

AeroNavData's Airport Mapping Database

AIRPORT OPERATIONS

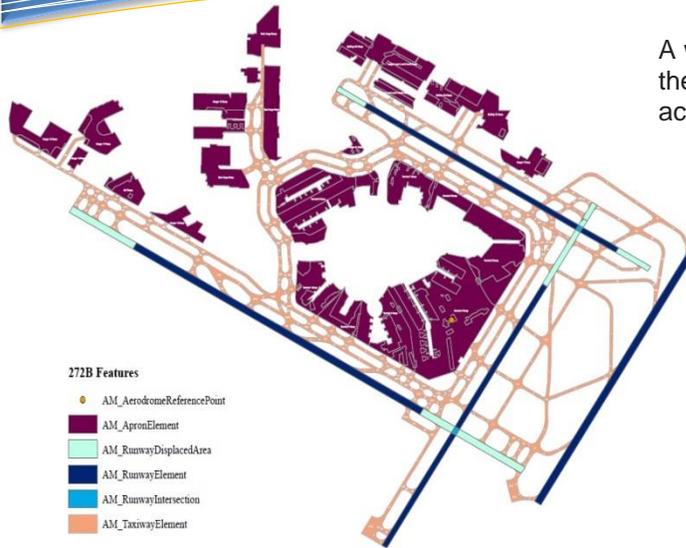
Construction and maintenance of airport resources (buildings, pavement, lighting, markings, and landing systems) and emergency response and security.

COMMERCIAL AND CARGO AIRLINE OPERATIONS

Apron control, aircraft maintenance and fueling, baggage and cargo handling, catering services, crew and aircraft scheduling, flight planning.

GENERAL AVIATION AND BUSINESS AVIATION

Fixed-Based Operators are typically located away from the commercial concourse but have access to active taxiways and runways, and provide maintenance, fueling, flight planning, and local ground transportation service



Airport operations consist of very complex and complicated activities, coordinated and accomplished by a variety of organizations and individuals. This group of pilots, air traffic controllers, maintenance crews, emergency teams, and airline operations staff must work collaboratively to sustain safe and efficient flight operations at their airport. And, importantly, they must all have reliable and up-to-date knowledge of the airport blueprint.

Though pilots typically navigate the airport surface based on their visual aids, they also rely on paper or digital charts of the airport as Air Traffic Control (ATC) communicates the route the pilot is to follow both in the air and on the ground. To maintain safe distances between aircraft traffic, surveillance of the airport surface is typically based on visual clues by both the ATC team and the flight crew based on "see and avoid" principles, aided by radio communication.

It is easy to see from these basic operations that ATC, ground crews, and flight crews would all benefit from shared accurate geospatial information of the airport layout and the precise location of runways, taxiways and other ground based features.

Access to accurate geospatial information about the surface features can support flight operations and aid the duties that keep things running smoothly and calamity-free.

A well-defined Airport Map can assist with the distinct and critical responsibilities and activities for:

- construction and maintenance of buildings, pavements, markings and landing systems
- emergency response teams: fire and rescue, security
- operations activities:
 - apron control
 - aircraft maintenance
 - fueling
 - baggage
 - catering
 - crew and aircraft scheduling
- training activities and simulation

AERONAVDATA collects, maintains, manages, and exchanges airport feature data to DO-272 / ED-99 standards, or to your user-defined requirements.

The data captured and maintained in this database includes aircraft movement and non-movement areas and enables the user to increase the focus on operational safety at both small and larger and more complex airports.

The airport geometric features and all associated critical attributes and can be output to your desired format. Our data is available for each airport, or multiple airports at one-time delivery or subscription-update interval.

Our data delivery includes AIXM 5.x, shapefile, and other industry standard formats. Our expert data management processes enable us integrate, validate, and verify airport data to populate and maintain the highest quality Airport Mapping Database comprised of current and accurate airport ground-based features.

INDUSTRY APPLICATIONS

- Aircraft onboard moving map displays
 - ✓ Situational awareness
 - ✓ Display taxi assignment route, position of other aircraft/vehicles
- Advanced Surface Movement Guidance Systems
 - ✓ Automate runway assignment and taxi route
 - ✓ Data communication
 - ✓ Conflict detection and resolution
 - ✓ Reduce traffic and radio communication congestion or confusion
- Digital charts and Electronic Flight Bag
 - ✓ Reduce clutter, weight, workload
 - ✓ Immediate electronic transfer
- D-NOTAM delivery
- Synthetic vision systems
- Airport or airline resource management
- Training, simulations, research and development
- Airport planning and construction
- Emergency response
- Security management

Features and Benefits

The high level of detailed features, such as guidance lines, hold lines, obstructions, and parking areas is necessary for surface navigation in low visibility. Enhanced situational awareness during the critical takeoff, landing, and rollout phase of flight is supported through display of runway features such as centerlines, exit lines, threshold points, hold lines, and painted markings.

Fixed Based Operators (FBOs) support General and Business Aviation operation tasks including maintenance, fuel, flight planning, and local ground transportation services.

Airworthiness and civil aviation authorities and the aviation industry are working to provide guidance to Airport Mapping Database providers, such as AeroNavData, to standardize the collection and attribution of airport feature data.

Standards and Requirements

AERONAVDATA is actively involved and fully supportive of advancing industry Airport Mapping Standards.

Data consistently captured and maintained to industry standards (such as RTCA DO-272 / ED-99) would enable all users and recipients to utilize the data for many different applications, capabilities and purposes. The results would include greatly improved and enhanced airport operations.

Additionally, our flexible collection processes enable us to capture airport feature data to diverse levels of complexity and attribution to accommodate your specific needs and requirements.

- We can output to AIXM 5.1, Shapefile, and a variety of industry standard formats.
- DO-272 / ED-99 -compliant airport features
- Customizable output of selected features and supplemental data
- Automated geometry and data integrity.



AeroNavData's DO-272 Airport Features

- Runway Element
- Runway Intersection
- Runway Displaced Area
- Taxiway Element
- Apron Element
- Building
- Hotspot
- Aerodrome Reference Point
- Construction Area

