

### **III. PROJECT OBJECTIVES**

#### **A. PROJECT PURPOSE**

The purpose of the proposed UPS Ontario Cargo Hub project is to develop a high capacity distribution facility for cargo which is handled as part of UPS' "Next Day Air" and "2nd Day Air" cargo operations, as well as ground-based distribution systems. At present, most UPS Next Day Air and 2nd Day Air shipments are flown daily to Louisville, Kentucky from 55 "gateway airports". This national cargo hub receives and sorts up to more than 100,000 packages and documents per hour each weekday. Increases in shipment volume have caused UPS to plan construction of satellite air cargo sorting hubs on the east and west coasts.

The UPS Ontario Cargo Hub, along with a similar hub planned in Philadelphia will increase both the capacity and efficiency of UPS' Next Day Air and 2nd Day Air systems. These hubs will principally handle the growing number of packages and documents whose origins and destinations are more regional in nature than the nationwide movements which will continue to pass through Louisville.

In addition to the 128.1 acre air cargo hub, approximately 31 acres of land owned by Valacal Company (subsidiary of UPS) along Mission Boulevard and the Union Pacific Railroad tracks are intended to be used for other industrial and distribution uses. These uses, while not necessarily related to the air cargo operation, will be of a nature which is complementary to the primary operation.

#### **B. PROJECT OBJECTIVES**

The objectives of the UPS Ontario Cargo Hub are as follows:

##### **1. Objectives Related to Citywide Concerns**

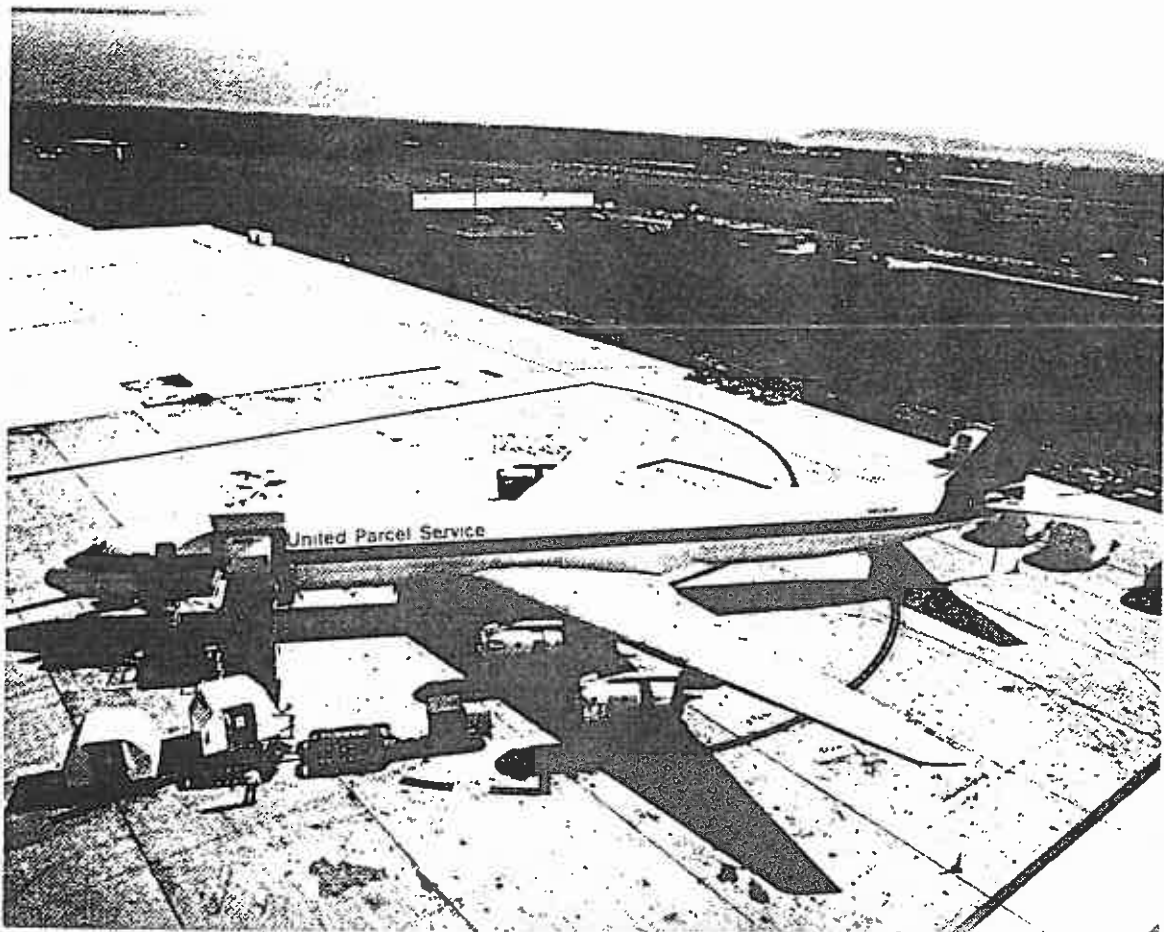
- o** Provide employment opportunities for existing Ontario area residents, as well as for people seeking to relocate to the Ontario area.
- o** Maintain and improve Ontario's position as the premiere Inland Empire location for employment generation activities.
- o** Maximize the economic benefits of Ontario International Airport to the Ontario area.
- o** Promote well-designed industrial developments which reflect a quality image complimentary to their setting adjacent to Ontario International Airport and the Haven Avenue Corridor.

## **2. Objectives Related to Project Development**

- o Increase the capacity and efficiency of UPS' Next Day Air and 2nd Day Air systems by establishing an air cargo hub operation at Ontario International Airport.**
- o Increase the efficiency of UPS ground service to the greater Ontario region by establishing a ground hub in the Ontario region.**
- o Provide for a safe working environment, successfully integrating airport-related distribution, and light industrial land uses.**
- o Establish design, development, and performance standards that will ensure a high quality working environment.**
- o Create a landscape and streetscape that will enhance the aesthetic and visual quality of the planning area and complement the landscape.**

# UPS AIRCRAFT

## LOADING AND UN-LOADING



A 50-acre concrete ramp will be used to stage aircraft during loading and unloading of air cargo containers. The above illustration depicts loading of air cargo containers from the Tugs via a K-loader to the UPS aircrafts.

## C. PROJECT CHARACTERISTICS

### 1. Sector 1 - Airport-Related Uses

#### a. Physical Features

The principal features of Sector 1 include the aircraft apron, fuel island, air carrier support office, employee parking area, tug road and jet blast containment wall. An additional feature associated with Sector 1 is the airport taxiway. Each of these features is briefly described below.

The proposed aircraft apron will constitute the major use of Sector 1. This area will have dimensions of approximately 1,750 feet by 1,200 feet, accounting for 48.2 acres or 76% of the sector. The apron will be of a reinforced concrete design of adequate thickness and strength to handle large, fully-loaded cargo aircraft such as the Boeing 747.

To meet the fuel demand of the UPS air operations, provision has been made for an on-site fuel island. This island will be connected to a proposed pipeline and fuel storage facility on airport property. The development and use of this island will, however, be dependent on development of new fuel storage facilities on ONT property. If these new facilities are not constructed, UPS will transport aviation fuel from ONT to the site by truck on airport property via old Archibald Road or other routes identified by airport authorities.

An air support facility will be located at the northwest corner of Sector 1 and provide office space for a communication center, weather support office, ground crew and air operations support office, required maintenance facilities, pilot office, a lounge area, and parts storage and work areas.

In the area south of the air carrier support building, UPS will develop an employees' parking area of sufficient size to handle those personnel working in Sector 1. Access to this area will be from Jurupa Street.

Along the east, south and west boundaries of the apron, UPS will construct a 45-foot wide tug road. The tug road will allow safe movement of cargo containers to and from the apron. Adjacent to the tug road, a jet blast wall will be constructed similar to those currently used at other airports. The purpose of the blast wall is to protect people and uses from the blast of jet engines. As such, the wall will be constructed at a height of 18 feet, which is higher than the engine exhaust height of a Boeing 747.<sup>1</sup>

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1. Although the engine intake on a Boeing 727 is higher than that of a 747, the exhaust of the 727 is located at the bottom of the tail. Consequently, the 747 has a higher exhaust height, and was there used as the criteria for design of the blast wall.

A taxiway between the UPS property and ONT runways will be developed to connect the aircraft apron to ONT runways. The taxiway layout has three ingress/egress points to the apron serviced by the taxiway. This taxiway will have a nominal width of 75 feet, and be constructed with similar characteristics as the apron. The development of this taxiway will be coordinated with the Department of Airports, and will be located fully on ONT property.

In addition to the main features of the apron area, there will also be perimeter security fencing, a noise control berm, and landscaping. The apron area will have a security fence along its perimeter. This fence will be designed and constructed in accordance with the requirements of Part 107 of the Federal Aviation Regulations. The controlled access to the site provided by the fence will be supplemented by 24-hour security personnel contracted by UPS.

Along the western boundary of Sector 1, UPS will develop an earthen berm from the air carrier support office south to Jurupa Street. This berm will have a trapezoid cross-section with a base of 45 feet. The berm will be approximately 15 feet tall, and will be designed to deflect sound from the Hofer Ranch area.

#### **b. Operations**

The current UPS flight schedule encompasses from one to twenty flights per day, depending on the day of the week. A projected UPS flight schedule for 1995 is for 110 flights (220 operations) per week. The projected schedule includes limited Saturday and no Sunday operations. During the December Christmas peak, up to an additional 28 flights daily are added to meet customer demand. The schedule is included in the Appendices of this document. The actual flight schedule may vary from the projected schedule depending on operational requirements over time.

UPS aircraft arriving at Ontario International Airport will taxi under their own power to the aircraft staging area (Sector 1). Once parked, cargo containers will be unloaded via a hydraulic lift (called a K-loader) onto "tugs". The tugs will then proceed along the tug road south to the sorting center within Sector 2 across Jurupa Street.

At the same time that cargo containers are being offloaded, a ground crew will conduct a routine inspections of the aircraft's systems to insure proper function. The ground personnel will perform that maintenance which is necessary to guarantee the safe operation of the aircraft. The type of maintenance which might be performed at the site includes repairs to hydraulic or electrical systems, instrument and systems replacement and aircraft washing. A more specific statement on aircraft maintenance is set forth below.

Following the sorting of packages, tugs will bring cargo containers back to the aircraft ramp from the sorting center in Sector 2. Once an aircraft has been loaded and fueled, it will be scheduled for departure. Ground crews will direct the aircraft from the apron to the taxiway. At this point the aircraft becomes subject to the FAA controls and enters the national airways system. The aircraft follows instructions from flight controllers as to where and when it can depart ONT.

**c. Aircraft Maintenance Activities**

In accordance with its Part 121 Federal Aviation Administration Certification as an airline, UPS is responsible for, and committed to, maintaining a safe fleet of aircraft. UPS is therefore required to conduct general maintenance activities at the project site.

Maintenance requirements are generated either by a predertimed schedule of routine aircraft maintenance based on the time an aircraft has flown, or by pilot complaints as recorded in the Log Book which is the official aircraft document for each airplane.

Service and maintenance are usually performed with the aircraft in a stationary position. Planned and potential maintenance activities are indicated as follows:

- parking and security of the aircraft
- servicing of fluids and pneumatics (engine oil, hydraulic system oil, landing gear air and oil, lavatory servicing, oxygen cylinder refills, window cleaning and engine and aircraft exterior cleaning)
- exterior inspection (walk around to identify damaged or missing parts; review of tires, brakes and fluid lines for evidence of excessive wear and/or leakage; check of flight controls integrity; check of lights and bulbs for collision avoidance and location identifier; check for evidence of any fuel leakage)
- interior inspection (check the seals and integrity of passenger and cargo entry doors; check for cleanliness of floors and floor hardware to prevent constraints on locking and roller system; check interior lights and smoke detectors; check interior cargo lining for fire prevention purposes; and check door sills and frames for damage)
- cockpit instrument check for integrity and operation
- component replacement due to time limitation, substandard performance, deterioration or trouble shootings (Typical components include brakes, engines, thrust reversers, tires and accumulator, oxygen bottle, windshield wipers, landing light assembly, electronics and instruments)
- major assembly removal, testing, lubrication and reinstallation
- modification maintenance of aircraft structure or system (usually due to an FAA edict, a manufacturer's recommendation, or an airline's reliability program)

Full engine run ups are required when an engine replacement or engine repair such as the automatic fuel control is performed. All full engine run ups will be accomplished in accordance with tower instructions and noise abatement procedures at the airport. Full engine run ups will not be undertaken on UPS property, but will be undertaken at the appropriate designated area on ONT property.

### **3. Sector 2 - Distribution Facility**

#### **a. Facilities**

The development of the distribution facility will involve 64.7 acres or 36% of the total project property. The sector will focus on the collection and distribution of parcels handled by UPS. The sector acts as the focal point for the UPS ground hub serving the greater Ontario area, as a sorting hub for air cargo having its origin or destination in southern California, and as the site of the western states air cargo exchange. The development of this sector will involve six UPS primary features including a staging area for tractor/trailers and package vans, a ground vehicle fueling depot and wash rack, a tug bridge across Jurupa Street, a customer service building, employee parking area, and the main package sorting and distribution building.

The ground based operations of UPS are supported by the use of tractor/trailers and familiar brown vans. The tractor/trailers handle large loads to be transported between UPS subregional centers, for instance, Ontario to Cerritos. The package vans are designed for transport of packages to and from a customer facility. Because of the large volume of packages to be handled at the Ontario facility, vehicles of each type will have to be readily available. For this reason UPS a portion of Sector 2 will be utilized for the parking of such vehicles.

The commitment to provide ground delivery service and to maintain a delivery vehicle fleet also makes it necessary for operations, as well as economic, reasons to retain the capability for on-site fueling. Two 20,000 gallon underground fuel storage tanks will be installed for this purpose. One tank will be dedicated to diesel and the other to gasoline. The installation will involve construction of a double containment structure and leak detection equipment in accordance with State regulations. The fueling area and wash rack are located adjacent to the driveway which provides access to Turner Avenue. This will allow vehicles to be fueled either when they arrive at the site or prior to their departure.

The fueling area will also contain a wash rack capable of handling all UPS vehicles. The wash rack is similar to a commercial car wash. The system for this facility will use biodegradable chemicals and cleaning agents in the washing process.

Air cargo transferred back and forth between Sectors 1 and 2 will be handled by vehicles known as tugs. Because Jurupa Street separates these sectors and because of the potential for conflicting traffic movements, a grade separation will be constructed between the tug road and Jurupa street. Jurupa will be physically lowered and a bridge for tug traffic will be constructed over Jurupa (see Figure 9). The bridge will be 50 feet wide, and will have a 17-foot clearance for traffic on Jurupa Street. The bridge will span the 120-foot Jurupa Street right-of-way.

UPS will construct the bridge and grade separation. A development agreement between the City of Ontario and UPS will be entered into to outline maintenance responsibilities. It is expected that UPS will assume the maintenance costs of the tug bridge crossing.

In the eastern portion of Sector 2, UPS will develop an employee parking and customer service area. This area will contain a customer service building (approximately 5,000 square feet) to handle the demand of the local community. A separate parking area will be provided for customer use. The access to this site will be from Jurupa Street.

The major facility within Sector 2 is the distribution and sorting facility. The building will likely be developed in two phases beginning with a initial building of 350,000 square feet. The second phase will enlarge the building to its final size of 591,632 square feet. At its ultimate size the building will be capable of handling 50,000 packages an hour.

#### **b. Operations**

The activities conducted in Sector 2 have one primary goal, to expedite the transport of packages from their origin to their destination. To achieve this the careful coordination of the air and ground operation must be maintained. The operation of the distribution facility is slightly different for the three modes of transportation used by UPS as outlined below.

The air cargo operation is designed to handle the transfer of packages between larger regional areas. Incoming packages received at Sector 1 will be brought to the sorting building and divided into groups according to whether their final destination is the local area or not. Local packages will be set aside for transport by package vans. Packages not destined for the Inland Empire will be grouped again according to final destination and held for transport to other distribution centers by tractor/trailer rigs.

Packages arriving at the Ontario facility via the ground system, not destined for local delivery, will be sorted according to the geographical area to which they are going. The packages requiring cross-country movement will be containerized and held for later shipment.

Tractor/trailer rigs provide the principal method of delivery between distribution centers on the subregion level. Packages arriving at Ontario via this means will either be destined for the local area or require air shipment to other regions. Local packages will be held for package van delivery while the remaining packages are containerized for later shipment. These vehicles will also be used for transport of packages which arrive by air to subregions. UPS estimates that approximately 45 tractor/trailers will operate from the Ontario Cargo hub, yielding 90 trips daily. None of the tractor trailer trips are expected to occur within the peak travel hours; however, as a condition of the approval of the project, the City of Ontario reserves the right to require additional traffic impact studies as the UPS operations expand and the number of tractor/trailers increases.

The package vans will primarily service the local community, i.e., the Inland Empire. They function as the final leg of the UPS transport system.



The air cargo and tractor/trailer operations will be conducted on a 24-hour basis. The package van system on the other hand is primarily a daytime activity operating during normal business hours.

**c.      Sector 3 - Light Industrial**

Sector 3 is intended for light industrial development. Located in the southern portion of the site, Sector 3 will contain a mixture of manufacturing and wholesale storage, and distribution uses. Unlike Sectors 1 and 2, site plans and specific facility types have not yet been determined for Sector 3. Therefore, potential uses and development requirements for Sector 3 have been formulated based upon standard practice for specific plans within the City of Ontario. Development of Sector 3 will be similar to development within the "Light Industrial" land use category of California Commerce Center to the east and the "Industrial" land use category of California Commerce Center South across Mission Boulevard to the south.