the Airport Improvement Program (AIP).

AIRPORT HAZARD – An airport hazard is any structure or natural object located on or in the vicinity of a public airport, or any use of land near such airport, that obstructs the airspace required for the flight of aircraft in landing or taking off at the airport or is otherwise hazardous to aircraft landing, taking off, or taxiing at the airport.

AIRPORT IMPROVEMENT PROGRAM (AIP) - The AIP provides federal funding from the Aviation Trust Fund for airport development, airport planning, noise compatibility planning, and similar programs. The AIP is implemented under various authorization acts that cover a specific time period.

AIRPORT LAYOUT PLAN (ALP) – An airport layout plan is a scale drawing of the airport showing:

(1) The boundaries of the airport and all its proposed additions together with the boundaries of offsite areas owned or controlled by the airport authorities for air-purposes, including additions;
(2) The exact location, type, and dimensions (including height) of all existing and proposed airport facilities and structures such as runways, taxiways, aprons, terminal buildings, and roads, as well as all proposed extensions and reductions of existing airport facilities; and,
(3) The location of all existing and proposed non-aviation areas and all their existing improvements.

AIRPORT LAYOUT PLAN DRAWING SET -The airport layout plan drawing set consists of a number of graphics drawn to scale, showing both existing and planned airport facilities as well as on-airport and adjoining-airport land uses. Depending on the specific requirements of the planning project, airport size, and activity level, some drawings may not be required or can be combined. Drawings that should be created:

• Title Sheet;
• Airport Layout Drawing;

• Terminal Area Drawing;
• Inner Portion of the Approach Surface Drawing;
• Airport Airspace Drawing;
• Airport Property Drawing;
• Land Use Drawing; and,
• Airport Access Drawing.

AIRPORT REFERENCE CODE - The airport reference code (ARC) is a coding system used to relate airport design criteria to the operational and physical characteristics of airplanes anticipated to operate at the airport. As described in FAA AC 150/5300-13, the ARC is made up of two components. The first considers the aircraft approach category to be served. For example, aircraft with approach speeds of less than 91 knots are within Category A. Speeds of 91 knots but less than121 knots are within Category B. Speeds of 121 knots but less than 141 knots are within Category C, and speeds of 141 knots but less than 166 knots are within Category D. The second component considers the airplane design group (ADG) to be served, which is based on wingspan. For example, Group I includes aircraft having a wing span of up to but not including 49 feet. Group II includes aircraft having a wing span of 49 feet up to but not including 79 feet, and Group III includes aircraft having a wingspan of 79 feet up to but not including 118 feet.

AIRPORT REFERENCE POINT (ARP) – An ARP is a point having equal relationship to all existing and proposed landing and takeoff which is used to locate the airport geographically.

AIRPORT ROLE - The capability of an airport defined in terms of the classes of aircraft that it can accommodate or in the case of air carrier airports, the route length it serves non-stop in its market area. Role types in the state of Florida include:

• Basic Utility Airport;
• General Utility Airport;
• Transport Airport;
• Heliport;
• Seaplane Base;
• Short Haul;
• Medium Haul; and,
• Long Haul.
(See specific role type for definition)

AIRPORT SERVICE LEVEL - Classification of an airport based on its functional role in the community. Service levels include:

• Commercial Service Airport;
• General Aviation Airport; and,
• Reliever Airport.
(See specific service level type for definition).

AIRPORT SURFACE DETECTION EQUIPMENT (ASDE) – Radar equipment specifically designed to detect all principal features on the surface of an airport, including vehicular traffic, and to present the entire picture on a radar indicator console.

AIRPORT SURVEILLANCE RADAR (ASR) - Radar tracking aircraft by azimuth and range data without elevation data. It has a range of 50 miles. Also, called ATC Terminal Radar.

AIRPORT SURVEILLANCE RADAR (ASR) – Radar providing the position of an aircraft by azimuth and range data without elevation data. It is used for terminal approach, departure, and aircraft overflights.

AIRPORTS DISTRICT OFFICE (ADO) - Administrative regional office of FAA that oversees airport development projects.

AIRSPACE - The space above a certain area of land or water, used for flight, landings, and takeoffs.

AIRWAY – A control area in the form of a corridor, in which the centerline is defined by radio or other navigational aids. Airways are used by aircraft in a similarly to the way automobiles use highways.

AIRWAY FACILITIES SECTOR FIELD OFFICE (AFSFO)

ALERT AREA - A category of special use airspace of defined dimensions identified by an area from the surface of the earth to a specified altitude where DOD flight training occurs.

ALSF-II - High intensity approach lighting system with sequenced flashing lights.

ALTERNATE AIRPORT – An airport specified on a flight plan to which a flight may proceed when a landing at the point of first intended landing becomes inadvisable.

ANNUAL INSTRUMENT APPROACH (AIA)

ANNUAL SERVICE VOLUME (ASV) - A reasonable estimate of the maximum number of annual aircraft operations that can theoretically be conducted at an airport, based on configuration, aircraft fleet mix, use, etc.

APPROACH CONTROL SERVICE – Air traffic control service provided by an approach control facility for arriving and departing VFR/IFR aircraft and, on occasion, tower en route control service.

APPROACH END OF RUNWAY – The approach end of runway is the near end of the runway as viewed from the cockpit of a landing airplane.

APPROACH FIX – The navigational point, determined electronically or geographically, from or over which the final approach (IFR) to an airport is executed.

APPROACH GATE – That point on the final approach course which is one mile from the approach fix on the side away from the airport or five miles from the landing threshold, whichever is farther from the landing threshold.

APPROACH LIGHT SYSTEM (ALS) – An airport lighting system designed to assist pilots in finding the runway during instrument approaches for landing. The lights extend from the runway end outwards along the extended centerline for a certain distance, depending on the type of runway.

APPROACH SEQUENCE – The order in which aircraft are positioned while awaiting approach clearance or while on approach.

APPROACH SURFACE – An imaginary surface extending out from the end of the Primary Surface at a slope and width defined in FAR Part 77, above which the airspace must be free of obstacles as aircraft approach or depart the runway.

AQUEOUS FILM FORMING FOAM (AFFF) –Used by Aircraft Rescue and Fire Fighting (ARFF) vehicles for aircraft related emergencies.

AREA NAVIGATION (RNAV) – A method of navigation that permits aircraft operations on any desired course within the coverage of station referenced navigation signals or within the limits of self-contained system capability.

ARMY NATIONAL GUARD (ANG)

ASPH - Abbreviation for runway surface composed of asphalt.

ATADS - Air Traffic Activity Data Base System

AUTOMATED RADAR TERMINAL STATION (ARTS)

AUTOMATED WEATHER OBSERVING SYSTEM (AWOS)

AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979 (ASNA)

AVIGATION EASEMENT - The conveyance of a specified property interest in the airspace over real property which grants rights and imposes restrictions. Rights include: right-of-flight; right-of-entry to remove and/or mark obstructions; right to cause noise, vibration, fumes, dust, and fuel particles, etc. Restrictions include: penetration of Far Part 77 surfaces by structures, growths, or obstructions; creation of electrical interferences with aircraft avionics, lighting that may confuse a pilot during approach, air emissions that may visually impair a pilot's vision, incompatible land uses, etc.

AZIMUTH (AZ) - The horizontal angle measured clockwise from north to an object. Also, see True Bearing.

B

BASED AIRCRAFT - An aircraft permanently stationed at an airport, usually by agreement between the aircraft owner and airport management (or FBO).

BASIC UTILITY AIRPORT - Airports that can accommodate 95 percent of the general aviation propeller-drive fleet of aircraft under 12,500 pounds maximum gross weight.

BRL - Building Restriction Line.

C

CAPACITY - The number of takeoffs and landings that can be safely handled within an acceptable level of delay. Airfield capacity represents the maximum number of operations (landings and takeoffs) that can be performed hourly or annually at an airport.

CATEGORY I, II, AND III LANDINGS –

- Category I: 200 foot ceiling and 2400 foot RVR;
- Category II: 100 foot ceiling and 1200 foot RVR;
- Category IIIA: zero ceiling and 700 foot RVR;
- Category IIIB: zero ceiling and 150 foot RVR;
- Category IIIC: zero ceiling and zero RVR.

To make landing under these conditions, aircraft must be equipped with special avionics, pilot must be qualified to land under specified conditions for that category, and aircraft must have proper ground equipment for conditions.

CATEGORY I INSTRUMENT LANDING SYSTEM (CAT I) - Precision Approach Category I. An instrument approach procedure that provides for approaches to a decision height of not less than 200 feet (60m) and visibility of not less than 1/2 mile (800m), or a runway visual range 2,400' (or 1,800' with operative touchdown zone and runway centerline lights).

CATEGORY II INSTRUMENT LANDING SYSTEM (CAT II) - Precision Approach Category II. An instrument approach procedure that provides for approaches to a minima less than CAT I to as low as a decision height of not less than 100 feet (30m) and runway visual range of not less than 1,200'.

CATEGORY III A INSTRUMENT LANDING SYSTEM (CAT III A) - Precision Approach Category III. An instrument approach procedure which provides for approaches to a minima less than CAT II.

CEILING – The height above the earth's surface of the lowest layer of clouds or obscuring phenomena that is reported as "broken", "overcast", or "obscured" and not classified as "thin" or "partial". The ceiling is reported in feet above the surface in a given location.

CENTER FIELD WIND (CFW)

CENTERLINE LIGHTING (CL)

CENTRAL BUSINESS DISTRICT (CBD)

CERTIFICATED POINT – A city, place, or population center authorized to receive scheduled air service under a Certificate of Public – Convenience and Necessity, or under an exemption issued to an air carrier.

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY - A document issued to an air carrier under Section 401 of the Federal Aviation Act by the Civil Aeronautics Board authorizing the carrier to engage in air transportation.

CIRCLING APPROACH - A descent in an approved procedure to an airport; a circle-to-land maneuver.

CIVIL AERONAUTICS BOARD (CAB) - Former federal agency responsible for overseeing and regulating the air carrier industry; the FAA carries out these tasks.

CIVIL AIR FACILITY (CAF)

CLEAR ZONE - Formally, the inner portion of the runway approach zone, now called the Runway Protection Zone (RPZ).

CLEAR ZONE – Defined by FAR Part 77 as an area off each runway end to be void of trees and other obstacles. The FAA has replaced this area with the Runway Protection Zone (RPZ).

CLEARWAY (CWY) - A defined rectangular area beyond the end of a runway cleared or suitable for use in lieu of a runway to satisfy takeoff distance requirements.

CLEARWAY – A clearway is an area beyond the stop end of runway, not less than 500 feet (150 m) wide, centered on the extended centerline of the runway, and controlled by the airport authorities. The clearway is expressed in terms of a geometric plane extending from the end of the runway, with an upward slope not exceeding 1.25 percent, above which no object nor terrain may protrude. Threshold lights, however, may protrude above the clearway plane if their height above the end of the runway is 26 inches (66 cm) or less and if they are located to each side of the runway. A clearway increases the allowable operating takeoff weights of turbine-powered airplanes. For most airplanes, the maximum usable length of the clearway is less than 1,000 feet (300 m).

CODE OF FEDERAL REGULATION (CFR)

COMMERCIAL SERVICE AIRPORT - An airport that handles scheduled passenger service by FAA-certified air carriers.

COMMERCIAL SERVICE AIRPORT – A public airport which enplanes 2,500 or more passengers annually and receives scheduled commercial passenger service. See "AIR CARRIER" for more information.

COMMUTER AIRLINE - Aircraft operated by an airline that performs scheduled flights over specified routes using light aircraft. Light aircraft have 30 seats or less and a maximum payload capacity of 7,500 pounds or less.

COMMUTER AIRLINES – Scheduled commuter air carrier operating with passengers, cargo, or mail for revenue in accordance with FAR Part 135 or Part 121.

COMPOSITE NOISE RATING (CNR) – An aircraft noise impact measuring methodology.

CONTROL TOWER - A central operations facility in the terminal air traffic control system consisting of a tower cab structure (including an associated IFR room if radar-equipped) using air/ ground communications and/or radar, visual signaling and other devices to provide safe and expeditious movement of terminal air traffic.

CONTROLLED AIRSPACE - An airspace of defined dimensions within which air traffic control service is provided to IFR and VFR flights in accordance with the airspace classification.

Note 1: Controlled airspace is a generic term that covers Class A, Class B, Class C, Class D, and Class E airspace.

Note 2: Controlled airspace is also that airspace within which all aircraft operators are subject to certain pilot qualifications, operating rules, and equipment requirements in Part 91 (for specific operating

requirements, please refer to Part 91). For IFR operations in any class of controlled airspace, a pilot must file an IFR flight plan and receive an appropriate ATC clearance. Each Class B, Class C, and Class D airspace area designated for an airport contains at least one primary airport around which the airspace is designated (for specific designations and descriptions of the airspace classes, please refer to Part 71).
Controlled airspace in the United States is designated as follows:

• **Class A** - Generally, the airspace from 18,000 feet MSL up to and including Flight Level 600 (60,000 feet), including the airspace overlying the waters within 12 nautical miles of the coast of the 48 contiguous states and Alaska. Unless otherwise authorized, all persons must operate their aircraft under IFR.

• **Class B** - Generally, the airspace from the surface to 10,000 feet MSL and surrounding the nation's busiest airports in terms of airport operations or passenger enplanements. The configuration of each Class B airspace is individually tailored and consists of a surface area and two or more layers (some Class B airspaces resemble upside-down wedding cakes), and is designed to contain all published instrument procedures once an aircraft enters the airspace. An ATC clearance is required for all aircraft to operate in the area, and all aircraft that are so cleared receive separation services within the airspace. The cloud clearance requirement for VFR operations is "clear of clouds."

• **Class C** - Generally, the airspace from the surface to 4,000 feet above the airport elevation (charted in MSL) and surrounding those airports that have an operational control tower, are serviced by a radar approach control, and have a certain number of IFR operations or passenger enplanements. Although the configuration of each Class C area is individually tailored, the airspace usually consists of a surface area(s) with a five nautical miles radius and an outer area. Each person must establish two-way radio communications with the ATC facility providing air traffic services before entering the airspace and then maintain communications while in the airspace. VFR aircraft are only separated from IFR aircraft within the airspace.

• **Class D** - Generally, the airspace from the surface to 2,500 feet above the airport elevation (charted in MSL) and surrounding those airports that have an operational control tower. The configuration of each Class D airspace is individually tailored, and when instrument procedures are published, the airspace will normally be designed to contain the procedures. Arrival extensions for instrument approach procedures may be Class D or Class E airspace. Unless otherwise authorized, each person must establish two-way radio communications with the ATC facility providing air traffic services before entering the airspace and then maintain communications while in the airspace. No separation services are provided to VFR aircraft.

• **Class E** - Generally, if the airspace is not Class A, Class B, Class C, or Class D, and it is controlled airspace, it is Class E airspace. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a surface area, the airspace will be configured to contain all instrument procedures. Also, in this class are Federal airways, airspace beginning at either 700 or 1,200 feet AGL used to transition to and from the terminal or en route environment, en route domestic, and offshore airspace areas designated below 18,000 feet MSL. Unless designated at a lower altitude, Class E airspace begins at 14,500 MSL over the United States, including that airspace overlying the waters within 12 nautical miles off the coast of the 48 contiguous states and Alaska, and up to, but not including, 18,000 feet MSL, and the airspace above FL600.

D

DAY-NIGHT AVERAGE SOUND LEVEL (DNL) - The 24-hour average sound level, in decibels, for the period from midnight to midnight, obtained after the addition of ten decibels to sound levels for the periods between midnight and 7:00a.m., and between 10:00 p.m. and midnight, local time. The symbol for DNL is Ldn.

DAY NIGHT AVERAGE SOUND LEVEL – NOISE METRIC (DNL) – Standard unit of measure for aircraft noise studies.

DECIBEL (Db)

A-WEIGHTED DECIBEL (DbA)

DECISION HEIGHT (DH) - The height at which a decision must be made, using an ILS or PAR instrument approach, to either continue the approach or to execute a missed approach.

DECISION HEIGHT (DH) – The height above the highest runway elevation in the touchdown zone at which a missed approach shall be initiated if the required visual reference has not been established. This term is used only in procedures where an electronic glide slope provides the reference for descent, as in ILS.

DECLARED DISTANCES - The distances the airport owner declares available and suitable for satisfying the airplane's takeoff run, takeoff distance, accelerate stop distance, and landing distance requirements. The distances are: (see TORA, TODA, ASDA, and LDA).

DECLARED DISTANCES – Declared distances are the runway distances that limit turbine-powered airplane operations and thus the airport operational capacity. The distances are the accelerated stop distance available (ASDA), the Landing Distance Available (LDA), the Takeoff Distance Available (TODA), and the Takeoff Run Available (TORA).

1) ASDA is equal to TORA plus the length of the stopway (SWY), if provided.

2) LDA is equal to the length of runway available and suitable for the landing ground run of airplanes.

3) TODA is equal to TORA plus the length of the clearway (CWY), if provided.

4) TORA is equal to the length of runway available and suitable for the takeoff ground run of airplanes.

DEPARTMENT OF DEFENSE (DOD)

DEPARTURE CONTROL – A function of air traffic control providing service for departing IFR aircraft and, on occasion, VFR aircraft.

DESIGN AIRCRAFT – The Design Aircraft is an aircraft whose dimensions and/or other requirements make it the most demanding aircraft for an airport's facilities (i.e., runways and taxiways). The Design Aircraft is used as the basis for airport planning and design; because if the airport's facilities are designed to accommodate the Design Aircraft, they can accommodate less demanding aircraft as well. An aircraft can be utilized as the Design Aircraft for an airport if it will (has) conduct(ed) 500 or more annual operations (250 landings) at that airport.

DEVELOPMENT OF REGIONAL IMPACT (DRI)

DISPLACED THRESHOLD - The portion of pavement behind a displaced threshold may be available for takeoffs in either direction and roll-out landings from the opposite direction.

DISPLACED THRESHOLD – A displaced threshold is a threshold located at a point on the runway other than at the runway end. Except for the approach standards defined in FAR Part 77, approach surfaces are associated with the threshold location.

DISTANCE MEASURING EQUIPMENT (DME) - An electronic installation with either a VOR or ILS to provide distance information from the facility to pilots by electronic signals. It measures, in nautical miles, the distance of an aircraft from a NAVAID.

DISTANCE MEASURING EQUIPMENT (DME) – Equipment (airborne and ground) used to measure, in nautical miles, the distance of an aircraft from a NAVAID.

DME FIX – A geographical position determined by reference to a NAVAID which provides distance and azimuth information. The DME fix is defined by a specified distance in nautical miles and a radial in degrees magnetic from that aid.

DXF - AutoCAD Drawing Interchange file format.

E

ELEVATION (EL)

EN ROUTE - The route of flight from departure to destination, including intermediate stops (excludes local operations).

EN ROUTE AIRSPACE - Controlled airspace above and/or adjacent to terminal airspace.

EN ROUTE FLIGHT ADVISORY SERVICE (Flight Watch) – Is a service specifically designed to provide the pilot with timely weather information pertinent to his type of flight, route of flight, and altitude.

ENPLANED PASSENGER – The number of revenue passengers boarding aircraft, including originating, stopover, and transfer passengers.

ENPLANEMENTS - The total number of revenue passengers boarding aircraft, including originating, stopover, and transfer passengers in scheduled and nonscheduled services.

ENVIRONMENTAL ASSESSMENT (EA)

ENVIRONMENTAL DATA SERVICE (EDS)

ENVIRONMENTAL IMPACT STATEMENT (EIS) – An environmental report describing environmental impacts which would occur during the implementation of airport improvement projects. This report includes mitigation measures and public comment.

ENVIRONMENTAL PROTECTION AGENCY (EPA)

F

FEDERAL AID TO AIRPORTS PROGRAM (FAAP) – FAA program to provide financial aid to airports. This has been replaced by the Airport Improvement Program (AIP).

FEDERAL AVIATION ADMINISTRATION (FAA) – Branch of the Federal Government (Department of Transportation) responsible for the safety of aviation and the operation of the air traffic control system, as well as other aviation related tasks.

FEDERAL AVIATION REGULATION (FAR) – Regulations developed by the FAA in order to maintain safety, define standards, and institute uniform practices throughout the industry.

FILLET – A concave junction formed where two surfaces meet (as at an angle), a strip that gives a rounded appearance to such a junction; also, a strip to reinforce the corner where two surfaces meet.

FINAL APPROACH – A flight path of a landing aircraft in the direction of landing along the extended runway centerline from the base leg to the runway. For instrument approaches, the final approach begins at the final approach fix (FAF).

FINAL APPROACH FIX (FAF) – The fix from or over which final approach (IFR) to an airport is executed.

FINAL APPROACH IFR - The flight path of an aircraft that is inbound on an approved final instrument approach course, beginning at the point of interception of that course and extending to the airport or the point where circling for landing or missed approach is executed.

FINAL APPROACH VFR - A flight path of landing aircraft in the direction of landing along the extended runway centerline from the base leg to the runway.

FISCAL YEAR (FY)

FIX – A geographical position determined by visual reference to the surface by reference to one or more radio NAVAIDS, by celestial plotting, or by another navigational device.

FIXED BASE OPERATION OR FIXED BASE OPERATOR (FBO) – A sales and/or service facility located at an airport, or the person who operates such a facility.

FLEET MIX - The proportion of aircraft types or models expected to operate at an airport.

FLIGHT PLAN – Specified information relating to the intended flight of an aircraft that is filed orally or in writing with an air traffic control facility.

FLIGHT SERVICE STATION (FSS) - A facility operated by the FAA to provide flight assistance services.

FLIGHT TRACK (FT)

FLORIDA AVIATION SYSTEM PLAN (FASP) -The aviation plan for Florida that provides documentation related to airports and related facilities needed to meet current and future statewide aviation demands.

FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT)

G

GENERAL AVIATION (GA) – All civil aircraft and aviation activity except that of the certified air carriers and military operations. GA includes corporate flying and private flying (recreation or personal).

GENERAL AVIATION AIRPORT - All public airports except commercial service airports.

GENERAL UTILITY (GU) AIRPORT - Airports that can accommodate all general aviation aircraft under 12,500 pounds maximum gross weight.

GENERIC VISUAL GLIDESLOPE INDICATOR (GVGI) – This is a general term which includes all airport light systems used to assist pilots in maintaining the proper glideslope while on final approach to the runway during landing. These systems use colored lights to warn pilots of their position in reference to the proper glideslope. GVGI's include Precision Approach Path Indicators (PAPI) and Visual Approach Slope Indicators (VASI).

GLIDE SLOPE (GS) – Vertical guidance provided by a ground based radio transmitter to an aircraft landing by use of an Instrument Landing System. This guidance informs the pilot if the aircraft is either too high or too low as it flies its approach to the runway for landing.

GLOBAL POSITIONING SYSTEM (GPS) - A system of navigation beacons mounted on satellites that orbit the earth. The system allows users to fix their position to a high degree of accuracy anywhere on earth.

GLOBAL POSITIONING SYSTEM (GPS) – GPS is a navigational system based on the use of multiple satellites strategically placed in the earth's orbit. GPS is used by aircraft equipped with the proper GPS receiving equipment for en route navigation, as well as instrument approaches to airports for landing. GPS allows aircraft to fly more freely and set waypoints (destinations) without the need or reliance on ground based radio navigation facilities such as VORs.

GROUND SERVICE (GS) – An indication that a given airport is staffed – usually offering aviation fuel and at least minor maintenance services.

H

HAZARD TO AIR NAVIGATION – Any object which has a substantial adverse effect upon the safe and efficient use of navigable airspace by aircraft or on the operation of air navigation facilities is a hazard to air navigation. The FAA will conduct an aeronautical study of any object to determine whether or not the object is a hazard to air navigation. As part of the airport layout plan approval process, the FAA conducts aeronautical studies of all obstructions to air navigation identified on the Airport Layout Plan. Hazards or potential hazards to air navigation are eliminated by either altering the existing or proposed object or adjusting the aviation operation to accommodate the object, in that order of priority.

HEIGHT ABOVE AIRPORT (HAA) – Indicates the height of the MDA above the published airport elevations. This is published in conjunction with circling minimums.

HELIPORT - A specialized airport for the exclusive operation and basing of rotorcraft.

HERTZ (Hz) – Cycles per second.

HIGH ALTITUDE AIRWAYS - Air routes above 18,000 feet MSL. These are referred to as Jet Routes.

HIRL - High Intensity Runway Edge Lighting.

HOLDING - A predetermined maneuver that keeps an aircraft within a specified airspace while awaiting clearance to land.

HOLDING FIX – A specified geographical point or NAVAID used as a reference point in establishing and maintaining the position of an aircraft while holding.

HUD - Department of Housing and Urban Development.

I

IFR CONDITIONS – Weather conditions below the minimum prescribed for flight under VFR.

INITIAL APPROACH – The segment of a standard instrument approach procedure between the initial approach fix and the intermediate fix, or the point where the aircraft is established on the intermediate segment of the final approach course.

INITIAL APPROACH ALTITUDE – The altitude prescribed for the initial approach segment of an instrument approach.

INITIAL GRAPHICS EXCHANGE SPECIFICATION (IGES) – Initial graphics exchange specification file format.

INNER MARKER (IM)

INSTRUMENT APPROACH - An approach conducted while the final approach fix is below VFR minimums.

INSTRUMENT FLIGHT RULES (IFR) - Instrument Flight Rules that govern flight procedures under limited visibility or other operational constraints.

INSTRUMENT FLIGHT RULES (IFR) – Aircraft operation rules as prescribed by Federal Aviation Regulations for flying by instruments.

INSTRUMENT LANDING SYSTEM (ILS) - A precision approach landing system consisting of a localizer (azimuth guidance), glide scope (vertical guidance), outer marker (final approach fix), and approach light system.

INSTRUMENT LANDING SYSTEM (ILS) – A system of electronic devices whereby the pilot guides his aircraft to a runway solely by reference to instruments in the cockpit. In some instances the signals received from the ground can be fed into the automatic pilot for automatically controlled approaches. The ILS consists of a Localizer, Glideslope and Marker Beacons (and Approach Light System).

INSTRUMENT METEOROLOGICAL CONDITIONS (IMC)

INSTRUMENT OPERATION - A landing or takeoff conducted while operating on an instrument flight plan.

INTEGRATED NOISE MODEL (INM)

INTEGRATED NOISE MODEL (INM) - The primary FAA sponsored noise model. This is a Windows-based model that produces noise contours and a variety of other noise data outputs pertinent to the development of airport noise impact assessments.

INTERMODAL - Refers to the means of changing modes of transportation such as airplane to road or rail.

INTERMODEL SURFACE TRANSPORTATION AND EFFICIENCY ACT (ISTEA)

ITINERANT OPERATION - All aircraft arrivals and departures other than local operations.

J

JET ROUTES - See High Altitude Airways.

JET PORT – An airport designed to handle jet airplanes.

JETWAYS (JET ROUTES) – An air route designed for aircraft operating at altitudes from 18,000 feet to 45,000 feet. These routes comprise the high altitude airway system. The name jetway is derived from the fact that most aircraft utilizing these routes are jet powered.

JOINT AUTOMATED CAPITAL IMPROVEMENT PLAN (JACIP) – A coordinated process between the FDOT and the FAA to plan airport capital improvements and expenditures on a short and long-term basis. The JACIP process has been designed as an ongoing and interactive process by which airports, the FAA and the FDOT can develop a realistic plan of staged capital improvements at each facility.

JOINT PARTICIPATION AGREEMENT (JPA)

L

LANDING DIRECTION INDICATOR - A device that visually indicates the direction in which landings and takeoffs should be made.

LANDING DISTANCE AVAILABLE (LDA) - The runway length declared available and suitable for landing (see Declared Distances).

LANDING MINIMUMS/IFR LANDING MINIMUMS - The minimum visibility prescribed for landing while using an instrument approach procedure.

LARGE AIRCRAFT – A large aircraft is an aircraft of more than 12,500 pounds (5,700 kg) for its maximum certificated takeoff weight.

(Ldn) SYMBOL FOR DAY-NIGHT AVERAGE SOUND LEVEL

LEAD-IN LIGHTS (LDIN)

(Leq) EQUIVALENT SOUND LEVEL

LINEAR FEET (LF)

LOCAL OPERATIONS - Operations performed by aircraft which:

a) Operate in the local traffic pattern or within sight of the tower;
b) Are known to be departing for or arriving from flight in a local practice area located within a 20-mile radius of the control tower; or
c) Execute simulated instrument approaches or low passes at the airport.

LOCALIZER (LOC) – A ground based radio transmitter which provides pilots with course guidance as they approach a runway for landing utilizing an Instrument Landing System. The course guidance is known as "azimuth".

LOCALIZER TYPE DIRECTIONAL AID (LDA) – A facility of comparable utility and accuracy to a localizer but which is not part of a complete ILS and will not be aligned with the runway.

LOM - Compass locator at an outer marker (part of an ILS). Also, called COMLO.

LONG HAUL AIRPORT - Commercial service airports that serve scheduled trips longer than 1,500 miles.

LOW ALTITUDE AIRWAYS - Air routes below 18,000 feet MSL. These are referred to as Victor Airways.

LOW IMPACT RESISTANT SUPPORTS (LIRS)

LOW INTENSITY RUNWAY EDGE LIGHTING (LIRL)

LOW LEAD (LL)

M

MALSF - MALS with sequenced flashing lights.

MALSR - MALS with runway alignment indicator lights (RAILs).

MARKER BEACON - A VFR navigational aid that transmits a narrow directional beam. It is associated with an airway or instrument approach.

MARKER BEACON – An instrument which provides aural and/or visual identification of a specific position along an Instrument Landing System approach to a runway.

MASTER PLAN - Long-range plan of airport development requirements.

MAXIMUM CERTIFICATED TAKEOFF WEIGHT (MCTW)

MAXIMUM GROSS WEIGHT (MGW)

MEAN SEA LEVEL (MSL)

MEDIUM HAUL AIRPORT - Commercial service airports that serve scheduled trips between 500 and 1,500 miles.

MEDIUM (INTENSITY) APPROACH LIGHT SYSTEM (MALS) – An airport approach light system of medium intensity.

MEDIUM INTENSITY RUNWAY EDGE LIGHTING (MIRL) – An airport runway lighting system of medium intensity.

MEDIUM INTENSITY TAXIWAY EDGE LIGHTING (MITL)

MICROWAVE LANDING SYSTEM (MLS) - An instrument landing system operating in the microwave spectrum, which provides lateral and vertical guidance to aircraft having compatible avionics equipment.

MICROWAVE LANDING SYSTEM (MLS) – A type of instrument approach system which uses different radio signals than an ILS. MLS is more flexible and is less susceptible to interference. MLS is very rare due to its high cost.

MIDDLE MARKER (MM) - Part of an ILS that defines a point along the glide slope normally at or near the point of decision height (DH).

MILITARY OPERATION - All arrivals and departures by aircraft not classified as civil (civilian).

MILITARY OPERATIONS AREA (MOA)

MINIMUM CROSSING ALTITUDES (MCA) – The lowest altitudes at certain radio fixes at which an aircraft can cross when proceeding in the direction of a higher minimum en route IFR altitude.

MINIMUM DESCENT ALTITUDE (MDA) - The lowest altitude, expressed in feet above mean sea level, to which descent is authorized on final approach or during circling-to-land maneuvering in execution of a standard instrument approach procedure where no electronic glide slope is provided.

MINIMUM OBSTRUCTION CLEARANCE ALTITUDE (MOCA) - The specified altitude in effect between radio fixes on VOR/LF airways, off-airway routes, or route segments, which meets obstruction clearance requirements for the entire route segment and which assures acceptable navigational signal coverage only within 22 nautical miles of a VOR.

MINIMUM VECTORING ALTITUDE (MVA) – The lowest altitude at which aircraft will be guided by a radar controller. This altitude ensures communications, radar coverage, and meets obstruction clearance criteria.

MISSED APPROACH - A prescribed procedure to be followed by aircraft that cannot complete an attempted landing at an airport.

MOVEMENT - Synonymous with the term operation, i.e., a takeoff or a landing.

MOVEMENT AREA – The runways, taxiways, and other areas of an airport which are used for taxiing, takeoff, and landing of aircraft, excluding loading ramps and parking areas.

N

NATIONAL AIRSPACE SYSTEM (**NAS1**) **-** The common system of air navigation and air traffic control communications facilities, air navigation facilities, airways, controlled airspace, special use airspace, and flight procedures authorized by Federal Aviation Regulations for domestic and international aviation.

NATIONAL CLIMATIC DATA CENTER (NCDC)

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

NATIONAL PLAN OF INTEGRATED AIRPORT SYSTEMS (NPIAS)

NATIONAL TECHNICAL INFORMATION SERVICE (NTIS)

NATIONAL WEATHER SERVICE (NWS)

NAUTICAL MILE (NM) – The unit of measure of distance in both nautical and aeronautical context. A nautical mile equals 1.15 statute miles (6,080 feet). The measure of speed in regards to nautical miles is known as *KNOTS* (nautical miles per hour).

NAVAID - See Air Navigational Facility.

NAVAL AIR STATION (**NAS2**)

NOISE ABATEMENT - A procedure for the operation of aircraft at an airport that minimizes the impact of noise on the environs of the airport.

NOISE COMPATIBILITY PROGRAM (NCP) - List of actions the airport proprietor proposes to undertake to minimize noise/land use incompatibilities.

NOISE EXPOSURE FORECAST (NEF)

NOISE EXPOSURE MAP (NEM) - Graphic depiction of both existing and future noise exposure resulting from aircraft operations and land uses in the airport environs.

NOISE LEVEL REDUCTION (NLF)

NOISEMAP - FAA-approved computer model used to generate noise contours.

NON-DIRECTIONAL BEACON (NBD) - A ground station transmitting in all directions in the L/MF frequency spectrum; provides azimuth guidance to aircraft equipped with direction finder receivers. These facilities often have ILS outer markers to provide transition guidance to the ILS system.

NON-DIRECTIONAL BEACON (NBD) – A radio beacon transmitting non-directional signals whereby an aircraft equipped with direction finding equipment can determine headings to or from the radio beacon and "home" in on a track to or from it.

NON-PRECISION APPROACH PROCEDURE/NON-PRECISION APPROACH - A standard instrument approach procedure in which no electronic glideslope is provided. A localizer, NDB, or VOR is often used.

NON-PRECISION INSTRUMENT RUNWAY – A non-precision instrument runway is one with an instrument approach procedure utilizing air navigation facilities, with only horizontal guidance, or area-type navigation equipment for which a straight in non-precision instrument approach procedure has been approved or planned, and no precision approach facility or procedure is planned or indicated on an FAA or DOD approved Airport Layout Plan, or on other FAA or DOD planning documents.

NORTH AMERICAN DATUM (NAD) - A mathematical model of North America that allows the making of "flat" maps that represent curved surfaces.

NOTICE TO AIRMEN (NOTAM) - A notice essential to personnel concerned with flight operations containing information (not known sufficiently in advance to publicize by other means) concerning the establishment of, conditions of, or change in any component (facility, service, or procedure, or hazard in the National Airspace System).

NOTICE TO AIRMEN (NOTAM) – A notice identified either as a NOTAM or an Airmen Advisory containing information concerning the establishment, condition, or change in any component of, or hazard in, the National Airspace System, the timely knowledge of which is essential to personnel concerned with flight operations.

1) *NOTAM*: A notice to Airmen in message form requiring expeditious and wide dissemination by telecommunications means.

2) *AIRMEN ADVISORY*: A Notice to Airmen normally only given local dissemination, during pre-flight or in-flight briefing, or otherwise during contact with pilots.

NP - Non-Precision Instrument runway marking.

O

OBJECT FREE AREA (OFA) - A two dimensional ground area surrounding runways, taxiways, and taxilanes, which is clear of objects except for those objects whose location are fixed by function.

OBSTACLE FREE ZONE (OFZ) - The airspace defined by the runway OFZ and, as appropriate, the inner-approach OFZ and the inner-transitional OFZ, which is clear of object penetrations other than frangible NAVAIDs.

OBSTACLE FREE ZONE (OFZ) – An OFZ is an area comprised of the runway OFZ, the approach OFZ, and the inner-transitional surface OFZ.

(A) Runway OFZ: The runway OFZ is the volume of space above a surface longitudinally centered on the runway. The elevation of any point on the surface is the same as the elevation of the nearest point on the runway centerline. The runway OFZ extends 200 feet (60 m) beyond each end of the runway and its width is:

1) 120 feet (36 m) for visual runways serving or expected to serve only small airplanes with approach speeds less than 50 knots.
2) 250 feet (75 m) for non-precision instrument and visual runways serving or expected to serve small airplanes with approach speeds of 50 knots or more and no large airplanes.
3) 300 feet (90 m) for precision instrument runways serving or expected to serve only small airplanes.
4) 180 feet (54 m), plus the wingspan of the most demanding airplane, plus 20 feet (6 m) per 1,000 feet (300 m) or airport elevation; or, 400 feet (120 m), whichever is greater, for runways serving or expected to serve large airplanes.

(B) Approach OFZ: The approach OFZ is the volume of space above a surface which has the same width as the runway OFZ and rises at a slope of 50 (horizontal) to 1 (vertical) away from the runway into the approach area. It begins 200 feet (60 m) from the runway threshold at the same elevation as the runway threshold and it extends 200 feet (60 m) beyond the last light unit in the approach lighting system. The approach OFZ applies only to runways with an approach lighting system.

(C) Inner-Transitional Surface OFZ: The inner-transitional surface OFZ is the volume or space above the surfaces which slope 3 (horizontal) to 1 (vertical) laterally from the edges of the runway.

1) OFZ and approach OFZ end at the height of 150 feet (45 m) above the established airport elevation. The inner-transitional surface OFZ applies only to precision instrument runways.
2) Free of all fixed objects. FAA approved frangible equipment which provides an essential aviation service may be located in the OFZ, provided the amount of penetration is kept to a practical minimum.
3) Clear of vehicles as well as parked, holding, or taxiing aircraft in the proximity of an airplane conducting an approach, missed approach, landing, takeoff or departure.

OBSTRUCTION - Any object/obstacle exceeding the obstruction standards specified by FAR Part 77.

OBSTRUCTION CHART (OC)

OBSTRUCTION LIGHT - A light, usually red or white, frequently mounted on a surface structure or natural terrain to warn pilots of the presence of an obstruction.

OBSTRUCTION TO AIR NAVIGATION – An existing object, including a mobile object, is, and a future object would be, an obstruction to air navigation if it is of a greater height than any of the heights or surfaces defined in FAR PART 77.23.

OFFICIAL AIRLINE GUIDE (OAG)

OMNI-DIRECTIONAL APPROACH LIGHTING SYSTEM (ODALS)

OPERATION - An aircraft arrival (landing) or departure (takeoff).

OPERATION – Generally thought of as either a take-off or a landing of an aircraft. FAA ATCT operations include all radio contacts with an aircraft, regardless of whether or not they are taking off or landing. Operations used for planning purposes include only takeoffs, landings and touch and gos.

OPERATIONS PER BASED AIRCRAFT (OPBA)

ORIGINATION AND DESTINATION (O & D)

OUTER FIX - A point in the destination terminal area from which aircraft are cleared to the approach fix or final approach course.

OUTER FIX – A fix in the destination terminal area, other than the approach fix, to which aircraft are normally cleared by an air route traffic control center or an approach control facility, and from which aircraft are cleared to the approach fix or final approach course.

OUTER MARKER (OM) - A marker beacon, which is part of an ILS, located at or near the glide slope intercept altitude of an ILS approach.

P

P - Precision Instrument runway marking.

PRACTICAL ANNUAL CAPACITY (PANCAP) – The practical annual capacity of an airport based, based on the runway(s).

PRACTICAL HOURLY CAPACITY (PHOCAP) – The practical hourly capacity of an airport based, based on the runway(s).

PRECISION APPROACH - A standard approach in which an electronic glide slope is provided.

PRECISION APPROACH PATH INDICATOR (PAPI) – An airport approach light aid to pilots. See GVGI.

PRECISION APPROACH RADAR (PAR) – Radar used by air traffic control specialists in a ground-controlled approach to assist a pilot on final approach down a prescribed path leading to the runway.

PRECISION INSTRUMENT RUNWAY – A precision instrument runway is one with an instrument approach procedure utilizing an Instrument Landing System (ILS), microwave landing system (MLS), or precision approach radar (PAR). A planned precision instrument runway is one for which a precision approach system or procedure is indicated on an FAA or DOD approved airport layout plan, or on other FAA or DOD planning documents.

PRIMARY RADAR – Primary Radar occurs when the original radar pulse generated by the ground station (air traffic control) returns to the same ground station after it "bounces" off of an object (aircraft). This return notifies the controller that an aircraft is present as well as where it is and in which direction it is moving. This return cannot tell a controller the altitude of the aircraft.

PRIMARY SURFACE – An imaginary horizontal surface extending out an equal distance on each side of the runway centerline a width as defined in FAR Part 77.

PRIVATE AIRPORT - A privately owned airport closed to the general public.

PRIVATE PILOT – A licensed pilot authorized to fly an aircraft carrying passengers provided he does not receive compensation.

PROHIBITED AREA - A category of special use airspace of defined dimensions identified by an area from the surface of the earth to a specified altitude where all flight activity is prohibited, e.g. the White House.

PUBLIC USE AIRPORT - A publicly or privately owned airport open to the public without advanced permission.

R

RADAR APPROACH CONTROL CENTER (RAPCON)

RADAR BEACON (SECONDARY RADAR) – A radar system in which the object to be detected is fitted with cooperative equipment in the form of a radio receiver/transmitter (transponder). Radio pulses transmitted from the ground based searching transmitter/receiver interrogator (air traffic control radar) site are received in the cooperative equipment and used to trigger a distinctive transmission. This transmission, not a reflected signal, is then received back at the interrogator site in order to track the aircraft and determine its altitude.

RADAR IDENTIFICATION – The process of ascertaining that a radar target is the radar return from a particular aircraft.

RADAR NAVIGATION (RNAV)

RADAR (RADIO DETECTION AND RANGING) – A device which, by measuring the time interval between transmission and reception of radio pulses, provides information on range, azimuth and/or elevation of objects in the path of the transmitted pulses.

RADAR SERVICE – A term which encompasses aircraft separation, navigation guidance, and/or flight track monitoring services based on the use of radar which can be provided by a controller to a pilot of a radar-identified aircraft.

RADAR SURVEILLANCE - The radar observation of a given geographic area for the purpose of performing some radar function.

RADAR VECTOR – A heading issued to an aircraft by air traffic control to provide navigational guidance based upon radar observations.

RADIAL – A magnetic bearing extending from a VOR, a VORTAC, or a TACAN navigational facility.

RANDOM AREA NAVIGATION ROUTE – Direct flight, based on area navigation capability, between waypoints defined in terms of degree distance fixes or offset from published or established routes/airways at a specified distance and direction.

REGIONAL AIRPORT SYSTEM PLAN (RASP)

RELIEVER AIRPORT - A specially designated general aviation airport that reduces congestion at busy commercial service airports by providing alternate landing areas for business aircraft.

RELIEVER AIRPORT - An airport designated as having the primary function of relieving congestion at a commercial airport and providing more general aviation access to the overall community. Reliever Airports are allowed to receive AIP (federal) funds for improvement.

RELOCATED THRESHOLD - The portion of pavement behind a relocated threshold is not available for takeoff or landing. It may be available for taxiing aircraft.

RELOCATED THRESHOLD – A relocated threshold is a permanent threshold located at the relocated runway end.

REMOTE COMMUNICATIONS OUTLET (RCO) - An unmanned communications facility remotely controlled by air traffic personnel. RCO's serve FSSs. RTRs serve terminal ATC facilities. An RCO or RTR may be UHF or VHF and will extend the communication range of the air traffic facility. There are several classes of RCOs and RTRs. The class is determined by the number of transmitters or receivers. Classes A through G are used primarily for air/ground purposes. RCO and RTR class O facilities are non protected outlets subject to undetected and prolonged outages. RCOs and RTRs were established for the express purpose of providing ground-to ground communications between air traffic control specialists and pilots at a satellite airport delivering en route clearances, issuing departure authorizations, and acknowledging instrument flight rules cancellations or departure/landing times. They may also be used for advisory purposes whenever the aircraft is below the coverage of the primary air/ground frequency.

RESTRICTED AREAS - A category of special use airspace of defined dimensions identified by an area from the surface of the earth to a specified altitude within which the flight of aircraft, while not wholly prohibited, is subject to restrictions.

REQUEST FOR PROPOSALS (RFP)

ROTATING BEACON - A visual NAVAID flashing white and/or colored light to indicate the location of an airport.

RUNUP – A part of the final checkout of the aircraft just before takeoff where the engine (or engines) is revved to a percentage of maximum power. During this exercise, all airplane systems are checked to make a final determination of whether or not the aircraft is fit for safe flight.

RUNWAY (RW, R/W AND RWY) – A runway is a defined rectangular area on an airport prepared for the landing or takeoff of airplanes.

RUNWAY ALIGNMENT INDICATOR LIGHTS (RAIL) – (usually part of a MALS system).

RUNWAY END IDENTIFIER LIGHTS (REIL) – Flashing strobe lights (usually white) which indicate the end of a runway. They are located at each end of the runway.

RUNWAY OBJECT FREE AREA (ROFA)

RUNWAY PROTECTION ZONE (RPZ) - An area of the runway end (formerly the clear zone) used to enhance the protection of people and property on the ground.

RUNWAY PROTECTION ZONE (RPZ) – A trapezoidal area centered about the extended runway centerline beginning 200 feet beyond the end of the area usable for takeoff or landing. The dimensions are a function of the approach visibility minimum and the type of aircraft. Refer to AC 150/5300-13 for specific dimensions and land use guidelines.

RUNWAY REFERENCE POINT (RRP) – The point on the runway where the effective visual glide slope intercepts the runway surface.

RUNWAY SAFETY AREA (RSA) - A surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

RUNWAY SAFETY AREA (RSA) – A runway safety area is a rectangular area, centered on the runway centerline, which includes the runway (and stopway, if present) and the runway shoulders. The portion abutting the edge of the runway shoulders, runway ends, and stopways is cleared, drained, graded and usually turfed. Under normal conditions, the runway safety area is capable of supporting snow removal, firefighting, and rescue equipment and accommodating the occasional passage of aircraft without causing major damage to the aircraft.

RUNWAY VISIBILITY RANGE (RVR) – An instrumentally derived value, based on standard calibrations, that represents the horizontal distance a pilot will see down the runway from the approach end.

S

SAFETY AREA – An actual graded area surrounding the runway that can be safely negotiated in case of an emergency by an aircraft that will be using that runway.

SEAPLANE BASE - A body of water licensed for operation and basing of seaplanes.

SEGMENTED CIRCLE - An aid identifying the traffic pattern direction.

SEPARATION – Spacing of aircraft to achieve their safe and orderly movement in flight and while landing and taking off.

SEPARATION MINIMA - The minimum longitudinal, lateral, or vertical distances by which aircraft are spaced through the application of air traffic control procedures.

SHORT APPROACH LIGHT SYSTEM (SALS)

SHORT HAUL AIRPORT - Commercial service airports that service scheduled trips for less than 500 miles.

SHORT TAKEOFF AND LANDING (STOL) RUNWAY – A runway specifically designated and marked for STOL operations. Except for the standards for locating thresholds, specified in appendix 9, and for marking and lighting, STOL runways are designed and maintained to the standards and recommendations applicable to conventional takeoff and landing airplanes.

SIMPLIFIED SHORT APPROACH LIGHT SYSTEM (SSALS)

SIMPLIFIED SHORT APPROACH LIGHT SYSTEM WITH SEQUENCED FLASHING LIGHTS (SSALF)

SINGLE-EVENT NOISE EXPOSURE LEVEL (SENEL)

SMALL AIRCRAFT – A small aircraft is an aircraft of 12,500 pounds (5,700 kg) or less maximum certificated takeoff weight.

SOUND EXPOSURE LEVEL (SEL)

SQUARE FEET (SF)

STANDARD INSTRUMENT DEPARTURE (SID) – A preplanned coded air traffic control IFR departure routing, preprinted for pilot use in graphic and/or written form.

STANDARD METROPOLITAN STATISTICAL AREA (SMSA)

STANDARD TERMINAL ARRIVAL ROUTE (STAR) – A preplanned coded air traffic control IFR arrival routing, preprinted for pilot use in graphic and/or written form.

STATUTE MILE – A regular “highway” mile measuring 5,280 feet.

STOL AIRCRAFT - A STOL (short takeoff and landing) aircraft is an aircraft with a certified performance capability to execute approaches along a glide slope of 6 degree or steeper and to execute missed approaches at a climb gradient sufficient to clear a 15:1 missed approach surface at sea level. The gradient is based on the airport elevation and decreases at the rate of 5 percent per 1,000 feet (300 m), i.e., for an airport at 4,000 feet (1,200 m) above Mean Sea Level (MSL), the gradient of the missed approach surface would be 18:1, 120 percent of 15:1.

STOP END OF RUNWAY – The stop end of runway is the far runway end as viewed from the cockpit of a landing airplane.

STOPWAY (SWY) - A rectangular surface beyond the end of a runway prepared or suitable for use in lieu of a runway to support an aborted takeoff, without causing structural damage to the airplane.

STOPWAY (SWY) – A stopway is an area beyond the stop end of the takeoff runway which is no less wide than the runway and is centered on the extended centerline of the runway. It is able to support an airplane during an aborted takeoff without causing structural damage to the airplane, and designated by the airport authorities for use in decelerating the airplane during an aborted takeoff.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

STRAIGHT-IN APPROACH - A descent in an approved procedure in which the final approach course alignment and descent gradient permit authorization of straight-in landing minimums.

STRAIGHT-IN APPROACH – Entry into the traffic pattern by interception of the extended runway centerline (final approach) without executing any other portion of the traffic pattern.

STUDY ADVISORY COMMITTEE (SAC)

SUPPLEMENTARY AVIATION WEATHER REPORTING STATIONS (SAWRS) – A weather observation station used solely for aviation purposes and manned by non-Federal personnel. The local airport management usually provides the equipment and personnel for the station.

SURFACE ACCESS - Ground transportation modes, such as auto or public transit, used to travel to and from the airport.

SURVEILLANCE APPROACH – An instrument approach conducted in accordance with directions issued by a controller referring to the surveillance radar display.

SYSTEM PLAN - A representation of the aviation facilities required to meet the immediate and future air transportation needs and to achieve the overall goals.

T

TACTICAL AIR NAVIGATION (TACAN) – A military navigation aid that provides distance and direction information to appropriately equipped aircraft. Derived from “tactical air navigation”.

TACTICAL AIRLIFT GROUP (TAG)

TAKEOFF DISTANCE AVAILABLE (TODA) - The TORA plus the length of any remaining runway and/or clearway beyond the far end of the TORA (see Declared Distances).

TAKEOFF RUNWAY AVAILABLE (TORA) - The runway length declared available and suitable for the ground run of an airplane taking off (see Declared Distances).

TAXI – To operate an airplane under its own power on the ground, except the movement incident to actual takeoff and landing.

TAXILANE (TL) – A taxilane is the portion of the aircraft parking area used for access between taxiways, aircraft parking positions, hangars, storage facilities, etc. A taxilane is outside the movement area, and is normally not controlled by the Air Traffic Control Tower.

TAXIWAY (TW, TWY, AND T/W) – A taxiway is a defined path, from one part of an airport to another, selected or prepared for the taxiing of aircraft.

TAXIWAY SAFETY AREA (TSA) – A taxiway safety area is an area centered on the taxiway centerline, which includes the taxiway and taxiway shoulders. The portion abutting the edge of the taxiway shoulders is cleared, drained, graded, and usually turfed. Under normal conditions, the taxiway safety area is capable of supporting snow removal, fire fighting, and rescue equipment and accommodating the occasional passage of aircraft without causing major damage to the aircraft.

TERMINAL AIRSPACE - The controlled airspace normally associated with aircraft departure and arrival patterns to and from airports within a terminal system and between adjacent terminal systems in which tower en route air traffic control service is provided.

TERMINAL AREA FORECAST, FAA'S (TAF)

TERMINAL AREA PLAN (TAP)

TERMINAL CONTROL AREA (TCA) – The aircraft traffic control area surrounding a hub airport in which all aircraft must be under radar control and have radio communications established. This airspace is now known as Class B airspace.

TERMINAL INSTRUMENT PROCEDURES (TERPS)

TERMINAL RADAR SERVICE AREA (TRSA) - This area identifies the airspace surrounding an airport wherein air traffic control provides radar vectoring, sequencing, and separation on a full-time basis for all IFR and participating VFR aircraft. Although pilot participation is urged, it is not mandatory within the TRSA.

TERMINAL VERY HIGH FREQUENCY OMNIRANGE RADIO STATION (TVOR)

T-HANGAR - A T-shaped aircraft hangar that provides shelter for a single airplane.

THRESHOLD – The threshold is the beginning of that portion of the runway available and suitable for the landing of airplanes.

THRESHOLD (TH) - The physical end of runway pavement. (Also see Displaced Threshold and Relocated Threshold.)

THRESHOLD CROSSING HEIGHT (TCH) – The height of the straight line extension of the visual or electronic glide slope above the runway threshold.

TOUCH-AND-GO OPERATION – A training operation in which a landing approach is made, the aircraft touches down on the runway, but does not fully reduce speed to turn off the runway. Instead, after the landing, full engine power is applied while still rolling and a takeoff is made, thereby practicing both maneuvers as part of one motion. It counts as two separate aircraft operations.

TOUCHDOWN ZONE LIGHTS (TDZ)

TRACK – The flight path of an aircraft over the surface of the earth.

TRAFFIC PATTERN - The traffic flow that is prescribed for aircraft landing at or taking off from an airport. The usual traffic pattern consists of five segments, or "legs". These components are the upwind leg, crosswind leg, downwind leg, base leg, and the final approach. Traffic patterns are followed by aircraft in order to exit the airport area after takeoff in an orderly fashion, and to enter an Airport area and ultimately land, also in an orderly fashion.

TRANSIENT OPERATIONS - An operation performed at an airport by an aircraft that is based at another airport.

TRANSITION ZONE - An imaginary surface extending upward at a 7 to 1 slope (i.e., up one foot for every seven feet moved horizontally) from the Primary Surface and Approach Surface defined in Federal Aviation Regulations (FAR) Part 77.

TRANSPORT AIRPORT - Airports that can accommodate high performance aircraft over 150,000 pounds maximum gross weight.

TRANSPORT AIRPORT – A transport airport is an airport designed, constructed, and maintained to specifically serve airplanes in Aircraft Approach Category C and D. Please refer to the definition for Aircraft Approach Category. Airports which accommodate Category C and D aircraft on a semi regular basis are not necessarily Transport Airports.

TRANSPORT CATEGORY AIRCRAFT - Aircraft with a maximum gross takeoff weight of 12,500 pounds or more.

TRUE AIR SPEED (TAS) – The actual speed at which an aircraft is traveling through the air.

TRUE BEARING (Azimuth) - The clockwise angle between a direction line and a meridian line that is referenced to the geographic north.

TURBINE – A mechanical device or engine that spins in reaction to fluid flow through or over it. This device is used in turbofan, turbojet, and turboprop powered aircraft.

TURBOFAN – A turbojet engine whose thrust has been increased by the addition of a low pressure compressor fan.

TURBOJET - An engine that derives power from a fanned wheel spinning in reaction to burning gases escaping from a combustion chamber. The turbine in turn drives a compressor and other accessories.

TURBOPROP - A turbine engine in which the rotating turbine turns a propeller.

U

ULTRA HIGH FREQUENCY (UHF)

UNCONTROLLED AIRSPACE - Airspace that has not been designated as Continental Control Area, control area, control zone, terminal control area, or transition area and within which ATC has neither the authority nor the responsibility for exercising control over air traffic.

UNICOM - Radio communications station that provides pilots with pertinent information (winds, weather, etc.) at specific airports.

UNITED STATES GEOLOGICAL SERVICE (USGS)

UNITED STATES WEATHER BUREAU (USWB)

USEFUL LOAD – In aircraft, the difference between the empty weight of the plane and the maximum authorized gross weight.

UTILITY AIRPORT – A utility airport is an airport designed, constructed, and maintained to serve airplanes in Aircraft Approach Category A and B. For discussion on airport type, see paragraph 5.

V

V - Visual Approach runway marking.

V_1 - Takeoff Decision Speed.

V_2 - Takeoff Safety Speed.

V_{LOF} - Lift-off Speed.

V_{SO} - Stalling Speed or the minimum steady flight speed in the landing configuration.

VECTOR - A heading issued to an aircraft to provide navigational guidance by radar.

VERTICAL/SHORT TAKEOFF AND LANDING (V/STOL)

VERTICAL TAKEOFF AND LANDING (AIRCRAFT) (VTOL) – An aircraft which has the capability of vertical takeoff and landing. These aircraft include, but are not limited to, helicopters.

VERY HIGH FREQUENCY (VHF)

VERY HIGH FREQUENCY OMNI DIRECTIONAL RANGE (VOR) – A ground radio station that provides a pilot of a properly equipped aircraft with his radial location in reference to that station. A VORTAC is an electronic air navigation facility combining a VOR and a TACAN.

VFR AIRCRAFT - An aircraft conducting flight in accordance with Visual Flight Rules.

VFR CONDITIONS – Basic weather conditions prescribed for flight under Visual Flight Rules; usually implies a ceiling of at least 1000 feet and a forward visibility of three miles or more.

VFR TRAFFIC – Aircraft traffic operated solely in accordance with Visual Flight Rules.

VICTOR AIRWAYS - See Low Altitude Airways.

VICTOR AIRWAYS – Established air routes connecting most VORs in the United States. The victor airways comprise the low altitude (up to but not including 18,000 feet) airway system. (Jetways comprise the high altitude airway system).

VISIBILITY, PREVAILING – The horizontal distance at which targets of known distance are visible over at least half of the horizon. It is normally determined by an observer on or close to the ground viewing buildings or other similar objects during the day and ordinary city lights at night.

VISUAL APPROACH – A VFR approach granted to an IFR flight by air traffic control under special circumstances. Visual approaches are normally conducted by aircraft operating under visual flight rules.

VISUAL APPROACH SLOPE INDICATOR (VASI) – The VASI is a device used by pilots to determine their position in regard to the recommended approach path for a particular airport. See also GVGI.

VISUAL FLIGHT RULES (VFR) - Visual Flight Rules that govern flight procedures in good weather.

VISUAL FLIGHT RULES (VFR) – "See and be seen" flight rules. Each pilot is responsible for the safe spacing and proper operation of his aircraft. Under VFR, a pilot is not required to file a flight plan or be in constant radar and communication contact with air traffic control. Visual flight rules are determined by weather and require a ceiling of at least 1,000 feet and visibility of at least 3 miles.

VISUAL RUNWAY - A visual runway is a runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA or Department of Defense (DOD) approved layout plan, or, on other FAA or DOD planning documents.

VORDME - VOR facility supplemented with Distance Measuring Equipment (DME).

VORTAC - VOR facility supplemented with Tactical Air Navigation (TACAN).

VORTAC – A combination of the civil VOR/DME and the military TACAN which can provide both distance and direction of an aircraft from the station.

W

WAKE TURBULENCE – The air turbulence caused by a moving aircraft, originating at the tips of the wings. The turbulence is caused by vortices generated by an aircraft's wingtips as it travels through the air. This turbulence is greatest when the aircraft is taking off and landing.

WARNING AREA - A category of special use airspace of defined dimensions identified by an area from the surface of the earth to a specified altitude, which exists in international airspace along the U.S. coastal borders.

WATER MANAGEMENT DISTRICT (WMD)

WIND-CONE (WIND SOCK) - Conical wind direction indicator.

WIND COVERAGE – Wind coverage is the percent of time for which aeronautical operations are considered safe due to acceptable crosswind components.

WIND ROSE - A graphic documenting the wind persistency and wind coverage provided by the runway system.

WIND TEE - A visual device used to advise pilots about wind direction at an airport.

APPENDIX B

REGULATORY REQUIREMENTS

Appendix B
Regulatory Guidelines

This Master Plan is prepared in accordance with Federal Aviation Administration (FAA) Advisory Circulars **AC 150/5370-6B**, *Airport Master Plans*, and **AC 150/5300-13**, *Airport Design,* in conjunction with the FDOT's *Guidebook for Airport Master Planning* and other related standards. Furthermore, current guidance will be incorporated from the FAA Airports District Office (Orlando), FDOT Aviation Office, JAA, and other local government agencies. Planning efforts of the city, county, region, state, and nation have been coordinated in the Master Plan to provide the most preeminent plan for the benefit of CRG and all of the participating organizations.

In addition, in order to assist JAA in considering the environmental factors that may impact future development at CRG, the following national, state and local legislation was considered. This overview of regulatory guidelines will assist the sponsor and the planning consultant in developing alternatives that are tailored to the airport's size, unique setting and operating environment while also considering the airport's environmental setting, the identification of environmentally related permits and the potential impacts of recommended development projects. An in-depth analysis of existing environmental conditions at CRG is provided in **Chapter Two**, *Existing Conditions*.

B.1 Water Quality

B.1.1 Legislation

The Federal Water Pollution Control Act, as amended by the Clean Water Act provides the authority to establish water control standards, control discharges into surface and subsurface waters, develop waste treatment management plans and practices, and issue permits for discharges and for dredged and filled materials into surface waters. The Fish and Wildlife Coordination Act requires consultation with the United States Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Conservation Commission (FFWCC) when any alteration and/or impounding of water resources is expected. The Federal National Pollution Discharge Elimination System (NPDES) permit program provides regulations that govern the quality of stormwater discharges into water resources of the United States.

B.1.2 Regulatory Agencies

The United States Army Corps of Engineers (COE), the Florida Department of Environmental Protection (FDEP), and the Saint Johns River Water Management District (SJRWMD) have jurisdiction over and regulate activities that alter the landscape and disrupt water flow to wetland areas and surface waters through the Environmental Resource Permitting (ERP) Program in Florida. The program forwards permit applications to other state and federal agencies including the FFWCC and the USFWS. Permitting requirements for construction that exceeds five acres are specified by NPDES regulations and administered by the FDEP.

B.2 Historical, Architectural, Archaeological, and Cultural Resources

B.2.1 Legislation

The National Historic Preservation Act of 1966 and the Archaeological and Historic Preservation Act of 1974 provide protection against development impacts that would cause change in historical, architectural, archaeological, or cultural resources.

B.2.2 Regulatory Agencies

The Department of State, Division of Historical Resources is responsible for promoting historical, archaeological, museum, and folk culture resources in Florida.

B.3 Biotic Communities

B.3.1 Legislation

The Fish and Wildlife Coordination Act (48 Statute 401 as amended; 16USC et. Seq.) considers impacts to habitat and wildlife. Section 2 of this act requires consultation with USFWS, the United States Department of the Interior (USDI), and state agencies that regulate wildlife whenever water resources are modified by a federal, public, or private agency under federal permit of license.

B.3.2 Regulatory Agencies

The USFWS and FFWCC have authority under the act to provide comments and recommendations concerning vegetation and wildlife resources.

B.4 Endangered and Threatened Species

B.4.1 Legislation

The Endangered Species Act of 1973 (ESA), as amended, requires federal agencies, in consultation with and assisted by the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat of such species. Section 7 of the Act states that federal agencies must review their actions: If those actions will affect a listed species or its habitat, they must consult with the United States Fish and Wildlife Service.

B.4.2 Regulatory Agency

The USFWS, the Florida Department of Agriculture and Consumer Services (FDACS), and the FFWCC have jurisdiction over and administer native endangered and threatened species permits for Florida. During the consultation process, the USFWS will determine the significance of potential impacts to federally protected species and will recommend methods to avoid or mitigate for impacts that may occur as a result of the proposed projects.

The FFWCC Threatened and Endangered Species Section reviews and issues permits that involve Florida's protected terrestrial animal species. The FFWCC Bureau of Protected Species Management reviews and issues permits that involve Florida's protected aquatic wildlife species. The FDACS Division of Plant Industry is responsible for providing protection to Florida's protected native plant species that are classified as endangered, threatened, or commercially exploited.

B.5 Wetlands

B.5.1 Legislation

Executive Order 11990, Protection of Wetlands, mandates that each federal agency take action to minimize the destruction, loss, or degradation of wetlands, and preserve and enhance their natural values. On the federal level, wetlands are regulated according to Section 404 of the Clean Water Act, which requires a permit for dredging and filling activities that take place in Waters of the United States, including wetlands.

The legal framework for the regulation of activities in wetlands by the State of Florida and by the State's Water Management Districts is provided, in part, by Chapter 373 of the Florida Statutes, *the Florida Water Resources Act of 1972*, specifically 373.414 which states that an activity regulated under this part will not be harmful to water resources;

water quality standards will not be violated; and such activity in, on, or over surface waters or wetlands, is not contrary to the public interest. If such an activity significantly degrades or is within an Outstanding Florida Water, the applicant must provide reasonable assurance that the proposed activity will be clearly in the public interest. Specifics concerning permit requirements are codified in Chapter 40, parts A through E, of the Florida Administrative Code.

B.5.2 Regulatory Agencies

In Northeast Florida, the COE, the FDEP, and the SJRWMD have jurisdiction over and regulate activities that alter the landscape and disrupt water flow to wetland areas and surface waters through the State ERP Program.

B.6 Floodplains

B.6.1 Legislation

Executive Order 11988, "Floodplain Management" defines floodplains as lowland areas adjoining inland and coastal waters, especially those areas subject to one percent or greater chance of flooding in any given year.

B.6.2 Regulatory Agencies

The Federal Emergency Management Agency (FEMA) has produced Flood Insurance Rate Maps (FIRMs) for communities participating in the National Flood Insurance Program. The maps detail the 100-year and 500-year base flood elevations. The State of Florida administers and requires compensation for floodplain impacts through the ERP program. SJRWMD has jurisdiction over Northeast Florida.

B.7 Coastal Zone Management Program

B.7.1 Legislation

The Coastal Zone Management Act (CZMA) aims to preserve, protect, develop, and where possible, restore and enhance the resources of the nation's coastal zone. The Florida Coastal Management Act of 1978 (Chapter 380, Part II, Florida Statutes) authorized the FDEP to develop a comprehensive state coastal management program based upon existing Florida Statutes and Rules.

B.7.2 Regulatory Agency

The FDEP is responsible for directing the implementation of the Florida Coastal Management Program (FCMP). The program is based on a cooperative network of nine agencies including the FDEP, the Florida Department of Community Affairs (DCA), FFWCC, Department of State (DOS), Governor's Office of Planning and Budgeting (OPB), Department of Transportation (DOT), Department of Health (DOH), and the Division of Forestry within the DACS. SJRWMD is also a cooperating member in the consistency review process for Northeast Florida.

B.8 Farmland

B.8.1 Legislation

The Farmland Protection Policy Act of 1981 (FPPA) requires the evaluation of farmland conversion to non-agricultural areas. Prime farmland is land best suited for producing food, feed, forage, fiber, and oilseed crops. This land has the quality, growing season, and moisture supply necessary to produce sustained crop yields with minimal energy and economic input.

B.8.2 Regulatory Agencies

The National Resources Conservation Service (NRCS) has jurisdiction and should be consulted if farmland is to be converted to non-agricultural use by a federally funded project. The consultation determines whether the farmland is classified as "prime" or "unique." If it is, the Farmland Protection Act requires rating the farmland conversion impacts based upon the length of time farmed, amount of farmland remaining in the area, level of local farm support services, and the level of urban land in the area.

APPENDIX C

DEMAND CAPACITY ANALYSIS

Appendix C
Demand Capacity Analysis

An essential step in predicting airport needs is the determination of an airport's current capacity to accommodate anticipated demand. Operational demand determines the overall capacity and development at an airport based upon an analysis of the airport's annual service volume (ASV). The ASV determines the airport's annual operational capacity without undue delay based upon historic and forecast aircraft operations and limited fleet mix data. Airports can operate above the ASV but will experience some take-off or landing delays during peak operating periods. ASV does not take into account, however, significant changes in aircraft group categories related to existing and anticipated fleet mix and runway length requirements. This is a deficiency of the traditional FAA Airport Capacity Analysis outlined in **FAA AC 150/5060-5**. ASV only accounts for deficiencies in runway use, aircraft fleet mix, weather conditions, etc. that would be encountered based upon the existing aircraft group category and usage rather than anticipated changes in operations and fleet mix.

Airfield operational capacity is defined as the number of aircraft that can be safely accommodated on the runway-taxiway system at a given point in time. Delay is the difference between "constrained" and "unconstrained" aircraft operating time, usually expressed in minutes. Unacceptable delay will occur when successive hourly demand exceeds the airport's hourly capacity. Further, aircraft delays can occur even when the total hourly demand is less than hourly capacity if demand during a portion of that hour exceeds the capacity of that timeframe.

C.1 Airfield Operational Capacity

Operational demand and capacity analysis of airfield or airside systems and facilities, such as the Airport's runways and taxiways, results in calculated hourly capacities for Visual Flight Rules (VFR) and Instrument Flight Rules (IFR) conditions. Additionally, an ASV, which identifies the total number of aircraft operations that may be accommodated at the airport without excessive delay, was also calculated.

An airport's hourly runway capacity is the maximum number of aircraft that can be accommodated under conditions of continuous demand during a one-hour period. It should be noted that generally this hourly capacity cannot be sustained over long periods without impacting operations and causing delay. An airport's hourly runway capacity is influenced by a number of factors, as described in the following paragraphs.

Since the magnitude and scheduling of user demand is relatively uncontrollable, especially at a general aviation (GA) airport, reductions in aircraft delay can best be achieved by improving airfield facilities to increase overall capacity. Airfield capacity is quantified by two calculable factors:

- Weighted hourly capacity (Cw): The theoretical number of aircraft that can be accommodated by the airport in an hour, considering all runway use configurations.
- ASV: The airport's theoretical annual operational capacity without undue capacity.

To determine Cw and ASV and conduct the capacity analysis, a number of prime determinates specific to CRG must be identified. These include:

- Meteorological conditions
- Runway use configuration
- Aircraft mix (based upon existing aircraft group demand)
- Percent arrivals
- T&G operations
- Exit taxiways

The FAA defines operational capacity as a reasonable estimate of an airport's annual capacity that would be encountered over a year's time. The parameters, assumptions, and calculations required for this analysis are included in the following sections.

C.1.1 Airfield Characteristics

Runway Configuration

The number of runways at an airport and how they are positioned in relation to one another determines how many arrivals and departures can occur within an hour. For example, if an airport has two runways that are oriented parallel to each other then it is generally possible to have arrivals and departures to both runways at the same time, which is most often referred to as runway independence. However, if the two runways intersect, an aircraft departing on one runway must wait for operations on the other to be completed prior to starting its takeoff, most often referred to as runway dependence. The runway configuration at CRG is dependent since Runway 5-23 and 14-32 cannot operate independently at the same time due to the airfield's triangular runway alignment. In addition, due to the relationship of the runway thresholds on Runway 32 and 23, land and hold short or LAHSO operations are currently in place which impacts the operational capacity of both runways

To accurately measure the ASV, a dependent runway system configuration was used as a benchmark to calculate appropriate capacity levels through operational utilization. Based upon operational data provided in the approved 2006 FAR Part 150 Study, Runway 14-32 accommodates approximately 55 percent of total operations during both VFR and IFR conditions and Runway 5-23 accommodates the remaining

45 percent. However, all IFR instrument approaches must be made to Runway 14 or 32. Aircraft can transition to land on Runway 5-23 when wind and visibility conditions allow.

Taxiway Configuration and Exits

The number of taxiways at an airport impacts hourly runway capacity by influencing when an arriving aircraft can safely exit the runway. The distance between the taxiway location and the runway ends plays a vital role in calculating runway occupancy time and delay. The longer an aircraft occupies the runway, the more likely delay will impact arriving or departing aircraft.

According to the FAA *Capacity* AC, taxiway exits located approximately 2000 feet from the runway arrival threshold provide the optimum safe distance for aircraft to exit. However, the location and type of exit taxiways (perpendicular or high-speed) is dependent upon not only the length of the runway but also the aircraft fleet using that runway. Conventional taxiways form right angles with the runway, while high-speed connectors or taxiways form an acute angle with the runway. The provision of high-speed exits increases capacity by decreasing roll out time and thus decreasing the time it takes for the aircraft to vacate the runway environment. In other words, smaller and lighter aircraft may be able to safely exit 2,000 feet from the runway threshold whereas a larger and heavier business jet will require a greater roll-out distance and the use of high-speed taxiway exits.

Taxiways A and B provide full parallel access to Runways 14-32 and 5-23, respectively, and are equipped with five (5) conventional connector taxiways. **Table C.1** designates the connector taxiways associated with Runways 5-23 and 14-32.

Table C.1 Taxiway Exit Locations		
Taxiway Exit	**Distance from Runway 14 Threshold**	**Distance from Runway 32 Threshold**
A	-	3,955 ft
A3	1,143 ft	2,801 ft
A5	2,083 ft	1,855 ft
C	3,804 ft	169 ft
E	3,506 ft	450 ft
	Distance from Runway 5 Threshold	**Distance from Runway 23 Threshold**
B	-	3,979 ft
B2	1,053 ft	2,929 ft
B4	2,093 ft	1,878 ft
C	3,690 ft	237 ft
F	3,419 ft	552 ft
Source: The LPA Group Incorporated 2007		

C.1.2 Aircraft Mix Index

In the *Capacity* AC, the FAA classifies aircraft at an airport based on their maximum certified operational weight. The mix index is a calculated ratio of the aircraft fleet based upon a weight classification system. As the number of heavier aircraft increases, so does the mix index. The hourly runway capacity decreases as the mix index increases because the FAA requires that heavier aircraft be spaced further apart from other aircraft for safety reasons. Because the runways at Craig are limited to aircraft operations at 60,000 lbs. or less and because these operations are projected to be a relatively small percentage of the total operations at Craig, there will be no change in the mix index over the planning period.

Knowing the operational fleet mix, it is possible to establish the mix index required to compute the airfield's capacity. The aircraft mix index is calculated based on the type or class of aircraft expected to serve an airfield. The aircraft mix index is a mathematical expression that refers to a ratio of aircraft classified by weight and is calculated with the following formula: %(C+3D), where class C are large aircraft with gross weight 12,500 to 300,000 lbs. and class D are large aircraft with a gross weight over 300,000 lbs as shown in **Table C.2**.

Table C.2 FAA Aircraft Classifications			
Aircraft Class	**Max. Cert. Takeoff Weight (lb)**	**Number of Engines**	**Wake Turbulence Classification**
A	12,500 or less	Single	Small (S)
B		Multi	
C	12,500 – 300,000	Multi	Large (L)
D	Over 300,000	Multi	Heavy (H)
Source: FAA AC 150/5300-13			

The majority of aircraft operating at CRG consists of Class A, B aircraft and C aircraft but no Class D aircraft. The FAA has three classifications for aircraft operations. The first two, based on wingspan and aircraft approach speed, outlined in the forecast, facility requirements and alternatives chapters indicates an increase in turboprop and jet traffic (Class B-I, B-II, C-I and C-II) over the planning period. The Demand/Capacity Analysis also classifies aircraft based on weight as discussed in Table C.2. Jet aircraft operating at CRG are typically considered Class C aircraft for the Demand/Capacity analysis. These aircraft currently represent approximately two (2) percent of total operations at the airport. Projecting forward, the 20-year forecast estimates an increase of jet traffic to seven (7) percent of total operational activity at CRG. This increase remains within the 0 to 20 percent aircraft mix index and does not affect the calculation for ASV over the planning period. Therefore, the practical capacity of the airfield will remain the same under current and future operational levels. The mix index over the entire planning period is depicted in **Table C.3**.

Table C.3 Aircraft Classification	
Year	**Mix Index: %(C+3D)**
2006	2.06%
2011	4.82%
2016	6.64%
2021	7.00%
2026	7.00%
Source: The LPA Group, Inc, 2007	

C.2 Operational Characteristics

Significant operational characteristics that can affect an airfield's overall capacity include: the percentage of aircraft arrivals, the sequencing of aircraft departures, and the percentage of touch and go operations. Moreover, runway utilization percentages, both during VFR and IFR, facilitate in assigning appropriate weighting factors in the calculation of hourly capacity.

C.2.1 Percentage of Aircraft Arrivals

The percentage of aircraft arrivals is the ratio of landing operations to the total operations of the airport. This percentage is considered due to the fact that aircraft approaching an airport for landing require greater runway occupancy time than departing aircraft. The FAA methodology used herein provides for computing airfield capacity with a 40, 50, or 60 percent of arrivals figure. For general planning purposes, the 50 percent of arrivals value was employed as an average or impartial effect to determine the overall capacity at CRG.

C.2.2 Sequencing of Aircraft Departures

All runways at CRG are equipped with dedicated run-up areas sufficient to allow for taxiing aircraft to pass simultaneously. Since areas dedicated for run-up activity or a lack thereof cannot be modeled using the FAA's airfield capacity methodology, the airfield is considered to have no aircraft departure constraints.

C.2.3 Percentage of Touch and Go Operations

The percentage of total operations that consist of touch and go operations plays a significant role in the determination of airport capacity. Touch and go operations are counted as one landing and one takeoff (i.e., two operations). These types of operations are normally associated with flight training activities. FAA guidelines for calculating ASV require an estimate of the percent of touch and go operations occurring at the airport. Conversations with the tower chief and other tower personnel indicated that approximately 30 percent of operations were associated with touch-and-go's. This percentage was used to calculate ASV and was assumed to remain consistent throughout the planning period.

C.2.4 Runway Utilization Percentage

Runway utilization rates are an important input into the model used to calculate hourly runway capacity and ASV. The spread of runway usage during all types of weather conditions helps determine the most efficient use of the airfield by maximizing capacity and minimizing delay. Based upon operating information provided by CRG Air Traffic Control personnel and 2006 FAR Part 150 Noise Study, VFR and IFR runway utilization percentages are provided in **Tables C.4** and **C.5**, respectfully. In addition, the airport experiences weather minimums below IFR capabilities less than 1 percent of the time when the airport is considered closed.

Table C.4 VFR Runway Utilization	
Runway	**Runway Utilization Percentage**
14	25.0%
32	30.0%
5	21.0%
23	24.0%
Source: 2006 FAR Part 150 Study	

Table C.5 IFR Runway Utilization	
Runway	**Runway Utilization Percentage**
14	25%
32	30%
5	21%
23	24%
Note: Instrument approaches are to Runways 14 or 32; a circle approach to land on Runways 5 or 23 when wind and visibility conditions allow. *Source: 2006 FAR Part 150 Study*	

C.2.5 Meteorological Conditions

Meteorological conditions influence the decision as to which runway end a pilot will choose in making an approach based on wind and other weather related conditions. Thus, these conditions can influence hourly airfield capacity. Runway utilization is normally determined by wind conditions while the cloud ceiling and visibility dictates spacing requirements. There are three measures of cloud ceiling and visibility conditions recognized by the FAA in calculating the capacity of an airport. These include:

- ✈ **Visual Flight Rules (VFR) –** Cloud ceiling is greater than 1,000 feet above ground level (AGL) and the visibility is at least three statute miles.

- ✈ **Instrument Flight Rules (IFR) –** Cloud ceiling is at least 600 feet AGL but less than 1,000 feet AGL and/or the visibility is at least half a statute mile but less than three statute miles.

- ✈ **Poor Visibility and Ceiling (PVC) –** Cloud ceiling is less than 500 feet AGL and/or the visibility is less than half a statute mile.

CRG has three published instrument approaches. There is an ILS approach to Runway 32 with a minimum decision height of 241 feet MSL and horizontal visibility of ½ statute mile. Runway 32 also has a GPS approach with a minimum decision height of 460 feet MSL and a horizontal visibility of ¾ statute mile. Runway 14 also has a GPS approach with a minimum decision height of 800 feet MSL and a horizontal visibility of 1 statute mile.

CRG experiences VFR conditions approximately 95 percent of the time, IFR conditions 4 percent of the time and below minimums less than 1 percent of the time. When the meteorological conditions are below these minimums, the airport is closed to landing aircraft.

C.3 Airfield Capacity Analysis

The preceding airfield characteristics were used in conjunction with the methodology developed by the FAA to determine airfield capacity. As mentioned, the FAA methodology generates the hourly capacity of runways and the annual service volume for measuring airfield capacity.

C.3.1 Hourly Capacity of Runway

Hourly capacity of the runways measures the maximum number of aircraft operations that can be accommodated by the airport's runway configuration in one hour. Based on the FAA methodology, hourly capacity for runways is calculated by analyzing the appropriate VFR and IFR figures for the airport's runway configuration. From these figures, the aircraft mix index and percent of aircraft arrivals are assessed to calculate the hourly capacity base, *C*. A touch and go factor, *T*, is also determined based on the percentage of touch and go operations combined with the aircraft mix index. Moreover, these figures complement the taxiway exit factor, *E*, which determines how many taxiway exits are available, separated by at least 750 feet.

For both VFR and IFR conditions, the hourly capacity for runways is calculated by multiplying the hourly capacity base, touch and go factor, and exit factor. This equation is:

$$\text{Hourly Capacity} = C^* \times T \times E$$

where:
- C* = hourly capacity base
- T = touch and go factor
- E = exit factor

Diagram 44 in the *Capacity AC* was selected as the figure that best represents the airfield configuration and usage. Since no physical changes are expected to be made to the runway configuration over the planning period, **Figure 3-28** in this AC was used for the hourly capacity calculations for **Diagram 44** throughout the entire planning period.

The mix index for this runway configuration, based upon information provided in **Table C.6**, was calculated in order to determine the hourly capacity. The mix index is calculated as follows: Mix Index = %(C + 3D). The hourly capacity for the key years of the planning period is shown in **Table C.7**. The weighted hourly capacities shown were calculated using the percentages that these conditions occurred at the airport.

Table C.6
Hourly Capacity of Runway Component Calculation Matrix

Runway Use Condition	Hourly Capacity Base (C*)	Touch and Go Factor (T)	Exit Rating (E)	Hourly Capacity	Weight Factor (W)	Percentage Use (VFR)	Percentage Use (IFR)
14 VFR	97	1.17	0.94	106.68	1	25.0%	
14 IFR	59	1	1	59	3		24.6%
32 VFR	97	1.17	0.94	106.68	1	30.0%	
32 IFR	59	1	1	59	3		29.8%
5 VFR	97	1.17	0.94	106.68	1	21.0%	
5 IFR	59	1	1	59	3		20.8%
23 VFR	97	1.17	0.94	106.68	1	24.0%	
23 IFR	59	1	1	59	3		23.8%
Closed	0	0	0	0	25		1.0%
TOTAL						**100%**	**100%**

Notes:
Maximum Hourly Capacity = 106.68 ops
Weighted Hourly Capacity Cw= ∑ (Column 5 x Column 6 x Column 7)/∑(Column 6 x Column 7) =
o 278 = Annual Demand/ADPM
Hourly Demand Ratio (H) with Aircraft Mix Index of 0% to 20%
o 11 = APDM/Peak Hour ops
Annual Service Volume (Cw x D x H) =
The weight factor calculation for both IFR and VFR conditions is as outlined in the methodology found in FAA AC 150/5060-5, Airport Capacity and Delay, Table 3-1
Since Runway 32 is equipped with an ILS, the majority of IFR operations are performed on this runway

Source: CRG FAR Part 150 Stud, 2006 and The LPA Group Incorporated, 2007

Table C.7
Calculation of Weighted Hourly Capacity

Year	VFR Operations/Hour	IFR Operations/Hour	Weighted Hourly Capacity (C_w)
Base Year			
2006	106.68	59	63.718
Forecast			
2007	106.68	59	63.718
2012	106.68	59	63.718
2017	106.68	59	63.718
2026	106.68	59	63.718

Source: The LPA Group Incorporated 2007

Hourly capacity is expected to remain constant over the planning period with the assumption that no modifications to the airfield or runway system will occur. The weighted hourly capacity of the airfield was considerably less than the operational capacity under VFR due to the moderate utilization of both runways under these conditions, depending on wind favorability. Currently, since both runways intersect, the operational dependency imposed by this relationship limits the number of hourly aircraft throughput due to safety issues.

C.3.2 Annual Service Volume

Under the FAA methodology, the most important value that must be computed in order to evaluate the throughput at an airport is the annual service volume. ASV represents a measure of the approximate number of total operations that the airport can support annually without undue delay. In other words, the ASV represents the theoretical throughput in aircraft operations that the airport can safely accommodate with minimal delay. Annual service volume is not a capacity limit for the airport but an indication of operations where delay will start to increase eventually reaching unacceptable levels. Annual service volume is calculated by multiplying the weighted hourly capacity for each runway configuration, $C_{W,}$ with average daily demand during the peak month, *D*, and average peak hour demand during the peak month, *H*. This equation is:

$$\text{Annual Service Volume} = C_w \times D \times H$$

where:

C_w	=	weighted hourly capacity
D	=	ratio of annual operations to average daily operations during the peak month
H	=	ratio of average daily operations to average peak hour operations during the peak month

Due to the integrated nature of the calculation of ASV, precise methodologies were followed as outlined in the *Capacity AC* to obtain a theoretical airfield capacity of **197,449 annual operations**. This figure is close to the published capacity of an airfield with a similar runway configuration and operational activity for CRG, but is below the theoretical limit due to two crossing runways, one precision approach capability, and the operational fleet mix.

Although the 2000 Master Plan Update stated that the CRG long range airport service volume was 230,000, we have determined in reviewing current operations, runway utilization and aircraft fleet mix as outlined in **FAA AC 150/5060-5, Change 9,** that 197,449 is the correct weighted ASV calculation. Based upon information provided in Appendix B of the previous master plan update, it appeared that the ASV was not calculated but based upon **Sketch 9** of the **AC 150/5060-5, Change 2**, only. Without additional information, it is not possible to conclusively determine how that ASV was determined.

Accordingly, subsequent recommendations for facility requirements will consult upon this calculation for reference as well as those previously outlined in the forecast chapter. The average peak month operations were determined to be approximately 10.91 percent of total annual operations. The demand ratio components used in the calculation of ASV are reflected in **Table C.8.**

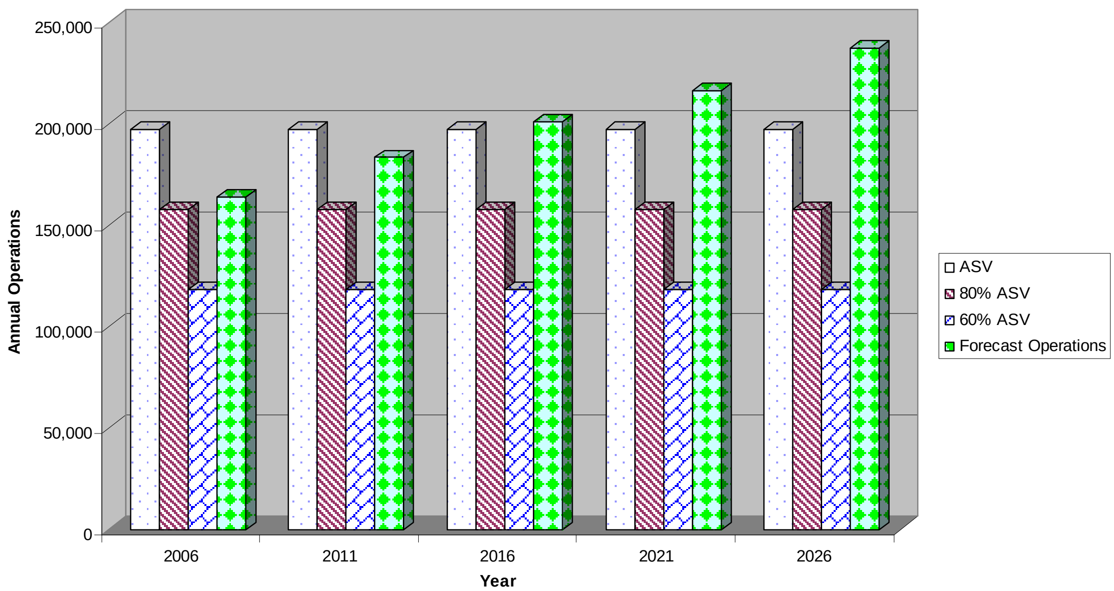
Table C.8 Calculation of Demand Ratios					
	2006	2011	2016	2021	2026
Annual Operations	163,988	183,325	200,790	216,325	237,049
Average Peak Month Operations	17,891	19,642	21,502	23,601	25,862
Average Daily Operations – Peak Month	588	646	707	776	850
Daily Demand Ratio (D)	278.89	278.64	278.74	278.81	278.94
Average Peak Hour – Peak Month	88	97	106	116	128
Hourly Demand Ratio (H)	11.11	11.11	11.11	11.11	11.11
Source: The LPA Group Incorporated 2007					

The final ASV calculations are reflected in **Table C.9**. This value was then compared to the existing and forecast level of annual operations for Craig Municipal Airport. According to the FAA methodology, a demand that exceeds the ASV will result in delays on the airfield. However, no matter how substantial an airport's capacity may appear, it should be realized that delays could occur even before an airport reaches its stated capacity. In fact, a number of projects that would increase the capacity at an airport are eligible for funding from the FAA. According to FAA **Order 5090.3C**, *Field Formulation of the National Plan of Integrated Airport Systems (NPIAS)*, this eligibility is achieved once the airfield has reached 60 percent of its current capacity. This allows improvements to be made before demand levels exceed the capacity of the facility in order to avoid lengthy delays. Future capacity levels for the airport have been calculated based on the forecasted annual operations and the calculated ASV for the airport. These levels are depicted in **Table C.9** and are shown graphically in **Figure C.1**.

Table C.9 Annual Service Volume			
Year	**Annual Operations**	**Annual Service Volume**	**Capacity Level**
Base Year			
2006	163,988	197,449	83.05%
Forecast			
2011	180,038	197,449	92.85%
2016	197,084	197,449	101.69%
2021	216,325	197,449	109.56%
2026	237,049	197,449	120.06%
Source: The LPA Group Incorporated 2007			

The capacity level increases from 83.05 percent in 2006 to 120.06 percent in 2026. This increase is attributed to the increase of operational activity at the airport without any changes in airfield capacity. Based on capacity levels as presented in **Table C.9**, the airfield capacity at CRG is constrained. Existing capacity levels exceed the point beyond which planning is required for additional capacity enhancement projects as well as when construction on those projects should begin. Since CRG is constrained by encroachment surrounding the airport's property boundary and is sensitive to community goodwill, any additional capacity projects will relate closely to preserving and enhancing existing airfield infrastructure elements. **Chapter 5**, *Airport Alternatives Analyses*, will outline in more detail projects that are associated with enhancing capacity at CRG.

Figure C.1
Annual Capacity Service Volume



Source: The LPA Group Incorporated 2007

C.4 Annual Aircraft Delay

As an airport's level of annual operations increase, so do the times when the airfield experiences periods of delay. Calculating the average delay for each aircraft allows a total to be estimated for all of the delay incurred at the airport over a year. FAA **AC 150/5060-5** also provides a method by which the annual delay can be quantified. This estimate includes arriving and departing aircraft operations under both VFR and IFR conditions. Essentially the ratio of annual demand to ASV is utilized in FAA charts to determine the average delay per aircraft. This value is then applied to the actual or forecasted annual demand to calculate the total hours of annual delay for the airport. The results of these calculations are included in **Table C.10**.

Table C.10 Annual Aircraft Delay		
Year	**Average Delay per Aircraft (Minutes)**	**Total Annual Delay (Hours)**
Base Year		
2006	0.85	51.19
Forecast		
2007	0.86	51.67
2011	0.94	56.74
2016	1.03	61.80
2021	1.10	66.00
2026	1.19	71.80
Source: The LPA Group Incorporated, 2007		

As indicated in **Table C.10**, the average delays per aircraft remain relatively low throughout the planning period. However, the delay projection at CRG considers an average delay based on hours the airport is operationally capable to accommodate aircraft, but may not reflect delay imposed to arriving and departing aircraft during peak periods. Average delay per aircraft operating during these times may be significantly higher, upwards of two to four minutes. The impact that increasing delay imposes upon the airport is such that constraints, both on the ground and in the air, are compounded with increasing operational activity. Arrival and departure delays can be mitigated by decreasing aircraft runway occupancy time. This can be achieved by constructing high-speed taxiway exits at critical points along the runway. When aircraft are required to continue taxiing down the runway for the next available taxiway exit, this increases occupancy time and thus decreases the throughput capability of the runway on an hourly basis. A more detailed analysis of potential resolutions will be further presented in the next chapter.

C.5 Summary

In estimating the capacity of the existing CRG operational areas, the primary elements of airfield capacity were examined to determine the airport's ability to accommodate anticipated levels of aviation activity. The results indicate that:

- Existing operations as a percent of total airfield capacity will grow from 83 percent to 120 percent over the planning period, indicating that the airfield has constrained capacity to handle forecast operations.
- Airspace in the vicinity of the airport does have limitations for additional instrument approach procedures, but will likely accommodate future aviation activity through coordination with local military authorities and the surrounding community as a whole.
- Runway orientation is adequate, based on existing and historical wind characteristics, although dependency issues may need to be addressed as traffic increases.

- Aircraft circulation areas via the taxiway system will likely be constrained without modifications including high-speed exits and additional connector taxiways in the future.
- There is excess regional capacity at other airports in the JAA system particularly at Cecil Field that will be utilized to accommodate growth as Craig reaches the constrained capacity of the existing two runway system.

Table C.11
Summary of Airfield Capacity Analysis

	2006	2011	2016	2021	2026
Hourly Runway Capacity					
VFR Capacity Base (Operations/Hour)	106.68	106.68	106.68	106.68	106.68
IFR Capacity Base (Operations/Hour)	59	59	59	59	59
Weighted Hourly Capacity	63.718	63.718	63.718	63.718	63.718
Annual Airfield Capacity					
Annual Operations	163,988	180,038	197,084	216,325	237,049
Annual Service Volume	197,449	197,449	197,449	197,449	197,449
Capacity Level	83.05%	92.85%	101.69%	109.56%	120.06%
Delay per Aircraft					
Average delay (minutes)	0.85	0.94	1.03	1.10	1.19
Total Annual Operational Delay					
Average total delay (hours)	51.19	56.74	61.80	66.00	71.80

Source: The LPA Group Incorporated 2007

Capacity and demand requirements have been determined for all aspects of CRG's operations. These calculations, which are based on various components, should be regarded as generalized planning tools, which assume attainment of forecast levels as described in **Chapter 3** as well as demand associated with potential general aviation and business jet operations. Should the forecasts prove conservative, proposed development recommended as a result of the demand/capacity analysis should be advanced in schedule. Likewise, if traffic growth materializes at a slower rate than forecast, deferral of expansion would be prudent.

APPENDIX D

AIRPORT FACILITY DIRECTORY REVISION FORMS

FAA Aeronautical Information Services

(National Flight Data Center)

SUPPLEMENT & AIRPORT/FACILITY DIRECTORY (A/FD) REVISONS

Submission Date: (completed by submitting civil agency)

CONTACT INFORMATION:

Submitting Official: Title:

Organization/Address:

Office Phone:
Cell Phone:

Authorizing Official (Airport Mgr or Equivalent): E-mail address:

E-MAIL (see below) Supplement and Airport /Facility Directory (A/FD) Revisions TO: 9-AWA-ATOR-AIS-airportchanges@faa.gov

Note: Airport Sketches and Airport Diagrams are submitted TO: 9-AWA-ATS-diagrams@faa.gov

AIRPORT NAME	SUPP / A/FD Page number	LOCATION IDENT CONUS/ICAO (e.g. BVI / KBVI)	STATE	REGION (e.g. NORTHEAST)

Use standard abbreviations found in A/FD General Information and FAA Order 7340.1. See format examples below. (Add pages as necessary).

FORMAT EXAMPLES

See Airport/Facility Directory (A/FD) Legend Items 1-34.

TO ADD: RMKS: ACTVT MIRL RY 01/19 AND PAPI RYS 01 & 19 - CTAF**.**
TO DELETE: RMKS: REIL RY 25 OTS INDEFLY.
TO REVISE: RADIO/NAV/WX RMKS: TOWER HRS 0600 – 2100 LCL **TO:** 0600 – 2200 LCL; APCH CTL 0600 – 2100 LCL **TO:** 0600 – 2200 LCL

ADD:

DELETE:

REVISE:

FORM SUBMISSION:

1. **Include Airport Ident and State** (e.g., KBVI, PA) in E-mail Subject Line.
2. E-mail FORM (AS AN ATTACHMENT) TO: 9-AWA-ATOR-AIS-airportchanges@faa.gov

FAA Aeronautical Information Services

(National Flight Data Center)

SUPPLEMENT & AIRPORT/FACILITY DIRECTORY (A/FD) REVISONS

FORM SUBMISSION:

1. **Include Airport Ident and State** (e.g., KBVI, PA) in E-mail Subject Line.
2. E-mail FORM (AS AN ATTACHMENT) TO: 9-AWA-ATOR-AIS-airportchanges@faa.gov

APPENDIX E

RUNWAY LENGTH ANALYSIS

Appendix E
Runway Length Justification

Today's aircraft may operate on a wide variety of available field lengths. However, the suitability of those runway lengths is often determined by several factors including:

- Elevation above mean sea level
- Temperature
- Wind velocity
- Airplane operating weights
- Takeoff and landing flap settings
- Runway surface condition (wet or dry)
- Effective runway gradient
- V_1 Engine Out Procedures
- Operational Use (private, charter, fractional ownership, etc.)
- Presence of obstructions within the vicinity of the approach and departure path, and
- Locally imposed noise abatement restrictions and/or other prohibitions

Runway length requirements were evaluated in **Chapter 4**, *Demand Capacity and Facility Requirements*, for CRG based upon historic, current and forecast fleet mix using **FAA Advisory Circular 150/5325-4B**, *Runway Length Requirements for Airport Design*. Additional support data was obtained using the FAA Central Region's Runway Length Adjustment Spreadsheets and FAA Regional Guidance Letter, RGL 01-2, *Runway Length and Strength Requirements for Business Jet Aircraft*, Airports Division, Southern Region, August 2001. This resulted in a runway length requirement of approximately **5,640 feet at a 60% load factor**. Further, based upon FAA approved forecast operations, survey data from existing operators, and letters from existing and interested tenants (provided in **Appendix F** of this report), it was determined that a runway length of 5,600 feet would accommodate approximately 100 percent of business jet aircraft less than 60,000 pounds at a 60 percent load factor[1].

E.1 Runway Length Requirements for Airport Design (AC 150/5325-4B)

In determining recommended runway lengths, the FAA uses a five step procedure based upon a selected list of critical aircraft. The five steps include:

1. Identify the list of critical design airplanes that will make regular use of the proposed runway for an established period of at least five years.

[1] Table 3-2, 100 Percent of Fleet at 60 or 90 Percent Useful Load, FAA AC 150/5325-4B

2. Identify airplanes or family of airplanes that will require the longest runway lengths at maximum certified takeoff weight (MTOW).
3. Using *Table 1-1* of **AC 150/5325-4B** and the airplanes identified in Step #2, determine the method that will be used for establishing the recommended runway length based upon useful load and service needs of critical design aircraft or family of aircraft.
4. Select the recommended runway length from among the various runway lengths generated in Step 3 using the process identified in Chapter 2, 3 or 4 of **AC 150/5325-4B**, as applicable.
5. Apply any necessary adjustment (i.e. pavement gradient, pavement condition (wet or dry), etc.)

The following narrative provides an analysis of the runway length requirements at Craig Municipal Airport (CRG) using the FAA's five step procedures and rationale for determining airport runway lengths.

E.1.1 Step 1 - Identification of Critical Design Airplane(s)

The AC provides the definition of critical design airplanes as the "listing of airplanes (or a single airplane) that would result in the longest recommended runway length" (Chapter 1, pg. 2, paragraph 102.b.2). Therefore, to complete Step 1, a list of aircraft requiring the longest runway length that will operate at CRG over the next five years should be created. For the purpose of this analysis, two important assumptions were made:

1. Models of airplanes operations at CRG in 2006/2007 will continue to operate at CRG over the next five years, and
2. Many of the more demanding airplane models currently operating at CRG incur operational penalties to do so. For example, some may operate at CRG only during cool temperatures in order to increase airplane takeoff performance, while still other may carry less than desirable fuel, passengers, payload, etc in order to effectively operate on the shorter runway.

To determine a list of demanding airplanes currently operating at CRG, operational flight data for the most recent full calendar year of operations (2006) was analyzed. This data was compiled from 2006 GCR & Associates, Inc. database[2], FAA 5010 data, CRG ATCT database, FAA Air Traffic Activity Database System (ATADS) data[3], and tenant surveys. The data included all aircraft operating to and from CRG under instrument flight rules (IFR) during calendar year 2006. The data contains specific information related to aircraft's call sign, manufacturer/model/type, engine type, departure/destination airport, and departure/arrival time. In general, data of this type includes very few records of aircraft operating under visual flight rules (VFR), as those aircraft typically do not file flight plans

[2] Source GCR and Associates, Inc. Private Turbine Aircraft Operations 2006, based upon FAA ATCT Data.
[3] FAA ATADS is an official source of historical air traffic operations for center, airport, instrument and approach counts. Daily, monthly and annual counts are available either by facility, state, region, or nationally.

with air traffic control. However, it is reasonable to assume that most itinerant operations performed by the more demanding turbojet aircraft at CRG are done so operating under IFR conditions.

The 2006 data was analyzed first by totaling airplane operational counts for each aircraft type, and the more demanding airplanes were identified for further analysis. At CRG, the more demanding aircraft were categorized as turbine-powered general aviation and limited air taxi based upon historical data. In 2006, CRG was home to 12 turbojet aircraft, which accounted for approximately 1,662 of the total 4,920 jet operations at CRG. Information provided in **Tables E-1**, *Based Aircraft Turbojet Operations*, and **E-2**, *2006 Based and Transient Jet Fleet Mix*, were obtained from CRG ATCT data, FAA GCR database[4], 2006 and CRG tenants.

Table E-1
Based Aircraft Turbojet Operations
2006

Aircraft	ARC	Based Aircraft	Operations
Cessna 501	B-I	1	76
Cessna 525 (CJ1)	B-I	1	110
MU-300	B-I	3	109
Cessna 525A (CJ2)	B-II	1	2
Cessna 550	B-II	1	97
Cessna 560	B-II	3	830
Cessna 560 XL	B-II	2	438
	Total Turbojet	**12**	**1,662**

Sources: FAA GCR Database, 2006, CRG ATCT, 2006 & 2007, and The LPA Group Incorporated 2007

Also according to airport management, in 2007, PSS World Medical and CAC, both current tenants, have added a Learjet 45 and 35, respectively, to their based aircraft fleets.

Table E-2
2006 Based and Transient Fleet Mix

		ARC A-I[1]		ARC B-I		ARC B-II		ARC C-I		ARC C-II	
	Total Jet Operations	**Ops**	**%[2]**	**Ops**	**%[2]**	**Ops**	**%[2]**	**Ops**	**%[2]**	**Ops**	**%[2]**
Based	1,662	0	0.00%	295	17.75%	1,367	82.25%	0	0	0	0.00%
Transient	3,258	0	0.00%	905	27.78%	1,346	41.31%	907	27.84%	100	3.06%
TOTAL	**4,920**	**0**	**0.00%**	**1,200**	**24.39%**	**2,713**	**55.14%**	**907**	**18.44%**	**100**	**2.03%**

Notes:
[1]*Designates operations associated with experimental jets and very light jets*
[2]*Percent of operations to total Jet operations*
Sources: FAA GCR 2006 Data, FAA ATADS, CRG ATCT Database, Tenant Surveys, The LPA Group, Inc. 2007

In addition, based upon letters from interested operators and existing tenant surveys at CRG, operators want to expand their existing fleet to accommodate the needs of their operators and

[4] Source GCR and Associates, Inc. Private Turbine Aircraft Operations 2006, based upon FAA ATCT data.

stage length requirements while improving the efficiency of their operations. It has been shown that business operators, on-demand charter operators and aircraft fractional owners prefer to use smaller, less congested airports closer to their destinations rather than busy commercial airports. As a result, of the top 50 airports in the United States for itinerant GA traffic, approximately 13 are located within the state of Florida. This is primarily due to the number of flight schools as well as business operators within the state.

Further, in reviewing forecast growth in the use of turbine aircraft for business, fractional ownership, limited air taxi and personal use nationwide, it is logical to assume that an increase in the number of turbine powered aircraft operating to and from CRG will continue to increase over the twenty-year planning period.

As a result of demand, estimates of jet aircraft operations over the twenty year planning period were developed. Based upon the *FAA Aerospace Forecast, 2007-2017*, turbine aircraft use is expected to increase by at least 2.8 percent per year. It is also anticipated that operations associated with newer, quieter and more sophisticated corporate jet aircraft less than 60,000 will increase as a result of continued growth in local business activity and the ease of access to the downtown central business district and beaches. These aircraft are expected to replace older noisier aircraft over time.

Applying the FAA average annual growth rate to CRG resulted in conservative jet aircraft demand of 16,594 operations (7 percent of total aircraft operations) of which approximately four (4) percent of total jet aircraft operations (627 operations) would be attributed to ARC C-II aircraft by the year 2026 as shown in **Table E-3**.

Table E-3
Forecast Turbojet Fleet Mix

		ARC A-I		ARC B-I		ARC B-II		ARC C-I		ARC C-II	
Year	Total Turbojet Operations	Ops[1]	%[2]	Ops	%[2]	Ops	%[2]	Ops	%[2]	ARC C-II Ops	%[2]
2006	4,920	0	0.00%	1,200	24.39%	2,713	55.14%	907	18.44%	100	2.03%
2007	5,614	0	0.00%	1,358	24.19%	3,080	54.87%	1,043	18.57%	133	2.37%
2011	8,679	92	1.06%	2,018	23.25%	4,670	53.81%	1,697	19.55%	202	2.33%
2016	13,086	192	1.47%	2,895	22.12%	6,871	52.51%	2,776	21.21%	352	2.69%
2021	15,143	307	2.03%	3,188	21.05%	7,759	51.24%	3,406	22.49%	483	3.19%
2026	16,594	465	2.80%	3,319	20%	8,297	50.00%	3,886	23.42%	627	3.78%

Notes: [1]Designates light sport, experimental and very light jet aircraft
[2]Percent of operations to total Jet operations
Sources: FAA Aerospace Forecasts (2006-2017; 2007-2020), Honeywell Business Jet Forecast 2007-2017, NBAA Factbook, 2004, FAA ATC Database, 2006, FAA GCR INC. Operational Data, 2007, FAA ATADS, CRG FAR Part 150 Study, 2006, Tenant Surveys, Fuel Flowage Data, and The LPA Group, Inc. 2007.

Based upon existing and forecast demand, a list of critical design airplanes that currently and will continue to make regular use of the proposed runway was determined as shown in **Table E-4.**

Table E-4 Critical Design Airplanes				
Critical Design Aircraft	**ARC**	**2006 Operations[1]**	**2011 Operations[2]**	**2026 Operations[2]**
VLJs	A-I	0	92	465
Subtotal A-I Aircraft		**0**	**92**	**465**
Cessna 501	B-I	281	473	0
Dassault Falcon 10	B-I	107	181	697
MU300	B-I	404	679	1,311
Cessna 525 (CJ1)	B-I	407	685	1,311
Subtotal B-I Aircraft		**1,200**	**2,018**	**3,319**
Cessna 525A (CJ2)	B-II	239	411	730
Cessna 525B (CJ3)	B-II	44	76	135
Cessna 550	B-II	287	494	878
Cessna 560 XL	B-II	608	1,046	1858
Cessna 560*	B-II	1469	2,529	4493
Dassault Falcon 2000EX	B-II	10	17	30
Falcon 50	B-II	48	83	150
Falcon 50EX	B-II	8	14	24
Subtotal B-II Aircraft		**2,713**	**4,670**	**8,297**
Beechjet 400A	C-I	213	399	1,010
Israel Westwind	C-I	70	130	103
Learjet 31/31A	C-I	181	339	539
Learjet 35	C-I	121	227	804
Learjet 45	C-I	322	602	1,430
Subtotal C-I Aircraft		**907**	**1,697**	**3,886**
Cessna 650	C-II	10	20	64
Cessna 680	C-II	13	25	77
Cessna 750 (Citation X)	C-II	21	43	133
Challenger (Series 600)	C-II	19	38	118
Falcon 900EX	C-II	38	76	235
Subtotal C-II Aircraft		**100**	**202**	**627**
Total Turbojet		**4,920**	**8,679**	**16,594**

Notes:
[1] Based upon historic information obtained from FAA, 2006 GCR Operations Database, CRG ATCT, and tenant information.
[2] 2011 and 2020 forecast operations based upon approved fleet mix forecast from Chapter 3 and 2005 Craig Airport FAR Part 150 Comparative Noise Study.
Source: The LPA Group Incorporated, 2007

E.1.2 Step 2: Aircraft Requiring the Longest Runway Length at MTOW

Step 2 of **FAA AC 150/5325-4B** states: "Identify the airplanes that will require the longest runway length at MTOW. This will be used to determine the method for establishing the recommended runway length" (Chapter 1, Pg. 2, Paragraph 102.b.2).

In accordance with FAA guidance, MTOW data was obtained and listed for each critical design airplane identified in Step 1. For these aircraft, MTOW, 2006 operations, and 2011 and 2026 projected operations are presented in **Table E-5**.

Table E-5
MTOW of Critical Design Airplanes Operations at Craig Municipal Airport

Critical Design Airplane	MTOW (lbs)[1]	2006 Actual Operations[2]	2011 Projected Operations[3]	2026 Projected Operations[3]
VLJs	5,995	0	92	465
Cessna 501	10,600	281	473	0
Dassault Falcon 10	18,740	107	181	697
MU300	14,630	404	679	1,311
Cessna 525 (CJ1)	10,400	407	685	1,311
Cessna 525A (CJ2)	12,500	239	411	730
Cessna 525B (CJ3)	13,870	44	76	135
Cessna 550	14,800	287	494	878
Cessna 560 XL	19,200	608	1,046	1858
Cessna 560	16,830	1469	2,529	4493
Dassault Falcon 2000EX	35,800	10	17	30
Falcon 50	37,480	48	83	150
Falcon 50EX	40,780	8	14	24
Beechjet 400A	16,100	213	399	1,010
Israel Westwind	23,500	70	130	103
Learjet 31/31A	16,500	181	339	539
Learjet 35	18,300	121	227	804
Learjet 45	20,200	322	602	1,430
Cessna 650 (Citation VI)	23,000	10	20	64
Cessna 680 (Sovereign)	30,300	13	25	77
Cessna 750 (Citation X)	36,100	21	43	133
Challenger (Series 600)	48,200	19	38	118
Falcon 900EX	48,300	38	76	235
	Total Operations	**4,920**	**8,679**	**16,594**

Notes:
[1]Data obtained from manufacturer's websites.
[2] Based upon historic information obtained from FAA, 2006 GCR Operations Database, CRG ATCT, and tenant information.
[3]2011 and 2026 forecast operations based upon approved fleet mix forecast from Chapter 3 and 2005 Craig Airport FAR Part 150 Comparative Noise Study.
[4]Older Cessna 501 aircraft anticipated to be replaced by newer and quieter B-I model aircraft

Source: The LPA Group Incorporated, 2007

FAA's guidance in Step 2 provides further instruction. Once MTOW of the critical aircraft has been determined, the AC states "when the MTOW of listed airplanes in 60,000 lbs. or less, the recommended runway length is determined according to a family grouping of airplanes having similar performance characteristics and operating weights" (Chapter 1, pg. 2, paragraph 102.b.2). Therefore for the purpose of this analysis, the runway length analysis should be created using a "family grouping of airplanes".

E.1.3 Step 3: Method Needed for Recommended Runway Length Analysis

Step 3 of **FAA AC 150/5325-4B** (Chapter 1, Pg 2, Paragraph 102.b.3) states: "Use Table 1.1 (found in **AC 150/5325-4B**) and the airplanes identified in Step 2 (**Table E-5**) to determine the method that will be used for establishing the recommended runway length".

For reference, Table 3 reflects the information contained in Table 1.1 of the AC (Chapter 1, Pg. 3). All of the critical design airplanes previously presented in **Tables E-4 and E-5**, with the exception of the VLJ and Cessna 501, have a MTOW greater than 12,500 lbs but less than 60,000 lbs. Since 4,920 operations were associated with these aircraft in 2006, the category of "aircraft over 12,500 but less than 60,000 lbs" was selected from Table 1.1 (as replicated in **Table E-6**) in order to continue this analysis.

Table E-6
Airplane Weight Categorization for Runway Length Requirements

<table>
<tr><th colspan="3">Airplane Weight Category
Maximum Certificated Takeoff Weight (MTOW)</th><th>Design Approach</th><th>Location of Design Guidelines (in AC 150/5325-4B)</th></tr>
<tr><td rowspan="4">12,500 pounds or less</td><td colspan="2">Approach Speed less than 20 knots</td><td>Family Grouping of Small Airplanes</td><td>Chapter 2; Paragraph 203</td></tr>
<tr><td colspan="2">Approach Speeds of at least 30 knots but less than 50 knots</td><td>Family Grouping of Small Airplanes</td><td>Chapter 2; Paragraph 204</td></tr>
<tr><td rowspan="2">Approach Speeds of 50 knots or more</td><td>With Less than 10 Passengers</td><td>Family Grouping of Small Airplanes</td><td>Chapter 2; Paragraph 205; Figure 2-1</td></tr>
<tr><td>With More than 10 Passengers</td><td>Family Grouping of Small Airplanes</td><td>Chapter 2; Paragraph 205; Figure 2-2</td></tr>
<tr><td colspan="3">Over 12,500 pounds but less than 60,000 pounds
(Selected Category)</td><td>Family Grouping of Large Airplanes</td><td>Chapter 3; Figure 3-1 or 3-2[a] and Tables 3-1 or 3-2</td></tr>
<tr><td colspan="3">60,000 pounds or more or Regional Jets</td><td>Individual Large Airplane</td><td>Chapter 4; Airplane Manufacturer Websites (Appendix 1)</td></tr>
</table>

Source: FAA AC 150/5325-4B.
Notes:
a) When the design airplane's airport planning manual (APM) shows a longer runway length than what is shown in Figure 3-2 (AC 150/5325-4B), use the airplane manufacturer's APM. However, users of an APM are to adhere to the design guidelines found in Chapter 4 (AC 150/5325-4B).

Runway length calculations were based upon useful load. The term useful load refers to the difference between maximum allowable structural gross weight and the operating empty weight. The useful load is typically defined by usable fuel, passengers and cargo. According to **FAA AC 150/5325-4B**, the recommended runway length must be able to accommodate the critical aircraft or family of critical aircraft at a 60 percent or higher useful load.

Figures 3-1 and 3-2 in the FAA AC provide charts that can be utilized to determine the recommended runway length. Figure 3-1 is a chart to determine runway lengths for "75% of fleet at 60 or 90% useful load," and Figure 3-2 is a chart to determine runway lengths for "100% of the fleet at 60 or 90% useful load". Table 3-1 provides a list of aircraft that constitute 75 percent of the fleet, and Table 3-2 provides a list of aircraft that make up the remaining fleet (100% of fleet). As stated in paragraph 303.a.2 of the AC, "Tables 3-1 and 3-2 should be utilized to determine which Figure (3-1 or 3-2) should be used".

Based on FAA Tables 3-1 and 3-2, CRG's critical design airplanes found in the 75% and 100% categories are shown in **Table E-7**. Table 3-1 applies to aircraft with balanced takeoff field length requirements at ISA of 5,000 feet or less. Table 3-2 applies to aircraft requiring a takeoff balanced field length at ISA of 5,000 feet or greater. Seventeen airplanes fall into the 75% category and five airplanes fall into the 100% category. At this time, very light jets have not been categorized. Chapter 3 of the FAA AC states that if "airplanes under evaluation are listed in Table 3-2, then figure 3-2 should be used to determine the runway length". Therefore, since five aircraft are included in the 100% fleet mix category (Table 3-2) then Figure 3-2 of the FAA AC was utilized to determine required runway length.

Table E-7 Fleet Category of Critical Design Airplanes at Craig Municipal Airport	
Critical Design Airplanes	**Fleet Category[1]**
VLJs (Eclipse 500)	NA
Cessna 501	75%
Dassault Falcon 10	75%
MU300	75%
Cessna 525 (CJ1)	75%
Cessna 525A (CJ2)	75%
Cessna 525B (CJ3)	75%
Cessna 550	75%
Cessna 560 XL	75%
Cessna 560	75%
Dassault Falcon 2000EX	100%
Falcon 50	75%
Falcon 50EX	75%
Beechjet 400A	75%
Israel Westwind	75%
Learjet 31/31A	75%
Learjet 35	75%
Learjet 45	75%
Cessna 650 (Citation VI)	100%
Cessna 680 (Sovereign)	75%
Cessna 750 (Citation X)	100%
Challenger (Series 600)	100%
Falcon 900EX	100%
Critical Design Airplanes in 100% Category: 5	

Notes: [1]Fleet Category corresponds to aircraft groupings contained in Tables 3-1 and 3-2 of FAA AC 150-5325-4B. VLJs, at this time, have not been assigned a category.
Source: The LPA Group Incorporated, 2007

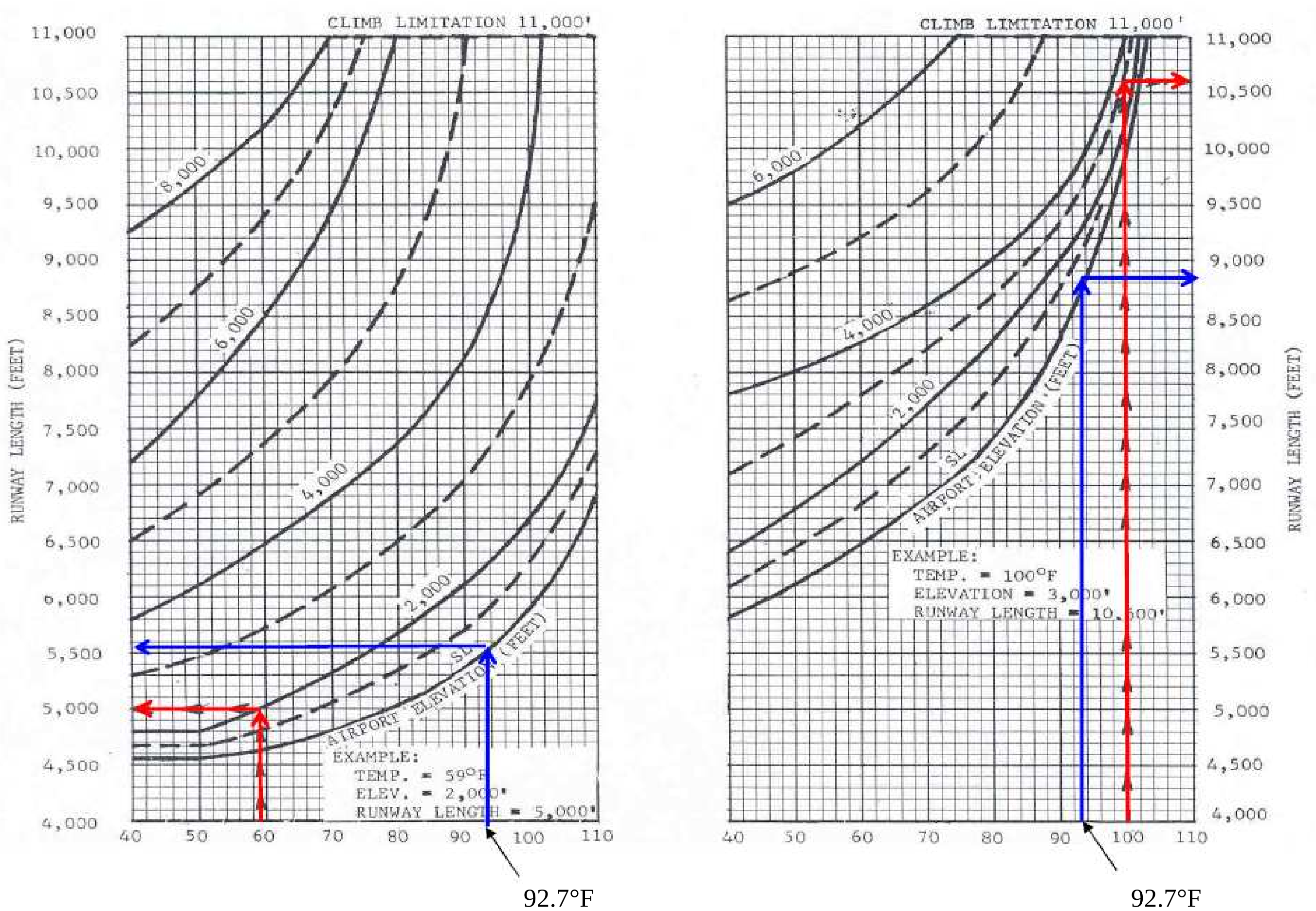
E.1.4 Step 4: Select the Recommended Runway Length

In Step 3, it was concluded that Figure 3-2 (Chapter 3, pg 13) in **FAA AC 150/5325-4B** would be utilized to calculate runway length requirements at CRG. Figure 3-2 provides two separate runway length curves which vary by 60% or 90% of the airplane useful load factor. For the purposes of this analysis both 60% and 90% useful load was evaluated. **Figure E-1** below depicts the runway length chart found in Figure 3-2 for 100% of the fleet operating at 60% or 90% useful load. Given the airport elevation of 41 feet[5], interpolation was used to arrive at a proposed runway length. Utilizing a mean maximum temperature for CRG of 92.7° F[6] and airport elevation of 41 feet above mean sea level, the corresponding unadjusted

[5] Airport elevation obtained from previous approved Airport Layout Plan Set, FAA 5010 Database and verified by 2007 airport survey.
[6] National Climatic Data Center, Official Temperature Records, Craig Municipal Airport (Station 72206), Jacksonville FL Station (August 2006).

runway length associated with the CRG equates to 5,540 feet for aircraft operating at 60% useful load, and 8,840 feet for aircraft operating at 90% useful load as shown in **Figure E-4**. Adjustments for runway gradient, runway condition and aircraft use (i.e. fractional ownership and air taxi) shall be considered in Step 5.

Figure E-1
100 Percent of Fleet at 60 or 90 Percent Useful Load



100% of Fleet at 60 Percent Useful Load **100% of Fleet at 90 Percent Useful Load**

Sources: FAA Advisory Circular 150/5325-4B, Figure 3-2, NCDC Official Weather Data, Runway Inner Approach Survey, and The LPA Group Incorporated, 2007

E.1.5 Step 5: Runway Length Adjustment

The runway takeoff length determined in Step 4 does not include an adjustment for runway gradient. According to Paragraph 304 of the AC (pg. 10), the runway takeoff length should be increased at a rate of 10 feet for each foot of elevation difference between the high and low points of the runway centerline. At CRG, the difference in elevation in the runway high and low points of Runway 14-32 is 10 feet (42 feet - 32 feet)[7]. Therefore, 100 feet should be added to the runway length calculated in Step 4. **This results in a total recommended length of 5,640 feet (5540 + 100 feet) for aircraft operating at 60 percent useful load on dry pavement and 8,940 feet (8,840 + 100 feet) for aircraft operating at 90 percent useful load.**

The AC further states by regulation, the runway landing length for turbojet-powered airplanes obtained from the "60 percent useful load" curves are increased by 15 percent or up to 5,500 feet, whichever is less, to accommodate wet pavement conditions. Since the recommended runway length at CRG exceeds 5,500 feet, an additional adjustment for wet and slippery conditions is technically not required.

E.2 Runway Takeoff Length Supporting Data

In support of **FAA AC 150/5325-4B**, the FAA Central Region, Airport Planning Division, developed two spreadsheets, *Takeoff Runway Length Adjustment (***Figure E-2***)* and *Landing Runway Length Adjustment (***Figure E-4***)*, to provide a methodology for estimating the runway lengths based upon specific aircraft and airport operating requirements. FAA Headquarters is looking into developing similar spreadsheets as part of an updated to **AC 150/5325-4B**.

The aircraft types analyzed as shown in **Table E-4** were based upon a review of existing business jets currently operating at CRG. Runway performance length factors were used for the development of the recommended runway length in support of **AC 150/5325-4B** findings. **Figure E-2**, *FAA Takeoff Length Adjustment Spreadsheet*, provides a more detailed description of the mathematical formulas used to adjust runway length for non-standard local conditions. This is not a substitute for calculations required by airplane operating rules and does not include insurance requirements for specific aircraft or operations.

Applying the aircraft's specific takeoff balanced field length requirement (L) and the following airport specific adjustments for CRG provides an adjusted runway takeoff length.

- Elevation (E) = 41 feet
- Mean Maximum Temperature of Hottest Month = 92.7° Fahrenheit, and
- Effective Gradient Adjustment (difference in Runway 14-32 high and low points) = 10 feet[7]

Figure E-2, *Takeoff Runway Length Adjustment*, demonstrates the mathematical methodology used for determining the adjusted runway takeoff length for the Dassault Falcon 900EX.

[7] Survey data obtained from LD Bradley, November 2007

Figure E-2
Takeoff Runway Length Adjustment
Sample Aircraft: Falcon 900EX

TABLE A-1
TAKEOFF RUNWAY LENGTH ADJUSTMENT
(given takeoff length at sea level, Mean Max Temperature, Elevation & difference in Hi / Lo pts)

Altitude Correction	E = Elevation
(7% per 1,000' above sea level)	L = Takeoff length @ sea level
	L1 = Length corrected for altitude
	L1 = (.07 * E / 1000) * L + L
Temperature Correction	
(0.5% per degree above stnd temp in hottest month)	
(Stnd Temp adjusted to Sea Level)	T1 = Adjusted Stnd Temp
	T = Mean Max High Temperature
	L2 = Length corrected for altitude & temperature
	T1 = 59 - (3.566 * E / 1000)
	L2 = (.005*(T - T1)) * L1 + L1
Effective Gradient Correction (takeoff only)	
(10' for each 1' difference between Hi / Lo P	G = Difference between Hi / Lo point in feet
	L3 = RW length corrected for alititude, temperature & gradient
	L3 = G * 10 + L2

Takeoff Runway Length at Sea Level and 59 Degrees Fahrenheit		
1. Enter the takeoff runway length at sea level in feet	L =	5215
Altitude		
2. Enter Airport Altitude in feet above sea level	E =	41
	L1 =	5230
Temperature		
3. Enter Mean Max Daily Temp in degrees F	T =	92.7
	T1=	58.85
	L2 =	6115
Gradient Adjustment		
4. Enter Maximum Difference in RW Elevation in feet		10
Takeoff Runway Length Adjusted for Temp, Elevation & Gradient	L3 =	6215

Source: Federal Aviation Administration Central Region, Airport Planning Division, 2005

The runway length requirements were based upon the maximum allowable gross takeoff weight shown in **Table E-5** at maximum payload and range for the aircraft listed. The origin and destination markets for business jet aircraft at CRG include Denver, New York City, Miami, Washington, Dallas, Chicago, and limited trips to the West Coast, including Seattle and Los Angeles. As a result, an average stage length of between 1,200 - 1,500 nautical miles (NM) was used to determine the runway length requirements. **Figure E-3** demonstrates the 1,500 NM coverage (within circle) for aircraft originating at CRG.

Figure E-3
1500 Nautical Mile Aircraft Stage Length From
Craig Municipal Airport

Source: Great Circle Distance, http://gc.KLS2.com

CRG's primary runway is Runway 14-32, which has a currently documented usable pavement length of 3,998 feet. Using the methodology outlined in **Figure E-2**, the following adjusted runway takeoff lengths (**Table E-8**) were developed for each of the critical design aircraft denoted in **Table E-4, Critical Design Airplane**. Aircraft runway takeoff balanced field length data[8] at International Standard Atmosphere (ISA) conditions was obtained from manufacturer's websites and aircraft operating handbooks. ISA balanced field takeoff length is based upon 59° Fahrenheit, elevation at sea level, standard flap setting, zero grade change, dry and uncontaminated pavement conditions, and includes aborted takeoff stopping distance.

[8] The unadjusted recommended runway length is based upon the longest of the following three distances:

- Accelerate-Takeoff Distance: The total distance needed for the aircraft to accelerate to the critical takeoff speed (V_1), takeoff, and climb to an altitude of 35 feet above ground level with one engine-out at V_1.
- Accelerate-Stop Distance: The distance needed for the aircraft to accelerate to V_1, and brake to a full stop under wet pavement conditions.
- All-engine takeoff distance: 115 percent of the distance needed to accelerate to V_1, takeoff, and climb to an altitude of 35 feet above ground with all engines operating normally.

Table E-8
Critical Design Aircraft
Runway Takeoff Length Adjustment

Critical Design Airplane	Runway Dry Pavement Length Required (ft)		Existing and Projected Operations		
	ISA[1]	Adjusted Length at Mean Max. Temp (92.7°F)[2]	2006 Actual Operations[3]	2011 Projected Operations[4]	2026 Projected Operations[4]
VLJs (Eclipse 500)	2,342	2,846	0	92	465
Cessna 501	2,830	3,418	281	473	0
Dassault Falcon 10	4,450	5,318	107	181	697
MU300	4,300	5,142	404	679	1311
Cessna 525 (CJ1)	3,080	3,712	407	685	1311
Cessna 525A (CJ2)	3,360	4,040	239	411	730
Cessna 525B (CJ3)	3,180	3,829	44	76	135
Cessna 550	3,600	4,321	287	494	878
Cessna 560 XL	3,590	4,310	608	1046	1858
Cessna 560	3,520	4,228	1,469	2529	4493
Dassault Falcon 2000EX	5,757	6,851	10	17	30
Falcon 50	4,890	5,834	48	83	150
Falcon 50EX	4,890	5,834	8	14	24
Beechjet 400A	4,169	4,989	213	399	1010
Israel Westwind	5,250	6,256	70	130	103
Learjet 31/31A	3,500	4,204	181	339	539
Learjet 35	5,000	5,963	121	227	804
Learjet 45	4,439	5,305	322	602	1430
Cessna 650 (Citation VI)	5,150	6,139	10	20	64
Cessna 680 (Sovereign)	4,000	4,790	13	25	77
Cessna 750 (Citation X)	5,140	6,127	21	43	133
Challenger (Series 600)	5,700	6,784	19	38	118
Falcon 900EX	5,215	6,215	38	76	235
		Total Operations	**4,920**	**8,679**	**16,594**

Notes:
[1] Balanced Field Length requirement based upon International Standard Atmosphere (ISA) conditions. Data obtained from manufacturer's websites.
[2] Lengths calculated by LPA Group using FAA Takeoff Runway Length Adjustment Spreadsheet, Exhibit 1, using NCDC 2006 Temperature Data
[3] Based upon historic information obtained from FAA, 2006 GCR Operations Database, CRG ATCT, and tenant information.
[4] 2011 and 2026 forecast operations based upon approved fleet mix forecast from Chapter 3 and 2005 Craig Airport FAR Part 150 Comparative Noise Study.
Source: The LPA Group Incorporated, 2007

E.3 Runway Landing Length Supporting Data

Landing length is also a critical component of the runway length analysis. Like the takeoff length, landing length must be adjusted based upon the unique characteristics of the airport. Using the *FAA Landing Length Adjustment Spreadsheet*, **Figure E-4**, the landing length for the critical aircraft were adjusted based upon airport elevation (41 ft AMSL), mean maximum hottest temperature (92.7°F), and wet pavement conditions.

Figure E-4
FAA Landing Runway Length Adjustment
Sample Aircraft: Falcon 900EX

LANDING RUNWAY LENGTH ADJUSTMENT
(given landing length in dry conditions at sea level, Mean Max Temperature, Elevation)

Altitude Correction	E = Elevation
(7% per 1,000' above sea level)	L = Landing length @ sea level
	L1 = Length corrected for altitude
	L1 = (.07 * E / 1000) * L + L
Temperature Correction	
(0.5% per degree above stnd temp in hottest month)	
(Stnd Temp adjusted to Sea Level)	T1 = Adjusted Stnd Temp
	T = Mean Max High Temperature
	L2 = Length corrected for altitude & temperature
	T1 = 59 - (3.566 * E / 1000)
	L2 = (.005*(T - T1)) * L1 + L1
Wet Pavement Correction (landing length only)	
(15% increase in length based on dry conditions)	
	L3 = Landing RW length corrected for altitude, temperature & wet cond.
	L3 = 1.15 * L2

Landing Runway Length in Dry Conditions at Sea Level and 59 Degrees Fahrenheit			
	1. Enter the landing runway length at sea level in feet	L =	3520
Altitude			
	2. Enter Airport Altitude in feet above sea level	E =	41
		L1 =	3530
Temperature			
	3. Enter Mean Max Daily Temp in degrees F	T =	92.7
		T1=	58.85
		L2 =	4128
Landing Runway Length Adjusted for Temp, Elev. & Wet Cond.			
		L3 =	4747

Source: Federal Aviation Administration Central Region, Airport Planning Division, 2005

Typically, runway length requirements are less than takeoff weight requirements. However, based upon an FAA Rule published in the Federal Register June 2006, Safety Alert for Operators (SAFO 06012) dated 08/31/06, and confirmed with FAA Headquarters Flight Standards Service and Air Transportation Divisions, a mandatory 20 to 40 percent landing distance safety margin is required for all FAR Part 91K (Fractional Ownership certification)[9], 125 (Corporate/Travel Club Certificate)[10], and 135 (Air Taxi/Commuter and On-demand Certification)[11] turbojet operations. According to Mr. Jerry Ostronic of the FAA Air Transportation Division and FAA Flight Standards, aircraft at a primary airport must be able to land within 60 percent of usable runway pavement. According to FAA, the following general methodology can be used to determine if an airport has adequate runway length to accommodate FAR Part 91K, 125 and 135 operations:

- Multiply Balanced Field Length at ISA by a factor of 1.66 for Dry Pavement Conditions.
- Multiply Balanced Field Length at ISA by a factor of 1.92 for wet and uncontaminated pavement conditions. Note, a higher factor is used for snow, ice or contaminated runway conditions.

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[9] As of November 2003, a fractional ownership certification (FAR Part 91.1001K) was to provide oversight for fractional ownership operations created by individuals and corporations that share ownership of aircraft that are scheduled and maintained by a management company, and furnished trained flight crews. Under FAR Part 91.1001K, any person piloting a fractionally owned aircraft, whether they are a professional pilot or a fractional owner/pilot must meet the following requirements:

- Total Flight Time for all Pilots:
  - PIC = 1500 hours
  - SIC = 500 hours
- For Multi-engine turbine-powered aircraft:
  - PIC = ATP and applicable type rating
  - SIC = Commercial and instrument rating

[10] Refers to an aircraft that carries MORE THAN 19 passengers and/or MORE THAN 6,000 pounds of cargo. However, you CANNOT receive money for each individual flight. In other words, the company/group owns the aircraft and they are not "renting" it out to anyone outside the company/group - the aircraft is for their own private use. Corporations that have their own private aircraft for business purposes, whether flying its employees or customers (without direct compensation); Travel Clubs with members that pay annual dues as well as the additional cost to fly to different locations organized by the travel club; Sky Diving Clubs that own their own aircraft. In other words, any group that "jointly" owns an aircraft that carries more than 19 passengers and/or more than 6,000 pounds of cargo can operate under FAAs Part 125.

[11] Air Taxi Certification (Commuter and On-Demand Operations) applicability: Each certificate holder that was issued an air carrier or operating certificate and operations specifications under the requirements of part 135 of this chapter or under SFAR No. 38–2 of 14 CFR part 121 before January 19, 1996, and that conducts scheduled passenger-carrying operations with:

(i) Nontransport category turbopropeller powered airplanes type certificated after December 31, 1964, that have a passenger seat configuration of 10–19 seats;
(ii) Transport category turbopropeller powered airplanes that have a passenger seat configuration of 20–30 seats; or
(iii) Turbojet engine powered airplanes having a passenger seat configuration of 1–30 seats.
(2) Each person who, after January 19, 1996, applies for or obtains an initial air carrier or operating certificate and operations specifications to conduct scheduled passenger-carrying operations in the kinds of airplanes described in paragraphs (a)(1)(i), (a)(1)(ii), or paragraph (a)(1)(iii) of this section.

Thus, adjusted manufacturer landing length requirements based upon pavement condition, gradient and safety margin are provided in **Table E-7.**

Table E-7
Adjusted Landing Length Requirements

Critical Aircraft	Private Use/Corporate Use less than 20 passengers			Fractional Ownership, Air Taxi and Air Charter Requirements*	
	ISA[1]	Adjusted for CRG (92.7°F and 41 ft AMSL) [2]	Wet Pavement[3]	Dry Pavement[4]	Wet Pavement[5]
VLJs (Eclipse 500)	2,250	2,638	3,034	3,735	4,320
Cessna 501	2,350	2,756	3,169	3,901	4,512
Dassault Falcon 10	3,700	4,339	4,989	6,142	7,104
MU300	3,200	3,752	4,315	5,312	6,144
Cessna 525 (CJ1)	2,750	3,225	3,708	4,565	5,280
Cessna 525A (CJ2)	2,980	3,494	4,018	4,947	5,722
Cessna 525B (CJ3)	2,770	3,248	3,735	4,598	5,318
Cessna 550	3,180	3,729	4,288	5,279	6,106
Cessna 560 XL	3,180	3,729	4,288	5,279	6,106
Cessna 560	2,770	3,248	3,735	4,598	5,318
Dassault Falcon 2000EX	2,631	3,085	3,548	4,368	5,052
Falcon 50	2,920	3,424	3,938	4,847	5,606
Falcon 50EX	2,920	3,424	3,938	4,847	5,606
Beechjet 400A	2,960	3,471	3,991	4,914	5,683
Israel Westwind	2,720	3,189	3,668	4,515	5,222
Learjet 31/31A	2,870	3,365	3,870	4,764	5,510
Learjet 35	2,900	3,401	3,911	4,814	5,568
Learjet 45	2,660	3,119	3,587	4,416	5,107
Cessna 650 (Citation VI)	2,900	3,401	3,911	4,814	5,568
Cessna 680 (Sovereign)	2,650	3,107	3,573	4,399	5,088
Cessna 750 (Citation X)	3,410	3,999	4,598	5,661	6,547
Challenger (Series 600)	3,300	3,870	4,450	5,478	6,336
Falcon 900EX	3,520	4,128	4,747	5,843	6,758
Average	**2,934**	**3,441**	**3,957**	**4,871**	**5,634**

Notes:
[1]Manufacturer landing lengths based upon ISA conditions.
[2]Manufacturer's landing length adjusted for temperature and elevation (See Figure E-5, FAA Runway Landing Length Adjustment.
[3]Adjusted landing length corrected for wet pavement conditions (~15%) as shown in Figure E-5, FAA Runway Landing Length Adjustment)
[4]Dry pavement adjustment under 91, 119, 125 and 135 is manufacturer's ISA landing distance multiplied by 1.66 as provided by FAA Aircraft Certification and Flight Standards divisions.
[5]Wet pavement adjustment under 91, 119, 125, and 135 is manufacturer's ISA landing distance multiplied by 1.92 as provided by FAA Headquarters Air Transportation and Flight Standards divisions.
Sources: Manufacturers data, FAA Headquarters Air Transportation, Flight Standards and Certification divisions and The LPA Group Incorporated, 2007

E.4 Runway Extension Funding[12]

According to FAA Office of Safety and Standards in Washington D.C., the following is required to obtain federal funding for a runway extension:

- **FAA AC 150/5325-4B** is a design document; therefore, for funding, only aircraft operations that equal or exceed 500 operations within the first five years can be used to determine the runway length requirements.
- the critical aircraft can be based upon a family as well as combination of B-II and C-I aircraft as designated in the *Airport Improvement Program Handbook*, **Order 5100.38C –** June 28, 2005, Pages 56-57, **FAA Order 5090.3C**, *Field Formulation of NPIAS*, and **FAA AC 150/5325-4B**, *Runway Length Requirements for Airport Design*. However, the most demanding aircraft within the category that is estimated to equal or exceed 500 operations by year five for each family of aircraft would be designated as the most critical for runway length purposes.
- If these aircraft appear in **Table 3-1** and **not Table 3-2 of AC 150/5325-4B**, then **Figure 3-1** is to be used[13].
- The critical runway length is based upon the 60 percent load factor and the mean maximum temperature.
- Runway length is then adjusted for difference in the high and low points as well as wet pavement conditions.

Therefore, based upon the criteria outlined, by the year 2011, the Cessna 560 and 560XL (B-II) and Learjet 45 (C-I) each exceed 500 annual operations as shown in **Table E-5.** Since all three aircraft are identified in **Table 3-1**, *Airplanes that Make Up 75 Percent of the Fleet*[14], then **Figure 3-1** within the Advisory Circular must be used to calculate runway length requirements for funding.

[12] Information obtained from Mr. George Legarreta, Civil Engineer and Author of AC 150/5325-4B, who works within FAA Headquarters Office of Safety and Standards, during phone conversation on July 30, 2008.

[13] Note if the critical aircraft's takeoff length at ISA over a 50 ft obstacle is less than 5,000 feet, then Figure 3-1 must be used, even if aircraft is not listed in the tables. If, however, the critical aircraft's takeoff length (according to manufacturer statistics) is 5,000 feet or greater at ISA over a 50 ft obstacle, then Figure 3-2 must be used to calculate runway length. (Source: FAA Headquarters, Airport Engineering and Airport Safety Standards (AAS 100), July 31, 2008.

[14] Table 3-1 identifies aircraft that at ISA have runway takeoff length requirements of less than 5,000 ft, whereas Table 3-2 identifies aircraft at ISA that have a runway takeoff length requirement of 5000 feet or greater.

Table 3-1. Airplanes that Make Up 75 Percent of the Fleet

Manufacturer	Model	Manufacturer	Model
Aerospatiale	Sn-601 Corvette	Dassault	Falcon 10
Bae	125-700	Dassault	Falcon 20
Beech Jet	400A	Dassault	Falcon 50/50 EX
Beech Jet	Premier I	Dassault	Falcon 900/900B
Beech Jet	2000 Starship	Israel Aircraft Industries (IAI)	Jet Commander 1121
Bombardier	Challenger 300	IAI	Westwind 1123/1124
Cessna	500 Citation/501Citation Sp	Learjet	20 Series
Manufacturer	**Model**	**Manufacturer**	**Model**
Cessna	Citation I/II/III	Learjet	31/31A/31A ER
Cessna	525A Citation II (CJ-2)	Learjet	35/35A/36/36A
Cessna	550 Citation Bravo	Learjet	40/45
Cessna	550 Citation II	Mitsubishi	Mu-300 Diamond
Cessna	551 Citation II/Special	Raytheon	390 Premier
Cessna	552 Citation	Raytheon Hawker	400/400 XP
Cessna	560 Citation Encore	Raytheon Hawker	600
Cessna	560/560 XL Citation Excel	Sabreliner	40/60
Cessna	560 Citation V Ultra	Sabreliner	75A
Cessna	650 Citation VII	Sabreliner	80
Cessna	680 Citation Sovereign	Sabreliner	T-39

Source: FAA AC 150/5325-4B

Step 2: Apply airport elevation (41 feet) and mean maximum temperature (92.7 degrees Fahrenheit) to **Figure E-5** (shown as the blue line) to obtain the unadjusted 60 and 90 percent load factors. This resulted in the following runway lengths:

a. Estimated Length at 60% = 4,741 feet
b. Estimated Length at 90% = 6,991 feet

Step 3: Adjust Runway Length for Effective Runway Gradient
The runway takeoff length determined in Step 2 does not include an adjustment for runway gradient. Since the difference in elevation between the runway high and low points of Runway 14-32 is 10 feet (42 feet - 32 feet), then 100 feet should be added to the runway lengths determined in Step 2. This resulted in the following runway lengths:

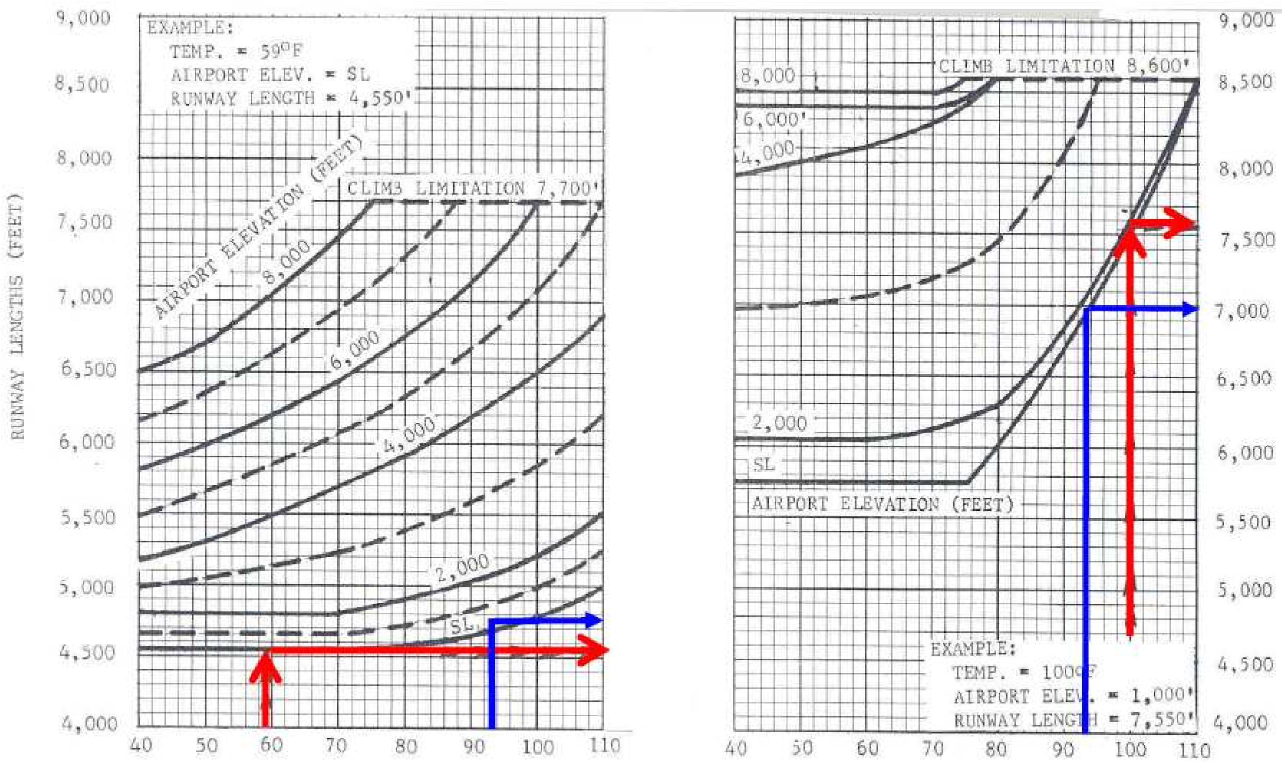
a. Estimated Runway Length at 60% Load Factor = 4,841 feet
b. Estimated Runway Length at 90% Load Factor = 7,091feet

Step 4: Wet and Slippery Runways (Applicable Only to Landing Operations of Turbojet-Powered Airplanes).
"By regulation, the runway length for turbojet-powered airplanes obtained from the "60 percent useful load" curves is increased by 15 percent or up to 5,500 feet (1,676 meters), whichever is less. By regulation, the runway lengths for turbojet powered airplanes obtained from the "90 percent useful load" curves are also increased by 15 percent or up to 7,000 feet (2,133 meters), whichever is less. No adjustment is necessary by regulation for turboprop-powered airplanes." (FAA AC 150/5325-4B, Pg 10) Therefore based upon the adjusted runway lengths identified in Step 3, the following runway lengths would be federally funded based upon design guidelines.

a. Adjusted wet pavement length at 60% load factor = (4841*.15)+4841 = 5,567.15 feet or **5,500 feet**.
b. No adjustment to 90 percent load factor for wet pavement since it exceeds 7,000 feet.

Thus, using the FAA AC 150/5325-4B methodology at 60 percent load factor, a runway length of at least 5,500 feet should be federally funded at CRG.

Figure E-5
75 Percent of Fleet at 60 and 90 Percent Load Factors



Mean Daily Maximum Temperature of Hottest Month of the Year in Degrees Fahrenheit

75 percent of feet at 60 percent useful load | 75 percent of feet at 90 percent useful load

Sources: FAA Advisory Circular 150/5325-4B, Figure 3-1, NCDC Official Weather Data, Runway Inner Approach Survey, and The LPA Group Incorporated, 2008

E.5 Summary

The results of the runway length analyses are summarized as follows:

- Based upon existing and anticipated demand, the aircraft or family of aircraft representing the critical aircraft will remain a C-II.
- By following the steps outlined in **FAA AC 150/5325-4B**, this analysis has provided justification that the minimum (60 percent useful load) recommended suitable runway length for critical design airplanes at CRG is between **5,640 feet** and the maximum suitable runway length (90 percent useful load) is **8,940 feet** is required to accommodate demand over the twenty year planning period.
- Based upon forecast demand through the year 2011, it is anticipated that FAA will participate in funding an extension of Runway 14-32 to provide a total length of 5,500 feet.
- Although not addressed within this section, a crosswind runway length of 4,000 feet based upon existing and anticipated aircraft use appears to be appropriate to accommodate demand over the twenty-year planning period.

The results of this analysis confirms the findings of previous planning reports that recommend an extension of at least one runway at CRG to accommodate the existing and forecast fleet mix. Further, the fleet mix assumptions are consistent with previous planning and noise studies.

A runway of 5,600 feet would provide adequate length for the majority of business jets with MTOW less than 60,000 pounds at 60 percent useful load and would provide similar service as that provided by other similarly sized reliever airports.

APPENDIX F

LONG-TERM NOISE ASSUMPTIONS

Craig Noise Contour Development Long Term Noise Assumptions

This section outlines assumptions used in determining the long term noise exposure levels for areas surrounding CRG including those associated with both the existing airfield and a proposed runway extension included in the LPA Master Plan's capital improvement program. In addition to the extension of Runway 14-32 1,600 to the southeast, the latter includes a 600 foot displacement of the landing thresholds at both ends of the runway. Runway use, flight track use, and nighttime use percentages are consistent with those used in the long term noise analysis outlined in the recent FAR Part 150 Noise and Land Use Compatibility Study. The forecast and fleet mix differed from those outlined in the Part 150 and reflect the results of the detailed forecast and fleet analysis conducted during the LPA Master Plan Update.

F.1 Integrated Noise Model (INM)

The FAA has approved two models for use in determining noise exposure -- NOISEMAP and the INM. NOISEMAP is used most often at military airports, while the INM is most commonly used at civilian airports and therefore was used for CRG. The model is designed as a conservative planning tool, and is periodically updated based on the philosophy that each version should present a conservative approach to noise prediction. To allow for direct comparison to the noise exposure maps outlined in the recent Part 150 Noise and Compatible Land Use Study, Version 6.1 was used for the long term analysis at the airport

F.1.1 Methodology

The INM works by defining a network of grid points at ground level around an airport. It then selects the shortest distance from each grid point to each flight track and computes the noise exposure generated by each aircraft operation, by aircraft type and engine thrust level, along each flight track. Corrections are applied for atmospheric acoustical attenuation, acoustical shielding of the aircraft engines by the aircraft itself, and aircraft speed variations. The noise exposure levels for each aircraft are then summed at each grid location. The cumulative noise exposure levels at all grid points are then used to develop noise exposure contours for selected values (e.g. 60, 65, 70, and 75 DNL). DNL noise contours of equal noise exposure can then be plotted.

F.1.2 INM Input Data

In order to develop DNL noise contours, the INM uses a series of input factors. Some of these factors are included in the database for the model (such as engine noise levels, thrust settings, aircraft profiles and aircraft speeds) and others are Airport-specific and need to be determined for each condition analyzed. This Airport-specific data includes the airport elevation, average annual temperature, runway layout, the mathematical description of ground tracks above which aircraft fly, and the assignment of specific aircraft with specific engine types at specific takeoff weights to individual flight tracks. Other INM input factors specific to CRG for this analysis include:

- Time of day/night of operations
- Stage lengths of aircraft
- Future aircraft operations and fleet mix
- Runway orientation and use

For GA airports, the split of itinerant and local activity are key factors that must be considered in the noise modeling effort. Local activity is generally described as an aircraft that remains in the local airspace within sight of the local air traffic control tower or within the tower's immediate area of control. These flights are often associated with training activities. Itinerant operations encompass the remainder of the flight activities at an airport and include transient aircraft activities.

F.1.3 Noise Curve Data

In addition to the mathematical procedures defined in the model, the INM has another very important element. This is a database containing tables correlating noise, thrust settings, and flight profiles for most of the civilian aircraft, and many common military aircraft, operating in the United States. This database, often referred to as the noise curve data, has been developed under FAA guidance based on thousands of actual noise measurements in controlled settings for each aircraft type.

The database also includes performance data for each aircraft type. This data allows the model to compute airport-specific flight profiles (rates of climb and descent) for each aircraft type, providing an accurate representation of actual procedures. The model also includes a number of FAA approved substitute aircraft. The tables contained in this chapter identify the actual aircraft type operating at CRG and, when necessary, the FAA approved INM substitute aircraft type.

F.2 Time of Day

For the purposes of noise modeling, the percentages of aircraft that operate during the daytime (7a.m.-10p.m.) and nighttime (10p.m.-7a.m.) are required. The separation of aircraft activity into daytime and nighttime activities is important because the Integrated Noise Model (INM) includes a 10 decibel penalty for aircraft noise during the nighttime hours.

Currently, the day night split is estimated to be 92 percent during the daytime and 8 percent during the nighttime. This same split was used for 2020.

F.3 Stage Length

An aircraft's "stage length" (or trip length) refers to the distance an aircraft flies to its next destination after departing an airport. The stage length is important in noise modeling, since the longer the distance an aircraft will travel to its next destination the greater its fuel load and overall weight and, as a result, the lower its departure profile will be. Stage lengths used in the INM for commercial service aircraft include the following ranges:

Stage length 1 – 0 to 500 miles	Stage length 2 – 500 to 1000 miles
Stage length 3 – 1000 to 1500 miles	Stage length 4 – 1500 to 2500 miles
Stage length 5 – 2500 to 3500 miles	Stage length 6 – 3500 to 4500 miles

There are no commercial aircraft at CRG. For GA aircraft, the INM automatically defaults to the maximum takeoff weight which was used for modeling future noise conditions.

F.4 Unconstrained and Constrained Fleet Assumptions

As outlined in Chapter 3, the LPA forecast (which was approved by the FAA) is an unconstrained forecast of future demand at the airport. That is, considering a variety of local, regional and national factors, the total operational level is what is anticipated at the airport without constraining factors. It was determined during the forecast analysis that some level of larger general aviation activity was already operating at the airport regardless of the extension. Therefore, the anticipated difference between the fleet with the extension versus without the extension is expected to be less than determined during the previous master plan update. The change in fleet is an important consideration in assessing the future noise implications of the runway extension to the communities surrounding CRG. Since the extension of the runway will allow general aviation aircraft to operate with improved payload capabilities, it is referred to as the "unconstrained" fleet scenario for the purpose of this analysis. Noise analysis related to the future activity conditions with the existing runway is referred to as the "constrained" fleet scenario. Activity for each major category of the fleet was analyzed for modeling.

F.4.1 Military Operations

Table F-1 presents the operations and fleet mix of military aircraft for 2020 as it was modeled for both the unconstrained and constrained scenarios.

TABLE F-1
2020 MILITARY OPERATIONS AND FLEET MIX

Aircraft	INM Aircraft	Operations	Operations/ Day	Percent of Fleet
Coast Guard	S70	740	2.0	50.1
Navy	A109	736	2.0	49.9
Total		***1,476***	***4.0***	***100.0***

Source: ESA Airports

F.4.2 General Aviation Operations

Tables F-2 and **F-3** present the 2020 itinerant fleet for the unconstrained and constrained scenarios respectively. Local general aviation operations and fleet mix for both the unconstrained and constrained scenarios are outlined in **Table F-4**.

TABLE F-2 2020 ITINERANT GENERAL AVIATION OPERATIONS AND FLEET MIX - UNCONSTRAINED					
Aircraft Category	**INM Aircraft**	**Aircraft Type**	**Operations**	**Operations / Day**	**Percent of Fleet**
Single-Engine	CNA172	Cessna 150/152/172/177	26,550	72.74	20.7%
Piston	CNA206	Cessna 182/185/205/206	12,170	33.34	9.5%
	CNA20T	Cessna 207	1,575	4.32	1.2%
	GASEPF	Beechcraft 23/24	8,243	22.58	6.4%
	GASEPV	Piper 28R/32R/46	12,191	33.40	9.5%
Multi-Engine Piston	BEC58P	Beechcraft 55/58/65/76/95	30,071	82.39	23.4%
Turboprop	CNA441	Cessna 421/425/441	7,712	21.13	6.0%
	DHC6	Beech Super King Air 200/300	7,233	19.82	5.6%
	EMB120	Embraer 120	46	.13	0.0%
	HS748A	Fairchild Merlin	639	1.75	0.5%
Jet	CNA500	Cessna Citation I	4,105	11.25	3.2%
	CL601	Canadair Challenger	86	.24	0.1%
	CNA750	Cessna Citation V, VLJ	380	1.04	0.3%
	CIT3	Cessna Citation VII	103	.28	0.1%
	CL600	Falcon 2000	27	.07	0.0%
	LEAR35	Lear 31/35/36	3,355	9.19	2.6%
	MU3001	Cessna 550/560/56X	6,719	18.41	5.2%
	IA1125	Astra 1125	88	.24	0.1%
Helicopter	EC130	Eurocopter EC130	2,173	5.95	1.7%
	B206L	Bell 206L	4,844	13.27	3.8%
Total			***128,308***	***351.53***	***100.00***
Source:ESA Airports					

TABLE F-3 2020 ITINERANT GENERAL AVIATION OPERATIONS AND FLEET MIX - CONSTRAINED					
Aircraft Category	**INM Aircraft**	**Aircraft Type**	**Operations**	**Operations / Day**	**Percent of Fleet**
Single-Engine	CNA172	Cessna 150/152/172/177	26,550	72.74	20.9%
Piston	CNA206	Cessna 182/185/205/206	12,170	33.34	9.6%
	CNA20T	Cessna 207	1,575	4.32	1.2%
	GASEPF	Beechcraft 23/24	8,243	22.58	6.5%
	GASEPV	Piper 28R/32R/46	12,191	33.40	9.6%
Multi-Engine Piston	BEC58P	Beechcraft 55/58/65/76/95	30,071	82.39	23.7%
Turboprop	CNA441	Cessna 421/425/441	7,712	21.13	6.1%
	DHC6	Beech Super King Air 200/300	7,233	19.82	5.7%
	EMB120	Embraer 120	46	0.13	0.0%
	HS748A	Fairchild Merlin	639	1.75	0.5%
Jet	CNA500	Cessna Citation I	4,105	11.25	3.2%
	CL601	Canadair Challenger	46	0.13	0.0%
	CNA750	Cessna Citation V, VLJ	335	0.92	0.3%
	CIT3	Cessna Citation VII	55	0.15	0.0%
	CL600	Falcon 2000	27	0.07	0.0%
	LEAR35	Lear 31/35/36	2,495	6.84	2.0%
	MU3001	Cessna 550/560/56X	6,434	17.63	5.1%
	IA1125	Astra 1125	59	0.16	0.0%
Helicopter	EC130	Eurocopter EC130	2,173	5.95	1.7%
	B206L	Bell 206L	4,844	13.27	3.8%
Total			***127,003***	***347.95***	***100.00%***
Source:ESA Airports					

TABLE F-4 2020 LOCAL GENERAL AVIATION OPERATIONS AND FLEET MIX					
Aircraft Category	**INM Aircraft**	**Aircraft Type**	**Operations**	**Operations/ Day**	**Percent of Fleet**
Single-Engine	CNA172	Cessna 150/152/172/177	28,219	77.31	34.2%
Piston	CNA206	Cessna 182/185/205/206	12,936	35.44	15.7%
	CNA20T	Cessna 207	1,674	4.59	2.0%
	GASEPF	Beechcraft 23/24	8,761	24.00	10.6%
	GASEPV	Piper 28R/32R/46	12,957	35.50	15.7%
Multi-Engine Piston	BEC58P	Beechcraft 55/58/65/76/95	11,844	32.45	14.3%
Turboprop	CNA441	Cessna 421/425/441	3,037	8.32	3.7%
	DHC6	Beech Super King Air 200/300	2,849	7.80	3.5%
	EMB120	Embraer 120	18	0.05	0.0%
	HS748A	Fairchild Merlin	252	0.69	0.3%
Total			***82,547***	***226.16***	***100.00***
Source: ESA Airports					

F.5 Flight Tracks

The location of flight tracks and corridors is an important factor in determining the geographic distribution of noise contours on the ground. Flight corridors utilized by arriving and departing aircraft in all flow conditions were reviewed and a series of centerlines of flight corridors (flight tracks) were established for each condition. These flight tracks were splayed within the INM in order to distribute the aircraft within each of the primary flight corridors. The flight tracks used for the 2020 analysis were assumed to be identical to those outlined in the Part 150 Study

The runway and flight track use percentages for propeller aircraft and training aircraft were assumed to be the same for the unconstrained and constrained fleet scenarios since these aircraft categories are more sensitive to wind conditions. Runway use and track use information for these aircraft are presented in **Tables F-5** and **F-6**. .

TABLE F-5
2020 PROPELLER AIRCRAFT FLIGHT TRACK USAGE

Runway	Departure Runway Use %	Departure Track	% of Flight Activity	Arrival Runway Use %	Arrival Track	Percentage of Flight Activity
Runway 5	20%	D1	40%	22%	A1	60%
		D2	5%		A2	20%
		D3	35%		A3	20%
		D3A	20%			
Runway 14	22%	D4	25%	28%		
		D5	50%		A4	40%
		D6	5%		A5	45%
		D7	15%		A6	15%
		D8	5%			
Runway 23	28%	D9	60%	20%	A7	20%
		D10	5%		A8	20%
		D11	35%		A9	60%
Runway 32	30%	D12	40%	30%	A10	15%
		D13	18%		A11	60%
		D14	2%		A12	25%
		D15	40%			

Source: FAA Air Traffic Control and ESA Airports

TABLE F-6 2020 LOCAL PATTERN FLIGHT TRACK USAGE			
Runway	**Touch and Go use Percentage**	**Track**	**Prop / Turboprop GA Jet Military**
5	22	T1	95%
		T2	5%
14	28	T3	5%
		T4	95%
23	20	T5	95%
		T6	5%
32	30	T7	95%
		T8	5%
Source: FAA Air Traffic Control and ESA Airports			

For jet aircraft, runway and flight track utilization is expected to change if the runway is extended. It is anticipated that most jet aircraft will request use of the longer runway to improve the payload capabilities and safety margin for their operations at CRG. **Table F-7** represents the current runway and flight track utilization if the runway is not extended (constrained scenario) and **Table F-8** shows the modeled track utilization if the runway is extended.

TABLE F-7 2020 JET AIRCRAFT FLIGHT TRACK USAGE (NO EXTENSION)						
Runway	**Departure Runway Use %**	**Departure Track**	**% of Flight Activity**	**Arrival Runway Use %**	**Arrival Track**	**Percentage of Flight Activity**
Runway 5	20%	D2	100%	22%	A2	100%
Runway 14	22%	D5	60%	28%	A5	100%
		D7	40%			
Runway 23	28%	D10	50%	20%	A8	100%
		D11	50%			
Runway 32	30%	D13	10%	30%	A11	100%
		D14	60%			
		D15	30%			
Source: FAA Air Traffic Control and ESA Airports						

TABLE F-8 2020 JET AIRCRAFT FLIGHT TRACK USAGE (WITH EXTENSION)						
Runway	**Departure Runway Use %**	**Departure Track**	**% of Flight Activity**	**Arrival Runway Use %**	**Arrival Track**	**Percentage of Flight Activity**
Runway 5	5%	D2	100%	5%	A2	100%
Runway 14	30%	D5	60%	30%	A5	100%
		D7	40%			
Runway 23	5%	D10	50%	5%	A8	100%
		D11	50%			
Runway 32	60%	D13	10%	60%	A11	100%
		D14	60%			
		D15	30%			
Source: FAA Air Traffic Control and ESA Airports						

APPENDIX G

FEDERAL GUIDANCE AND RUNWAY EXTENSION LETTERS

Regional Guidance Letter

Airports Division, Southern Region

Number: RGL 01-2

Line of Business: Airport Planning

Date: August 2001

Subject: Runway Length and Strength Requirements for Business Jet Aircraft

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Purpose: This Regional Guidance Letter supplements RGL 00-1, Standard Development for "Business Jet" Aircraft, and Advisory Circular (AC) 150/5325-4A, Runway Length Requirements for Airport Design, and provides additional guidance for determining the appropriate runway length and strength for airports expected to serve business jet aircraft.

Background: There has been a rapid increase in the business jet aircraft fleet over the past few years. Many new models and several new manufacturers have been introduced into the marketplace. There has also been a general increase in the size of business jet aircraft. As a result, AC 150/5325-4A, and therefore the runway length portion of the Airport Design for Microcomputers program which is based on this AC, is out of date with regard to business jet aircraft. Most of the business jets listed in the AC are now obsolete. While the AC or the microcomputer program should still be used as a general guide in determining the appropriate runway length for airports serving business jet aircraft, additional guidance is needed to ensure the runway length is adequate for the specific makes and models of business jets expected to use the airport on a regular basis.

The FAA's Central Region Airports Division reviewed the performance characteristics of 64 different makes and models of business jet aircraft, 57 of which are listed in the attached table (ref: Table 1. Business Jet Statistics). There was not enough information available to determine the performance characteristics of the remaining models. An analysis of the information in Table 1 revealed the following:

Category B Business Jets: 23 of the models studied have approach speeds of 91 knots or more, but less than 121 knots. All of these jets have a wingspan of less than 79 feet, thus fall in Airplane Design Groups I or II. About 5,500 of these jets have been manufactured to date. These aircraft typically weigh between 10,000 and 45,000 pounds, with most weighing less than 30,000 pounds. The takeoff distance required at sea level, standard temperature, and maximum takeoff weight is between 3,200 and 5,500 feet. The landing distance required in dry conditions at sea level, standard temperature, and maximum landing weight ranges from 2,500 to 5,900 feet.

Category C Business Jets: 28 of the models studied have approach speeds of 121 knots or more, but less than 141 knots. All but one of these jets have wingspans of less than 79 feet, thus fall in Airplane Design Groups I or II. One jet has a wingspan of 94 feet, thus falls in Airplane Design Group III. There have been about 5,400 of these jets manufactured to date. Most of them weigh between 13,000 and 45,000 pounds. The takeoff distance required at sea level, standard temperature, and maximum takeoff weight is between 3,200 and 5,700 feet. The landing distance required in dry conditions at sea level, standard temperature, and maximum landing weight ranges from 2,400 to 5,900 feet.

Category D Business Jets: Only 4 of the models studied have approach speeds greater than 141 knots. One of them has a wingspan less than 49 feet, thus falls in Airplane Design Group I. Two of them have wingspans greater than 49 feet, but less than 79 feet, thus fall in Airplane Design Group II. One of them has a wingspan greater than 79 feet, but less than 118 feet, thus falls in Airplane Design Group III. There have been about 1,100 of these jets manufactured to date. Three of these aircraft weigh between 60,000 and 95,000 pounds. The fourth weighs 23,500 pounds. The takeoff distance required at sea level, standard temperature, and maximum takeoff weight is between 5,500 and 6,000 feet. The landing distance required in dry conditions at sea level, standard temperature, and maximum landing weight ranges from 3,000 to 3,500 feet.

Guidance:

Determinations of Required Runway Length for Business Jets: ADO Program Managers should determine the required runway length based on AC 5325-4A or the Airport Design for Microcomputers program. However, this should be supplemented by checking the runway length required for the specific makes and models of business jet aircraft expected to use the airport on a regular basis (regular basis being defined as at least 250 annual takeoff operations).

The runway length required for specific business jets may be determined by adjusting the takeoff and landing runway lengths listed in Table 1 for altitude, temperature, maximum difference in runway centerline elevations, i.e., effective gradient (takeoff length only), and wet runway conditions (landing length only). Note that takeoff and landing lengths for some of the aircraft were not available in the data used to compile the table and must be obtained from the manufacturer. The attached spreadsheets (ref: Takeoff Runway Length Adjustment.xls and Landing Runway Length Adjustment.xls) are available electronically in the Airports Reference System to aid Program Managers in making the runway length adjustment calculations. Program Managers may enter the values for takeoff and landing runway length from Table 1, airport elevation, mean maximum daily temperature, and difference between the high and low points of the runway (takeoff runway length only), and have the spreadsheets calculate the adjusted takeoff and landing runway lengths required. The greater of the adjusted takeoff or landing lengths is the recommended runway length for airport design.

Note that the takeoff runway lengths in the table are based on the aircraft operating at maximum takeoff weight, i.e., 100 percent useful load. In determining the adjusted takeoff runway length, consideration should be given to the stage length (non-stop haul distance) of the aircraft using the airport on a regular basis. This affects the fuel load to be carried, thus the weight of the aircraft. It may not be appropriate to assume that the aircraft operates at the maximum takeoff weight, i.e., 100 percent useful load. Therefore, the calculated takeoff runway length may be longer than actually required. The use of judgment is necessary in such cases.

The longer of the adjusted runway length calculated for the specific critical business jet aircraft or the runway length obtained from the AC or microcomputer program should be used as the required runway length.

Determinations of Required Runway Strength for Business Jets: ADO Program Managers should determine the required runway strength for the specific critical business jet aircraft expected to use the airport on a regular basis (regular basis defined as at least 250 annual takeoff operations). The required strength may be determined based on the maximum takeoff weight listed in Table 1.

In general, runways should have a dual wheel pavement strength of 30,000 pounds if they accommodate only category B business jets, 60,000 pounds if they accommodate category B and C business jets, and 90,000 pounds if they accommodate category B, C, and D business jets. However, these are broad generalizations and some category B business jets have a maximum takeoff weight of more than 30,000 pounds. Likewise, some category C business jets have a maximum takeoff weight of more than 60,000 pounds. Therefore, in practice, the pavement strength required for the specific critical aircraft should be used.

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Table 1. Business Jet Statistics

BUSINESS JETS	# MFG.	ARC	1.3 X STALL SPEED KNOTS	WING SPAN FEET	MAX T.O. LBS.	T.O. DIST. ISO	LAND. DIST. ISO
AEROSPATIALE SN-601 CORVETTE	40	B-I	118	42.2	14550	NA	NA
BEECHJET 400A/T/ T-1A JAYHAWK*	581	C-I	121	43.5	16100	4169	2960
BOMBARDIER CL-600 CHALLENGER	85	C-II	125	61.8	41250	5700	2775
BOMBARDIER CL-601 CHALLENGER	66	C-II	125	61.8	41250	5700	2775
BOMBARDIER CL-601-3A/3R CHALLENGER	194	C-II	125	61.8	41250	5700	2775
BOMBARDIER CL-604 CHALLENGER	180	C-II	125	61.8	47600	5700	2775
BOMBARDIER BD-700 GLOBAL EXPRESS	85	C-III	126	94	96000	6300	2700
CESSNA 500 CITATION	418	B-I	108	47.1	11850	2930	2270
CESSNA 501 CITATION I/SP	325	B-I	112	46.8	10600	2830	2350
CESSNA 525 CITATIONJET (CJ-1)	430	B-I	107	46.7	10400	3080	2750
CESSNA 525A CITATIONJET II (CJ-2)*	30	B-II	118	49.5	12500	3420	2980
CESSNA 550 CITATION II	733	B-II	108	51.7	13300	2990	2270
CESSNA 550 CITATION BRAVO*	161	B-II	112	52.2	14800	3600	3180
CESSNA 551 CITATION II/SP	94	B-II	108	51.8	12500	2650	2210
CESSNA 552/T-47A	15	B-II	107	52.2	16300	3180	2800
CESSNA S550 CITATION S/II	162	B-II	NA	52.2	15900	NA	NA
CESSNA 560 CITATION V Ultra	538	B-II	108	52.2	16300	3180	NA
CESSNA 560 CITATION ENCORE*	25	B-II	108	52.2	16830	3560	2865
CESSNA 560 CITATION EXCEL*	160	B-II	107	55.7	20000	3590	3180
CESSNA 650 CITATION III/VI	241	C-II	131	53.3	21000	5150	2900
CESSNA 650 CITATION VII*	119	C-II	126	53.6	23000	4850	3220
CESSNA 750 CITATION X*	160	C-II	131	63.6	36100	5140	3410
DASSAULT FALCON 10	226	B-I	104	42.9	18740	NA	NA
DASSAULT FALCON 20	515	B-II	107	53.5	28660	NA	NA
DASSAULT FALCON 2000**	140	B-II	114	63.5	35800	5240	5220
DASSAULT FALCON 50*	310	B-II	113	61.9	37480	4715	4875
DASSAULT FALCON 900	190	B-II	100	63.4	45500	4680	5880
DASSAULT FALCON 900 EX*	85	C-II	126	63.5	48300	4985	5880
GULFSTREAM II	258	D-II	141	68.8	65300	NA	NA
GULFSTREAM III	199	C-II	136	77.8	68700	NA	NA
GULFSTREAM IV	469	D-II	149	77.8	71780	5450	3190
GULFSTREAM V	160	D-III	NA	98.6	89000	5990	2950
HAWKER-SIDDELEY 125-400	291	C-I	124	47	23300	NA	NA
HAWKER-SIDDELEY 125-600	71	C-I	125	47	25000	NA	NA
BAE 125-700	212	C-I	125	47	24200	NA	NA
RAYTHEON/HAWKER 125-800	533	B-I	120	51.3	28000	5380	4500
RAYTHEON/HAWKER 125-1000 HORIZON	50	C-II	130	61.9	36000	5250	2340

Continued on next page…

BUSINESS JETS	**# MFG.**	**ARC**	**1.3 X STALL SPEED KNOTS**	**WING SPAN FEET**	**MAX T.O. LBS.**	**T.O. DIST. ISO**	**LAND. DIST. ISO**
ISRAEL AIRCRAFT INDUSTRIES							
JET COMMANDER 1121 & WESTWIND 1123/1124*	442	C-I	130	43.3	23500	NA	NA
ASTRA 1125	135	C-II	126	52.8	23500	5300	3500
GALAXY 1126	33	C-II	140	58.2	34850	5500	3500
LEARJET 23	100	C-I	124	NA	12500	4000	4300
LEARJET 24	257	C-I	128	35.6	13000	NA	NA
LEARJET 25	373	C-I	137	35.6	15000	NA	NA
LEARJET 28/29	9	B-I	120	43.7	15000	NA	NA
LEARJET 31	220	C-I	124	43.1	16500	3410	2870
LEARJET 35/36	739	C-I	133	39.5	18300	5000	2900
LEARJET 45	145	C-I	129	47.1	20200	4220	3140
LEARJET 55	147	C-I	138	43.7	21500	5310	3250
LEARJET 60	210	D-I	149	43.9	23500	5360	3420
MITSUBISHI MU-300 DIAMOND	111	B-I	109	43.5	14630	4300	3200
RAYTHEON 390 PREMIER	42	B-I	120	44	12500	3792	3300
SABRELINER T-39	140	NA	NA	NA	NA	NA	NA
SABRELINER 40	137	B-I	120	44.5	18650	4900	2950
SABRELINER 60	146	C-I	134	44.6	20200	3500	3400
SABRELINER 65	76	C-II	124	50.5	24000	5450	3345
SABRELINER 75	9	C-I	137	44.5	23300	5500	3750
SABRELINER 75a/80	72	C-II	128	50.4	24500	4460	3450

Notes:
* Denotes some of the Aircraft currently using CRG.
NA = Not Available
Takeoff Distance is based on maximum takeoff weight and effective gradient.
Landing Distance is based on maximum landing weight and dry pavement and no wind conditions.
ISO = Sea Level at 59 Degrees Fahrenheit
Some, but not all data has been checked against the approved aircraft flight manual.
This information is used for planning purposes only.

NATIONAL BUSINESS AVIATION ASSOCIATION, INC.

1200 EIGHTEENTH STREET NW, SUITE 400
WASHINGTON, DC 20036-2527
Tel: (202) 783-9000 • Fax: (202) 331-8364
E-mail: info@nbaa.org • Web: www.nbaa.org

November 7, 2007

Ms. Tiffany Gillem
Jacksonville Aviation Authority
Craig Municipal Airport
855-1 St. Johns Bluff Road N.
Suite #500
Jacksonville, FL 32225

Re: Craig Municipal Airport (CRG)

Dear Ms. Gillem:

As the southeast Regional Representative, for the National Business Aviation Association (NBAA), I write in support of needed airport development now under discussion for Craig Municipal Airport. Modest airfield/runway improvements to remedy present-day safety concerns would represent a prudent upgrading of the facility and is worthy of support from the Airport Authority and the entire community of airport users and neighbors. Safety is a high priority not only with NBAA Members, but with airport operators and FAA as well.

By way of background, the National Business Aviation Association represents over 8,000 Member companies that own or operate business aircraft or are involved in business aviation. NBAA's Members operate over 10,000 aircraft that support the travel needs of America's businesses. Over 1,150 aircraft of NBAA Members are based in the state of Florida. These Members rely on business aviation as a vital tool in the conduct of business. Fulfillment of this mission requires reasonable and safe access to the hundreds of general aviation airports serving the business locations and destinations of our Member Companies.

Some of the aircraft based at CRG are owned and operated by NBAA Member Companies, while many others fly into and out of the airport on a regular or itinerant basis in support of their business. Keep in mind that both current and future air access to your community by our Member companies will be accommodated through your municipal airport. As you and members of the Business Aviation community well know, airports such as CRG are vitally important because they provide significant transportation and economic benefits. It also provides business aviation passengers with direct access to your community via our national system of airports and airspace. Without this important infrastructure, our way of life and business would certainly be severely curtailed.

The CRG airport/runway safety development needs represent a logical and modest improvement to your airport facility. NBAA advocates for general aviation airport requirements, which have been identified by NBAA's airports/heliports Access Committee. From our vantage point, the Authority should pursue federal financial assistance from FAA under the Airport Improvement Program (AIP) to fund a major portion of the needed capital improvement safety project. Once completed, these airport layout modifications will provide both airport users and the Airport Authority with sufficient airport infrastructure from an operational standpoint; and will offer business aviation travelers a safer and overall more desirable airport facility. This is of obvious importance to NBAA Member Companies, but I feel it also would have a significant positive economic impact on the surrounding community.

For the reasons presented above, I urge the City Council to support JAA's proposed modernization of Craig Municipal Airport.

Sincerely,

Harry Houckes
NBAA SE Reg. Rep.
hhouckes@nbaa.org

(Written in "speakease" so please don't mind the format)

Morgan Miller 13912 Atlantic Blvd.

Mr. Council President, Honorable Council Members… good evening.

First, I want to commend all of you on your service to our community. It is certainly a daunting task. None of you would have chosen to serve in this position unless you had a passion to make our City better.

At one time I had the position that we should not want to expand the runway. I found that I was in fact under some misinformation.

Recently, I became involved with Craig Air Center, but before I did, I set out to do extensive and objective research to learn what both sides of the issue are.

I have even taken rides in aircraft to experience first hand what I am hearing from the Pilots. I have looked at independent studies and recommendations. I have looked at housing values and associated trends. I have talked to community leaders who opposed the issue.

Here are some facts.

I was told that the home values declined around Craig… I learned that the housing market around Craig has kept pace with the surrounding area… even in this current slump; it is down less than many areas not near any airport.

I was told that the noise levels would be higher… I learned that the noise levels would be lower.   With the longer runway the take offs and landings will be much quieter.

Aircraft will be higher above the residential areas. As you know, the compromise was to redo the markings on the asphalt to establish a 1000 ft overrun on each end, establishing a landing length of 5000 feet. With this new layout, it results in significantly raising the height of aircraft over the populated areas. The one area of concern… the 50ft incoming height difference on the south end will not change the noise contour.

I have been told that safety is not the primary factor. I have learned that indeed safety is the largest consideration.

Some recommendations have been put out from Council Members that if it was only about safety then why not do some of these other measures that exist at some other airports. After researching that option, I found that doing some kind of grass area or soft material, or catching mechanism… is not safe for all the aircraft in this airport. Some planes would flip as a result. This would most certainly result in injury and even death. Most would receive serious equipment damage at best. Why do this?

It does not mean that we are "***unsafe***" now. Just as for many years we only had one shoulder on the interstate… and now the guard railing system of old has been replaced with better designs. The wider designed shoulders and overall interstate highways are indeed safer… let's to the same type of thing at Craig. In fact, the interstate highway could handle large aircraft. Of course everything is fair game in an emergency. But, we are not talking about this. We are talking about safer day-to-day operations.

The short length of the runway currently here is absolutely the single thing that would be the most beneficial to improve for safety… nothing else would come to that level. And absolutely, having that "balanced" runway will result in business improvement over time. Make things better and you tend to be more attractive. More attractive to businesses who may want to locate here in Jacksonville, more to local businesses, more jobs, more positive economic impact.

I have been told that larger and commercial craft would be the new type of craft at Craig. I have learned that this is not desired from any side of the issue.

Separately from the limited weight capacity of the runway, the taxiways, the ramps and aprons the hangars, the handling equipment, maintenance facilities, the security parameter, etc. are not designed for larger craft, nor does the airport designation, or the ability to change it, (controlled by the FAA) even allow this. Nothing is setup for this… dig a hole… start over… 100's of millions of dollars later… you may be there… no one wants this… it's not even remotely cost effective.

JIA has way more capacity for growth for these big guys. Even if it was full, which will take many years, if ever; Cecil could be used for their overflow. Craig is there for the charter, corporate air and general aviation… and it's all that's wanted. Again, even from a purely business standpoint, these smaller aircraft are the desire at Craig.

For someone to use an example of a 51 passenger plane would be the new type of craft that would be hosted at Craig…. Not realistic. In theory I could house 20 people in my home, I was in the Navy… I slept within 20 feet of about 30 guys. It *COULD* be done… not realistic.

Let us stop using these extreme examples that are not reflective of how things will actually be. It only leads to more misinformation and creates fear. Please do more research before taking too strong of a position. Frankly, this method (solid fact finding…not dirt digging) will certainly keep egg off some faces, when the facts are learned.

I was told that the small prop planes would be squeezed out. I have learned that is certainly not the case. No one wants that; Now or in the future. Even if the only growth at Craig were limited to corporate jets, it would take many, many years to reach that capacity. I have also learned that many prop planes are indeed louder than some of these jets. The jets of today are much quieter than those of the past. In fact, we want to attract more of the small craft General Aviation customers here… it's good business.

During the last committee meeting I attended, Mr. Bishop made a statement about Safety… He said, "No one questions that a longer runway is a safer runway... But… safer for who?"

First, being safer for ***anyone*** would be a good thing… and certainly if it is safer for the pilot it is going to be safer for the passengers and those on the ground below.

Secondly, this expansion is tremendously safer for residents in the flight path of this runway. Because of this extension… pilots can stay on the ground more readily if there is a problem.

Currently… the "point of no return" happens quite soon… this is the point where the pilot ***must*** go airborne even if there is a problem… because… there is not enough room to stop the craft on the ground… I know I would prefer a plane who had an engine failure to stay on the ground than try to fix it in the air or come around for a landing again. This is called having a "balance runway".

I have been told that the land for Craig to extend the runway does not allow for a proper land "buffer" The particular piece of the runway that we are talking about already has more than the required space needed… no further land purchase is required to have that buffer. For other areas, if a desire to grow exists, it appears that yes, there would possibly be a need for some buffers or barriers to depending on the magnitude of the expansion. But, this is not needed for the piece in question.

As far as using another airport… Well… What did they say about the Dames Point Bridge… or how about Wonderwood… or JTB? Why did we have to put in 9A? Why didn't we keep Atlantic at just a two-lane road?

About mixing the different sized aircraft… well we could keep them all separate if we build about 15 more airports in the area… again not realistic. The FAA controls the flow of traffic. The mix is good here a Craig. There are some small ones at JIA that may be a better fit here.

Ladies and Gentlemen: I encourage you to explore the rest of the information that some of you may not have discovered, in an objective manner, and take advantage of the chance to actually fly… if your schedule won't permit… certainly get a straight forward understanding of the experience.

Thank you, again for all of your hard work and listening to my input. Let me know if I can be of assistance to any of you.

Morgan Miller
(904) 703-6393

WILLIAM P. CLARKE, M.D., F.A.A.F.P.
DIPLOMATE, AMERICAN BOARD OF FAMILY PRACTICE
1441 UNIVERSITY BOULEVARD NORTH, JACKSONVILLE, FLORIDA 32211
TELEPHONE (904) 743-1944

08/30/2007

William Bishop, A1A
City Council Member, District 2
Office of the City Council
117 West Duval St, Suite 421
Jacksonville, Florida 32202

Re: Craig Air Field runway extension

Dear Sir:

I attended the meeting of 8-27-07 and am sympatetically aware of your feelings in line with the multitude of groups against the runway extension. I am well aware of the pride Jim Tullis (a friend) had in taking a position against the extension. I can live with the fact that everyone there continually feels the "sky is falling" in regards to Craig Air Field and that is the way it will be as far as any action by you.

Nevertheless, I must say the lengthening enhances Craig. St Augustine airport has been wise enough to take away most of the Ponte Vedra type group with solicitation, convenience and foresight that the Jacksonville Council has lacked.

My flying years ahead of me have to be limited, but it does not diminish my interest or insight. My experiences start 1943 bicycling to Craig. I saw the Blue Angels first air show 1946-1948. Since 1963 I have been based at Craig continually, although I am also an active at Herlong as well. My activities at Craig now are certainly VFR, but for years it was not unusual to have to make instrument take offs and approaches late at night, successfully, such that the runway extension would have improved this greatly. It is my regret that another friend some years ago spoke at a public meeting with the authority of appearing like his experience with the FAA made the extension untendable . This created the extension downfall and I regret I was not there to correct his misrepresentation. It does not change your situation, but you need to know an airman's perspective and how limited the foresight of the local neighbors has been.

Sincerely,

William P. Clarke M.D.

Copy to: Michael D. Stewart
Director, External Affairs
P.O. Box 18018
Jacksonville, Florida

The issue deserves open and honest debate allowing the City Council as a whole to make an informed decision based on facts. Such a full disclosure process would also allow the general public to hear all the facts, and not just the emotional reaction of a segment of our community.

Sincerely,

Jack Demetree, Chairman
JAA Board of Directors

cc: Members, JAA Board of Directors
The Honorable Mayor John Peyton

WILLIAM P. CLARKE, M.D., F.A.A.F.P.
DIPLOMATE, AMERICAN BOARD OF FAMILY PRACTICE
1441 UNIVERSITY BOULEVARD NORTH, JACKSONVILLE, FLORIDA 32211
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Sincerely,

William P. Clarke M.D.

Copy to: Michael D. Stewart
Director, External Affairs
P.O. Box 18018
Jacksonville, Florida

Fwd: Runway extension at CRG
Dan Stroehlein [drstroehlein@yahoo.com]
Conversation: Runway extension at CRG

Dear Jacksonville City Council Members,

I am e-mailing you today to express my concern for the lack of runway at Craig airport. I have seen many aircraft barely make it out of our 4,000ft runways, not to mention the lack of runway space that is available if an aircraft were to have to abort a takeoff. Craig airport is centrally located between the beaches and downtown and is a popular airport for many executives and the governor to fly into. This airport is an asset to the community and by limiting the size of the runways the liability and accessibility of this great airport is hindered. I hope that everyone realizes that the more efficient an airport amounts to the increased productivity of the surrounding business's and tourism.

Sincerely,

Daniel Stroehlein
CFI

Support of Craig Airport runway extension
Stuart Till [stutill@bellsouth.net]
Conversation: Support of Craig Airport runway extension

I respectfully request your support in approving the runway 14/32 extension to 6,000 feet at Craig Airport. This is a safety issue. This will also have a positive economic impact on the community by allowing more business aircraft to land at Craig Airport.

Respectfully,

Stuart Till
President
First Coast Aviation Services LLC
St. Augustine, FL
904-315-1442 Cell
904-797-5844 Home/Office
904-794-5605 Fax
Member NBAA AOPA IPA

Dear Councilman Johnson:

It is critical that we support the Jacksonville Aviation Authority's plans to extend Craig Airport's main runway by 2,000 feet.

The longer runway proposed by the JAA will NOT mean bigger planes or commercial air service. That's not going to happen. The maximum weight of two-wheeled planes landing and taking off at Craig Airport is now 60,000 pounds. After the runway is extended, the maximum weight will still be 60,000 pounds. As for scheduled commercial flights, Craig Airport is not certificated by the Federal Aviation Administration to handle these types of flights nor will it be. The airport will continue to handle personal, corporate and charter aircraft.

Whatever your view on this issue, Craig Airport is here to stay and will continue to be an important part of the city's aviation system and economy. With that said, it is difficult for me to understand why anyone would argue against making Craig Airport safer.

I strongly urge the City Council to approve the runway extension. The issue is safety. Let's act responsibly now so we don't have to be sorry later.

Sincerely,

Lucille Beaulieu

From: Jim Delay [mailto:jim.delay@fulcrumpartnersllc.com]
Sent: Wednesday, October 03, 2007 3:43 PM
To: Art; Shad, Art; Corrigan, Michael; Davis, Daniel; Lee, Denise; Gaffney, Johnny; Johnson, Glorious; Jabour, Jay; Joost, Stephen; Hyde, Kevin; Jones, Mia; Clark, Richard; Redman, Don; Fussell, Ronnie; Bishop, Bill; Jones, Warren; Webb, Jack
Cc: tim@apro-fbo.com
Subject: Craig Municipal Airport (CRG)

It is my understanding that the Jacksonville City Council will hold a public hearing on November 27, 2007 to consider approving the extension of runway 14/32 to 6,000 feet. On behalf of my fellow airplane owners, pilots at Craig Airport and neighborhood homeowners I implore you to approve this extension immediately.

I have been operating single engine, multi-engine turbo prop and jet powered airplanes at Craig Airport on a continuous basis since 1978. My family owned a home in the Fort Caroline/Hidden Hills neighborhood from 1976-1981. From 1976 until now I have listened to the non-pilot, non-aviation oriented detractors of extending the runway at Craig. Their perception that the extension would only serve to bring bigger, noisier airplanes into Craig is a gross distortion of the facts. The proposed extension will make the airport safer for operators and local neighborhoods, not attract larger equipment. Safety is the paramount issue as pilots will have more space and therefore more time to respond to ground emergency situations which require rapid and aggressive response by the crew. These emergencies include but are not limited to: loss of directional control, engine failure, electrical failure, fire and smoke in the cockpit. Emergencies that occur after the airplane leaves the ground, which may require the airplane to make an immediate return to Craig, include loss of power, complete engine failure, landing gear failure, fire, smoke in the cockpit, pressurization failure and radio failure. All emergency situations enumerated above will be better served by having a longer runway. The longer the runway the more time for the crew handling the emergency to respond properly. The risk to the community is substantially greater in emergency situations with the shorter runway. There is ample room at Craig to extend runway 14/32 and this planned extension, in addition to providing improved safety attributes, will have collateral benefits of noise reduction on take off and landing, which is always desirable.

My understanding is that the F.A.A. has approved the request for the extension of the runway to 6,000 feet and presumably has provided expert opinions as to the reasonableness and necessity of this long needed improvement for this airport. Please listen to the logic of the extension from aviation experts and not the emotional uninformed detractors who do not have aviation experience. Please contact me if you need any additional information. Your approval of this runway extension will be greatly appreciated.

Jim DeLay
President
Jordan Foster Aviation, Inc.
818 A1A North, Suite 200
P.O. Box 1909 (Zip 32004-1909)
Ponte Vedra Beach, FL 32082
904-296-2563 main
904-296-0333 fax
jdelay@mindspring.com

Owner/Operator of Cessna Citation N713JD and Beechcraft King Air N461K

TO: clay@coj.net>, <wbishop@coj.net>, <rclark@coj.net>, <redman@coj.net>, <ashad@coj.net>, <webb@coj.net>, <gaffney@coj.net>, <edlee@coj.net>, <wajones@coj.net>, <mjones@coj.net>, <holt@coj.net>, <ddavis@coj.net>, <artg@coj.net>, <corrigan@coj.net>, <ronnief@coj.net>, <jabour@coj.net>, <joost@coj.net>, <khyde@coj.net>, <gloriousj@coj.net>, <margom@coj.net>, <bthoburn@coj.net>, <sandys@coj.net>, jpeyton@coj.net

10/11/2007 08:07 PM

Put safety first

With all the rhetoric flying around the Craig runway extension, let's not forget the core issue. **A longer runway is a safer runway.** Expert analysis and industry standards support the fact that a longer runway is justified at Craig to make the busiest airport in Jacksonville safer for the over 163,000 landings and take offs each year.

Clinging to "promises" that were made based on invalid information or the exchange of political favors cannot override making a public transportation facility safer.

As Mr. Yarborough pointed out in the October 9 council meeting, the decision to oppose the extension in 2001 was a political move on the sitting JPA board and city council. Don't make that same mistake again - safety should not be superseded by politics.

Be the city council that corrects a past error and commit yourselves to public safety and being proactive in making our aviation infrastructure safer.

Please do the right thing and allow the JAA to fulfill its responsibility to the community - to operate the safest system of airports possible.

Respectfully,

S. H. Jones
2459 Green Spring Dr. (District 2)

From: Rusty Harrell [mailto:rharrell@ambling.com]
Sent: Wednesday, October 03, 2007 2:25 PM
To: Bishop, Bill; Clark, Richard; Redman, Don; Shad, Art; Webb, Jack; Gaffney, Johnny; Lee, Denise; Jones, Warren; Jones, Mia; Davis, Daniel; art@coj.net; Corrigan, Michael; Fussell, Ronnie; Jabour, Jay; Joost, Stephen; Hyde, Kevin; Johnson, Glorious
Subject: CRG runway extension

Council members,
I have been made aware of the possibility for runway extension at Craig Airport and just wanted to express my support for such a project. My company flight dept uses Craig Airport when able, but under certain weather conditions, the present length does not provide sufficient safety margins for landing our jet aircraft. I understand that the proposed extension would add an additional 2000 feet to one of the existing runways. This would add a significant and much needed margin of safety for such instances. Thanks for taking time to receive this feedback.

Rusty Harrell
Captain C560
Emmaus Group LLC
Valdosta, GA

Craig Airport
Andrew Day [stantondrew5@yahoo.com]
Conversation: Craig Airport

Dear councilmen and councilwomen,

My name is Andrew Day and I am writing you today to express my feelings for the Craig runway extension. I am a 20 year old college student who was born and raised in Jacksonville, attended Stanton College Preparatory High School and currently attend college here. Needless to say I have seen Jacksonville grow as much as I have. My lifelong dream, beginning when my father use to take me to Jacksonville International Airport to watch airplanes land and take off has been to be a pilot. He has never been in the aviation industry but had a passion for it and passed it along to me. I am currently fulfilling my dream as I am enrolled in flight school at Craig Airport about halfway through my Commercial Pilot license. I also am working toward a 4 year degree in Public Relations. I fly every chance I get, and do so at Craig. I want to express my support to you in favor of the runway extension for these reasons: safety and economic purposes.

I work part time at an FBO at Craig and am part of everyday operations there. I talk with pilots of the jets flying into there every chance I get. I always bombard them with questions about their career paths and aircraft. One of the things most frequently mentioned or questioned is the lack of runway length at an executive airport of that magnitude, and my answer is always the same "They have been trying for years, but residents continue to shoot it down." I see jets using up all 4,000 feet available very regularly and when it is raining or marginal weather conditions exist, the aircraft with reservations end up diverting to JIA. 2,000 more feet would allow these jets to operate safely. Basic takeoff and landing performance is something you learn at the Private Pilot level and needless to say I can guarantee you these jets are not always operating to their safest potential.

Another perk of my job is I get to meet and speak with the leaders of companies who come into Craig. Daily executives of companies who are bringing their business into our economy fly into Craig. Hardhats and briefcases are what is brought off the aircraft as these executives are going to job sites and finalizing deals. I know the perception is that only rich people going to the Bahamas with their golf clubs are what is flying in these jets. That couldn't be farther from the truth. The extension of this runway would allow more jets of very comparable size that are currently flying into Craig also access this airport, thus making it more economically viable.

In closing I would like to invite any of you to come out to Craig and experience first hand what I experience. Come talk to the people and pilots who utilize Jacksonville's hidden gem, get more unbiased perspectives. I believe residents who are speaking out against Craig are in the vast minority. I have spoken to many people at businesses around Craig and they do not even know the airport is there. I ask of you all to uphold your promise to the community, the one that says you will do whats best for the safety of the residents, and do what is best for the city of Jacksonville. Please do not use this for political gain because I do not believe any of you stand to gain by voting against this resolution. At least give the issue due process and do not vote in favor of the resolution 2007-984. I would like to thank all of you for your time and will end on this note. I have nothing to lose or gain with this issue, in the end I will still be a college student on my own supporting myself, but what I do have is an unbiased, first hand point of view that I feel you should all be made aware of and ask of you all to listen to the JAA and professionals close to the issue and let the process play out. In the end, if the runway is extended I believe you will all be very happy with the outcome, for yourself, for your city, and most of all for the lives of the people who use this airport on a daily basis, including myself. Thank you.

Deepest Appreciation,

Andrew Day
4204 Pinewood Avenue
Jacksonville, FL 32207

Craig Runway Extension
Melaniep000@aol.com [Melaniep000@aol.com]

Attachments can contain viruses that may harm your computer. Attachments may not display correctly.

Conversation: Craig Runway Extension

Attachments: From the Desk of Melanie

From the Desk of
MELANIE PAPAGEORGE
10864 Crosswicks Road
Jacksonville, FL 32256

Dear Councilman,

I am writing to strongly urge your approval of the Jacksonville Aviation Authority's request to amend the Craig Airport Comprehensive Plan to allow for the extension of the airport's primary runway because longer runways are safer runways.

While Craig Airport is safe now, a 2,000-foot extension of the runway will make the airport safer by creating a greater margin of error for pilots. That's important because nearly 80% of all general aviation accidents occur during take off and landing.

Despite what some are saying, a longer runway will not mean bigger planes landing at Craig. The thickness of the runway – xx inches – will not change with the proposed extension. The maximum landing weight of planes operating at Craig will continue to be 60,000 pounds.

I strongly believe the lengthening of the Craig runway is in the best interests of the Jacksonville.

Respectfully,

Melanie Papageorge

I support Craig's runway extension
eunika louis [eunikalouis207@hotmail.com]
Conversation: I support Craig's runway extension

Dear Councilman,

I am writing to support the Jacksonville Airport Authority's plan for Craig's runway extension.
As a student in Aviation Operations at FCCJ, I understand that not only such initiative will increase the safety level of Craig's Airport, but also it will reduce the risk for general aviation accidents.
Noise has always been (and still is)a critical factor in airport operations and a huge annoyance for those residing around airports.
With such ambitious project, I believe that lengthening the runway will definitely help in reducing aircraft noise.
Therefore, I encourage the Jacksonville Airport Authority in their outstanding efforts to make aviation safer for the Jacksonville community.

Craig Feild Runway Extension 34. 2007-984
Carlin Anderson [cjanders@comcast.net]
Conversation: Craig Feild Runway Extension 34. 2007-984

Currently my home in the Kensington subdivision is located under one of the main flight paths for Craig Field. Planes and helicopters fly overhead with what I consider to be excessive noise at least 1 or 2 times a week. I have occasionally called these noise issues, in, but at the same time, I don't consider them to be outside of normal flight operations. I do not, however, want this excessive noise to increase. I can understand the need for a better safety margin for this airport, and I would suggest supporting this measure, so long as the following stipulations were agreed to by JAA.

1. The runway expansion must meet the same load specifications as the current runways.
2. Current aircraft size requirements remain unchanged.
3. Various airport agencies, or any agency with an affiliation to the airport, are NOT allowed to solicit new business by touting the newly lengthened runway as a way for them to fly in larger aircraft.
4. A specific plan to handle any issues resulting from increased noise complaints is developed, which would have financial consequences identified with any appeals to be resolved via arbitration by a joint council/community committee. All current tententents/users of the facility would need to agree to this before the extension would be allowed, and all future tenents would need to as well. Allowances for military/government related activities can be addressed.
5. Changes to either of the above stipulations are allowed, so long as they are agreed upon by 85% of the council.

This allows for the safety factors being expressly identified as the primary reason for the extension, and yet keep the current traffic & noise volumes at their current levels.

Thank you for your time.

Carlin Anderson

Craig Runway Extension
j-lbailey@comcast.net [j-lbailey@comcast.net]
Conversation: Craig Runway Extension

WING AIR, LLC

6741 Lloyd Road West
Jacksonville, FL 32254

October 13, 2007

Honorable Glorious J. Johnson
Jacksonville City Council
117 West Duval Street, Suite 425
Jacksonville, FL 32202

Dear Councilman Johnson:

As the Chief Pilot for Wing Air, LLC (a subsidiary of JB Coxwell Contracting, Inc.), I am writing to seek your support for the extension of Craig Airport and Herlong Airport runways. Mr. John Coxwell has a King Air B200 based at Herlong Airport. We do, however, utilize Craig Airport and Jacksonville International Airport depending on the needs of the passengers.

Please consider runway extension at both Craig Airport and Herlong Airport. The aircraft I operate and many others are limited by a 4,000 foot runway. We are forced to reduce fuel load, passenger load and sometimes both during the heat of summer and when the runway is wet. The extra length would permit my aircraft to perform a maximum weight take-off even on the hottest days in August. Additionally, the extra length would provide a valuable safety margin to help compensate for the hundreds of variables that affect aircraft take-off and landing performance.

Thank you for your attention to and assistance with this matter. Should you have any questions, please do not hesitate to contact me at (904) 233-4741.

Sincerely,

Jim Bailey
Chief Pilot

Dear Jacksonville City Council Members,

I am e-mailing you today to express my concern for the lack of runway at Craig airport. I have seen many aircraft barely make it out of our 4,000ft runways, not to mention the lack of runway space that is available if an aircraft were to have to abort a takeoff. Craig airport is centrally located between the beaches and downtown and is a popular airport for many executives and the governor to fly into. This airport is an asset to the community and by limiting the size of the runways the liability and accessibility of this great airport is hindered. I hope that everyone realizes that the more efficient an airport amounts to the increased productivity of the surrounding business's and tourism.

Sincerely,

Daniel Stroehlein
CFI

From: crgjet@aol.com
To: clay@coj.net; wbishop@coj.net; rclark@coj.net; redman@coj.net; ashad@coj.net; webb@coj.net; gaffney@coj.net; edlee@coj.net; wajones@coj.net; mjones@coj.net; holt@coj.net; ddavis@coj.net; artg@coj.net; corrigan@coj.net; ronnief@coj.net; jabour@coj.net; joost@coj.net; khyde@coj.net; gloriousj@coj.net; margom@coj.net; bthoburn@coj.net; sandys@coj.net; judy.starling@jacksonville.com; phil.fretz@jacksonville.com
Subject: Craig Safety Initiative
Date: Tue, 16 Oct 2007 7:10 pm

I am not a politician. That said, I would like to express my opinion about the Craig Safety Initiative.

I am a resident of a neighborhood adjacent to Craig. My home is my pride and joy. It took me 30 years of hard work to achieve my goal of home ownership. It is not something I take lightly.

I also work at Craig Airport. I have listened to the rhetoric about the runway extension at Craig for over 20 years. I am not a pilot, I am not a business owner, I stand to gain no personal financial reward if the runway is extended. My concern is strictly the safety of the community of people using Craig, and the safety of the surrounding community. Both communities. The one I work in, and the one I live in.

I fear for both equally.

I fear that the aircraft that are already using the airport will never get the runway they need to truly operate their aircraft in the safest manner possible. These aircraft are already here. Not in the future. Now. Most of the aircraft that these runways were designed for, we rarely see here anymore. The majority of traffic that comes to Craig is corporate aircraft. The people on board are the drivers of the economy in Jacksonville. These are the aircraft that are bringing in CEO's of large corporations to review a new site for development, to check on existing stores, or to meet with our existing companies in order to secure a deal. I see people who come to Craig in order to go to the Mayo Clinic, many of whom make many visits while undergoing treatment. Many of our city's biggest companies have aircraft based at Craig, and would find it impossible to do business without such a tool.

Jacksonville is the only city of this size in the country, that does not have a true reliever airport. We are fortunate enough to have four airports in the system, each one serving a different purpose. Jacksonville International is our commercial services airport. Cecil is cargo and industrial. Herlong is recreational. Craig performs the function of a reliever airport, reducing congestion at the international airport. However, it does not have the runway necessary to support the aircraft that are flying today in the safest manner possible. Will it take a tragedy for us to wake up and realize that safety should never be a political hot potato? The people most outspoken against the runway extension have the most to gain by it. They are the ones most at risk. Those that are in the flight path, or off the ends of the runway. The most critical phases of any flight are take-off and landing.
Give today's pilot the room he needs to have these phases of flight over the airport, not the surrounding communities.

Now to address my other community. The one I live in. I have listened to those who say they speak for the residents around Craig. They do not speak for me. I believe they speak for themselves. They play on the emotions of the uneducated. If you take the emotionalism out of the situation, and look at the studies that have been done, it is clear that many of the area communities would benefit by a reduction in noise. With the runway extended, the thresh holds of the runway are displaced, taking the static run ups of the aircraft 1,000 feet away from the existing homes, reducing the amount of noise. With longer runways, the aforementioned critical phases of flight are over the airport, not the surrounding homes, making the community as a whole safer. With a longer runway, landing aircraft have more room to stop, reducing the need to use reversers to stop on the shorter runways. Reducing noise. The last piece of the puzzle that I have not heard anyone address. Given a choice, more aircraft would use the longer runway. This fact would reduce not only noise, but also the amount of traffic the majority of the adjacent communities would see, since the majority of traffic would then utilize the longer runway. How many communities would benefit? I know that mine would. I admit some would see increased traffic, but again, that traffic would create less noise and operate more safely. I have not seen those most vocal opponents address any need other than their own comfort, and a promise made many years ago. There is no factual data. Emotion and fear rule their thought. I fear that many affected will never know the truth of this matter, as the truth gets lost in the hype. Again, the opponents of the extension do not speak for me as an area resident.

For the safety of the aircraft and the people utilizing Craig Airport, extend the runway.

For the safety of my home and family, extend the runway.

Thank you for your time.

Rebecca Donovan

From: Jesse Vose [mailto:jvose@yahoo.com]
Sent: Tuesday, October 09, 2007 5:52 PM
To: Yarborough, Clay; Jones, Mia; Holt, Ray; Davis, Daniel; Graham, Art;
Corrigan, Michael; Fussell, Ronnie; Johnson, Glorious; Jabour, Jay; Joost, Stephen; Hyde, Kevin; Bishop, Bill; Clark, Richard; Redman, Don; Shad, Art; Webb, Jack; Gaffney, Johnny; Lee, Denise; Jones, Warren
Subject: City Council Meeting - Proposed Runway Extension at Craig Airport

To all of the members of the Jacksonville City Council,

My name is Jesse Vose and I would like to go on record, along with the people listed below, as being IN FAVOR of the proposed runway extension at Craig Municipal Airport.

Edward E. Burr (Jacksonville Chamber Trustee)
Mike Lewis (President and CEO, ILD Telecommunications) Joseph E. McCollough (Pilot for Edward E. Burr) Jesse Vose (Pilot for Edward E. Burr)

Thank You,

Jesse Vose
jvose@yahoo.com
(904) 631-6196

<wbishop@coj.net>, <rclark@coj.net>, <redman@coj.net>, <ashad@coj.net>, <webb@coj.net>, <gaffney@coj.net>, <edlee@coj.net>, <wajones@coj.net>, <mjones@coj.net>, <holt@coj.net>, <ddavis@coj.net>, <artg@coj.net>, <corrigan@coj.net>, <ronnief@coj.net>, <jabour@coj.net>, <joost@coj.net>, <khyde@coj.net>, gloriousj@coj.net

Craig Safety Improvement

October 9, 2007

Dear City Counsel Members,

I am the owner of Craig Air Center. We have been located at Craig Field and serving the community for almost a quarter of a century. We have employed many from the Jacksonville community from students at the local colleges to white collar professionals and semi retired seniors. We have an excellent reputation and we provide a vital service to the residents of Jacksonville and its many visitors seven days a week.

The much needed runway improvement is not only vitally necessary to improve safety but it is YEARS OVERDUE.

Some real facts to consider:

- Craig Airport was built in 1942 then given to the city in 1946. Before most homes and other structures in the area.
- A longer runway is always safer regardless of aircraft type: piston, turboprop or jet. (Landing or Taking Off)
- A jet aircraft will produce a higher Decibel level to stop on a short runway with maximum reverse thrust than it will when taking off.
- The Craig runway weight capacity will not be changed.
- The instrument landing system in place at Craig guides an aircraft to a touchdown spot 1500' from the threshold. At Craig this leave a mere 2500' to stop wet or dry with no overrun available.

Noise: (number of complaints in descending order from most to least)

- Army Guard Helicopters - Daily late afternoon and weekend training flights. These aircraft have relocated to Cecil Field.
- Cessna 210 freight planes - Early morning and late evening departures. These have also moved most of their operations to other airports.
- Old Turbojet aircraft - Out of production and none based at Craig Field.

Important Notes to consider:

- Activity is up at Craig and Noise complaints have declined.
- Jets based at Craig and transient jet traffic in/out of Craig have increased while noise complaints have declined.
- Old out of production Turbojets were classified as Stage 1 or 2 for their noise levels.
- New Fanjets are now Stage 3 or 4. A significant improvement that many non aviators are unaware of.
-

Jacksonville continues to grow.

- While Jacksonville continues to grow and join the ranks of other major metropolitan cities it's infrastructure must keep up.
- The Better Jacksonville plan is evidence of this initiative and everyone is grateful for the improvements to our transportation system.
- The airports can not be left out of this effort. They serve us all.

Growth and expansion surrounding Craig.

- Atlantic Blvd. - Expanded to Six lanes plus new intecoastal Bridge constructed.
- Monument Road - Expanded to Four Lanes.
- Merrill Road - Expanded to Six lanes.
- 9A/295 Loop, Dames Point Bridge - Created to improve traffic to/from the Southside and around Jacksonville.
- Fort Caroline Road - Widening to Four Lanes.
- Mc McCormick Road - Expanded to Four Lanes.
- Wonderwood Expressway - Created.
- St. Johns Bluff Road - Widening to Four Lanes.
- Kernan Road - Created and scheduled to be Expanded to Four Lanes.

As you are quite aware of all of these projects and many more, Jacksonville is a booming city and it's growth is welcome but with this great growth comes the responsibility of those of you who are the stewards of our great city to see that all of our infrastructure keeps pace with the needs of our residents, businesses and the many visitors to our city. Craig Field has not kept up and it is as much a vital piece of our infrastructure as any of these roads surrounding it.

Please look at the big picture and consider the good of all our citizens, visitors and the general public as a whole and allow the CRAIG AIRPORT SAFETY INITIATIVE to pass with your approval.

Thank you for taking the time to read this. I hope you find it helpful and informative.

Sincerely,
John T. Vito
President / Gen. Mgr.
Craig Air Center, Inc.
PS. I have been living nearby Craig Airport just off Monument Road since 1985.

Letter to the Editor - Times Union 9/5/07

CRAIG FIELD
Increase length of runway

Seven years ago, the Jacksonville Port Authority promised not to pursue extending the runway at Craig Municipal Airport.

It was the wrong decision then, and it is still the wrong decision now.

As a general aviation pilot with a great deal of experience at Craig and a former board member of the JPA, I think I speak with some knowledge and authority on the subject. The issue today is the same as it was in 2000: safety.

Increasing the length of the runway from 4,000 feet to 6,000 feet will enhance safety. It is really that simple.

Don't be fooled by the arguments put forward by the small but vocal group of opponents resistant to change.

So, why not make it a win-win issue for all? It will be safer for pilots, passengers and local residents and quieter for the neighbors. These are the facts.

A longer runway will not lead to bigger aircraft. The maximum weight of planes landing and taking off at Craig will continue to be 60,000 pounds.

A longer runway will not lead to noisier flight operations.

With a longer runway, pilots will be considerably higher over the affected neighborhoods, resulting in significantly quieter operations.

What a longer runway at Craig airport will do is provide an extra measure of safety for pilots landing and taking off.

A safer airport is in the best interest of all Jacksonville residents, but especially for those who live and work near Craig.

DAVID MARCO, Jacksonville

Letter to the Editor – Times Union 9/25/07

CRAIG AIRPORT
Time to lengthen runway

This is a rebuttal to letter writers who opposed the extension of a runway at Craig Municipal Airport.

1. Charge: There have been few incidents, most of them on takeoffs.

Reply: Checking the National Transportation Safety Board reveals something different. Going back only 15 years shows 13 accidents or incidences at Craig; 12 happened during landing, and four of them ran off the runway.

2. Charge: Lengthening the runway does not help an aircraft that loses an engine at 300 feet after takeoff.

Reply: It most certainly does! Never mind that it is an extremely rare event, I would much rather have the extra runway to set down on than the swampy timberland that surrounds Craig's 1,500 acres.

When I carried passengers as a captain operating out of Craig, I always wanted the longest runway available because I knew what the reality was. There is more chance of an accident during landing than at any time in the whole flight.

3. Charge: Do neighbors want a 737 zooming over their houses at 800 feet at takeoff thrust?

Reply: No 737s are going to land at Craig airport. The width, depth and proposed length of the pavement prevent that from ever happening.

The opponents used the noise argument before the Federal Aviation Administration funded a study that gave approval to Craig's Noise Compatibility Program. The only arguments they have left is that the city promised it would not lengthen the runways at Craig.

The time has come to add the overruns to Craig airport's instrument runway.

JERRY STRAW, Jacksonville

Letter to the Editor – Times Union 9/13/07

CRAIG AIRPORT
Time to lengthen runway

As a Jacksonville business owner who has been flying in and out of Craig Municipal Airport for many years, I want to voice my strong support for the Jacksonville Aviation Authority's plan to extend Craig's main runway by 2,000 feet. It's long overdue.

At its present length of 4,000 feet, Craig's primary runway is among the shortest runways at comparable general aviation airports in the Southeast.

It poses real safety concerns for the flying public, as well as the communities surrounding the airport.

There's no doubt a longer runway will make landing and taking off at Craig safer.

Craig airport has been operating for many years as a general aviation airport.

The airport's close proximity to downtown Jacksonville and many of the city's major businesses make it an important economic asset.

As a community, we understand the importance of improving and upgrading our road infrastructure, especially our bridges, in order to make them safer to handle increased traffic.

Our aviation system is no different. We must make our airports safer to meet the needs of our growing city.

The runway was constructed to its present width and length in 1943. In over 60 years, it has not been lengthened. Clearly, this work is overdue.

JOHN D. ROOD, Jacksonville

2704 US Hwy 92
Winter Haven, Florida 33881

Dear Mr.

Recently I have become aware of the Jacksonville Airport Authority's intent to increase the length of the runways at the Craig Airport, Jacksonville, Florida.

I have been a user of the Craig Airport since the middle 1970's, even then, the runways were of marginal length for takeoff and landing safety. When the airport was constructed as a Navy pilot training site in 1942, we were using bi-wing Stearman airplanes. They were very loud with high power engines and slow because of the design of the day. By the end of WWII, even the war department realized the early runways were too short for the later version of fighters and bombers and the runways were extended to 5000 feet. The length of the runway was appropriate for those early aircraft, but todays aircraft are faster, they are not short field airplanes any more. The need for longer runways to accelerate to takeoff speeds, just like a small car of today needs more distance to accelerate to interstate speeds on the "on ramp" versus the 1970's cars with the big V8 engines. According to the accident records, the number 1 accident/incident problem is in takeoff and landing.

It seems the local citizen thinks there will be increased noise from larger airplanes that will use the longer runways. Someone said, "A Boeing 747 would start using the airport if longer runways were available." Runway pavements are designed for specific weight airplanes. As a former Civil Engineer and airport designer, I know the Boeing 747 would sink right through the Craig Airport runway which is limited to 60,000 pound airplanes. Would they have to use Cecil Field. Yes, because of the safer runways lengths and runways strengths for an aircraft that weights around 800,000 pounds.

In 1978, The FAA recognized the need to raise the traffic pattern from 800, where it had been since WWII, to 1000 feet above the airport elevation for noise and greater safety concerns. In the past 30 years, aviation has changed from low and slow airplanes to the faster airplanes, because of the changes in flight design, the more modern aircraft need longer runways for takeoff and landing safety. The new generation of airplanes that are just starting into the market while light in weight will be even faster and require a longer runways for safety. They will be using Craig airport with is marginal runways.

As the very light jets enter the system and airline operations increase do to increased passenger traffic the larger airports such as Jacksonville International will be sending the smaller aircraft to Craig. Are we prepared for the future which is already here.

For the greater safety of the people living in the vicinity of Craig airport, they should insist on longer runways. As a pilot and user of the Craig Airport, I support the increased length of the runways but at there current weight restriction.

Sincerely,
Walter S. Schamel

From: Eddie McCollough <jemccollough@tds.net>
To: crgjet@aol.com
Date: Mon, 24 Sep 2007 9:03 am

[Unable to display image]

Rebecca, see how this sounds to you. Open for suggestions.

As a corporate pilot for 21 years and 9000 hours of flight time I have flown to many different kinds of airports, from the larger hubs Atlanta Hartsfield, Charlotte Douglas, Chicago O'Hare to the most remote airports in Alabama, Georgia, Mississippi and New Hampshire, I consider the last five years to be the most challenging. I have been telling people during this past five years "My worst airport that I go to is my home base". Yes, my worst airport is my 4000 foot runway at my home base at Craig Airport and that is where 50% of my takeoffs and landings occur.

How long is the runway? That is the first question I usually ask when I'm presented with a takeoff or landing. The reason is because pilots are required to operate fast, relatively fragile aircraft at their maximum performance to achieve minimum speeds required for takeoff and landing, and all this precision flying is done in close proximity to the ground. There is not much room for error even under ideal circumstances and then throw in gusty winds, obstructions, and short runways and things can get worse really fast.

It's a simple fact; **longer runways are safer.**

1) Longer runways provide aircraft more area to maneuver during takeoffs and landings.

2) In the case of an emergency during takeoff the aircraft has more runway to either continue the takeoff **safely** or to abort the takeoff **safely.**

3) During landing phases the aircraft can fly a higher steeper approach that also reduces noise levels, the pilot has more runway to let the aircraft roll to reduce the excess speed after landing instead of using the high power, high noise thrust reversers therefore decreasing the noise level again.

4) After takeoff longer runways also allow aircraft to obtain greater altitude above the airport and houses by starting the takeoff roll further away from homes, this produces **quieter** operations and much **safer** operations for the surrounding areas.

Craig airport is classified and serves as a reliever airport for the Jacksonville International airport and deserves the attention by the City of Jacksonville, the JAA, and the surrounding community for support of continued improvements and upgrades. This betterment of the primary runway will not only reward the community with additional safety, and quieter operations, but it will also capitalize on the economic asset that Craig Airport is to the City of Jacksonville.

The community should be rallying for the support of Craig Airport runway improvements for the betterment of the community.

Eddie McCollough, Lewis Air Fleet

Eddie McCollough
Lewis Air Fleet
904-403-7422
jemccollough@tds.net

September 24, 2007

As a pilot who flies both professionally and for pleasure off the Craig Airport I would like to take this opportunity to comment on the proposal to extend the runway at Craig.

It is very important to take the emotion and politics out of this discussion look at the facts.

1. Any additional runway length makes every take-off and landing from that runway safer.
2. Any additional runway length allows the pilot the opportunity to lessen brake and tire wear.
3. The length added would not mean any more noise to the airport as the same size aircraft that are operating there now will still be the ones using the longer runway.
4. The large commercial flights will continue to operate out of Jacksonville International and Cecil Field.

Craig Airport is a large and vital part of the transportation system that Jacksonville must continue to develop. If one looks at the addition of the 9A complex to the west of Craig and the expansion of the highways that surround Craig we see that progress is coming to the area and Craig is a vital part of that expansion.

Thank You,

Ed Burran

Ed Burran

Craig Airport Runway Extension Justification

Aircraft Owner	Date of Letter	Present Aircraf	Present # of Operations	Future Aircraft/Needs	Future # of Ops Expected
Gate Petroleum (Geoff Parnell)	7/13/00	Citation Ultra	approx 270 / year	Larger Aircraft	Approx. 351 / year
	8/9/99		Letter of Support for Runway Extension		
Raytheon Travel Air	6/13/00	Various Aircraft	20/month (240/year)		
	8/3/00		approx 255.5/year	Hawker Horizon	Approx 584/year
Executive Jet, Inc.	6/13/00	Various Aircraft	Letter of Support for Runway Extension		
	8/25/00		Approx 70/year		Approx 70+/year
PSS World Medical, Inc	10/17/00	LR35A / LR31A	Approx 209 / Year	LJ45	Approx 212+/year
Marco Ophthalmic	6/7/00		Letter of Support for Runway Extension		
Frank Robinson	6/22/00		Letter of Support for Runway Extension		
O.K.Industries, Inc.	6/15/00	Citation Jet	Letter of Support for Runway Extension		
Hudson Group	8/13/99	Merlin IIIB	Letter of Support for Runway Extension		
Atlantic Marine Holding Company	8/10/99		Letter of Support for Runway Extension		
Landstar Express America, Inc.	8/9/99		Letter of Support for Runway Extension		
Coca-Cola, Inc.	8/10/99		Letter of Support for Runway Extension		
					Total: 1217 Approximate
					Annual Operations

HUDSON GROUP

TELEPHONE 704-338-9161
FAX 704-376-0455
P.O. BOX 33877, ZIP 28233

221 S. TRYON STREET, CHARLOTTE, NC 28202

August 13, 1999

Jacksonville City Council
Jacksonville, FL

Re: Runway Extension - Craig Field

Ladies & Gentlemen:

This is to support the proposed runway extension at Craig Field. In view of the loss of airport facilities around the U.S., it is particularly positive and a hopeful sign when a responsible community such as Jacksonville seeks to improve the terrific facility which Craig is.

As our company relies entirely on Craig Air Center for maintenance on our Merlin IIIB aircraft, the continued viability of Craig is of crucial importance to us.

Thanks for your consideration of our view of this issue.

Very truly yours,

Chris Hudson

Christopher A. Hudson
President
Hudson International, Inc.

CAH/jl

Atlantic Marine Holding Company

8500 HECKSCHER DRIVE ● JACKSONVILLE, FLORIDA 32226
(904) 251-3111 ● TX: 756894 (AMI B JAX) ● FAX: (904) 251-3400

August 10, 1999

Honorable Lynette Self, Counsel Member
2319 W. University Blvd.
Jacksonville, Florida 32225

Dear Mrs. Self:

Our company is one of the larger employers in Jacksonville and has utilized Craig Field for our base of operations due to its convenient location and the services of Craig Air Center. During our years of operation from Craig the number of corporate aircraft using this airport has increased greatly, but the airport itself has not improved to keep up with the needs of these aircraft. This airport has long needed its runways extended and its general support system improved. The length of the runways at Craig are marginal for most aircraft. This includes not only the turbine aircraft but also the smaller piston twins used by many private flyers.

We strongly urge you to resolve this oversight by lengthening the existing runways and encouraging the expansion and growth of those businesses serving the flying public at Jacksonville's Craig Airport.

Craig is a valuable piece of this city's infrastructure and is worthy of our support.

Sincerely,

George W. Gibbs

George W. Gibbs, III
Chairman

LANDSTAR

EXPRESS AMERICA

Landstar Express America, Inc.
St. Simons Island Office
PO Box 20246
St. Simons Island, GA 31522-8246
912/634-0114
FAX 912/634-0117

August 9, 1999

Mr. John T. Vito, President
Craig Air Center
855 St. Johns Bluff Road
Jacksonville, Florida 32225

Dear John:

I will be out town on the evening of the meeting to discuss the extension of Craig Air Center. This letter is a statement of my support for this project. Craig Air Center is one of my favorite airports to land.

Let me take this opportunity to thank you and your staff for your professionalism and commitment to meeting the needs of the pilots and passengers that land at the Air Center.

Good luck with the project.

Sincerely,

Ray

Raymond E. Pinson

Coca-Cola Enterprises Inc.

AVIATION DEPARTMENT

Fulton County Airport
4155 South Airport Road
Atlanta, GA 30336
404-699-1103
404-472-1004 Fax

Honorable Lynette Self
Jacksonville City Council
2319 West University Blvd
Jacksonville, Florida 32225

August 10, 1999

Dear Councilwoman Self,

It has come to my attention that the JPA is again trying to extend the runway at Craig Field. As a large corporation, which uses the Jacksonville area frequently, we are in agreement with the recent proposal. By lengthening the runway, the safety margin increases also. The performance of the aircraft will become much better due to the longer runway.

We currently use Jacksonville International Airport and are not pleased with the higher prices and proximity to our business. Craig Field is much closer to our business areas. This addition would enhance our relations with our local offices and customers by eliminating needless ground travel time.

Coca-Cola Enterprises supports you and your efforts in helping pass the runway extension at Craig Field. If I can be of any further assistance, please give me a call at 404-472-1001. Thank you for your time and good luck!

Regards,

Brian L. Ross
Director of Aviation

OK INDUSTRIES, INC.

4601 NORTH 6TH STREET • P.O. BOX 1119 • FORT SMITH, ARKANSAS 72902-1119
501-783-4186

July 28, 2000

Mr. Gary E. Duncan
General Aviation Manager
Jacksonville Port Authority
P O Box 3005
Jacksonville, FL 32206-0005

Dear Mr. Duncan:

We have been very interested in the matter concerning the additional 2,000 foot extension of Runway 14 at 32 at Craig Municipal Airport. Our most recent letter concerning this was sent to Craig Air Center, and a copy of this letter is enclosed with this letter to you. We will be happy to do anything we can in achieving the runway extension which is important as we pointed out in our letter for safety as well as for additional aircraft that will be able to land at Craig.

Sincerely,

O. K. INDUSTRIES, INC.

Collier Wenderoth, Jr.
Chairman of the Board

dm

OK INDUSTRIES, INC.

4601 NORTH 6TH STREET • P.O. BOX 1119 • FORT SMITH, ARKANSAS 72902-1119
501-783-4186

June 15, 2000

TO WHOM IT MAY CONCERN:

We have been flying in and out of Craig Field in Jacksonville, Florida since the 1960's when we flew a Cessna 182. We have had five airplanes and like both the fixed base operator, Craig Air Center, and the convenience of Craig Field to Ponte Vedra where we have a condo. The 182 was upgraded to a 310, then to a Cessna 421, then to a Cessna 525, and now a Cessna CitationJet.

When you go to Flight Safety for recurrent training, a lot of time is devoted to the safety of landing and taking off on runways that are considered marginal for operation of turbo props or pure jets. In certain weather conditions, such as extreme heat or thunderstorm activities, a 4000' runway, such as those at Craig Field, could stop an operation.

There is no question that it the aviation world is headed toward pure jets in the not too distant future. Jacksonville has always been very progressive, yet it is disturbing to me, as well as to many people who operate in and out of Craig Field, that the 2000' extension to Runway 32 has not been approved.

We note that very shortly St. Augustine is going to add a control tower, along with brand new hangars and fixed base operators, and because of their 8000' runway, they could be instrumental in a lot of people who now fly into Craig Field moving to this new location. It is something that we do not want to do, and probably a lot of others don't want to do this either, but at the same time, we don't want to compromise safety.

As pro-active as Jacksonville is, it would be our thinking that you would not want to stop growth in such a fine city because of corporate airplanes leaving Craig Field for St. Augustine because of runway length.

It is our understanding that you are going to revisit the 2000' extension this fall. We would strongly urge that this be approved in the interest of safety as well as economic growth for the City of Jacksonville.

We are in the poultry business, which is competitive just as cities vieing for industry, and it has been my personal observation that any time you become non-competitive, the parade passes you by.

Thanking you for your time in reading this and for your consideration, we are

Sincerely,

O. K. INDUSTRIES, I NC.

Collier Wenderoth, Jr.
Chairman of the Board

OK INDUSTRIES, INC.

4601 NORTH 6TH STREET • P.O. BOX 1119 • FORT SMITH, ARKANSAS 72902-1119
501-783-4186

June 15, 2000

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Thanking you for your time in reading this and for your consideration, we are

Sincerely,

O. K. INDUSTRIES, INC.

Collier Wenderoth, Jr.
Chairman of the Board

Frank Robinson

1462 Le Fleur Place ~ Memphis, TN 38120
Home Phone 904 273-9700

June 22, 2000

Mr. Gary E. Duncan
Craig Municipal Airport
855-11 St. John's Bluff Rd.
Jacksonville, Fl 32225

I have been utilizing Craig Airport for almost 20 years. The runway length of 4,000 feet has served my needs well, but the aircraft that I have just purchased would perform better operating from a longer runway. My aircraft cannot load enough fuel for the range of the aircraft, which forces me to take revenue that would otherwise stay in Jacksonville to another city and state.

If Jacksonville is going to continue to grow, Craig Airport must also change to support the growth.

Please feel free to call me at (904) 273-9700

Sincerely,

Frank Robinson

Frank Robinson

ExecutiveJet
NETJETS

Paul Reynolds
Ground Support Manager
Vendor Relations

June 13, 2000

Tracine Anderson
Craig Air Center
855-14 St. John's Bluff Rd
Jacksonville, FL 32225

Dear Tracine,

Executive Jet, Inc.

4111 Bridgeway Ave.

Columbus, OH 43219

Tel. (614) 239-4820

Fax (614) 239-5481

www.netjets.com/vendors

preynolds@netjets.com

It was good to hear the news of the construction tentatively planned for the runway at Craig (CRG) Airport in Jacksonville.
The current runway length of just over 4000ft severely limits our operations, allowing only the Ultra aircraft to be planned into your airport. And when the conditions become wet, even they are forced to divert to JAX.
Increasing the length to 6000 feet would benefit both EJA and your airport. All of 200 aircraft would be able to operate under dry conditions, with only a few flights possibly being affected during rain.
As Executive Jet enjoys a 25-30% growth rate, it is exciting to hear about expansion throughout the industry. As you probably know, there are another 400 aircraft on order! A longer runway at Craig Municipal should open up new opportunities in the Jacksonville area.

Sincerely,

Paul Reynolds

ExecutiveJet
NETJETS

Paul Reynolds

Ground Support Manager

Vendor Relations

Executive Jet, Inc.

4111 Bridgeway Ave.

Columbus, OH 43219

Tel. (614) 239-4820

Fax (614) 239-5481

www.netjets.com/vendors

preynolds@netjets.com

August 25, 2000

Mr. Gary E. Duncan
General Aviation Manager
Jacksonville Port Authority
P.O. Box 3005
2831 Talleyrand Avenue
Jacksonville, FL 32206-0005

Dear Mr. Duncan,

Executive Jet currently operates almost 200 aircraft in its NetJets fleet supporting our fractional ownership program. At this time, 400 more aircraft are on order with a new aircraft arriving every 6 days. The fleet consists of Citation V Ultras, Citation VII, Citation X, Citation Excel, Hawker 800XP, Hawker 1000, Falcon 2000, and the Gulfstream IV. The fleet will be expanding to include Gulfstream V, and the Boeing Business Jet (737-700) by the first quarter of 2001.

The approximate number of Craig Municipal Airport (CRG) operations is currently 70 per year. Executive Jet is enjoying a 25-30% growth rate at the present. The 70 operations consist only of the Citation Ultras as our other aircraft are not able to use CRG due to the 4000 ft runway. The 6000 ft runway would accommodate all of our aircraft types. It is impossible to give you a definite figure, however, it is fairly safe to say that some of the owners of the larger aircraft may choose to operate into Craig if it were available instead of going to Jacksonville (JAX). Our JAX operations consist of approximately 360 per year.

Increasing the runway length could only help CRG attract more general aviation and business aircraft.

Sincerely,

Paul Reynolds

Paul Reynolds
Ground Support Manager

Raytheon Travel Air
101 S. Webb
P.O. Box 2902
Wichita, KS 67201-2902
Tel 316 676 6899
Fax 316 676 2694

Tony Marlow
Vice President
Operations

Raytheon Travel Air
A Wholly Owned Subsidiary Of Raytheon Aircraft

August 3, 2000
RTA-00-174-TM-bd

Mr. Gary E. Duncan
Craig Municipal Airport
855-11 St. Johns Bluff Rd.
Jacksonville, FL 32225

Re: Jacksonville Port Authority
Craig Municipal Airport
FAA Runway Extension Justification

Dear Mr. Duncan:

Raytheon Travel Air is a fractional aircraft ownership provider. We currently operate a fleet of 80 airplanes including 19 King Air B200s, 40 Beechjet 400As, and 21 Hawker 800XPs. Many of our owners live, have business and operate in the Southeast including the Jacksonville area. The Raytheon Travel Air program is growing rapidly. We will end the year with nearly 100 airplanes and will add airplanes at a rate of approximately 30 per year for at least the next five years. In 2002, we will be adding the all new super-mid size Hawker Horizon to the fleet.

From January 1 to August 1, 2000, we have made 526 departures from the two Jacksonville area airports. 153 of these departures were from Craig Municipal. Unfortunately, due to the relatively short runway, our operations are restricted to the King Air and the Beechjet. Additionally, the Beechjet can land only if the runway is dry. Obviously, this dry restriction for the Beechjet is cumbersome for our Owners in that during trip planning we don't know if the runway will be wet, so many times we simply plan and use JAX. The runway is too short for the Hawker in any case, therefore, our Owners are forced to go to JAX. If the runway were 6000 feet long or longer, the airport would have no restrictions. This would hold true for the new Hawker Horizon as well. No restrictions would mean more convenience for our Owners, more business at Craig and the surrounding community and relieved strain on JAX.

Assuming just half of our current JAX operations would prefer CRG, that would have more than doubled our use of CRG for the first 7 months of 2000. I believe that estimate to be conservative.

A five-year forecast is difficult because of our rapid growth. However, through July, 153 departures in 213 days is an average of 0.7 departures per day. If half the JAX departures could leave from CRG, that average would increase to 1.6 departures per day. Assuming no increase in that activity over five years, we would have 2920 departures from CRG. As approximately 25% of our Owners come from the Southeast, it is very conservative to assume no increase in activity in the Jacksonville area. As our fleet grows from 80 airplanes to 250+ in five years, 8000 or more departures are not unreasonable from CRG if the runway is 6000 feet long.

A runway extension will benefit RTA, our Owners, businesses based on and near the airport as well as the surrounding community. I sincerely hope you can make it a reality.

Tony D. Marlow

Raytheon Travel Air
101 S. Webb
P.O. Box 2902
Wichita, KS 67201-2902
Tel 316 676 6899
Fax 316 676 2694

Raytheon Travel Air

A Wholly Owned Subsidiary Of Raytheon Aircraft

Tony Marlow
Vice President
Operations

June 13, 2000
RTA-00-139-TM-bd

To Whom It May Concern:

Raytheon Travel Air operates a fleet of 77 airplanes increasing to 96 by year-end and will exceed 200 airplanes in four years. Our airplanes are owned by many companies and individuals that participate in an interchange program of fractional ownership.

Our fleet of airplanes is used to take people to many places throughout the U.S. Craig Airfield is a frequent destination for our flights. 2000 YTD, we have landed at CRG 120 times or an average of 5 visits per week. These arrivals support our Owners business activities in the local area, and of course, some of our Owners live in the area. Virtually all visits contribute to the local economy from the business activity accomplished down to fuel, catering and service for our airplanes.

Unfortunately, the runway length at Craig can limit our ability to use the airport under certain conditions. When we cannot use the airport, we must go to an alternate airport and our passengers must be inconvenienced. A runway extension to 6,000 feet would eliminate any operational restrictions for Raytheon Travel Air and, therefore, allow us to better serve our Owners. Our frequency of visits to CRG will continue to increase anyway, but a longer runway would allow even more visits.

Thanks for your consideration.

Tony D. Marlow

GATE

Petroleum Company

July 13, 2000

Mr. Gary E. Duncan
Craig Municipal Airport
855-11 St. Johns Bluff Road North
Jacksonville, Florida 32225

Re: Jacksonville Port Authority, Craig Municipal Airport – FAA Runway Extension Justification

Dear Mr. Duncan:

Gate Petroleum Company is currently operating our corporate Citation Ultra aircraft out of Craig Municipal Airport with approximately 20-25 operations per month. A major consideration in the purchase of the Citation Ultra was the minimal available runway lengths offered at Craig. Gate Petroleum is considering the purchase of a larger aircraft in the future as part of its forward planning.

With the purchase of any larger aircraft we would require at least 6,000 feet for take off and 6,000 feet for landing to ensure the safe operation of our aircraft. Additionally, we anticipate a 30% increase in operational utilization in line with this upgrade.

Craig Airport offers the most benefits to us as a business aviation airport with respect to location, facilities, minimal traffic delays and conflicts making it most desirable for us to remain at Craig. However, if the runway extension were not available to us at the time a decision is to be made, we certainly would need to consider a move to an airport that can satisfactorily meet the balanced field length requirements of any larger aircraft currently available.

Gate Petroleum is very hopeful that the proposed runway extension will progress as soon as possible to ensure not only the safety of our operation but all other corporations that face the same decision as to the viability of Craig in the future. Craig Airport is, in our opinion, by far the most beneficially located airport for corporate aircraft coming to Jacksonville.

Sincerely,

Geoff R. Parnell
Chief Pilot/Director of Operations

GATE PETROLEUM COMPANY • 904/737-7220 • 9540 SAN JOSE BLVD. • PO BOX 23627 • JACKSONVILLE, FL 32241-3627

GATE

Petroleum Company

August 9, 1999

Mr. Charles Snowden, A. A. E.
Jacksonville Port Authority
P. O. Box 3005
Jacksonville, Florida 32206-0005

Dear Mr. Snowden:

I would like to take this opportunity to indicate Gate Petroleum Company's strong support of the proposed improvements at Craig Airport. In particular, the extension of runways 14/32 to 6000 feet.

It is our firm belief that Craig Airport has and will continue to support, the strong economic growth and subsequent increase in employment in Jacksonville. The proposed improvements can only assist in these vital areas and additionally will provide a vast improvement to the safety of this airport's operations.

We are all fortunate to live in this great city and any and all positive actions such as this will have a direct effect in making Jacksonville even greater for all it's residents and business people alike.

I would urge all persons involved to work together in assisting to make this important undertaking a reality with all urgency.

Sincerely,

Herbert H. Peyton
President

HHP/kmp

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PSS | WORLD MEDICAL, INC
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October 17, 2000

Mr. Gary Duncan
Manager, General Aviation
Jacksonville Port Authority
2831 Talleyrand Avenue
Jacksonville, Florida 32206

Dear Mr. Duncan:

1. PSS relocated to Craig Field in March 1996. The move was predicated on a number of things:

Private hangar space was not available which was our company's preference over bulk storage. Aircraft safety and security are always a concern.

Poor service levels and high prices from the FBO at JAX.

Our corporate office is located on the southside. The majority of our company executives and other employees who regularly ride on the company plane reside in the southside areas and at the beaches locations. It is simply much more convenient for everyone to travel to Craig Field than to JIA.

I was told in March of l996 that Craig Field was being scheduled for improvements including runway extensions. Our company is pro aviation and prefers to be located at the cities General Aviation Airport <u>not</u> the airline airport. It made practical and economic sense to locate to Craig in 1996. However, we (and everyone else) are still waiting for these improvements.

2. PSS currently operates a Learjet Model 31A out of Craig Field. We have operated this aircraft since June l998 and to date have had (see listings) operations in and out of Craig in this or other Lear 31A's we have operated on short term leases. Prior to the Lear 31A, PSS owned and operated a Learjet Model 35A out of Craig from March 1996 through May 1998. During this time we had (see listings) operations in this type of aircraft in and out of Craig Field.

During the time we had the Lear 35A we were <u>always</u> weight and temperature limited. We could <u>never</u> take off at max takeoff weight and thus could not utilize the full capability of the aircraft. This always meant we could not carry as many passengers as we wanted or go as far as we needed to go <u>non-stop</u>. PSS is a nationwide company with service centers coast to coast. With the runway limitations at Craig, we very often have to make a fuel stop which adds to the expense of the operation.

4345 Southpoint Boulevard
Jacksonville, Florida 32216
Phone: (904) 332-3000

The Lear 31A poses the same kind of limitations only to a lessor degree because of its longer wing. It still represents a significant limitation however, because to take off at max take off weight the ambient air temperature needs to be 73 F or Less. Between the hours of 0700 AM and 0700 PM Jacksonville Craig Field experiences very few days with temperatures at or below 73 F.

3. PSS currently has a Learjet Model 45 on order and we expect to take delivery of this aircraft in March 2001. Company growth, increased travel requirements and a need to carry more passengers' longer distances necessitated the upgrade. We expect the annual hours flown and number of operations out of Craig Field to increase over time.

4. The Lear 45 is a 20,500 max gross take off weight airplane. To do a gross weight take off at 86 F requires 5,150' of dry runway. Each additional degree of temperature requires another 101' to meet balanced field length requirements. Runway contamination (damp runway up to standing water) adds significantly to both take off and landing requirements.

Obviously, with current runways at Craig Field at only 4000' we will only be able to operate at a much-reduced weight so as to meet take off and landing requirements based on the current conditions.

Mr. Duncan, I hope this response to your request of September 27,2000 answers your questions and provides the information you requested. I also hope it emphasizes how much Craig Field so drastically needs runway extensions.

Should you need any additional information, please contact me.

Sincerely,

James Jacobs
Manager, Flight Operations

YEAR	MONTH	TAKE OFF	Z TIME	LANDING	Z TIME	TYPE
1996	March			1	18:59	LR35A
		1	11:05			LR35A
				1	20:23	LR35A
		1	12:44			LR35A
				1	17:34	LR35A
		1	13:15	1	0:46	LR35A
		1	12:07			LR35A
				1	20:29	LR35A
		1	16:37	1	23:18	LR35A
		1	13:45			LR35A
				1	21:40	LR35A
		6		7		

YEAR	MONTH	TAKE OFF	Z TIME	LANDING	Z TIME	TYPE
1996	DEC	1	21:06	1	23:21	LR35A
		1	12:45	1	19:34	LR35A
		1	21:13			LR35A
				1	18:31	LR35A
		1	19:20			LR35A
				1	19:54	LR35A
		1	13:15			LR35A
				1	16:15	LR35A
		1	18:40			LR35A
				1	17:00	LR35A
1997	JAN.	1	12:17			LR35A
				1	3:04	LR35A
		1	14:55			LR35A
				1	0:20	LR35A
		1	19:45			LR35A
				1	4:21	LR35A
	FEB	1	13:04	1	0:14	LR35A
		1	12:39			LR35A
				1	22:20	LR35A
		1	19:20			LR35A
				1	11:45	LR35A
		1	12:10	1	21:21	LR35A
		1	21:55			LR35A
		1	13:27	1	0:07	LR35A
	MAR	1	13:23			LR35A
				1	22:06	LR35A
		1	13:19	1	6:08	LR35A
		1	20:47			LR35A
				1	23:33	LR35A
		1	12:48	1	21:43	LR35A
		1	13:20	1	23:31	LR35A
		1	12:14	1	21:35	LR35A
		1	12:00	1	14:30	LR35A
		1	18:15	1	19:21	LR35A
		1	14:04			LR35A
				1	0:00	LR35A
		84		83		

YEAR	MONTH	TAKE OFF	TIME	LANDING	TIME	TYPE
1998	FEB	1	2:24			LJ35A
				1	21:37	LJ35A
		1	13:38	1	14:50	LJ35A
		1	21:33	1	22:41	LJ35A
		1	12:26			LJ35A
				1	0:13	LJ35A
		1	12:29			LJ35A
				1	3:31	LJ35A
	MAR	1	11:42			LJ35A
				1	0:52	LJ35A
		1	12:52			LJ35A
				1	23:16	LJ35A
		1	20:38			LJ35A
				1	15:05	LJ35A
		1	1:28	1	4:11	LJ35A
		1	19:59	1	21:06	LJ35A
		1	16:56	1	18:09	LJ35A
		1	18:44	1	22:27	LJ35A
		1	11:44	1	15:38	LJ35A
		115		114		

YEAR	MONTH	TAKE OFF	Z TIME	LANDING	Z TIME	TYPE
1998	DEC			1	18:42	LJ31A
				1	18:41	LJ35A
		1	21:55	1	1:07	LJ35A
		1	13:55			LJ35A
				1	22:26	LJ35A
		1	12:57	1	22:05	LJ35A
		1	10:18			LJ35A
				1	1:56	LJ35A
		1	12:35	1	23:37	LJ35A
		1	12:49	1	19:08	LJ35A
		1	11:44	1	0:53	LJ35A
1999	JAN	1	13:19			LJ31A
				1	18:16	LJ31A
		1	17:45			LJ31A
				1	17:32	LJ31A
		1	12:08			LJ31A
				1	21:10	LJ31A
		1	12:07			LJ31A
				1	3:28	LJ31A
		1	11:39			LJ31A
				1	21:38	LJ31A
	FEB	1	13:06			LJ31A
				1	23:54	LJ31A
		1	12:44			LJ31A
				1	5:19	LJ31A
		1	13:57			LJ31A
				1	23:01	LJ31A
		1	12:00	1	21:25	LJ31A
		1	12:55			LJ31A
				1	22:00	LJ31A
	MAR	1	13:00			LJ31A
				1	2:14	LJ31A
		1	12:08	1	21:32	LJ31A
		1	21:38	1	22:56	LJ31A
		1	21:05	1	5:15	LJ31A
		1	12:37			LJ31A
				1	21:00	LJ31A
		1	21:19	1	22:40	LJ31A
		1	21:16	1	3:49	LJ31A
		1	12:14	1	22:30	LJ31A
		1	17:35	1	1:42	LJ31A
		1	11:28	1	20:49	LJ31A
		92		94		

YEAR	MONTH	TAKE OFF	Z TIME	LANDING	Z TIME	TYPE
2000	SEPT	1	11:39	1	21:07	LJ31A
	OCT	1	18:57	1	22:18	LJ31A
		1	14:51	1	20:47	LJ31A
		1	10:41	1	14:25	LJ31A
		1	17:15	1	20:42	LJ31A
		1	11:12	1	0:35	LJ31A
		1	15:04	1	19:17	LJ31A
		1	11:15	1	16:10	LJ31A
		1	21:27			LJ31A
				1	15:50	LJ31A
			179		178	

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Fax (904) 642-9338

marcooph.com

June 7, 2000

Mr. Gary E. Duncan
855-11 St. Johns Bluff Road
Jacksonville, FL 32225

Dear Mr. Duncan:

Marco Ophthalmic, Inc. has been operating out of Craig Airport for approximately 30 years. While 4000 feet serviced Jacksonville's corporate aviation needs 20 – 30 years ago, it grossly underserves our needs (our future aircraft cannot load enough fuel for our anticipated range) and Jacksonville's needs.

Craig is in the southern area of Jacksonville, which is by far the fastest growing business, residential, and commercial area of Jacksonville. Jacksonville International is approximately 15 miles north of town and has never experienced the growth of the southside of town.

Please feel free to call me at 904-762-9330, Ext. #127.

Sincere regards,

David Marco
President

DM/mn

APPENDIX H

KEY PARTICIPANTS AND PUBLIC COMMENTS AND PARTICIPATION

Craig Airport Master Plan Update Project Meetings	
Date	**Meeting**
December 4, 2006	Craig Master Plan TAC Kick-Off Meeting
August 21, 2007	Craig Master Plan TAC, Craig Airport Citizens Advisory Committee (CACAC) and Greater Citizens Arlington Planning Advisory Committee (CPAC) Meetings
January 24, 2008	Meeting with Craig Community Working Group to cover FAA AC 150/5325-B, Runway Length Requirements for Airport Design, the current and forecasted fleet mix of aircraft operating at Craig and other community questions of concern
February 1, 2008	Meeting with Craig Community Working Group
February 12, 2008	Meeting with G. Robichaud and other community members opposed to the runway extension on the FAA recommended runway length and other related issues
February 13, 2008	Meeting with Craig Community Working Group
February 20, 2008	Meeting with Craig Community Working Group
March 4, 2008	Meeting with Craig Community Working Group
March 17, 2008	Craig Town Hall Meeting # 1 with JAA Staff on the Craig Master Plan Update and the need for a runway extension at Craig
March 26, 2008	Craig Town Hall Meeting # 2 with JAA Staff on the Craig Master Plan Update and the need for a runway extension at Craig
April 7, 2008	Meeting with Craig Community Working Group
April 28, 2008	Presentation of Final Draft to JAA Board

Note: In addition to the above meetings, JAA and The LPA Group met with members of the City of Jacksonville Planning and Development Department, the Jacksonville Department of Public Works, City Council, North East Florida Regional Council, First Coast Metropolitan Planning Organization, Florida Department of Community Affairs, citizen working groups, and other business and service organizations during the master plan process to explain the purpose and need for various alternatives and development.

Craig Municipal Airport Master Plan Update Technical Advisory Committee Members	
Name	**Title**
Tiffany Gillem	Airport Manager
Chip Seymour	Asst. Director - Planning
Izzy Bonilla	Director of Aviation
Susan Sallet	Director of Business Development
Derrick Willoughby	Administrator - Business Development
Todd Lindner	Senior Planner & Grants Administrator
David Dunkley	Senior Planner & Grants Administrator
Kristen D. Reed, AICP	Senior Planner
Steven Smith	
Gene Lampp	District Aviation Specialist
Rebecca Henry	Program Manager - Planning
Richard Owen	Program Manager - NE Region
Lt. Andy Morgan	Aviation Unit Commander
Robert Taylor	Director of Maintenance
Mr. Adam Thomas	
Mr. Richard Rossi	VP-Enterprise Division
Mr. Michael Stewart	External Affairs
Mr. Arnie Olinger	Operations Manager
Hayden Malone	Vice President
John Slate	Operations Manager
Steve Hallam	Partner
Tim Vito	President
Tomas Gyruis	
Rebecca Donovan	

AGENDA

Craig Municipal Airport Master Plan Update
Technical Advisory Committee Meeting
December 4, 2006
1:00 to 2:00 p.m.

Attendees: See Attendee List

Introduction
Project Background
Goals and Objectives of Study
Master Planning Process

Inventory of Existing Conditions
History
Airspace and Air Traffic Control
Airport Facilities
Landside Facilities
Airport Support Facilities/Infrastructure

Forecasts of Aviation Activity
Historical Activity
Forecasting Approach
Forecast Assumptions
Industry Trends
Preliminary Forecasts of Aircraft Activity

Questions and Next Steps
Questions
Address Comments on Working Paper #1
Refinement of Aviation Forecasts
FAA Review of Forecasts

Additional Information:
Phil Jufko and Tricia Fantinato of the LPA GROUP INCORPORATED will present the key aspects associated with the Inventory and Forecast phases of the study.

Master Plan Update
Craig Municipal Airport

Technical Advisory Committee Meeting

December 4, 2006

Goals and Objectives

- **Community leaders providing input into long-range planning for aviation authority consideration.**
- **Intended as a forum to freely present issues, ideas, and provide guidance in planning for future aviation facilities.**
- **Provide diverse representation of community interests and opinions relative to airport development to address all issues of concern to the community and region.**
- **Provide input related to aviation, community, political, planning & legal issues.**
- **Provide a linkage to various groups that committee members have been drawn from and to the larger community as a whole.**

What is a Master Plan?

- **Projection of the Airport's ultimate growth over a 20-year timeframe.**
- **Plan for the ultimate development of physical facilities.**
- **Development guide, including timing and costs, that considers adjacent land uses and environmental issues.**
- **Step-by-step description of the logic used in formulating the plan.**
- **Display of the plan in graphical and written form.**
- **Positions the Airport to compete for FAA and FDOT funding (up to 95%).**

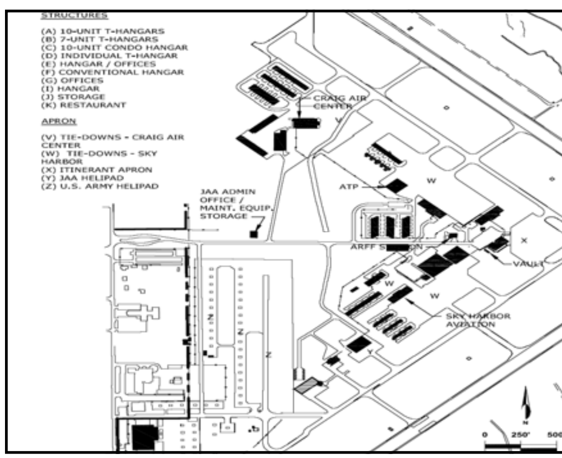
Master Plan Process

- **Inventory**
- **Aviation Activity Forecasts**
- **Airfield Capacity Analysis**
- **Facility Requirements Analysis**
- **Airport Alternatives Analysis**
- **Airport Layout Plans**
- **Financial Plan/Capital Improvement Program**
- **Public Involvement**
  - **Advisory Committee Meetings**
  - **Airport Authority Meetings**
  - **Public Meeting**
  - **Coordination Meetings**
  - **Briefings to JAA**

Existing Conditions

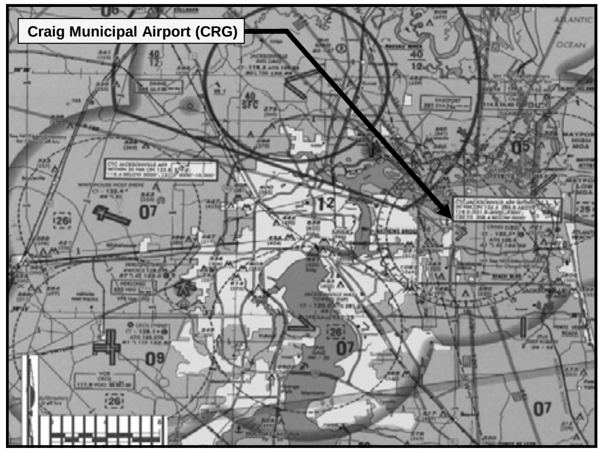
- **Combination civilian/military airspace: Class D, overlapping Classes C (veil) & D; MOAs**
- **Precision instrument approaches**
- **Combined aprons: accommodate 235 aircraft**
- **2 local FBOs: Craig Air Center, Sky Harbor Aviation**

- <u>Runway 14-32</u>
  - **Primary runway: 3,998 ft x 100 ft; extension underway**
  - **ARC C-II design designation; good condition; stopways**
- <u>Runway 5-23</u>
  - **Secondary/crosswind runway: 4,004 ft x 100 ft**
  - **ARC C-II design designation; visual approach only; good condition**



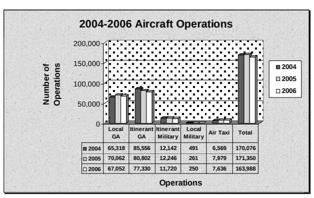
Existing Conditions: Issues

- Airfield capacity
  - Limited potential runway and taxiway development
- Aircraft circulation areas
  - Taxiways, aprons
- Dense, overlapping airspace
  - Military airspace, overlapping JAX Class C veil
- Aircraft noise, environmentally sensitive areas
  - Aircraft approach/departure patterns
- Residential encroachment
- Security
  - Perimeter and Airside



Historical Aviation Activity

- **Fluctuation in based aircraft**
- **Slight decrease in operations**
  - **Indication of airfield capacity constraint**
  - **Leakage of traffic to other area airports**
- **Diminishing military presence**
- **Increased flight training activity**



Purpose of Forecasting

- **To develop a realistic assessment of market conditions and market performance.**
- **To address unique local conditions not fully considered in national, macro level forecast efforts.**
- **To provide a benchmark for comparing current facilities against a reasonable estimate of future demand to define potential future facility needs.**
- **Consider the recession and growth coupled with the terrorist attacks of September 11, 2001 and their impacts well into the future.**

Forecasting Methodology

- **Composite methodology and market share method were employed, closely following projections in TAF**
- **Calculations were made, in part, to determine what has historically been the airport's contribution to the nation's GA activity.**
- **These rates were then applied with the FAA's national forecast, TAF, and the Part 150 Study to project the anticipated level of GA operations for the planning period.**
- **The resulting level of GA activity reflects a positive growth rate.**

Aviation Forecast: GA Operations

	2006	2011	2016	2021	2026	Average Annual Growth Rate
Air Taxi	7,636	8,817	9,120	9,561	9,802	1.26%
Based Aircraft	327	375	424	483	552	2.65%
OPERATIONS						
Local GA	67,052	74,952	87,596	99,528	115,063	2.72%
Itinerant GA	77,330	81,549	84,352	88,426	90,656	0.80%
Military	11,720	13,138	13,590	14,246	14,605	1.11%

Forecast Comparison

	2006	2011	2016	2021	2026	Average Annual Growth Rate
OPERATIONS						
2007 FAA TAF	156,915	174,796	191,482	207,379	223,527	1.82%
Part 150 Study	163,988	180,760	197,236	215,215	234,832	1.81%
Master Plan Forecast	163,988	178,456	194,659	211,761	230,126	1.71%

Next Steps

- **Address comments on Working Paper 1**
  - **Refinement of Forecasts/FAA Review**
- **Airfield Capacity and Facility Requirements Analyses**
- **TAC meeting to review results of Working Paper 2**
- **Airport Alternatives Analysis**
- **Airport Plans Set**
- **Financial Plan/Capital Improvement Program**

Project Schedule

- **Inventory & Forecast – 2 months**
- **Capacity & Facility Requirements – 2 months**
- **Alternatives Analysis – 2 months**
- **Financial Plan – 2 months**
- **Airport Layout Plan and Report – 3 months**
- **Agency Review (FAA/FDOT) – 2 months**

Question and Answer Forum

Michael Stewart
External Affairs
JAA
741-2721
~~[illegible]~~
945-6300

ATTENDEE LIST

Craig Municipal Airport Master Plan Update
Technical Advisory Committee Meeting
December 4, 2006
1:00 to 2:00 p.m.

NAME	TITLE	ORGANIZATION	PHONE	E-MAIL
Tiffany Gillem	Airport Mgr	Craig-JAA	904-641-7666	tgillem@jaa.aero
Gene Lampp	District Aviation Specialist	FDOT	904-360-5996	gene.lampp@dot.state.fl.us
Phil Jufko	Mgr, Aviation Planning	LPA	813-889-3892	pjufko@lpagroup.com
Tricia Fantinato	Project Mgr	LPA	813-889-3892	tfantinato@lpagroup.com
Andy Morgan	Avn Unit Commander	JSO	904-642-0422	Robert.Morgan@jaxsheriff.org
Robert Taylor	Director of ATP Maint	ATP	904-641-7799	JAXMX@allatps.com
Hayden Malone	V. P.	Malone Aircharter	904 708-5461	malone@malone aircharter.com
Arnie Olinger	Ops Manager	FAA JAX Tower/TRACON	904-741-0706	arnie.olinger@faa.gov
John Slate	Ops Manager	North Fl Flight Training	904 642-3912	skysonnews30@bellsouth.net
Steve Hallam	Partner	North Florida	904-536-5470	schallam@cs.com
Tim Vito	President	Craig Air Center	904-641-0300	JTVITO@CRAIGAIRCENTER.COM

ATTENDEE LIST

Craig Municipal Airport Master Plan Update
Technical Advisory Committee Meeting
December 4, 2006
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NAME	TITLE	ORGANIZATION	PHONE	E-MAIL
KRISTEN REED	SENIOR PLANNER	JAX PLANNING & DEVELOPMENT DPT	630-2137	KREED@COJ.NET
Susan Sallet	Dir of Bus.	JAA	741-2004	SSallet@JAA.Aero
Derrick Willoughby	Administrator	JAA	741-2426	dwilloughby@JAA.AERO
TODD LINDNER	ADMIN OF PLANNING	JAA	741-2228	TLINDNER@JAA.AERO
David Dunkley	Admin of Planning	JAA	741-2744	DDunkley@JAA.AERO

AGENDA

Craig Municipal Airport Master Plan Update
Craig Airport Citizens Advisory Committee
August 21, 2007
9:00 am to 10:00 am

Attendees: See Attendee List

Introduction
What is a Master Plan
Airport Inventory
Approved Aviation Forecasts

Demand/Capacity and Facility Requirements
Airport Capacity and Delay
Design Aircraft and Runway Requirements
Airfield Facility Requirements
General Aviation Facilities
Airport Support Facilities

Airport Alternatives Analysis
Airfield Development Concepts
Land Use Considerations
Landside Development Concepts

Questions and Next Steps
Questions
Refinement of Airport Development Options
Submit Working Paper 3 (Refined Alternatives) for Review

Additional Information:
Phil Jufko of the LPA GROUP INCORPORATED will make a presentation on the airport master plan project, including key aspects associated with the Facility Requirements and Alternatives Development phases of the study.

Master Plan Update
Craig Municipal Airport

Craig Airport Citizens Advisory Committee

August 21, 2007

Goals and Objectives

- **Community leaders providing input into long-range planning for aviation authority consideration.**
- **Intended as a forum to freely present issues, ideas, and provide guidance in planning for future aviation facilities.**
- **Provide diverse representation of community interests and opinions relative to airport development to address all issues of concern to the community and region.**
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- **Provide a linkage to various groups that committee members have been drawn from and to the larger community as a whole.**

What is a Master Plan?

- **Projection of the Airport's ultimate growth over a 20-year timeframe.**
- **Plan for the ultimate development of physical facilities.**
- **Development guide, including timing and costs, that considers adjacent land uses and environmental issues.**
- **Step-by-step description of the logic used in formulating the plan.**
- **Display of the plan in graphical and written form.**
- **Positions the Airport to compete for FAA and FDOT funding (up to 95%).**

Master Plan Process

- ✔ **Inventory**
- ✔ **Aviation Activity Forecasts**
- ✔ **Airfield Capacity Analysis**
- ✔ **Facility Requirements Analysis**
- ✔ **Airport Alternatives Analysis**
- **Refine Alternatives Analysis**
- **Airport Layout Plans**
- **Financial Plan/Capital Improvement Program**
- **Public Involvement**
  - **Advisory Committee Meetings**
  - **Airport Authority Meetings**
  - **Public Meeting**
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  - **Briefings to JAA**

Airfield Inventory

FACILITIES

- Two Fixed Based Operators
- 327 Based Aircraft
- 107 T-Hangars
- 13 Conventional/Corporate Hangars
- Four Flight Schools
- Air Traffic Control Tower (Hours of Operation: 0600 to 2300)

RUNWAYS

- <u>Runway 14-32</u>
  - Primary runway: 3,998 ft x 100 ft
  - ARC B-II design designation
  - Good condition
  - Precision approach Runway 32
- <u>Runway 5-23</u>
  - Crosswind Runway 4,004 x 100 ft
  - ARC B-II design designation
  - Visual approach only
  - Good condition

Development Issues

- **Runway Length limits operating conditions for aircraft currently and forecast to use the Airport**
- **Total Aircraft Operations limited by Airfield Configuration.**
- **Dense, overlapping airspace**
  - **Military airspace, overlapping JAX Class C veil**
- **Aircraft noise, environmentally sensitive areas**
  - **Aircraft approach/departure patterns**
  - **Residential encroachment**
- **Airside and Perimeter Security**
  - **New GA Security Requirements**

Purpose of Forecasting

- To develop a realistic assessment of market conditions and market performance.
- To address unique local conditions not fully considered in national, macro level forecast efforts.
- To provide a benchmark for comparing current facilities against a reasonable estimate of future demand to define potential future facility needs.
- Consider the recession and growth coupled with the terrorist attacks of September 11, 2001 and their impacts well into the future.

Approved Aviation Forecast

	2006	2011	2016	2021	2026	Average Annual Growth Rate
Based Aircraft	327	367	416	475	543	2.57%
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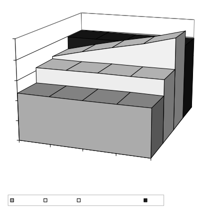
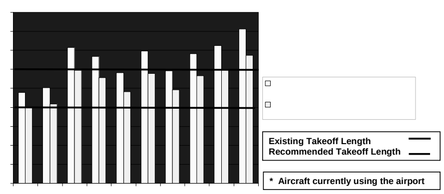
TOTAL OPERATIONS	**163,988**	**183,325**	**200,790**	**216,325**	**237,049**	**1.86%**

Airport Capacity and Delay



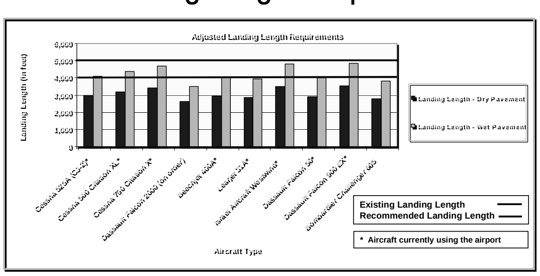
Year	2006	2011	2016	2021	2026
Annual Operations	163,988	183,325	200,790	216,325	237,049
Annual Service Volume	197,449	197,449	197,449	197,449	197,449
Capacity Level	83.05%	92.85%	101.69%	109.56%	120.06%
Average Delay per Aircraft (in Minutes)	0.85	0.86	0.94	1.03	1.19

Adjusted Takeoff Length Required



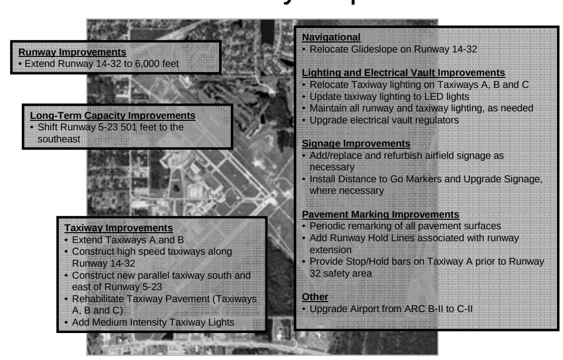
Current Critical Aircraft Takeoff Length at 100% Useful Load = 7,258 ft
Current Critical Aircraft Takeoff Length at 80% Useful Load = 5,922 ft

Landing Length Requirements



Existing Critical Aircraft Landing Length - Wet Pavement = 4,834

Airfield Facility Requirements



Alternative Evaluation Criteria

- **Optimize operational efficiency, effectiveness, capability and safety of the airport;**
- **Enhance the economic and social value of the airport;**
- **Meet long-range aviation needs of the community;**
- **Ensure that current and future airport plans are environmentally compatible and in harmony with local and regional plans and objectives; and**
- **Consider recommendations of the Technical Advisory Committee, user groups, and general public.**

Runway Alternative 1

STRENGTHS
- **Provides takeoff length of 6,000 feet**
- **Provides landing length of 5,000 feet**
- **Improved safety on takeoff and landing**
- **Accommodates 75 percent of active GA Fleet**
- **Provides access to Southeast Airfield**
- **Improved operations, and**
- **Decreased noise impacts**

WEAKNESSES
- **Cost (~$18 million)**
- **Relocation of perimeter road and NAVAIDs (including Glideslope Antenna and MALSR)**

Runway Alternative 2

STRENGTHS
- **Takeoff length of 6,500 feet**
- **Provides access to Southeast Airfield**
- **Improved operations**

WEAKNESSES
- **Landing length of 4,500 feet**
- **Accommodates 60% of GA Fleet**
- **Cost (~20 million)**
- **Does not decrease noise impact**
- **Brings aircraft operations closer to neighboring residential properties, and**
- **Requires relocation of perimeter road and NAVAIDs (including glideslope antenna, localizer and MALSRs)**

Airfield Alternative Analysis

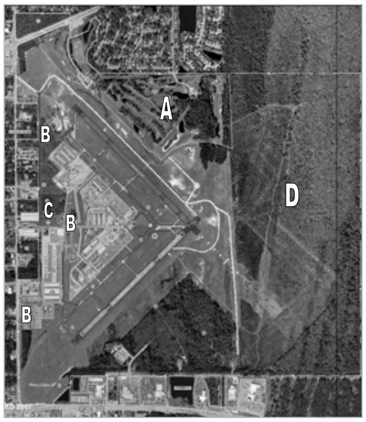
Airfield Evaluation Criteria	Runway Alternative 1	Runway Alternative 2
Takeoff Length	6,000 feet	6,500 feet
Landing Length	5,000 feet	4,500 feet
Noise Impacts	Decreases noise impacts to all surrounding neighborhoods	Increases impacts to neighborhoods northwest of airfield
Land Acquisition	None	Approximately 2.0 acres on Runway 14
Safety and Operations	•Provides increased safety during landing and takeoff in all configurations •Requires relocation of Glideslope Antenna	•Marginally increase safety on landing to Runway 32 •Requires relocation of localizer and glideslope antenna
Addresses Runway Operational Requirements	Yes	No
Order of Magnitude Cost	$18 million	$20 million

Recommended Runway Alternative

- **Runway 14-32 extended to 6,000 feet**
- **1,000 ft displaced threshold on Runways 14 and 32**
- **Extend Taxiways A and B**
- **Add two high-speed taxiways**

Long-Term Airfield Development

- **Runway 5-23 shifted 501 feet to the southwest**
  - **Improved Airfield Capacity**



Existing Land Use

A. **Mill Cove Golf Course**
B. **Available Aviation Leases**
C. **Available Non-Aviation Leases**
D. **Wetland Mitigation and Conservation**

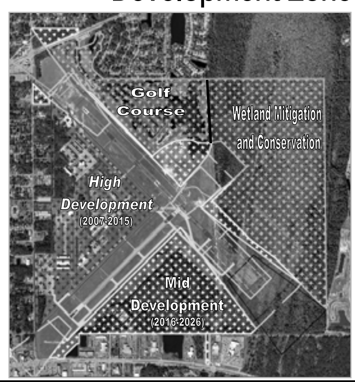
General Aviation Facility Requirements

- **Rehabilitate existing pavement adjacent to Craig Air Center and Sky Harbor**
- **Rehabilitate or replace 85 T-Hangars**
- **Add approximately fifteen 12-unit T-Hangars**
- **Construct at least 8 Conventional hangars**
- **Construct at least 28 Corporate hangars**

Required Support Facilities, Access and Infrastructure

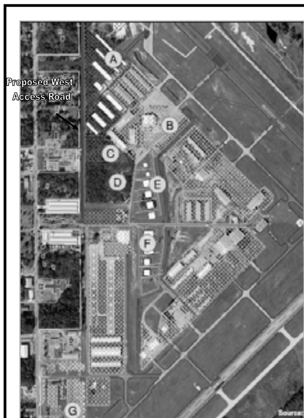
- **Support Facilities**
  - **Install additional Jet A fuel tanks**
  - **Relocate fenceline associated with development**
  - **Install Inner Fence**
  - **Install additional regulators in electrical vault associated with development**
- **Access and Infrastructure**
  - **Widen Airport Road, as traffic permits**
  - **Construct internal access roads**
  - **Construct access roads from St. Johns Bluff Road and Atlantic Blvd.**
  - **Provide additional parking where needed to accommodate anticipated demand**

Development Zones



High Development (2007-2015)
- **Utility infrastructure in place**
- **Available parcels**
- **Surface access**
- **Airfield access**

Mid-Development (2016-2026)
- **Available Parcels**
- **Limited utilities**
- **Limited surface access**



GA Alternative 1 High Development

Potential Development Sites

A. **T-Hangar Development**
B. **FBO and Corporate Aviation Development**
C. **Corporate and Business Aviation Development (i.e. private storage development)**
D. **Aviation and Non-Aviation Business Development (i.e. Restaurant, Avionics Shop, etc.)**
E. **Corporate Hangar Development (80' x 80' and 50' x 50')**
F. **Corporate Hangar Development (120' x 120' and 75' x 75')**
G. **Aviation Business Development (i.e. Maintenance Facility or Aviation School)**

GA Alternative 2 High Development

Potential Development Sites

A. **Corporate Hangar Development (100' x 100')**
B. **T-Hangar Development**
C. **Aviation Maintenance or Avionics Facility**
D. **T-Hangar Development (I and II)**
E. **Aviation Business and Aircraft Storage (Office and Hangar development)**
F. **Non-Aviation Business Development**

GA Alternative 1
Mid Development

Potential Development Sites

A. Box Hangars (75’ x 75’) with Apron

B. Non-Aviation (76.8 acres) Industrial/Commerce Park

GA Development 2
Mid Development

Potential Development Sites

A. T-Hangar Development (ADG I and II)

B. Corporate Hangar Development (100’ x 125’)

C. Non-Aviation (76.8 Acres) Industrial/Commerce Park

Next Steps

- **Address Comments on Working Paper 2 (Request comments from TAC by September 3, 2007)**
- **CPAC Presentation**
- **Refine Airport Alternatives**
- **Develop Airport Layout Plan Set**
- **Develop Financial Plan/Capital Improvement Program**
- **Submit Final Master Plan Update:**
  - **Review and Approval from FAA**
  - **Review and Approval by FDOT Aviation Office**

Question and Answer Forum

AGENDA

Craig Municipal Airport Master Plan Update
Technical Advisory Committee Meeting
August 21, 2007
2:00 to 3:00 pm

Attendees: See Attendee List

Introduction
Project Status

Demand/Capacity and Facility Requirements
Airport Capacity and Delay
Design Aircraft and Runway Requirements
Airfield Facility Requirements
General Aviation Facilities
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ATTENDEE LIST

Craig Municipal Airport Master Plan Update
Technical Advisory Committee Meeting
August 21, 2007
2:00 p.m.

NAME	TITLE	ORGANIZATION	PHONE	E-MAIL
Gene Lamps		FDOT		
David Dunkley	Planner	JAA		
TIFFANY Gillem		JAA		
James Richardson	NEIGHBORHOOD COORDINATOR	COJ	255-8235	JRICHARD@coj.net
Susan Salle	Director-Business	JAA	741-2004	SSalle@JAA.Aero
JOE WENDRICKS	CRAIG TOWER	RVA	641-3022	LELYN78@AOL.com
REBECCA DONOVAN	General Manager	Sky Harbor	641-8555	crgiet@aol.com
ARNIE OLINGER	FAA JAX TRACON	Support Manager	741-0706	arnie.olinger@faa.gov
Justin Brown	Intern	JAA	335-0949	JBrown@JAA.Aero
Theren Harrison	GA Specialist	JAA	641-7666	tharrison@jaa.aero
Rolf Riechmann	GA Specialist	JAA	641-7666	rriechmann@jaa.aero
CHRIS GUEST	~~JAA~~ MAINT.	JAA	641-7666	Cguest@JAA.AERO
KRISTEN REED	PLANNER	COJ PLANNING & DEVELOPMENT	630-2137	KREED@COJ.NET

Master Plan Update
Craig Municipal Airport

Citizens Planning Advisory Committee
September 17, 2007

Goals and Objectives

- **Community leaders providing input into long-range planning for aviation authority consideration.**
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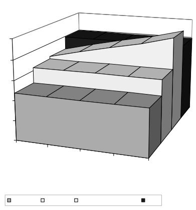

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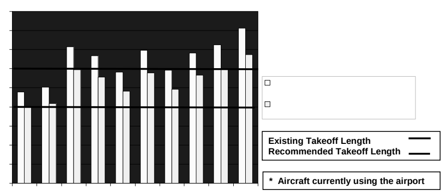

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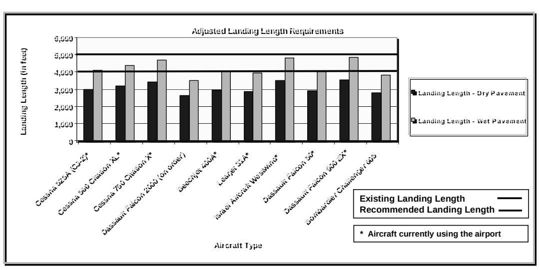

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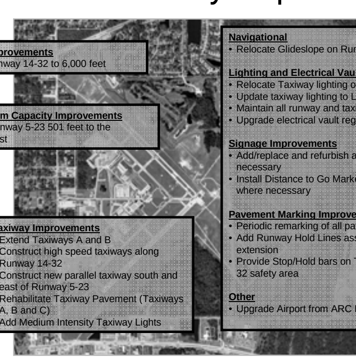

Runway Improvements
- Extend Runway 14-32 to 6,000 feet

Long-Term Capacity Improvements
- Shift Runway 5-23 501 feet to the southeast

Taxiway Improvements
- Extend Taxiways A and B
- Construct high speed taxiways along Runway 14-32
- Construct new parallel taxiway south and east of Runway 5-23
- Rehabilitate Taxiway Pavement (Taxiways A, B and C)
- Add Medium Intensity Taxiway Lights

Navigational
- Relocate Glideslope on Runway 14-32

Lighting and Electrical Vault Improvements
- Relocate Taxiway lighting on Taxiways A, B and C
- Update taxiway lighting to LED lights
- Maintain all runway and taxiway lighting, as needed
- Upgrade electrical vault regulators

Signage Improvements
- Add/replace and refurbish airfield signage as necessary
- Install Distance to Go Markers and Upgrade Signage, where necessary

Pavement Marking Improvements
- Periodic remarking of all pavement surfaces
- Add Runway Hold Lines associated with runway extension
- Provide Stop/Hold bars on Taxiway A prior to Runway 32 safety area

Other
- Upgrade Airport from ARC B-II to C-II

Alternative Evaluation Criteria

- **Optimize operational efficiency, effectiveness, capability and safety of the airport;**
- **Enhance the economic and social value of the airport;**
- **Meet long-range aviation needs of the community;**
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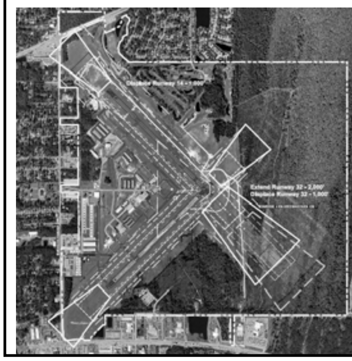
Runway Alternative 1



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- **Provides landing length of 5,000 feet**
- **Improved safety on takeoff and landing**
- **Accommodates 75 percent of active GA Fleet**
- **Provides access to Southeast Airfield**
- **Improved operations, and**
- **Decreased noise impacts**

WEAKNESSES

- **Cost (~$18 million)**
- **Relocation of perimeter road and NAVAIDs (including Glideslope Antenna and MALSR)**

Runway Alternative 2

STRENGTHS

- **Takeoff length of 6,500 feet**
- **Provides access to Southeast Airfield**
- **Improved operations**

WEAKNESSES

- **Landing length of 4,500 feet**
- **Accommodates 60% of GA Fleet**
- **Cost (~20 million)**
- **Does not decrease noise impact**
- **Brings aircraft operations closer to neighboring residential properties, and**
- **Requires relocation of perimeter road and NAVAIDs (including glideslope antenna, localizer and MALSRs)**

Airfield Alternative Analysis

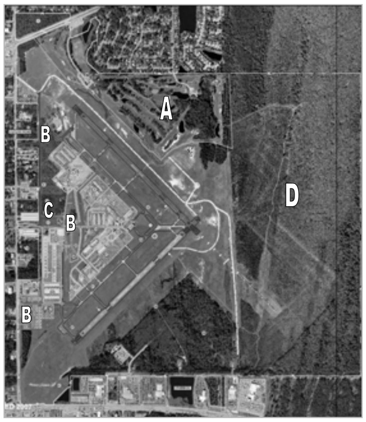
Airfield Evaluation Criteria	Runway Alternative 1	Runway Alternative 2
Takeoff Length	6,000 feet	6,500 feet
Landing Length	5,000 feet	4,500 feet
Noise Impacts	Decreases noise impacts to all surrounding neighborhoods	Increases impacts to neighborhoods northwest of airfield
Land Acquisition	None	Approximately 2.0 acres on Runway 14
Safety and Operations	•Provides increased safety during landing and takeoff in all configurations •Requires relocation of Glideslope Antenna	•Marginally increase safety on landing to Runway 32 •Requires relocation of localizer and glideslope antenna
Addresses Runway Operational Requirements	Yes	No
Order of Magnitude Cost	$18 million	$20 million

Recommended Runway Alternative

- **Runway 14-32 extended to 6,000 feet**
- **1,000 ft displaced threshold on Runways 14 and 32**
- **Extend Taxiways A and B**
- **Add two high-speed taxiways**

Long-Term Airfield Development

- **Runway 5-23 shifted 501 feet to the southwest**
  - **Improved Airfield Capacity**



Existing Land Use

A. Mill Cove Golf Course
B. Available Aviation Leases
C. Available Non-Aviation Leases
D. Wetland Mitigation and Conservation

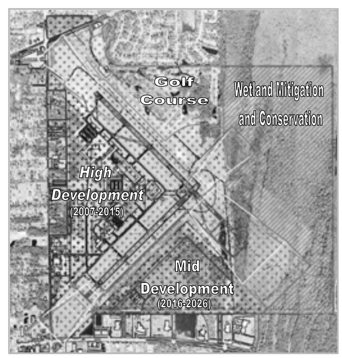
General Aviation Facility Requirements

- **Rehabilitate existing pavement adjacent to Craig Air Center and Sky Harbor**
- **Rehabilitate or replace 85 T-Hangars**
- **Add approximately fifteen 12-unit T-Hangars**
- **Construct at least 8 Conventional hangars**
- **Construct at least 28 Corporate hangars**

Required Support Facilities, Access and Infrastructure

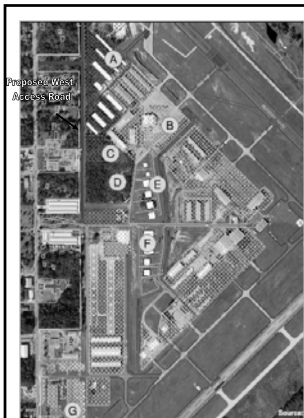
- **Support Facilities**
  - **Install additional Jet A fuel tanks**
  - **Relocate fenceline associated with development**
  - **Install Inner Fence**
  - **Install additional regulators in electrical vault associated with development**
- **Access and Infrastructure**
  - **Widen Airport Road, as traffic permits**
  - **Construct internal access roads**
  - **Construct access roads from St. Johns Bluff Road and Atlantic Blvd.**
  - **Provide additional parking where needed to accommodate anticipated demand**

Development Zones



High Development (2007-2015)
- **Utility infrastructure in place**
- **Available parcels**
- **Surface access**
- **Airfield access**

Mid-Development (2016-2026)
- **Available Parcels**
- **Limited utilities**
- **Limited surface access**



GA Alternative 1 High Development

Potential Development Sites

A. **T-Hangar Development**
B. **FBO and Corporate Aviation Development**
C. **Corporate and Business Aviation Development (i.e. private storage development)**
D. **Aviation and Non-Aviation Business Development (i.e. Restaurant, Avionics Shop, etc.)**
E. **Corporate Hangar Development (80' x 80' and 50' x 50')**
F. **Corporate Hangar Development (120' x 120' and 75' x 75')**
G. **Aviation Business Development (i.e. Maintenance Facility or Aviation School)**

GA Alternative 2 High Development

Potential Development Sites

A. **Corporate Hangar Development (100' x 100')**
B. **T-Hangar Development**
C. **Aviation Maintenance or Avionics Facility**
D. **T-Hangar Development (I and II)**
E. **Aviation Business and Aircraft Storage (Office and Hangar development)**
F. **Non-Aviation Business Development**

GA Alternative 1
Mid Development

Potential Development Sites

A. **Box Hangars (75’ x 75’) with Apron**
B. **Non-Aviation (76.8 acres) Industrial/Commerce Park**

GA Development 2
Mid Development

Potential Development Sites

A. **T-Hangar Development (ADG I and II)**
B. **Corporate Hangar Development (100’ x 125’)**
C. **Non-Aviation (76.8 Acres) Industrial/Commerce Park**

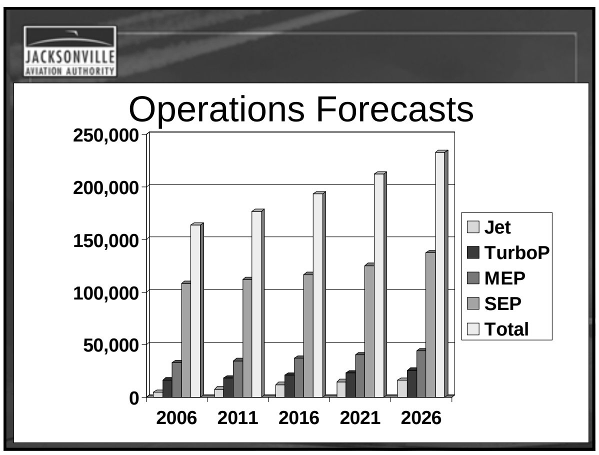
Next Steps

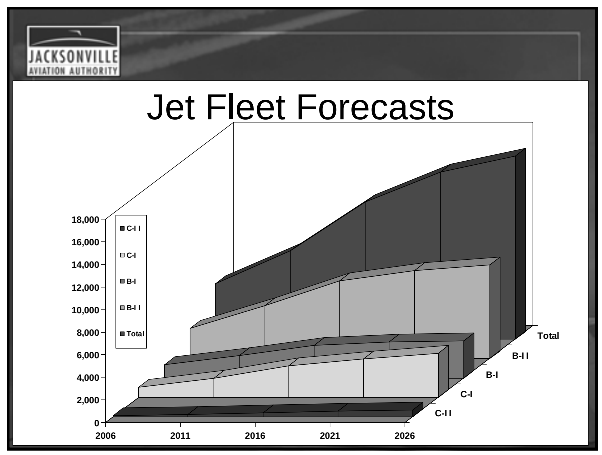
- **Refine Airport Alternatives**
- **Develop Airport Layout Plan Set**
- **Develop Financial Plan/Capital Improvement Program**
- **Submit Final Master Plan Update:**
  - **Review and Approval from FAA**
  - **Review and Approval by FDOT Aviation Office**

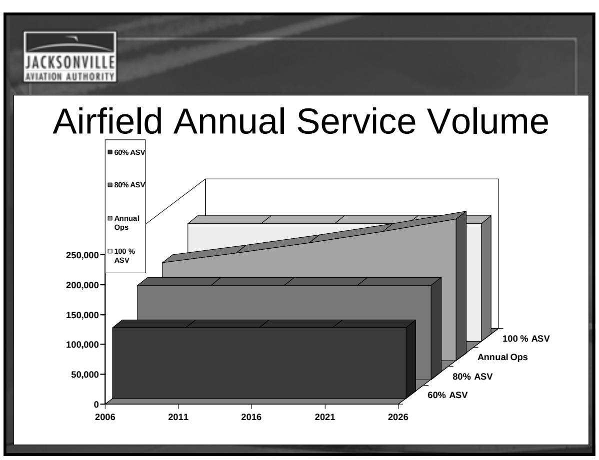
Question and Answer Forum

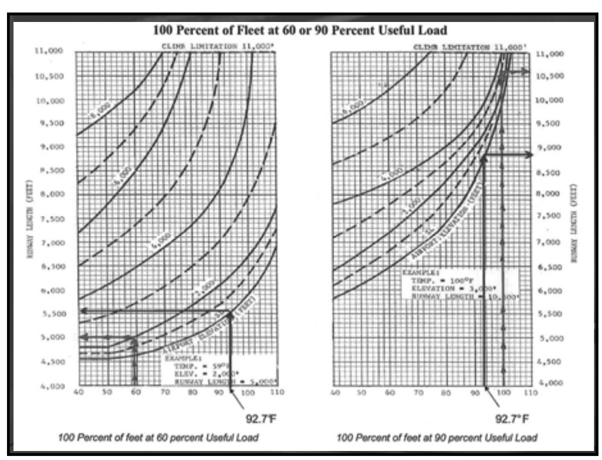
Key Issues

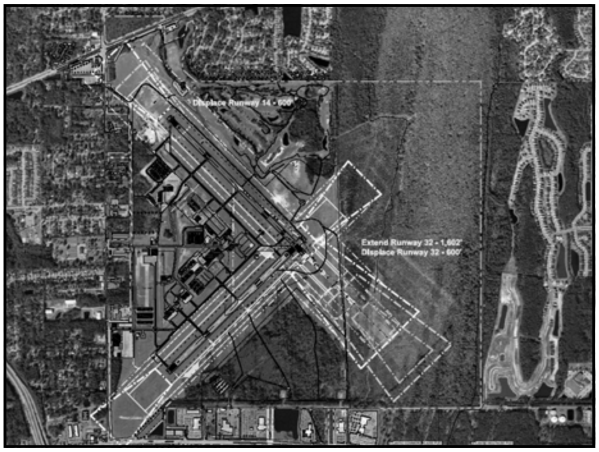
- Primary Rwy Length, Safety Areas and Airfield Capacity
- Long Term Options and Infrastructure Needs
- Potential Noise Impacts and Noise Abatement Options
- Maximize Use of Available Property and Airside Access
- Evaluate Existing Pavement Conditions
- Evaluate Ground Access Improvements

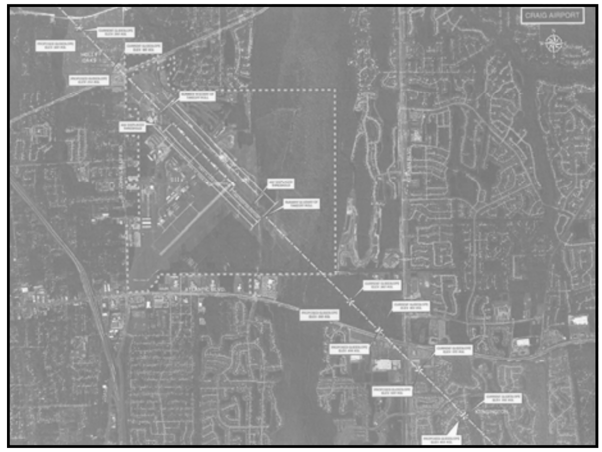


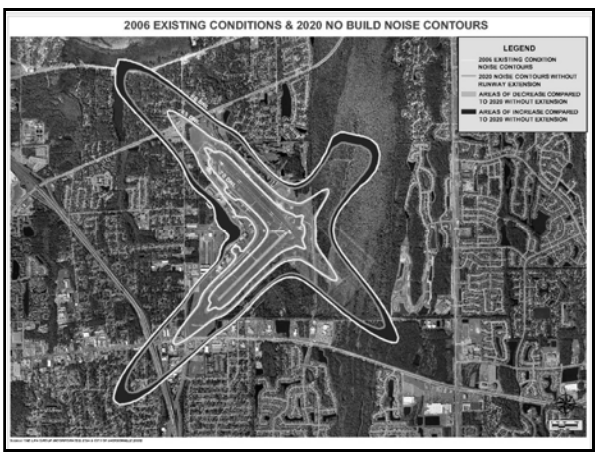


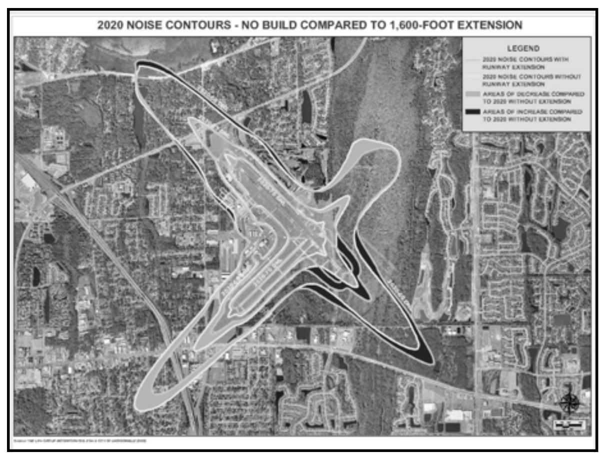


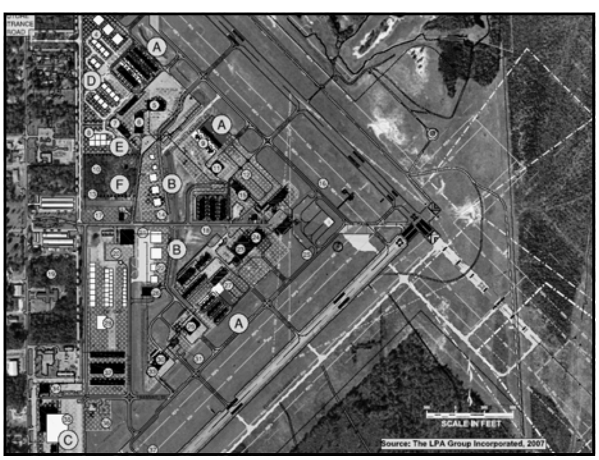



Displace Runway 14 - 600'
Extend Runway 32 - 1,602'
Displace Runway 32 - 600'


CRAIG AIRPORT


2006 EXISTING CONDITIONS & 2020 NO BUILD NOISE CONTOURS
LEGEND
2006 EXISTING CONDITION NOISE CONTOURS
2020 NOISE CONTOURS WITHOUT RUNWAY EXTENSION
AREAS OF DECREASE COMPARED TO 2020 WITHOUT EXTENSION
AREAS OF INCREASE COMPARED TO 2020 WITHOUT EXTENSION


2020 NOISE CONTOURS - NO BUILD COMPARED TO 1,600-FOOT EXTENSION
LEGEND
2020 NOISE CONTOURS WITH RUNWAY EXTENSION
2020 NOISE CONTOURS WITHOUT RUNWAY EXTENSION
AREAS OF DECREASE COMPARED TO 2020 WITHOUT EXTENSION
AREAS OF INCREASE COMPARED TO 2020 WITHOUT EXTENSION


A
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SCALE IN FEET
Source: The LPA Group Incorporated, 2007


A
PARKING
FUTURE BUSINESS PARK
B
FUTURE POND
GENERAL DOOLITTLE DRIVE ROAD EXTENSION
SOUTHSIDE ACCESS ROAD
BUSINESS PARK ACCESS ROAD
FUTURE ROAD
FUTURE ROAD
DRAINAGE
GENERAL DOOLITTLE DRIVE

Costs

- JAA expects $150,000 from FAA and $500,000 from FDOT annually. FAA can add discretionary funding for high FAA priority projects.
- Runway 14/32 Extension estimated at $18-20 million
- 20-year Funding Plan:

FAA	$ 2.85 M
FAA Discretionary	$ 19.20 M
FDOT	$ 9.50 M
JAA	$ 10.50 M
Private	$ 60.00 M
Total	$102.05 M

Next Steps

- Submit Draft Master Plan to FAA, FDOT and Public for Final Comment
- Board Review All Data and Determination of Direction
- If Board Determines to Move Forward with Runway Extension
  - FAA Benefit/Cost Analysis
  - Federal Environmental Action (EA/EIS)
  - Develop Specific Funding Plan
  - Begin Construction

Florida Department of Transportation

JEB BUSH
GOVERNOR

1109 South Marion Avenue
Lake City, Florida 32025-5874

DENVER J. STUTLER, JR.
SECRETARY

1109 South Marion Avenue
Mail Station 2018
Lake City, Florida 32025-5874

(800) 749-2967
(386) 961-7855
(386) 758-3766 Fax

July 27, 2006

Michele L. Stephens
Contract Administrator
Jacksonville Aviation Authority
P.O. Box 18018
Jacksonville, FL 32229

RE: Craig Municipal Airport
Master Plan Update
F.P. 40996319401, JAA Project C2006-03, Contract A/E 227-027
Request for Concurrence

Dear Ms. Stephens

The Florida Department of Transportation (FDOT) gives approval with the condition funds are available in the current executed Joint Participation Agreement(s) (JPA) and no addition Department funds will be needed for the project.

I also want to bring to the attention of the Jacksonville Airport Authority (JAA) the last sentence in paragraph 3.00 of the project JPA which states, "The Agency agree to bear all expenses in excess of the total estimated cost of the project and any deficits involved."

If you should have any questions concerning this letter, please feel free to contact me.

Sincerely,

Roland C Luster

Roland C. Luster
Aviation/Ports Administrator

Duval County Public Schools

1701 Prudential Drive
Jacksonville, FL 32207
www.dreamsbeginhere.org
904 390 2000

September 12, 2008

Mr. Chip Seymour
Jacksonville Aviation Authority
Jacksonville, FL 32216

Dear Chip,

Per our conversation, thank you for sending the FDOT and NEFRC information. City Planning has also sent detailed maps showing the proposed runway extension at Craig Field.

Doug Ayars and I have carefully reviewed the maps and FS 333.03(3) and the impacts on Kernan Elementary School and Landmark Middle School. In each case only one corner of the property is impacted. The impacted areas do not include any buildings or areas of student congregations. We do not feel that the impact is significant enough to oppose the extension of the runway and we will urge the School Board to take no action.

Thank you for requesting our comments.

Sincerely,

Karen S. Kuhlmann

Karen S. Kuhlmann
Director
Real Estate and Agency Liaison

PRESENTATION TO THE JAA CRAIG AD-HOC COMMITTEE

9/15/08

JAA UNDERTAKES A MASTER PLAN UPDATE ON EACH OF OUR AIRPORTS EVERY 5 TO 7 YEARS. JAA BEGAN THE CURRENT CRAIG MASTER PLAN UPDATE IN SEPTEMBER 2006. THE MASTER PLAN PROCESS PROVIDES A LOGICAL STUDY OF AN AIRPORTS ULTIMATE GROWTH OVER A 20 YEAR TIME FRAME BASED ON ACTUAL AND FORECASTED AVIATION NEEDS OF THE COMMUNITY AND THE FACILITIES NECESSARY TO SUPPORT THAT GROWTH BASED ON FAA AND FDOT GUIDANCE AND REGULATIONS.

THE GOALS FOR THE CRAIG MASTER PLAN UPDATE INCLUDED EXAMINING LONG TERM GROWTH OPTIONS AND INFRASTRUCTURE NEEDS INCLUDING DETERMINING THE PRIMARY RUNWAY LENGTH, SAFETY AREAS AND AIRFIELD CAPACITY; EXAMINING POTENTIAL NOISE IMPACTS AND NOISE ABATEMENT OPTIONS; MAXIMIZING THE USE OF AVAILABLE AIRPORT PROPERTY AND AIRSIDE ACCESS, EVALUATING PAVEMENT CONDITIONS AND GROUND ACCESS IMPROVEMENTS.

DURING THE PLANNING PROCESS, JAA IDENTIFIED A NEED TO UPGRADE THE AIRFIELD LIGHTING, REHABILITATE THE PAVEMENT ON RUNWAY 5/23, ADD SEVERAL NEW HANGARS, REHABILITATE EXISTING HANGARS AND PAVEMENT STRUCTURES, IMPROVE ACCESS TO THE SOUTHSIDE OF

THE AIRPORT, INSTALL AN AIRCRAFT FLIGHT TRACKING AND NOISE MONITORING SYSTEM, AS WELL AS EXTEND THE PRIMARY RUNWAY BY 1,600 FEET TO 5,600 FEET

THE NEED FOR THE RUNWAY EXTENSION IS BASED ON THE GUIDANCE IN FAA ADVISORY CIRCULAR 150/5325.4B WHICH INDICATES THAT RUNWAY 14/32 SHOULD BE EXTENDED TO 5,600 FEET BASED ON THE AIRCRAFT THAT ARE USING CRAIG TODAY.

DURING THE PLANNING STUDY, JAA ALSO EXAMINED THE NOISE FOOTPRINT FROM OPERATIONS AT CRAIG. THE FAA, IN CONJUNCTION WITH LEADING NOISE EXPERTS HAS DEVELOPED A NOISE MODEL THAT PREDICTS THE AVERAGE NOISE FOOTPRINT FROM AIRCRAFT OPERATIONS OVER A 24-HOUR PERIOD. THIS MODEL USING THE ACTUAL FLIGHT TRACKS AT AN AIRPORT AND THE EXISTING AND FUTURE AIRCRAFT OPERATIONS AT THE AIRPORT TO PREDICT A 65 AVERAGE DAY-NIGHT NOISE CONTOUR FOR THE AIRPORT. THE 65 AVERAGE DAY NIGHT FOOTPRINT IS THE POINT AT WHICH FAA DETERMINES THAT AVERAGE NOISE CROSSES THE FEDERAL THRESHOLD THAT IMPACT RESIDENTIAL USE. CURRENTLY THE FAA FOOTPRINT HAS LIMITED OFF AIRPORT IMPACTS TO THE NORTHWEST OF THE AIRPORT AND NO IMPACT TO THE SOUTHEAST. AS THE NUMBER OF OPERATIONS AT CRAIG GROW THIS

FOOTPRINT IS PROJECTED TO HAVE INCREASING IMPACTS TO OFF AIRPORT PROPERTY.

AS A MITIGATION MEASURE THAT RECOGNIZES THE COMMUNITIES CONCERN ABOUT POTENTIAL INCREASING NOISE IMPACTS AND ALSO RECOGNIZES THE JAA CONCERN ABOUT PROVIDING THE RUNWAY LENGTH NECESSARY FOR THE AIRCRAFT CURRENTLY OPERATING AT CRAIG, JAA HAS PROPOSED TO EXTEND RUNWAY 14/32 1,600 FEET SOUTHEAST AND TO DISPLACE THE RUNWAY LANDING THRESHOLD 600 FEET ON EACH END. THIS WILL PROVIDE 5,600 FEET FOR TAKE-OFF AND 5,000 FEET FOR LANDING AND WILL MOVE THE NOISE IMPACTS BACK TOWARD CRAIG AIRPORT PROPERTY.

IN ORDER TO COMPLETE THE MASTER PLANNING PROCESS WE HAVE SUBMITTED THE PLAN TO FAA AND FDOT FOR REVIEW AND COMMENT AND HAVE RECEIVED THEIR INITIAL COMMENTS. WE HAVE POSTED THE PLAN AND THE FAA AND FDOT COMMENTS ON OUR WEB SITE AND IN OTHER APPROPRIATE LOCATIONS FOR THE PUBLIC TO REVIEW AND PROVIDE COMMENT. FOLLOWING THIS MEETING WE WILL PROVIDE OUR FINAL COMMENTS BACK TO FAA AND FDOT.

WE EXPECT FAA AND FDOT TO APPROVE THE TECHNICAL PROCESS THAT WE HAVE FOLLOWED. FAA WILL CONDITIONALLY APPROVE THE AIRPORT

LAYOUT PLAN DEVELOPED DURING THE STUDY. FDOT APPROVES THE PROJECTS INCLUDED IN THE STATE CAPITAL IMPROVEMENT PLAN FOR FDOT FUNDING. SPECIFIC PROJECTS PROPOSED IN THE PLAN MUST STILL BE APPROVED INDIVIDUALLY FOR FAA FUNDING PARTICIPATION. THIS APPROVAL PROCESS INCLUDES A DETAILED ENVIRONMENTAL REVIEW AND PUBLIC REVIEW AND COMMENT BEFORE ANY ACTION IS APPROVED. THIS PROCESS COULD TAKE 2 TO 3 YEARS TO COMPLETE.

TIFFANY GILLEM AND IZZY BONILLIA, THE CRAIG AIRPORT MANAGER AND THE DIRECTORY OF OPERATIONS FOR JAA WILL NOW PROVIDE AN OVERVIEW OF THE COMMUNITY CONCERNS THAT HAVE BEEN ADDRESSED DURING THE PLANNING PROCESS.


JACKSONVILLE
AVIATION AUTHORITY
DRAFT
MASTER PLAN UPDATE
Craig Municipal Airport
Jacksonville, Florida

JACKSONVILLE AVIATION AUTHORITY

Master Plan Goals

- Long Term Options and Infrastructure Needs
- Primary Rwy Length, Safety Areas and Airfield Capacity
- Potential Noise Impacts and Noise Abatement Options
- Maximize Use of Available Property and Airside Access
- Evaluate Existing Pavement Conditions
- Evaluate Ground Access Improvements

THE LPA GROUP


NON-AVIATION
Displace Runway 14 - 600'
Extend Runway 32 - 1,592'
Displace Runway 32 - 600'
FUTURE BUSINESS PARK
FUTURE POND
FUTURE ROAD
ATLANTIC COMMERCIAL-USE PUD
ATLANTIC MULTI-USE PUD

JACKSONVILLE AVIATION AUTHORITY

Next Steps in the Master Plan Process

- Draft Master Plan Submitted to FAA, FDOT and Public for Final Comment.
- Provide Final comments back to FAA and FDOT.
- FAA approves the technical process that the airport follows and conditionally approves the ALP. Specific projects proposed in the plan must be approved individually for FAA funding participation.
- FDOT reviews the Master Plan process and approves the inputs into the JACIP that may receive FDOT funding.

THE LPA GROUP

NON-AVIATION
Displace Runway 14 - 600'
Extend Runway 32 - 1,592'
Displace Runway 32 - 600'
FUTURE BUSINESS PARK
FUTURE POND
FUTURE ROAD
ATLANTIC COMMERCIAL USE PUD
ATLANTIC MULTI-USE PUD

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Cathy Whatley Date: 9/15/08
Telephone:
Email Address: cathy@bkandb.com

Topic:

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Pamela Jensen Date: 9/15/08
Telephone: (904) 641-1957
Email Address: JJAMESPAMELA@BELLSOUTH.NET

Topic: As the community is overwhelmingly against the extension and [illegible] will be!!! please consider another airport where the area around the airport is not so heavily populated.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Elizabeth Killough Date: 9/15/08
Telephone: [redacted]
Email Address: [redacted]

Topic: Craig Extension
We do not want this extension & you should be willing to listen to & meet with the people in this community & say it is a "Done Deal".

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: James J. Jensen Date: 9/15/08
Telephone: (904) 641-1957
Email Address: JJamespamela@bellsouth.net

Topic: as craig Airport is situated in the middle of a residentual area I believe the only solution is closing Craig Airport. However as I also believe that will not happen there is no way the runway should be extended.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

DO NOT NEED TO SPEAK

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: C. ROSS BENOLKEN **Date:** 9/15/08
Telephone: 725-4965
Email Address: SKIPBENO@AOL.COM

Topic: RUNWAY EXTENSION - CRAIG FIELD
I AM STRONGLY OPPOSED TO ANY RUNWAY EXTENSION

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Jim Osborn **Date:** 9/15/08
Telephone: 221-3336
Email Address: OsbornJW@AOL.Com

Topic: The runway expansion directly effects Kensington with more noise, Bigger planes and lower flying planes over our homes. No way can we except this!!

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: MORGAN MILLER **Date:** 9/15/08
Telephone: 904 703-6393
Email Address: ~~DrMORGAN~~ DrMorganMILLKR@AOL.COM

Topic: I SUPPORT THE EXTENSION AT CRAIG AIRPORT

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

I Want to Speak Please.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Dianne Wiles **Date:** 9/15/08
Telephone: 998 1328
Email Address: diwiles@aol

Topic: Oppose extending runways - This is Not about Safety - This is about fuel sales & hanger rentals! 25,000 people have moved around Craig since 1992 - when it was put into our 2010 Comp Plan. I bought my

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

[illegible]

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Olive Pape **Date:** 9/15/08
Telephone: 904 703-6392
Email Address: Ojossie@hotmail.com

Topic: I support the extension at Craig airport.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

(4) HOW CAN JAA VIOLATE THE LAND USE REQUIREMENTS ESTABLISHED BY THE CITY COUNCIL,
(5) WHAT IS FAA POLICY ON HOME RULE
. ISSUES CONCERNING AIRPORT RUNWAY EXTENSIONS,

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: DICK BROWN **Date:** 9/15/08
Telephone: 246-6029
Email Address: ebrown9982@AOL.COM

Topic: OPPOSITION TO RUNWAY EXPANSION -

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: LAKE RAY **Date:** 9/15/08
Telephone: (904) 534-0095
Email Address: LRAY3@ATT.NET

Topic: (1) QUESTION: IF THE RUNWAY IS EXTENDED WHAT CHANGES ARE REQUIRED FOR LAND USE AND ZONING
(2) DO THOSE CHANGES IMPOSE REQUIREMENTS ON HOMES IN THE AREA i.e. SALES CONTRACTS OR HOME IMPROVEMENTS,
(3) WHO PAYS FOR THE REQUIREMENTS,

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting. (OVER)

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: WILLIAM H. CALDWELL **Date:** 9/15/08

Telephone: 904 642-2791

Email Address: WCALDWEL@UNF.EDU

Topic: THE AUTHORITY HAS NOT PROVIDED JUSTIFATION TO SUPPORT THEIR POSITION ~~THAT~~ A RUNWAY EXTENSION IS NEEDED FOR SAFETY. WITHOUT SUCH INFORMATION, RESIDENTS CAN ONLY ASSUME THAT THE EXPANSION OF THE AIRPORT FACILITIES IS NOT REALLY REQUIRED.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: David Shields **Date:** 9/15/08

Telephone: 904-638-4637

Email Address: davidshields@comcast.net

Topic: Comment - opposed to extension.

I am very opposed to the Craig Airport runway extension

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

No speaking

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Janet Durall **Date:** 9/15/08

Telephone: 646-9724

Email Address: wxRUBY2C@bellsouth.net

Topic: Craig Field, Expansion
Very negative impact on area. Was supposed to be only a training airport when I moved here 20 years ago. Now area is too impacted with people.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: GARY WARNER **Date:** 9/15/08

Telephone: 565-1353

Email Address: gwarner@fccj.edu

Topic: If the JAA is creating a master plan, where is the community - JAA interaction? No one likes to have a plan handed to him/her and be told: "We created this for you, aren't we great?"

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Carlotta Schutt Date: 9/15/08
Telephone: 904 641 5356
Email Address:

Topic: voice of residents against expansion of run ways + traffic at Craig field over will of residents

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Bruce Dwyll Date: 9/15/08
Telephone: 646-9724
Email Address: myruby20@bellsouth.net

Topic: Craig Field Expansion No Do not need it

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: PAUL T. BATTEN Date: 9/15/08
Telephone: 904-307-6422
Email Address:

Topic: NOISE AFTER 11 pm, < 6AM

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: H.R. BRIZENDINE Date: 9/15/08
Telephone: 904-641-8110
Email Address:

Topic: EXTENSION OF CRAIG AIRFIELD RUNWAY. AS A RESIDENT OF THE AREA FOR OVER 50 YEARS I OPPOSE THE RUNWAY EXTENSION.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: HENRY OLTMANNS **Date:** 9/15/08
Telephone: 904 655 7786
Email Address: BROKER@ABERLTYFL.COM

Topic: HOME OWNERSHIP LOSSES AND PROPOSED AFFORDABLE HOUSING DISREGARD BY JAA

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: STEPHEN SNYDER **Date:** 9/15/08
Telephone: 904 645 7224
~~Email~~ Address: 11111 WINDY OAKS DR. N JACKSONVILLE FLA 32225

Topic: HOW MANY CORPORTE, EXECUTIVE, LEAR TYPE JETS CURRENTLY LAND AT JIA? WHICH IS THE NUMBER WE COULD EXPECT TO BE MOVED TO CRAIG?

65 AVG DAY NIGHT NOISE NEEDS TO BE

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

BASED ON TRUE FUTURE FLIGHTS NUMBERS!!

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: DENNIS Bradford **Date:** 9/15/08
Telephone: 904/220-2222
Email Address: Loansbybradford@comcast.NET

Topic: NO EXTENTION
IT'S NOT FOR SAFTY - IT'S FOR LARGER PLANES AND NOISE

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: VERA BRADFORD **Date:** 9/15/08
Telephone: 220-2222
Email Address: Loansbybradford@comcast.net

Topic: CRAIG FIELD
NOISE ABATEMENT, PLANES flying so low IN OUR community that IT RATTLES window & doors WAKING you up from sleep
this HAPPENED AT 2:30 AM 9/14/08

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Kay Vrooman — Realtor Watson Realty **Date:** 9/15/08
Telephone: 221-7226
Email Address: kayvrooman@aol.com

Topic: Impact on real estate Values + quality of life. Mayor's promise not to extend ~~runway~~ when campaigning for office which he now "cannot remember."

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: CARL VROOMAN **Date:** 9/15/08
Telephone: 904-221-7226
Email Address: Vroopeople@aol.com

Topic: LENGTHENING THE RUNWAY TO 5600 ft WILL ALLOW COMMERCIAL AIRCRAFT TO USE THIS AIRPORT. THE 737 BASIC ONLY IS DESIGNED TO UTILIZE A 5000 FT RUNWAY. 5600 FT WILL BE SATISFACTORY FOR 737 EXTENDED BODY AIRCRAFT. "BUILD IT AND

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.
THEY WILL COME!!

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Kim B. Williams **Date:** 9/15/08
Telephone: 998-1962
Email Address: im4yeshua@gmail.com

Topic: I am in Favor of EXTENDING the the RUNWAY at Craig Airport. The airport was here before I was and Expansion does it not surprise me nor does it annoy me.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Heather Bishop **Date:** 9/15/08
Telephone: 641-0641
Email Address: wssholmes@comcast.net

Topic: opposed to runway extension

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Ms. Laura L. Johnson Date: 9/15/08
Telephone: 997-1727
Email Address:

Topic:

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Ken Ulatowski Date: 9/15/08
Telephone: 904-642-7703
Email Address: KenorMarianne@AOL.com

Topic:
- Neighborhood SAFETY NOT PART OF MASTER PLAN GOALS?
- How soon before we need 8000, 10,000 ft.?
- WHY IS LOCAL PIXLE IGNORED?
- " " ARE " CONCERNS "
- "VOLUNTARY" NOISE ABATEMENT?

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: JAMES MOORE Date: 9/15/08
Telephone: 904 301 1269
Email Address: jmoore@northfloridalaw.com

Topic: Opposition to Craig Runway extension.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: JOHN CRESCIMBENI Date: 9/15/08
Telephone: 710-7100
Email Address: JRCJAXFL@AOL.COM

Topic:

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

ACKSONVILLE
VIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Charron, Cely Date: 9/15/08
Telephone: 904/221-0202
Email Address:

Topic: Craig

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE
AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Andrea Troutman Date: 9/15/08
Telephone: (904) 509-2230
Email Address: ABTConstruction@aol.com

Topic: Opposition by Titus Harvest Dome Church.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

ONVILLE
AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

e: Nancy Davis Date: 9/15/08
ione: 904-996-7308
Address: davis7301@bellsouth.net

: Homeland Security
Who prevents terrorist from flying into Craig? No tower control to determine who, what or for what reason planes are flying into Craig.
Persons involved in 9-11 attack flew into Craig while in Florida.

Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

Drugs
So many flights come and go at Craig Airport and no one knows why they are there. Tower closed from 11PM to 6AM.
What kind of security is available to know what activity is taking place.
Seems like a great airport for flying in drugs.

Over

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Lad Hawkins **Date:** 9/15/08
Telephone: 730 9360
Email Address: LHAWKINS@GGISE.COM

Topic: OPPOSE EXTENSION —
Incompatible with Land Use of
Surrounding Area.
Contrary to our 18 year Comp plan.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

TO FAA (JAX COMP PLAN FORBIDS EXTENSION)

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

* NO HANDOUTS GIVEN,

Name: Roberta Thomas **Date:** 9/15/08
Telephone:
[redacted] **Address:** 3470 Lenczyk Dr W, Jax 32277

Topic: Federal Homeland/DOD Security Issues!
I am DOD security specialist + I KNOW
extending Craig makes SE USA vulnerable
to terrorist attacks plus undermining
CRUCIAL normal DOD operations for USA +
abroad. I KNOW what is on our BASES *

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

DO NOT FORGET KINGS BAY NUCLEAR EITHER

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: LINDA DEGROAT **Date:** 9/15/08
Telephone: 220-0615
Email Address:

Topic: No Extention —
We don't need it
We don't want it
It won't help Jacksonville
Just More Pollution

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

Terrorists who hit
New York towers, Pentagon,
etc → TRAINED at
Craig Airport. * 9-11-01

If new, fast jets come in,
we cannot scramble fast
enough to save us from
anthrax or attacks to JAX, NP,
+ Kings Bay computer + Telecom
+ Nuclear centers. Top
Secret operations + I
will not disclose.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: David Weston **Date:** 9/15/08
Telephone: 904-705-9580
Email Address: Waveman_43@yahoo.com.

Topic: THE FORECASTED Number of Jet's will Quadruple @ in 2020 according to The MASTER plan I Live well beyond The impacted AREA SHOWN IN THE MASTER PLAN HOWEVER THE SOUND LEVEL FROM JET AIRCRAFT IS LOUD ENOUGH to where You can not MAINTAIN A CONVERSATION while

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

STANDING in YOUR FRONT YARD UNDER EXISTING 2008 Conditions. I AM CONCERNED THAT →

THIS will impact MY Family and I in the near future and ~~~~ the 2020 TIMEFRAME. ADDITIONALLY, FDOT MAINTAINS THAT THERE will BE IMPACTS ADJACENT to the ELEMENTARY ~~~~ AND MIDDLE Schools. I HAVE ALSO REVIEWED THE PORTIONS OF THE MASTER plan CONCERNING NOISE IMPACTS. ~~~~ AND IT IS CLEAR THAT THE LEVELS OF NOISE AND NOISE IMPACTS HAVE NOT BEEN ADEQUATELY ASSESS Beyond The AIRPORT PROPERTY. IF YOU INCREASE THE RUNWAY Then larger Jet's have The CAPACITY TO LAND. ~~~~ I DON'T SUPPORT The EXPANSION OF THE Runway because no regulatory MEASURES will Limit The NOISE IMPACTS in The Future ALSO, THE FUTURE IMPACTS OF NOISE ~~~~ HAVE NOT

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: JOHN (JACK) INGE **Date:** 9/15/08
Telephone: 904-724-2668
Email Address: NONE.

Topic: NOISE? BIG PLANES? WHERE IS THE BLASTED AREA? WHY IN THE MIDDLE OF RESIDENTIAL AREA

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Barbara Leis **Date:** 9/15/08
Telephone: 641-3620
Email Address: leisjax@yahoo.com

Topic: Oppose extention

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Kay Youngniger **Date:** 9/15/08
Telephone: (904) 997 9027
Email Address: keyoung@bellsouth.net

Topic:

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: MARK Spitzer **Date:** 9/15/08
Telephone: 233 1955
Email Address:

Topic: Aircraft Safety

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: LEONA INGE **Date:** 9/15/08
Telephone: 723-3976
Email Address:

Topic: WHEN - WHERE & WHY?

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Richard Witzel **Date:** 9/15/08
Telephone: 620-8217
Email Address: rqw3fly@Bellsouth.Net

Topic: Lowering of Glidpath on SE Approach causes a decrease in Safety.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: MICHAEL Cook **Date:** 9/15/08
Telephone: 904 693 6456
Email Address: MNCOOK@BELLSOUTH.NET

Topic: I SUPPORT THE CRAIG MASTER PLAN INCLUDING THE EXTENSION OF RUNWAY 14/32.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

1778 MONUMENT OAKS (Ratey Creek)

Name: Joyce Penman **Date:** 9/15/08
Telephone: (904) 642-3743
Email Address: brennerjp@live.com

Topic: NO to extending Craig Field runway! I live just North of Craig Field in a subdivision. I like the small 4-seater planes but do not want the larger planes because of noise + safety hazards. NO to more corporate planes at Craig.

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

No more charter planes either.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Dave Evans **Date:** 9/15/08
Telephone: 874-0460
Email Address: daveevans@clearwire.net

Topic: Craig Field

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: LEE WEST **Date:** 9/15/08
Telephone: 565-2412
Email Address: –

Topic: CRAIG AIRPORT

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: PATRICIA WEST **Date:** 9/15/08
Telephone: 2734 ANNISTON RD
Email Address: N A

Topic: I do not want the runway at Craig field lengthen for bigger planes & more noise. The people have spoken why dont JAA listen

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

Name: Bill Bishop **Date:** 9/15/08
Telephone: 630-1392
Email Address: wbishop @ cog.net

Topic:

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

JACKSONVILLE AVIATION AUTHORITY

SPEAKER INFORMATION
(Craig Airport Master Plan Public Meeting)

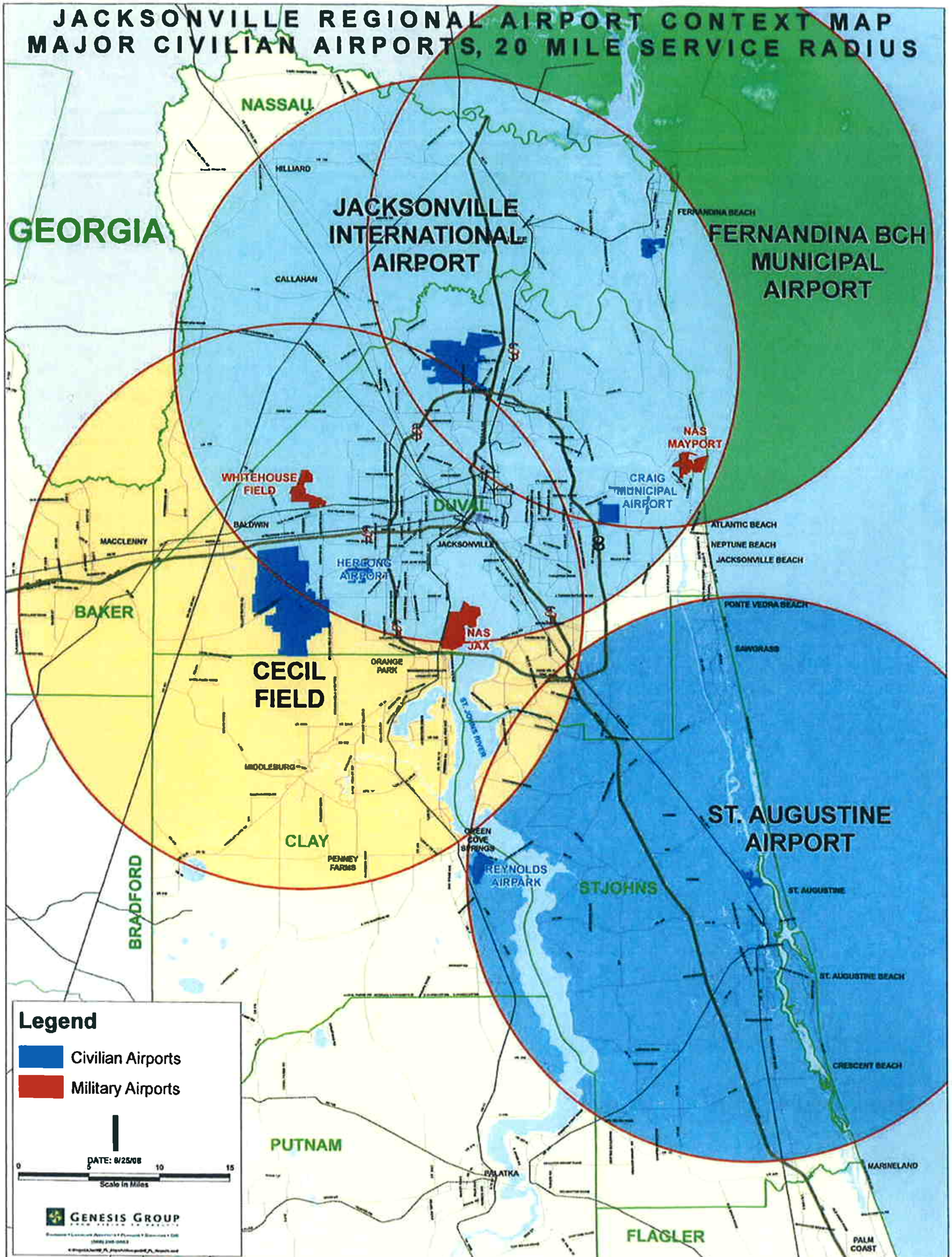
Name: Esther Chandler **Date:** 9/15/08
Telephone: 997. 9420
Email Address: —

Topic: no Jet's

I live on Kernan & they come over my house now, and the noise is bad. We dont need this in Jax—

Note: Please limit all topics to a maximum of 3 minutes. Information card must be completed and submitted prior to meeting.

This is all about money!


JACKSONVILLE REGIONAL AIRPORT CONTEXT MAP
MAJOR CIVILIAN AIRPORTS, 20 MILE SERVICE RADIUS
NASSAU
HILLIARD
GEORGIA
JACKSONVILLE INTERNATIONAL AIRPORT
FERNANDINA BEACH
FERNANDINA BCH MUNICIPAL AIRPORT
CALLAHAN
NAS MAYPORT
WHITEHOUSE FIELD
CRAIG MUNICIPAL AIRPORT
DUVAL
BALDWIN
ATLANTIC BEACH
MACCLENNY
JACKSONVILLE
NEPTUNE BEACH
JACKSONVILLE BEACH
HERLONG AIRPORT
PONTE VEDRA BEACH
BAKER
NAS JAX
SAWGRASS
CECIL FIELD
ORANGE PARK
ST. JOHNS RIVER
MIDDLEBURG
ST. AUGUSTINE AIRPORT
CLAY
GREEN COVE SPRINGS
PENNEY FARMS
REYNOLDS AIRPARK
STJOHNS
ST. AUGUSTINE
BRADFORD
ST. AUGUSTINE BEACH
Legend
Civilian Airports
Military Airports
DATE: 8/25/08
0
5
10
15
Scale in Miles
CRESCENT BEACH
PUTNAM
MARINELAND
PALATKA
GENESIS GROUP
FLAGLER
PALM COAST

APPENDIX I

FAA PROJECT PRIORITY RATES

Point Values for AIP Airport and ACIP Work Codes

A = Airport Code (2 to 5 pts.):

Primary Commercial Service Airports

A - Large and Medium Hub = 5 pts
B - Small and Non Hub = 4 pts

Non Primary Commercial Service, Reliever, and General Aviation Airports

	Based Aircraft/Itinerant Operations	
A -	100 or 50,000	= 5 pts
B -	50 or 20,000	= 4 pts
C -	20 or 8,000	= 3 pts
D -	<20 and <8,000	= 2 pts

P = Purpose Points (0 to 10 pts)

CA = Capacity = 7pts
EN = Environment = 8pts
OT = Other = 4pts
PL = Planning = 8pts
RE = Reconstruction = 8pts
SA = Safety/Security = 10pts
SP = Statutory Emphasis Programs = 9pts
ST = Standards = 6pts

C =Component Points (0 to 10 pts)

AP = Apron = 5pts
BD = Building = 3pts
EQ = Equipment = 8pts
FI = Financing = 0pts
GT = Ground Transportation = 4pts
HE = Helipad = 9pts
HO = Homes = 7pts
LA = Land = 7pts
NA = New Airport = 4pts
OT = Other = 7pts
PB = Public Building = 7pts
PL = Planning = 7pts
RW = Runway = 10pts
SB = Seaplane = 9pts
TE = Terminal = 1pt
TW = Taxiway = 8pts
VT = Vertiport = 4pts

T = Type Points (0 to 10 pts)

60 = Outside 65 DNL = 0pts
65 = 65 - 69 DNL = 4pts
70 = 70 - 74 DNL = 7pts
75 = Inside 75 DNL = 10pts
AC = Access = 7pts
AD = Administration Costs = 0pts
AQ = Acquire Airport = 5pts
BO = Bond Retirement = 0pts
CO = Construction = 10pts
DI = De-Icing Facilities = 6pts
DV = Development Land = 6pts
EX = Extension/Expansion = 6pts
FF = Fuel Farm Development = 2pts
FR = RW Friction = 9pts
IM = Improvements = 8pts
IN = Instrument Approach Aid = 7pts
LI = Lighting = 8pts
MA = Master Plan = 9pts
ME = Metropolitan Planning = 7pts
MS = Miscellaneous = 5pts
MT = Mitigation = 6pts
NO = Noise Plan/Suppression = 7pts
OB = Obstruction Removal = 10pts
PA = Parking = 1pt
PM = People Mover = 3pts
RF = ARFF Vehicle = 10pts
RL = Rail = 3pts
SE = Security Improvement = 6pts
SF = RW Safety Area = 8pts
SG = RW/TW Signs = 9pts
SN = Snow Removal Equipment = 9pts
SR = Sensors = 8pts
ST = State Planning = 8pts
SV = Service = 6pts
SZ = Safety Zone (RPZ) = 8pts
VI = Visual Approach Aids. Aid = 8pts
VT = Construct V/Tol RW/Vert Plan = 2pts
WX = Weather Reporting Equipment = 8pts

NPIAS-ACIP Standard Descriptions, ACIP Codes, and National Priority Ratings

5100.39A
Appendix 6

PROJECT DESCRIPTION	ACIP Codes			Airport Code			
	Purpose	Component	Type	A	B	C	D
				5	4	3	2
APRON							
Construct {name} Apron	CA	AP	CO	56	54	52	50
Expand {name} Apron	CA	AP	EX	47	46	44	42
Construct {name} Apron (environmental mitigation)	EN	AP	CO	66	64	62	60
Rehabilitate {name} Apron	RE	AP	IM	62	60	58	56
Construct {name} Apron	ST	AP	CO	46	44	43	41
Expand/Strengthen {name} Apron	ST	AP	IM	42	41	39	38
Install {name} Apron Lighting	ST	AP	LI	42	41	39	38
BUILDINGS							
<Construct/Expand/Improve/Modify/Rehabilitate> Aircraft Rescue & Fire Fighting Building [Pt.	SA	BD	EX	73	71	68	66
<Construct/Expand/Improve/Modify/Rehabilitate> {describe} Building	ST	BD	MS	34	32	31	29
<Construct/Expand/Imp/Modify/Rehabilitate> <Snow Removal Equipment/Chemical Storage E	ST	BD	SN	41	39	38	36
EQUIPMENT							
Acquire Driver's Enhanced Vision System	ST	EQ	MS	41	40	38	37
Acquire Interactive Training System	OT	EQ	MS	25	24	23	22
Acquire Aircraft Rescue & Fire Fighting Vehicle [required by Part 139 only]	SA	EQ	RF	98	95	93	90
Acquire Aircraft Rescue & Fire Fighting Safety Equipment {describe} [required by Part 139]	SA	EQ	RF	98	95	93	90
Acquire Security Equipment/Install Fencing {e.g., access control} [required by Part 107]	SA	EQ	SE	86	83	81	78
Acquire Aircraft Deicing Equipment	ST	EQ	DI	43	41	40	38
<Acquire/Install/Rehabilitate> Emergency Generator	ST	EQ	LI	47	45	44	42
Acquire Aircraft Rescue & Fire Fighting Safety Equipment {describe} [not required by Part 139	ST	EQ	MS	41	40	38	37
Acquire Equipment (e.g., Sweepers, etc.)	ST	EQ	MS	41	40	38	37
Acquire Aircraft Rescue & Fire Fighting Vehicle [not required by Part 139]	ST	EQ	RF	50	49	47	46
Acquire Security Equipment/Install Perimeter Fencing {e.g., access control} [not Part 107]	ST	EQ	SE	43	41	40	38
Acquire <Snow Removal Equipment/Urea Truck/etc.>	ST	EQ	SN	48	47	45	44
Acquire Friction Measuring Equipment	ST	EQ	SR	47	45	44	42
Install Weather Reporting Equipment {describe, e.g., AWOS }	ST	EQ	WX	47	45	44	42
FINANCE							
Administrative Costs (PFC)	OT	FI	AD	0	0	0	0
Financing Costs	OT	FI	BO	0	0	0	0
GROUND TRANSPORTATION							
<Construct/Expand/Improve/Modify/Rehabilitate> <Inter/Intra> Terminal People Mover	CA	GT	PM	39	37	36	34
<Construct/Expand/Improve/Modify/Rehabilitate> <Inter/Intra> Terminal People Mover	OT	GT	PM	18	17	16	15
<Construct/Expand/Improve/Modify/Rehabilitate> Access Rail	CA	GT	RL	39	37	36	34
<Construct/Expand/Improve/Modify/Rehabilitate> Access Rail	OT	GT	RL	18	17	16	15
<Construct/Expand/Improve/Modify/Rehabilitate> Access Road	CA	GT	AC	48	46	44	42
<Construct/Expand/Improve/Modify/Rehabilitate> Access Road	OT	GT	AC	23	22	21	20
<Construct/Expand/Improve/Modify/Rehabilitate> Service Road	OT	GT	SV	22	21	20	19
HELIPORT							
<Construct/Expand/Improve/Modify/Rehabilitate> Helipad/Heliport	CA	HE	CO	63	61	59	57
<Construct/Expand/Improve/Modify/Rehabilitate> Helipad/Heliport	ST	HE	CO	52	50	49	47
RESIDENCE							
Noise Mitigation measures for residences outside 65 DNL	EN	HO	60	46	44	42	40
Noise Mitigation measures for residences within 65 - 69 DNL	EN	HO	65	56	54	52	50
Noise Mitigation measures for residences within 70 - 74 DNL	EN	HO	70	63	61	59	57
Noise Mitigation measures for residences within 75 DNL	EN	HO	75	70	68	66	64
LAND							
Acquire <land/easement> for noise compatibility/relocation {# relocated} outside 65 DNL	EN	LA	60	46	44	42	40
Acquire <land/easement> for noise compatibility/relocation {# relocated} within 65 - 69 DNL	EN	LA	65	56	54	52	50
Acquire <land/easement> for noise compatibility/relocation {# relocated} within 70 - 74 DNL	EN	LA	70	63	61	59	57
Acquire <land/easement> for noise compatibility/relocation {# relocated} within 75 DNL	EN	LA	75	70	68	66	64
Acquire <land/easement> for development/relocation {list parcels and/or # relocated}	ST	LA	DV	41	40	38	37
Acquire miscellaneous land {describe, e.g., land for outer marker, relocate road}	ST	LA	MS	40	38	37	35
Acquire land/easement for approaches {list parcels and/or # relocated}	ST	LA	SZ	45	44	42	41

NPIAS-ACIP Standard Descriptions, ACIP Codes, and National Priority Ratings **5100.39A**
Appendix 6

	ACIP Codes			Airport Code			
PROJECT DESCRIPTION	Purpose	Component	Type	A	B	C	D
				5	4	3	2
NEW AIRPORTS							
Construct New Airport	CA	NA	CO	54	52	50	49
Acquire [existing] Airport	ST	NA	AQ	35	34	32	31
Construct New Airport	ST	NA	CO	44	43	41	40
OTHER							
Construct Deicing Containment Facility	EN	OT	DI	61	59	57	55
Noise Mitigation Measures [miscellaneous]	EN	OT	MS	58	56	54	52
Environmental Mitigation	EN	OT	MT	61	59	57	55
Install Noise Monitoring System/Equipment	EN	OT	NO	63	61	59	57
<Construct/Improve/Repair> <Fuel Farm/Utilities> [MAP]	OT	OT	FF	20	19	18	17
<Construct/Rehabilitate> Parking Lot [non revenue producing-non hub/MAP]	OT	OT	PA	19	18	17	16
<Light/Mark/Remove> Obstructions {list location}[hazard only e.g., approaches]	SA	OT	OB	95	93	90	88
Install <Guidance Signs/ Runway Incursion Caution Bars> [required by Part 139]	SA	OT	SG	92	90	87	85
Install <Guidance Signs/ Runway Incursion Caution Bars> [non Part 139 CS]	SP	OT	SG	80	77	75	73
<Install/Rehabilitate> Airport Beacons [required by Part 139]	SA	OT	VI	89	87	84	82
Install miscellaneous <NAVAIDS/Approach Aids> {seg, circle, beacon, etc., Not ALS}	SP	OT	IN	74	72	70	68
Install miscellaneous <NAVAIDS/Approach Aids> {seg, circle, beacon, etc., Not ALS}	ST	OT	IN	43	42	40	39
Improve Airport <Drainage/Erosion Control/miscellaneous improvements>	ST	OT	IM	45	44	42	41
<Light/Mark/Remove> Obstructions {location}	ST	OT	OB	49	47	46	44
Construct Aircraft Rescue & Fire Fighting Training Facility/Regional Burn Pit/Mobile Training F	ST	OT	RF	49	47	46	44
Install <Guidance/other> Signs [not Part 139]	ST	OT	SG	47	45	44	42
Construct Deicing Containment Facility	ST	OT	DI	41	40	38	37
PUBLIC BUILDINGS							
Noise Mitigation measures for public buildings outside 65 DNL	EN	PB	60	46	44	42	40
Noise Mitigation measures for public buildings within 65 - 69 DNL	EN	PB	65	56	54	52	50
Noise Mitigation measures for public buildings within 70 - 74 DNL	EN	PB	70	63	61	59	57
Noise Mitigation measures for public buildings within 75 DNL	EN	PB	75	70	68	66	64
PLANNING							
Conduct <Environmental Assessment/Environmental Impact Statement/Feasibility> <study/up	EN	PL	MA	68	66	64	62
Conduct Noise Compatibility Plan study/update {Part 150}	EN	PL	NO	63	61	59	57
Conduct Ground Transportation/Rail Study	PL	PL	AC	63	61	59	57
<Conduct/Update> <Airport Master Plan Study {ALP, EA, etc.}>	PL	PL	MA	68	66	64	62
Conduct/Update Metropolitan System Plan Study	PL	PL	ME	63	61	59	57
<Conduct/Update> {name} (e.g., Pavement Maintenance Plan, PCI, NPDES, etc.)	PL	PL	MS	58	56	54	52
<Conduct/Update> State System Plan Study	PL	PL	ST	66	64	62	60
Conduct Vertiport/Tiltrotor Plan	PL	PL	VT	51	49	47	45
RUNWAYS							
Construct Runway {name}	CA	RW	CO	64	63	61	59
Extend Runway {name}	CA	RW	EX	56	54	53	51
Construct Runway {name} (environmental mitigation)	EN	RW	CO	76	74	72	70
Rehabilitate Runway {name}	RE	RW	IM	72	70	68	66
Rehabilitate Runway <Lighting/Electrical Vault>	RE	RW	LI	72	70	68	66
Install Runway Lighting (HIRL, MIRL) [Required by Part 139]	SA	RW	LI	97	94	92	89
Install Runway Lighting (HIRL, MIRL) [non Part 139 CS]	SP	RW	LI	84	81	79	77
<Construct/Extend/Improve> Runway {name} Safety Area [Primary Airports]	SA	RW	SF	97	94	92	89
<Apply Friction Course/Groove> Runway	SP	RW	FR	86	84	82	80
Install Runway {name} distance-to-go Signs	SP	RW	SG	86	84	82	80
Install Runway {name}<Vertical/Visual> Guidance System [PAPI/VASI/REIL/ALS/etc.]	SP	RW	VI	84	81	79	77
Construct Runway {name} [includes relocation]	ST	RW	CO	53	52	50	49
<Construct/Extend/Improve> Runway {name} Safety Area [Non-Primary Airports]	ST	RW	SF	50	48	47	45
Install Runway Lighting (HIRL, MIRL, TDZ, LAHSO or CL)	ST	RW	LI	50	48	47	45
<Extend/Widen/Strengthen> Runway {name} [to meet standards]	ST	RW	IM	50	48	47	45
Install <full/partial> Instrument Approach Aid {describe, e.g., install localizer]	ST	RW	IN	48	46	45	43
Install Runway {name} Sensors	ST	RW	SR	50	48	47	45
Install Runway {name} <vertical/visual> Guidance System [PAPI/VASI/REIL/ALS/etc.]	ST	RW	VI	50	48	47	45

NPIAS-ACIP Standard Descriptions, ACIP Codes, and National Priority Ratings **5100.39A**
Appendix 6

	ACIP Codes			Airport Code			
PROJECT DESCRIPTION	Purpose	Component	Type	A	B	C	D
				5	4	3	2
SEAPLANE BASES							
Rehabilitate Seaplane <ramp/floats>	RE	SB	IM	72	70	68	66
<Construct/Improve/Modify> Seaplane ramp/floats	CA	SB	CO	64	63	61	59
<Construct/Improve/Modify> Seaplane ramp/floats	ST	SB	CO	53	52	50	49
TERMINAL DEVELOPMENT							
Construct Terminal Building	CA	TE	CO	49	47	45	43
Expand Terminal Building	CA	TE	EX	40	39	37	35
<Improve/Modify/Rehabilitate> Terminal Building	CA	TE	IM	44	43	41	39
Construct Terminal Building	ST	TE	CO	40	38	37	35
Expand Terminal Building	ST	TE	EX	32	31	29	28
<Improve/Modify/Rehabilitate> Terminal Building	ST	TE	IM	36	35	33	32
Acquire Handicap Passenger Lift Device	ST	TE	MS	31	29	28	26
TAXIWAYS							
Construct Taxiway {name}	CA	TW	CO	61	59	57	56
Extend Taxiway	CA	TW	EX	53	51	49	47
Construct Taxiway {name} (environmental mitigation)	EN	TW	CO	72	70	68	66
Rehabilitate Taxiway	RE	TW	IM	68	66	64	62
Rehabilitate Taxiway {name} Lighting	RE	TW	LI	68	66	64	62
Install Taxiway {name} Lighting (MITL) [Required by Part 139]	SA	TW	LI	92	89	87	84
Install Taxiway {name} Lighting (MITL) [non Part 139 CS]	SP	TW	LI	79	77	75	72
Construct Taxiway {name} [includes relocation]	ST	TW	CO	50	49	47	46
<Extend/Widen/Strengthen> Taxiway {name}	ST	TW	IM	47	45	44	42
Install Taxiway {name} Lighting (e.g., SMGCS, reflectors, MITL)	ST	TW	LI	47	45	44	42
Install Taxiway {name} Sensors	ST	TW	SR	47	45	44	42
VERTIPORTS							
<Construct/Expand/Improve/Modify/Rehabilitate> Vertiport	CA	VT	IM	50	48	46	44
<Construct/Expand/Improve/Modify/Rehabilitate> Vertiport	ST	VT	IM	41	39	38	36

A = Airport Code (2 to 5 pts.):
Primary Commercial Service Airports
A = Large and Medium Hub = 5 pts
B = Small and Non Hub = 4 pts
Non Primary Commercial Service, Reliever, and General Aviation Airports.
Aircraft/Itinerant Operations
A = 100 or 50,000 = 5 pts
B = 50 or 20,000 = 4 pts
C = 20 or 8,000 = 3 pts
D = <20 and <8,000 = 2 pts

Priority Equation = k5*P*(k1*A+k2*P+k3*C+k4*T)

Priority Number = .25P(A+1.4P+C+1.2T)

k1 =	1.00
k2 =	1.40
k3 =	1.00
k4 =	1.20
k5 =	0.25
k6 =	0.00

APPENDIX J

SHORT-TERM PRELIMINARY PROJECT COST ESTIMATES AND ALP CHECKLIST

U.S. Department of Transportation
Federal Aviation Administration
Southern Region – Airports Division
Effective Date: May 2004

Airport Layout Plan Drawing Set Checklist

Name of Airport: CRAIG Municipal Airport
Location of Airport: Jacksonville FL
Date of Review: 4/23/08 Reviewed by: G. Fantinato

Significant Development Changes Since Previous ALP Approval/ or Narrative

1. Extension Runway 32 by 1600 feet
2. Displaced landing Thresholds on Runway 14 + 32
3. Development of South side of Airfield, and no Runway 5-23 Shift.
4.
5.
6.

In order to protect the airspace for future conditions, complete the following information:

Future Airport Reference Point (ARP) **(if same as existing, provide existing ARP)**

ARP Latitude: 30°20'8.3"N, ARP Longitude: 81°30'49.370 W

Future Rwy End Coordinates & Rwy End Elevation **(if same as existing, provide existing coordinates)** (NAD 83 Coord.)

Rwy End: 5, Rwy End Latitude: 30 19 44.010N, Rwy End Longitude: 81 31 08.170W, Rwy End Elevation: 40.1
Rwy End: 23, Rwy End Latitude: 30 20 12.030N, Rwy End Longitude: 81 30 35.260W, Rwy End Elevation: 40.3
Rwy End: 14, Rwy End Latitude: 30 20 32.775, Rwy End Longitude: 81 31 03.256W, Rwy End Elevation: 32.
Rwy End: 32, Rwy End Latitude: 30 20 02.570N, Rwy End Longitude: 81 30 27.544W, Rwy End Elevation: 40.3

Existing and Proposed Modification of Standards (MOS)

Existing Deviation of Standard/ FAA Approved MOS — FAA Approval Date (if any) — Expiration Date (if any)

1. None
2.
3.

Proposed Deviation of Standard/ FAA Modification of Standards

1. None
2.
3.

Runway Safety Area Re-Evaluations

(✓) Concur with Runway Safety Area Determination currently on file with FAA.

( ) Reevaluation of Runway Safety Area Determination completed as part of planning document and shown on this ALP set.

Narrative Report	Yes No	Comments
Report Provided	(✓) ( )	
Aeronautical Forecasts		
- 0-5 yrs., 6-10 yrs., 10-20 yrs	(✓) ( )	
-Total annual operations	(✓) ( )	
- Annual itinerant operations	(✓) ( )	
- Based aircraft	(✓) ( )	
- Annual instrument approaches (if applicable)	(✓) ( )	
- Annual itinerant operations by critical aircraft	(✓) ( )	
- Annual itinerant ops by more demanding aircraft	(✓) ( )	
Proposed Development Justification	(✓) ( )	
Special Issues (MOS, etc.)	(✓) ( )	
Development Schedule and Graphics	(✓) ( )	
Proper Agency Coordination (sponsor, local, state)	(✓) ( )	
Airport Layout Drawing		
Proper Agency Approval (Sponsor, Local, State)	(✓) ( )	
Sheet Size - 24"x36"/ 22" x 34"	(✓) ( )	
Scale 1"=200'-600'	(✓) ( )	
2'-10' Labeled Contours	(✓) ( )	
North Arrow		
- True & magnetic	(✓) ( )	
- Declination w/ annual rate of change	(✓) ( )	
Wind Rose		
- Source & time period	(✓) ( )	
- MPH & knots	(✓) ( )	
- 12 MPH individual & combined coverage	(✓) ( )	10.5, 12 + 16 mPh
- 15 MPH individual & combined coverage	(✓) ( )	12, 13 + 18 KNOTS
Airport Reference Point (ARP)		
- Existing w/ Lat./ Long. (NAD 83)	(✓) ( )	
- Ultimate w/ Lat./ Long. (NAD 83)	(✓) ( )	
Elevations (Existing & Ultimate)		
- Existing runway ends	(✓) ( )	
- Displaced thresholds	(✓) ( )	Rwy 14 + 32 Only
- Ultimate runway ends	(✓) ( )	
- Runway intersections	(✓) ( )	
- Runway high & low points	(✓) ( )	
- Touchdown zone elevation	(✓) ( )	
(highest Rwy elevation in first 3,000' of any Rwy having published straight -in minima)		
Drawing Lines		
- Existing property boundary	(✓) ( )	
- Ultimate property boundary	(✓) ( )	
- Building restriction line (both sides)	(✓) ( )	
- Existing development shown as solid	(✓) ( )	
- Future development shown as dashed/ shaded	(✓) ( )	

Airport Layout Drawing (Continued)

Item	Yes	No	Comments
Runway Drawing Details (Existing & Ultimate)			
- Runway(s) Depiction	✓		
- Length & width	✓		
- End numbers	✓		
- True bearing (nearest sec.)	✓		
- Markings (basic, NPI, PIR)	✓		
- Lighting (thresholds only)	✓		
- Threshold lat/ long & elevations	✓		
- Displaced threshold lat/ long & elevations	✓		
- Runway safety areas & dimensions	✓		
- Runway object free areas & dimensions	✓		
- Runway obstacle free zones	✓		
- Centerline w/ true bearing	✓		
- Approach aids indicated (ILS, REILS, etc.)	✓		
- Lat/ long & elevation for non-federal on-airport NAVAIDs (used for instrument approach procedure)	✓		
Taxiway Details (Existing & Ultimate)			
- Taxiway widths	✓		
- Designations	✓		
- Separation dimensions to:			
Runway centerline(s)	✓		
Parallel taxiway(s)	✓		
Aircraft parking area(s)		✓	~~AE~~ TERMINAL DRAWING only (NOTE on ALP Sheet)
Aircraft Parking Aprons			
- Existing & ultimate aprons shown	✓		
- Dimensions		✓	Shown on Terminal Sheet becz limited space
- Tie-down layout/ locations	✓		Locations but NOT Tiedown Symbols
Runway Protection Zones (RPZs)			
- Existing & ultimate RPZs shown	✓		(Also Departure RPZs on Rwys 14 & 32
- Dimensions	✓		
- Approach slope (20:1, 34:1, 50:1)	✓		
Title & Revision Blocks			
- Name and location of airport	✓		
- Name of preparer	✓		
- Date of drawing	✓		
- Drawing title	✓		
- Revision block			
- FAA disclaimer	✓		
- Sponsor approval block	✓		
Airport Data Block (Existing & Ultimate)			
- Airport elevation (MSL)	✓		
- Airport Reference Point (ARP) Data	✓		
- Airport & terminal NAVAIDS (beacon, ILS)	✓		
- Mean maximum temperature	✓		
- Airport Reference Code (ARC) for each runway	✓		
- Design Aircraft for each runway	✓		
- Identify GPS at airport	✓		

Airport Layout Drawing (Continued)

Item	Yes	No	Comments
Runway Data Block (Existing & Ultimate)			
- % effective gradient	✓		
- % wind coverage (MPH & knots)		✓	Cover Sheet
- Maximum elevation above MSL	✓		
- Runway length	✓		
- Runway width	✓		
- Runway surface type (turf, asphalt...)	✓		
- Runway strength (SWG, DWG...)	✓		
- Part 77 approach category (visual, NPI, PIR)	✓		
- Type instrument approach (ILS, GPS...)	✓		
- Approach slope (20:1, 34:1, 50:1)	✓		
- Runway lighting (HIRL, MIRL, LIRL)	✓		
- Runway marking (PIR, NPI, BCS)	✓		
- NAVAIDS & visual aids	✓		
- Runway safety area dimensions (standard & non-standard)	✓		
Miscellaneous			
- Airport facility/ building list (existing & future)	✓		
- Standard legend	✓		
- Location map		✓	Cover Sheet
- Vicinity map		✓	Cover Sheet
- Roadways, traverse ways identified	✓		

Additional Comments:

Airport Airspace Drawing

Item	Yes	No	Comments
Ultimate Runway Length Plan View of Surfaces	✓		
Profile View of Ultimate Runway Lengths	✓		
Obstruction Data Tables	✓		
Sheet Size Same as ALP	✓		
Plan View Scale 1"=2000'	✓		
Profile View Scale 1"=1000' Horizontal, 1"=100' Vertical	✓		
Title & Revision Blocks	✓		
Approach Plan View Details			
- USGS base map	✓		(most up to Date)
- Runway end numbers shown	✓		
- Elevation contours of 50' on all slopes	✓		
- Show most demanding surface lines as solid and others as dashed	✓		
- Identify penetrating objects & top elevations (for those in inner approach add note, "Refer to the inner portion of the approach surface plan view details for close-in obstructions.")	✓		
- Show PIR approach of 50,000 on separate sheet as necessary	✓		
- Note any height restriction zoning/ ordinances/ statutes in place	✓		
Approach Profile View Details			
- Ground profile along extended centerline (highest profile elevations of width & length of approach)	✓		
- Identify significant objects (roads, rivers, etc.) w/ elevations	✓		
- Existing & ultimate runway ends and approach slopes	✓		

Additional Comments:

Inner Portion of the Approach Surface Drawing	Yes	No	Comments
Large-Scale Plan View for Each Runway End (up to 100′ height above runway end)	(✓)	( )	
Large-Scale Profile View for Each Runway End (up to 100′ height above runway end)	(✓)	( )	
Sheet Size	(✓)	( )	
Scale 1″=200′ Horizontal, 1″=20′ Vertical	(✓)	( )	
Title & Revision Blocks	(✓)	( )	
Separate Approach Tables with Obstruction Data			
- Type of approach (NPI, etc.)	(✓)	( )	
- Approach Slope (20:1, etc.)	(✓)	( )	
- Obstruction number	(✓)	( )	Surveyed 2007 — Obtained From LD Bradley
- Obstruction description	(✓)	( )	
- Approach penetration (in feet)	(✓)	( )	
- Proposed mitigation (including "none.")	(✓)	( )	
Inner Approach Plan View Details			
- Aerial photo base map	(✓)	( )	~~200~~ Received From FAA
- Obstructions numbered	(✓)	( )	
- Property line depicted	(✓)	( )	
- Identify by numbers all traverse ways w/ elevations & vertical clearances in approach	(✓)	( )	
(At approach edge & extended centerline)			
- Depict existing & ultimate runway ends	(✓)	( )	
- Ground contours shown	(✓)	( )	
Inner Approach Profile View Details			
- Identify significant terrain/ items in RSA	(✓)	( )	
- Identify obstructions with numbers on plan view	(✓)	( )	
- Depict roads and railroads at edge of approach as dashed	(✓)	( )	

Additional Comments:

Terminal Area Drawing	Yes	No	Comments
Large-Scale Plan View of Terminal/ GA Area(s) as Needed	(✓)	( )	
Show Existing & Future Buildings	(✓)	( )	
Sheet Size Same as ALP	(✓)	( )	
Scale 1″=50′-100′	(✓)	( )	
Title & Revision Bocks	(✓)	( )	
Legend	( )	( )	
Building Data Table (Existing & Ultimate)			
- Number facilities	(✓)	( )	
- Include top elevations	(✓)	( )	
- Identify obstruction marking	(✓)	( )	

Additional Comments: ✓ Also Apron Dimensions + separation Requirements

Land Use Drawing (Existing & Ultimate)

Item	Yes	No	Comments
- Basic airport features/ surfaces	✓		
- Property lines	✓		
- Include all land uses (industrial, residential, etc.) on & off airport (including non-aeronautical) to minimum 65 LDN	✓		w/in 60 DNL CONTOURS
- Line of sight or runway visibility zones shown	✓		
- Note any existing land use ordinances/ statutes in place	✓		
- Noise contours as required in scope of work (60, 65 & 70 LDN)	✓		
- Sheet size same as ALP	✓		
- Scale same as ALP	✓		
- Title & revision block	✓		
- Aerial base map	✓		
- Legend (symbols and land use descriptions)	✓		
- Identify recommended land use changes	✓		
- Identify public facilities (schools, parks, etc.)	✓		

Additional Comments:

Airport Property Map (Existing & Ultimate) (1941- 2008)

Item	Yes	No	Comments
Property Lines (Clear & Bold)	✓		
RPZ's Shown	✓		
Tracts of Land on and off Airport	✓		
Sheet Size Same as ALP	✓		
Scale Same as ALP	✓		
Title & Revision Block	✓		
Legend	✓		
Airport Features (expansion, etc.)/ Critical Surfaces (RSA's, etc.) Shown (to aid in determining eligible land needs)	✓		

Data Table

Item	Yes	No	Comments
- Numbering system for parcels	✓		
- Date of acquisition	✓		
- Federal aid project number	✓		
- Type of ownership (fee, easement, federal surplus, etc.)	✓		
- Parcel acreage	✓		

Additional Comments:

JACIP – AIRPORT PROJECT DETAIL REPORT

Airport:	Craig Airport	NPIAS No.: 12-0033
Sponsor:	Jacksonville Aviation Authority	Airport ID: CRG
Sponsor ID:	1204	Site No.: 03251.*A

UPIN:	PFL0007020	Candidate:	
Airport Project ID:		FDOT Description 2:	
WPI No.:		FDOT Description 3:	
Sponsor Priority:	2008	National Priority:	
Common Description:	Environmental Assessment Runway 14-32	Project Type:	Environmental

Project Narrative:
This project involves providing an environmental assessment of anticipated impacts related to the extension of Runway 14-32 and the relocation of the MALSR lighting.

Project Justification:
Based upon FAA runway length criteria and existing aircraft operations, an extension of Runway 14-32 is required to provide additional safety. The environmental assessment is required to identify potential impacts, which may require environmental permitting and impact the final design.

Airport Notes:

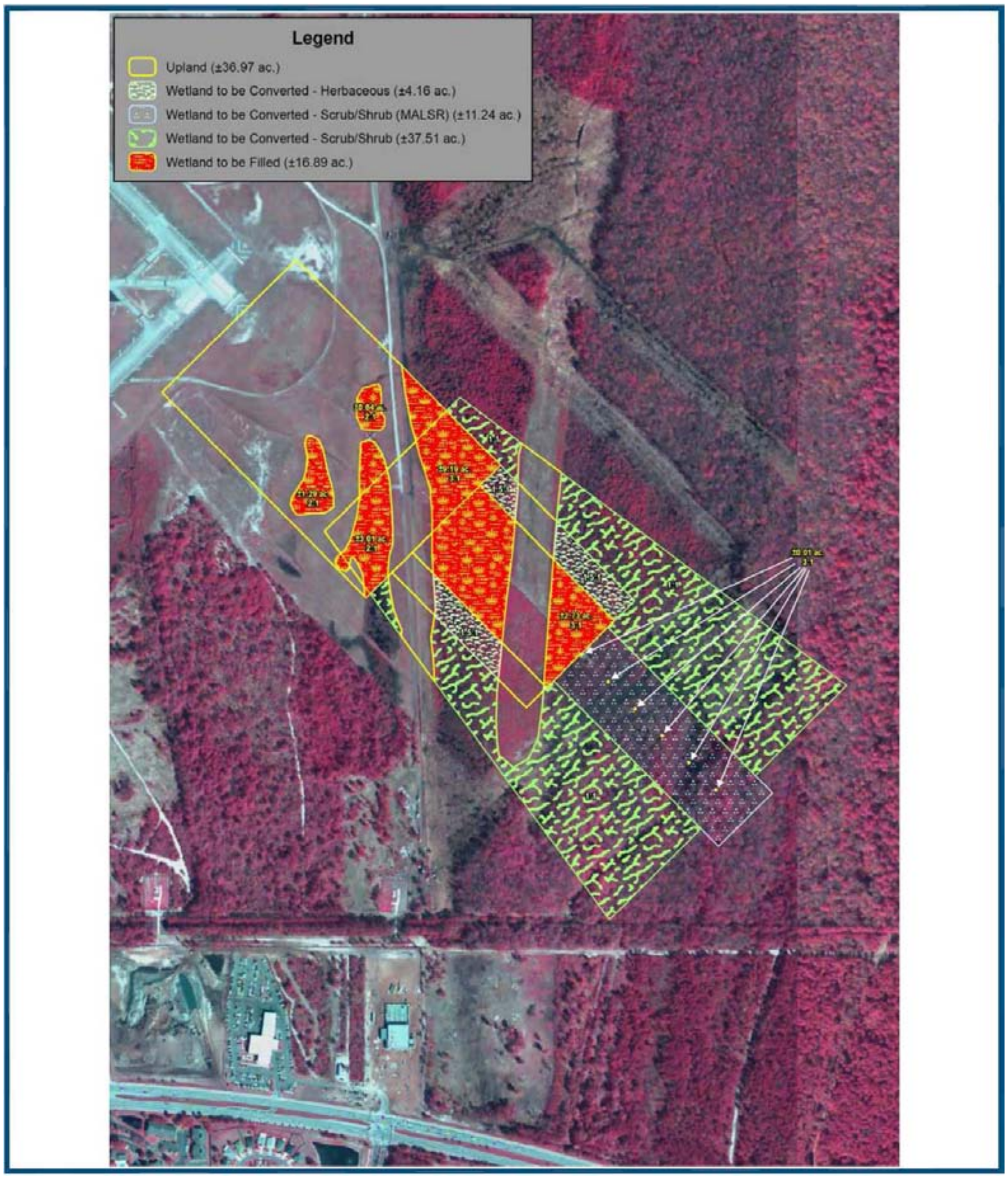
FDOT Notes:

Airport Sponsor Request:

Sponsor Year	Source	Amount
Project – Federal	Entitlement	$150,000
Project - Federal	Discretionary	$760,000
Project Total – State	Design	$0.00
Project Total – Local		$40,000
Overall Project Total		$950,000

Project Summary

Previously approved FAA studies and the 2008 Master Plan Update recommend an extension of Runway 14-32 to accommodate existing and forecast aircraft demand. Based upon the findings of the benefit cost analysis, an environmental assessment will be performed to ensure that ensuing environment impacts are identified, predicted, evaluated and mitigated prior to proceeding with the project. The EA also identifies mitigation areas and anticipated costs, permitting requirements and strict liability or insurance coverage associated with the project. The anticipated environmental assessment will evaluate a potential 50 acre impact.



JACIP – AIRPORT PROJECT DETAIL REPORT

Airport:	Craig Airport	NPIAS No.: 12-0033
Sponsor:	Jacksonville Aviation Authority	Airport ID: CRG
Sponsor ID:	1204	Site No.: 03251.*A

UPIN:	PFL0001459	Candidate:	
Airport Project ID:		FDOT Description 2:	
WPI No.:	2169691-94-01	FDOT Description 3:	
Sponsor Priority:	2008/2009	National Priority:	
Common Description:	Upgrade Electrical Vault and Lights Runway 14/32	Project Type:	Lighting Project

Project Narrative:
This project includes the upgrade to the electrical vault at Craig Municipal Airport as well as upgraded runway lighting on Runway 14-32.

Project Justification:
This project is required to allow the airport to become more energy efficient as well as providing an expanded electrical vault to accommodate planned lighting, NAVAID and other electrical requirements over the next twenty years.

Airport Notes:

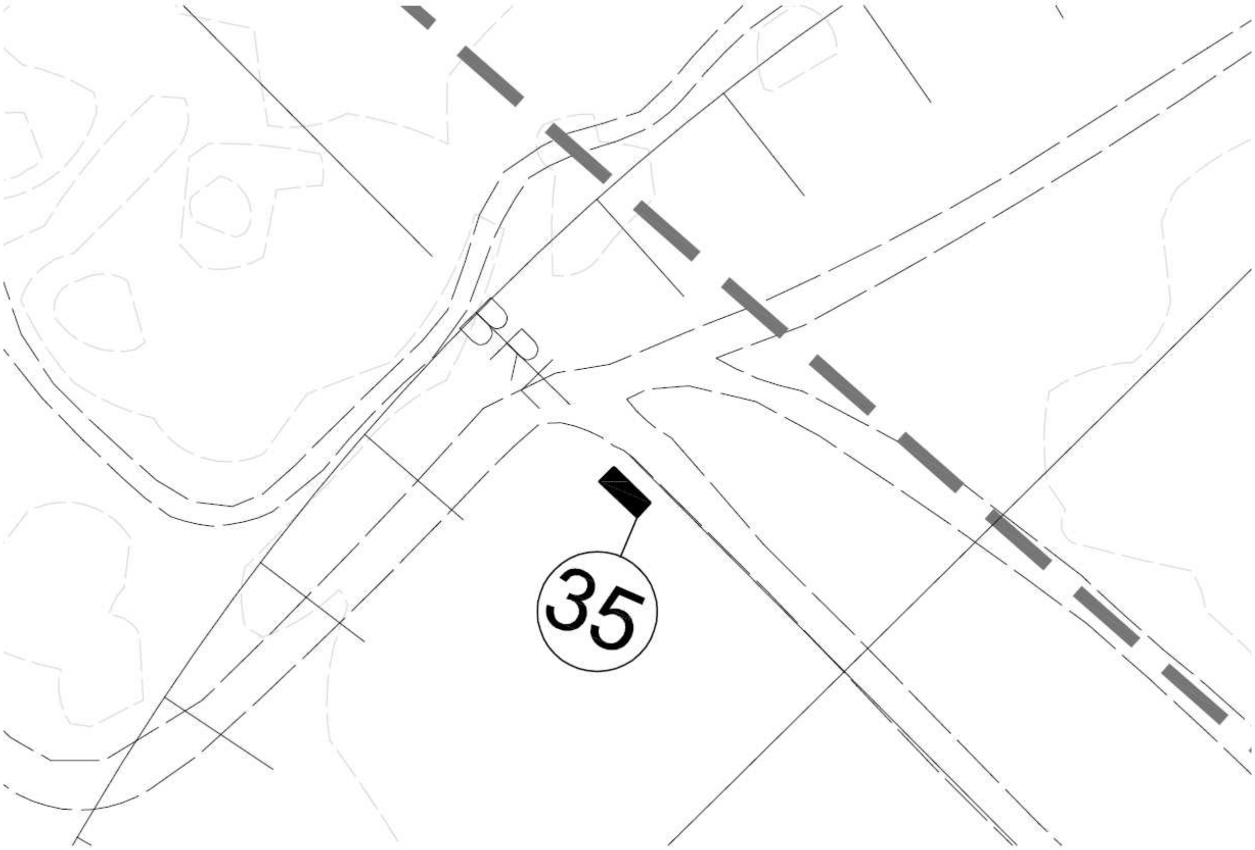
FDOT Notes:

Airport Sponsor Request:

Sponsor Year	Source	Amount
Project - State	Design	$25,000
Project - Local	JAA Design	$125,000
2008 Project Total		$150,000
Project - Federal	Entitlement	$0.00
Project - Federal	Discretionary	$950,000
Project - State	Construction	$0.00
Project - Local	JAA Construction	$50,000
2009 Project Total		$1,000,000
Project – Federal	Entitlement	$0.00
Project - Federal	Discretionary	$950,000
Project Total – State	Construction	$25,000
Project Total – Local	JAA	$175,000
Overall Project Total		**$1,150,000**

Project Summary

The Electrical Vault upgrade and Runway 14/32 lighting upgrade is to increase energy efficiency at the airport, increase visibility during low visibility or night operations, and accommodate increased energy demands related to LED lighting, NAVAIDs, runway extension, etc.



JACIP – AIRPORT PROJECT DETAIL REPORT

Airport:	Craig Airport	NPIAS No.: 12-0033
Sponsor:	Jacksonville Aviation Authority	Airport ID: CRG
Sponsor ID:	1204	Site No.: 03251.*A

UPIN:	PFL0001887	Candidate:	
Airport Project ID:		FDOT Description 2:	
WPI No.:	2169842-94-01	FDOT Description 3:	
Sponsor Priority:	2009-2012	National Priority:	
Common Description:	Runway 5/23 Pavement Overlay	Project Type:	Design and Construction

Project Narrative:
This project consists of the surveying and re-pavement of approximately 45,000 SY of Runway 5/23 including pavement markings.

Project Justification:
The project is required in order to rehabilitate and patch areas of cracking and spalling on the pavement and ensure the safety of aircraft using the runway.

Airport Notes:

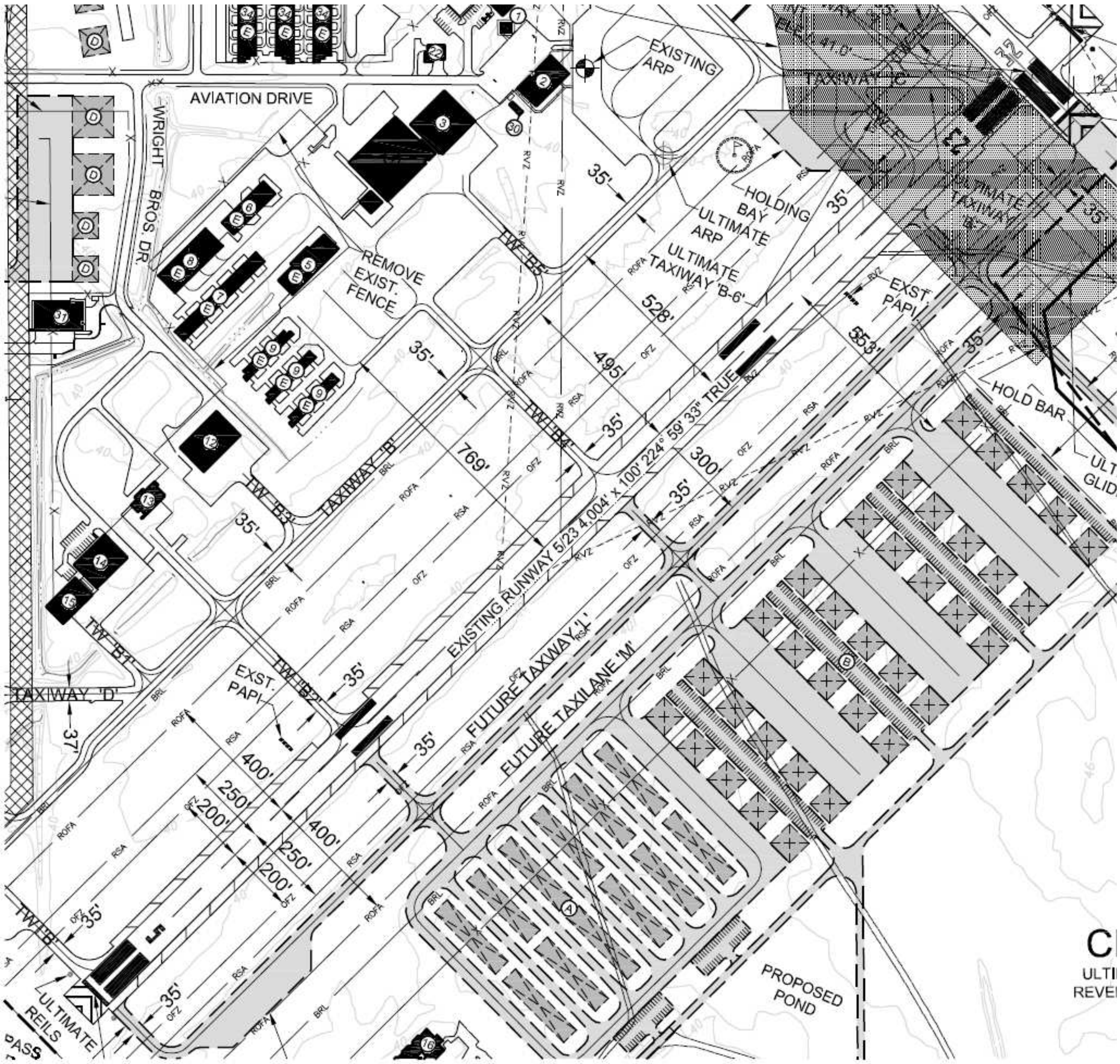
FDOT Notes:

Airport Sponsor Request:

Sponsor Year	Source	Amount
2009	State Match - Design	$150,000
2009	Local Match - Design	$150,000
Year Total		$300,000
2011	State Match - Construction	$900,000
2011	Local Match - Construction	$700,000
Year Total		$1,600,000
2012	State Match - Construction	$223,699
2012	Local Match - Construction	$223,699
Year Total		$447,397
Project – Federal	Entitlement/Discretionary	$0.00
Project Total – State	Design/Construction	$1,273,699
Project Total – Local		$1,073,699
Overall Project Total		$2,347,398

Project Summary

Runway 5/23 was overlayed and remarked in 1993. A pavement overlay is typically required every 10 years to maintain safe movement of aircraft and accommodate a changing fleet mix at CRG. Also associated with this project are pavement markings. The approximate total project area will encompass 45,000 square yards, and is recommended to be complete prior to construction of the Runway 32 extension.



PRELIMINARY ESTIMATE OF PROJECT COSTS
Craig Airport - Capital Improvement Program

	Runway 5/23 Pavement Overlay and Rehabilitation	Approximate Pavement/Bldg Area:	45,000	SY
CIP Year:	2009-2012			

Item	Description	Quantity	Unit	Unit Price	Item Cost	Total Cost
C-1	Mobilization	1.0	LS	$129,676.53	$129,677	
C-2	Erosion and Sediment Control	1.0	LS	$12,839.26	$12,839	
C-3	Maintenance of Traffic	1.0	LS	$3,000.00	$3,000	
C-4	Embankment/Excavation	14,850.0	CY	$8.16	$121,176	
C-5	Miscellaneous Repairs/Patching	1,800.0	SY	$50.00	$90,000	
C-6	Pavement Milling (1/2")	45,000.0	SY	$1.00	$45,000	
C-7	Bituminous Surface Course (2")	45,000.0	SY	$17.00	$765,000	
C-8	Bituminous Prime Coat	45,000.0	SY	$1.75	$78,750	
C-9	Pavement Markings	75,000.0	SF	$1.53	$114,750	
C-10	Ditch/Shoulder Grading	1.0	LS	$10,000.00	$10,000	
C-11	Sodding	22,500.0	SY	$2.50	$56,250	
					Approximate Total Construction Cost:	*$1,426,442*
S-1	Surveying & Design Testing	6%			$85,586.51	
S-2	Allowance for Permitting Fees				$5,000.00	
S-3	Engineering	14%			$199,701.85	
S-4	Inspection & Testing	10%			$142,644.18	
S-5	Airport Administration	1.5%			$21,396.63	
					Approximate Total Services Cost:	*$454,329*
	Preliminary Estimate of Project Cost					$1,880,771
	Contingency					$466,627
					PRESENT COST:	$2,347,398

Source: The LPA Group, Inc. 2009

JACIP – AIRPORT PROJECT DETAIL REPORT

Airport:	Craig Airport	NPIAS No.: 12-0033	
Sponsor:	Jacksonville Aviation Authority	Airport ID: CRG	
Sponsor ID:	1204	Site No.: 03251.*A	

UPIN:		Candidate:	
Airport Project ID:		FDOT Description 2:	
WPI No.:		FDOT Description 3:	
Sponsor Priority:	2009	National Priority:	
Common Description:	Environmental Survey & Permitting	Project Type:	Environmental

Project Narrative:
This project consists of the surveying and permitting associated with the extension of Runway 32.

Project Justification:
This project is required to accommodate the extension of Runway 14-32 to accommodate the critical aircraft and safety requirements.

Airport Notes:

FDOT Notes:

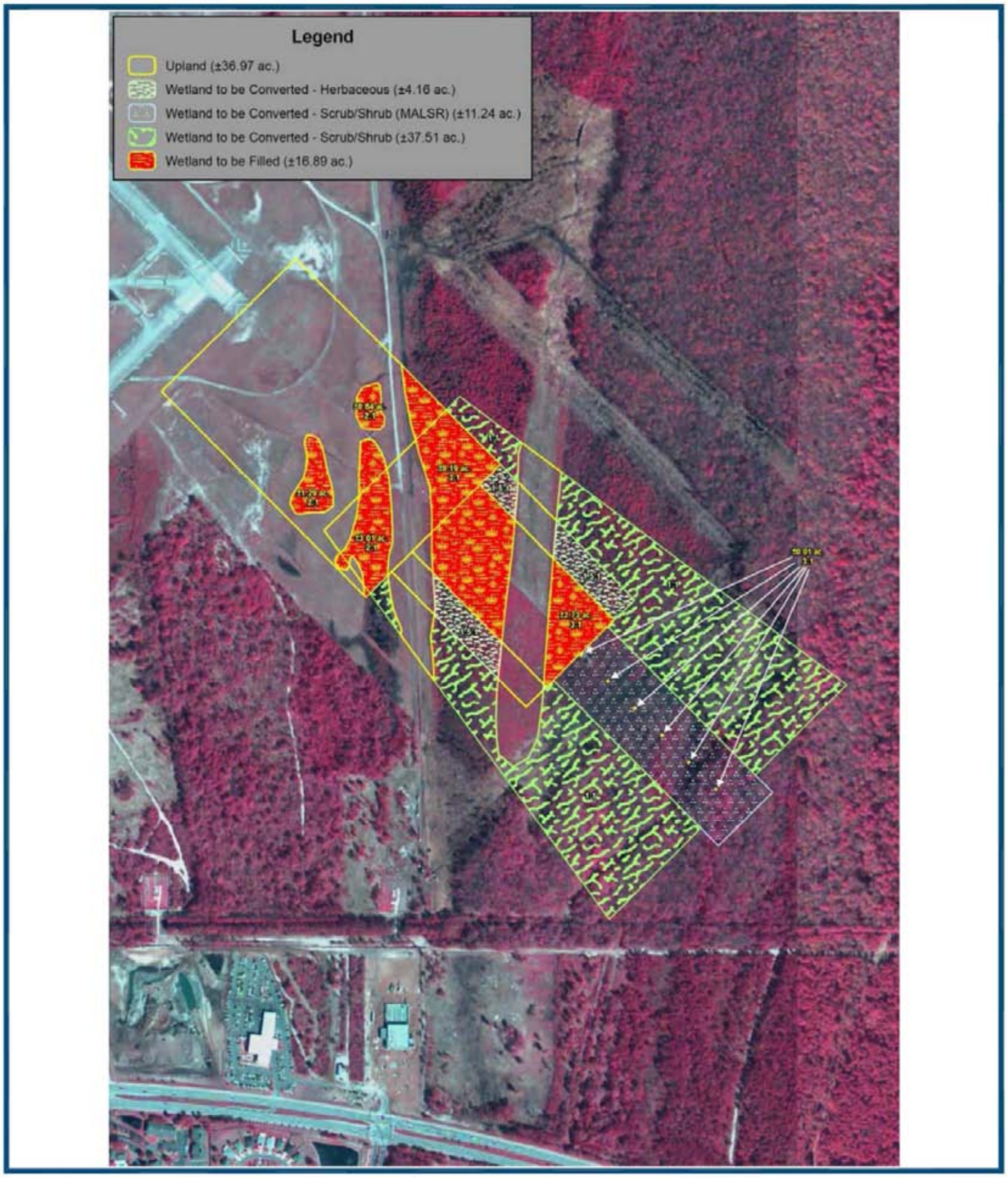
Airport Sponsor Request:

Sponsor Year	Source	Amount
Project – Federal	Entitlement	$150,000
Project Total – State		$0.00
Project Total – Local		$50,000
Overall Project Total		$200,000

Project Summary

The environmental survey and permitting includes the 50 acres impacted by the extension of Runway 32 and the relocation of the approach lighting system.

Runway 32 Mitigation Measures



LPA

N.T.S.

JACIP – AIRPORT PROJECT DETAIL REPORT

Airport:	Craig Airport	NPIAS No.: 12-0033
Sponsor:	Jacksonville Aviation Authority	Airport ID: CRG
Sponsor ID:	1204	Site No.: 03251.*A

UPIN:		Candidate:	
Airport Project ID:		FDOT Description 2:	
WPI No.:		FDOT Description 3:	
Sponsor Priority:	2009-2012	National Priority:	
Common Description:	Wetland Mitigation – Rwy 14/32	Project Type:	Environmental

Project Narrative:
This project consists of the surveying and re-pavement of approximately 50,000 SY of Runway 7/25 including the rehabilitation of accompanying signage.

Project Justification:
The project is required in order to rehabilitate and patch areas of cracking and spalling on the pavement and ensure the safety of aircraft using the runway.

Airport Notes:

FDOT Notes:

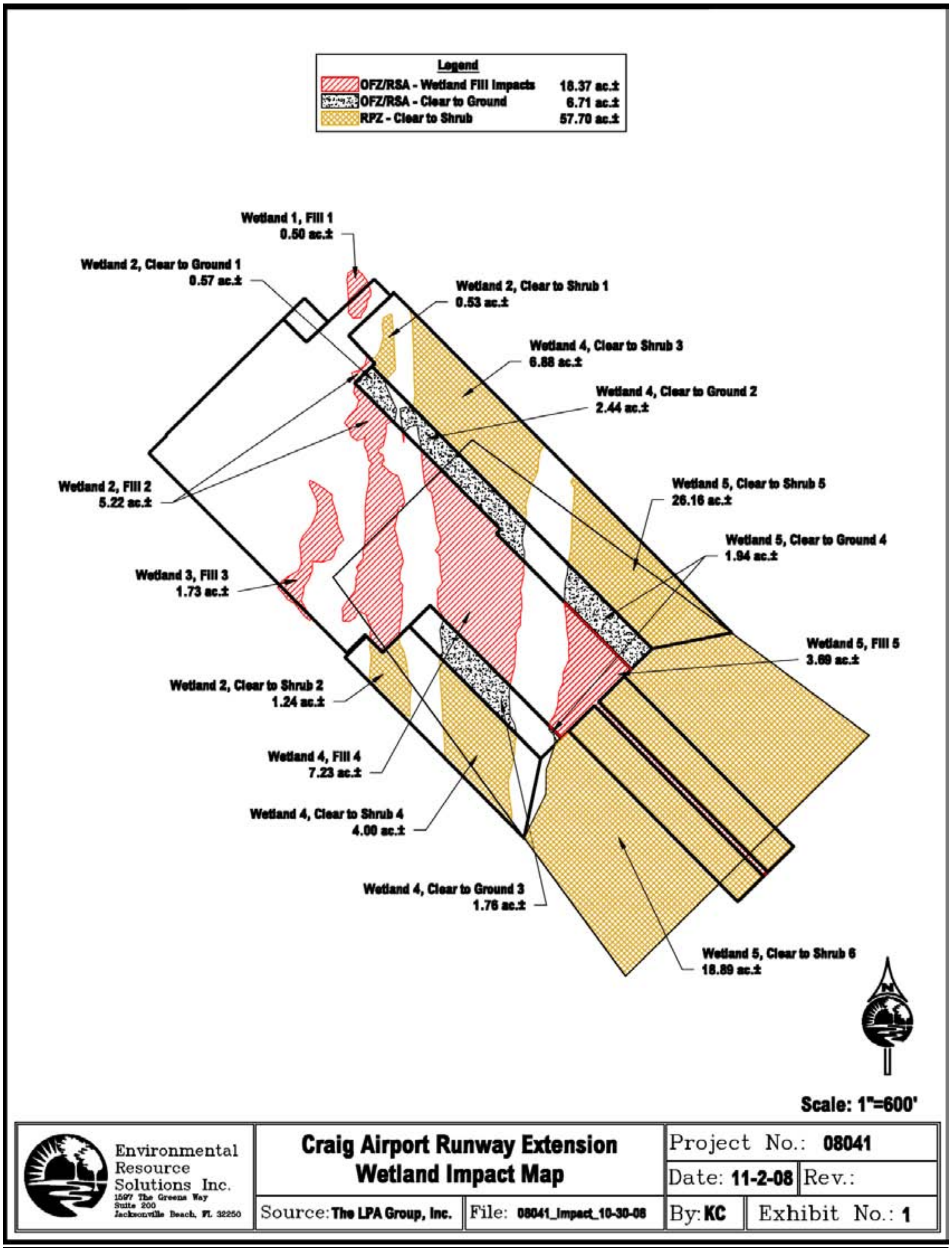
Airport Sponsor Request:

Sponsor Year	Source	Amount
2009	Federal Match - Discretionary	$1,306,250
2009	Local Match - Design	$68,750
Year Total		$1,375,000
2010	FAA Match - Discretionary	$1,306,250
2010	Local Match - Construction	$68,750
Year Total		$1,375,000
2011	FAA Match - Discretionary	$1,306,250
2011	Local Match - Construction	$68,750
Year Total		$1,375,000
2012	FAA Match - Discretionary	$1,306,250
2012	Local Match - Construction	$68,750
Year Total		$1,375,000

Project – Federal	Discretionary	$5,225,000
Project Total – State	Design/Construction	$0.00
Project Total – Local		$275,000
Overall Project Total		$5,500,000

Project Summary

Wetland mitigation associated with extension of Runway 32 and associated navigational and visual aids are estimated at approximately 82.78 acres of wetland impacts. On airport mitigation is being evaluated as is the use of mitigation banks to offset potential impacts.



JACIP – AIRPORT PROJECT DETAIL REPORT

Airport:	Craig Airport	NPIAS No.: 12-0033
Sponsor:	Jacksonville Aviation Authority	Airport ID: CRG
Sponsor ID:	1204	Site No.: 03251.*A

UPIN:		Candidate:	
Airport Project ID:		FDOT Description 2:	
WPI No.:		FDOT Description 3:	
Sponsor Priority:	2010-12	National Priority:	
Common Description:	Design Runway 14-32 and Taxiway A Extension	Project Type:	Pavement Construction

Project Narrative:
This project involves the design of the Runway 14-32 extension to 5,600 feet and the associated extension of parallel Taxiway A

Project Justification:
This project is required to accommodate existing and forecast traffic to provide an additional level of safety based upon runway length requirements associated with these aircraft.

Airport Notes:

FDOT Notes:

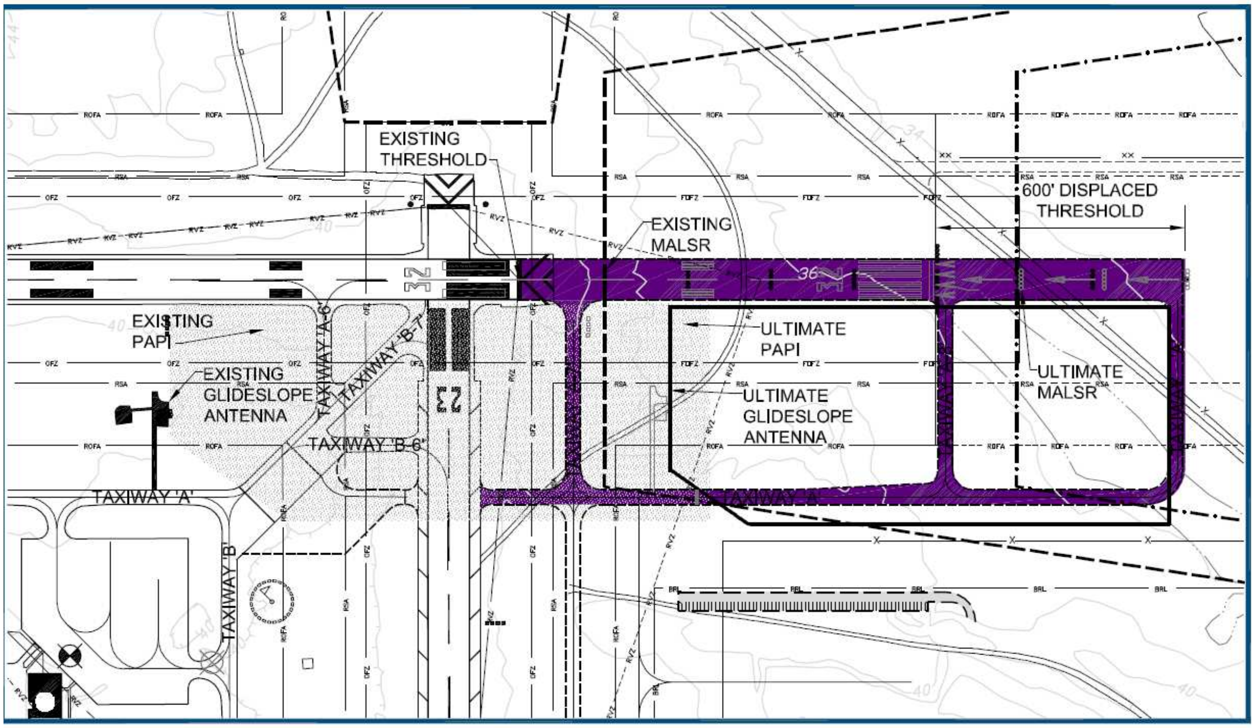
Airport Sponsor Request:

Sponsor Year	Source	Amount
2010	Federal Match - Discretionary	$967,586
2010	Local Match - Design	$50,926
Year Total		$1,018,512
2011	FAA Match - Discretionary	$967,586
2011	Local Match - Design	$50,926
Year Total		$1,018,512
2012	FAA Match - Discretionary	$967,586
2012	Local Match - Design	$50,926
Year Total		$1,018,512
Project – Federal		$2,902,758
Project Total – State		$0.00
Project Total – Local		$152,778
Overall Project Total		**$3,055,536**

Project Summary

The extension of the primary Runway 14-32 is based upon existing and forecast runway length requirements associated with the critical family of aircraft using the FAA 150/5325-4B, Runway Length Analysis Guidelines. The extension of Taxiway A, which currently runs parallel to Runway 14-32, will provide access to the southeast side of the airfield and provide for additional capacity.

1,600' Extension - Runway 32



Scale: 1" = 300'

JACIP – AIRPORT PROJECT DETAIL REPORT

Airport:	Craig Airport	NPIAS No.: 12-0033	
Sponsor:	Jacksonville Aviation Authority	Airport ID: CRG	
Sponsor ID:	1204	Site No.: 03251.*A	

UPIN: PFL0007044		Candidate:	
Airport Project ID:		FDOT Description 2:	
WPI No.:		FDOT Description 3:	
Sponsor Priority:	2012	National Priority:	
Common Description:	Relocation of Taxiway A-3	Project Type:	Pavement and Drainage

Project Narrative:
This project consists of the surveying and re-pavement of approximately 50,000 SY of Runway 7/25 including the rehabilitation of accompanying signage.

Project Justification:
The project is required in order to rehabilitate and patch areas of cracking and spalling on the pavement and ensure the safety of aircraft using the runway.

Airport Notes:

FDOT Notes:

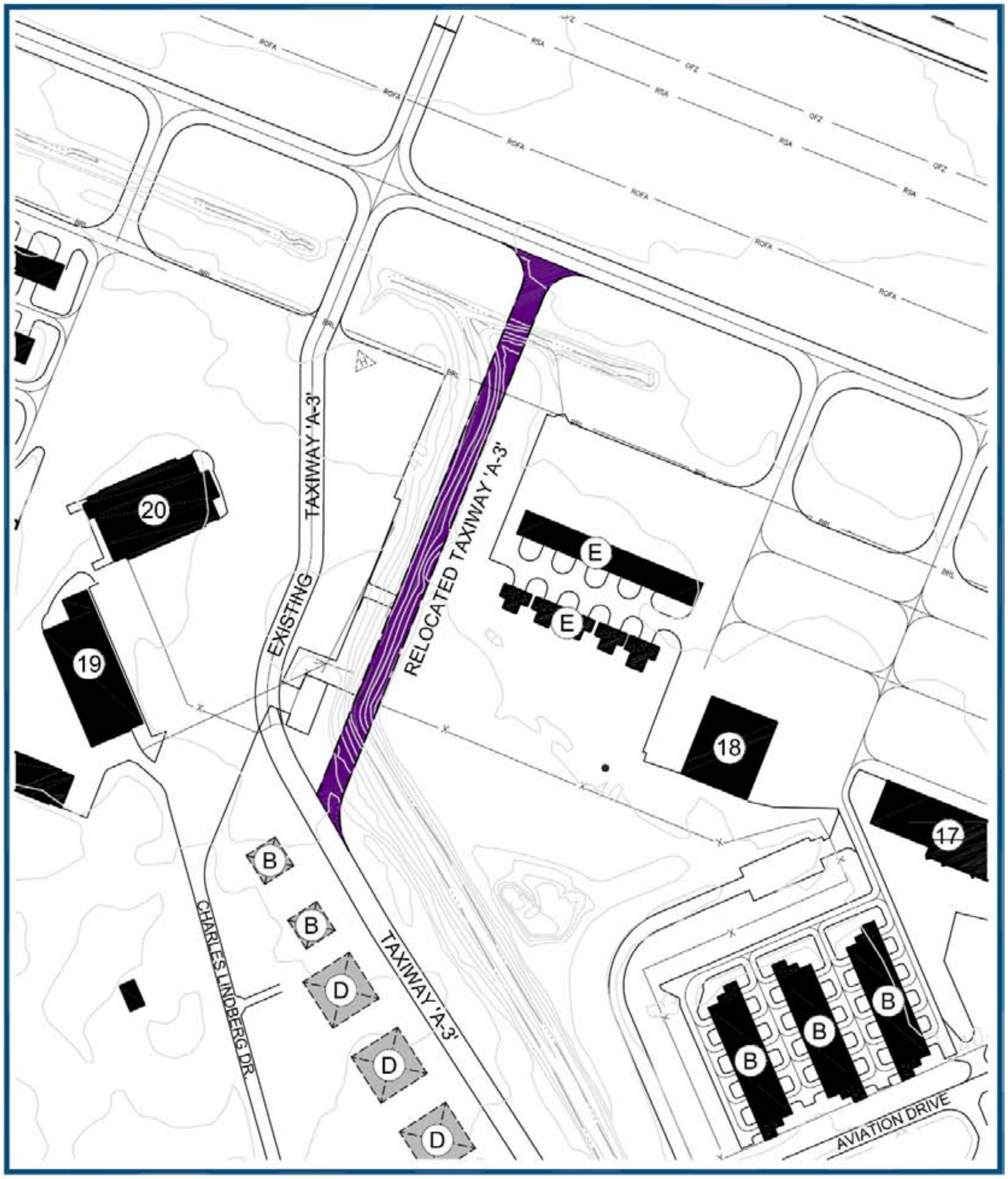
Airport Sponsor Request:

Sponsor Year	Source	Amount
2012	Federal Match - Entitlement	$300,000
2012	FDOT Match – Design/Construction	$809,531
2012	Local Match – Design/Construction	$809,531
Year Total		$1,919,063
Project – Federal		$300,000
Project Total – State		$809,531
Project Total – Local		$809,531
Overall Project Total		$1,919,063

Project Summary

The current Taxiway A-3 currently impacts an existing leasehold and, thus, limits available apron parking and aircraft maneuverability. Based upon drainage improvements deemed necessary for this area, and relocation of Taxiway A-3 is required.

Relocated Taxiway 'A-3'



LPA

Scale: 1" = 200'

PRELIMINARY ESTIMATE OF PROJECT COSTS
Craig Airport - Capital Improvement Program

	Relocate Taxiway A-3 and Drainage Improvements	Approximate Pavement/Bldg Area:	SY
CIP Year:	2012		

Item	Description	Quantity	Unit	Unit Price	Item Cost	Total Cost
C-1	Mobilization	1.0	LS	$113,636.36	$113,636.36	
C-2	Erosion and Sediment Control	1.0	LS	$9,878.61	$9,878.61	
C-3	Maintenance of Traffic	1.0	LS	$4,321.87	$4,321.87	
C-4	Embankment/Excavation	100.0	CY	$17.63	$1,763.32	
C-5	Subgrade Stabilization	7,575.7	SY	$17.29	$130,964.15	
C-6	Base Course (6")	7,575.7	SY	$34.57	$261,928.30	
C-7	Bituminous Surface Course (2")	7,575.7	SY	$36.74	$278,298.82	
C-8	Bituminous Prime Coat	7,575.7	SY	$3.78	$28,648.41	
C-9	Pavement Markings	1.0	SF	$2,160.93	$2,160.93	
C-10	Ditch/Shoulder Grading	1.0	LS	$97,242.05	$97,242.05	
C-11	Sodding	3,787.8	SY	$5.40	$20,463.15	
C-12	Allowance for Drainage Improvements	1.0	LS	$162,070.08	$162,070.08	
C-13	Lights	16.0	ea	$1,404.61	$22,473.72	
C-14	Cable	14,500.0	lf	$2.16	$31,333.55	
C-15	Trench and Conduit	4,500.0	lf	$5.40	$24,310.51	
C-16	Signage	4.0	ea	$3,000.00	$12,000.00	
C-17	Regulator and Vault Work	1.0	LS	$21,609.34	$21,609.34	
C-18	Drainage	1.0	LS	$26,896.82	$26,896.82	
				Approximate Total Construction Cost:	*$1,250,000*	
S-1	Surveying & Design Testing	6%		$75,000	$75,000	
S-2	Allowance for Permitting Fees				$5,000.00	
S-3	Engineering	14%		$175,000	$175,000	
S-4	Inspection & Testing	10%		$125,000	$125,000	
S-5	Airport Administration	1.5%		$18,750	$18,750	
				Preliminary Estimates of Project Cost	*$*	398,750
	Contingency					$20,000
				Estimated Total Cost		**$1,919,063**

APPENDIX K

FEDERAL AVIATION ADMINISTRATION

AND

FLORIDA DEPARTMENT OF TRANSPORTATION CORRESPONDENCE

THE LPA GROUP INCORPORATED
Transportation Consultants

4503 WOODLAND CORPORATE BOULEVARD, SUITE 400 ■ TAMPA, FLORIDA 33614 ■ 813-889-3892 ■ FAX 813-889-3893

February 2, 2007

Ms. Rebecca Henry
Orlando Airports District Office
5950 Hazeltine National Drive, Suite 400
Orlando, Florida 32822-5024

**RE: Craig Municipal Airport Master Plan Update
Airport Operations and Based Aircraft Forecasts**

Dear Ms. Henry:

THE LPA GROUP, INCORPORATED at the request of Jacksonville Aviation Authority (JAA) requests your review and concurrence with projections of aviation activity over the twenty-year planning period for the Craig Municipal Airport. Since the forecast is within 15 percent of the 2007 Terminal Area Forecast (TAF) for the 10-year forecast period, it is believed that this preferred projection provides an accurate prediction of future operations at the airport based upon increased based aircraft and transient aircraft operations as well as significant overall growth within the Jacksonville Metropolitan Statistical Area (MSA). Since the TAF also shows no operational growth, but does show based aircraft growth, it was determined that the TAF does not provide an accurate forecast of potential development at CRG based upon market demand and socio-economic conditions.

As a result, LPA requests that the Regional Office support these forecasts as realistic and justified. We look forward to working with you as we continue to develop the Craig Airport Master Plan Update and Airport Layout Plan. If you need any additional information or have any questions, please feel free to contact me at (813) 889-3892.

Thank you for your time and consideration in this matter.

Respectfully,

THE LPA GROUP INCORPORATED

Tricia Fantinato
Manager, Aviation Planning

Enclosure: Craig Airport Aviation Activity Forecasts

U.S. Department
of Transportation
Federal Aviation Administration

Orlando Airports District Office
5950 Hazeltine National Dr., Suite 400
Orlando, FL 32822-5024

Phone: 407-812-6331

February 16, 2007

Mr. Chip Seymour, C.M.
Senior Manager, Planning
Jacksonville Airport Authority
Jacksonville International Airport
P.O. Box 18018
Jacksonville, FL 32229-0010

Dear Mr. Seymour:

RE: Craig Airport (CRG), Jacksonville, Florida
Approval of Master Plan Forecast

The Airport Master Plan Forecast, transmitted by your consultant's February 16, 2007 correspondence, is within 10 percent of the 2007 Federal Aviation Administration (FAA) Terminal Area Forecast (TAF). Therefore, the forecasts are approved for use in the current master planning efforts.

Sincerely,

Original Signed By

Rebecca R. Henry
Program Manager
Planning and Compliance

cc: Tricia Fantinato, LPA Group, Inc., Tampa

THE LPA GROUP INCORPORATED
Transportation Consultants

4503 WOODLAND CORPORATE BOULEVARD, SUITE 400 ■ TAMPA, FLORIDA 33614 ■ 813-889-3892 ■ FAX 813-889-3893

April 28, 2008

Mr. Gene Lampp
District Aviation Specialist, District 2
Florida Department of Transportation
2198 Edison Avenue
Jacksonville, FL 322204

Re: Craig Airport Master Plan and Airport Layout Plan Update
FDOT Central Office and Local Office

Dear Mr. Lampp:

On behalf of the Jacksonville Aviation Authority, THE LPA GROUP INCORPORATED respectfully requests the Florida Department of Transportation's (FDOT's) review of the Craig Airport Master Plan Update and Airport Layout Plan. We have included two (2) copies of the full size draft ALP set (under a separate cover), draft Master Plan Update report, and completed ALP Checklist. Once you have had a chance to review these documents, we will be ready to respond to any comments you might have.

We look forward to working with you to finalize the Craig Airport Master Plan Update and Airport Layout Plan. If you need any additional information or have any questions, please feel free to contact me at (813) 889-3892.

Thank you for your time and consideration in this matter.

Respectfully,

THE LPA GROUP INCORPORATED

Tricia Fantinato
Manager, Aviation Planning

Enclosure: Master Plan Update Report
Airport Layout Plan Set (under separate cover)
Completed FAA Southern Region ALP Checklist

CC: C. Seymour, JAA
T. Lindner, JAA

THE LPA GROUP INCORPORATED
Transportation Consultants

4503 WOODLAND CORPORATE BOULEVARD, SUITE 400 ■ TAMPA, FLORIDA 33614 ■ 813-889-3892 ■ FAX 813-889-3893

April 28, 2008

Ms. Rebecca Henry
Orlando Airports District Office
Federal Aviation Administration
5950 Hazeltine National Drive
Citadel International Building, Suite 400
Orlando, Florida 32822-5024

Re: Craig Airport Master Plan and Airport Layout Plan Update

Dear Ms. Henry:

On behalf of the Jacksonville Aviation Authority, THE LPA GROUP INCORPORATED respectfully requests the FAA Airport District Office's review of the Craig Airport Master Plan Update and Airport Layout Plan. We have included one (1) copy of the full size draft ALP set (under a separate cover), draft Master Plan Update report, and completed ALP Checklist. Once you have had a chance to review these documents, we will be ready to respond to any comments you might have at that time.

We look forward to working with you to finalize the Craig Airport Master Plan Update and Airport Layout Plan. If you need any additional information or have any questions, please feel free to contact me at (813) 889-3892.

Thank you for your time and consideration in this matter.

Respectfully,

THE LPA GROUP INCORPORATED

Tricia Fantinato
Manager, Aviation Planning

Enclosure: Master Plan Update Report
Airport Layout Plan Set (under separate cover)
Completed FAA Southern Region ALP Checklist

CC: C. Seymour, JAA
T. Lindner, JAA
Richard Owen (FAA)

THE LPA GROUP INCORPORATED
Transportation Consultants

4503 WOODLAND CORPORATE BOULEVARD, SUITE 400 ■ TAMPA, FLORIDA 33614 ■ 813-889-3892 ■ FAX 813-889-3893

August 7, 2008

Ms. Rebecca Henry
Program Manager
Planning and Compliance
Federal Aviation Administration
Orlando Airports District Office
5950 Hazeltine National Drive
Suite 400
Orlando, Florida 32822-5024

RE: Craig Airport (HEG)
Airport Layout Plan (ALP) and Master Plan Update
FAA Draft Review Comments

Dear Ms. Henry:

Thank you for your comments on the Craig Airport Master Plan and ALP Update provided in the June 9, 2008 letter. Below is our response to your comments, and all recommended changes will be incorporated into both the ALP and final document write-up for your approval.

1. Currently, there is no Runway Safety Area (RSA) determination on file for CRG. An RSA determination will be made with information presented on the ALP and in the Airport Master Plan. Please ensure the accuracy of this data.

LPA Response: All information has been checked and rechecked to validate that the information presented in both the Airport Layout Plan and narrative report are correct.

2. Runway Safety Areas (RSAs) are not clearly depicted on the ALP drawing. Please ensure the RSAs are easily determined.

LPA Response: Runway Safety Area line work was shown on the ALP set; however, to easily identify, the line weights have been increased and call outs have been added to distinguish existing and future safety areas.

3. It appears the localizer building will be in the RSA once Runway 14-32 is extended. This building will need to be relocated as localizer locations are not deemed "fixed by function".

LPA Response: The future localizer and associated critical area is located along the centerline beyond the end of the runway safety area of Runway 14. The old localizer

ATLANTA ■ BATON ROUGE ■ CHARLOTTE ■ COLUMBIA ■ GREENSBORO ■ JACKSONVILLE ■ KNOXVILLE
LITTLE ROCK ■ MOBILE ■ NASHVILLE ■ ORLANDO ■ RALEIGH ■ SARASOTA ■ TALLAHASSEE ■ TAMPA ■ WEST PALM BEACH

building and new localizer building are clearly identified with call-outs. Note that the existing localizer critical area is shown with a gray dot pattern, and the future critical area is shown with an unbroken line. Call outs were also provided for easy identification.

4. If available, please provide a VFR windrose in addition to the IFR and all-weather windroses.

LPA Response: This information has been added to the ALP drawing set as requested.

5. FAA records indicate that Runway 14-32 measure 4,008 feet, not 3,998 feet as shown on the ALP. Please verify runway length.

LPA Response: After reviewing the Runway 14-32 pavement overlay survey and discussions with LD Bradley, it was determined that surveyor had incorrectly measured the runway length by approximately 10 by using the center points of the threshold markings rather than the outer edge of the threshold markings. This was double checked by our engineers, and a length of 4,008 feet was determined. As a result, the runway length, extension, latitude, longitude, runway end points, high and low points, plan and profile sheets, inner approach surface drawings, etc. were all adjusted to show the correct runway pavement length.

6. Please clearly depict the existing and future MALSR, glideslope and localizer for Runway 14-32.

LPA Response: Heavier line weights, colors, symbols and call-outs were used to clearly depict the existing and future MALSR, glideslope and localizer for Runway 14-32.

7. Existing and future glideslope and localizer critical areas should be shown on the ALP.

LPA Response: Existing and future glideslope and localizer critical areas have been added and called out on the required sheets. The existing critical areas are shown in a gray dot pattern, and the future critical areas are depicted as a broken line.

8. The VORTAC should be protected by a VOR critical area.

LPA Response: The VORTAC critical area (1,000 ft radius, 1.25 degree slope for metal buildings and 2.25 degree slope for wood buildings) has been added to the ALP set as well as clearly identified.

9. On Sheet 9, the runway end does not match up between the plan and profile view.

LPA Response: This has been corrected.

10. Sheet 10, the approach surface to the future runway end should be shown.

<u>LPA Response</u>: The new approach surface information to Runway 32 has been added to Sheet 10.

11. In the interest of time, the Airport Property Map/Exhibit A was not thoroughly reviewed at this time. We will review this document and provide any comments on this sheet prior to final agency ALP comments.

<u>LPA Response</u>: As part of this review, it is requested that FAA review the property map and provide any comments to the client and consultant.

As requested, five (5) copies of the ALP set are enclosed with this letter for your review and distribution to the agencies. Please if you have any additional comments or questions, do not hesitate to contact me at (813) 889-3892.

Best regards,

The LPA Group Incorporated

Tricia Fantinato
Manager – Aviation Planning

Enclosures (5)

JACKSONVILLE
AVIATION AUTHORITY

PO Box 18018

Jacksonville, FL

32229-0018

www.jaa.aero

November 14, 2008

Mr. Gene Lampp
District Aviation Specialist, District 2
Florida Department of Transportation
2198 Edison Avenue
Jacksonville, FL 322204

Re: Craig Airport Master Plan and Airport Layout Plan Update
FDOT Central Office and Local Office
FDOT Draft Review Comments

Dear Mr. Lampp:

Thank you for your comments on the Craig Airport Master Plan and Airport Layout Plan Update provided in the July 9, 2008 letter. Below is our response to your comments, and all recommended changes will be incorporated into both the ALP and document write-up.

FDOT Central Office Comments

1. Scope of Work (SOW) for this master plan update was not submitted for review/approval by the Aviation Office. According to the Airport Master Plans procedure no. 725-040-100-e, 2.4, the proposed SOW including cost estimates should have been reviewed/approved by the Aviation Office before a Notice to Proceed was issued. Please provide copy of SOW.

JAA Response: According to JAA records, the scope of work for the Craig Master Plan was forwarded to District Two for review and concurrence and concurrence was received on July 27, 2006. As requested, a copy of the SOW is included in this package for your records.

2. Chapter 2.2.6.5 Air Traffic Control Tower: Reference to Figure 2-13 needs to be corrected to Figure 2-12.

JAA Response: This inconsistency has been corrected in the final report.

3. Chapter 4.2.1, Airport Role and Service Level: According to the Airport Master Plans procedure No. 725-040-100-e (page 4, paragraph 5), in order for planned airport improvements to be eligible for state funding, airport master plans must be consistent with the aviation system role for the airport described in the FASP. Describe the role of this airport in the FASP.

JAA Response: According to the Florida Aviation System Plan, 2007, and the FAA National Plan of Integrated Airport Systems, 2007-2011, Craig Municipal Airport is designated as a reliever airport. A reliever airport absorbs general aviation operations from busy commercial service airports (i.e. Jacksonville International Airport). Relievers typically have large numbers of based aircraft and high level of aircraft operations. The FASP includes Craig Airport in the Community Airport (GA) category. The Northeast Florida Regional Overview of the FASP reports Craig as the busiest GA airport in the region handling over 28 percent of the regional GA traffic. The Regional Overview indicates that State funding should be targeted to Craig to enhance services and increase airport capacity.

4. Chapter 5.5.1.3 Extension of Runway 14/32 states that "no impact to Landmark Middle School or Kernan Elementary School" will be caused by the runway extension. From figures 5-20 and 5-21, it appears both schools are impacted to the extent that the areas graphically superimposed as "school regulatory zones" have greater encroachment to school owned property than previously existed under the no extension scenario. This intrusion and the significance of it is uncertain to us so we would defer to the City's Zoning and Regulatory Division and Department of Community Affairs to establish if the intrusion is significant enough to be considered problematic with regard to the requirements. If "no impact" is the appropriate determination based on the figures provided, this conclusion should be documented through the appropriate agency responsible for this determination.

JAA Response: The Master Plan studied the impact of the runway extension on the School Regulation Zone for Landmark Middle or Kernan Elementary Schools and determined that the extension would not result in any increased exposure to either school. As the Master Plan indicates and the accompanying drawings in the Master Plan illustrate no buildings or playground areas would be located within the expanded regulation area. We coordinated this issue with Karen Kuhlman, Director Real Estate and Agency Coordination as indicated in the accompanying letter. As Figure 5-19 illustrates there are other existing schools that have considerably greater exposure from the existing runway conditions at Craig. JAA will undertake any additional due diligence, if required, during the environmental assessment phase of the runway extension project.

5. Chapter 5.5.1.3 Page 5-54, Figure 5-21 shows Kernan Elementary School will be impacted. The text which appears on page 5-54 makes reference to Kernan Middle School. Please review the text reference and correct if the intent was to address the school as the Kernan Elementary School.

JAA Response: The text has been corrected to refer to Kernan Elementary School.

6. The columns within the spreadsheets tables in Chapter 7 are not correctly aligned, thus, they do not add up correctly. Before we can conclude our assessments concerning whether the Craig Municipal Master Plan draft is financially feasible, it will be necessary to revise this information and resubmit it for our review.

JAA Response: In reviewing the spreadsheets in Chapter 7, the information has been aligned and correctly summed to provide a financially feasible program of short and long-term development at Craig Airport. An updated copy of Chapter 7 has been included in this package for your review.

In addition to the above responses, the JAA notes FDOT's concern about the Master Plan and its consistency with the locally adopted Comprehensive Plan. The Master Plan Analysis indicates that a runway extension is necessary to provide the runway length recommended by FAA Advisory Circular 150/5325-B, Runway Length Requirements for Airport Design, for the aircraft currently operating at Craig Airport. JAA understands that this issue must be addressed during the final development and approval of the proposed runway extension project.

On September 15, 2008 JAA held an additional public meeting to allow public comment on the Master Plan and the proposed runway extension at Craig. JAA mailed over 56,000 announcements to all households in the ZIP codes that are located near Craig Airport. There were 171 people that signed in as attending the meeting and 51 comment cards were received. There was a recording made of all comments. JAA has included the comment cards and recording with this response and asks to have these comments included in the official record for the Master Plan.

Please if you have any questions or require any additional information, do not hesitate to contact either me at (904) 741-2743.

Respectfully,

Hubert Seymour
Sr. Manager, Planning
Jacksonville Aviation Authority

Enclosures

Florida Department of Transportation

JEB BUSH
GOVERNOR

1109 South Marion Avenue
Lake City, Florida 32025-5874

DENVER J. STUTLER, JR.
SECRETARY

1109 South Marion Avenue
Mail Station 2018
Lake City, Florida 32025-5874

(800) 749-2967
(386) 961-7855
(386) 758-3766 Fax

July 27, 2006

Michele L. Stephens
Contract Administrator
Jacksonville Aviation Authority
P.O. Box 18018
Jacksonville, FL 32229

RE: Craig Municipal Airport
Master Plan Update
F.P. 40996319401, JAA Project C2006-03, Contract A/E 227-027
Request for Concurrence

Dear Ms. Stephens

The Florida Department of Transportation (FDOT) gives approval with the condition funds are available in the current executed Joint Participation Agreement(s) (JPA) and no addition Department funds will be needed for the project.

I also want to bring to the attention of the Jacksonville Airport Authority (JAA) the last sentence in paragraph 3.00 of the project JPA which states, "The Agency agree to bear all expenses in excess of the total estimated cost of the project and any deficits involved."

If you should have any questions concerning this letter, please feel free to contact me.

Sincerely,

Roland C Luster

Roland C. Luster
Aviation/Ports Administrator

dcps
Duval County Public Schools

1701 Prudential Drive
Jacksonville, FL 32207
www.dreamsbeginhere.org
904 390 2000

September 12, 2008

Mr. Chip Seymour
Jacksonville Aviation Authority
Jacksonville, FL 32216

Dear Chip,

Per our conversation, thank you for sending the FDOT and NEFRC information. City Planning has also sent detailed maps showing the proposed runway extension at Craig Field.

Doug Ayars and I have carefully reviewed the maps and FS 333.03(3) and the impacts on Kernan Elementary School and Landmark Middle School. In each case only one corner of the property is impacted. The impacted areas do not include any buildings or areas of student congregations. We do not feel that the impact is significant enough to oppose the extension of the runway and we will urge the School Board to take no action.

Thank you for requesting our comments.

Sincerely,

Karen S. Kuhlmann

Karen S. Kuhlmann
Director
Real Estate and Agency Liaison

Fantinato, Tricia

From:	CSeymour@jaa.aero
Sent:	Tuesday, March 17, 2009 10:45 AM
To:	Bennett, James
Cc:	Hatim, Abdul; Ashbaker, Bj; Thoburn, Brad; Baldwin, Charles; Lampp, Gene; jclark@jaa.aero; Worth, Phil; Parks, Robert; Luster, Roland Jr; TLindner@jaa.aero
Subject:	Re: Craig Master Plan review letter
Attachments:	3608_001.pdf

Please find attached our response to your January 22 letter concerning the Craig Airport Master Plan. We have received FAA approval to release the final technical document and ALP and we now request your clearance to print the document. Any issues that remain unresolved as related to a runway extension will be identified in the required Environmental Analysis and resolved before FAA will approve the project for construction.

(See attached file: 3608_001.pdf)

JACKSONVILLE
AVIATION AUTHORITY

PO Box 18018

Jacksonville, FL

32229-0018

www.jaa.aero

March 17, 2009

Mr. James G. Bennett, PE
District Aviation Specialist, District 2
Florida Department of Transportation
2198 Edison Avenue
Jacksonville, FL 322204

Re: Craig Airport Master Plan, FDOT January 22, 2009 letter

Dear Mr. Bennett:

Our responses to your comments 1-5 were addressed in a November 14, 2008 letter to Mr. Lampp of your office. We held a meeting on January 9, 2009 to review our comments and to the best of our knowledge we believe you had indicated at the January 9 meeting that our answers to these comments were satisfactory. If there is any additional information that you require on comments 1-5 please notify us as soon as possible.

In the same letter and at the January 9 meeting, the JAA noted FDOT's concern about the Master Plan and its consistency with the locally adopted Comprehensive Plan. At the January 9 meeting JAA indicated the changes requested by FDOT on this issue had been made and a copy was provided to Mr. Lampp. The Master Plan Analysis indicates that a runway extension is necessary to provide the runway length recommended by FAA Advisory Circular 150/5325-B, Runway Length Requirements for Airport Design, for the aircraft currently operating at Craig Airport. JAA understands that this issue must be addressed during the final development and approval of the proposed runway extension project. JAA anticipates this coordination will occur during the Environmental Assessment study for the runway extension. Resolution of this issue is a political decision by the local community. However this issue is resolved, the aviation need for the runway extension will not change.

At the January 9 meeting we also discussed in detail the steps we had taken to address citizen concerns about land use and the potential risk to the community in the event of a downed aircraft off the ends of the runways at Craig. FAA has established standards that require a runway safety area of 1,000 feet off each runway end and a Runway Protection Zone that requires height and land use controls that minimize the potential risks to the community. All of the proposed development at Craig meets these standards. These are the only land use controls proposed by FAA or the State of Florida for safety reasons. The off airport land uses at Craig in its current configuration and with the runway extension meet City of Jacksonville land use code requirements and FDOT land use code guidance.

Some community members have tried to invoke a land use standard not adopted by the City of Jacksonville nor recognized by the FAA or FDOT. This land use standard discusses accident potential zones that are based on an NTSB study of past accidents that have occurred over a ten year period throughout the United States. There is no attempt in the NTSB study to relate the accidents to any kind of statistical analysis that could be used to determine how likely an accident off airport property might be or if a particular type of aircraft is more likely to have an accident. There are only two states in the country that have even included this guidance in their state land use planning rules and these states have indicated it is still a local issue to determine if this guidance should apply.

While the Craig Master Plan was being developed, the City of Jacksonville undertook a review of the City Land Use Code related to Land Use around Airports. The City Planning Department and the City Council were aware of the more restrictive guidance that addressed accident potential zones. There was no support for adopting this guidance into the City of Jacksonville Land Use Code. If this standard were applied to airports throughout Florida many of those airports could be forced to close.

While all airport owners are concerned about safe operations from their airports some level of risk is inherent. The accident statistics in the NTSB Annual Review of Aircraft Accidents indicate that an aircraft operator is much more likely to have an accident on airport that in the areas off the runways. JAA believes that aircraft users operating on the available runway at Craig are at greater risk that an aircraft approaching or departing the airport. The FAA, the State of Florida and the City of Jacksonville have published guidance and Zoning Codes that control land uses around airports that do not preclude residential development off the ends of any runway except in the Runway Protection Zones for safety reasons.

JAA has received the FAA's final comments related to the Craig Master Plan and desires to publish the Craig Master Plan document. We will continue to work with the community to ensure any safety concerns are addressed in the Environmental Assessment study for the runway extension. We request that FDOT District Two release the document for final publication.

Please if you have any questions or require any additional information, do not hesitate to contact either me at (904) 741-2743.

Respectfully,

Hubert Seymour
Sr. Manager, Planning
Jacksonville Aviation Authority

Cc: John Clark
Charles Baldwin
Bill Ashbaker
Abdul Hatim
City Of Jacksonville Planning Department

From:	Rebecca.Henry@faa.gov
To:	Fantinato, Tricia
Subject:	CRAIG ALP COMMENTS
Date:	Thursday, January 15, 2009 9:35:22 AM

Tricia,

The following comments have been received on Craig ALP. Please review them and call me if you need clarification. We are still waiting on one Division--they have a deadline of tomorrow. We will move forward after that.

Thanks,

Rebecca

We have the following concerns/comments: ALP indicates a service road through the RWY 32/GS critical area. This violates the ILS siting criteria; therefore we recommend that the road be relocated behind the GS. REIMBURSABLE PROJECTS DUE TO RWY 14/32 Extension. RWY/32 GS; RWY/32 Papi; RWY/32 MALSR LOC/32; RWY/14 Papi. To accomplish these relocation projects, a reimbursable agreement is required between Jacksonville Aviation Authority Craig Airport and the FAA. Please contact Angela Freeman Lead Planner, Planning & Integration Office at 404-305-7054 to discuss the reimbursable process. LINE of Sight from the ATCT to existing and future operational surfaces shall be protected. "Shadow Studies" for planned structures and/or parked aircraft shall be submitted to the FAA for approval. AT Division must review and approve the shadow studies.

NO IFR EFFECTThe Eastern FPO has reviewed this ALP and has the following comments:---- 1.Page 2 of 9 - Runway data indicates that R14/32 will be extended and displaced thresholds added sometime in the future. The FPO needs to have a minimum of 12 months (currently 18 months) advanced notice of the construction so that a publication date can be defined to coincide with runway completion date. If this advanced notice is not provided, the airport runs the risk of losing the approach to this runway. The FPO would recommend that the Airport consider requesting RNAV approaches be developed to R5/23 so that the airport will continue to have IFR capability during runway construction. Have the proponent request the approaches from the AVN web site "http://avn.faa.gov/". Request form can be located under the Flight procedures dropdown - "so you want an instrument procedure".----- 2. I would have the displaced runway coordinates for the proposed runway 14/32 extension checked as our calculation show the displace threshold 439 NM SE of the airport.---- 3. Any new hangar/building construction on the airport needs to be evaluated under its own NRA. Insure that a crane is included in the NRA package.---- 4. Once R14/32 is extended and has 600' runway displacements, the parallel taxiway will extend beyond the displace runway threshold. Aircraft taxiing for takeoff potentially will penetrate the visibility 34:1 and 20:1 surfaces. Recommend that provisions be made for a hold bar outside the visibility surface be made so that when weather is below 800-2, aircraft have a known hold point.--- 5. In the design process for R32 extension/displaced threshold, the airport may want to consider angling the parallel taxiway away from the runway so that it can remain clear of the visibility surface.

Runway Data Table appears to show the OFZ widths in error. Measurements of the widths are correct. Runway 05/23 shows 250 feet and the standard would be 400 feet as a B-II airport. The airport would be expected to handle as much as a 65,000 lb. Fokker F-28. In reality a much larger airplane may very well operate on the airport. Runway 14/32 shows an existing width of 250/300 and the ultimate as No Change. The Standard is 400 feet. The length of the OFZ shows 200 feet which is correct except for Runway 32 with the MALSR which extends the OFZ to 200 feet beyond the end of the approach lights which would be 2600 feet from the threshold. Page 1 shows Runway 14/32 as 4004 feet long and page 4 says 3636 feet. The A/FD and the U.S. Terminal Procedures show 4004 feet. Please correct. This review covers only what the narrative report describes and does not constitute approval of any Modification of Standards which should be submitted separately for study. As described by the FPO, the POFZ for Runway 32 should be considered.

THE LPA GROUP INCORPORATED
Transportation Consultants

4503 WOODLAND CORPORATE BOULEVARD, SUITE 400 ■ TAMPA, FLORIDA 33614 ■ 813-889-3892 ■ FAX 813-889-3893

February 24, 2009

Ms. Rebecca Henry
Program Manager
Planning and Compliance
Federal Aviation Administration
Orlando Airports District Office
5950 Hazeltine National Drive
Suite 400
Orlando, Florida 32822-5024

**RE: Craig Airport (CRG)
Airport Layout Plan (ALP) and Master Plan Update
FAA Final Review Comments**

Dear Ms. Henry:

Thank you for providing the final FAA Division comments with regard to the Craig Master Plan Update and Airport Layout Plan set provide in your January 15, 2009 e-mail. We have incorporated the required changes, and have provided our response to FAA comments and recommendations below.

1. ALP indicates a service road through the Runway 32/GS critical area. This violates the ILS siting criteria; therefore we recommend that the road be relocated behind the GS.

   <u>LPA Response</u>: The service road was relocated behind the glideslope critical area. The road identified by the FAA was marked for closure and relocation to the new site behind the GS critical area. Additional text has been added to the ALP to clarify the road relocation.

2. Reimbursable projects due to Runway 14/32 Extension: Runway 32 PAPI, Rwy 32 MALSR and Localizer, and Runway 14 PAPI. To accomplish these relocation projects, a reimbursable agreement is required between Jacksonville Aviation Authority/Craig Airport and the FAA. Please contact Angela Freeman, Lead Planner, Planning & Integration Office at 404-305-7054 to discuss the reimbursable process.

   <u>LPA Response</u>: This information was provided to JAA management who will work with FAA to develop a reimbursable agreement related to the relocation of the listed navigational aids during final planning and design.

3. Line of Sight from the ATCT to existing and future operational surfaces shall be protected. "Shadow Studies" for planned structures and/or parked aircraft shall be

submitted to the FAA for approval. Air Traffic (AT) Division must review and approve the shadow studies.

LPA Response: As part of the "notice of proposed construction" associated with new facility development at CRG, "shadow studies" will be performed to determine the potential impact of the development to Air Traffic Control line of sight requirements. However, there is no proposed development that would appear to create any problem with any existing movement areas or impact ATCT Line of Sight on the airport. Notice of Proposed On-Airport Construction with Shadow Studies will be submitted at least six (6) months prior to proposed construction for FAA approval.

4. ***NO IFR EFFECT*** The Eastern FPO has reviewed this ALP and has the following comments:
   a. Page 2 of 9 – Runway data indicates that Runway 14/32 will be extended and displaced thresholds added sometime in the future. The FPO needs to have a minimum of 12 months (currently 18 months) advanced notice of the construction so that a publication data can be defined to coincide with runway completion date. If this advanced notice is not provided, the airport runs the risk of losing the approach to this runway.

      LPA Response: Jacksonville Aviation Authority will inform the FAA Airport Districts Office and Flight Planning Office at least 18 months prior to construction of the recommended extension of Runway 32.

   b. The FPO would recommend that the Airport consider requesting RNAV approaches be developed on Runway 5/23 so that the airport will continue to have IFR capability during runway construction. Have the proponent request the approaches from the AVN website http://avn.faa.gov/. Request form can be located under the Flight Procedures drop down menu = "so you want an instrument approach".

      LPA Response: Both LPA and JAA have reviewed this recommendation. This is a good suggestion that JAA will pursue prior to the extension of Runway 14/32. When the RNAV approach is requested, JAA will modify the ALP at that time.

   c. I would have the displaced runway coordinates for the proposed runway 14/32 extension checked as our calculation show the displaced threshold 439 NM Southeast of the airport.

      LPA Response: LPA has re-evaluated all runway threshold coordinate calculations, and determined that FAA was correct. The correct runway coordinates have been determined and denoted in both the Data Table and on the

ALP drawings. This information was also correctly identified within the narrative report.

d. Any new hangar/building construction on the airport needs to be evaluated under its own NRA. Insure that any crane is included in the NRA package.

   LPA Response: A notice of on-airport proposed construction, including shadow study, will be performed and submitted to FAA Airport District Office and FAA Regional Offices for review prior to any new construction. If a crane is required for construction, its location, hours of operation, and height will also be included in the on-airport notice of proposed construction paperwork.

e. Once Runway 14/32 is extended and has 600 ft displaced thresholds, the parallel taxiway will extend beyond the displaced runway threshold. Aircraft taxiing for takeoff potentially will penetrate the visibility 34:1 and 20:1 surfaces. Recommend that provisions be made for a hold bar outside the visibility surface be made so that when weather is below 800-2, aircraft have a known hold point.

   LPA Response: Based upon this recommendation, a hold bar has been added to the Taxiway A, so that aircraft taxiing for takeoff will not penetrate the 34:1 and 20:1 visibility surfaces. This information has also been added to the text of the narrative report.

f. In the design process for Runway 32 extension/displaced threshold, the airport may want to consider angling the parallel taxiway away from the runway so that it can remain clear of the visibility surface.

   LPA Response: JAA has taken this recommendation into consideration. However, based upon planned development and associated costs, it was determined that installing a hold bar on Taxiway A would be more cost effective especially since CRG is equipped with an Air Traffic Control Tower.

5. Runway Data Table appears to show the OFZ widths in error. Measurement of the widths is correct. Runway 05/23 shows 250 feet and the standard would be 400 feet for a B-II airport. The airport would be expected to handle as much as a 65,000 lb Fokker F-28. In reality a much larger airplane may very well operate at the airport.

   LPA Response: The information in the data table has been corrected to match the drawing set (object free zone = 400 feet). Also, it is important to note that the runway pavement strength of all runways and taxiways is 60,000 lbs, so operations of heavier aircraft will be limited due to operating and insurance requirements.

6. Runway 14/32 shows an existing width of 250/300 and the ultimate as No Change. The standard is 400 feet. The length of the OFZ shows 200 feet which is correct except for Runway 32 with the MALSR which extends the OFZ to 200 feet beyond the end of the approach lights which would be 2600 feet from the threshold.

LPA Response: The OFZ width and length for Runway 14/32 has been corrected on the Data Table to reflect the ALP drawing set and standard requirements.

7. Page 1 shows Runway 14/32 as 4,004 feet long and page 4 says 3,636 feet. The Airport Facility Directory (A/FD) and the US Terminal Procedures show 4,004 feet. Please correct.

   LPA Response: This error has been corrected on all sheets. The existing length of Runway 14/32 is 4,004 feet as denoted in the A/FD.

8. This review covers only what the narrative report describes and does not constitute approval of any Modification of Standards which should be submitted separately for study. As described by the Flight Procedures Office (FPO), the POFZ for Runway 32 should be considered.

   LPA Response: At this time, no existing or future modification to standards were identified or recommended as part of this master plan update. If any modifications are required, JAA will submit those requests separately to the FAA for their review and approval. Also, as noted by the Flight Procedures Office, the POFZ has been correctly labeled and identified on both the ALP and within the Narrative Report. Further, the airport service road was relocated behind the Glideslope Critical Area to limit potential interference with the navigational aid.

Enclosed for your stamp of approval are 12 copies of the Craig Airport Layout Plan set, one GBC bound copy of the final report, and two compact disks containing the electronic files of the report as well as AutoCAD files of the airport layout plan set for your files. Please if you need any additional information or have any questions, do not hesitate to contact us at (813) 889-3892. Thank you for your assistance.

Respectfully,

THE LPA GROUP INCORPORATED

T. Fant

Tricia Fantinato
Manager – Aviation Planning

Enclosures: Craig Final Airport Layout Plan set (12)
Craig Final Master Plan Narrative Report (1)
Compact Disks (2)

APPENDIX L

KEY SECTIONS OF CITY OF JACKSONVILLE ZONING AND FLORIDA PUBLIC LAW

Select Year: 2007 Go

The 2007 Florida Statutes

Title XXV	Chapter 333	View Entire Chapter
AVIATION	AIRPORT ZONING	

333.03 Power to adopt airport zoning regulations.--

(1)(a) In order to prevent the creation or establishment of airport hazards, every political subdivision having an airport hazard area within its territorial limits shall, by October 1, 1977, adopt, administer, and enforce, under the police power and in the manner and upon the conditions hereinafter prescribed, airport zoning regulations for such airport hazard area.

(b) Where an airport is owned or controlled by a political subdivision and any airport hazard area appertaining to such airport is located wholly or partly outside the territorial limits of said political subdivision, the political subdivision owning or controlling the airport and the political subdivision within which the airport hazard area is located, shall either:

1. By interlocal agreement, in accordance with the provisions of chapter 163, adopt, administer, and enforce airport zoning regulations applicable to the airport hazard area in question; or

2. By ordinance or resolution duly adopted, create a joint airport zoning board, which board shall have the same power to adopt, administer, and enforce airport zoning regulations applicable to the airport hazard area in question as that vested in paragraph (a) in the political subdivision within which such area is located. Each such joint board shall have as members two representatives appointed by each political subdivision participating in its creation and in addition a chair elected by a majority of the members so appointed. However, the airport manager or managers of the affected political subdivisions shall serve on the board in a nonvoting capacity.

(c) Airport zoning regulations adopted under paragraph (a) shall, as a minimum, require:

1. A variance for the erection, alteration, or modification of any structure which would cause the structure to exceed the federal obstruction standards as contained in 14 C.F.R. ss. 77.21, 77.23, 77.25, 77.28, and 77.29;

2. Obstruction marking and lighting for structures as specified in s. 333.07(3);

3. Documentation showing compliance with the federal requirement for notification of proposed construction and a valid aeronautical evaluation submitted by each person applying for a variance;

4. Consideration of the criteria in s. 333.025(6), when determining whether to issue or deny a variance;

and

5. That no variance shall be approved solely on the basis that such proposed structure will not exceed federal obstruction standards as contained in 14 C.F.R. ss. 77.21, 77.23, 77.25, 77.28, or 77.29, or any other federal aviation regulation.

(d) The department shall issue copies of the federal obstruction standards as contained in 14 C.F.R. ss. 77.21, 77.23, 77.25, 77.28, and 77.29 to each political subdivision having airport hazard areas and, in cooperation with political subdivisions, shall issue appropriate airport zoning maps depicting within each county the maximum allowable height of any structure or tree. Material distributed pursuant to this subsection shall be at no cost to authorized recipients.

(2) In the manner provided in subsection (1), interim airport land use compatibility zoning regulations shall be adopted. When political subdivisions have adopted land development regulations in accordance with the provisions of chapter 163 which address the use of land in the manner consistent with the provisions herein, adoption of airport land use compatibility regulations pursuant to this subsection shall not be required. Interim airport land use compatibility zoning regulations shall consider the following:

(a) Whether sanitary landfills are located within the following areas:

1. Within 10,000 feet from the nearest point of any runway used or planned to be used by turbojet or turboprop aircraft.

2. Within 5,000 feet from the nearest point of any runway used only by piston-type aircraft.

3. Outside the perimeters defined in subparagraphs 1. and 2., but still within the lateral limits of the civil airport imaginary surfaces defined in 14 C.F.R. part 77.25. Case-by-case review of such landfills is advised.

(b) Whether any landfill is located and constructed so that it attracts or sustains hazardous bird movements from feeding, water, or roosting areas into, or across, the runways or approach and departure patterns of aircraft. The political subdivision shall request from the airport authority or other governing body operating the airport a report on such bird feeding or roosting areas that at the time of the request are known to the airport. In preparing its report, the authority, or other governing body, shall consider whether the landfill will incorporate bird management techniques or other practices to minimize bird hazards to airborne aircraft. The airport authority or other governing body shall respond to the political subdivision no later than 30 days after receipt of such request.

(c) Where an airport authority or other governing body operating a publicly owned, public-use airport has conducted a noise study in accordance with the provisions of 14 C.F.R. part 150, neither residential construction nor any educational facility as defined in chapter 1013, with the exception of aviation school facilities, shall be permitted within the area contiguous to the airport defined by an outer noise contour that is considered incompatible with that type of construction by 14 C.F.R. part 150, Appendix A or an equivalent noise level as established by other types of noise studies.

(d) Where an airport authority or other governing body operating a publicly owned, public-use airport has not conducted a noise study, neither residential construction nor any educational facility as defined in chapter 1013, with the exception of aviation school facilities, shall be permitted within an area contiguous to the airport measuring one-half the length of the longest runway on either side of and at the end of each runway centerline.

(3) In the manner provided in subsection (1), airport zoning regulations shall be adopted which restrict new incompatible uses, activities, or construction within runway clear zones, including uses, activities, or construction in runway clear zones which are incompatible with normal airport operations or endanger public health, safety, and welfare by resulting in congregations of people, emissions of light or smoke, or attraction of birds. Such regulations shall prohibit the construction of an educational facility of a public or private school at either end of a runway of a publicly owned, public-use airport within an area which extends 5 miles in a direct line along the centerline of the runway, and which has a width measuring one-half the length of the runway. Exceptions approving construction of an educational facility within the delineated area shall only be granted when the political subdivision administering the zoning regulations makes specific findings detailing how the public policy reasons for allowing the construction outweigh health and safety concerns prohibiting such a location.

(4) The procedures outlined in subsections (1), (2), and (3) for the adoption of such regulations are supplemental to any existing procedures utilized by political subdivisions in the adoption of such regulations.

(5) The Department of Transportation shall provide technical assistance to any political subdivision requesting assistance in the preparation of an airport zoning code. A copy of all local airport zoning codes, rules, and regulations, and amendments and proposed and granted variances thereto, shall be filed with the department.

(6) Nothing in subsection (2) or subsection (3) shall be construed to require the removal, alteration, sound conditioning, or other change, or to interfere with the continued use or adjacent expansion of any educational structure or site in existence on July 1, 1993, or be construed to prohibit the construction of any new structure for which a site has been determined as provided in former s. 235.19, as of July 1, 1993.

History.--s. 3, ch. 23079, 1945; s. 4, ch. 75-16; s. 4, ch. 88-356; s. 72, ch. 90-136; s. 8, ch. 92-152; s. 10, ch. 93-164; s. 1, ch. 94-201; s. 958, ch. 95-148; s. 971, ch. 2002-387.

The Land Use and Zoning Committee offers its first substitute to File No. 2006-1225:

Introduced by the Council President at the Request of the Mayor and substituted by the Land Use and Zoning Committee:

ORDINANCE 2006-1225

AN ORDINANCE REPEALING PART 10, CHAPTER 656, ORDINANCE CODE (REGULATIONS RELATED TO AIRPORTS AND LANDS ADJACENT THERETO); ESTABLISHING A NEW PART 10, CHAPTER 656, ORDINANCE CODE (REGULATIONS RELATED TO AIRPORTS AND LANDS ADJACENT THERETO) REGULATING LAND USES AND OTHER ACTIVITIES OCCURRING NEAR AIRPORTS, ESTABLISHING NOISE LIMIT AREAS AND PROVIDING AN AIRPORT ACKNOWLEDGEMENT REQUIREMENT FOR NEW DEVELOPMENT NEAR AIRPORTS; PROVIDING AN EFFECTIVE DATE.

BE IT ORDAINED by the Council of the City of Jacksonville:

Section 1. Part 10, Chapter 656 (Regulations Related to Airports and Lands Adjacent Thereto), Ordinance Code, is repealed in its entirety, and a new Part 10, Chapter 656 (Regulations Related to Airports and Lands Adjacent Thereto), Ordinance Code, is established as follows:

CHAPTER 656

ZONING CODE

*** * ***

PART 10. REGULATIONS RELATED TO AIRPORTS AND LANDS ADJACENT THERETO

SUBPART A. GENERAL REGULATIONS

Sec. 656.1001. Findings.

The Council finds and determines as follows:

(a) It is necessary and proper for the city, in the exercise of its police power of land use regulation, to require controls within certain noise zones, airspace height and hazard zones, clear zones and accident potential zones so as to minimize potential detrimental effects on its citizens.

(b) The combined noise zones, airspace height and hazard zones, clear zones, runway safety areas, runway protection zones and accident potential zones described in this part constitute a significant portion of the land area of the City.

(c) The Planning Commission considered this part and rendered an advisory opinion.

(d) The Land Use and Zoning Committee, after due notice and public hearing, has made its recommendation to the Council.

(e) Taking into consideration the above recommendations, the Council finds that this part is consistent with the Comprehensive Plan.

Sec. 656.1002. Intent.

It is the intent of this Part 10 to promote the health, safety and general welfare of the inhabitants and visitors of the city by preventing the creation, establishment or maintenance of hazards to aircraft, preventing the destruction or impairment of the utility of the airports in the city and the public investment therein and protecting the lives and properties of owners or occupants of lands in the vicinity of airports as well as the users of airports and to aid and implement the overriding federal interest in safe operation of airports and the security of land surrounding airports.

Sec. 656.1003. Applicability.

The regulations set forth herein are applicable to all lands lying within delineated airport environs adopted as a part of the Zoning Atlas as provided in Section 656.202 and to all lands defined in Section 656.1005 herein. Notwithstanding the zoning district regulations set out in Part 3, the provisions of this part as they apply to a parcel of land shall override and supersede other regulations set forth in the Zoning Code to the extent set forth herein based upon the airport environ(s) in which the parcel is located. The provisions of this part shall not override or supersede notification requirements previously established pursuant to the Zoning Code, or by action of a property owner.

The boundaries of all airport environ zone delineations shall be determined as follows:

(a) Unless Section 656.214 applies, for recorded lots less than one acre in size, where an airport environ zone enters or crosses the parcel, the land use restriction and noise level reduction standards of the more stringent airport environ zone shall apply to the entire lot.

(b) For platted and unplatted properties greater than one acre in size, where an airport environ zone enters or crosses the parcel, the regulations associated with more than one zone may apply. The Planning and Development Department shall use the Zoning Atlas, including the applicable airport environ zone, over-layed onto a parcel map to determine the applicable zone. The Planning and Development Department, in consultation with the United States Navy or the Jacksonville Aviation Authority, as appropriate, shall determine the line of demarcation.

Planned Unit Developments and site plans reviewed pursuant to Section 656.404 requirements for preliminary site development review that were approved prior to the effective date of this ordinance (   ) may proceed as approved in regards to density and uses, however all other requirements shall apply.

Nothing in this section shall prevent a Civilian or Military Airport from negotiating with a property owner to establish avigation easements or notification requirements.

Sec. 656.1004. Definitions.

For the purposes of this part:

(A) Accident Potential Zone I (APZ I) applies only to military airfields. This is defined as the area 500 feet either side of the runway centerline and 2500 feet from the end of the Clear Zone for Class A runways. For Class B runways it is 3000 feet wide beginning at the end of the clear zone and 5000 feet long. The APZ may be curved and enlarged to conform to the shape of the predominate flight track.

(B) Accident Potential Zone II (APZ II) applies only to military airfields. For Class A runways this is defined as the area 1000 feet wide and 2500 feet long beginning at the end of APZ I. Accident Potential Zone II (APZ II) for Class B runways is 3000 feet wide and 7000 feet long beginning at the end of APZ I. The APZ may be curved and enlarged to conform to the shape of the predominate flight track.

(C) Air installation compatible use zones (AICUZ) program is a Department of Defense (DoD) program and only applies to military airbases. The purpose of the program is to protect the public's safety, health and welfare while safeguarding the operational capabilities of military airports. The main intent of the AICUZ Program is to insure that development of surrounding lands will be compatible with noise levels and accident potential associated with military airport operations.

(D) Airport (Civilian) includes all of the following:

(1) Jacksonville International Airport.

(2) Craig Airport.

(3) Herlong Airport.

(4) Cecil Field.

(E) Airport (Military) includes all of the following:

(1) Naval Air Station, Jacksonville, Florida.

(2) Outlying Field Whitehouse, Jacksonville, Florida.

(3) Naval Station Mayport, Jacksonville, Florida.

(F) Airport elevation means the highest point of an airport's usable landing area measured in feet above mean sea level.

(G) Airport environ zone (civilian airports) means those areas which are included in a height and hazard zone; noise zone; notice zone, school regulation zone, miscellaneous use zone, runway safety area, and runway protection zone. These zones are determined by the Jacksonville Aviation Authority. If consistent with the Comprehensive Plan, maps associated with zones may be added to the Zoning Atlas in the form of an Airport Environ Zone map and the requirements of Part 10 enforced within them by action of the City Council, after recommendation by the Planning and Development Department and the Planning Commission.

(H) Airport environ zone (military airports) means those areas which are included in an height and hazard zone; noise zone, notice zone, school regulation zone, accident potential zone and/or clear zone, miscellaneous use zone, and the lighting regulation zone at Outlying Field Whitehouse. These zones are determined by the Navy. If consistent with the Comprehensive Plan, maps associated with zones may be added to the Zoning Atlas in the form of an Airport Environ Zone map and the requirements of Part 10 enforced within them by action of the City Council, after recommendation by the Planning and Development Department and the Planning Commission.

(I) Airport Notice Zones are those zones requiring execution of an Airport Notice Zone Acknowledgement, as required in Section 656.1010. All parcels partially or completely within the Notice

Zone shall be denoted with the suffix of P10. The Airport Notice zones are areas for which the limits are represented by the 60 DNL to 64.99 DNL noise contour range. This zone is determined by the Navy and Jacksonville Aviation Authority. Maps associated with the Airport Notice Zone may be added to the Zoning Atlas and the requirements of Part 10 enforced within it only by action of the City Council, after recommendation by the Planning and Development Department and the Planning Commission. For military airports only, the Airport Notice Zone also shall encompass all lands within accident potential zones, lighting regulation zone (for OLF Whitehouse only) or the one hundred fifty (150) foot Height and Hazard Zone which is also known as inner horizontal and conical surface zone as shown on the Airport Notice Zone Map and as adopted into the Zoning Atlas (only as it applies to NASJax, NSMayport and OLF Whitehouse).

(J) Airport Notice Zone Acknowledgement is a notice filed pursuant to 656.1005, Subsections A and B, and 656.1010. The Acknowledgement form is found at 656.1014.

(K) Airport obstruction is defined as a structure or object of natural growth or use of land which would exceed the federal obstruction standards as contained in Title 14, Code of Federal Regulations (CFR), Part 77 or NAVFAC P-80.3 01/82 which obstructs the airspace required for flight of aircraft in landing and takeoff at an airport or which is otherwise hazardous to the landing or taking off of aircraft. Examples include an object constructed, controlled, or installed by man, including but not limited to buildings, antennae, towers, smokestacks, utility poles, cranes, trees, vegetative plants and overhead transmission lines.

(L) Clear Zone (military airports) is the trapezoidal government owned area abutting the end of each airport runway. The limits of the clear zones vary based on the type of runway and within the clear zone land should be cleared and graded and free of above ground objects except for U.S. Navy approved structures.

(M) Cluster means to group uses close together rather than distributing them evenly throughout a site while remaining below the applicable gross density or intensity ceiling of the land use plan category.

(N) Day/Night Noise Level (DNL) is a cumulative measurement of community noise exposure established by the Federal government. The sound exposure levels from aircraft events are accumulated to determine the sound pressure present in a 24-hour period and a 10 decibel penalty is applied to each aircraft event that occurs between 10:00 p.m. and 7:00 a.m. DNL values are typically shown as a series of noise contours surrounding the airport.

(O) dB Decibel is the measurement of sound by its pressure or energy level. The decibel scale is logarithmic. Noise energy doubles with each increase of 3 decibels.

(P) dBA is the measurement of sound pressure using an A-weighted scale to best represent the range of human hearing.

(Q) Fully shielded shall mean an outdoor light fixture shielded in such a manner that all light emitted by the fixture, either directly from the lamp or indirectly from the fixture, is projected below a horizontal plane extending from the bottom of the light fixture.

(R) Height and Hazard Zone includes lands located within the surface limits of the airport height zone for which there is a potential for such hazards as electronic interference, light glare, bird strike hazard and other potential hazards to safe navigation of aircraft. Height zone means the obstruction height limits as defined in Title 14, Code of Federal Regulations (CFR), Part 77 and Navy NAVFAC P-80.3 set forth in this part. They include all the land lying beneath the approach, transitional, horizontal and conical surfaces as they apply to a particular airport. The area located in more than one of the described zones is considered to be only in the zone with the more restrictive height limitation. The City has defined 0’, 35’, 50’, 150’, 300’, and 500’ Height and Hazard Zones and structures exceeding these heights must be referred to the Jacksonville Aviation Authority or the US Navy as required by Section 656.1005. These zones are shown on the Zoning Atlas and included in the Airport Environs Maps.

(S) Lighting Regulation Zone means an area that includes all lands beneath the primary zone, clear zone, both approach and departure clearance zones (sloped and horizontal), inner horizontal conical surface zone and transitional zone (see NAVFAC P-80.3) in conjunction with Outlying Field Whitehouse only.

(T) Minimum vectoring altitude means the lowest mean sea level altitude at which an aircraft on instrument flight rules will be vectored by a radar controller, except when otherwise authorized for radar approaches, departures and missed approaches.

(U) Miscellaneous Use Zone means an area within the Height and Hazard Zone as defined in R above, of airports where JAA or US Navy approval is required for the uses listed in 656.1005 Subsection A (d) and Subsection B (d).

(V) Noise Level Reduction (NLR) is a measurement standard for the reduction in sound level transmission between two designated locations for a stated sound frequency band. NLR standards are used to evaluate the effectiveness or establish the requirements of techniques to limit sound level transmission in order to prevent or mitigate adverse noise impacts.

(W) Noise Zones are areas for which the boundaries are represented by DNL noise contour ranges. All parcels partially or completely within the Noise Zone shall be denoted with the suffix of P10. The noise zones are Noise Zone A (DNL values 70 and greater); and Noise Zone B (65 DNL to 69.99 DNL range). These zones are determined by the Navy and the Jacksonville Aviation Authority. Maps associated with Noise Zones may be added to the Zoning Atlas and the requirements of Part 10 enforced within them only by action of the City Council, after recommendation by the Planning and Development Department and the Planning Commission.

(X) Runway Protection Zone (RPZ) is a trapezoidal area starting 200 feet from the existing or future runway ends at a civilian airport and extending 1,000 to 2,500 feet beyond the starting point depending on the type of aircraft and the approach visibility minimums for the runway that is intended to enhance the protection of people and property on the ground. The Federal Aviation Administration (FAA) requires the clearing of all incompatible objects and activities from this area and encourages the airport to acquire a sufficient property interest in the RPZ to control the land uses on the property to prohibit residences and places of public assembly, churches, schools, hospitals, office buildings, shopping centers and fuel storage facilities.

(Y) Runway Safety Area is an area surrounding the runways at civilian airports that is prepared or suitable for reducing the risk of damage to airplanes in the event of a problem on landing or take-off by clearing all obstructions from the area. This surface extends 600 to 1,000 feet from the end of an existing or future runway depending on the type of aircraft operating from the runway.

(Z) School Regulation Zones are areas defined in FS 333.03. School sites are regulated based on their relationship with existing or planned runways shown in the AICUZ, in the case of a military facility or Master Plan, in the case of a civilian facility. School regulation zones are shown on the Zoning Atlas and will be included in the Airport Environs map.

Sec. 656.1005. Airport Environs.

There are hereby created two subsections: SUBSECTION A applicable to civilian airport environs and SUBSECTION B applicable to military airport environs.

Sec. 656.10051. Subsection A. Regulations Applicable to Designated Civilian Airport Environs.

(a) Civilian airport environ zones are designated in accordance with Table 656-1, below.

<u>Table 656-1</u>

Civilian Airport Environ Area	**DNL Range/Comment**
Noise Zone A	70 or Greater
Noise Zone B	65- 69.99
Airport Notice Zone	60-64.99
Runway Safety Area	As defined in 656.1004 (Y)
Runway Protection Zones (RPZ)	As defined in 656.1004 (X)
Height and Hazard Zones (HH)	As defined in 656.1004 (R)

(b) Allowable land uses in noise zones.

Notwithstanding the zoning district regulations contained elsewhere in this chapter, the allowable land use for a parcel of land lying within a noise zone shall be modified as set forth by the regulations in this section.

(1) The land use requirements shown in Table 656-2, below, shall determine, subject to the zoning classification of the parcel, allowable land uses for the noise zones within which a given parcel of land lies.

(2) Land use requirements are delineated in three categories:

(i) Unacceptable development (X), which means that, even though otherwise permitted in the zoning classification of the parcel, the land use is prohibited as delineated by Table 656-2, below.

(ii) Conditional new development (C), which means that, even though otherwise permitted in the zoning classification of the parcel, prior to commencement of the land use indicated, the use shall meet the guidelines set forth in the footnotes to Table 656-2, below.

(3) Acceptable development (A), which means that the provisions of the appropriate zoning classification of the parcel shall apply as well as Airport Notice Zone Acknowledgement requirements.

TABLE 656-2

Land Use Category	**Noise Zone A** **>70DNL**	**Noise Zone B** **65-69.99 DNL**	**Airport Notice Zone** **60-64.99 DNL**
Residential:			
Single-family dwelling	X, 11	C, 1, 2	C, 1
Multifamily dwelling	X, 11	C, 1, 2	C, 1
Mobile home park	X	X	C, 1
Foster care/family care home	X, 11	C, 1, 2	C, 1
Group care home and similar uses	X, 11	C, 1, 2	C, 1
Rooming house/boarding house	X, 11	C, 1, 2	C, 1
Commercial:			

Retail outlets for the sale of general merchandise (including sale of food), wearing apparel and similar uses	C, 1, 2	C, 1	C, 1
Retail sales of building materials, hardware, farm equipment, new or used automobiles, mobile homes, boats and similar uses	C, 1, 2	C, 1	C, 1
Commercial parking lot	C, 1	C, 1	C, 1
Retail sale of furniture, home furnishings and similar uses	C, 1, 2	C, 1	C, 1
Service establishments such as restaurants (including drive-in restaurants), service of alcoholic beverages and similar uses	C, 1, 2	C, 1, 3	C, 1
All types of professional and business offices, personal services, professional or business including building trades contractors and similar uses	C, 1, 2	C, 1, 3	C, 1
Commercial indoor recreational or	C, 1, 2	C, 1, 3	C, 1

entertainment facilities			
Repair services and services garages including automobile repair, radio and television repair and similar uses	C, 1	C, 1	C, 1
Automobile service station	C, 1	C, 1	C, 1
Motel or hotel	C, 1, 2	C, 1, 2	C, 1
Radio and television broadcasting offices and studios, telephone exchange and similar uses	C, 1, 2	C, 1, 2	C, 1
Medical and other health services such as hospitals, clinics and similar uses	X, 11	C, 1, 2	C, 1
Industrial:			
Wholesaling, warehousing storage or distribution establishments, assembling of components and similar uses	C, 1, 10	C, 1, 10	C, 1
Freight, bus, traveling, shipping or other transportation terminals	C, 1, 10	C, 1, 10	C, 1
Manufacturing of food and kindred products, apparel, textile mill	C, 1, 10	C, 1, 10	C, 1

products and similar uses			
Manufacturing of chemicals and allied products, petroleum refining and related activities, rubber and miscellaneous plastic products and similar uses	C, 1, 10	C, 1, 10	C, 1
Manufacturing of lumber and wood products, furniture and fixtures, paper and allied products, stone, clay and glass products, primary metal including fabrication of metal products and similar uses	C, 1, 10	C, 1, 10	C, 1
Printing, lithography, publishing or similar establishments	C, 1, 10	C, 1, 10	C, 1
Manufacturing of professional, scientific and control instruments, prosthetic appliances, dentures, eyeglasses, hearing and similar products	C, 1, 10	C, 1, 10	C, 1
Public and Quasi-public Services:			
Cemeteries	C, 1, 5	C, 1, 5	C, 1

Churches	X, 11	C, 1, 2	C, 1
Governmental services, such as offices, fire stations, postal services and prisons	C, 1, 2	C, 1, 2	C, 1
Schools	X, 11	X, 11	C, 1, 7
Cultural activities such as libraries, museums, art galleries and similar uses	X, 11	X, 11	C, 1
Private clubs and similar uses which provide for public assembly	X, 11	C, 1, 2	C, 1
Outdoor Recreation:			
Playgrounds, neighborhood parks	X, 11	X, 11	C, 1
Community and regional parks	X, 11	X, 11	C, 1
Nature exhibits	X, 11	X, 11	C, 1
Spectator sports, including arenas	X, 11	X, 11	C, 1
Golf courses, riding stables and similar uses	C, 1, 6	C, 1, 6	C, 1
Private camps (including day camps)	X, 11	X, 11	C, 1
Entertainment assembly, amphitheater, music shell and similar uses	X, 11	X, 11	X, 11
Resource Production,			

Extraction and Open Land			
Agriculture, including livestock grazing	C, 1, 8	C, 1, 8	C, 1,
Livestock farms, animal breeding	C, 1, 8	C, 1, 8	C, 1
Agriculture-related activities	C, 1, 8	C, 1, 8	C, 1
Forestry	C, 1, 4, 8	C, 1, 4, 8	C, 1

A--Acceptable development

X--Unacceptable development

C--Conditional development, with conditions as noted:

1 Recorded Airport Notice Zone Acknowledgement applied to the parcel

2 Compatible development is conditioned on design and construction providing for an average minimum NLR of average minimum 30 dBA throughout the facility or dwelling.

3 Compatible development is conditioned on design and construction providing for an average minimum NLR of average minimum 25 dBA throughout the facility or dwelling.

4 Permitted only within height constraints.

5 Rooms / buildings for funeral services, prayer and meditation are not permitted

6 Compatible development is conditioned on design and construction providing for an average minimum NLR of average minimum 30 dBA in the clubhouse or other interior meeting structure

7 Schools are further limited by FS 333, See Sec. 656.1009

8 Operations which attract a large concentration of birds should be excluded

9. Compatible development is conditioned on design and construction

providing for a noise level reduction of average minimum 30 dBA in reception, office and employee lounge areas.

10. Compatible development is conditioned on design and construction providing for a noise level reduction of average minimum 25 dBA in reception, office and employee lounge areas.

11. Development permitted in Planned Unit Developments approved prior to the enactment date of this ordinance or pursuant to preliminary site development reviews in accordance with Section 656.1003 and uses or structures permitted pursuant to Section 656.1008 shall also be subject to footnote 1 and footnote 2 of this table.

(c) Allowable development in Airport Height and Hazard zones (HH).

Notwithstanding the zoning district regulations contained elsewhere in this chapter, the allowable development on a parcel of land lying within an Airport Height and Hazard Zone shall be modified as set forth by the regulations in this section. Airport Height and Hazard zones exist around all civilian airports within the city limits of Jacksonville as defined in section 656.1004 (R). The horizontal limits of the zones and limitations on heights of obstructions within these zones are defined for each airport by Title 14, Code of Federal Regulations (CFR), Part 77 guidelines. The City of Jacksonville Planning and Development Department has GIS maps provided by the Jacksonville Aviation Authority showing the boundaries of the Airport Height and Hazard Zones around each airport. In order to assure that Part 77 guidelines are not exceeded and that no structure or obstruction is permitted that would raise a minimal obstruction clearance altitude, a minimum vectoring descent altitude or a decision height, all cell towers and any structure or obstruction in excess of the height limit above ground as depicted on the Zoning Atlas and the Airport

Environs Maps shall receive, in writing, FAA or Aviation Authority comment if they are within an Airport Height or Hazard Zone. Any construction above 200 feet or that penetrates a Part 77 surface must provide notice to the FAA Administrator prior to beginning construction. Although written documentation from the Aviation Authority or acceptable evidence that a parcel is not in a Height or Hazard Zone is not required for proposed structure heights below the listed heights, Part 77 still applies.

(d) Miscellaneous Use Regulations apply to the development within Miscellaneous Use Zones that may be a hazard to aircraft in flight. It shall be unlawful and a violation of the Zoning Code to establish, maintain or continue a use within the surface limits of the height and hazard zone in a manner as to interfere with the operation of airborne aircraft. Development proposals for miscellaneous uses as listed below shall be forwarded to the JAA. The following special requirements shall apply to each use lawfully established in the zones:

(1) Lights or illumination used in conjunction with street, parking, signs or use of land and structures shall be arranged and operated in such a manner that it is not misleading or dangerous to aircraft operating from an airport or in the vicinity thereof as determined by the airport operator.

(2) No operations of any type shall produce smoke, glare or other visual hazards within the limits of the zone that would adversely affect the safe flight of aircraft.

(3) No operations of any type shall produce electronic interference with navigation signals or radio communication between the airport and aircraft within the limits of the zone.

(4) In addition to the height limitations imposed by the

height and hazard zone, no structure or obstruction will be permitted within the City that would cause a minimum vectoring altitude to be raised.

(5) No use of land, including those resource production/extraction/open land uses addressed in Section 656.1005, as well as ponds, borrow pits, waste disposal and other facilities which store, handle or process organic or any other material that fosters or harbors the growth of insects, rodents, amphibians or other organisms as they result in significant bird population increases above the normal background should be permitted which encourages or attracts large concentrations of birds or waterfowl within the vicinity of an airport.

(e) Allowable development in Runway Protection Zones (RPZ).

Notwithstanding the zoning district regulations contained elsewhere in this chapter, the allowable development on a parcel of land lying within a runway protection zone shall be modified as set forth by the regulations in this section. A runway protection zone exists adjacent to the end of all civilian airport runways within the City limits of Jacksonville. The horizontal limits of the zones have been defined based on FAA criteria for each runway. The City of Jacksonville Planning and Development Department has GIS maps provided by the Jacksonville Aviation Authority showing the boundaries of the runway protection zones adjacent to each airport runway. Prior to modifying the use of a parcel of land, the owner or developer must review the GIS maps to determine if the parcel is located in whole or in part in the runway protection zone. If the parcel is found to be in one of the runway protection zones, the Aviation Authority office of Planning and Development must be notified in writing of the proposed changes to the use of the parcel. The Aviation Authority will then notify the City in writing of the compatibility of the use with the runway protection zone requirements.

656.10052. Subsection B. Regulations Applicable to Designated Military Airport Environs.

(a) Military airport environ zones are designated in accordance with Table 656-3, below.

Table 656-3

Military Airport Environ Area	DNL Range/Comment
Noise Zone A	70 or Greater
Noise Zone B	65- 69.99
Airport Notice Zone	60-64.99
Height and Hazard Zones (HH)	As defined in 656.1004 (R)
Accident Potential Zone 1 (APZ1)	As defined in 656.1004 (A)
Accident Potential Zone 2 (APZ2)	As defined in 656.1004 (B)
Lighting Regulation Zone	As defined in 656.1004 (S)
Clear Zone (CLZ)	No development except as in 656.1004 (L)

(b) Allowable land uses in noise zones and accident potential zones.

Notwithstanding the zoning district regulations contained elsewhere in this chapter, the allowable land use for a parcel of land lying within a noise zone and/or an accident potential zone shall be modified as set forth by the regulations in this section.

(1) The land use objectives shown in Table 656-4, below, shall determine, subject to the zoning classification of the parcel, allowable land uses for the airport environs area within which a given parcel of land lies.

(2) Land use objectives are delineated in three categories:

(i) Unacceptable development (X), which means that, even though otherwise permitted in the zoning classification of the parcel, the land use is prohibited as delineated by Table 656-4, below.

(ii) Conditional new development (C), which means that, even though otherwise permitted in the zoning classification of the parcel, prior to commencement of the land use indicated, the use shall meet the guidelines set forth in the footnotes to Table 656-4, below.

(3) Acceptable development (A), which means that the provisions of the appropriate zoning classification of the parcel shall apply as well as Airport Notice Zone Acknowledgement requirements.

Table 656-4

Land Use Category	**APZ1**	**APZ2**	**Noise Zone A >70 DNL**	**Noise Zone B 65-69.99 DNL**	**Airport Notice-Zone 60-64.99 DNL**
Residential:					
Single-family dwelling	X	C, 1, 7	X, 15	C, 1, 2	C, 1
Multifamily dwelling	X	X	X, 15	C, 1, 2	C, 1
Mobile home park	X	X	X	X	C, 1
Foster care/family care home	X	X	X, 15	C, 1, 2	C, 1

Group care home and similar uses	X	X	X, 15	C, 1, 2	C, 1
Rooming house/boarding house	X	X	X, 15	C, 1, 2	C, 1
Commercial:					
Retail outlets for the sale of general merchandise (including sale of food), wearing apparel and similar uses	X	C, 1, 10	C, 1, 2	C, 1, 3	C, 1
Retail sales of building materials, hardware, farm equipment, new or used automobiles, mobile homes, boats and similar uses	A	A	C, 1, 2	C, 1, 3	C, 1
Commercial parking lot	A	A	C, 1	C, 1	C, 1
Retail sale of furniture, home furnishings and similar uses	X	C, 1, 10	C, 1, 2	C, 1, 3	C, 1
Service establishments such as restaurants (including drive-in restaurants), service of alcoholic beverages and similar uses	X	A,1	C, 1, 2	C, 1, 3	C, 1
All types of professional and business offices,	X	C, 1, 9	C 1, 2	C, 1, 3	C, 1

personal services, professional or business including building trades contractors and similar uses					
Commercial indoor recreational or entertainment facilities	X	X	C, 1, 2	C, 1, 3	C, 1
Repair services and services garages including automobile repair, radio and television repair and similar uses	A,1	A, 1	C, 1, 13	C, 1, 13	C, 1
Automobile service station	X	A, 1	C, 1, 13	C, 1, 13	C, 1
Motel or hotel	X	X	C, 1, 2	C, 1, 2	C, 1
Radio and television broadcasting offices and studios, telephone exchange and similar uses	X	C, 1, 9	C, 1, 2	C, 1, 2	C, 1
Medical and other health services such as hospitals, clinics and similar uses	X	X	X, 15	C, 1, 2	C, 1
Industrial:					
Wholesaling, warehousing storage or distribution establishments,	A	A, 1	C, 1, 14	C, 1, 14	C, 1

assembling of components and similar uses					
Freight, bus, traveling, shipping or other transportation terminals	C, 1, 8	A, 1	C, 1, 14	C, 1, 14	C, 1
Manufacturing of food and kindred products, apparel, textile mill products and similar uses	X	A, 1	C, 1, 14	C, 1, 14	C, 1
Manufacturing of chemicals and allied products, petroleum refining and related activities, rubber and miscellaneous plastic products and similar uses	X	X	C, 1, 14	C, 1, 14	C, 1
Manufacturing of lumber and wood products, furniture and fixtures, paper and allied products, stone, clay and glass products, primary metal including fabrication of metal products and similar uses	X	A, 1	C, 1, 14	C, 1, 14	C, 1
Printing, lithography, publishing or similar	X	A, 1	C, 1, 14	C, 1, 14	C, 1

establishments					
Manufacturing of professional, scientific and control instruments, prosthetic appliances, dentures, eyeglasses, hearing and similar products	X	A, 1	C, 1, 14	C, 1, 14	C, 1
Public and Quasi-public Services:					
Cemeteries	C, 1, 5	C, 1, 5	C, 1, 5	C, 1, 5	C, 1
Churches	X	X	X, 15	C, 1, 2	C, 1
Governmental services, such as offices, fire stations, postal services and prisons	X	C, 1, 9	C 1, 2	C, 1, 2	C, 1
Schools	X	X	X, 15	X, 15	C, 1, 11
Cultural activities such as libraries, museums, art galleries and similar uses	X	X	X, 15	X, 15	C, 1
Private clubs and similar uses which provide for public assembly	X	X	X, 15	C, 1, 2	C, 1
Outdoor Recreation:					
Playgrounds, neighborhood parks	X	X	X, 15	X, 15	C, 1
Community and regional	C, 1, 9	C, 1, 9	X, 15	X, 15	C, 1

parks					
Nature exhibits	C, 1, 9	C, 1, 9	X, 15	X, 15	C, 1
Spectator sports, including arenas	X	X	X, 15	X, 15	C, 1
Golf courses, riding stables and similar uses	C, 1, 9	C, 1, 9	C, 1, 6	C, 1, 6	C, 1
Private camps (including day camps)	X	X	X, 15	X, 15	C, 1
Entertainment assembly, amphitheater, music shell and similar uses	X	X	X, 15	X, 15	X
Resource Production, Extraction and Open Land					
Agriculture, including livestock grazing	C, 1, 12	C, 1, 12	C, 1, 12	C, 1, 12	C, 1
Livestock farms, animal breeding	C, 1, 12	C, 1, 12	C, 1, 12	C, 1, 12	C, 1
Agriculture-related activities	C, 1, 12	C, 1, 12	C, 1, 12	C, 1, 12	C, 1
Forestry	C, 1, 4, 12	C, 1, 4, 12	C, 1, 12	C, 1, 4, 12	C, 1

A--Acceptable development

X--Unacceptable development

C--Conditional development, with conditions as noted:

1 Recorded Airport Notice Zone Acknowledgement applied to the parcel

2 Compatible development is conditioned on design and construction providing for an average minimum NLR of average minimum 30 dBA throughout the facility or dwelling.

3 Compatible development is conditioned on design and construction

providing for an average minimum NLR of average minimum 25 dBA throughout the facility or dwelling.

4 Permitted only within height constraints.

5 Rooms / buildings for funeral services, prayer and meditation are not permitted

6 Compatible development is conditioned on design and construction providing for an average minimum NLR of average minimum 30 dBA in the clubhouse or other interior meeting structure

7 Maximum density 2 dwelling units per acre

8 No passenger terminals and no major above ground transmission lines

9 Structures shall be limited to 5,000 square feet of gross floor area and development is subject to the condition that meeting places, auditoriums and so forth for a gathering of more than fifty people are not permitted or built.

10 Small neighborhood retail stores are compatible but strip malls and shopping malls are not

11 Schools are further limited by FS 333, See Sec. 656.1009

12. Operations which attract a large concentration of birds should be excluded.

13. Compatible development is conditioned on design and construction providing for a noise level reduction of average minimum 30 dBA in reception, office and employee lounge areas.

14. Compatible development is conditioned on design and construction providing for a noise level reduction of average minimum 25 dBA in reception, office and employee lounge areas.

15. Development permitted in Planned Unit Developments approved prior to the enactment date of this ordinance or pursuant to preliminary site development reviews in accordance with Section 656.1003 and uses or structures permitted pursuant to Section 656.1008 shall also be subject to footnote 1 and footnote 2 of this

table.

(c) Allowable development in Airport Height and Hazard zones (HH).

Notwithstanding the zoning district regulations contained elsewhere in this chapter, the allowable development on a parcel of land lying within an Airport Height and Hazard zone shall be modified as set forth by the regulations in this section. Airport Height and Hazard zones exist around all military airports within the city limits of Jacksonville as defined in section 656.1004 (R). The horizontal limits of the zones and limitations on heights of obstructions within these zones are defined for each airport in NAVFAC P-80.3 01/82. The City of Jacksonville Planning and Development Department has GIS maps provided by the United States Navy showing the boundaries of the Airport Height and Hazard zones around each airport. In order to assure that NAVFAC P-80.3 01/82 guidelines are not exceeded and that no structure or obstruction is permitted that would raise a minimal obstruction clearance altitude, a minimum vectoring descent altitude or a decision height, all cell towers and any structure or obstruction in excess of the height limit above ground as depicted on the Zoning Atlas and the Airport Environs Maps, the City shall receive, in writing from the U.S. Navy, comment if the project is within an Airport Height or Hazard Zone. Although written documentation from the U.S. Navy or acceptable evidence that a parcel is not in a Height or Hazard Zone is not required for proposed structure heights below the listed height, Part 77 still applies.

(d) Miscellaneous Use Regulations apply to the development within Miscellaneous Use Zones that may be a hazard to aircraft in flight. It shall be unlawful and a violation of the Zoning Code to establish, maintain or continue a use within the surface limits of the height and hazard zone in a manner as to interfere with the operation of airborne aircraft. By City action, development proposals for miscellaneous uses as listed below shall be forwarded to the US Military. The following special requirements shall apply to each use lawfully established in the zones:

(1) Lights or illumination used in conjunction with street, parking, signs or use of land and structures shall be arranged and operated in such a manner that it is not misleading or dangerous to aircraft operating from an airport or in the vicinity thereof as determined by the airport operator.

(2) No operations of any type shall produce smoke, glare or other visual hazards within the limits of the zone that would adversely affect the safe flight of aircraft.

(3) No operations of any type shall produce electronic interference with navigation signals or radio communication between the airport and aircraft within the limits of the zone.

(4) In addition to the height limitations imposed by the height and hazard zone, no structure or obstruction will be permitted within the city that would cause a minimum vectoring altitude to be raised.

(5) No use of land, including those resource production/extraction/open land uses addressed in Section 656.1005 as well as ponds, borrow pits, waste disposal and other facilities which store, handle or process organic or any other material that fosters or harbors the growth of insects, rodents, amphibians or other organisms as they result in significant bird population increases above the normal background should be permitted which encourages or attracts large concentrations of birds or waterfowl within the vicinity of an airport.

(6) Within the Lighting Regulation Zone at Outlying Field Whitehouse, all artificial lighting equipment, including but not limited to flood lights and searchlights, whether temporary or permanent installations, shall have positive optical control so that no light is emitted above the horizontal plane. No building permit shall be granted in this zone unless this requirement is met. Development within the Lighting Regulation Zone at Outlying Field Whitehouse is subject to Airport Notice Zone Acknowledgements as required in Section 656.1010.

(e) Allowable development in clear zones (CLZ).

Notwithstanding the zoning district regulations contained elsewhere in this chapter, the allowable development on a parcel of land lying within a clear zone shall be modified as set forth by the regulations in this section. A clear zone exists adjacent to the end of all military airport runways within the city limits of Jacksonville. The horizontal limits of the zones for each runway have been defined based on United States Navy criteria (NAVFAC P-80.3 01/82). For aviation safety, the clear zone should be cleared, graded and free of above ground objects (except for airfield lighting). The City of Jacksonville Planning and Development Department has GIS maps provided by the United State Navy showing the boundaries of the clear zones adjacent to each airport runway. Prior to modifying the use of a parcel of land, the owner or developer must review the GIS maps to determine if the parcel is located in whole or in part in the clear zone. If the parcel is found to be in one of the clear zones, the City will notify the United States Navy office of Commanding Officer, Naval Air Station, Jacksonville must be notified in writing of the proposed changes to the use of the parcel. The U.S. Navy will then notify the City in writing of the compatibility of the use with the clear zone requirements.

SUBPART B. (Requirements for both Civilian and Military Airports)

Sec. 656.1006. Hazard marking and lighting.

Notwithstanding the provisions of section 656.1005, the owner of a structure over 200 (two hundred) feet above ground level shall install lighting on the structure in accordance with Federal Aviation Administration Advisory Circular 70-7460-1 Series and Amendments thereto. Additionally, high-intensity white obstruction lights shall be installed on a high structure that exceeds five hundred feet above ground level. The high-intensity white obstruction lights must be in accordance with the Federal Aviation Administration Advisory Circular 70-7460-1E and amendments.

A permit or variance granted shall require the owner to mark and light the structure in accordance with Federal Aviation Administration Advisory Circular 70-7460-1 Series. The permit may be conditioned to permit the Jacksonville Aviation Authority, United States Navy or the city, at its own expense, to install, operate and maintain markers and lights necessary to indicate to pilots the presence of an airspace hazard if special conditions so warrant.

Sec. 656.1007. Noise Level Reduction Requirements.

As outlined in Table 656-2 and 656-3, design and construction providing minimum noise level reduction of average minimum 25 or 30 dBA is required in some zones for some uses. The applicant shall provide a testing certificate from an accredited noise testing lab that a structure built pursuant to the proposed engineering plans will achieve a average minimum dBA reduction equal to or greater than the reduction required. In lieu of the required test, an applicant may submit an engineering judgment signed and sealed by an engineer licensed in the state of Florida, that in his/her opinion a structure built according to the submitted plans will meet the required noise reduction, or may use standards contained within Section 4, Appendix D or the computer program referenced in Section 1.4 representing an average minimum 30 dBA reduction within "Guidelines for Sound Insulation of Residences Exposed to Aircraft Operations", prepared for the Department of the Navy, by Wyle Research and Consulting, Arlington Virginia, April 2005, on file with the Office of Legislative Services. Notwithstanding the requirements contained in the Guidelines pertaining to doors and windows, the maximum required STC shall be 28.

Sec. 656.1008. Nonconforming uses and structures.

To the extent set forth herein, the restrictions on nonconforming uses and structures contained in Part 7 are modified or supplemented as follows:

(a) The owner of a nonconforming structure shall allow the installation, operation and maintenance during hours of darkness of the markers and lights deemed necessary by the Aviation Authority office of Planning and Development or the United States Navy as appropriate to indicate to the operators of aircraft in the vicinity of the airport the presence of the structures or aircraft hazards. The markers and lights shall be installed, operated and maintained at the expense of the owners of the airport concerned.

(b) The owner of a tree or other natural growth which exceeds the limitations on height as provided in the Zoning Code shall allow the Aviation Authority or United States Navy at its expense to make lower, remove or take other action necessary to bring the tree or growth into conformity with the Zoning Code.

(c) A structure which is nonconforming by virtue of the regulations contained in this part may be structurally altered, reconstructed or replaced, provided there is no increase in the floor area of the structure. However, the floor area of single-family dwellings may be increased, if the structural alteration, reconstruction or addition provides for the sound attenuation required by the airport noise zone within which the parcel is located (the sound attenuation requirement only applies to the new construction/addition).

(d) Notwithstanding other provisions of this part, a manufactured home park existing on March 18, 1985 may place a manufactured home not meeting the requirements of this part within the park on each manufactured home space established as existing on March 18, 1985 by the Florida Department of Health, the City of Jacksonville Environmental Resource Management Department or the Planning and Development Department. The requirements contained in section 656.1010 for execution of an Airport Notice Zone Acknowledgement shall also be met.

(e) If a nonconforming use, by virtue of the regulations contained in this part, ceases for any reason for a period of twelve consecutive months, the subsequent use shall conform to the regulations of this part.

Sec. 656.1009. Educational Facilities.

No new educational facility of a public or private school, with the exception of aviation school facilities, shall be permitted within an area extending along the centerline of any runway and measured from the end of the runway and extending for a distance of five miles and having a width equal to one half the runway length. Exceptions approving construction of an educational facility within the delineated area shall only be granted when the Planning Commission and/or City Council make specific findings detailing how the public policy reasons for allowing construction outweigh health and safety concerns prohibiting such a location.

Sec. 656.1010. Airport Notice Zone Acknowledgement; Recording of Plats of lands located all or partially in Noise Zones A and B and/or Airport Notice Zone.

Within Noise Zones A and B and the Airport Notice Zone, the following requirements apply:

(a) For any proposed subdivision (as defined in Chapter 654, Ordinance Code) located all or partially within Noise Zones A and B and/or the Airport Notice Zone as defined in this Chapter, which proposed subdivision is required to meet the platting requirements set forth in Chapter 654, Ordinance Code, the plat for such subdivision shall include in a prominent place the following statement: "NOTICE: Individual lots may be located in an Airport Environ Zone and/or Air Installation Compatible Use Zone (AICUZ) and may be subject to increased noise or hazard levels associated with air traffic operations." Additionally, a separate note shall indicate which lots are located within Noise Zone A, B and/or the Airport Notice Zone, and such lots shall be annotated with a reference to the paragraph of the note which indicates in which noise zone such lot falls. Additionally, the covenants and restrictions for any subdivision subject to the provisions hereof shall contain the aforementioned statement and shall identify which lots within said subdivision are in Noise Zone A, B, and/or the Airport Notice Zone.

(b) For any new proposed residential use within Noise Zones A and B and the Airport Notice Zone, an Airport Notice Zone Acknowledgement shall be executed by the owner of the property upon which a such proposed residential use is being constructed and shall be recorded in the public records of Duval County, Florida prior to issuance of building permits for multi-family uses or residential uses that are not subject to a final plat or subdivision.

(c) For any non-residential, existing residential or newly constructed residential properties or structures as of the effective date of this ordinance, no person shall sell, or otherwise transfer, lease or offer to lease or offer to sell, or otherwise transfer a structure or land within Noise Zones A and B and/or an Airport Notice Zone as defined in this chapter, unless the prospective transferee or lessee has been given an Airport Notice Zone Acknowledgement in writing, at the time of contract of sale, transfer, or lease, which Airport Notice Zone Acknowledgement shall be included in the contract of sale, transfer, or lease agreement for leases greater than three months. For conveyances evidenced by a recorded instrument, the Airport Notice Zone Acknowledgement shall be recorded simultaneously with the instrument that conveys the real property interest in the lands lying within the aforereferenced Noise and Airport Notice Zones. It shall be the responsibility of the buyer or lessee to perform all reasonable due diligence prior to entering into any contract to purchase or lease property within a Noise or Airport Notice Zone. Any person who knowingly violates the provisions of this section shall be subject to an enforcement action by the City. Nothing in this section shall affect the validity or enforceability of any sale, transfer, or lease or contract for the sale, transfer, or lease of any interest in real property, nor shall anything in this section create a defect in the sale, transfer, or lease agreement. Lease transactions shall require an Airport Notice Zone Acknowledgement signed by two witnesses. Sales transactions shall require a fully executed and recorded Airport Notice Zone Acknowledgement. This subsection shall not apply to developers and sellers required to comply with the provisions contained in subsection 656.1010(a) of this Part.

(d) No building permit subject to Planning Department review and approval will be issued within Noise Zones A and B and the Airport Notice Zone, as defined in this chapter, unless the applicant provides a copy of a fully executed Airport Notice Zone Acknowledgement, to the Planning and Development Department. This subsection shall not apply to those parties required to comply with the provisions contained in subsections 656.1010(a), (b) or (c) of this Part.

Within Noise Zones A and B and the Airport Noise Zone, the following requirements apply:

(a) For any new proposed residential use within Noise Zones A and B and the Airport Noise Zone, an Airport Notice Zone Acknowledgement shall be recorded in the public records of Duval County, Florida prior to recording of the final plat by the applicant (for single family and town home residential uses) or when building permits are issued (for multi-family uses or uses that are not subject to a final plat or subdivision). A copy of the recorded Acknowledgement shall accompany the final plat or subdivision recording package. Furthermore, the plat shall contain a statement identifying the location of the recorded acknowledgement in the public records.

(b) For any non-residential or existing residential properties or structures as of the effective date of this ordinance, no person shall sell, or otherwise transfer, lease or offer to lease or offer to sell, or otherwise transfer a structure or land within Noise Zones A and B and/or an Airport Notice Zone as defined in this chapter, unless the prospective transferee or lessee has been given an Airport Notice Zone Acknowledgement in writing, at the time of contract of sale, transfer, or lease, which Acknowledgement shall be included in the contract of sale, transfer, or lease agreement for leases greater than three months, as a part of the legal instrument that conveys the real property interest in the lands lying within the aforereferenced Noise and Airport Notice Zones. It shall be the responsibility of the buyer or lessee to perform all reasonable due diligence prior to entering into any contract to purchase or lease property within a Noise or Airport Notice Zone. Any person who knowingly violates the provisions of this section shall be subject to enforcement by the City. Nothing in this section shall affect the validity or enforceability of any sale, transfer, or lease or contract for the sale, transfer, or lease of any interest in real property, nor shall anything in this section create a defect in the sale, transfer, or lease agreement. Lease transactions shall require an Airport Notice Zone Acknowledgement signed by two witnesses. Sales transactions shall require a fully executed and recorded Airport Notice Zone Acknowledgement.

(c) No building permit subject to Planning Department review and approval will be issued within Noise Zones A and B and the Airport Notice Zone, as defined in this chapter, unless the applicant provides a copy of a fully executed and recorded Airport Notice Zone Acknowledgement, to the Planning and Development Department.

Sec. 656.1011. Rezonings within the Noise Zones A and B.

Within the Noise Zones A and B, all rezonings shall be proposed as Planned Unit Developments unless the Planning and Development Department makes findings that a rezoning to a conventional zoning will not negatively impact current or future operations of military or civilian airports. No use shall be allowed in Noise Zones A and B that is not consistent with the Comprehensive Plan and Section 656.1005, and the density and intensity policies and regulations contained therein shall be reflected without variance in any Planned Unit Development. Further, the Planning and Development Department must make findings that the site plan and written description associated with a proposed Planned Unit Development meet all requirements of Part 10 and that they cluster development away from height and hazard zones, runway safety areas, runway protection zones, accident potential zones and clear zones.

Sec. 656.1012. Planned Unit Developments (PUDs), Rezonings, Waivers, Exceptions and Variances involving a change of use or intensification of residential use.

Planned Unit Developments (PUDs), Rezonings, Waivers, Exceptions and Variances located all or partially in Noise Zones A and B shall be referred to the JAA or the United States Navy for review. All PUDs, Waivers, Exceptions and Variances involving a change of use or intensification of residential use of land in Noise Zones A and B, shall show the boundaries of airport environs as they occur within Noise Zones A and B as of the current date on any required site plan, and the ordinance or final order approving such PUD, Waiver, Exception or Variance shall include the following condition: "All or a portion of this property may be located in an Airport Environ Zone and/or Air Installation Compatible Use Zone (AICUZ) and development in accordance with this ordinance or final order (as applicable) shall meet the requirements set forth in Part 10, Zoning Code."

Sec. 656.1013. Airport Zoning Committee.

The Planning and Development Department, the US Navy and the Jacksonville Aviation Authority shall be members of the Airport Zoning Committee, which shall meet to discuss proposals for rezonings and land use map amendments within Airport Notice Zones as necessary. The Committee shall be chaired and staffed by the Director or his or her designee. Each member shall be requested by the Director to designate a representative to attend each Committee meeting. Meetings can be requested by any member of the Committee or its designee, and each member agrees to make such request and provide a representative in a timeframe sufficient for the Committee to meet and make an advisory recommendation prior to consideration of the rezoning or land use map amendment by the Local Planning Agency/Planning Commission.

Sec. 656 1014. Airport Noise Advisory Council.

There shall be created the Airport Noise Advisory Council, which shall be comprised of two residents of the City of Jacksonville appointed by the Mayor, two residents of the City of Jacksonville appointed by the Council President, and one representative from both the United States Department of the Navy and the Jacksonville Aviation Authority. The Council shall meet monthly or as determined by the Chair (which shall be elected by the members of the Council) to review airport noise issues and make recommendations to address them. The Council shall make recommendations to the JAA, the City or the Navy.

Sec. 656 1015. Public Awareness.

Citizens and property owners located within the Airport Noise and Airport Notice Zones shall be made aware of the potential for objectionable noise impacts via the following methods:(a) Public notice of the existence of Airport Noise and Airport Notice maps shall be published by the Jacksonville Planning and Development Department at least three times a year in a newspaper of general circulation as provided in the Laws of Florida, Ch. 96-193; and(b)

Airport Environ, Airport Noise and Airport Notice maps shall be made available for inspection on the City’s Website.

Sec. 656.1016. Airport Notice Zone Acknowledgement.

An Airport Notice Zone Acknowledgement shall be created for use as described in this Part in substantially the form attached hereto and incorporated herein as Exhibit 1. The original Airport Notice Zone Acknowledgment for conveyances will be recorded in the official public records of Duval County, Florida, and copies shall be provided to the Jacksonville Planning and Development Department, JAA or the US Navy, as appropriate.

Exhibit 1. AIRPORT NOTICE ZONE ACKNOWLEDGMENT

Return to: Chief, Regulatory Planning
Jacksonville Planning and Development Department
220 East Bay Street, Room 100
Jacksonville, Florida, 32202

AIRPORT NOTICE ZONE ACKNOWLEDGMENT

The City of Jacksonville has determined that persons on the premises may be exposed to significant noise level and/or accident potentials or may be subject to special lighting regulations as a result of the airport operations. The city has established that, within its boundaries, there exist certain Airport Notice Zones as defined in Section 656.1004 (J). The city has also placed certain restrictions on the development, construction methods and use of property within airport environ areas. The property at ____ ____________________ (Real Estate Parcel # and address), which is more particularly described in the legal description (Exhibit A) attached hereto and made a part hereof, is located within the Airport Notice Zone of ___________________________ (airport).

CERTIFICATION (AS APPLICABLE)

As the owner/sellor/lessor (circle one) of the subject property, I hereby certify that I am aware that the property is located in an Airport Notice Zone. I have been advised to consult Part 10 of

Chapter 656, Ordinance Code, concerning the restrictions that have been placed on the subject property. I further acknowledge that I am aware that, as a result of the proximity of the subject property to the airport noted above, airport operations may affect the quiet enjoyment and use of the subject property. Additionally, I acknowledge that airport operations may change due to changes in type of aircraft operating, changes in flight paths and general operations of the airport, and changes resulting from expansion, reconfiguration or additional runways.

Dated this ____ day of ________________ 20___.

____

Print Witness Name: ___________

____

By:______________________________

Name:____________________________

Title:___________________________

____

Print Witness Name: ____________

STATE OF FLORIDA

COUNTY OF DUVAL

The foregoing instrument was acknowledged before me this ______ day of ______________, 200_, by _______________________ and. ______________Such person(s): *(notary must check applicable box)*

☐ is (are) personally known to me; or

☐ produced a current ________________ driver's license as identification; or

☐ produced ___________________________ as identification.

____

____

[print or type name]

Notary Public, State of Florida at Large

As the purchaser/lessor of the subject property, I hereby certify that I am aware that the property is located in an Airport Notice Zone. I have been advised to consult Part 10 of Chapter 656, Ordinance Code, concerning the restrictions that have been placed on the subject property.

Dated this ____ day of _________________20___.

____

Print Witness Name:__________ By:______________________________

Name:____________________________

Title:___________________________

____

Print Witness Name: ____________

The foregoing instrument was acknowledged before me this ______ day of ______________, 200_, by _______________________ and ______________Such person(s): *(notary must check applicable box)*

☐ is (are) personally known to me; or

☐ produced a current ________________ driver's license as identification; or

☐ produced _____________________________ as identification.

____

____

[print or type name]
Notary Public, State of Florida at Large

Copies will be recorded at the Duval County Clerk of Court, and filed with the Jacksonville Planning and Development Department, and will be provided to JAA or the US Navy, as appropriate.

Section 2. Effective Date. This Ordinance shall become effective upon signature by the Mayor or upon becoming effective without the Mayor's signature.

Form Approved:

/s/ Jason R. Teal

Office of General Counsel

Legislation Prepared By: Jason R. Teal

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