

Newark International Airport: From Marsh to International Gateway

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Introduction

When Newark International Airport was built, it was a humble airport; the first in metropolitan New York. Time would provide the airport with competition and numerous periods of uncertainty. Ultimately, however, consistent growth, aided by two major expansions following its creation, would transform a marsh located outside New York City into a major international gateway.

In 1927, the City of Newark made public its intention to build an airport by the Port of Newark. In little time, the airport would prove extremely successful, becoming the world's busiest airport. Competing neighboring airports and revolutionary advancements in aviation would lead Newark Airport to a massive expansion in the 1970s. Although setbacks greatly disrupted the expansion, time brought success to the airport, prompting a second overhaul at the end of the 1990s. True to the dream of the visionaries who designed the airport, Newark Airport became, with these expansions, a gateway to the world.

“Where railways, waterways, airways, and highways meet”

“Preliminary plans to provide for a \$6,000,000 commercial airport which would be constructed, owned, and operated by Newark at Port Newark, were announced [August 3, 1927] by [Newark] Mayor Thomas L. Raymond.”¹ When the plan to build Newark Metropolitan Airport² was made, it provided for ample opportunities and ease of use. The initial statement by the mayor noted that “the airport site would be twenty-two minutes from Broadway and Canal Street when the vehicular tunnel under the Hudson River (the Holland Tunnel) is opened and the new State highway route 1 is completed.”³ The mayor also announced that, pending approval of his plan, the airport was to be completed by the spring of 1928. It is also important to note that the airport was designed “exclusively for commercial purposes,”⁴ meaning there were no intentions of having any portion of the airport dedicated to military aviation.

Although initial plans called for a spring, 1928, completion of the airport, construction quickly fell behind the deadline. By mid-February, 1928, the idea of completion by spring had been disregarded, and a new goal, to have the first unit of the airport completed by the beginning of August, was announced. However, this time frame was presented purely for financial reasons. Much of the metropolitan region’s air mail was being sent a few miles away from Newark, through Hadley Field, in New Brunswick, NJ. As it turned out, many of the air mail carriers’ contracts were set to

¹ "Newark Airport Plans." *The New York Times* 4 Aug. 1927: 12.

² In the 1970s, Newark Metropolitan Airport was renamed Newark International Airport. With either name, the airport was commonly referred to simply as “Newark Airport.”

"Newark Liberty International Airport." *Wikipedia*. 25 Mar. 2006. 29 Mar. 2006
<http://en.wikipedia.org/wiki/Newark_Liberty_International_Airport>.

³ "Newark Airport Plans." *The New York Times* 4 Aug. 1927: 12.

⁴ *Ibid.*

expire on August 1, 1928, and it was the hope of Newark to attain those contracts; to do so required being fully operational at the contracts' end to ensure no disruption in mail service and no contract renewal at Hadley Field.⁵ In addition to the contracts' expirations, the United States Postmaster General, Harry S. New, was in favor of moving operations to Newark, noting that although overnight mail aircraft are capable of reaching Hadley and Newark Airports at the same time, the train to New York City would allow the mail to arrive from Newark approximately one and a half hours sooner than that from Hadley. Similarly, outgoing mail can arrive at the New York City Post Office later in the evening if the outbound aircraft were to leave Newark at the same time it would normally leave Hadley.⁶

Although the original timing goal was ambitious and unattainable, the planning teams did show great forethought in creating what they hoped to be "the main Eastern terminus of the nation's airways."⁷ The first instance of this forethought was to allocate for the airport nearly quadruple the land area needed for the initial plans. While the airport was to be opened using only 176 acres,⁸ 500 acres total had been set aside to allow for expansion. Additionally, the location of the airport proved an excellent choice. Apart from being easily accessible to both Newark and New York City, the airport's location proved a wise choice as it avoided the "'fog belt' and smoke haze that constitute one of the greatest difficulties to the development of air commerce in and out of the metropolitan district."⁹ By February, 1928, Newark Airport had a slogan, "Where

⁵ "Newark's New Airport for the Metropolitan Area." The New York Times 19 Feb. 1928: 124.

⁶ "Air Mail Abandons Hadley Field Port." The New York Times 8 Aug. 1928: 15.

⁷ "Newark's New Airport for the Metropolitan Area." The New York Times 19 Feb. 1928: 124.

⁸ When the airport first opened, only 68 acres were actually in use

"Newark International Airport." Port Authority of NY & NJ. 2006. 28 Mar. 2006

<<http://www.panynj.gov/aviation/ehisfram.htm>>.

⁹ "Newark's New Airport for the Metropolitan Area." The New York Times 19 Feb. 1928: 124.

railways, waterways, airways, and highways meet.” With roadways under construction around the airport, six separate rail lines leading to the airport site, a large enough deep-sea waterway to allow both landing space for seaplanes as well as a direct line for twenty-one steamship lines just beyond the edge of the airport, and the development of port-related commerce along approximately three to four miles of the Port of Newark flanking the airport’s grounds, the slogan seemed not only appropriate, but indicative of a very prosperous future for the airport, with ample opportunity to carry both passengers and cargo.¹⁰

What is also interesting to know is the amount of effort that was required to prepare the site of Newark Airport for construction. Instead of finding an area of land that needed simply to be leveled, the City of Newark chose to build on top of “a waste of useless swamp land.”^{11,12} This land, along with another 1,500 acres also owned by the City of Newark, was filled to become useable, worth \$20,000 per acre in 1928. Building the airport also required the diversion of three streams which cut through the field, as well as the use of 500,000 cubic yards of dry fill to bring the land “up to a pool-table smoothness.”¹³

As the construction progressed, it became quite evident that Newark Airport would have little trouble garnering traffic once it opened. “Hardly a day passes [...] but we receive inquiries from someone who wants to use the airport”¹⁴ said the supervisor of

¹⁰ "Newark's New Airport for the Metropolitan Area." The New York Times 19 Feb. 1928: 124.

¹¹ Ibid.

¹² Indeed, much of the area surrounding Newark Airport remains a swamp to this day. Thirty-two square miles, about 20,000 of the 900,000 acres of wetlands in New Jersey, make up the Meadowlands, filling the area around the airport with abundant wildlife.

Schensul, Jill. "Meadowlands Breathes Anew." Wild NJ. 23 June 1996. 27 Mar. 2006
<<http://www.wildnj.com/br4-9.htm>>.

¹³ "Newark's New Airport for the Metropolitan Area." The New York Times 19 Feb. 1928: 124.

¹⁴ Ibid.

the project, Peter J. O'Toole, Jr. O'Toole noted that commercial carriers were interested in servicing Newark from cities as far away as New Orleans and Havana, Cuba.

Additionally, department stores around the area, which had recently begun receiving merchandise by air, expressed early interest in use of the airport for shipments. Finally, great interest was expressed in the airport's ability to provide for on-site businesses, such as oil and gas stations, departure points for aerial sightseeing companies, hotels, restaurants, and more. The promise for the airport was also made evident by the numerous classified ads seen next to newspaper articles about the airport's progress (fig. 2).

With Newark's promise came a change of plans, as well. While the initial plans for the airport called for strictly commercial aviation, it was only a matter of months before the military became interested. New Jersey quickly planned to add hangers, a machine shop, and other needed buildings in order to establish a full unit of the New Jersey National Guard air service. In addition, the state planned to establish a special rail terminal for the sole use of mobilizing servicemen of the metropolitan area.

Plans for Newark Airport also brought forth ideas of technological breakthrough that would revolutionize the world of flight.

Special studies are also being made with a view to introducing such advanced features as radio beacons, which will guide a plane to a safe landing through a fog, and runway marker lights, which will shift with the wind. 'Such rapid progress is being made,' said Colonel [Stedman] Hanks, "that we may soon hope to see a plane led safely to a field by the direction-guiding note of the radio

beacon on the pilot's instrument board, while whatever additional information he needs is received from the airport through the headphone of his radio telephone.¹⁵ This idea is the basis of the Instrument Landing System (ILS), a feature with which every modern airplane is equipped. The ILS system uses two sets of radio beacons to show the pilots their horizontal position relative to the runway centerline, and the vertical position relative to the appropriate descent path as the aircraft approaches the runway. Without such a system, safe, low visibility landings would not be possible, and air travel as it is known today could not exist.¹⁶

Although the revised plan for the airport called for an August 1, 1928, opening, it was not until the first of October that, with little fanfare—in fact, nary a mention in the *New York Times*—Newark Airport would finally open officially, featuring a 1,600-foot-long runway, the first hard-surfaced runway of any commercial airport within the United States.¹⁷ In the ensuing months, the airport proved a success as it obtained new air mail contracts, including many of those from Hadley Field, became the rendezvous point for New York sightseeing flights, and quickly became the destination of new commercial flights from numerous cities around the United States.

Throughout the 1930s, Newark's airport prospered, expanding by building more hangars, as well as increasing the runway's length. In addition, Newark became a world leader in the advancement of aviation technology. "As new safety aids for flying were developed, Newark provided a testing ground. Night lifting, paved runways, air traffic control, radio transmittal from land to air and instrument flying were all pioneered at

¹⁵ "Newark's New Airport for the Metropolitan Area." *The New York Times* 19 Feb. 1928: 124.

¹⁶ "Instrument Landing System." *Wikipedia*. 17 Mar. 2006. 27 Mar. 2006
<http://en.wikipedia.org/wiki/Instrument_Landing_System>.

¹⁷ "Newark Metropolitan Airport Buildings." National Parks Service. 27 Mar. 2006
<<http://www.cr.nps.gov/nr/travel/aviation/new.htm>>.

Newark.”¹⁸ With its success, Newark became the world’s busiest airport by 1930. This title was held until 1939,¹⁹ with 117 combined daily arrivals and departures.²⁰ The demise of Newark Airport, however, was soon approaching as New York City Mayor Fiorello LaGuardia completed his city’s first airport, LaGuardia Field.

With the main Newark carriers moving immediately to LaGuardia Field upon its opening due to far less expensive rent, Newark Mayor Meyer C. Ellenstein opted to close the control tower on May 31, 1939. In the airport’s first decade, more than 2,000,000 passengers, 17,000,000 pounds of express mail, and 30,000,000 additional pounds of regular mail had been handled by the airport. However, even high rent was unable to make the airport profitable or even break-even, with a yearly deficit of approximately \$210,000 being covered by the taxpayers of Newark for the years leading up to its close. Although Mayor Ellenstein had protested the transferring of flights from Newark to New York—he cited collusion between the airlines and the City of New York—his pleas were unanswered. Unceremoniously, the world’s busiest airport closed its control tower—prompting the Civil Aeronautics Administration to declare the uncontrolled airport unsafe for flight—victim to a new, larger field.²¹

On April 1, 1941, Newark Airport would reopen, following some improvements, in the midst of negotiations with the four major airlines in the area to return commercial flights to the once bustling field.²² Service at the field, however, would last only slightly more than a year, as the War Department took over the airport in June of 1942, being used as the headquarters for the Atlantic Overseas Air Technical Service Command.

¹⁸ "Newark Metropolitan Airport Buildings."

¹⁹ Ibid.

²⁰ "Big Airlines Quit Newark's Airport." The New York Times 31 May 1940, Late City ed.: 1.

²¹ Ibid.

²² "Newark Airport." The New York Times 1 Apr. 1941: 22.

More than 51,000 war planes passed through Newark, being dismantled upon landing and loaded onto ships at the Port of Newark for transportation to Europe. Although service was disrupted at the airport, the military did help the airport's future, adding runways, acquiring more land, and erecting new buildings. The airport would reopen in February of 1946 with three runways and major commercial routes. In 1947, the Port Authority of New York and New Jersey signed a lease with the City of Newark to take over the airport; the Port Authority has had control of the airport since March 22, 1948. Under the watch of the Port Authority, more land was acquired, giving Newark Airport its present 2,027 acres, and a new instrument runway was built. A new terminal building at the north end of the airport and control tower were also built, giving way to a new era at Newark Airport.²³

²³ Hough, Bill. "Newark International Airport: the First 70 Years." Airliners 1 Sept. 1999: 34-35.

The Jet Age: A Modern Newark Airport Takes Form

With residential areas surrounding three of Newark Airport's four sides, it took a study and Port Authority permission to overcome opposition to jet traffic from nearby residents. The *New York Times* reported, following a request from American and United Airlines to authorize plans to fly jets into Newark, the following:

For the last two years, the [Port Authority] has permitted jets to land at Newark and discharge passengers and freight only when weather conditions were unsuitable for landings at New York International Airport at Idlewild. But the jets must take off empty. [...] Newark will never be considered a first-class modern air terminal so long as its operations are limited to propeller-type aircraft.²⁴

With the support of the F.A.A. chief Najeeb E. Halaby, who noted that Idlewild alone would be unable to meet the New York area's aviation demands with the expected surge in traffic due to the jet age,²⁵ as well as strict noise abatement procedures,²⁶ scheduled jet flights commenced at Newark Airport on September 11, 1961, when a United Airlines Caravelle aircraft (fig. 4) departed Newark for Chicago²⁷ nearly a decade after the world's first commercial jet flight²⁸ and just shy of three years after the first jet flight at Idlewild^{29,30}.

²⁴ "Two Airlines Eye Newark for Jets." *The New York Times* 21 May 1961: S19.

²⁵ "F.A.A. Chief Backs Jets for Newark." *The New York Times* 26 May 1961: 66.

²⁶ Such procedures included requirements for rapid altitude gain and turns following takeoff, power restrictions over residential areas, and altitude limits around residential areas.

"Airlines At Newark Give Pledge on Jets." *The New York Times* 10 Sept. 1961: S11.

²⁷ Hough, Bill. "Newark International Airport: the First 70 Years." *Airliners* 1 Sept. 1999: 33-43.

²⁸ "Aviation: Jet Service." *The New York Times* 30 Mar. 1952: X24.

²⁹ "La Guardia Airport Enters the Jet Age." *The New York Times* 2 June 1964: 75.

³⁰ Renamed John F. Kennedy International Airport shortly after Kennedy's assassination in 1963

With traffic already on the rise—2,861,000 passengers in 1961—and three airlines, TWA, American, and Eastern scheduling jets by the end of the same year, it was clear that Newark's decade-old North Terminal would soon be unable to handle the traffic the jet age would bring, projected at 19,000,000 passengers by 1980. With such a projection, the Port Authority called for the construction of new, modern terminals along the southwest side of the airport. Additionally, the plans called for longer runways and various support buildings. The *New York Times* reported:

[The plan] calls for a new passenger terminal two and a half times the size of the existing terminal, which is to be converted into an aircraft hanger. The airport's two runways are to be modified and extended and a new runway is to be built parallel to and slightly north of the existing instrument runway, 4-22³¹. The new runway system would increase the airport's operating capacity by 50 per cent and extend buffer zones between runways and near-by communities.

In addition, a 120-acre cargo area as well as a 200-acre maintenance area were proposed. Up to seven hangars and a twenty-acre fuel storage area would be provided.³²

In November of 1964, a more detailed description of the planned work was made. This included an expanded terminal complex comprised of four individual terminals, each the size of the existing North Terminal (fig. 5). The four terminal buildings were each to have satellites which would house the gates, in total supporting 76 aircraft, with apron

³¹ Runways are named based on their magnetic direction; when at one end facing the other, the compass heading is rounded to the nearest ten and divided by ten. Each runways surface, thus, has two runways numbers, differing by 18. Should two runways be parallel, R or L is placed after the number to indicate whether the runway is on the right or left side of the other.

³² Hudson, Edward. "Newark Airport to Be Enlarged." *The New York Times* 7 Dec. 1961: 85.

space allowing for 25 more to be parked. Additionally, a parking facility would be built, allowing for 12,000 cars to park at the airport. Finally, in addition to expanding the instrument runway, a second, parallel runway was to be built. While this plan seemed good at first, predictions for what the future would hold brought forth ideas to build a fourth New York area airport.³³

When Newark Airport was ready to actually begin building—October of 1967—new projections for the upcoming years revealed ugly truths, calling for, yet again, the revision of plans. Perhaps the airport’s situation was best summarized by the *New York Times* headline “Newark Airport Grows, but Still Lags.” John P. Veerling, the director of the expansion project, noted “[The expansion] is not going to pick up the demands of the region, but if we don’t do it, it’ll be that much more. It’s better to do all that you can, rather than sit back and do nothing.”³⁴ Even New Jersey Governor Richard J. Hughes was not optimistic, saying as he broke ground on the construction site, “[the expansion] will not afford the solution to the overriding problem of providing sufficient airport facilities to meet the future demands” and that the best solution to the problem would be the building of another airport.^{35,36} The F.A.A., in its own report, strongly suggested, in addition to improving the three New York airports, the building of a fourth, as well as the increase in landing fees and fares during peak times, and the decrease of both during off-peak times, in an attempt to keep down delays come the expected influx of traffic over

³³ Honig, Milton. "Newark Airport to Build 4 Terminals." *The New York Times* 11 Nov. 1964: 45.

³⁴ Burrows, William E. "Newark Airport Grows, But Still Lags." *The New York Times* 9 Oct. 1967: 49.

³⁵ "Hughes Helps Start Expansion Project At Newark Airport." *The New York Times* 11 Oct. 1967: 34.

³⁶ The Governor’s proposal of a Central-Jersey airport was quickly nixed due to a combination of congested airspace and long distance from New York City. Other plans that would move the site to Northern New Jersey, at the Great Swamp, were met with sharp criticism by residents of the highly populated area, environmentalists, and one of the Governor’s campaign pledges. The plan would eventually be scrapped, and no fourth airport would be built in New Jersey.

Sullivan, Ronald. "Jetport is Urged in North Jersey." *The New York Times* 1 Apr. 1967: 33.

the ensuing years.³⁷ With the newly introduced jumbo jets—expected to enter service during the construction of the terminals—Newark’s four-terminal project was reduced to three, larger terminals. In addition to a changed gate layout, 2,000 of the planned 12,000 parking spaces were removed to accommodate the new terminals.

In addition to setbacks caused by the changing aviation industry, transportation to the airport became another setback. While the Pennsylvania Railroad’s tracks are at one point less than a mile from the airport, congestion problems during peak hours led to the decision that the train would not be a viable option to shuttling passengers to the airport. With an increase in expected car and bus traffic, the lengthening and improvement of State Routes 1 and 22, along with the widening of the New Jersey Turnpike, became entered in the expansion plan. Apart from simply changing blueprints, these revisions also increased the projected cost of the expansion from \$150 to \$200 million.³⁸

By 1966, eleven airlines were occupying the North Terminal, which had recently been expanded to squeeze in more gates. Initial construction on the 425-acre terminal site began with land preparation in the fall of 1965; as was the case when Newark Airport was first built, the land was marsh that needed to be filled before building could take place. To do this, mud was brought, by barge, from offshore and piped to the new terminal area.³⁹

With construction underway, Airlines quickly began to plan for what the future would hold at Newark Airport. Pan American Airways (Pan Am) announced in November of 1965 their intention to spread international flights from Kennedy International—at the time, the only New York area airport to service international

³⁷ "F.A.A. Study Calls for New Airports." *The New York Times* 14 Feb. 1968: 93.

³⁸ Burrows, William E. "Newark Airport Grows, But Still Lags." *The New York Times* 9 Oct. 1967: 49, 94.

³⁹ Hough, Bill. "Newark International Airport: the First 70 Years." *Airliners* 1 Sept. 1999: 33-43.

destinations—to Newark. Noted Pan Am President Harold E. Gray, demand for international destinations among residents of northern New Jersey was on the rise and the airline wanted to make travel more convenient than requiring passengers to make their way out to Queens, New York. Pan Am's press release listed intentions to lease counter space and six gates as soon as the first of the new terminals at Newark was to open, with flights to Bermuda and Puerto Rico initially planned, as well as other destinations as demand dictated.⁴⁰ Pan Am also addressed the issue of jet aircraft noise, citing that, upon the completion of the runway extension, additional flights would not increase the noise levels in the areas surrounding the airport.⁴¹

While construction went smoothly and according to plan, Newark's luck was such that more problems would arise before the expansion was complete. As 1970 came to a close, Newark saw not the expected surge in air traffic, but a massive slump. Compared to 1969, traffic had fallen by more than 10%, and nearly 20% compared to 1968. Indeed, the loss of traffic was so dramatic that the F.A.A. lifted a quota on hourly landings and takeoffs—put in place to ease congestion in much of the Northeast in June of 1969—for Newark Airport, leaving them in place at Kennedy and LaGuardia. Still looking towards the future, though, Newark officials noted that a recession in the airline industry had hindered air traffic throughout the United States, with all three New York airports seeing a loss in traffic, although Newark was the hardest hit. With environmental impacts likely restricting expansions at Kennedy, Newark looked to the future to bring more traffic, and

⁴⁰ This schedule would eventually be revised, with flights beginning in 1968, well before the completion of the terminal construction. Since Newark Airport did not yet have Customs facilities, such flights were made possible only by U.S. Customs offices set up at the island airports.

"Pan Am to Step Up Newark Flights." The New York Times 18 Sept. 1968: 93.

⁴¹ "Overseas Service At Newark Airport Will Begin in 1969." The New York Times 5 Nov. 1965: 73.

potentially future expansions when the New York airports next reached their maximum capacity.⁴²

As construction progressed at Newark Airport, one setback arose over the issue of minority labor. Leaders of the black community made numerous claims that Essex County construction unions systematically discriminated against blacks, keeping them from joining the unions and thus working on the massive Newark Airport construction. By the end of 1971, the problem had become serious enough that the Port Authority set specific goals for the number of minority construction workers to be working on new contracts.⁴³ As 1972 began, construction unions received additional pressure from Washington to hire minorities. In addition, six major airlines—frustrated with the 14-month quarrel between black leaders and the unions that effectively brought a stalemate to construction on the first two terminals since the spring of 1971—announced their endorsement of a plan created by Newark’s black leaders to require substantial numbers of Puerto Rican and black workers to be hired to finish construction on the two partially-built terminals.⁴⁴

In the meantime, as the new terminal buildings were under construction, Newark took its first step, ““a relatively modest step””⁴⁵ noted airport manager Joseph L. Vanacore, in its goal to become an international hub by 1976, by opening a customs area within the terminal. With plans to convert the terminal into a full international arrivals terminal pending the completion of the new terminals, when domestic airlines would

⁴² Lindsey, Robert. "Traffic Off At Newark Airport as Expansion Nears Completion." The New York Times 6 Dec. 1970: 147.

⁴³ Lindsey, Robert. "Port Agency to Award Contract Setting Job Goals for Minorities." The New York Times 3 Nov. 1971: 66.

⁴⁴ Lindsey, Robert. "Integration May End Newark Airport Building Stoppage." The New York Times 27 Feb. 1972: 71.

⁴⁵ "Customs Area Opens At Newark Airport." The New York Times 12 Dec. 1972: 93.

move to the new buildings, praise was strong for Newark, which celebrated that New Jersey residents would no longer have to travel to New York (Kennedy Airport) to fly internationally. The culmination of this plan was to occur in 1976, when the third new terminal, earmarked for international arrivals, was to be completed, bringing Newark Airport's international abilities to the same sophistication as Kennedy's.

As the final touches to the first two terminals, A and B, were being completed, Newark's future looked extremely promising. The only major New York airport with room to expand, Newark handled only 6.7 million passengers in 1972, compared to Kennedy's 20.7 million and LaGuardia's 14.2 million.⁴⁶ Rechristened Newark International Airport, Terminal A opened on August 8, 1973, eight years after construction began, serviced by four airlines; Terminal B followed soon after, opening for traffic in mid-September (fig. 6). With the new terminals, the old terminal was officially renamed the North Terminal, "relegated to handling infrequent international and charter flights."⁴⁷

The early 1970s saw no end to the slowing of air traffic from the high levels of the late 1960s. In part because of the Arab oil embargo, costs for air travel continued to rise, with airlines taking action in order to protect themselves from debt. American Airlines, for example, cut 21.6% of its flights between October of 1973 and January of 1974. Salaries and employee numbers were also cut. While American was one of the more strongly hit airlines, the cuts they made were not too unusual throughout the

⁴⁶ Lindsey, Robert. "Newark Airport, Area's Oldest At 45, Facing a Rebirth." The New York Times 1 July 1973: 169.

⁴⁷ Hough, Bill. "Newark International Airport: the First 70 Years." Airliners 1 Sept. 1999: 36.

industry.⁴⁸ Because of the industry-wide industry crisis, Terminals A and B were not even filled to capacity, when less than a decade earlier forecasters said the completion of all three terminals would not be enough to meet all air traffic demand for the area. By this time, Newark had also not been given the international flights expected, with scheduled service only to the Bahamas, Bermuda, and Toronto. While Newark was designed to process 18 million passengers yearly, its 1973 volume was just 6.8 million. With this news, Newark halted for three years the construction of Terminal C in the middle of 1974, realizing the terminal would not be needed until the airline industry became revived.⁴⁹

In 1977, light began to shine down on Newark's recent grim period. The year was the first since 1969 where more than 7 million passengers passed through the airport's gates.⁵⁰ In addition, plans were finally set to bring a trans-Atlantic flight to Newark, with TWA flying a wide body Boeing 707 (fig. 7) to London on April 30, 1978, as 300 spectators watched the departure from Terminal A while sipping champagne with TWA officials. TWA also announced plans to expand service to Frankfurt on June 8.⁵¹ Additionally, United Airlines announced in April of 1978 their intention to add Boeing 747 and Douglas DC-10 (fig. 8) wide body service to Newark in early June, along with an overall increase in flights, upping their passenger capacity by 33.6%. In total, United would bring 29 daily flights to the airport, more than at either Kennedy or LaGuardia.⁵²

⁴⁸ Lindsey, Robert. "Airlines Throttle Back to Salvage Profits." The New York Times 20 Jan. 1974, sec. 3: 1-2.

⁴⁹ "Newark's Air Terminal C Expected to Be Postponed." The New York Times 13 Jan. 1974: 90.

⁵⁰ Hough, Bill. "Newark International Airport: the First 70 Years." Airliners 1 Sept. 1999: 36.

⁵¹ "First Overseas Passenger Flight Takes Off From Newark Airport." The New York Times 1 May 1978, sec. B: 8.

⁵² Cook, John. "United Airlines to Increase Flights From Newark Airport on June 6." The New York Times 20 Apr. 1978: 23.

The year 1978 also brought another blessing to Newark Airport, the Airline Deregulation Act of 1978. Since 1938, it had been the job of Civil Aeronautics Board (CAB) to oversee airline fares, routes, and schedules as if the industry were a public utility. In doing so, fares for short-haul routes were held back at the expense of high-priced long-haul routes, regardless of the wishes of the airlines. The CAB was well known for its long chain of bureaucracy, which often resulted in airlines waiting for years to receive a decision. For example, Continental Airlines waited for eight years until a Federal court ordered the CAB to approve a new Denver to San Diego route. By the mid-1970s, as the airlines pulled out of their slump, Congress worried about the possibility that another airline crisis could force major carriers into bankruptcy, and hearings on deregulation began. On October 24, 1978, President Carter signed the Airline Deregulation Act, which, among many provisions, took away the price controls of the CAB, allowing the airline industry to be exposed to market forces.⁵³ Without regulations on airfares, low-cost airlines were able to form. Among the many was PEOPLExpress

The airline that started service on April 30, 1981, with a handful of ex-Lufthansa 737-100s [fig. 9], transformed Newark from a sleepy backwater into a busy aviation hub. Air Florida, Capitol Air and New York Air also took advantage of Deregulation and started serving Newark. These new, inexpensive flights caused airline passengers to rediscover the airport west of the Hudson and also promoted the major carriers to add service. Traffic growth was dramatic: in 1984, Newark's 345,200 aircraft movements exceeded those at both La Guardia and JFK—343,100 and 306,700,

⁵³ "Airline Deregulation Act." [Wikipedia](http://en.wikipedia.org/wiki/Airline_deregulation). 2 May 2006. 14 May 2006 <http://en.wikipedia.org/wiki/Airline_deregulation>.

respectively. Two years later, Newark regained its title as the region's busiest airport when it handled 29,433,000 [passengers], versus 27,224,000 at JFK.⁵⁴

Based in the run-down North Terminal when its operations commenced, PEOPLExpress, in January, 1985, reached an agreement with the Port Authority to finish the last part of Terminal C, which, since June of 1984, had been used as a temporary international arrivals terminal. Instead of building Terminal C as originally planned—consisting of three satellites, like Terminals A and B—a new design featuring two linear concourses with a 41-gate capacity was chosen. While Terminal C was finally completed more than two decades after ground was broken, PEOPLExpress would not survive to see its new home, being bought out by Continental Airlines in 1987. Continental opened its portion of Terminal C, used for domestic flights, in May of 1988, and the North Terminal was forever closed to passenger traffic, destined for demolition a decade later. As the 1980s came to a close, Newark Airport's passenger traffic fell from its record numbers in the middle of the decade, but cargo traffic skyrocketed, increasing 312% over the decade, with Federal Express and United Parcel Service both building their own facilities at the airport. Before the end of the decade, international arrivals also moved to Terminal B, with numerous European carriers joining U.S. airlines in flying daily international flights into the airport. The huge success of the 1980s would pave the way for Newark Airport to expand further in upcoming years, transforming the airport into a 21st century international airport.⁵⁵

⁵⁴ Hough, Bill. "Newark International Airport: the First 70 Years." *Airliners* 1 Sept. 1999: 37.

⁵⁵ *Ibid.*

Newark Airport Enters the 21st Century

Since 1990, Newark Airport has been making numerous expansions and renovations to allow for more traffic and ease of use for passengers. The expansions have included more gates, more room for larger aircraft, longer runways, and more comfortable terminals. While many renovations to the airport have affected the many diverse airlines that serve the airport, it is Continental Airlines, the largest carrier at Newark Airport, which has spurred the most construction, centered around its Terminal C.⁵⁶

In addition to numerous long-distance domestic and international flights, Continental's route system includes many short-haul regional flights operated by its subsidiary, Continental Express. In 1994, Continental opened its new terminal, C-4, for Continental Express. The 28,000 square foot building had access to an adjacent aircraft ramp, with room for 28 aircraft. This terminal would serve Continental Express well as it retired its propeller-driven fleet, favoring regional jets. However, it would not last long, giving way to a greatly expanded Terminal C within a decade.

In early 1996, Newark Airport completed construction on a new part of Terminal B, an international arrivals area designed to help Newark continue its quest to attain more international flights. The \$120 million project resulted in a 250,000 square foot building that, while not out of the ordinary on the outside, was described as "unquestionably one of the cleanest airport buildings in the world. Not just hygienically, but esthetically, too."⁵⁷ With the size of the building came two benefits. First, Newark Airport's capacity

⁵⁶ Hough, Bill. "Newark International Airport: the First 70 Years." *Airliners* 1 Sept. 1999: 38.

⁵⁷ Muschamp, Herbet. "Next to Godliness, At Newark." *The New York Times* 26 Jan. 1996, sec. B: 1+.

for wide body international arrivals nearly doubled, from eight to fifteen. Second, the extra space and expansive immigration hall allowed for customs processing at a rate of 3,000 people per hour.⁵⁸

As Newark Airport continued to grow, transportation became an issue, as well. When the current terminals were designed in the 1960s, provisions were made for a transportation system among the terminals. In the early 1990s, this transportation system, a monorail, would be planned, allowing not only for people to more easily move about the airport, but also for expansions to rail lines, an idea that had not come to fruition since first proposed around the time of the airport's beginning. After more than a year of delays during construction, the first stage of the monorail, connecting the three terminals and the parking lots at each far end, opened on May 31, 1996, at a cost of \$350 million (fig. 10). Two enormous advantages provided by the monorail instantly were known travel times between terminals, when traffic jams on the roads connecting the terminals were so common, as well as an ease in making connections, especially for international passengers who often arrived at Terminal B, with their connections leaving from Terminals A or C.⁵⁹

In 1998, as Continental continued to dominate the scene at Newark Airport with an ever-expanding domestic and international schedule, the first discussions of another major expansion took place between Continental and the Port Authority. The two groups set the foundation for a possible expansion of the airport, whose traffic had grown by 30% in the past decade, with a potential cost of upwards of \$1 billion. Of that,

⁵⁸ Hough, Bill. "Newark International Airport: the First 70 Years." *Airliners* 1 Sept. 1999: 38.

⁵⁹ Sullivan, John. "Long-Delayed Monorail to Open At Newark Airport." *The New York Times* 30 May 1996, sec. B: 7.

Continental was prepared to commit \$700 million to the Global Gateway Project, as they would be, by far, the largest beneficiary of any expansion.⁶⁰

On June 28, 1999, a unanimous vote by the board of the Port Authority approved the Newark expansion, expected to cost \$1.37 billion, of which Continental was slated to pay at least \$590 million. In addition to Continental adding gates—Continental planned to add 12 gates to its current 44—the plan called for Newark to receive new roads and parking structures. At a time when Newark Airport was the number one most delayed airport in the country, the project approval was a blessing to Continental, which was responsible for one quarter of the traffic among the three metropolitan airports.⁶¹

As the airport was in the midst of its expansion, the terrorist attacks of September 11, 2001, hit the airport, with one of the four hijacked aircraft leaving the airport. While the attacks had a profound affect on security measures at the airport, they did not serve to alter the construction. In fact, less than two months following the attacks, the Newark Airport Station was opened, completing the decade-long, \$769 million monorail project. Nearly 75 years after the airport's opening, it finally had a connection to local rail lines—NJ Transit and the PATH—which provide service into New York, allowing for Amtrak connections, as well as stops throughout New Jersey.⁶² In tribute to those who lost their lives in the September 11th attacks, Newark International Airport was officially renamed Newark Liberty International Airport in 2002, although locals rarely use the new name.⁶³

⁶⁰ "Expansion Considered for Newark Airport." The New York Times 20 Jan. 1998, sec. B: 4.

⁶¹ Ramirez, Anthony. "Projects for Kennedy and Newark Approved." The New York Times 22 June 1999, sec. B: 2.

⁶² Johnston, David C. "A Rail Link From New York to Newark Airport." The New York Times 25 Nov. 2001, sec. TR: 3.

⁶³ "Newark Liberty International Airport." Wikipedia. 13 May 2006. 15 May 2006
<http://en.wikipedia.org/wiki/Newark_Liberty_International_Airport>.

On December 6, 2001, Continental unveiled its C-3 concourse, which brought the total number of gates at Terminal C to 60, 10 more than the combined 27 and 23 at Terminals A and B, respectively. The new Terminal C, featuring two Continental Presidents' Clubs, food courts, restaurants, and numerous retail outlets, from office supplies to electronics and cosmetics, was extremely well received, and was judged by *Airport Retail News* to have some of the finest retail concessions at any airport in the U.S. In addition to amenities for passengers, the new terminal also offered a ramp control tower for Continental to effectively control its own ground operations and a state-of-the-art baggage system. For Continental, the expansion project culminated with the opening of its \$80 million international arrivals facility on March 28, 2002. Designed specifically for Continental, the new facility can process 1,500 passengers per hour and aids in connections between Continental flights.^{64,65}

As Continental expanded, the rest of the airport was not left behind. Both Terminals A and B have been upgraded, with newer systems to handle baggage and ease airport operations, as well as amenities to cater to passengers, such as shops and airline club lounges. Also, in May of 2003, the FAA commissioned the new control tower, the fourth in the airport's history, which was built over the course of four years at a cost of \$22.4 million. The 325-foot tall building replaced the control tower built in 1960, affectionately dubbed "the toothbrush" due to its unusual shape (fig. 11).⁶⁶

⁶⁴ "Continental Airlines - History 2001 to Now." 2006. 15 May 2006
<<http://www.continental.com/company/history/2001-2010.asp>>.

⁶⁵ "Newark International Airport." Port Authority of NY & NJ. 15 May 2006
<<http://www.panynj.gov/aviation/ehisfram.htm>>.

⁶⁶ Ibid.

Conclusion

Now a few years into the 21st century, Newark Airport has proven itself a major international terminal, ranked the 22nd busiest airport in the world (13th in the U.S.) in 2004 with just shy of 32 million passengers, and the 21st busiest airport for cargo traffic, with over 920,000 tons, fueled in large part because of Federal Express' Newark Airport automated sort facility.⁶⁷ With dozens of airlines operating from the airport, one can travel from Newark across North America, as well as to South America, Europe, Africa, and Asia on regularly scheduled flights, including many of the world's longest flights, with nonstop destinations including Singapore (the current longest flight), Hong Kong, Beijing, and New Delhi.⁶⁸

In 1927, the City of Newark began planning for an airport to be built on a marsh. Attaining some mail contracts and commercial flights, the airport expanded into the golden age of flight, when air travel was a luxury for the rich. As time progressed, new aircraft were built, and Newark Airport entered the jet age in the shadow of its neighboring New York fields. Although its future looked bleak numerous times, Newark Airport kept expanding, becoming the airport it is today, a gateway to the world.

⁶⁷ "World's 30 Busiest Airports by Passengers and Cargo, 2004." Infoplease. 15 May 2006 <<http://www.infoplease.com/ipa/A0004547.html>>.

⁶⁸ "Newark Liberty International Airport." Wikipedia. 13 May 2006. 15 May 2006 <http://en.wikipedia.org/wiki/Newark_Liberty_International_Airport>.

Appendix A: Photographs

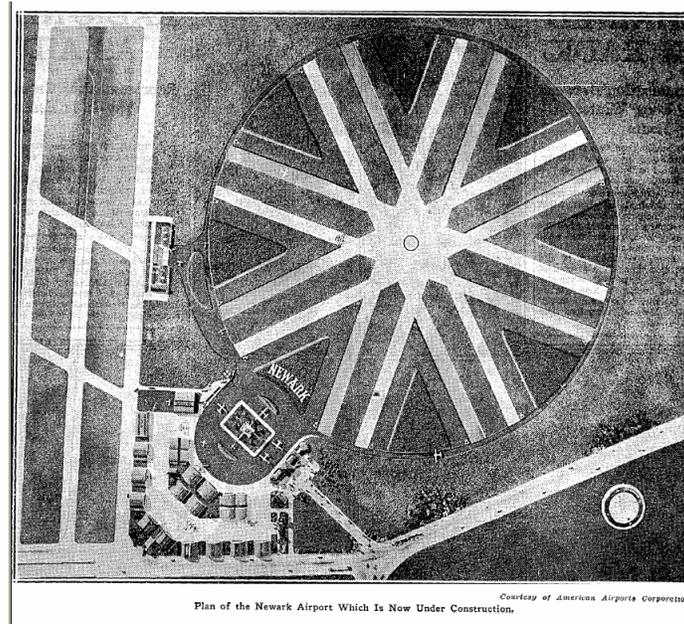


Figure 1. The original plan for Newark Airport. The airport features a circular landing area, allowing for safe landings regardless of the direction of the wind.

From: "Airports Linked in New England." *The New York Times* 20 May 1928: 139.

<p>NORTH AMERICAN AIRWAYS, Inc. Wishes to announce they are now ready to receive inquiries regarding their complete course in FLYING Including Thoro Ground Instruction 51 EAST 42D STREET NEW YORK</p>	<p><i>Learn to fly</i> NEWARK-ELIZABETH AIRPORT <i>Nearest Flying Field to New York City</i> Ten-Hour Flying Course—\$150.00 Elementary Course—\$25.00 WACO PLANES TRANSPORT PILOTS NEWARK-ELIZABETH AIRPORT Operated by Reich Air Transport OFFICES 800 Broad St., Newark, N. J. 349 W. Grand St., Elizabeth, N. J. Flying Field located Newark-Elizabeth City Line, on Elizabeth Ave., northeast three blocks of the Duran Factory.</p>				
<p>AIR ASSOCIATES, INC. "The Aviation Clearing-House" COMPLETE SERVICE TO PASSENGERS, PILOTS, BUILDERS OR BUYERS Nashua Radio Talk Station W3SG 535 5th Ave. (44th St.) Murray Hill 9397</p>	<table border="1"> <tr> <td data-bbox="716 1331 911 1430"> <p>LEARN YOUR WINGS WITH U. S. VOLUNTEER AIR SERVICE. 500 27th Ave., N. Y. C. First Wings Grant subject to exam. Also make time square with your job and receive wages. Offered through ground school training in all sections, required by Department of Commerce regulations, and includes the French Pupin Method. Also our instructor evening from 7 to 10 P. M. Secretary of U. S. at 4th St. & 4th Av. Saturdays at Hotel Maryland, 49th St. & 4th Av.</p> </td> <td data-bbox="915 1331 1099 1430"> <p>THE NEW YORK AVIATORS' CLUB For Young Men and Women Instruction is given in flying, parachute jumping and emergency flying. The Club has ten planes ready and in use. Flying instructions from ex-army pilots. For full information write SECRETARY 116 Lexington Avenue, N. Y. C.</p> </td> </tr> <tr> <td data-bbox="716 1436 911 1526"> <p>HANGARS Designers and manufacturers of individual or large fireproof steel hangars. GEO. W. THOMAS, Representative Butler Manufacturing Co. New York City, New York Telephone Building 6200, 44 Whitehall St.</p> </td> <td data-bbox="915 1436 1099 1526"> <p>American Eagle Agency for Northern New Jersey Passenger Flying and Instruction Arcola Flying Field Address: FREDERICK TRAUTWEIN R. F. D. No. 1, Hackensack, N. J. Telephone Hackensack 2272-37</p> </td> </tr> </table>	<p>LEARN YOUR WINGS WITH U. S. VOLUNTEER AIR SERVICE. 500 27th Ave., N. Y. C. First Wings Grant subject to exam. Also make time square with your job and receive wages. Offered through ground school training in all sections, required by Department of Commerce regulations, and includes the French Pupin Method. Also our instructor evening from 7 to 10 P. M. Secretary of U. S. at 4th St. & 4th Av. Saturdays at Hotel Maryland, 49th St. & 4th Av.</p>	<p>THE NEW YORK AVIATORS' CLUB For Young Men and Women Instruction is given in flying, parachute jumping and emergency flying. The Club has ten planes ready and in use. Flying instructions from ex-army pilots. For full information write SECRETARY 116 Lexington Avenue, N. Y. C.</p>	<p>HANGARS Designers and manufacturers of individual or large fireproof steel hangars. GEO. W. THOMAS, Representative Butler Manufacturing Co. New York City, New York Telephone Building 6200, 44 Whitehall St.</p>	<p>American Eagle Agency for Northern New Jersey Passenger Flying and Instruction Arcola Flying Field Address: FREDERICK TRAUTWEIN R. F. D. No. 1, Hackensack, N. J. Telephone Hackensack 2272-37</p>
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<p>Designers and Builders of Airports William E. Arthur & Co. Incorporated Aeronautic Engineers and Builders 292 Madison Avenue, New York, N. Y. Telephone FAirmont 1289 FLYING CLUBS now organizing has limited membership open to those men interested in aviation. Applicants must have fair education and be physically fit. LAWRENCE CHURCH, 2254 Times Bldg.</p>					

Figure 2. A display of classified advertisements located on the same page as the large *New York Times* article "Newark's New Airport for the Metropolitan Area."

From: "Newark's New Airport for the Metropolitan Area." *The New York Times* 19 Feb. 1928: 124.



Figure 3. Dedicating the administration building, a terminal topped with a control tower, on May 16, 1935.

From: "Newark Metropolitan Airport Buildings." National Parks Service. 27 Mar. 2006 <<http://www.cr.nps.gov/nr/travel/aviation/new.htm>>.



Figure 4. United Airlines Caravelle, Newark Airport, August, 1965.

From: Vallillo, Anthony. "United Airlines Sud SE-210 Caravelle VI-R." Airliners.Net. 2 May 2002. 16 May 2006 <<http://www.airliners.net/open.file/0240045/M/>>.

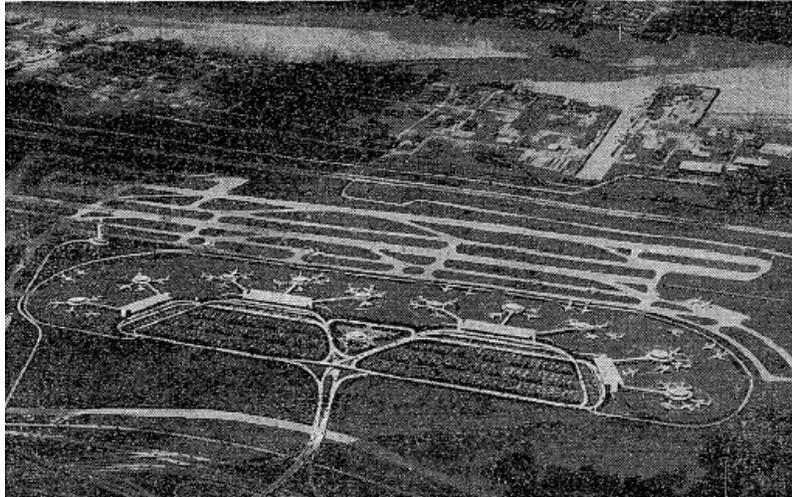


Figure 5. A picture depicting the four proposed terminals.

From: Honig, Milton. "Newark Airport to Build 4 Terminals." The New York Times 11 Nov. 1964: 45.

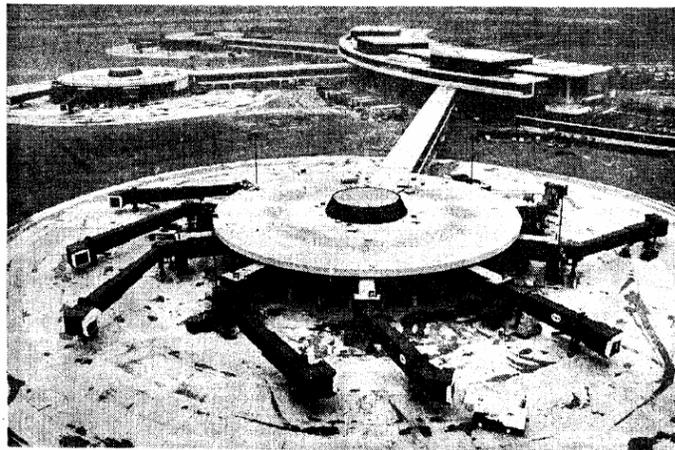


Figure 6. Concourse A-3 just before Terminal A was opened in 1973.

From: Burks, Edward C. "Newark Opening First of 3 Terminals." The New York Times 6 Aug. 1973: 59.



Figure 7. A TWA Boeing 707 parked at Newark, November 25, 1978.

From: Chaloner, Howard. "Trans World Airlines (TWA) Boeing 707-331." [Airliners.Net](http://www.airliners.net). 20 Nov. 2002. 16 May 2006 <<http://www.airliners.net/open.file/0295539/M/>>.



Figure 8. A United 747 parked at Newark, with a United DC-10 tail showing in the background, April 13, 1979.

Chaloner, Howard. "United Airlines Boeing 747-122." [Airliners.Net](http://www.airliners.net). 8 Apr. 2005. 16 May 2006 <<http://www.airliners.net/open.file/0812862/M/>>.



Figure 9. A PEOPLExpress 737 at Newark, April 30, 1983.

Chaloner, Tim. "PEOPLExpress Boeing 737-130." Airliners.Net. 19 June 2004. 16 May 2006 <<http://www.airliners.net/open.file/0602541/M/>>.



Figure 10. The Newark Airport Monorail.

"New York Airtrain." Railway Technology. 16 May 2006 <<http://www.railway-technology.com/projects/airtrain/airtrain7.html>>.

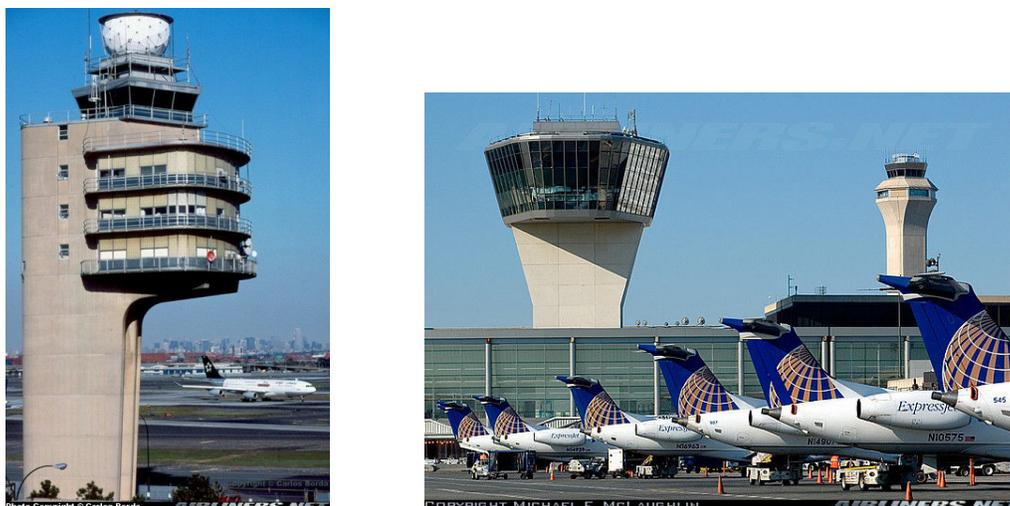


Figure 11. (Left) The old Newark Control Tower, built in 1960. (Right) The Continental ground control tower (foreground) and new Newark tower (background)

Borda, Carlos. [Airliners.Net](http://www.airliners.net). 23 July 2001. 16 May 2006
<<http://www.airliners.net/open.file/0176727/M/>>.

McLaughlin, Michael. [Airliners.Net](http://www.airliners.net). 15 Oct. 2005. 16 May 2006
<<http://www.airliners.net/open.file/0941219/M/>>.



Figure 12. An array of international airlines parked at Terminal B. Seen, foreground to background, are Virgin Atlantic (UK), El Al (Israel), Singapore Airlines, Malaysia Airlines.

Borda, Carlos. [Airliners.Net](http://www.airliners.net). 1 Jan. 2004. 16 May 2006
<<http://www.airliners.net/open.file/0483049/M/>>.



Figure 13. A busy day at Newark in May of 2001.

Preis, Joe. [Airliners.Net](http://www.airliners.net). 10 May 2001. 16 May 2006
<<http://www.airliners.net/open.file/0162154/M/>>.



Figure 14. A 737 departs on one of Continental's numerous flights from Newark.

Brett, Art. [Airliners.Net](http://www.airliners.net). 30 June 2004. 16 May 2006
<<http://www.airliners.net/open.file/0625792/M/>>.

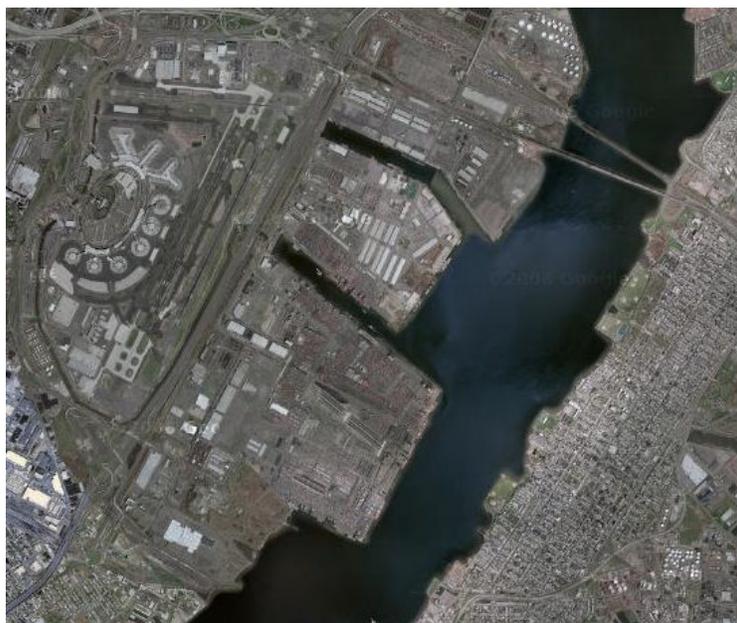
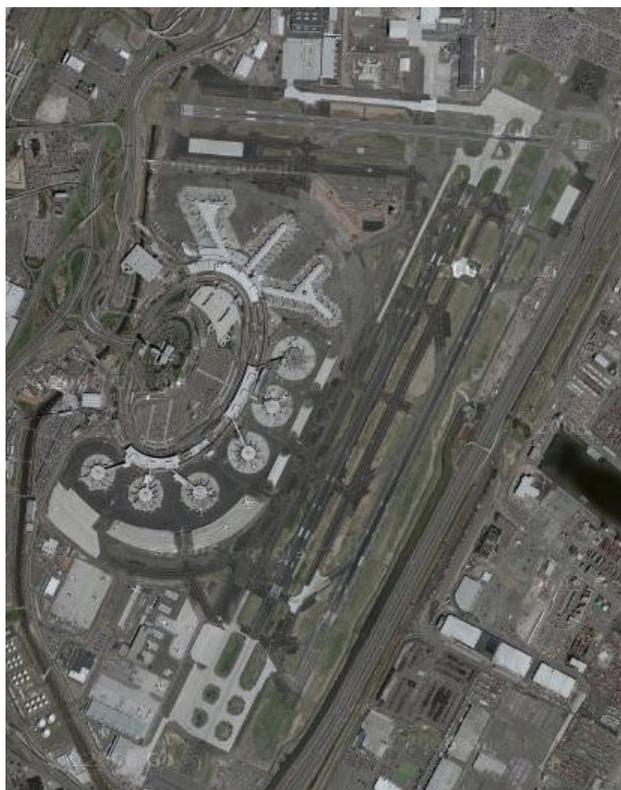


Figure 15. Two overviews of Newark Airport. (top) Note the size of Terminal C in comparison to Terminals A and B. (Bottom) Also, note the airport's proximity to Newark Bay.

From: "Newark Airport." Google Maps. 15 May 2006 <<http://maps.google.com>>.

Appendix B: Charts

Newark Airport Statistics While Under Port Authority Control

Year	Plane Movements	Passengers	Air Cargo (in short tons)	Air Mail (in short tons)
1949*	93,463	834,916	40,574	2,891
1960	163,378	2,935,613	58,313	10,557
1970	204,595	6,460,489	157,301	37,401
1980	196,781	9,223,260	107,167	38,227
1990	379,653	22,255,002	495,407	61,351
1995	420,546	26,626,231	958,419	84,818
1997	462,889	30,945,857	1,069,545	86,216
1998	455,833	32,575,874	1,074,642	120,134
1999	457,974	33,622,686	1,084,660	123,079
2000	450,289	34,188,701	1,070,380	123,015
2001	439,275	31,100,491	913,126	73,029
2002	405,816	29,220,775	906,164	38,868
2003	405,734	29,428,899	890,712	73,611
2004	437,828	31,908,556	995,313	89,913
*First full calendar year of Port Authority operations				

From: "Newark International Airport." Port Authority of NY & NJ. 15 May 2006
 <<http://www.panynj.gov/aviation/ehisfram.htm>>.

Airlines Currently Serving Newark Airport

- Air Canada
- Air France
- Air India
- Air Jamaica
- Air Plus Comet (Seasonal)
- Air Tran Airways
- Alaska Airlines
- Alitalia (Italy)
- America West
- American Airlines
- American Eagle
- British Airways
- Chautauqua
- Comair
- Continental
- Continental Express (Express Jet)
- Czech Airlines
- Delta
- Delta Express
- El Al (Israel)
- EVA Airways (Taiwan)
- Flybe British European
- Jet Blue
- KLM Royal Dutch Airlines
- Lot Polish
- Lufthansa (Germany)
- Malaysia
- Mexicana
- Miami Air (Charter)
- Midwest
- Northwest
- Qantas (Australia)
- SAS (Scandinavia)
- Singapore Airlines
- Swiss
- TAP Portugal
- United Airlines
- United Express
- USA3000
- US Airways
- US Airways Express
- Virgin Atlantic (United Kingdom)

From: "Newark International Airport." Port Authority of NY & NJ. 16 May 2006
<<http://www.panynj.gov/aviation/ealframe2.html>>.