

CANADA'S WEST COAST INTERNATIONAL GATEWAY: VANCOUVER, BRITISH COLUMBIA

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Vancouver International Airport enjoys the dual distinction of being Canada's principal gateway to Asia and an attractive destination and transfer point for North American and European passengers. To maintain that lead, the Vancouver International Airport Authority launched an ambitious \$350-million expansion program in 1992 that includes a new runway and international terminal building. The new terminal, now under construction, will secure Vancouver's future as one of the world's premier gateways.

POISED FOR GROWTH

Increased international activity at Vancouver is inevitable. British Columbia's commerce and industries — including the seaport, cruise ship lines, and ski resorts — draw travelers in growing numbers from around the world. Vancouver's proximity to Asia, Europe, and the United States makes it an attractive transfer point for connecting passengers. Already Vancouver has captured 15 percent of all air traffic from the Pacific Rim to the west coast of North America.

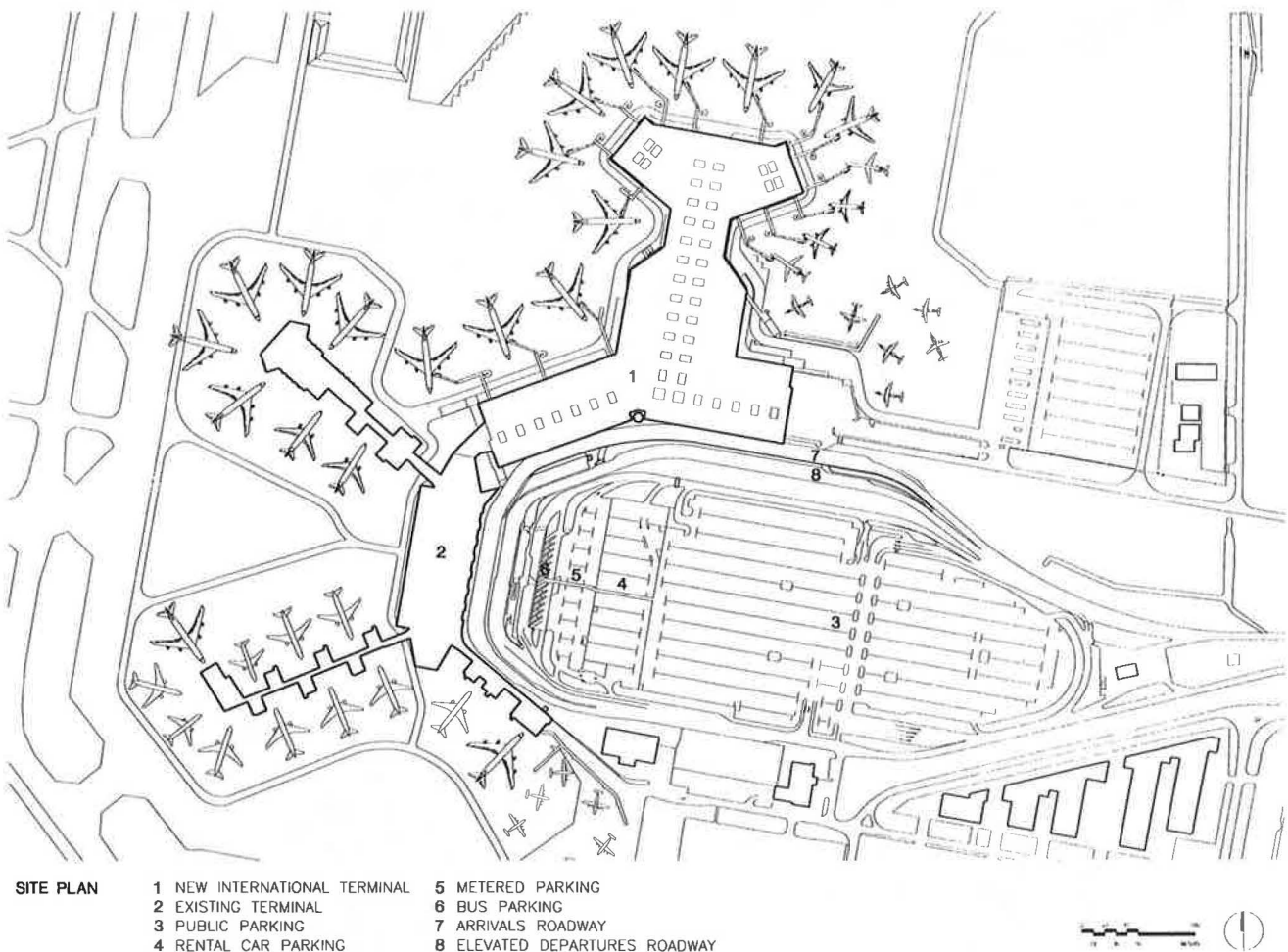
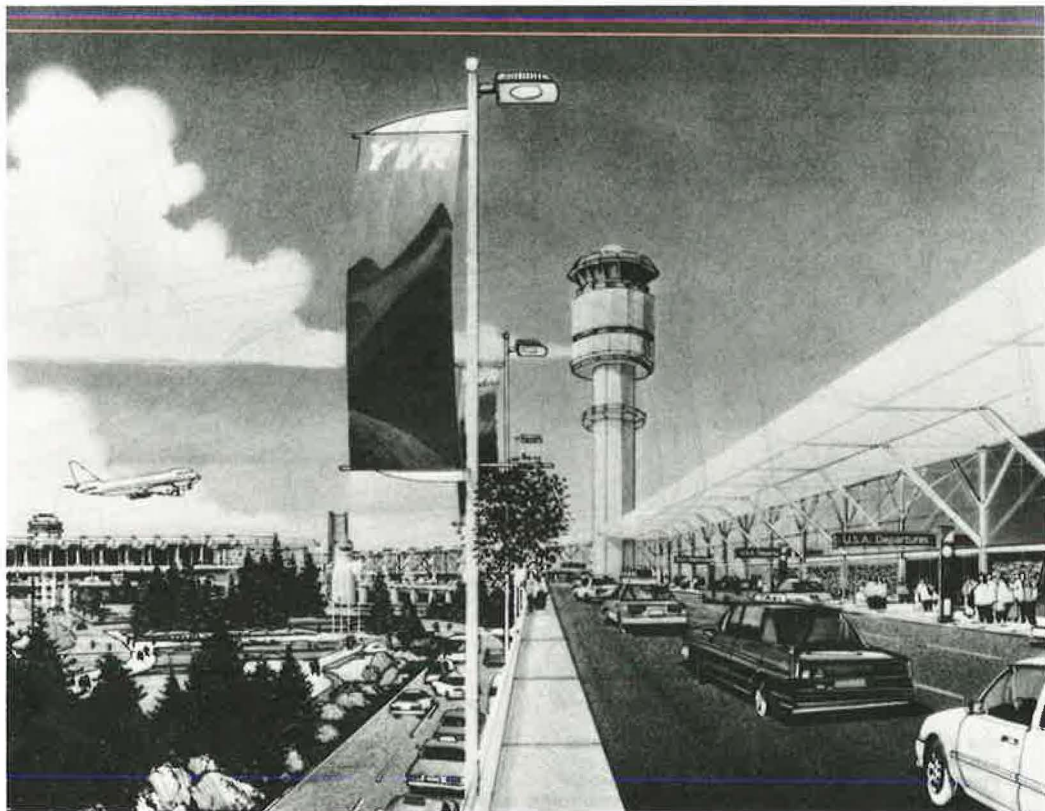
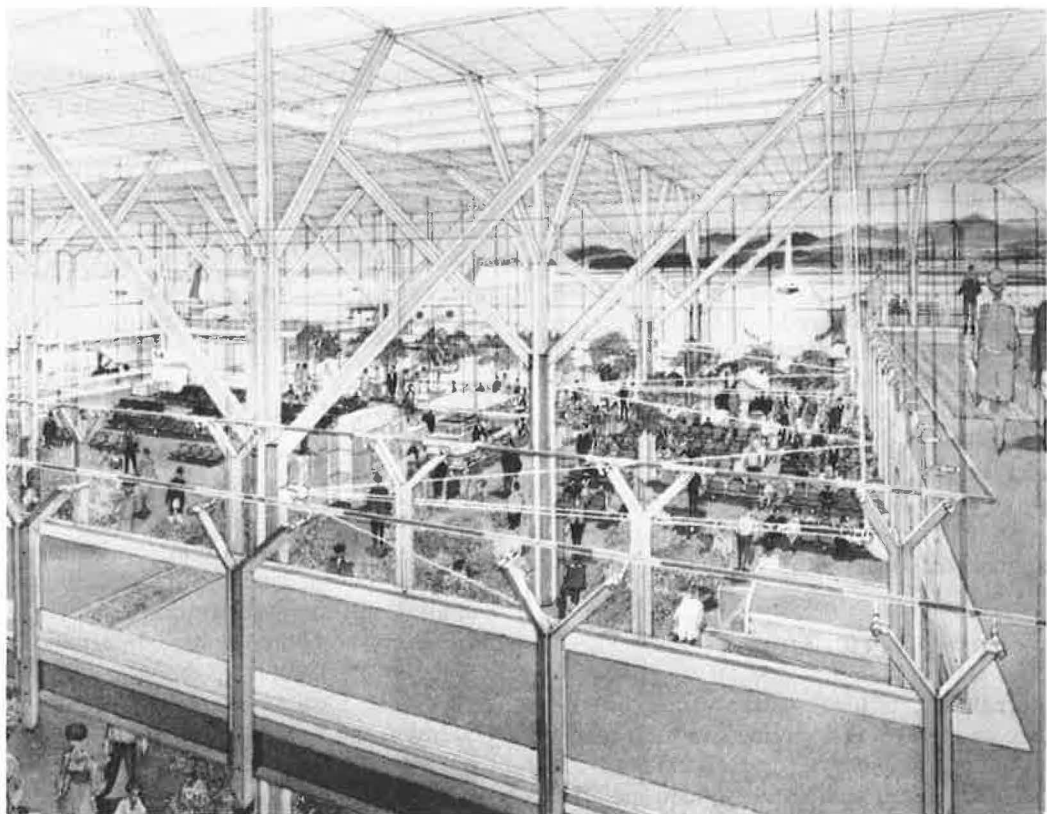


FIGURE 1 Site plan of Vancouver International Airport terminal.







Currently 16 major carriers and 14 regional airlines serve Vancouver. Approximately ten million passengers flowed through the airport in 1993. By 2010, more than half the airport's projected 20 million annual passengers will be international.

Today the existing passenger terminal struggles to handle both domestic and international passenger activity. It operates at capacity during peak periods, experiencing overcrowding and reduced levels of service. The new international terminal will change all that.

Designed by HNTB Corporation in association with Vancouver architects Waisman Dewar Grout Carter, Inc., the new terminal building with an area of 1.1 million square feet will be twice the size of the existing building. Initially it will serve up to 6.2 million annual passengers, and it can later be expanded to handle over 10 million annual passengers.

A TASTE OF BRITISH COLUMBIA

The new international terminal will have high ceilings, large skylights, and glass walls offering panoramic views of the surrounding mountains, coastal waters, and Vancouver skyline. Local stone and wooden materials will add warmth and character to the public spaces.

Captivating displays, including giant murals, museum artifacts, and specially commissioned art will depict British Columbia's past and present.

Graceful steel columns that mimic trees in a forest will support the roof and floors. Branch-like column struts will reduce roof beam spans, allowing widely spaced columns. The structure will efficiently resist the forces of man and nature while allowing passengers to see through the building to the distant landscape.

TERMINAL BUILDING DESIGN

Passenger Flow

Passenger circulation within the building has been a particular design challenge. International passengers cannot legally mix with "transborder" passengers bound to or from the United States. International passengers will depart from gates on the west side of the terminal. Transborder passengers, after processing through a U.S. Federal Inspection Services (FIS) facility, will depart from gates on the east side.

Arriving international and transborder passengers, if not connecting to another international flight, will walk

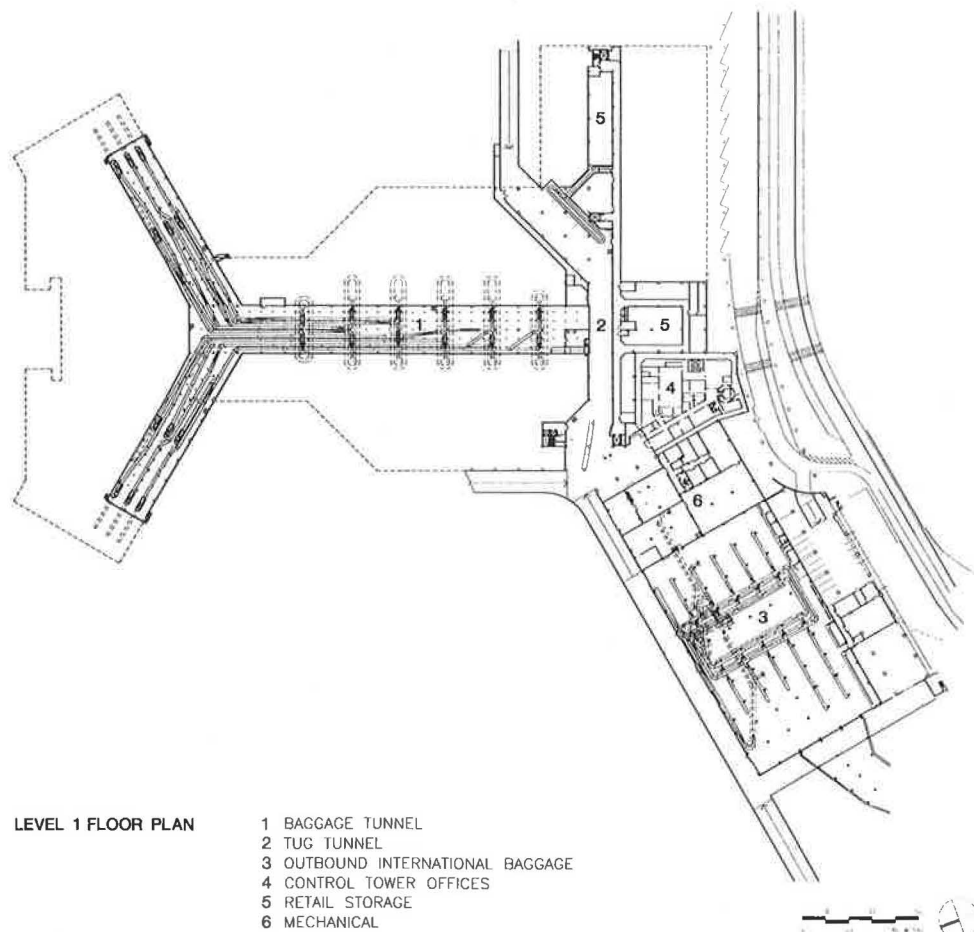


FIGURE 2 Vancouver International Terminal, level 1 floor plan.

in secure corridors to a Canadian Inspection Services (CIS) facility, where they will claim their baggage and officially enter Canada. Arriving international passengers transferring to transborder flights will have the convenience of a dedicated baggage claim area and streamlined CIS facility next to the FIS facility.

Flexible Facilities

The building will have common-use ticketing, check-in, baggage handling, and gate facilities to reduce the required building area and operational costs. Common-use facilities are feasible because not all airlines experience peak activity simultaneously. The shared use of counters, baggage-sort piers, departure lounges and loading bridges, for example, lets an airline use facilities not needed by other carriers at a given time.

The 120 ticketing and check-in counters in the new terminal will use common-use terminal equipment (CUTE), which allows any airline to use any counter without change of equipment. Automated outbound baggage sorting systems will efficiently distribute baggage to flight-assigned sort piers. Most of the terminal's 15 jet gates will handle B747-400 size aircraft, with expansion capability for even larger future-generation aircraft.

Baggage Handling

There are eight separate baggage systems, two of which are automated. Each will read 10-digit bar-coded baggage tags and automatically sort the bags to appropriate piers for manual loading into carts or containers. The outbound international baggage system

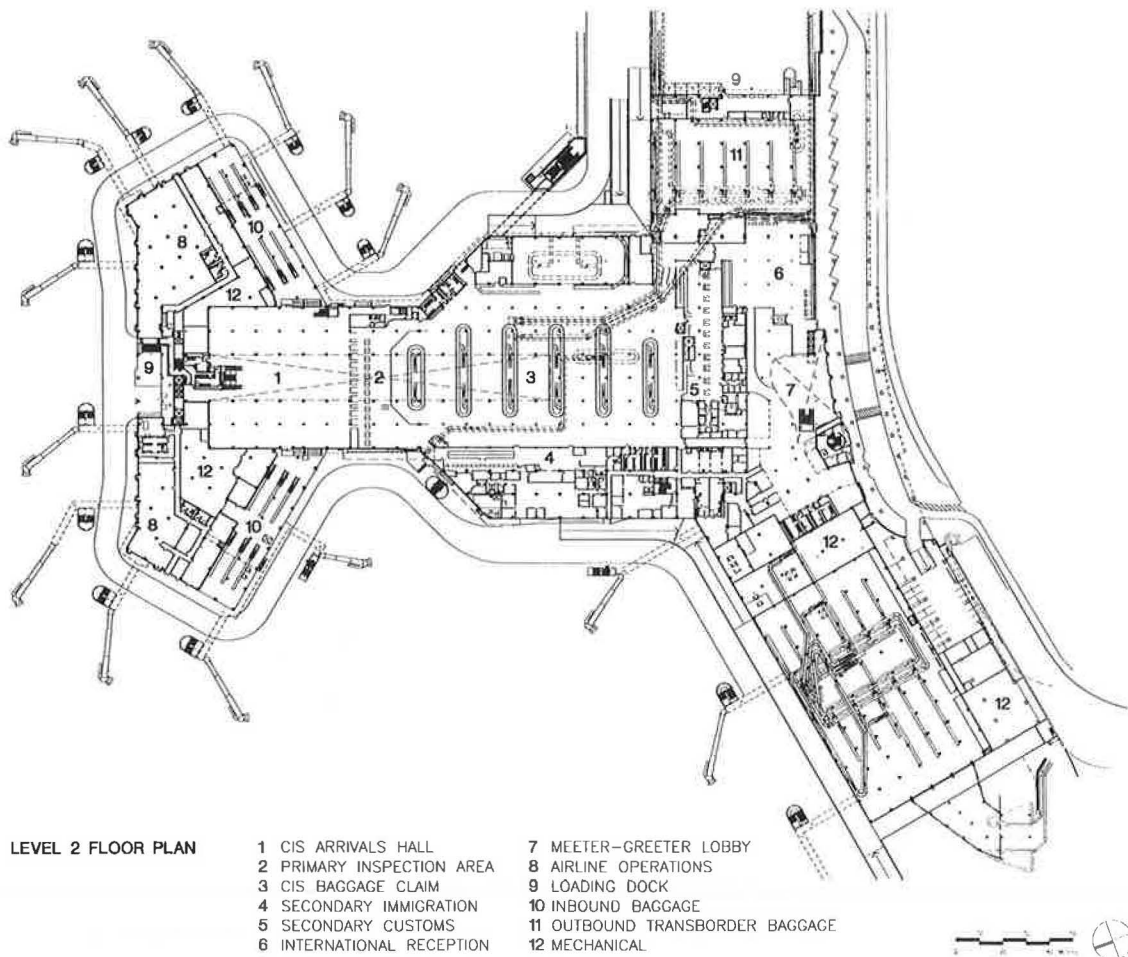


FIGURE 3 Vancouver International Terminal, level 2 floor plan.

has two sorting loops and 14 piers to handle up to 120 bags per minute. The outbound transborder baggage sorting system with a single loop and seven piers will handle up to 60 bags per minute.

Inbound international and transborder baggage conveyors will feed six sloped-bed claim carousels in the CIS hall. Each of these claim units, among the largest in the world, will display the baggage from a fully-loaded B747-400. There are five other baggage conveyor systems in the building for handling special transfers such as international-to-transborder, international-to-domestic, and cruise ship passenger baggage.

Retail Development

About 7 percent of the floor area in the terminal building will be dedicated to concessions, including a consumer-oriented mix of retail and eating

establishments located where passengers are most likely to linger.

At the center of the terminal a concession court, flanked by the international and transborder check-in lobbies, will mimic the ambience of Vancouver's popular Granville Island marketplace. This colorful, diversified shopping environment will attract departing passengers and their well-wishers, as well as some early "meeter-greeters" from the international arrival lobby below.

There will be even more shopping and eating opportunities for passengers blended into the lounge seating areas near the departure gates. Passengers will be able to shop or buy refreshments only a few feet from their gates while awaiting their boarding calls.

Customs Facilities

Almost one quarter of the total floor area of the terminal building will be devoted to CIS and FIS

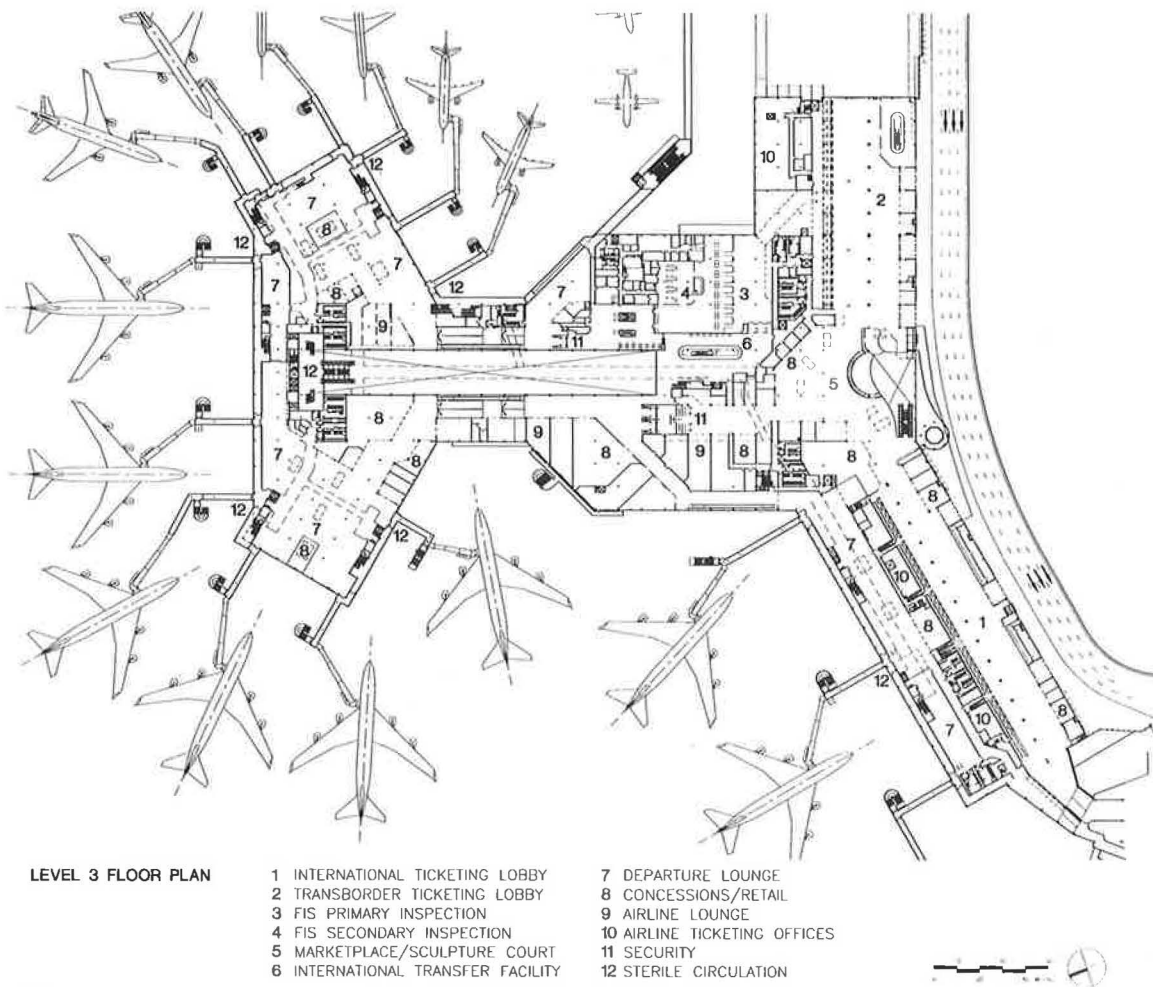


FIGURE 4 Vancouver International Terminal, level 3 floor plan.

inspection facilities. The CIS portion, with over 196,000 square feet of space, will have 30 primary inspection and 22 secondary customs positions to process up to 2,900 arriving passengers per hour. From the gates, arriving international passengers will walk or ride moving walkways on an interior sky bridge overlooking the departure level and CIS facility below. Passengers will then descend by escalators or elevators to the CIS hall.

On average, a passenger will walk only 525 feet from an arrival gate (not including the assistance of moving walkways) to the inspection hall. This distance compares favorably to 800 to 1,200 feet at most other airports.

The FIS facility, comprising 34,000 square feet, will process up to 1,400 departing passengers per hour. FIS processing at Vancouver, called preclearance, allows passengers to arrive at any airport in the United States without the need for further FIS passenger inspection.

CONSTRUCTION FUNDING AND SCHEDULE

The estimated construction cost of the new terminal project is around \$250 million (Canadian). Funding will come from an Airport Improvement Fee (AIF) paid by departing passengers (41 percent), a loan from a consortium of financial institutions (48 percent) and revenue from airport operations (11 percent).

Construction will take 24 months, with a scheduled June 1996 completion date. There are multiple construction contracts, including separate contracts for baggage conveyors, passenger loading bridges, and structural steel. The airport expansion is currently British Columbia's largest public works project.

When completed, the new international terminal will offer all the conveniences of a modern air terminal while portraying British Columbia's vitality and heritage to

