
FACILITY REQUIREMENTS

INTRODUCTION

This chapter will assess the ability of the existing landside facilities at William R. Fairchild International Airport (CLM) to accommodate the future activity levels presented in the Aviation Demand Forecast chapter. Any deficiencies found in the capability of these facilities to meet forecasted demand will be identified. This analysis is limited to landside facilities, including the passenger terminal area, air cargo facilities, Fixed Base Operator (FBO) facilities, aircraft apron and hangar areas, aviation support facilities, access and vehicle parking, and utilities. In addition, the analysis will include county and regional Emergency Services needs, and non-aviation related development and other potential development options. The airport's airfield facilities (runways, taxiways and Nav aids) will be discussed in the next Chapter.

REQUIREMENTS ASSESSMENT

Identification of landside capacity and requirements for the airport will be determined using a combination of quantitative techniques developed by the FAA, the consultant and/or other industry-accepted methodologies. The areas to be examined include the following:

- ◆ **The Terminal Area:** Includes the passenger terminal building, terminal apron, automobile parking, security needs, and other facilities necessary to support commercial aviation activity.
- ◆ **Aircraft Storage Requirements:** This will include tiedown aprons for both based aircraft and transient airport users and the hangars needed for the storage of based aircraft, and FBO facilities and services. Aircraft apron and parking areas suitable for long-term storage of large corporate aircraft will be specifically identified. Automobile parking locations for users of the general aviation facilities and their capacity will also be evaluated. Vehicle circulation around and on the airport is examined to assure the safe separation of aircraft, personnel, and vehicle traffic.
- ◆ **Utilities and Drainage:** The adequacy of existing utility systems to meet current and future demand will be noted. Recommendations will be provided for those systems that require improvements or increased capacity due to airport

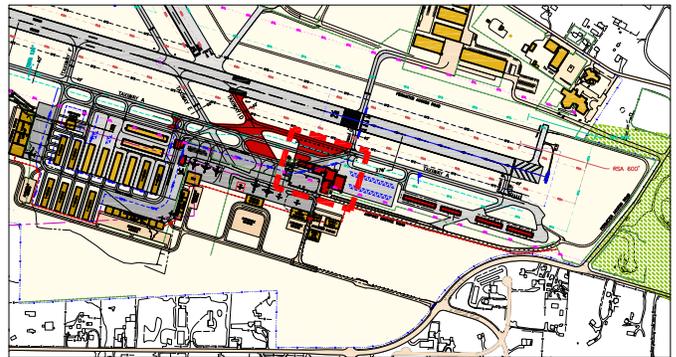
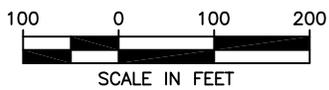
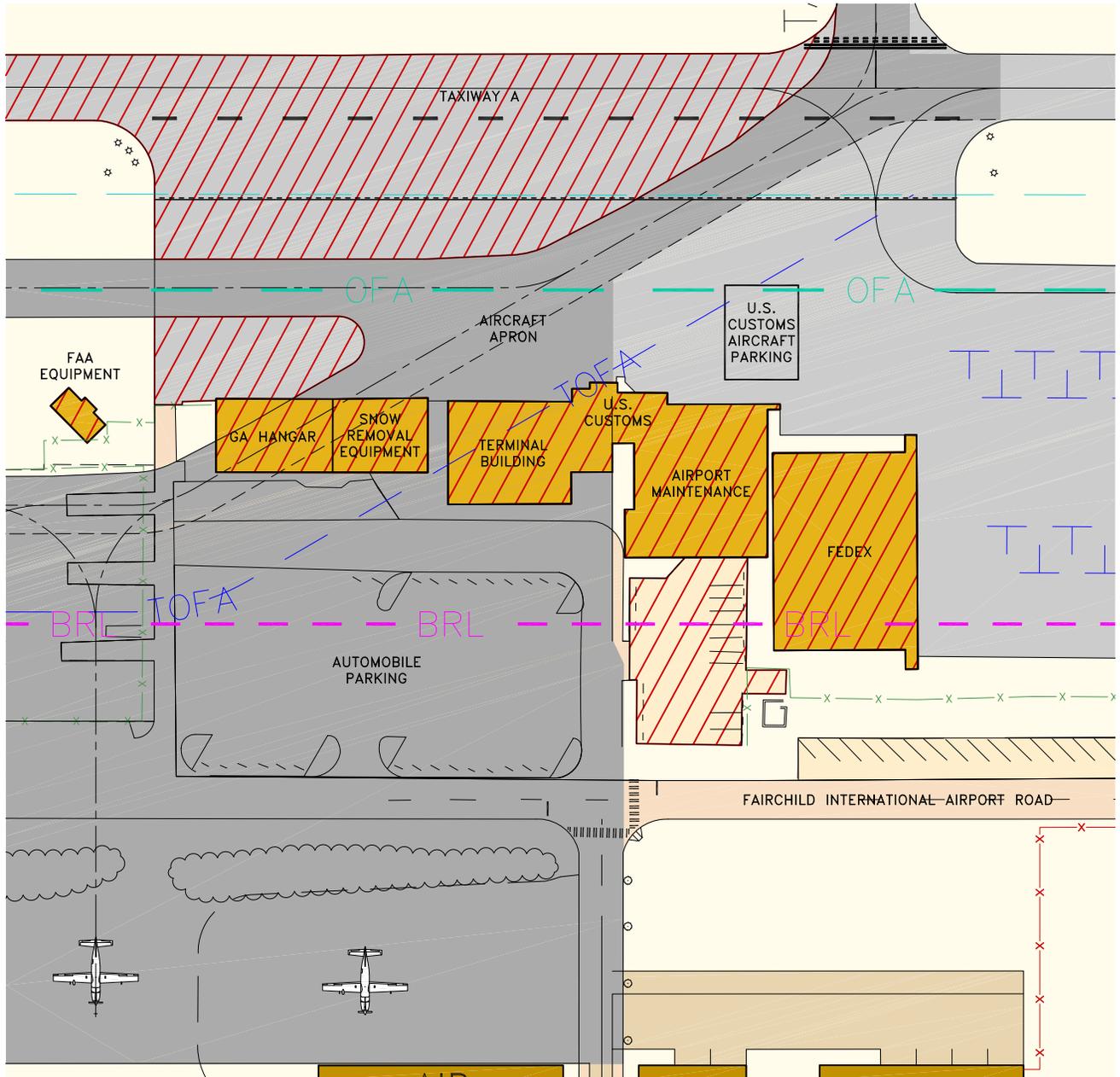
development. Systems to be considered include electricity, water, wastewater, natural gas, and telecommunications lines.

- ◆ **Support Facilities/Services:** The capacity and source of airport support facilities and services will be examined. This includes requirements for the storage and distribution of aircraft fuel, facilities and equipment required for airport maintenance and accommodation of required emergency equipment. Included will be an analysis of the current and future Airport Rescue and Fire Fighting (ARFF) needs at the airport.
- ◆ **Emergency Operations Center:** The provisions needed for hosting emergency operations in case of a disaster.

TERMINAL REQUIREMENTS

As noted in the Existing Conditions chapter, the terminal area at William R. Fairchild International Airport is located in the southeast section of the airport (Exhibit 4-1). At the center of the terminal area is the passenger terminal building that consists of approximately 5,000 square feet of building space devoted to the facilities and services required to process commercial airline passengers (including security screening). The terminal contains space for two airlines (ticket counters and office space), a restaurant and concessions area, restrooms, a passenger waiting area and a baggage processing facility. Since service to and from Port Angeles is presently through a non-secure terminal area at the King County International Airport/Boeing Field, passenger screening and TSA security measures are not required.

The terminal building is fronted to the north by the air carrier apron. This apron covers approximately 37,000 square feet and is sufficient to park two Cessna Caravan aircraft (as used by Kenmore Air) or one DeHavilland Dash 8 aircraft. South of the terminal is the automobile parking lot. There are 85 paved and marked parking spaces in this lot used for both short- and long-term parking, although the lot does not differentiate the spaces. Additional parking is provided in unmarked gravel lots to the west and south of the paved parking area. Access to the terminal area comes off Airport Boulevard where a new airport access road connects with the automobile parking lot.



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**WILLIAM R. FAIRCHILD INTERNATIONAL AIRPORT
 AIRPORT MASTER PLAN**

TERMINAL AREA PLAN

SHEET

4-1

INTENTIONALLY

LEFT

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Located next to the terminal building are the airport management offices, Customs and immigration facilities, the airport maintenance hangar, and an air cargo hangar used by Federal Express.

All development within the terminal area currently violates the FAA's required setback distances from the runway and taxiway as contained in AC 150/5300-13 as well as penetrating Federal Aviation Administration (FAR) Part 77 Transitional Surfaces.

Passenger Terminal Building Requirements

For any passenger terminal building, services are required for the efficient processing of passengers arriving and departing on commercial flights. Enplaning services include the ticketing area ticket counter, electronic ticket kiosks, queuing area, and airline offices. Processing services typically include passenger and bag screening facilities operated by the Transportation Security Administration (TSA). Deplaning services generally include baggage claim area, rental car counters, and parking pre-pay facilities. Other services that are necessary in a terminal building include concessions (restaurants, gift shops, restrooms, advertising and display areas, mechanical and utility rooms, and janitorial service and storage areas).

Although the current terminal at CLM does not include TSA areas (the nature of the airline service does not require them) it is recommended that any new building allow for the eventual reinstatement of service by a Part 139 certificated carrier and provide space for both passengers and baggage screening operations. While construction of these functional areas within a terminal building would not be eligible for FAA funding under current circumstances, allowing for the additional space while developing a terminal layout plan is prudent to assure that adequate space is allocated for the future. Also, CLM is currently served by a single airline using aircraft with a capacity of fewer than 9 seats and occasional charter operations using narrow body aircraft with 100 to 120 seats. Any new terminal should be planned to assure that additional airlines and larger aircraft are not precluded from use should demand arise for service expansion as well as assuring that the current peak loads are accommodated. The following discussion provides details on the facility requirements for a new passenger terminal at CLM.

Passenger Enplaning Facilities

For any new terminal at CLM, ticket counter space should be provided for two airlines. The requirements at the ticket counter were calculated assuming that each airline would

require space for two agents with computer terminals to process enplaning passengers separated by a bag well between the agent positions. As a result, the ticketing area should include;

- ◆ Ticket Counter = 15 feet long
- ◆ Agent Work Area = 10 feet depth behind the front edge of the counter for a total of 150 square feet
- ◆ Passenger Service area in front of the counter to include a three foot transaction zone, 15 feet for queuing and an additional 10 feet for circulation and movement. Total area is 420 square feet.
- ◆ Airline Ticket Offices (ATO) will require space of at least 150 square feet per airline. This area will be sufficient for both the offices as well as for outbound baggage areas. Total area is 300 square feet.

Once passengers are ticketed, they proceed to the TSA security checkpoint. While at CLM there is no current requirement for a TSA screening area, it is recommended that the future terminal building allow for one screening lane and, with that, one carry-on screening machine. The passenger queuing area will require 16 square-feet of space per passenger in queue. With a maximum of seven passengers, this equals 112 square feet. Adjacent to the passenger screening area would be a support area. Per TSA design standards, an average of 1,050 square-feet is required per screening lane. This includes a seating-composure area, response corridor, law enforcement officer, and a private search room. The total area for security screening will therefore be approximately 1,162 square feet.

Once ticketed and through security, passengers will proceed to the hold room/gate facilities to await departure. This area will require sufficient seating for peak hour passengers. When planning for a new terminal space needs should be based on the potential for growth in aircraft size. Therefore, even though current forecasts show a continuation of service by aircraft with fewer than nine seats, the passenger gate areas should allow space for potential operations by aircraft carrying up to 60 passengers even though these are unlikely during the planning period. At an estimated 18.3 square feet per seat and associated circulation, this would total 1,100 square feet. In addition to

Chapter 4: Facility Requirements

seating, a departure podium, queuing area and exit corridor add approximately 400 square feet totaling 1,500 square feet (*rounded*) for the departure hold room.

In total, the area suggested for enplaning services would be approximately 3,870 square feet.

Deplaning Services

As passengers deplane, they proceed from the aircraft, through the hold room to the baggage claim area. The bag claim area at CLM should include one slide plate device for baggage retrieval. Assuming a 10-foot long device with a 12-foot wide retrieval zone in front, the area will need to be approximately 120 square feet. However, additional space will need to be considered should larger aircraft be added to the fleet. This could equal an additional 240 square feet. Space should also be provided for two rental car agencies with customer queuing (150 square feet) and parking pre-pay (25 square feet). Total area for deplaning passengers would be approximately 535 square feet.

Other services

In addition to facilities used to process passengers, the terminal should also provide other public services. A seating/waiting area for meeters and greeters should be provided. This will need sufficient seating for peak hour passengers plus 50% for meeters and greeters (approximately 90 people). Once again using an estimated 18.3 square feet per seat and associated circulation, this would come to 1,650 square feet (*rounded*). Other public services include restaurant/concessions (minimum of 1,000 square feet), restrooms (450 square feet), a display area (100 square feet), and mechanical/janitorial rooms (100 square feet). Space required for these services totals approximately 3,300 square feet.

Airport Management Space

It is assumed that airport management will be located within the terminal building if a new one is built. Space requirements include one office for the Airport Manager as well as one for the Maintenance Chief at 150 square feet per office. In addition, a conference/meeting area (150 square feet), kitchen/support area (100 square feet), circulation space (100 square feet), and a single person restroom (50 square feet) should be provided. This totals 600 square feet.

Custom and Immigration Facility

Since William R. Fairchild International Airport (CLM) is an international airport, provisions must be made for customs and immigration services. These services are currently provided for general aviation. Given that there are no international commercial flights into or out of CLM, a customs and immigration facility does not need to be attached to the terminal building. In addition, since almost all international flights are general aviation, it is preferable they do not share the same immediate apron space with non-international aviation. Therefore, a separate parking position on the terminal apron should be dedicated to these aircraft.

Currently, the US Customs and Immigration Service at CLM operates from facilities adjacent to the terminal. These include office space and approximately 2,600 square feet of apron. For the forecast period, these facilities are assumed adequate.

Exhibit 4-2: Terminal Building Requirements

Facility	Measure	New Facility
Enplaning		
Ticket Counter	lf	15
Agent Work Area	sf	150
Transition Area	sf	45
Queuing Area	sf	225
Circulation	sf	150
Airline Service Area	sf	300
Baggage Screening Area	sf	300
Total		1,170
Security		
No. of Lane		1
Queuing	sf	112
Screening Process and Equipment	sf	1,050
Total		1,162
Gate Area		
Seating/Waiting	sf	1,100
Gate Processing	sf	400
Circulation	sf	110
Total		1,610
Deplaning		
Circulation	sf	120
Baggage Claim	sf	240
Rental Car Area	sf	150
Parking Pay	sf	25
Total		535
Other		
Seating/Waiting	sf	1,650
Concessions	sf	1,000
Restrooms	sf	450
Display Area	sf	100
Mechanical/Janitorial	sf	100
Total		3,300
Miscellaneous		
Port Offices	sf	600
Maintenance	sf	1,000
Customs and Immigration	sf	2,600
Total		4,200
Total Building Size		11,977

Terminal Apron

The aircraft apron at the existing passenger terminal is 37,000 square feet and includes room for two parking positions for the Cessna Caravan or a single position for the larger Q-200 (future Q-400) size aircraft. These parking positions are designed to allow for power in/power out operations. In addition, the terminal apron has space allocated for a fueling position, taxilanes, area for ground servicing the aircraft and storage of the ground service equipment. In addition, the current ramp includes an aircraft parking position associated with the Customs and Immigration facility. This parking position is sufficient to allow for the parking of a corporate jet aircraft such as the Grumman Gulfstream V.

Although the exact size of the future terminal apron will be highly dependent on the final footprint and layout of the terminal building, a minimum area of equal to the current apron (37,000 square feet) should be dedicated to terminal area apron.

Automobile Parking

At CLM, the automobile parking area consists of designated areas for short and long-term parking, as well as having spaces designated for employee parking and permitted long-term parking. There are 10 designated spots in the parking lot for rental car ready or return areas. Terminal employee parking is contained in the public lot but there are four dedicated spaces adjacent to the Airport manager’s office for Port personnel, visitors and for the other tenants of the

Exhibit 4-3: Automobile Parking Requirements

Year	Annual Passengers	Spaces Required	Area (sf)
2007	15,860	65	9,750
2012	16,866	69	10,350
2017	17,937	74	11,100
2022	19,079	78	11,700
2027	20,295	83	12,450
2057	29,463	121	18,150

building. In projecting future needs for automobile parking in the terminal area, it was assumed that the current 85 paved parking positions were adequate for current needs. In fact, the current parking area has excess capacity at present. In projecting future demand an excess capacity of 25 percent was assumed with the actual demand for parking estimated to be 65 spaces for all terminal area parking needs. Projecting future requirements was done using the growth rates for passenger activity as an indicator of required facility expansion. This resulted in an estimate of the total number of spaces

required for the passenger terminal parking lot. To calculate the area requirement, it was determined that each parking position would need 150 square feet to provide for the parking area, maneuvering and access. This was applied to the total number of spaces.

Air Cargo Activity

Air cargo service at CLM consists of daily flights by FEDEX using a Cessna Caravan and daily flights by UPS (via a contractor) operating similar aircraft.

The need for air cargo processing facilities varies at each airport and for each carrier. The latest published guidelines for planning is a study completed for the FAA that established an empirical long-term space requirement criterion that compares favorably with throughput capacity of actual cargo terminals today. The study indicated that about one square foot of cargo building is required to process one annual ton of cargo. The study noted that the utilization ratio on many of the cargo facilities surveyed as part of the research varied by a factor of two. Actual space requirements will depend primarily on the needs of individual carriers and the type of cargo they process. However, at airports like CLM that have a relatively small amount of cargo the average warehouse utilization rate is approximately 1.75 square feet per ton. This ratio was used to project the need for air cargo processing space.

In addition, each air cargo carrier will require space for aircraft parking and processing. The amount of space needed is calculated at one and a half times the physical size of the airplane itself and equivalent to 6,500 square feet of space for parking and handling two cargo aircraft. This need will

Exhibit 4-4: Air Cargo Activity Forecast

Year	Annual Tons	Annual Operations	Tons/ Operation
2007	519	624	0.83
2012	659	624	1.06
2017	807	624	1.29
2022	967	624	1.55
2027	1,165	728	1.60
2057	3,035	2066	1.60

Exhibit 4-5: Air Cargo Facility Requirements

Year	Annual Tons	Size Required
2005	519	624 sf
2012	659	1,153 sf
2017	807	1,412 sf
2022	967	1,692 sf
2027	1,165	2038 sf
2057	3,035	5,311 sf

be consistent through the entire planning period since peak hour operations will continue to consist of two aircraft at a time.

AIRCRAFT STORAGE REQUIREMENTS

Located just west of the terminal area is the existing general aviation (GA) development area. The GA area consists of all facilities required to service and support general aviation activity at CLM. There are currently 98 aircraft based at the airport, including 92 single-engine piston aircraft and 6 multi-engine piston aircraft.

The primary general aviation apron and hangar areas are to the south of Runway 8-26. These include a total of 18,600 square yards for two tiedown aprons that are separated by the Terminal Area. The western apron includes tiedown space for 30 aircraft and the eastern apron has space for 36 aircraft. In addition to these apron areas, there are 14 Open sided but covered parking spaces (T-shades), 40 T-hangars, and 3 large hangars next to the western apron area and 32 T-hangars next to the eastern apron. In the late 1990s, there was a waiting list of more than 35 individuals waiting for hangar space at the airport although in recent years that number has declined. As of late-2008, the airport had developed hangar taxiway and utility extensions to facilitate the construction of up to 20 new T-hangar positions but actual hangar construction had not yet occurred.

The long-term forecast for based aircraft at CLM anticipates 126 based aircraft at the airport by 2027 and 192 aircraft by 2057. With 94 additional aircraft anticipated to base at the airport over the 50-year-planning period, the majority of aircraft will need to be accommodated in hangars. The forecast shows that the based aircraft will consist of increasingly higher performance twin and turbine aircraft whose owners generally prefer to shelter them indoors. The number and type of aircraft storage facilities needed over the course of the 20-year planning period is detailed in the sections below.

Hangar Storage Requirements

Covered aircraft storage is in high demand at CLM due to the local weather conditions.

The growth in based aircraft will translate into a need for additional hangars. Presently there are 14 T-shades, 72 T-hangars, and 3 large box hangars at the airport. With 98 based aircraft, this means that 14 percent of the based aircraft are in T-shades, 73 percent in T-hangars,

3 percent in box hangars and 8 percent based on the tiedown apron. Since the forecast, shown in Exhibit 4-6, has projected that the fastest growth in based aircraft will be in the turbine powered category, it can be presumed that the demand for corporate or box hangars will increase over time. In this analysis, the assumed storage distribution percentages listed in Exhibit 4-7 are used.

Given the based aircraft forecast, the resultant requirements for hangar space is shown in Exhibit 4-8. Demand for Tiedowns will remain low while the biggest growth is expected to be in Corporate Hangars.

Exhibit 4-6: Fleet Mix Forecast

Year	SEP	MEP	Turbo Jet	Rotor	Total
2007	92	6	0	0	98
2012	94	7	2	1	104
2017	94	9	6	2	111
2022	95	12	8	4	119
2027	95	15	11	5	126
2057	115	29	38	10	192

Exhibit 4-7: Aircraft/Hangar Distribution

Aircraft Type	T-shades	T-hangars	Corporate Hangars	Tiedown
Single Engine Piston	15%	80%	0%	5%
Multi-Engine Piston	0%	50%	50%	0%
Turbine	0%	0%	100%	0%
Rotor	0%	0%	100%	0%

The Aviation Demand Forecasts project 15 multi-engine turboprop aircraft and 11 turbojet aircraft based at CLM by 2027. It is assumed that these will be stored in hangars. As a result, at least 11 of the 126 hangars should be sized to accommodate the larger corporate aircraft.

Exhibit 4-8: Hangar Requirements

Year	T-shades	T-hangars	Corporate Hangars	Tiedown	Total
Existing	14	72	3	66	155
2007	14	77	3	4	98
2012	14	79	7	4	104
2017	14	80	13	4	111
2022	14	82	18	5	119
2027	14	84	23	5	126
2057	17	107	63	5	192

Hangar size is typically dictated by aircraft wingspan and tail height. A “stock” hangar offered by one manufacturer suitable for ARC B-II aircraft would have a door opening 65’ wide and 18’ high. It should be remembered that the demand for aircraft hangars is based on forecasts that can change over time. Consequently, while it is recommended that these larger hangar facilities be reflected in the airport’s long-term plans, it is also recommended that hangars only be constructed as specific needs arise or are identified and not on a speculative basis. Additionally, because the fleet of aircraft is changing, it is recommended that portions of the general aviation area be set aside for storage of aircraft that are larger than the B-II classification.

Based Aircraft Tiedown Storage Requirements

At present, very few existing based aircraft are stored outside on tiedown aprons. These aircraft are generally smaller single engine piston aircraft. Space planning for these types of aircraft is calculated based on 360 square yards of apron for each parking space. This allowance provides space for aircraft parking and circulation between the rows of aircraft, although circulation space requirements can vary by site. This space allowance assumes that pilots have a certain degree of familiarity with the parking situation, and therefore represents a minimum that should be provided. Since there are already 66 tiedowns, no additional tiedowns will be needed to accommodate future based aircraft needs.

Transient Aircraft Tiedown Storage Requirements

Tiedown space is also needed for transient aircraft. It is often best to provide this space at or adjacent to FBO facilities if layout configurations allow. In calculating the area required for transient tiedowns, an allowance equal to 700 square yards per aircraft is used. This area is larger than that applied to spaces for based aircraft tiedowns for two reasons. First, the user of the transient spaces may not be as familiar with the airport's ground movement patterns and thus providing a greater margin of safety is prudent. Second, all types and sizes of aircraft may be parked in the transient tiedowns and a greater apron allowance provides more flexibility in how the spaces are used. The following method was employed in calculating the number of aircraft that will require transient aircraft parking spaces.

- ◆ Determine the average day number of itinerant aircraft operations
- ◆ Convert the itinerant operations to the number of arrival aircraft by dividing by two.
- ◆ Divide the number of aircraft performing itinerant operations by two to account for the fact that some itinerant operations are by based aircraft.
- ◆ Assume that no more than 50 percent of the resulting daily transient aircraft operations will require storage at any one period of time.

Based on Chapter 3, Aviation Demand Forecasts, peak month, average day operations are projected to reach 285 by 2057. Itinerant operations are forecast to constitute 45 percent of overall operations or 128 operations by 2057. Using the methodology cited above, 16 itinerant aircraft tiedown positions will be required. This equates to approximately 11,200 square yards or 2.3 acres of transient tiedown apron that will be required by 2057. There are currently over 3.8 acres of tiedown apron at the airport so no additional space will be needed to accommodate activity through the planning period. However, as the types of aircraft change to include a higher number of business jet aircraft, tiedown space capable of parking aircraft in excess of 60,000 pounds will be required. This can be provided by strengthening existing pavement or, more likely, by building new tiedown apron area for this purpose. Any parking for these larger aircraft should be done in conjunction with FBO expansion.

Summary of Aircraft Storage Requirements

The preceding analyses show that the focus for future aircraft storage will be on hangars (either group or T-hangars) instead of tiedowns. The following table shows the amount of space needed for aircraft storage throughout the forecast period.

Exhibit 4-9: Aircraft Storage Area Requirements

	Year					
	2007	2012	2017	2022	2027	2057
T-Shades						
Number	14	14	14	14	14	17
Area (sf)	49,000	49,000	49,000	49,000	49,000	59,500
Small T-Hangars						
Number	65	67	68	70	71	91
Area (sf)	386,155	396,185	401,200	411,230	421,260	536,605
Medium T-Hangars						
Number	12	12	12	12	13	16
Area (sf)	82,005	84,135	85,200	87,330	89,460	113,955
Group Hangars						
Number	3	7	13	18	23	63
Area (sf)	22,650	52,850	98,150	135,900	173,650	475,650
Based Tiedowns						
Number	5	5	6	6	6	10
Area (sf)	15,925	16,900	18,038	19,338	20,475	31,200
Transient Tiedowns						
Number	10	10	11	11	12	16
Area (sf)	63,000	63,000	69,300	69,300	75,600	100,800
Total Requirement						
Area (sf)	618,735	662,070	720,888	772,098	829,445	1,317,710
Area (sy)	68,748	73,563	80,099	85,789	92,161	146,412
Area (acres)	14.20	15.19	16.54	17.72	19.03	30.24

Fixed Base Operator (FBO) Facilities

Currently Rite Bros. Aviation is the only full service Fixed Base Operator (FBO) serving the airport. The FBO provides charter services, aircraft fueling (Jet A and 100LL), pilot training, and aircraft service and maintenance. The company is currently operating out of

two buildings located in the General Aviation area and has developed a plan for the construction of new facilities to expand their operation and replace their existing buildings. The exact layout and nature of this expansion is being coordinated with this master planning effort and will be integrated into our general aviation planning in a later section.

In the future, as the number of based aircraft increases and the level of operations continue to rise, the airport will need to assure that adequate land is set aside for FBO facilities. In this report, this is calculated at 15 percent of the total area designated for based aircraft storage and transient tiedown space. Exhibit 4-9 shows the number of aircraft that will need to be accommodated at the facility and Exhibit 4-10 indicates the area required.

Exhibit 4-10: General Aviation/FBO Area Requirements

	2007	2012	2017	2022	2027	2057
GA Needs						
Square Feet	618,735	662,070	720,888	772,098	829,445	1,317,710
Square Yards	68,748	73,563	80,099	85,789	92,161	146,412
Acres	14	15	17	18	19	30
FBO Needs						
Square Feet	92,810	99,311	108,133	115,815	124,417	197,657
Square Yards	10,312	11,035	12,015	12,868	13,824	21,962
Acres	2	2	2	3	3	5

The area set aside for the FBO expansion should include the transient aircraft parking spaces that are discussed previously.

AUTOMOBILE PARKING AND ACCESS

Access

Security requirements for general aviation are still being developed. However, what is clear is that access to the airfield will increasingly become more limited, especially in environments where commercial air carriers are operating. Vehicle access gates at CLM currently limit automobile access to the operations and hangar areas to the owners and operators of aircraft. These individuals have not been background checked and no

security ID cards. This arrangement will likely need to change in the near future as FAA and TSA redefine their security requirements.

UTILITIES AND DRAINAGE

Existing utility services at CLM were discussed in Chapter 2, Existing Conditions Inventory. There are no identified deficiencies in the current level of services available. Consequently, no recommendations are provided for changes to the existing utility services.

As new facilities are developed, utilities will need to be extended or expanded to provide the necessary services. For the terminal area and general aviation area, utility services typically include electricity, water, data cables and the collection of storm water run-off.

The Port developed a state of the art storm water management facility that will accommodate up to 80 acres of site development, that should be sufficient to accommodate this development but drainage and the handling of storm water run-off will require continued attention in the creation of all new development.

AIRPORT SUPPORT FACILITIES

Analysis of airport support facilities and services include requirements for the storage and distribution of aircraft fuel, facilities and equipment required for the maintenance of the airport.

Fuel Service

As noted in Chapter 2, Existing Conditions Inventory, fuel service at CLM is available for Jet A and 100LL aircraft fuel. Two aboveground storage tanks each provide 12,000-gallon capacity and are located on the west GA apron. No changes are recommended to the existing fuel service at this time.

Airport Maintenance Building

According to FAA Advisory Circular 150/5220-20, an airport will require one snow removal vehicle per each 750,000 square feet of paved surface to be maintained. Based on this guidance, the Port will need to purchase additional snow removal equipment. The current equipment storage building that is attached to the airport manager's office is adequate for the present needs but will need to be expanded to accommodate the new snow removal and maintenance equipment. At this time, it should be relocated to be part

of a multi-purpose facility that would include an ARFF building. The relocation is likely to occur concurrent with the terminal relocation.

Perimeter Fencing/Equipment

As indicated in Chapter 2, the airport's Airport Operation Area (AOA) is completely enclosed by a perimeter security fence. It is comprised of 7- and 8-foot high chain link fencing topped with 3-strand barbed wire. No changes are recommended to the existing security at this time.

However, as new facilities are developed, the security perimeter may need to be reevaluated to accommodate any expansion that may happen.

EMERGENCY OPERATIONS CENTER

William R. Fairchild International Airport is the only Olympic Peninsula airport that has adequate runway length, instrument approach capabilities, physical facilities, and access to population centers to be the central player in emergency responses. Located at a higher elevation than most other peninsula airports, CLM is likely to be operational when facilities such as Sequim, Sekiu, and others may be inaccessible. The airport could serve as the prime emergency services center for Jefferson and Clallam, as well as for portions of northern Gray's Harbor County. The agencies likely to be involved include.

- ◆ Clallam County Emergency Services
- ◆ City of Port Angeles Fire Department
- ◆ Washington State Emergency Services
- ◆ Jefferson County Emergency Services
- ◆ United States Coast Guard

To determine the likely needs for an Emergency Operations Center (EOC), area meetings were held with the agencies. During these meetings, several items were identified.

Emergency Operations Center (EOC)

Clallam County Emergency Services expressed a need for a centralized Emergency Operations Center. This center would need to be available 24 hours per day, 7 days a week. None of these facilities would need to be located directly on the flightline. Facilities needed were identified to include:

- ◆ Communications Center
- ◆ Offices for staff of five.
- ◆ Briefing Room for the full incident response team of 20 people
- ◆ Response Command Center
- ◆ Conference Room
- ◆ Equipment Storage

This area, should it be constructed, would need to be capable of continuous operation under adverse circumstances. As such, it would need emergency back-up power and communications capabilities.

With the construction of the EOC, it can be expected that a regional dispatch center such as that constructed in Kitsap County would collocate. This area would require a substantial parking area to allow for all of the full time as well as response personnel.

Other Emergency Facilities

In conjunction with the EOC concept, there may be a need for the airport to serve as the base for recovery efforts in Clallam County. This will require that sufficient land be available to allow the various agencies to base crews and other response efforts at the airport. To do this the concept that would likely be most feasible is to provide for space and “hook-up” facilities for the service providers to set up mobile headquarters at the airport. This would include:

- ◆ A Pencom Antenna
- ◆ Parking Space for Mobile Headquarters vehicles and trailers
- ◆ Utility hook ups – to include emergency electricity, potable water, communications systems, etc
- ◆ Emergency Aircraft parking areas (on existing ramp facilities)
- ◆ Designated helicopter take-off and landing areas as well as parking pads.
- ◆ Emergency equipment/supplies staging areas
- ◆ Crew sleeping (tent set up or trailer) areas with potable water, toilet facilities, etc.
- ◆ Parking/maneuvering area for trucks

Summary of Requirements

The result of the analyses contained in this chapter is that numerous facilities will need to be expanded and possibly relocated in order to meet the demand levels shown in the aviation demand forecasts. A summary of the requirements is presented in Exhibit 4-11. In subsequent sections of this master plan we will explore alternative ways and locations where these new facilities can be located and develop a plan for long-range implementation.

Exhibit 4-11: Summary of Facility Requirements

Facility	Conclusions
Passenger Terminal Facilities	<p>The current terminal facilities are an obstruction to the FAR Part 77 Transitional Surfaces for Runway 08/26. At the time that the terminal is relocated a new facility needs to be constructed that allows for sufficient area to allow for passenger growth as well as considering potential changes to FAA and TSA requirements for security.</p> <p>Included in the requirement for terminal relocation will be the aircraft apron and automobile parking areas.</p>
Support Facilities	<p>With the relocation of the terminal the Port’s management offices, maintenance facility and the U.S Customs and Border Patrol area will also need to be relocated.</p>
Air Cargo Facilities	<p>Air cargo facilities are will need to be expanded to meet future demand for aircraft parking and cargo processing.</p>
General Aviation Facility Location	<p>The existing GA area will need to grow to accommodate the increased demand for hangar and aircraft parking aprons.</p>
Based Aircraft Hangar Storage	<p>Recommend construction of new corporate and T-hangars.</p>
FBO and support facility expansion	<p>New FBO facilities are required to provide support for the general aviation community.</p>
Fueling	<p>The current system is adequate. The private sector will continue to upgrade and improve as needed.</p>
Airport Maintenance	<p>Recommend consolidated maintenance facility be constructed.</p>
Rental Car Facilities	<p>Recommend that customer service related facilities such as ready and return lots be maintained in the terminal area but service and storage areas be located in remote areas.</p>
Emergency Operations Center	<p>Recommended that space be set aside on the airport to allow for establishment of emergency services during a disaster.</p>