



NORTHWEST REGIONAL AIRPORT AIRPORT MASTER PLAN

SUMMARY

JANUARY 2014



BUILDING A MASTER PLAN

What is the Purpose of a Master Plan?

The purpose of the Northwest Regional Airport (NWRA) Master Plan is to provide a long-term (20 year) planning framework for the facility. It is intended to act as a guide for future development, allowing the airport to grow in a way that is consistent with community goals and objectives. It is also intended to provide a platform from which the airport can be expanded in a comprehensive, cost effective and efficient manner. The Master Plan is intended to be a “living document”, it will be updated on a regular basis to ensure it continues to accurately guide all airport developments in line with the changing needs of the airport business, the communities and region that it supports.

Airport Vision

Provide a safe, reliable aviation facility for the use of all stakeholders. This facility will be self-supporting, will foster growth of the communities it serves and improve the overall economic value of the area.

The vision is an important guiding principle for the development and operation of an airport. As a Regional Airport the Board of Directors and the Airport Management continue to refer to the vision of the airport to guide the strategic thinking and investment in the airport facilities and infrastructure.

The primary strategic direction provided by the NWRA within the Master Plan is captured in the following points:

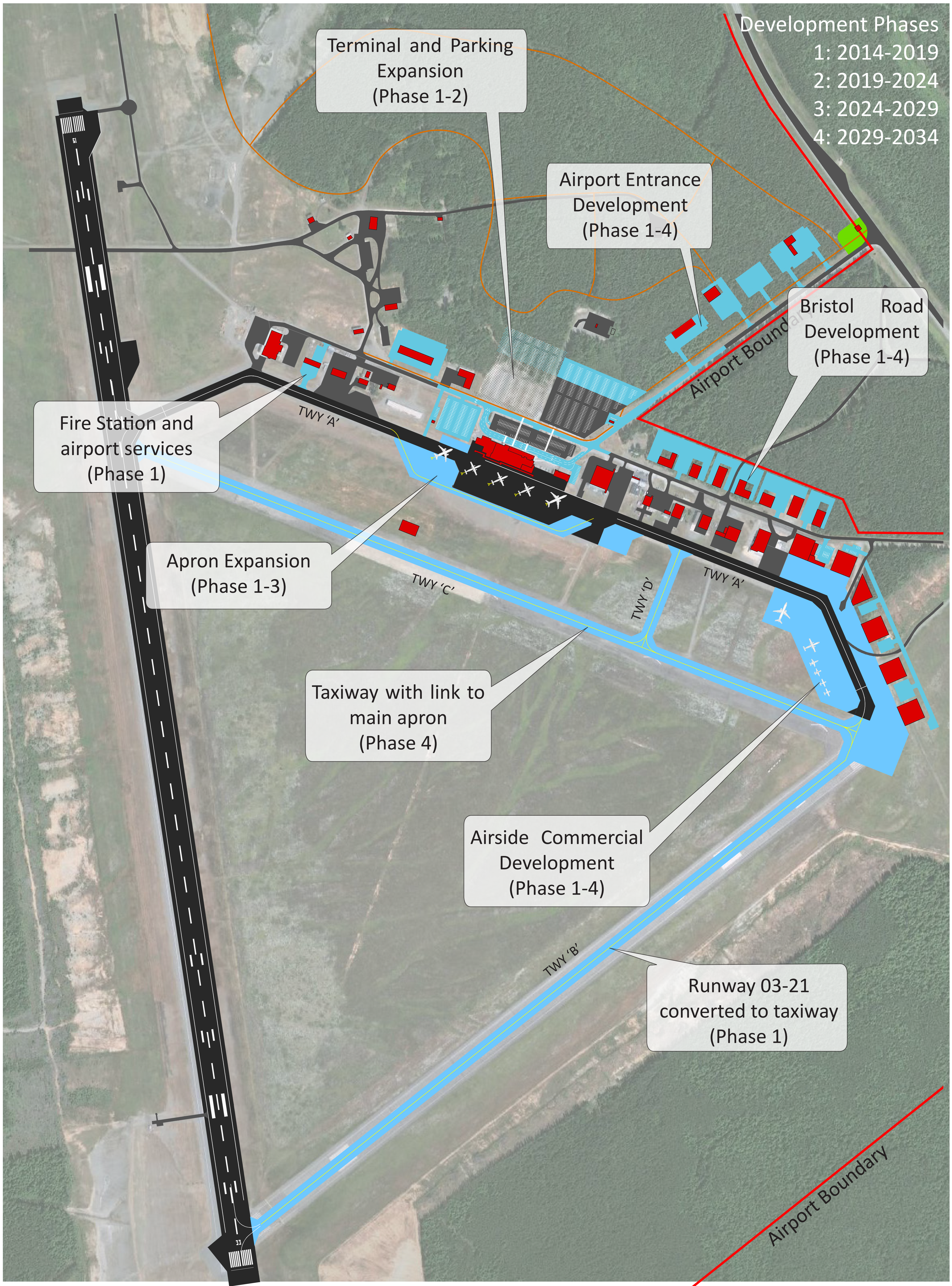
- To manage and operate the airport in a safe, secure and efficient manner
- Provide a true regional airport to Northwest BC
- Advance economic and community development in the region
- Maximize commercial revenue
- Achieve ongoing financial viability

Airport Description

The boundary for the Northwest Regional Airport contains 780 hectares or 1,930 acres of land. The airport land is situated 5.5 kilometres south of the centre of the City of Terrace, on the south side of the Skeena River.

The airport is the busiest in Northwest British Columbia in terms of aircraft and passenger movements. Recent growth due to significant investment into construction projects in the region is expected to continue over the short to long-term due to the demand for resources.

The airport has two runways, only one of which has instrument approach procedures. It has a 24 hour flight service station and four commercial airlines operating out of the passenger terminal building.



SUMMARY

AVIATION ACTIVITY AND FORECASTS

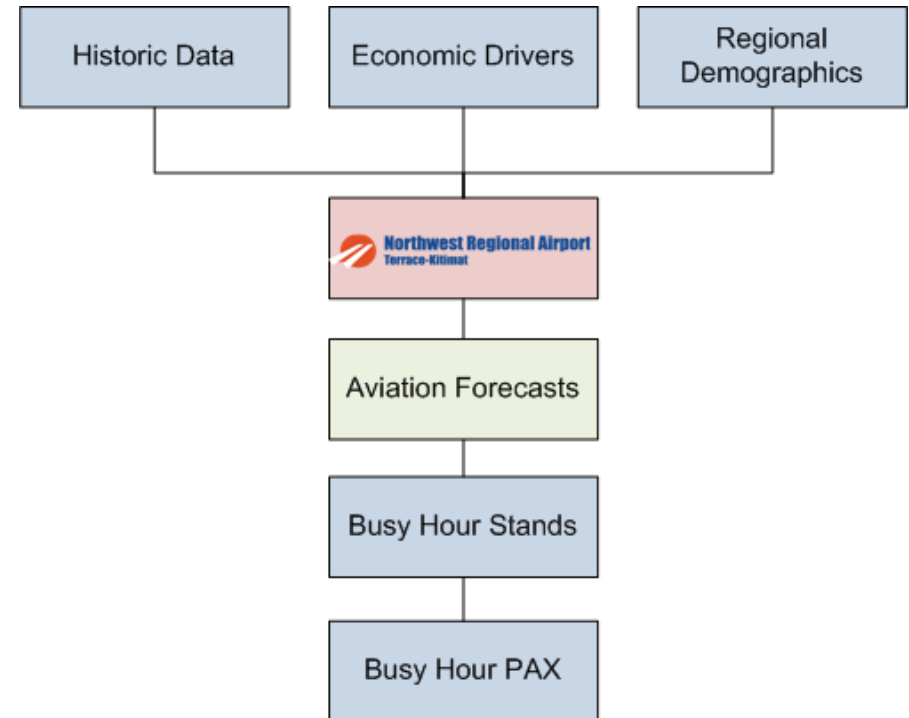
The Northwest Regional Airport finds itself in a unique situation where current forecasts provided by government organizations such as Transport Canada and Stats Canada are outdated due to the local economic changes in recent years. Terrace and Kitimat have been the focus of many Oil and Gas companies for potential large scale investment, which directly impacts the local economy and the aviation demands for the region.

The Northwest Regional Airport is the closest and best equipped airport in the region to handle the expected increase in aviation demand. The forecasting methodology employed within the Master Plan take the local economic conditions into account by using historical data, information on economic drivers and regional demographics. This provides a growth profile specific to the local conditions which is then used to create the aviation forecasts.

Aviation forecasts include annual passenger and aircraft movement numbers which are broken down into hourly aircraft parking demand (amount of aircraft on the ground at one time) and hourly passenger demand (amount of passengers in the terminal at one time). These planning parameters guide the sizing of all airport facilities in the Master Plan.

In 2013, the Northwest Regional Airport handled 177,600 passengers – a 28% increase from the previous year. It is forecast that strong demand will continue in the short-term, surpassing 250,000 passengers in the next 5 years.

Once the construction phase of large projects in the region is completed, it is expected that demand at the airport will reflect local conditions and will grow at a gradual pace, returning to around 250,000 passengers by the end of the planning horizon of the Master Plan (2034).



Forecasting Methodology

SUMMARY

AIRFIELD

The Northwest Regional Airport is already pursuing the conversion of Runway 03-21 to a taxiway (TWY 'B'), hence it is assumed that this change will occur in the short-term. The Master Plan outlines development of two additional taxiways (TWY 'C' and 'D') to the current layout which will provide benefit to airfield efficiency as aircraft movements increase. It is expected that TWY C and D development will occur in the longer-term (beyond 2024) as private operators continue to develop airside commercial lots east of the terminal building.

The short-term development of the primary apron will provide space for larger Code C aircraft (Boeing 737 and Airbus A320). This expansion will provide sufficient apron capacity through the projected growth period. Additional capacity will only be required should scheduled aircraft continue to add services at similar times throughout the day. This is not expected until after 2024.

Airfield expansion also requires more service equipment to maintain facilities. The Master Plan has provided provision for increased maintenance facilities to the west of the terminal building. A critical feature of this reserve area is its access to all operational facilities. This feature also makes this area ideal for a fire service station which will be required at the airport after three consecutive 6 month periods of more than 185,000 annual passengers. Based on forecast passenger figure, a fire station will be needed by 2016.

The Master Plan development for the airfield has been broken down into the following five year increments:

2014 - 2019

- Conversion of Runway 03-21 into Taxiway 'B'
- Expansion of main apron to allow for an extra power-in and power-out stand for Code C aircraft (including jets)
- Development of airport fire station
- Airfield lighting and electrical upgrade
- Runway 15-33 overlay

2019 - 2024

- No major airfield developments

2024 - 2029

- Expansion of main apron to allow for an extra power-in and power-out stand for Code C aircraft (including jets)

2029 - 2034

- Development of Taxiway 'C' to provide link between TWY 'A' and TWY 'B'
- Development of Taxiway 'D' between main apron and Taxiway 'C'

SUMMARY

TERMINAL

The existing terminal building is generally in good condition. However, many processors are approaching their capacity due to recent growth in passenger numbers. Over the 20-year study period, the increased demand at the airport is expected to require the terminal to almost double in size.

Mvt Type	2015	2024	2029	2034
Arr	130	138	147	155
Dep	168	178	189	199

Busy Hour Passengers

Given that the peak hour passenger growth represents the addition of one or two new flights in the peak hour it is likely that incremental expansion will be built to respond to the 2034 forecast and generally occur within the next 10 years. This is primarily due to three factors:

- Construction/operational considerations (phasing)
- Operational life of extended building (a minimum of 10 years prior to realizing capacity)
- Level of Service/passenger experience

Currently the most urgent upgrades to the terminal building include the following functions:

- Check-in counter and queue space
- Pre-board Screening (PBS) and Hold Baggage Screening (HBS)
- Holdroom
- Terminal office space

The Master Plan development for the terminal building has been broken down into five phases over the next 10 years:

2014 - 2019

- Western Terminal Expansion (Phase 1) – Holdroom, outbound baggage room, new office space, expanded security area
- Arrivals Expansion (Phase 2) – Replace inbound baggage unit, relocation of NWRA staff and tenants to the new office space developed in Phase 1
- Restaurant Redevelopment (Phase 3)

2019 - 2024

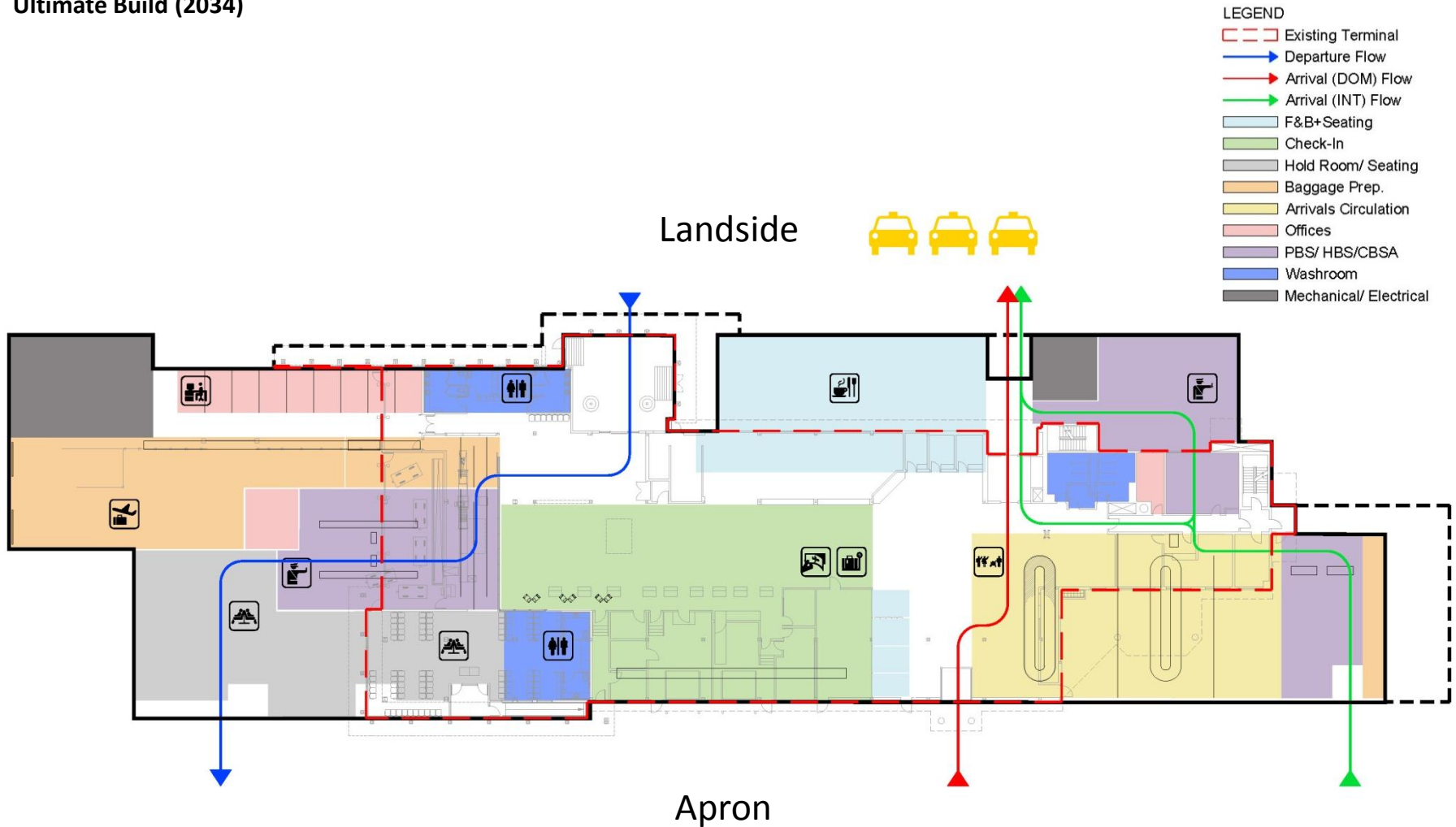
- Central Terminal Refurbishment (Phase 4) – Expanded check-in, Interior modifications to public areas
- Canadian Border Services Agency (CBSA) Development (Phase 5) - New inbound baggage unit #2, new CBSA facilities

Note: Approval of CBSA facility development is at the discretion of the CBSA.

The following page provides the conceptual layout for the terminal building based on the anticipated improvements listed above.

SUMMARY TERMINAL

Ultimate Build (2034)



Terminal Concept Functional Areas and Passenger Flows

GROUND ACCESS AND PARKING

Airport Access

Max Neubacher Way is expected to continue to be the main access point to the primary facilities at the Northwest Regional Airport. The existing approach to the terminal building provides adequate traffic flow features to ensure access through the life of the Master Plan. It is expected that minimal changes will be required to the general flow of traffic from the airport entrance to the terminal building. The Master Plan outlines the following important features in planning ground access for any future development:

- One-way flow across terminal front (curb)
- Segregate parking traffic away from the terminal curb
- Segregate other (non-traveller) traffic away from the terminal curb

Parking

Airport parking is directly related to the amount of people going through the terminal. It is expected that the demand for parking over the planning horizon of the Master Plan will increase by 70%. The 2034 demand is forecast to be similar to the demand levels expected during the peak of major construction projects in the region. Therefore, a significant increase in parking capacity will be required in the next five years. To reduce costs, the airport will continue to develop a mix of paved and gravel long-term parking lots.

The following ground access and parking developments are expected within the Master Plan:

2014 - 2019

- Development of new parking lots to accommodate staff and rental cars as short-term lot reaches capacity
- Development of bus stalls and long-term parking lots as demand from construction projects increases

2019 - 2034

- Paving of gravel parking lots as demand increases after construction projects are completed

COMMERCIAL DEVELOPMENTS

Airside Commercial Expansion

The initial opportunity to expand airside commercial lands is to extend east of the existing lots on Bristol Road. The benefit of expansion in this area is that commercial development will be kept to one precinct of the airport while core airport maintenance services that require access to the airfield and terminal will have a dedicated precinct to the west of the terminal building.

This eastern development on Bristol Road creates an isolated area for private operations that does not impact the scheduled service operations using the terminal building and main apron. Also, with the planned decommissioning of Runway 03-21 this area will be able to extend onto Taxiway B, which can be converted into an uncontrolled Taxilane.

Bristol Road Development

An area of land which does not have airside access has been identified as suitable for light industrial purposes. These lands are located on the north side of Bristol Road, which is consistent with the City of Terrace Official Community Plan (OCP). This is a logical location for groundside development as it is in close proximity to existing serviced lots. The intent is to promote developments within this area which are synergistic to the airport. Typical uses within this district include: airport maintenance and operational facilities, car rental facilities, self-storage facilities, light manufacturing and fabricating shops.

Airport Entrance Development

The western side of Max Neubacher Way is defined in the City of Terrace OCP to be designated as Groundside Commercial. The area of focus at the intersection of Max Neubacher Way and Highway 37 has direct exposure to all airport road traffic and also exposure to traffic on the Highway that links the cities of Terrace and Kitimat. As development in Terrace and Kitimat grows it is expected that the traffic volume between the two will increase.

The concept which has been created for this area illustrates how the lands could be developed to accommodate uses such as:

- Entrance feature for the Northwest Regional Airport
- Interpretive Centre and trail head parking area leading into the airport recreational area
- Service Station with car wash facility (for passengers, car rental and passing traffic)
- Cell phone lot for those wanting to pick up passenger from terminal curb
- Aviation themed restaurant or drive-thru restaurant
- Motel (for aviation staff and passengers remaining overnight)
- Office complex (for aviation related uses)

SUMMARY

IMPLEMENTATION

The development concept outlined in the Master Plan will be implemented in a staged manner to meet the identified demand. Immediate focus will be placed on the terminal building, public parking lots, and apron as these areas are currently the most constrained.

Work Underway

The public parking lot expansion started at the end of 2013. The airport has cleared land to prepare for the increasing demand of passengers wanting to park and fly.



Contact

Please contact the airport for questions regarding the Master Plan and current expansion work.

Northwest Regional Airport, Terrace-Kitimat

info@yxt.ca

Suite 103, 4401 Bristol Road
Terrace BC V8G 0E9

+1 (250) 635-2659