SEATTLE-TACOMA INTERNATIONAL AIRPORT

Architecture Design Guidelines and Standards

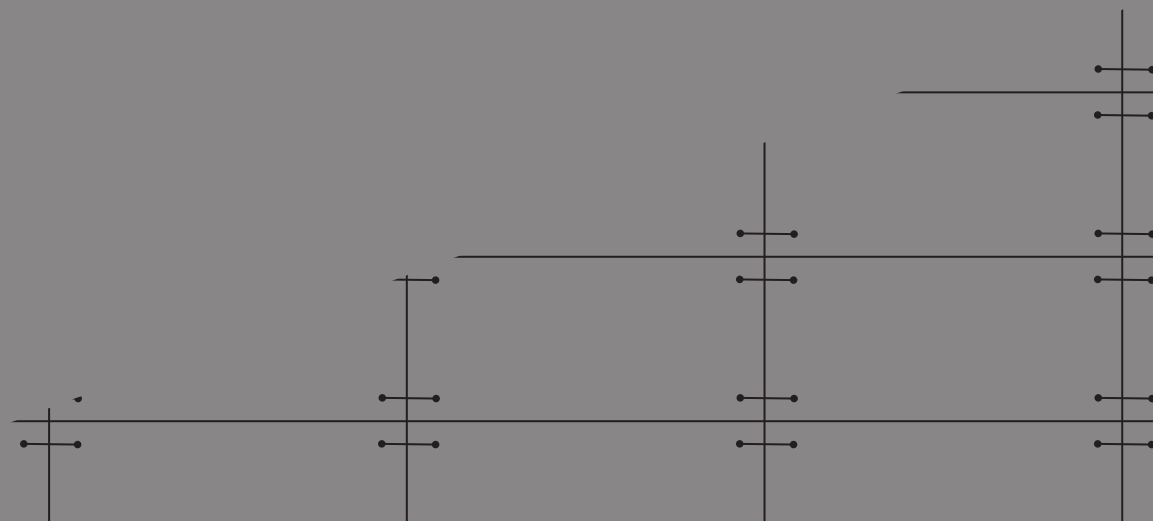
SEA
Seattle-Tacoma International Airport

2025

revision date: 12.31.24

INTRODUCTION

Seattle-Tacoma International Airport welcomes you as a vital partner in helping shape our future. This document is comprised of the SEA Design Vision, Design Guidelines, and Architectural Standards. These resources are designed to guide you in conceptualizing and realizing the SEA design vision.



SEA
Seattle-Tacoma International Airport

1

DESIGN VISION

1.1 Exploring The History and Evolution of SEA
1.2 Crafting the Pacific Northwest Sense of Place
1.3 Form and Function
1.4 Integrating Sustainable Practice
1.5 Mapping The Journey
1.6 Adopting An Experience Design Approach
1.7 Fostering Successful Tenant Relationships

2

DESIGN GUIDELINES

2.1 Introduction
2.2 Planning
2.3 Space Types

3

TENANT DESIGN

3.1 Introduction
3.2 Tenant Design Vision & Design Guidelines
3.3 Tenant Design Standards

4

ARCHITECTURAL STANDARDS

4.1 Architectural Elements
4.2 Building Envelope
4.3 Roofing
4.4 Structure
4.5 Fenestration
4.6 Partitions
4.7 Conveying
4.8 Casework
4.9 Furniture
4.10 Lighting
4.11 Finishes
4.12 Ceiling
4.13 Equipment

5

APPENDIX

5.1 Resources
5.2 Forms & Document Library
5.3 Maintainability Standards
5.4 Design Intent Drawings

1

DESIGN VISION

DESIGNING THE FUTURE

Welcome to SEA

As a premier destination for domestic and international air travel, SEA is committed to an unparalleled experience, one that is truly reflective of the grandeur of the Pacific Northwest. The purpose of the Design Vision is to guide the design of unique experiences that engage passengers' emotions, beckoning them to return.

GUIDING PRINCIPLES

Our overall vision can be described in a way that captures the spirit of our airport, our goals for improvements to better serve our customers, tenants, and region, and progress the ideas of what an airport can be.

Integrated & Intentional

Coordinate and balance: Wayfinding, Art, Advertising, Sustainability, Maintainability. Evaluate total cost of ownership.

Inviting & Inclusive

Collective appreciation for all who travel through SEA. Strong Northwest Sense of Place. Comfortable and accommodating.

Inspiring & Innovative

Create beautiful, memorable spaces that people enjoy and seek out.

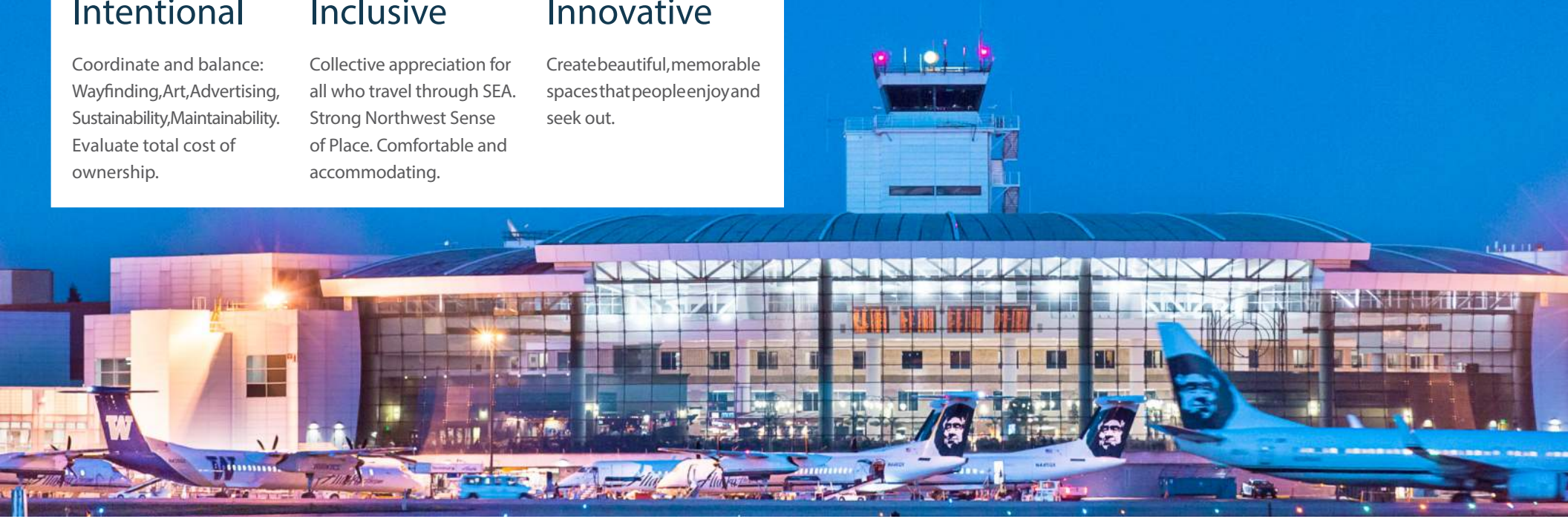


TABLE OF CONTENTS

1.1 EXPLORING THE HISTORY AND EVOLUTION of Seattle-Tacoma International Airport

1.2 CRAFTING THE PACIFIC NORTHWEST SENSE OF PLACE

1.3 FORM FOLLOWS FUNCTION

1.4 INTEGRATING SUSTAINABLE PRACTICES

1.5 MAPPING THE JOURNEY

1.6 ADOPTING AN EXPERIENCE DESIGN APPROACH

1.7 FOSTERING SUCCESSFUL TENANT RELATIONSHIPS

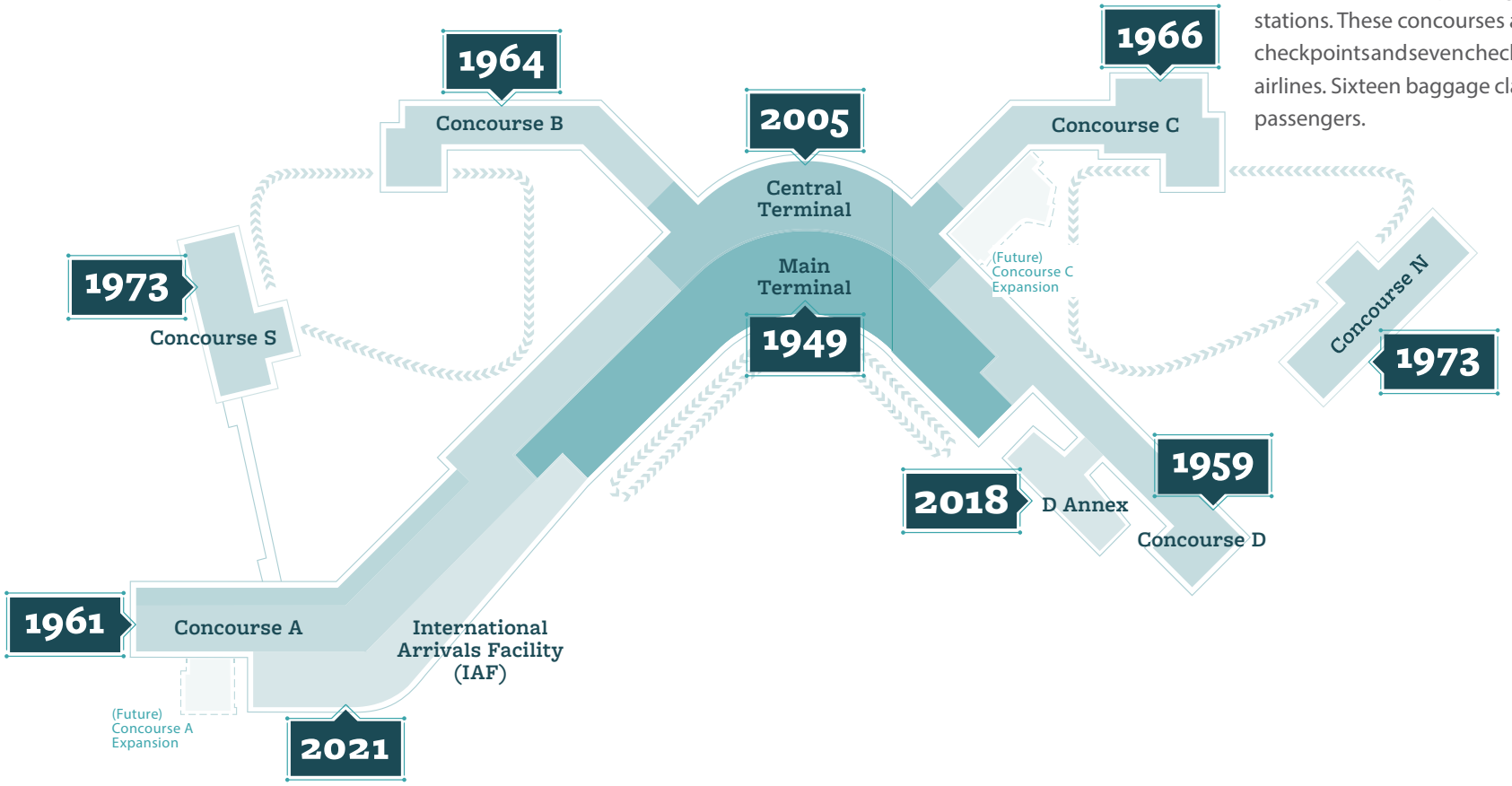
1.1

EXPLORING THE HISTORY AND EVOLUTION

of Seattle-Tacoma International Airport

HISTORICAL SEA GROWTH: CONSTRUCTION DATES

SEA consists of a Main Terminal servicing four attached concourses (A, B, C, D) and two satellite concourses (N, S) that are linked by train service. Three train routes deliver passengers to six underground stations. These concourses are served by five security checkpoints and seven check-in zones serving multiple airlines. Sixteen baggage claim devices serve arriving passengers.



SEA MILESTONES

1943 Construction of new airport begins at Bow Lake, current airport site.

1944 Airport dedicated as Seattle-Tacoma Airport with arrival of United Airlines DC-3 Mainliner. Passengers wait in "The Pantry," a Quonset hut with a wood-burning potbellied stove.

1947 Northwest Airlines and Western Airlines commence first scheduled service.

1949 New Main Terminal opens and renamed Seattle-Tacoma International Airport. Annually serves 130,000 passengers.

1954 Annual passenger demand grows to 1,000,000 people

1961 Fossilized skeleton of a giant sloth, unearthed by construction crews.

1971 Billboard appears on Aurora Avenue North in Seattle requesting, "Will the last person leaving Seattle please turn out the lights," in response to the slump in Boeing orders.

1973 Major construction program completed: New Main Terminal, North & South Satellites, underground Satellite Transit System, parking garage, & airport road system.

1992 Total renovation and expansion of Concourses B, C, and D completed. Airport road system.

1994 SEA becomes a smoke-free facility.

1997 SEA's 50th anniversary.

2004 Completion of new South Main Terminal and Concourse A

2005 Central Terminal renovation and expansion completed.

2008 New third runway opens.

2017 Airport serves 46.9 million passengers.

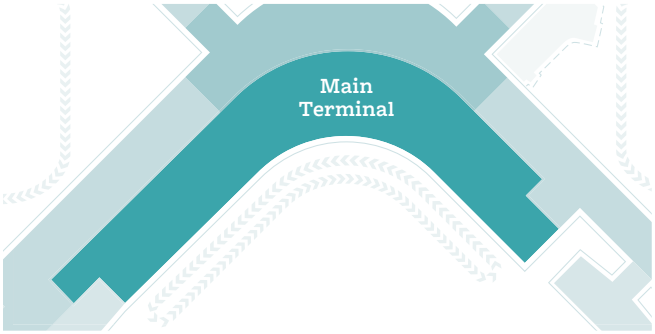
2018 D Annex opens.

2019 North Satellite Extension opens.

2021 New IAF and the renovated North Satellite are completed.

2034 Forecasts anticipate 66 million annual passengers.

MAIN TERMINAL



AT A GLANCE

OPENED IN
1949

SIGNIFICANT
RENOVATIONS

1973 Substantial expansion of Main Terminal

1987 Further expansion to the north

2002 North vertical circulation expansion

2004 South expansion

HIGHLIGHTS

The Main Terminal is the portal through which people arrive and depart the airport, and where they check in for their flights and claim their bags. It is an elegant Modernist building, simple and timeless.

LOOKING FORWARD

SEA is preparing for substantial passenger growth in the next 20 years, and is investing in its infrastructure to keep its place as a premier international airport and Skytrax 4 star airport. Planned upgrades include a major renovation of Main Terminal through SEA Gateway and Main Terminal Infrastructure Project (MTIP), and Checkpoint 1 will be relocated to baggage claim level.

**The front door of SEA,
Welcoming gateway to all.
We guide, where to next?**

CENTRAL TERMINAL

AT A GLANCE

OPENED IN
2005

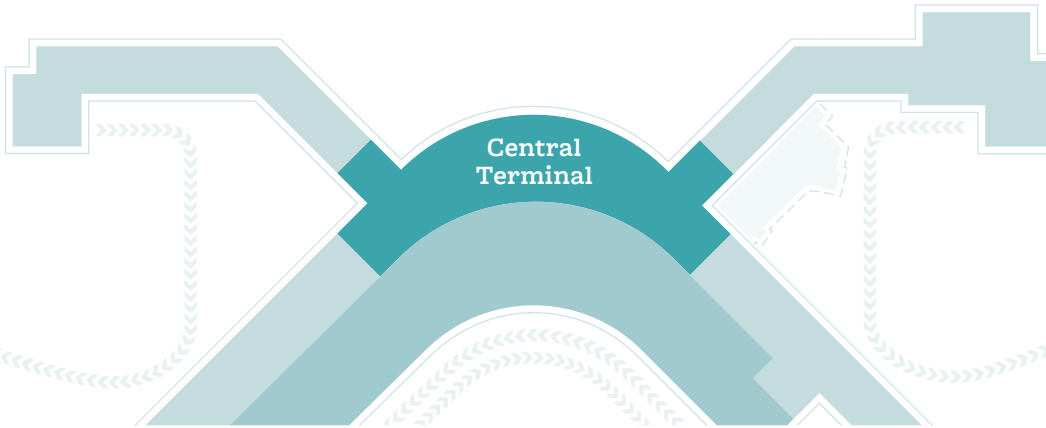
SIGNIFICANT RENOVATIONS

1997 Major renovation/expansion begins

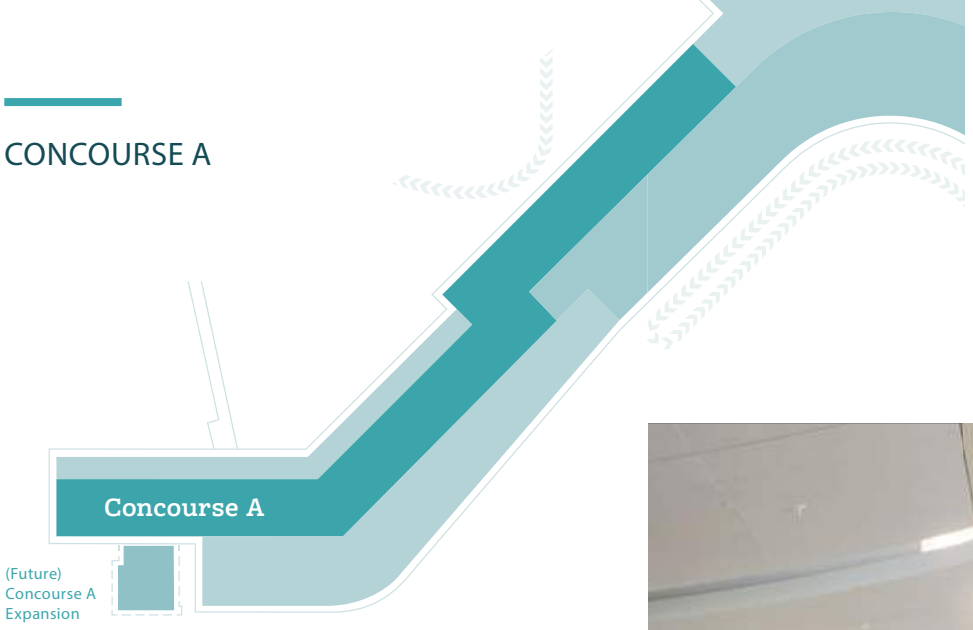
2005 Central Terminal renovation complete

HIGHLIGHTS

Central Terminal is the airport's living room, the jewel of SEA's dining and retail experience. With its large open space, abundance of natural light, natural stone finishes, live music, and distinctive double curvature curtain wall, it is a sought after destination for travelers waiting for their flight to depart. The backdrop of the Central Terminal is the original facade of the main terminal which includes a frieze of fish leaping above waves; an original integration of Northwest Sense of Place.



CONCOURSE A



AT A GLANCE

OPENED IN
1961

SIGNIFICANT
RENOVATIONS
2005 Replaced with all new expanded building

HIGHLIGHTS

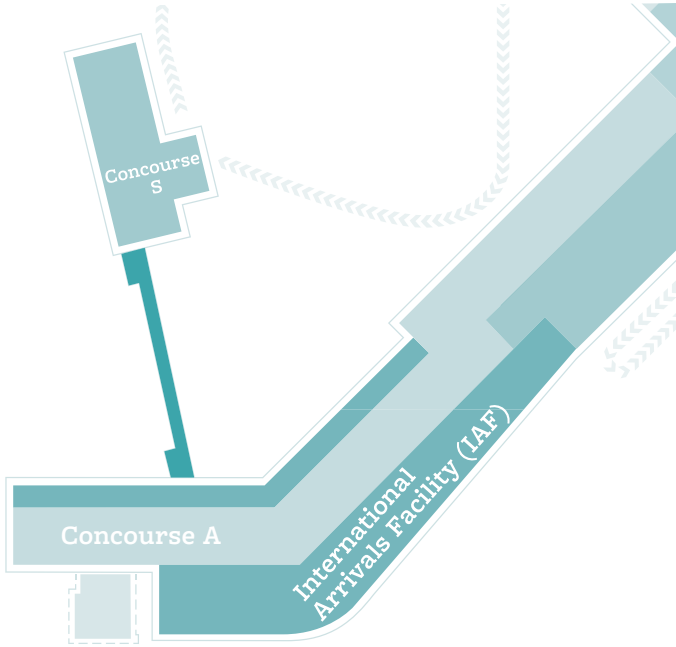
Concourse A is the newest and most spacious of SEA's six gate buildings. Soaring ceilings, vast expanses of light, numerous shops and restaurants, and engaging art displays provide a pleasant and uplifting environment for passengers.

LOOKING FORWARD

Airport lounges are increasingly popular and to accommodate higher demand SEA has multiple lounge expansion projects planned. Concourse A Expansion project, a multi-story expansion near gate A20, includes three new levels of lounge and leasable tenant space.

Swooping skies above,
Angular supports below;
Lofty thoughts take flight.

INTERNATIONAL ARRIVALS FACILITY (IAF)



AT A GLANCE

OPENED IN
2021

HIGHLIGHTS

In 2021 the International Arrivals Facility (IAF) opened to increase SEA's capacity of international gates from 12 to 20. An iconic aerial walkway connects arriving international passengers from Concourse S to IAF's new baggage claim and international passenger processing center.

CONCOURSE B

AT A GLANCE

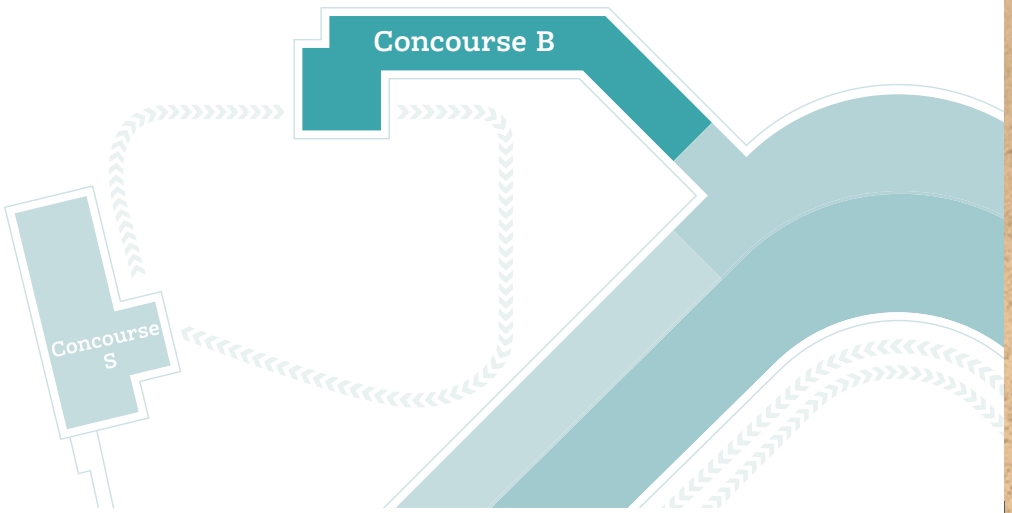
OPENED IN
1964

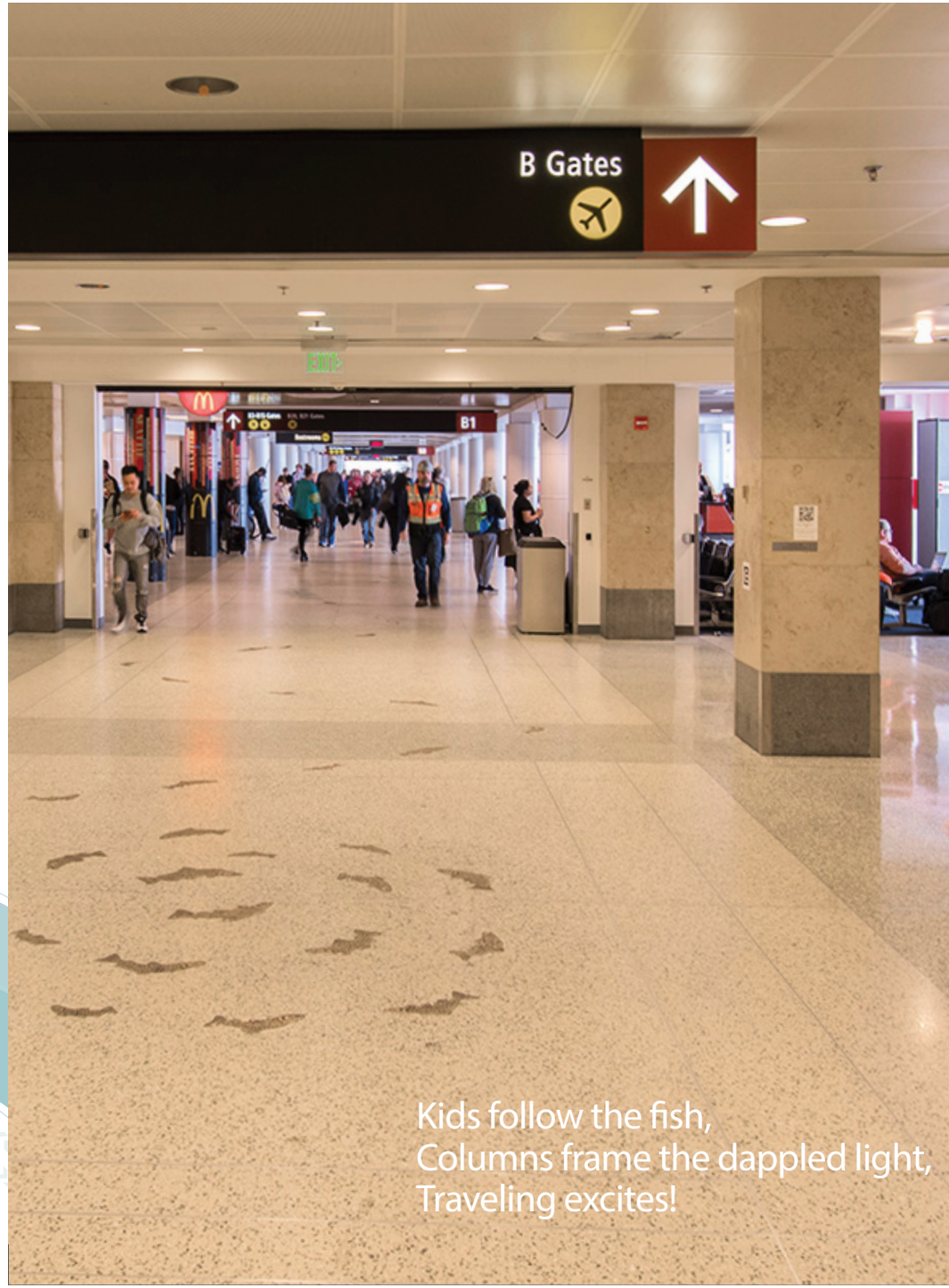
SIGNIFICANT
RENOVATIONS

1992 Expansion and remodel

HIGHLIGHTS

Concourse B incorporates the Northwest Sense of Place through use of materials and art. Children and adults alike aredelightedwiththebronzefish"swimming"intheterrazzo floor. The bronze ceiling mimics the dappled light of a northwest forest canopy.





CONCOURSE C

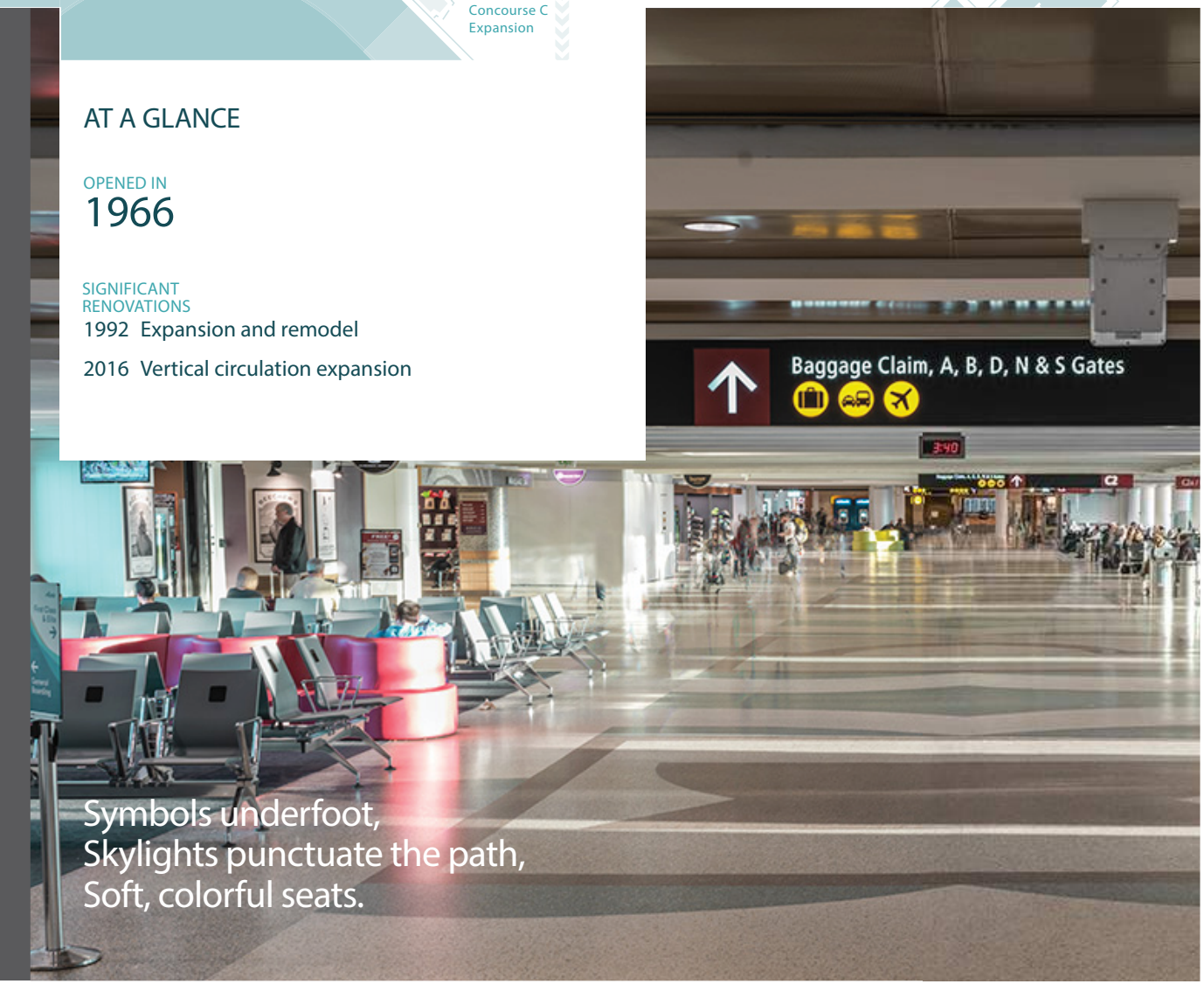
AT A GLANCE

OPENED IN
1966

SIGNIFICANT
RENOVATIONS

1992 Expansion and remodel

2016 Vertical circulation expansion



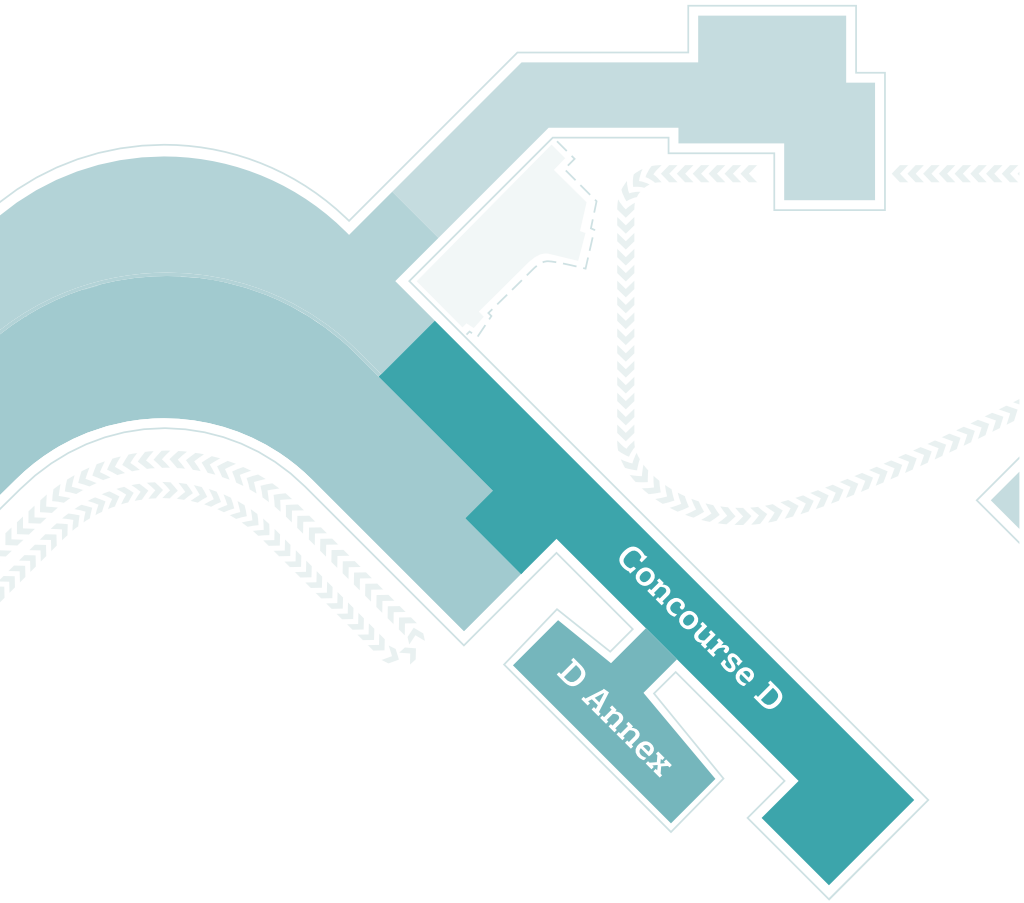
HIGHLIGHTS

Concourse C's wide corridor and artistic terrazzo welcomes passengers to eat, shop, and relax before their flight. Upgrades to vertical circulation systems in Concourse C were completed in 2015, including weather protected sloped walkways and new elevators, greatly improving customer service and Alaska Airlines' regional operations.

LOOKING FORWARD

CConcourseExpansion(CCE)projectexpandstheintersection of C Concourse with Central Terminal. The project increases dining and retail square footage within a large atrium with dynamicopenstairandperformancearea.Theupperstoriesof CCEincludeadditionalpassengeramenities,outdoorviewing deck, leaseable tenant space, and future airline lounge.

CONCOURSE D



Travel to the end,
Explore under the canoe,
Journey awaits all.

AT A GLANCE

OPENED IN
1959

SIGNIFICANT RENOVATIONS

1968 Extension

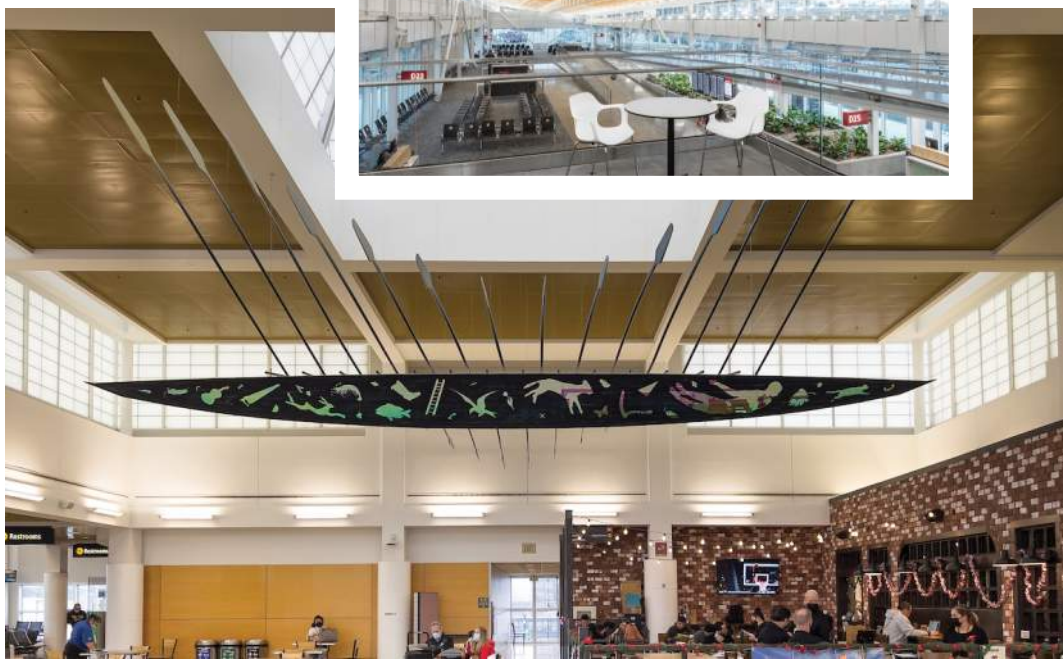
1992 Expansion/ remodel

2018 D Annex holdroom addition

HIGHLIGHTS

Concourse D is the oldest and narrowest concourse at SEA and its materials represent the palette used in the early 90's renovation of Concourses B, C, and D.

Concourse D Annex is a beautiful addition to the Concourse D that features unique glulam timber and steel truss system constructed from locally sourced Douglas Fir trees that supports a dynamic roof. The two story, column-free space is bright and open with clear, intuitive wayfinding. The building includes 6 hardstand gates, a concession area, and children's play area. The Annex is the first airport terminal building in the U.S. to achieve Silver certification through the USGBC's LEED v4 for Building Design and Construction.



CONCOURSE N

AT A GLANCE

OPENED IN
1973

SIGNIFICANT RENOVATIONS

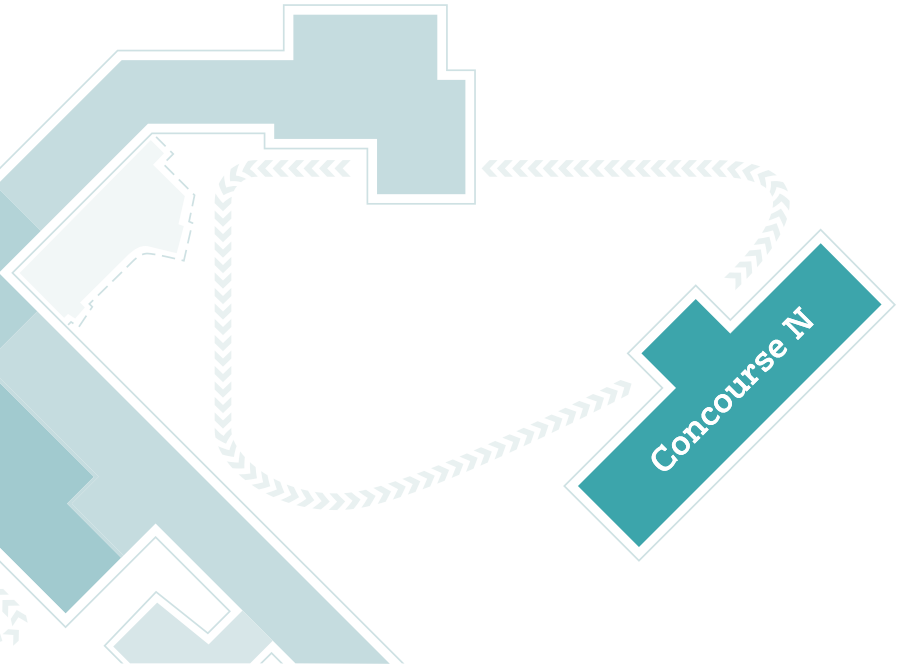
2019 West extension opened

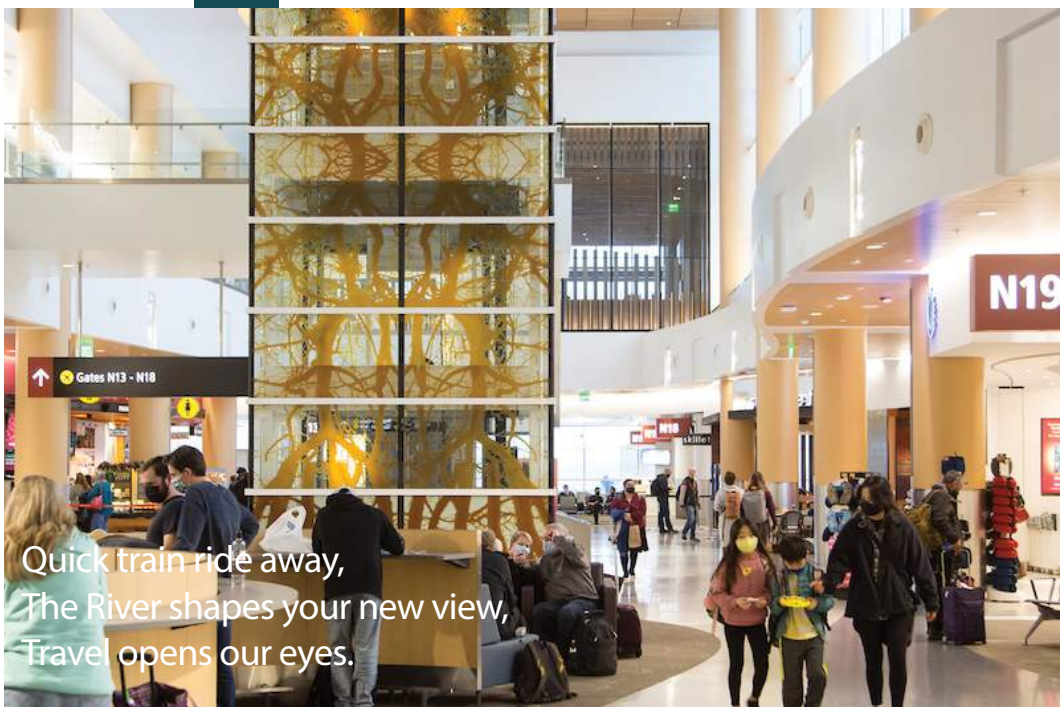
2021 Remaining North Satellite renovation completed

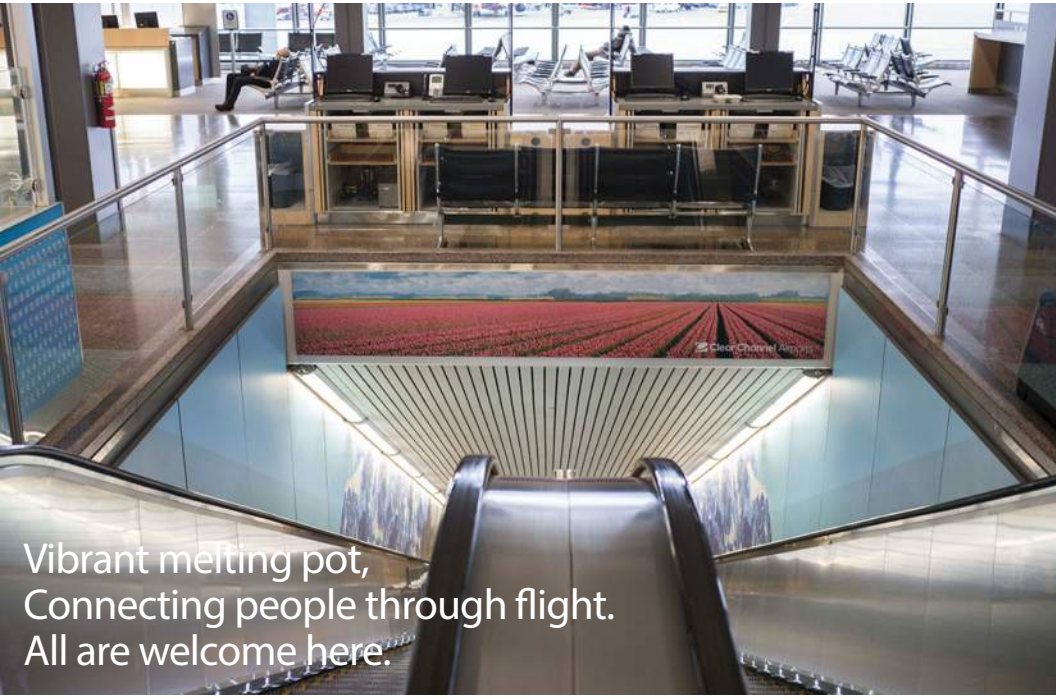
HIGHLIGHTS

For 45 years Concourse N (previously North Satellite) has served as the center for SEA's United and Alaska Airlines flights. A comprehensive baggage system upgrade was completed in 2015, resulting in faster transfers, extended system life, reliability and decreasing operation and maintenance costs.

The North Satellite Modernization Project expanded and renovated this facility, as Alaska's flagship facility, responding to continued growth at SEA. The $550 million expansion and renovation of Concourse N included adding eight new gates with a 240-foot extension of the building to the west, an upper level mezzanine, doubled the existing dining and retail square footage, and introduced a new Alaska Airlines lounge with views of the Olympic Mountains.







CONCOURSE S

AT A GLANCE

OPENED IN
1973

SIGNIFICANT RENOVATIONS

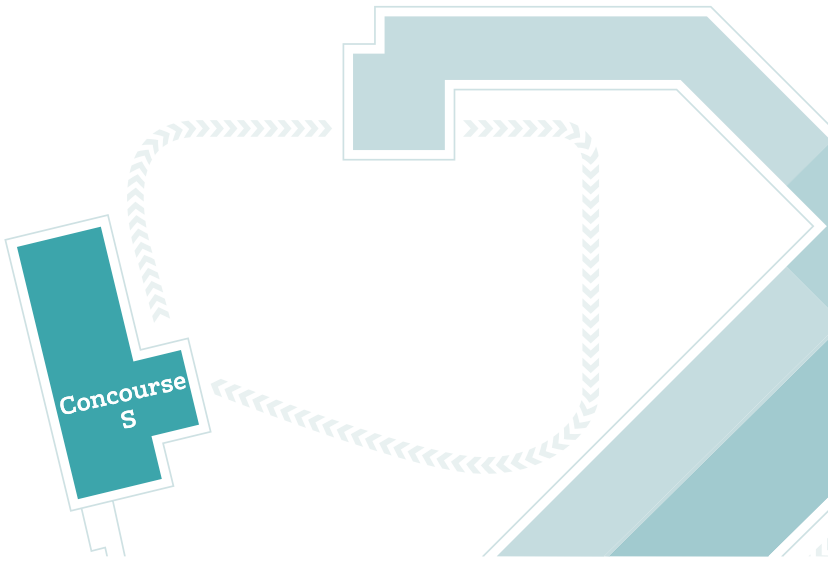
1983 West extension

HIGHLIGHTS

Concourse S (previously South Satellite) was built with Concourse N (previously North Satellite) and Main Terminal as part of the major 1973 expansion of SEA. Along with Concourse A and International Arrivals Facility, it is the entry and exit point for SEA's international flights and passengers. Concourse level finishes have been updated to provide a more contemporary look to brighten the space.

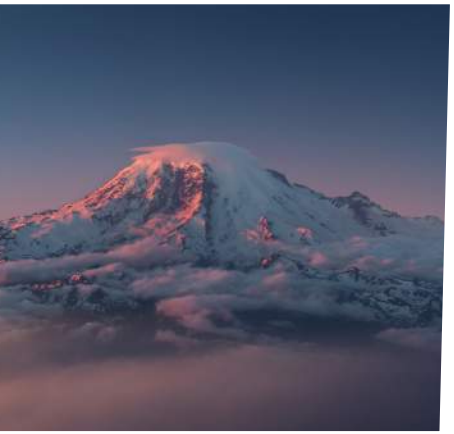
LOOKING FORWARD

A major capital project is planned to update and expand Concourse S to include a revised concourse layout, updated structural system, additional dining and retail options, passenger amenity spaces, and lounges.



1.2

CRAFTING THE PACIFIC NORTHWEST SENSE OF PLACE



EVOKING THE VIBE

A socially conscious approach to design embodies the Northwest Ethos. SEA has chosen a process that contributes to improving the passenger and employee experience. The goal is the creation of inspiring public spaces that engage the emotions of all who pass through—passengers, airline personnel, SEA employees, and the workers who staff businesses in the terminal. The distinct landscapes, people, and cultures of Washington inspired our SEA Vision, which creates architectural themes and materials to help represent Washington within our airport. Design consultants that shape the future of SEA should express this Northwest Sense of Place though a variety of means—architecture, interior design, art, graphics, and other media. Spaces that evoke the unique "vibe" and the authenticity of the Pacific Northwest, set SEA airport apart from all other airports.

NORTHWEST ETHOS

Distinctive, awe-inspiring natural environment

Invoke the feel of mountains, forest, water, and sky.

A dynamic, vibrant built environment

Reference the cities, neighborhoods, parks, and buildings of the Pacific Northwest–both historic and modern-day.

A pioneering, cutting-edge spirit

Think of the early settlers to the region, trade and commerce, industries (like timber, fishing, health/biotech, and aviation), and technology.

Rich, diverse culture and history

Consider the various events, arts, music, entertainment, sports, and education happening in the region.

The people

Who we are today and the groups and individuals who have been significant in the region's past.

Thriving international trade, commerce, and tourism

Think of ways to create experiential zones that create Pacific Northwest setting by combining visual elements with other senses such as sound, smell, and touch.

Green values

Creating and maintaining a sustainable environment.

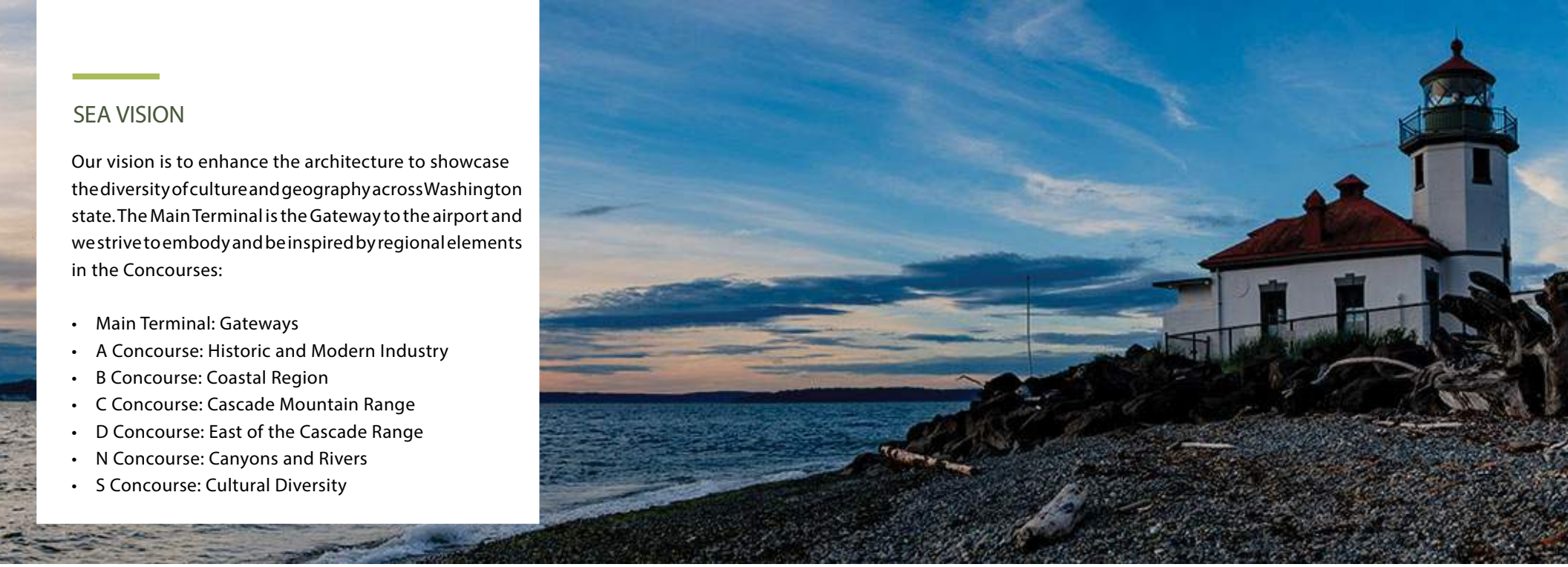
Dining, retail, and advertising

Develop relationships with appropriate brands and concepts.

SEA VISION

Our vision is to enhance the architecture to showcase the diversity of culture and geography across Washington state. The Main Terminal is the Gateway to the airport and we strive to embody and be inspired by regional elements in the Concourses:

- Main Terminal: Gateways
- A Concourse: Historic and Modern Industry
- B Concourse: Coastal Region
- C Concourse: Cascade Mountain Range
- D Concourse: East of the Cascade Range
- N Concourse: Canyons and Rivers
- S Concourse: Cultural Diversity

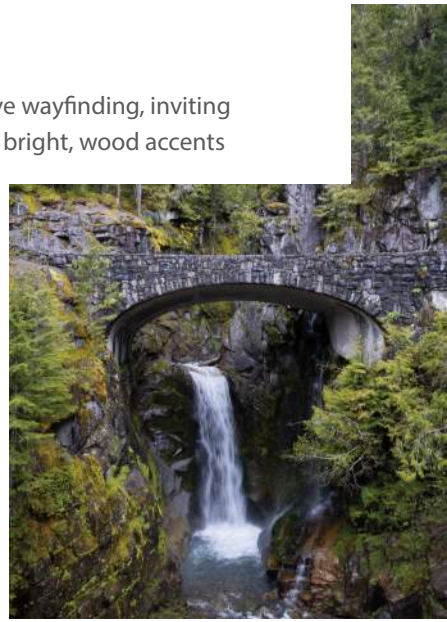


Main Terminal

Gateways

Inspiration: open, intuitive wayfinding, inviting

Color & Materials: light & bright, wood accents



A Concourse

Historic and Modern Industry in the Puget Sound

Inspiration: entrepreneurial, change-makers, craft

Color & Materials: earth tones, wood, metals

B Concourse

Coastal Region

Inspiration: windswept, scale/density, Ocean & Salish Sea

Color & Materials: blues, grays, with sunset accents

C Concourse

Cascade Mountain Range

Inspiration: grand, awe-inspiring, evolving vistas, vibrant

Color & Materials: green, plum, brown, with wildflower accents

D Concourse

East of Cascade Range - Palouse

Inspiration: agriculture, rugged, wide expanse, textural

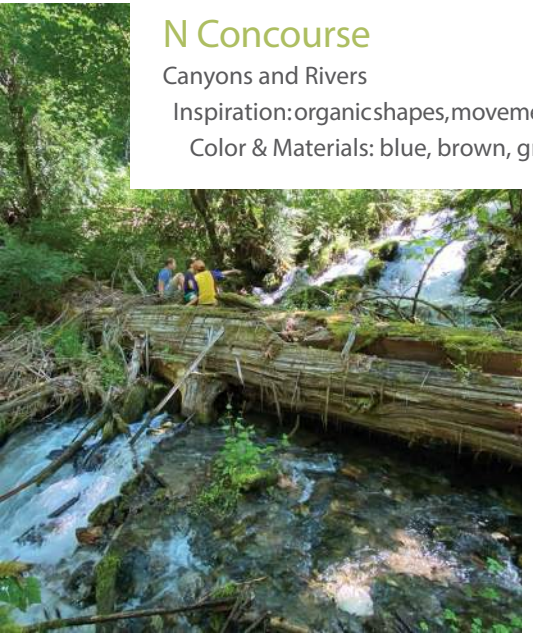
Color & Materials: orange, green, tan, sunrise accents

N Concourse

Canyons and Rivers

Inspiration: organic shapes, movement, unexpected moments

Color & Materials: blue, brown, green, white

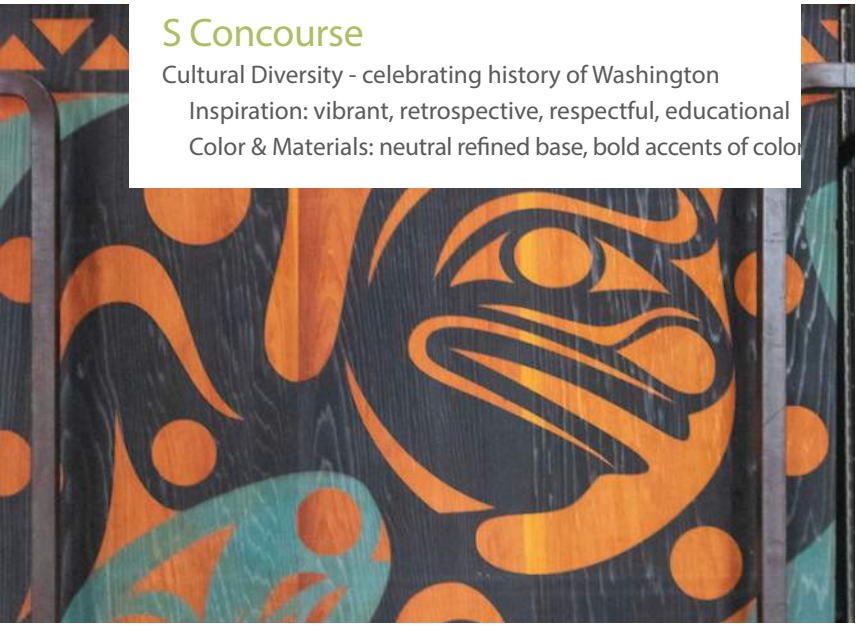


S Concourse

Cultural Diversity - celebrating history of Washington

Inspiration: vibrant, retrospective, respectful, educational

Color & Materials: neutral refined base, bold accents of color



DEFINING NORTHWEST SENSE OF PLACE

1 Progressive Northwest Modern

Maintain continuity with existing architecture.
Berespectfulofexistingterminal'smodernism-timeless.

2 Nature as Inspiration

Biophilic Design Elements - Natural light, connection to outdoors, materials, patterns, and experiences for scale and views

3 Authentic Experience

Clarity of Northwest elements and inspiration.
Honest use of materials - local, natural finishes
Structural Honesty

4 Cultural Influence

Respectful representation of cultures in Washington.
Inspired ways of incorporation.

5 Inclusivity

Warm and Inviting
Comfortable Human Scale
Universal Design

If you don't know where you are, you don't know who you are.

—Wendell Berry, American Bioregionalist

1

PROGRESSIVE NORTHWEST MODERN

SEA design vocabulary can be defined as "Progressive Northwest Modern." This style is a blend of progressive modern architecture and the regional influences found in the natural environment and cultures of the area. The term "Progressive Northwest Modern" conveys two fundamental ideas:

Providing continuity with the existing architecture makes projects more successful in achieving a unified image at SEA.

Each new design should be forward thinking and innovative, and we encourage designers bringing new ideas while being respectful of existing architecture.

PROGRESSIVE NORTHWEST MODERN FUNDAMENTALS

continuity with existing

UNIFIED TRANSITION FROM OLD TO NEW

progressive yet respectful

RESPECTFUL OF EXISTING MODERNISM

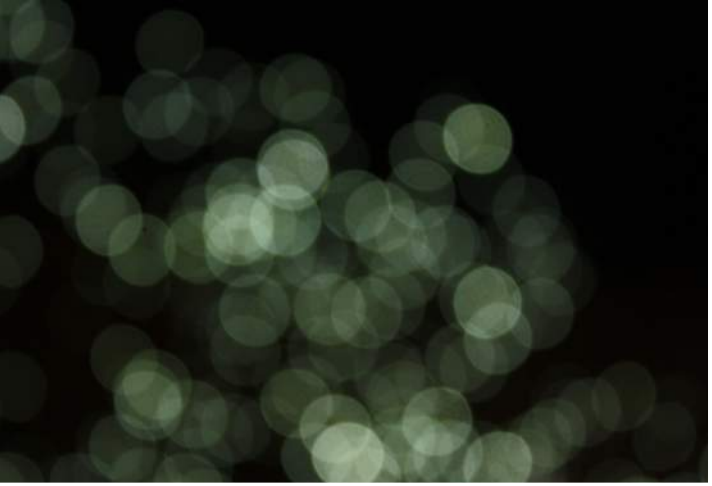
2

NATURE AS INSPIRATION

Architecture and interiors in the Pacific Northwest have responded historically to the natural environment, contending with its power in unique ways.

This response to nature has created a vernacular design style, a particular kind of design expression that seeks to connect materials, structure, and nature. The region's dramatic and varied geography includes mountains, volcanoes, islands, temperate rain forests, and multiple bodies of water; these, and abundant natural resources, as well as maritime, agricultural, and industrial histories form a singular context for creativity. There is an inherent human inclination to connect with nature.

Connecting with nature embodies the tenets of biophilia. By extension, biophilic design incorporates natural materials, natural light, vegetation, nature views and other elements of the natural world into the modern built environment in a balanced configuration of seen and felt experiences.



Creating an experience that celebrates nature is not about recreating the "great outdoors." A design goal of evoking nature, using nature as a reference is preferred, in impactful, considered ways, balancing the literal with the abstract.

Our key elements are derived from the patterns of biophilic design to elements that would most successfully be implemented at SEA. Architects and interior designers can achieve a connection to nature through a variety of means. SpacePlanning-layingoutnewbuildingswithwaystogiveviews for wayfinding, to see nature, yet providing secluded areas or ways to discover new areas can incorporate multiple elements of biophilic design. On a smaller scale, materiality - for instance, using a real stone that is regionally sourced, or a species of wood that is local to the area. Or lighting—maybe a moment of surprise and delight, such as a pool of dappled light that recalls a forested path.

SEA, as a gateway to the Pacific Northwest, embraces a natural aesthetic style and its impact on all who use the airport, linking it to the city, community and region in which the airport belongs.

NATURE AS INSPIRATION ELEMENTS

visual connection to nature
VIEWS TO ELEMENTS OF NATURE & LIVING SYSTEMS

non-rhythmic stimuli
UNIQUE MOMENTS WITHIN AREAS OF REPETITIVE PATTERN

dynamic & diffused light
CAPTURE DAYLIGHT VARIATIONS, CIRCADIAN LIGHTING

biomorphism
FORM, PATTERN, & SYSTEMS INSPIRED BY NATURE

material connection
LOCAL, NATURAL ELEMENTS INTEGRATED

complexity and order
SYSTEMS & GEOMETRIES WITHIN SPATIAL HIERARCHY

prospect
CURATED VIEWS TO DISTANT AREAS & DIVERSE SPACES

refuge
ELEMENTS THAT SUPPORT DESIRE FOR SPATIAL REPRIEVE

discovery
ENTICE FURTHER EXPLORATION OF BUILT ENVIRONMENT

3

AUTHENTIC EXPERIENCE

"...designs evolve naturally, drawing inspiration from the surroundings, structural considerations, and the site itself. In the same way that the play of the sun and wind determine the growth of a plant, the environment can shape the best design for a building."

— Fred Bassetti, Seattle Post-Intelligencer interview

Strong architectural concepts that are inspired from Northwest locations, materials, or cultures are encouraged. Seek to discover and portray the underlying principles from the inspiration and convey it in a more abstract way. Photography is often employed to reinforce a sense of place, but designers are encouraged not to simply use photos of local icons to impart authenticity. Another example is finding inspiration from local stone formations and using that in tile or wall patterns.

Local, natural materials are priority when designing spaces. We encourage use of stone, wood detailing, expansive areas of glass, exposed structure, deep overhangs, to represent the Northwest Sense of Place.

Structural Integrity is using exposed framing members that speak to the utility and strength of early agricultural buildings in the region. This "structural honesty" is celebrated in various ways throughout SEA. One striking example is the complex curved curtainwall in Central Terminal. Its fully exposed structural system uses machined fittings and cables to create the open view.

AUTHENTIC EXPERIENCE ELEMENTS

clarity of northwest inspiration
INTERPRETATIONS, ABSTRACTED

honest use of materials
LOCAL, NATURAL FINISHES

structural integrity
EXPOSED STRUCTURE

4

CULTURAL INFLUENCE

For some guests, a connection through SEA is their only exposure to the Pacific Northwest region. But the changing nature of air travel, impacted by our everything/everywhere culture, means that SEA is so much more than just a place to travel through, it is a microcosm of the Pacific Northwest. SEA, while obviously serving air travel needs, is also a place to play, work, shop, dine, and experience art, exhibits, music, and other cultural aspects that make the Pacific Northwest a unique destination.

That uniqueness is what we are trying to distill in SEA's design, and it should be immediately apparent when a person disembarks from an airplane, or enters the terminal from outside.

In order to tell the story of the people and cultures of the Pacific Northwest, we encourage designers to engage with stakeholders and communities during the design phase to better understand and incorporate elements into the architecture. Methods of honoring and being inspired by cultures can take many forms both figurative - such as materials, construction details, or patterns, and literal - such as imagery, art, or types of spaces included.

CULTURAL INFLUENCE ELEMENTS

respectful representation

ENGAGE, HONOR, & INCLUDE COMMUNITIES DURING DESIGN

inspired incorporation

INTEGRATE CULTURAL REFERENCES IN DESIGN

INCLUSIVITY FUNDAMENTALS

helpful & welcoming

BUILDING IS INTUITIVE, ACCOMMODATING

human scale

BALANCE OF VOLUMES & SCALES

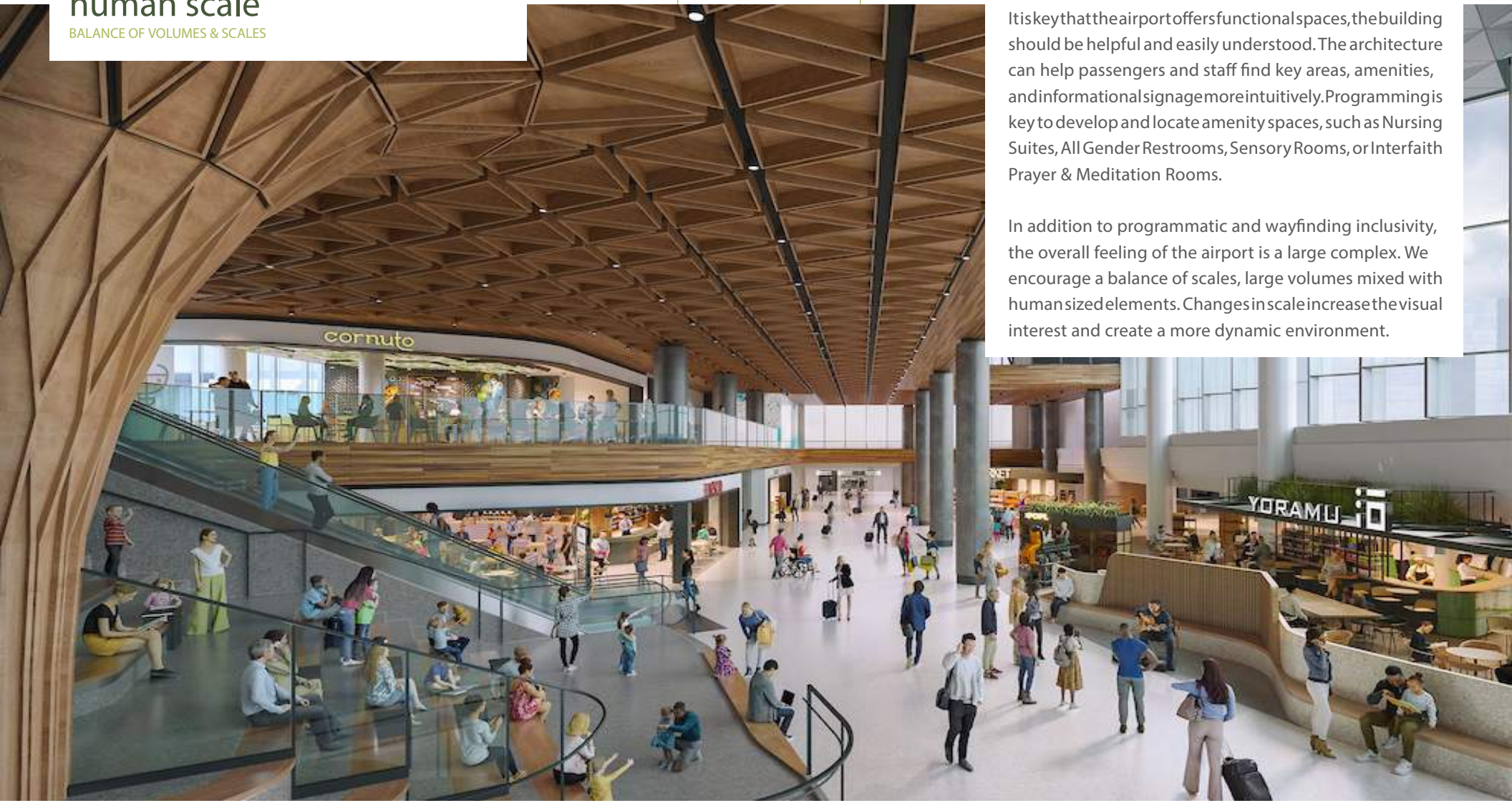
5

INCLUSIVITY

The Northwest has a reputation for polite and tolerant people. The architecture of SEA can build upon that reputation with being an inclusive environment that offers ease and accommodations for all who travel through it.

It is key that the airport offers functional spaces, the building should be helpful and easily understood. The architecture can help passengers and staff find key areas, amenities, and informational signage more intuitively. Programming is key to develop and locate amenity spaces, such as Nursing Suites, All Gender Restrooms, Sensory Rooms, or Interfaith Prayer & Meditation Rooms.

In addition to programmatic and wayfinding inclusivity, the overall feeling of the airport is a large complex. We encourage a balance of scales, large volumes mixed with human sized elements. Changes in scale increase the visual interest and create a more dynamic environment.



Airports say a lot about a place because they are both a city's business card and its handshake; they tell us what a community yearns to be.

—Pico Lyer, The Golden Soul

1.3

FORM FOLLOWS FUNCTION

Whether it be the eagle in its flight, or the open apple blossom, the branching oak, or the clouds drifting over the sun, form (ever) follows function, and this is the law.

—Louis Sullivan, Modernist Architect, 1896

WHAT IS "FORM FOLLOWS FUNCTION"?

Simply put, it's a principle of modernist architecture and industrial design which mandates that the shape of a building (or object) should primarily relate to its intended function or purpose.

How does this credo affect the SEA brand? And how can your design best respond? Airports, by nature, are complex spaces that require users to make multiple decisions throughout their journey. Many elements compete for attention. By respecting and solving for passenger issues first, and stripping away the superfluous, the design that emerges will become a canvas upon which to build the best experience, one that is not only memorable, but intuitive as well. One that is hierarchical from both a messaging and visual standpoint. An environment whose form is born from the functional.

form follows function

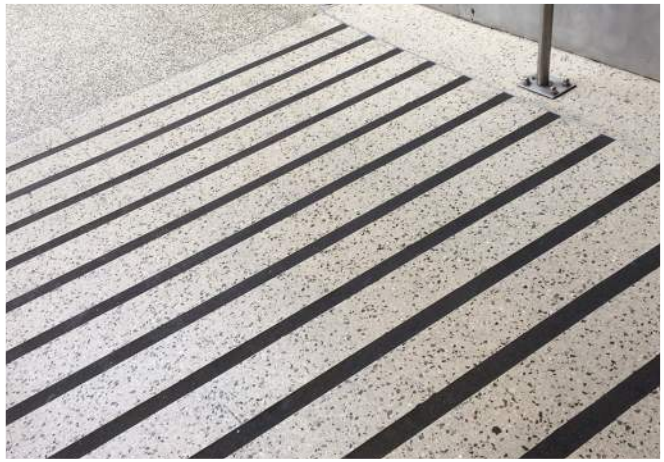
MATERIALITY FOLLOWS FUNCTION

The appropriate material at the right stage or area of the passenger journey, is an important aspect of "form follows function."

Scale is a factor in airport design. Large-scale spaces often seek out the "wow" factor, exciting passengers about their journey. But just as critical is an approach that acknowledges the importance of the human scale, and the resulting impact on the space. Materiality plays a key role in this. "Material follows function" is a good way to think of this. A material checklist as you conceive your design is helpful, as is a conversation with your SEA project representative, to understand expectations and lessons learned with material applications at the airport. Also be aware as you affect the built landscape at SEA that there are a number of legacy finishes that should not be used on new projects, and will remain until a new project replaces them.

Building from the floor plane up, what materials are appropriate? What materials should be consistent throughout the airport, and where is there opportunity for variance? Design consultants should reference the Architectural Guidelines and Standards. An introductory narrative for each category of material (flooring, wall covering, etc.) provides an overview of considerations for that material type. In addition to appropriateness of use, sustainability is a key attribute when selecting or specifying materials – does your palette meet applicable sustainability requirements, including furniture coverings?

BUILDING FROM THE FLOOR UP



Material maintenance must also be considered. Flooring is perhaps the most important material in your design. Major circulation zones should be terrazzo for durability. Flooring materials can often be used in a manner that goes beyond the obvious. For example, when designing with terrazzo, consider the subliminal wayfinding aspect that patterning can create. Consider the sonic environment as well--gate holdrooms should also be carpeted with tiles, acoustically quieting these zones.

Wall base, and wall protective finishes, are important in reducing on-going maintenance costs. Transitions between existing designs and your design warrant particular attention. Many projects, both new build and renovations, will have adjacency concerns that are beyond the specificity of the architectural guidelines. Your SEA project manager can help prioritize a checklist of items/conditions to assure a smooth transition between your design and existing designs.

FLOORING CONSIDERATIONS

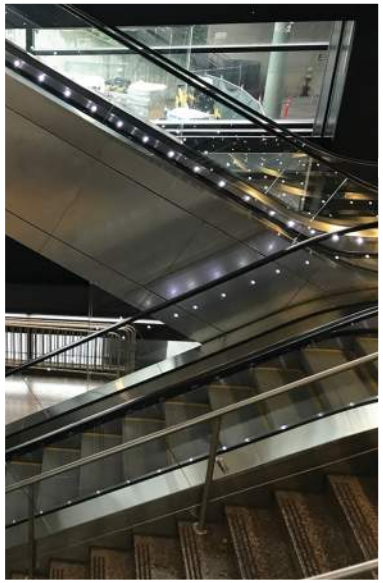
1. major circulation = terrazzo
2. gate holdrooms = carpet
3. restrooms = porcelain tile

BALANCING MATERIALITY & MAINTENANCE

The idea that "materiality follows function" is never more important than in specifying restroom materials. Simply stated, materials of exceptional durability must be used in restrooms. Practical considerations take precedence, but this doesn't mean that character has to be sacrificed. For example, while a monolithic, non-patterned countertop material may look good in theory, in practice its water-spotting potential will be an on-going maintenance concern. Practical considerations for material backings should also be considered. For example, mirrors with copper-free backing (coatings) will not "pit" when used in conjunction with wet vanity areas. And again, flooring is key – large scale porcelain pavers are durable, typically meet slip-resistance standards, and require fewer grout lines due to their size. Terrazzo is not an acceptable restroom flooring material due to its degradation when exposed to solutions that have acidic properties.

The balance between materiality and maintenance in restroom environments is constantly evolving, spurred by the myriad of commercially available products. As stated earlier, it's important to understand lessons learned from your SEA project manager, especially before selecting or specifying restroom materials.

The balance between materiality and maintenance in restroom environments is constantly evolving.



DETAILS MATTER

The notion that form follows function has an impact beyond the importance of materiality. From visual cues at vertical circulation moments, down to the smallest detail of something as functional as a ledge, this type of thinking has validity at a multitude of scales throughout the airport.

Airports, by nature, are busy environments that have overlapping functions/elements vying for passengers' attention. This, added to distracted passengers focused on personal devices, raises safety concerns when negotiating stairs and/or escalators. Generously scaled spaces are required at these transition points. Consider a tactile detection surface at flooring zones at the top and bottom of stairs and escalators. Materials surrounding stairs and attachment points for handrails must meet accessibility standards. Passengers carrying luggage on escalators pose a special safety concern. Elevators should always be located adjacent to escalators, or within sightlines of escalators. Lighting design should respond with a higher level of illuminance at these vertical transition points.

Daylighting is an essential, challenging aspect of design in thriving civic spaces. The balance of daylight with artificial light, and potential glare, must be considered. The increased demand for, and use of, daylighting and LED-lamped lighting fixtures can sometimes pose glare issues, particularly for flight information displays (FIDS) and airline gate agents, whose work counters/monitors typically get placed adjacent to window walls. Fritted glazing, dynamic glazing, window films, and motorized shade systems are some of the solutions to this issue. Additionally, exterior light shelves or shading systems can redirect the negative effects of daylighting.

It's often stated that if you get the details right, the rest falls into place. While this might be an overstatement, details definitely matter! Design consultants are encouraged to imagine their designs through the lens of a harried passenger. For example, a flat ledge is the perfect spot to leave a coffee cup when a recycling container is not nearby. By simply angling the ledge relative to the floor plane, this visually unpleasant situation is avoided.

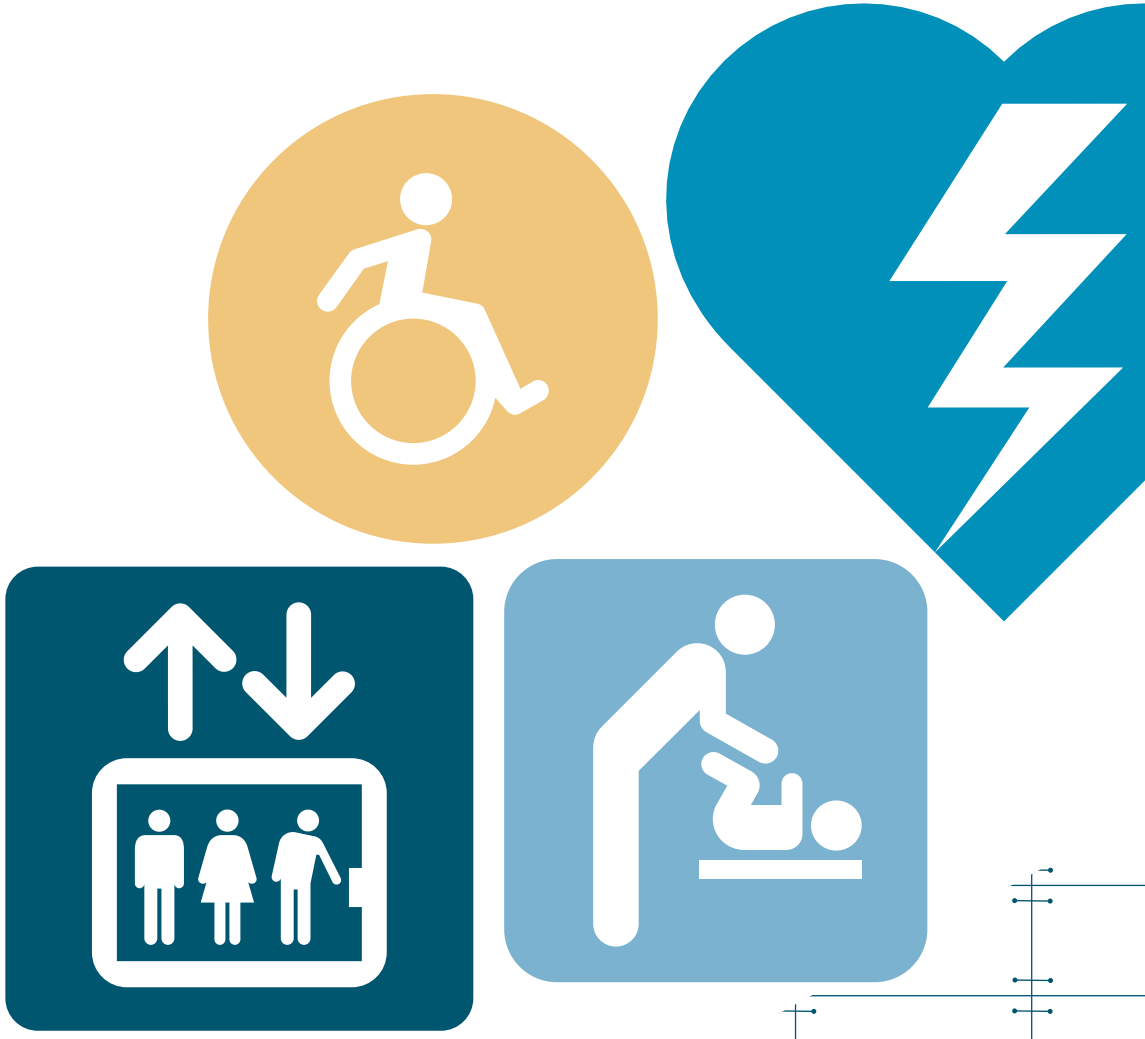
When daylighting, aim to balance brightness levels with methods to reduce glare.

BEYOND ACCESSIBLE DESIGN

"The one argument for accessibility that doesn't get made nearly often enough is how extraordinarily better it makes some people's lives. How many opportunities do we have to dramatically improve people's lives just by doing our job a little better?"

—Steve Krug

Planning an accessible facility embodies the goal of "form follows function." SEA targets to be the most accessible airport, period. The airport environment must be designed to fit everyone: young or old, able or disabled, English and non-English speaking. And while all projects must meet the specifications defined and regulated by the Americans with Disabilities Act (ADA), consultants are encouraged to go beyond the required, and consider the aspirational.



UNIVERSAL DESIGN

Going beyond accessible design is also a goal. While Accessible Design is good design, Universal Design not only acknowledges the importance of accessibility, but takes the mission a step further. Simply put, the National Disability Authority (NDA) states that Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability. And everyone benefits.

A truly accessible and inclusive airport would provide a travel experience where passengers, regardless of their specific abilities, can travel freely through space while feeling in control and accommodated.

Universal and Accessible Design should be part of all new build projects at SEA, as well as renovations. Even challenging existing conditions have adaptability! Practicing form follows function, Frank Lloyd Wright designed the iconic Guggenheim Museum in New York City decades before accessibility was mandated.

"Great architecture has this capacity to adapt to changing functional uses without losing one bit of its dignity or one bit of its original intention."

—Tom Kerns, Guggenheim Director

The details are not the details, they make the design.

—Charles Eames, Architect

1.4

INTEGRATING SUSTAINABLE PRACTICES

SUSTAINABILITY PIONEERS

As the first large United States hub airport to fully incorporate sustainability practices as a key component of its master planning effort, SEA is a pioneer. SEA's Sustainable Airport Master Plan (SAMP) develops a long-term blueprint for the airport over 5, 10, and 20 year time frames, reducing environmental and social impacts. SEA is a steward of the Northwest natural environment and champions this role in both literal and metaphoric ways. Literal through the application of sustainable design strategies, and metaphoric through the influence of biophilic design principles.

biophilic design

In architecture, a sustainable design strategy that incorporates reconnecting people with the natural environment.

DESIGN RESILIENCY

One aspect of biophilic design is resiliency—natural systems possess the ability to dynamically respond to change without environmental deterioration.

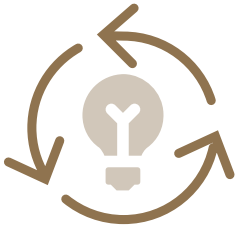
The building and design industry is adopting the resilient approach due to climate change and natural forces.

Evolving building technologies are enabling architects to create smarter structures that respond to environmental conditions that impact them. One example of this is the use of dynamic exterior glazing, capable of adapting to shifting sun angles throughout the day, thereby decreasing mechanical loads and improving the users' well-being. SEA is using dynamic smart glass in two major projects currently under construction.

Design consultants should consider the implementation of planning and design principals of this trend, increasing the resiliency of their building designs for the passengers who interact with them on a daily basis.

SUSTAINABILITY GOALS

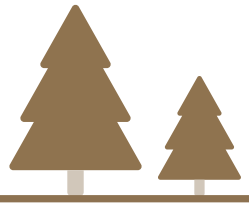
Consultants are required to follow sustainable goals, and to describe basic strategies that can achieve them. To summarize, sustainable building projects at SEA strive to reach five simple goals:



conserve energy

Energy is a finite resource that must be conserved if the region is to achieve a sustainable pattern of development. Each project must meet the Washington State Non-Residential Energy code, and should consider the following energy conserving strategies:

Reduce energy consumption
Harvest site resources
Increase efficiency



manage material use

The construction of new facilities, as well as the renovation of existing spaces, increase our region's consumption of materials. To approach sustainable patterns of material use, the complete life cycle of a product should be considered. Improving the efficiency of use and lowering the overall resource consumption, can be achieved through four strategies:

Minimize material use
Select sustainable sources
Use durable materials
Close the loop

support landscape

Landscaping and the connection to the natural environment is an essential aspect of the vision for SEA Airport. Three important objectives are:

To connect with nature
To preserve native vegetation
To work with natural systems

enhance environment

There is growing evidence of the negative impact from exposure to multiple environmental toxins present in building materials. The construction of new facilities can create new sources of pollution and environmental impact both inside and outside of buildings. The approach to enhancing the environment has three key components:

Reduce pollution sources
Eliminate contamination
Dilute pollution strength

safeguard water

The beauty of the Pacific Northwest is closely linked to the quality of its water resources. Three strategies are employed to conserve and improve the quality of water:

Reduce potable water use
Maintain natural water flows
Harvest on-site flows

Additionally, a LEED Silver designation is the goal for all design and construction projects at the airport.

COMMITMENT WITH RESULTS

SEA's commitment to sustainable practices has resulted in numerous domestic and international industry awards, including:

ACI (Airports Council International) 2011 Environmental Achievement Award

for SEA's Sustainable Aviation Fuels Northwest project

Seattle Business Magazine's "Green 50 Award"

for the SEA's many environmental initiatives, including:

- Centralized Pre-Conditioned Air for parked jets project
- Leading the effort for the Sustainable Aviation Fuels Northwest projec
- The At-Berth clean fuels for cargo vessels project
- The Scrappage & Retrofits for Air in Puget Sound project

2011 Best Workplaces for Recycling and Waste Management award

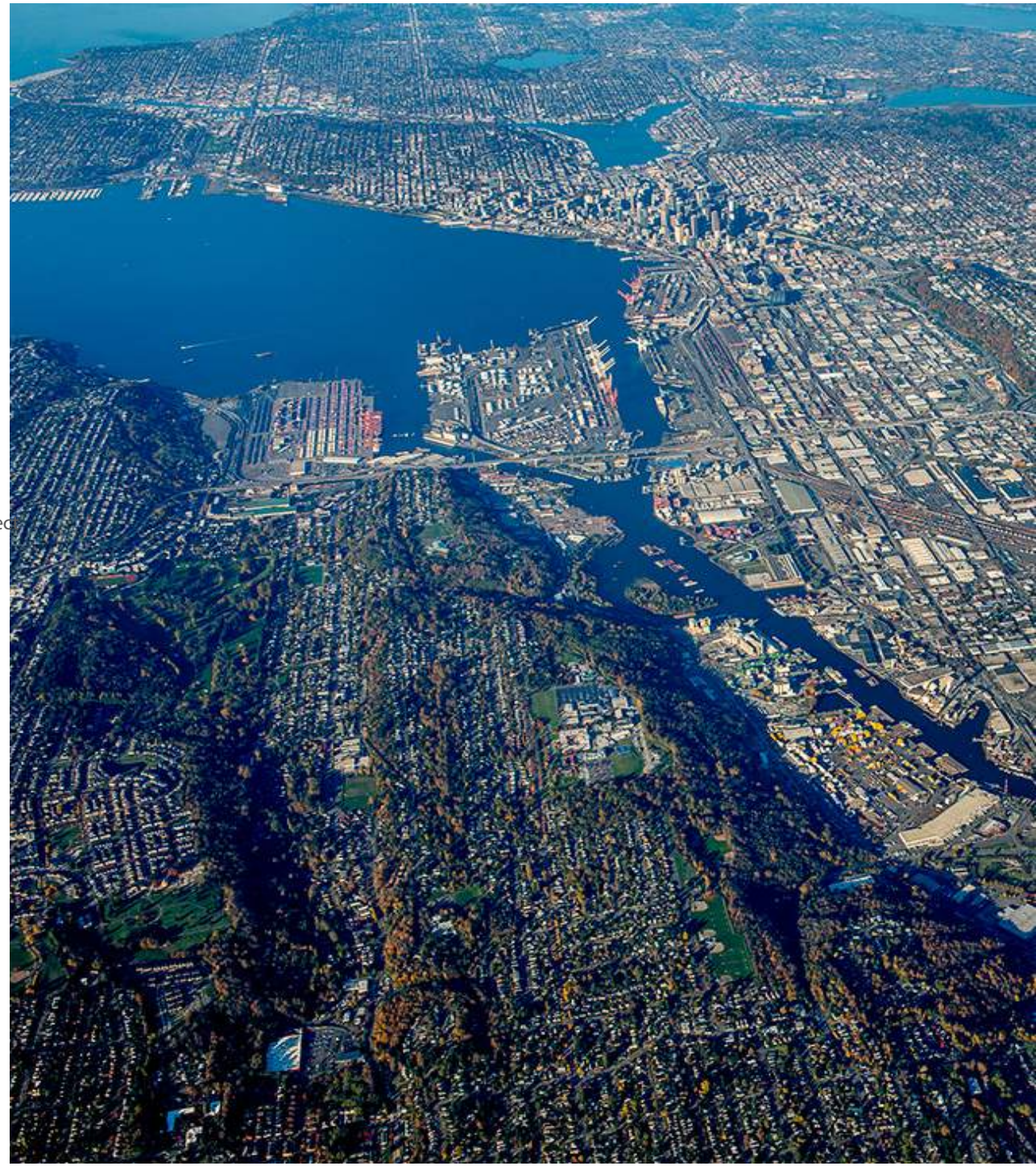
from King County's Solid Waste Division

Enterprise Seattle's 2011 Diamond Award

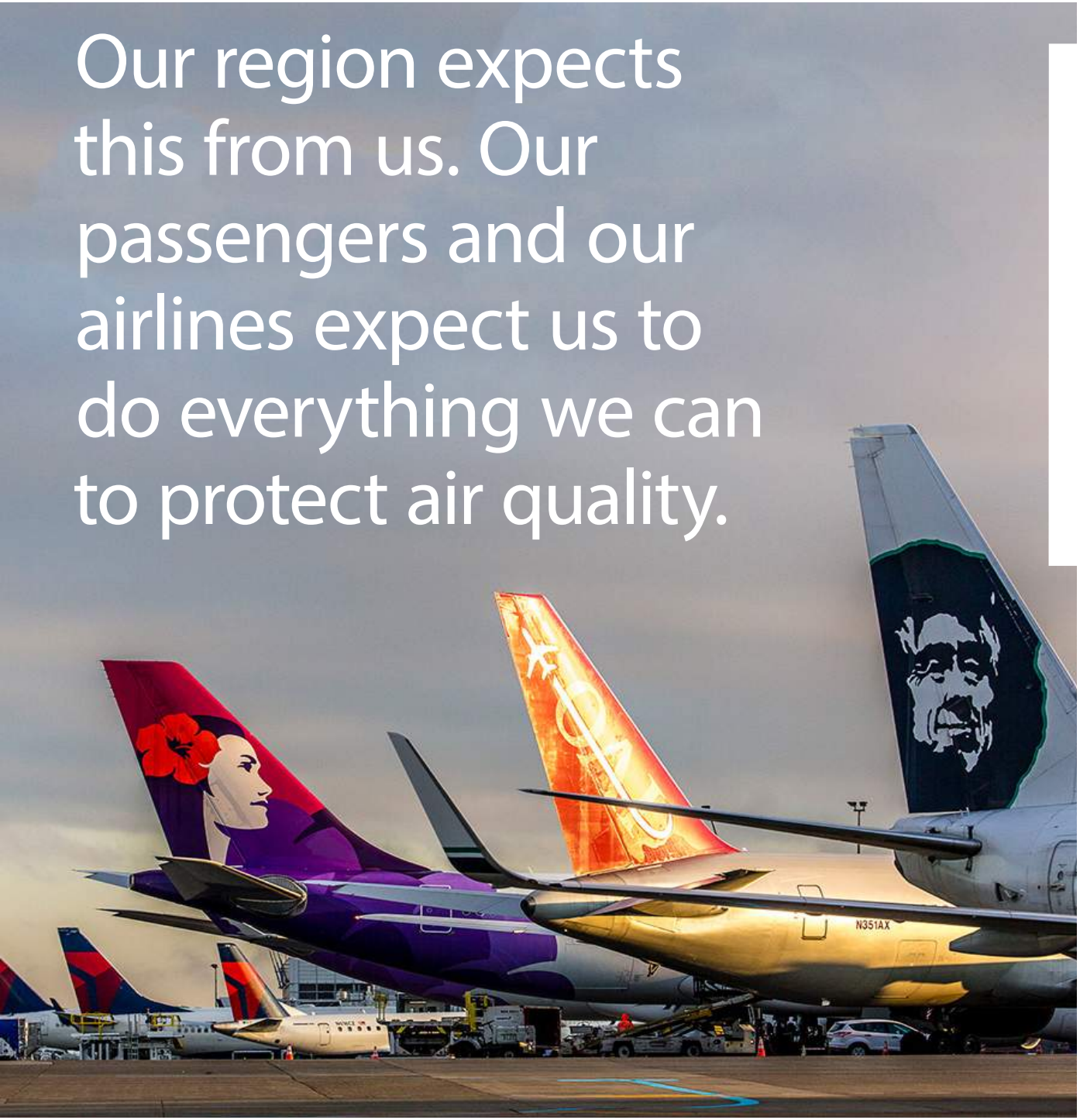
for Special Achievement, in recognition of SEA's employee commute trip reduction program

2015 International Tech Awards

sponsored by The American Society of Heating, Refrigerating, and Air-conditioning engineers (ASHRAE), in recognition of SEA's centralized pre-conditioned air project



Our region expects this from us. Our passengers and our airlines expect us to do everything we can to protect air quality.



As the prior awards lists demonstrates, SEA has undertaken highly innovative initiatives, exemplified by the pivotal centralized pre-conditioned air project. SEA faced a dilemma: How could jets waiting at gates get fresh air without running their engines? The result: a centralized plant that pumps hot and cold fluids through 15 miles of pipes to 73 jet gates, where a unit then pre-conditions warm or cool air blown into the aircraft. This program saves five million gallons in fuel annually, equating to 15 million dollars. The annual emission reductions equal 40,000 tons of greenhouse gases, which is equivalent to taking 8,000 cars off the road. In addition, SEA provides electric vehicle charging stations in the garage. SEA's efforts reflect and further the values of the people in its community, who demand a reduced carbon footprint and the resulting cleaner air.

40,000 tons
annual reduction
of greenhouse gases

= to

8,000 cars
off the roads

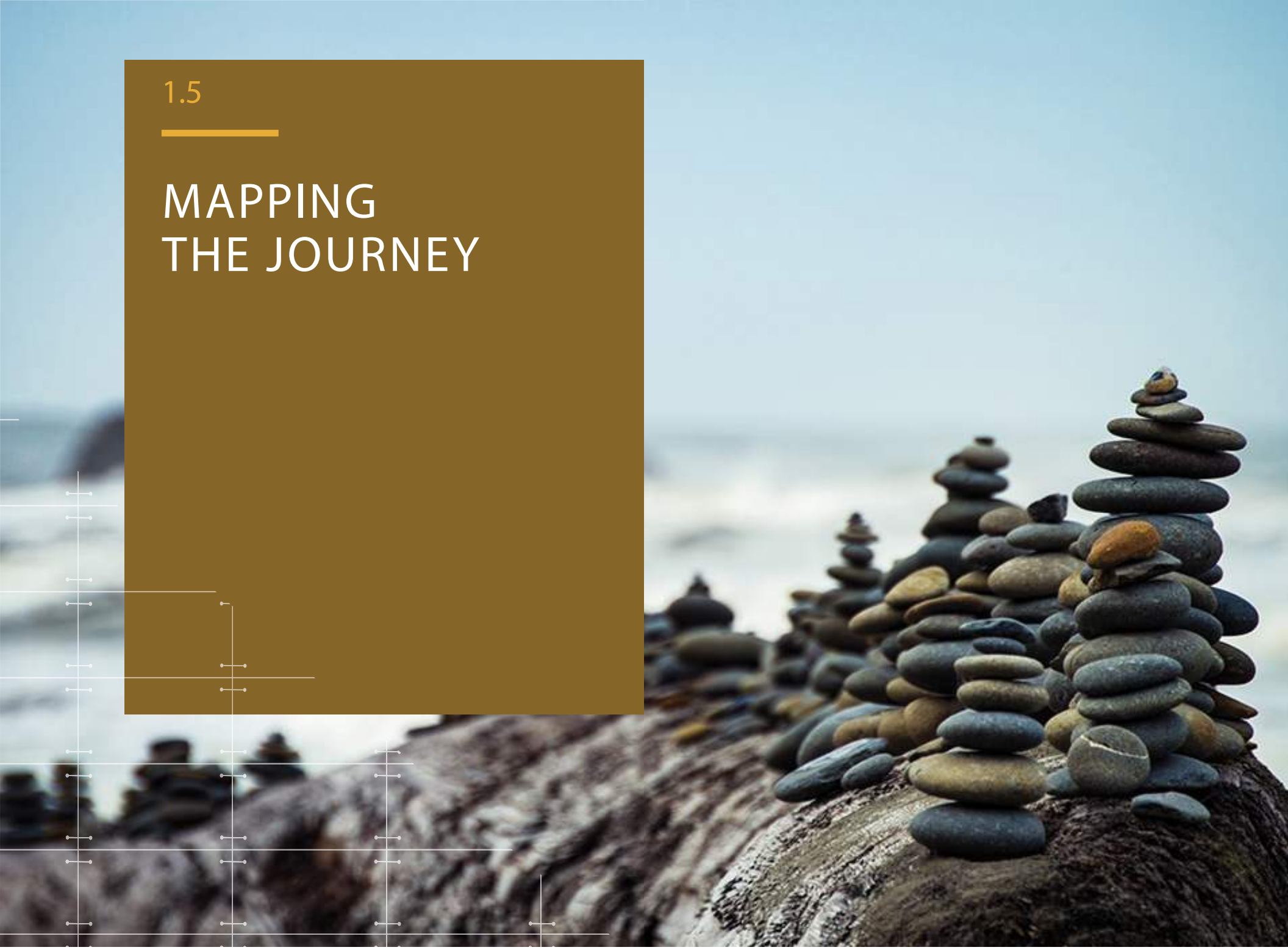
The goal of biophilic design is to create places imbued with positive emotional experiences...Using inspiration from the local natural environment...to create a sense of place…

—Judith Heerwagen, Author

—Judith Heerwagen, Author

1.5

MAPPING THE JOURNEY



CONSIDERING PASSENGERS & EMPLOYEES

SEA is committed to providing the best possible experience for both its passengers and the many employees and varied employers who work there. In addition to serving tens of millions of passengers annually, SEA itself also employs over 30,000 people. Creating a progressive working environment for all employees has a positive net impact—happy employees mean happy passengers.

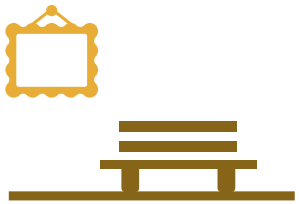
Design consultants must consider various components when planning projects, including how to enhance the spatial experience, how to emotionally choreograph that experience, and how to provide a clear wayfinding experience for a variety of passenger types and employees.

SEA DESIGN CONSIDERATIONS

1. Enhance spatial experience
2. Choreograph emotional journeys
3. Define passenger typologies
4. Provide clear wayfinding

1

ENHANCING THE SPATIAL EXPERIENCE

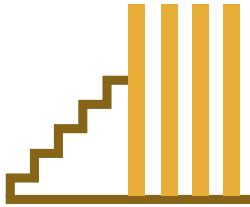


Public Spaces

Public spaces should be clearly organized, visually open and engaging, generously scaled, and appropriate to the use of the space.

Public Circulation

Public circulation areas should be comfortably sized to allow for easy traveler movement during peak traffic periods.



Vertical Circulation

Vertical circulation between floor levels should be very open, enabling clear way finding and offering opportunities for spatial drama and visual connectivity.

Public spaces should be free of physical impediments that would reduce ease of movement, both for passengers with and without disabilities, and for employees.

Service elements should be consolidated and located in alcoves or otherwise well integrated to avoid congestion in public circulation paths. Visual clutter inhibits way finding and orientation. "Controlling clutter" is not just an operational issue; designers should develop clear zones for service elements, creating a framework that allows future evolution of service needs without compromising the image and coherence of the public spaces.

Consider how materials, finishes, and artwork can also support and clarify the intended spatial hierarchy.

Give primary spaces greater emphasis through the use of featured materials or through prominent integration of artwork. Develop lighting and signage in ways that strengthen and support the spatial hierarchy.

2

CHOREOGRAPHING THE EXPERIENCE

Approach, decision, arrival, and relaxation are the series of emotional phases that passengers experience while traveling.

The design of the public spaces should support the varied emotional states at each of these sequential experiences. When approaching a new space, passengers seek reassurance with clarity of wayfinding being the most critical aspect of this point in the journey. Your designs must provide a hierarchically clear spatial organization and include intuitive cues to reassure passengers. At decision points where paths converge, your designs must be appropriately scaled to temporarily slow passengers in order for them to make decisions.

Your designs should celebrate arrival moments in a new space or intermediate destination. The creation of gateways and focal points, whether through special architectural features or artwork, can provide a memorable experience. These special features serve an additional purpose as easily defined meeting points, or the perfect photo opp for posting on social media.

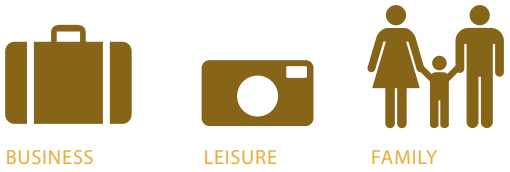
And finally, relaxation! Your designs for gate holdrooms and concession areas must encourage relaxation and discovery, focusing on exterior views and natural daylight where possible. Co-locating food and beverage concessions with gate holdrooms allows for ease of use, allowing passengers to take time to "unplug." A balance of comfort with drama is the goal. Surprise passengers with how comfortable it can be to be in an airport.

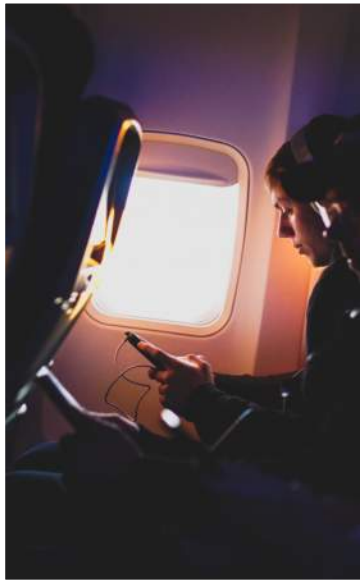
3

DEFINING PASSENGER TYPOLOGIES

To choreograph the best experience, it is essential to understand what is important to different types of passengers as they experience SEA. Design consultants are encouraged to think about the different passenger journeys through SEA: departing, arriving, and connecting passengers. Passenger typologies are another critical filter to apply while planning and programming projects. The final filter is technology. Self-service technology is prevalent at SEA, and designers must consider how the experiences they create can adapt and tailor to this trend, always keeping specific passenger types in mind. Engaging with technology in SEA will increasingly affect the experience. Equally important will be the desire to retreat from technology. These differences can positively shape the experience. Journey "moments" through SEA include a variety of experiences: curbside (both departing and arriving), ticketing, checkpoint, concessions, concourses, holdrooms, play areas, restrooms, art and exhibits, baggage claim, and connectors, to name a few.

TYPOLOGIES TO CONSIDER





Consultants may find that creating a journey map will guide their programming and planning. Crafting a narrative for key passenger types, then physically mapping this through all the journey moments, can result in more thoughtful approaches to architecture and interior design. A key component to this mapping is to consider how a passenger's journey through SEA can maximize non-airline revenue. Can your journey map facilitate 100% of passengers passing by 100% of concessions? Can the journey map also support community and social connection, allowing users

to socialize with family and friends? The time spent waiting to depart should always be productive. This "in-between" time drives discovery, and new experiences, for both passengers and employees. Analyzing the needs, wants, and preferences of differing passenger types and how the physical environment can respond to this, will be a key strategy in positively affecting non-airline revenue at SEA.

Great design is great for business!

4

PROVIDING CLARITY OF WAYFINDING

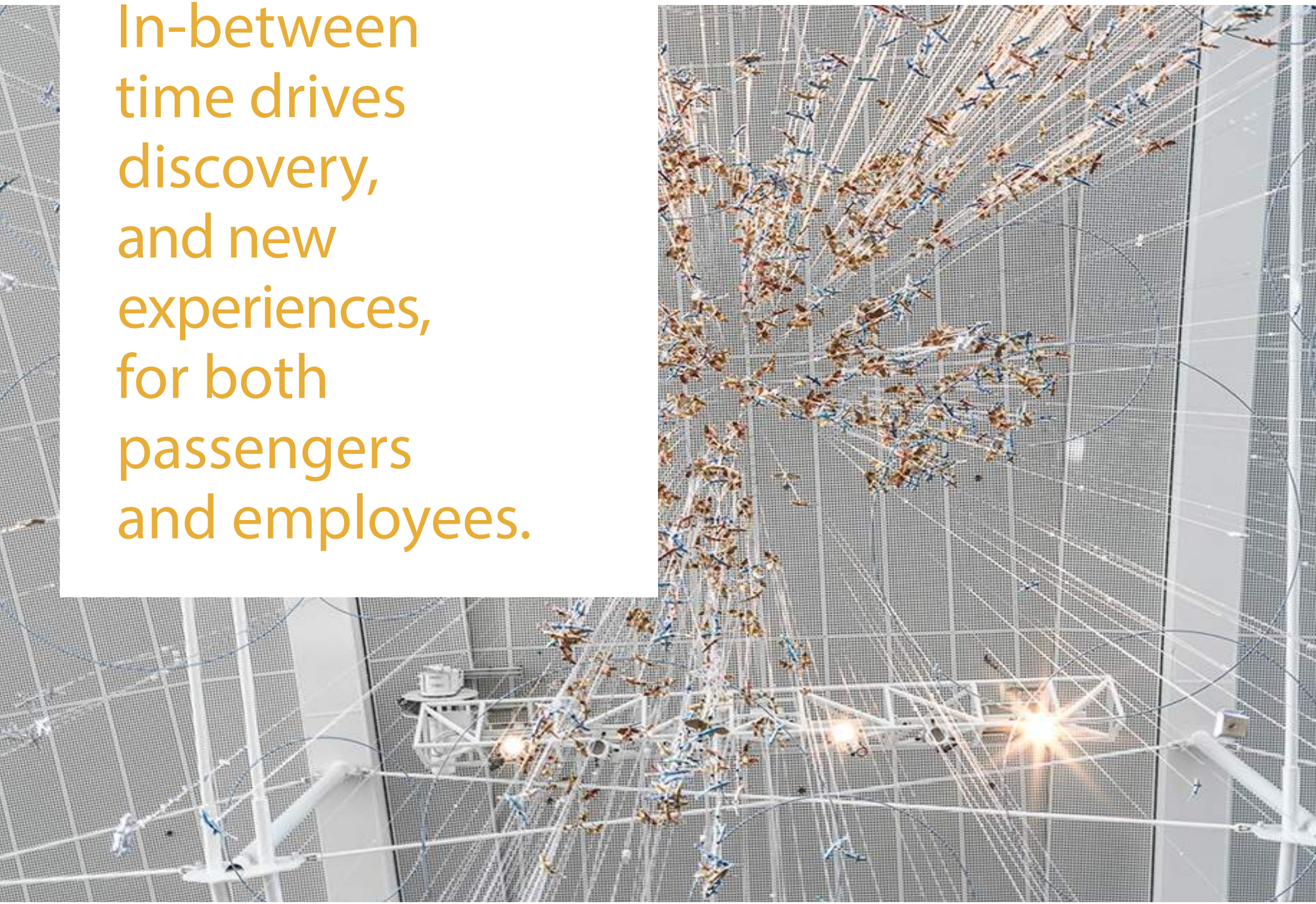
SEA hosts millions of passengers, guests and employees annually, each with a unique point of view and destination. The most basic need of each user is a clearly defined wayfinding system.

SEA is proactive in assessing its wayfinding systems, implementing new strategies to improve the passenger experience. As a result, design consultants must have a clear understanding of the latest wayfinding guidelines and strategies at the start of design projects.

Design consultants must engage with the SEA Wayfinding and Visual Environment (WAVE) committee at the beginning of the design process to ensure that visual communication is integrated into the design, not added after the design is completed. A uniform hierarchy of messaging, categorized into "primary" (directional and identification) and "secondary" (auxiliary services and support functions) messages will positively impact passenger flow. Although wayfinding clarity is key, designers are encouraged to not sacrifice the character of the spaces they affect. Consider embedding sensory cues into your designs as a way of adding an intuitive layer to the wayfinding system. For example, a creative use of color or pattern in flooring materials, whether terrazzo or carpet, can provide a subliminal reinforcement to a passenger's progression through the airport.

Additionally, new technologies will have a direct impact on wayfinding, from dynamic overhead signage to smart phone apps, all working in concert with static messaging to guide passengers through the SEA experience.

In-between time drives discovery, and new experiences, for both passengers and employees.



1.6

ADOPTING AN EXPERIENCE DESIGN APPROACH

WHAT IS EXPERIENCE DESIGN?

In the context of the airport, it can be described as design driven by the thoughtful consideration of the moment of engagement, or touchpoints, between passengers and employees and the SEA brand, and the ideas, emotions, and memories that these moments create.

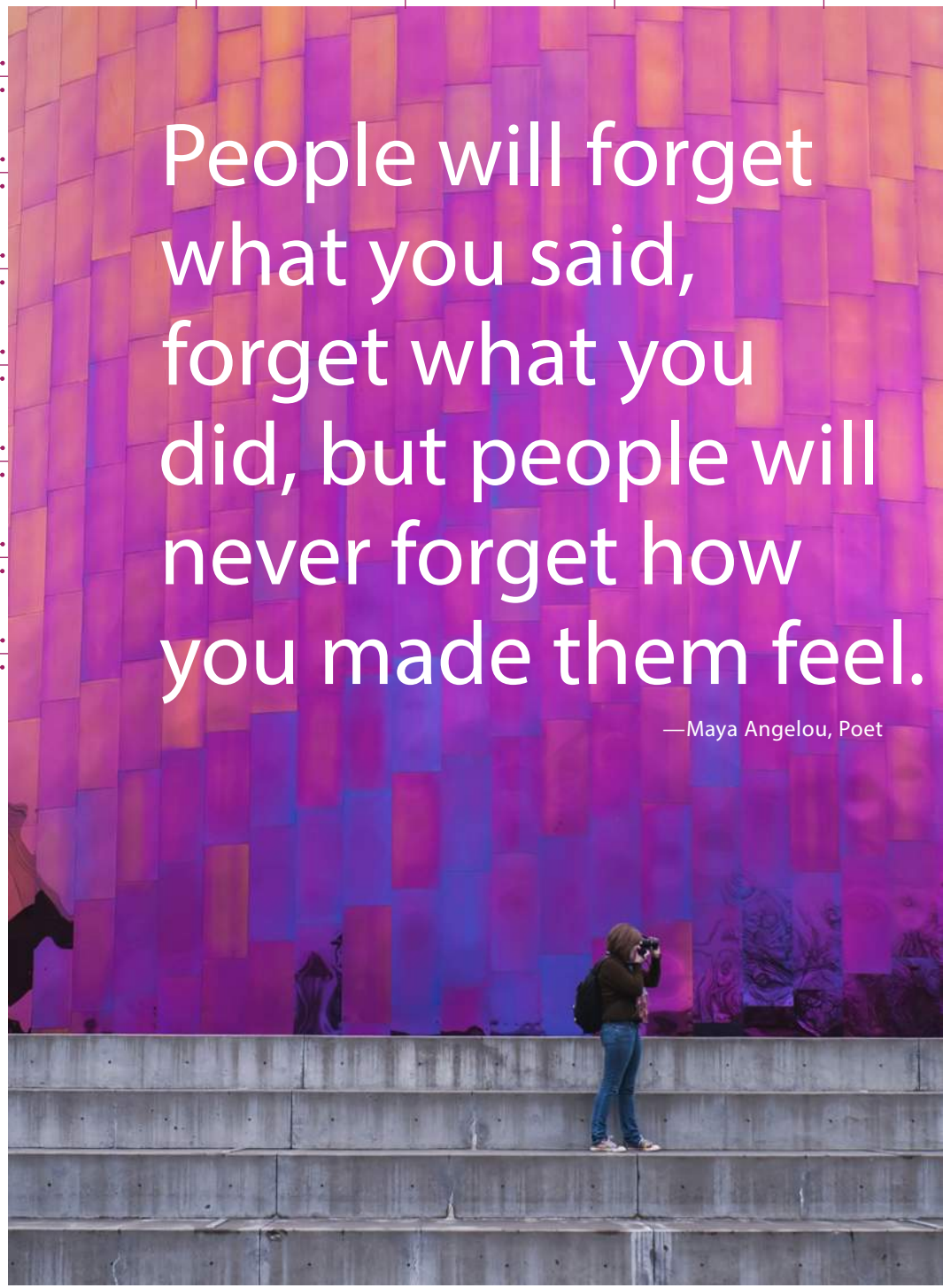
SEA believes a high-quality environment increases employee and passenger satisfaction. The design consultant's role in creating inspiring public spaces with a positive emotional impact is essential to this vision.

By substituting the word "people" with "passengers" in Maya Angelou's quote, a subtle mindshift begins to occur; an acknowledgment that just as experience is emotional, so is design.

experience design

noun

It's the "X" factor of design, inspiring the creation of great places that engage people's emotions and keep them coming back.



CREATING THE BEST PASSENGER EXPERIENCE INVOLVES:

1. stress reduction
2. optimized operational systems
3. hospitality service model

PASSENGER AS GUEST

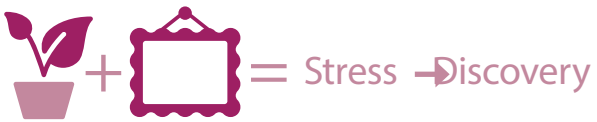
Think of passengers as "guests." Great hotels anticipate the needs and desires of their guests, understanding that they can't exceed expectations if they don't understand them. Creating the best experience for passengers touches on several things: stress reduction, optimizing operational systems, and a service style that emulates the hospitality industry. While design consultants may not be able to affect all of these things, one goal to strive for is "inclusion," the notion that all SEA passengers should be made to feel like they are members of a premium club.

Something as simple as providing a variety of seating types in your designs can alleviate passenger stress. Are there chairs that are designed specifically for the elderly? For children and families? People with disabilities? Are there seating groups that promote social interaction? Powered benching systems borrowed from the workplace world that enable working on your laptop or phone? Lounge options that provide more privacy? By offering multiple choices in the same area, passengers feel both more considered and more in-control of their environment, all elements in a stress-reduction program.

SHIFTING THE MINDSET

Borrowing from the hospitality industry, single-use spaces have increasingly yielded to spaces that support a variety of activities. SEA, while providing its obvious role of air travel, recognizes that traditional uses of space are blurring. Passengers—guests—are working, dining, shopping, exercising, engaging with art, everywhere throughout the terminal, concourses, and satellite buildings. Spaces that blur boundaries, that are adaptable to change as activities shift over time, are spaces that meet a wide variety of needs for a wide variety of guests. Certain spaces at the airport must maintain primary focus but by layering in other activities to expand a guest's experience, a richer, more emotional response can be achieved.

For example, one of these spaces is the checkpoint, typically the most stressful part of a passenger's journey through the airport. While you might not be able to control that area due to TSA regulations, it is important to consider how your design can "reset" a passenger's emotional state after they pass though security. Consider the calming effect of nature, such as natural daylight, if possible. Incorporating biophilic design elements and artwork are elements that aid in shifting the mindset to one of discovery. Direct visual connection to flight information displays (FIDs) is critical, as is de-cluttering this zone from distracting visuals such as advertising.
A calming experience is the goal, with ample seating areas where passengers can "recompose" themselves.



COMFORTABLE NOT CROWDED

Consultants addressing the physical environment at SEA are encouraged to create "homes" for a myriad of things: ATMs, shoe shine stands, vending, baggage carts, and advertising. The goal is seamless integration, not clutter.

A primary area of passenger hospitality is gate holdroom comfort. Consultants should review the document "Managing the Factors Affecting Comfort in Waiting/Gate Areas, 2012 Gate Comfort Project," and any lessons learned post publication date. The key finding is that the quantity of seating is the most important factor affecting gate comfort. This issue must be balanced against the possibility of crowding. Wi-fi service and access to electrical power are also important aspects to ensure the best possible gate experience. When planning for gate comfort, consider a variety of seating types, such as lounge chairs and occasional tables, and wheelchair spaces, to complement tandem seating. Adequate electrical outlets are an important aspect of gate comfort, as is circulation unimpeded by baggage.

Consultants should understand the intended airline gate podium configuration and boarding queuing space. Design for change as well, anticipating shifting airline boarding practices that can have huge impacts on gate layout.

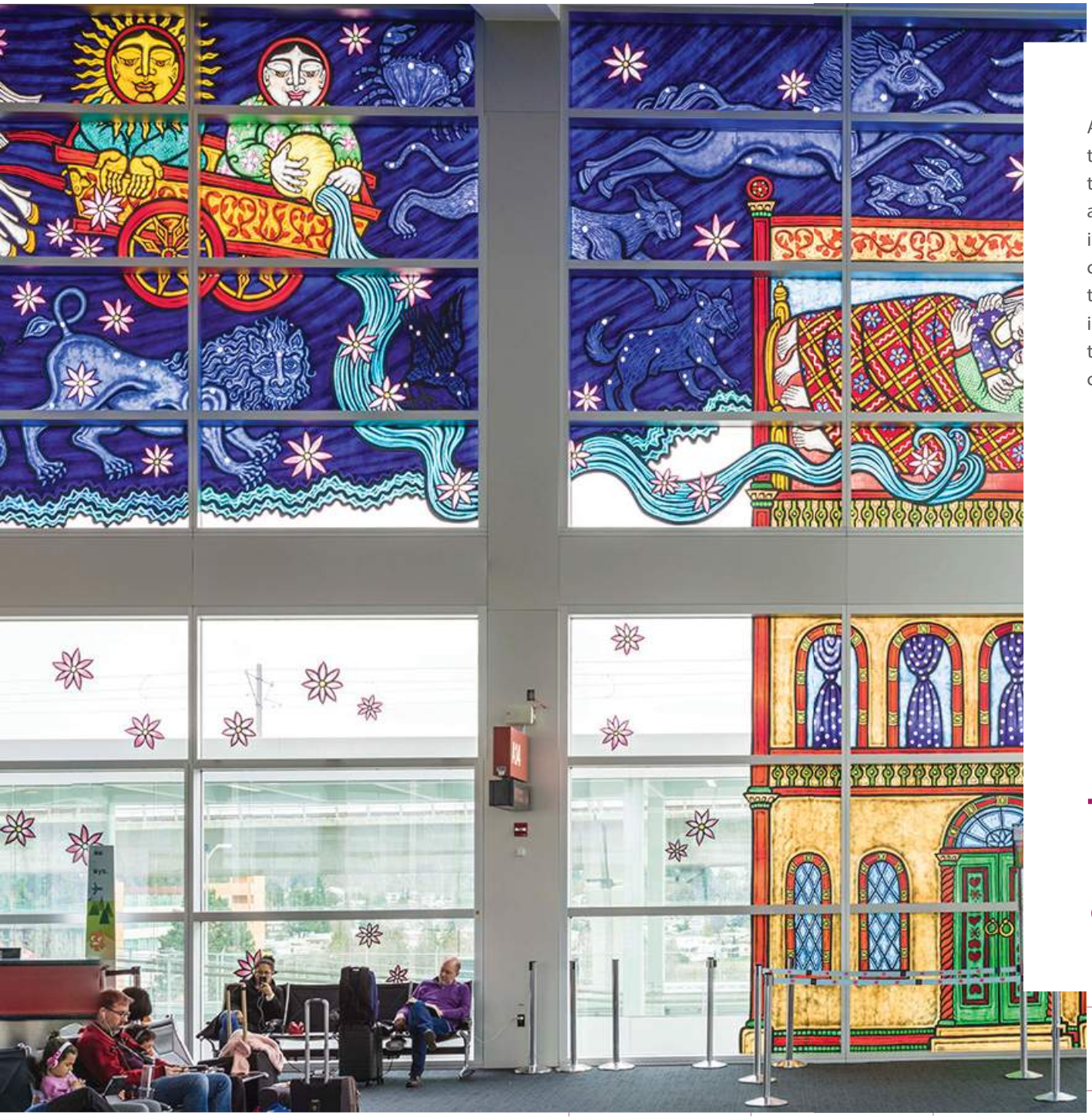
GATE COMFORT ENTAILS:

THE RESTROOM EXPERIENCE

It is an undeniable fact that great restroom design sets the baseline for every passenger's expectation of a great airport experience. The goal is a restroom experience that is like that of a premier hotel, that has rigorous attention given to the smallest detail, that goes beyond the basics. Whether through word of mouth, or posted for thousands to see on social media sites, people talk about restrooms and in many cases, every journey begins and ends with a trip to the restroom! Consultants affecting the location and design of restrooms must familiarize themselves with the SEA Restroom Guidelines, and any lessons learned post publication date.

The location and design of restrooms can have an overwhelming impact on the guest experience. In addition to traditional gender-specific restrooms, consider the special requirements of family restrooms, all-gender restrooms, and accessibility needs. And don't forget passengers traveling with pets! The location and design of both pre- and post-secure pet relief stations is not only important, but a code requirement.

Every journey begins and ends with a trip to the restroom.



Although the experience design approach requires more thought and rigor to achieve, it's important to remember that to achieve real impact, you don't need to be perfect at everything, just excellent at the right things. It's also important to remember that many places and spaces today compete on the experience they deliver. A unique approach to design thinking is encouraged by SEA, so that its brand is differentiated, and therefore memorable. So think about the experience design approach not as a series of rules that constrain your design, but as a framework for your creativity.

Learn the rules like a pro, so you can break them like an artist. —Pablo Picasso

I know I just walked through the door but this doesn't feel like any of the airports I've been to. There is such a local Seattle vibe.

1.7

FOSTERING SUCCESSFUL TENANT RELATIONSHIPS

SETTING THE STANDARD

SEA, along with its partners and tenants, strives to provide the highest quality experience, not only for its passengers and guests, but for tenants and other partners as well. Tenants at SEA comprise several types, including airlines, service providers, and municipal departments, among others. Passenger-facing, highly visible tenants, such as retail and food and beverage outlets, deserve the highest attention level by design consultants affecting the SEA concession landscape.

The Tenant Design section of the Architecture Design Guidelines & Standards provide a unifying theme for tenants, including airport dining and retail (ADR) spaces. Tenants and their design consultants must familiarize themselves with these design guidelines, which outline inspiring and practical design methodologies. The guidelines articulate SEA's Design Vision, outline principles to guide project teams and provide a clear understanding of the design review process. The guidelines embrace the qualities of the Northwest by synthesizing the region's natural beauty, international orientation, and local arts and culture. Supporting this design point of view are practical considerations that will ensure the successful implementation and realization of tenant designs.

Passenger-facing, highly visible tenants, such as retail and food and beverage outlets, deserve the highest attention level.

A balance of unique character and a Northwest aesthetic is the goal.

Whether an airport-unique concept, a local business, or a nationally recognized brand, the design of each tenant space must follow the SEA Architecture and Design Guidelines in order to ensure a consistent design aesthetic and quality throughout the airport. Brand concepts with a recognizable look, must adjust their design to ensure compatibility with the design aesthetic and Northwest Sense of Place identity. However, it is equally important that each tenant space be given its own character and individual expression through the creative use of approved materials, signage, and lighting. The airport encourages creative design solutions, particularly those that reinforce a concession's unique concept and brand. The best creative design solutions will reflect the brand concept but be appropriately revised to address the regional style as described here, resulting in maximized sales potential for the tenant.

All designs are subject to review and approval by the standard airport design review processes.

PLANNING FOR SUCCESS: TENANTS

SEA recommends a few ideas to tenants to ensure successful collaboration and realization of their brands.

professional design

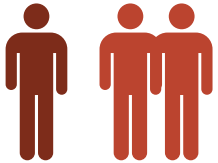
The context of your space is critical. Your brand must peacefully co-exist with SEA's brand. Engage professional designers and architects experienced in retail, food and beverage, and airline design. This will help ensure a professional result, and a smoother design and construction process.

lighting design

Hire a professional lighting designer to bring your brand to life.

graphic design

Turn to a professional graphic designer to provide your brand with the best exposure, particularly regarding food and beverage menu boards/displays



inclusive meetings

Bringing your designer/ architect/general contractor to SEA review meetings will be beneficial from a process standpoint, allowing for resolution of issues in a quick and timely manner.

Location, location, location! Again, understanding the context your design will exist in, and the type it is, is critical. For example, is your design an in-line facility? Corner location? Free-standing? Partially free-standing? Or unique operation? Each particular type will have its own impact on SEA base building design, signage, lighting, HVAC, utility connections, sightlines, etc.

CONCESSIONS PLANNING

Circulation design is key.
The goal is to allow passengers easily access anything they want to experience.

If your project includes concession planning, consider new planning typologies to make the layout more progressive. Some areas a "food court" arrangement of dining and retail spaces with shared seating is ideal. Other areas, integrating food and beverage tenants into holdroom lounges creates a symbiotic relationship between the two. Passengers have the convenience of nearby dining, while keeping an eye on their gate, reducing travel anxiety. Tenants have a captive audience, helping with revenue generation.

Consultants designing concession arrangements should begin the design process by checking in with their SEA Dining and Retail representative to understand the airport's latest thinking on this integrated approach. Regardless of the particular planning approach, guiding the highest number of passengers by concession tenants is critical.

When planning areas adjacent to boarding gates, consider the specific airline and its operational procedures. Gate counters and back counter zones, boarding spatial requirements, airline branding components, even airline brand colors will have an impact on your design. Plan for future changes, as airline requirements can evolve rapidly. See Tenant Design section for additional planning considerations.

CAN YOUR DESIGN ALLOW...

100%

TO PASS

100%

A HOME FOR ADVERTISING

Another tenant type that needs careful consideration is advertising. Advertising partners are a significant source of non-airline revenue generation at SEA.

Consultants should understand the type and size of advertisements scheduled for the area they are affecting, and plan accordingly. An integrated approach is desired, with advertisements embedded in the design, not added-on as an afterthought. For example, large format internally illuminated ads work well in recessed niches, creating a flush relationship with the adjacent architecture. Creating "homes" like this will support the "experience design" approach to spaces at the airport. The airport environment is also populated with wayfinding signs, public art, airline branding and other amenities, so achieving a balance between advertising and these important special elements is critical, to avoid conflicts or guest wayfinding confusion. Wayfinding always takes priority.

COMMUNICATION HIERARCHY

WAYFINDING	1
ADVERTISING	2
ART AND DISPLAY	3

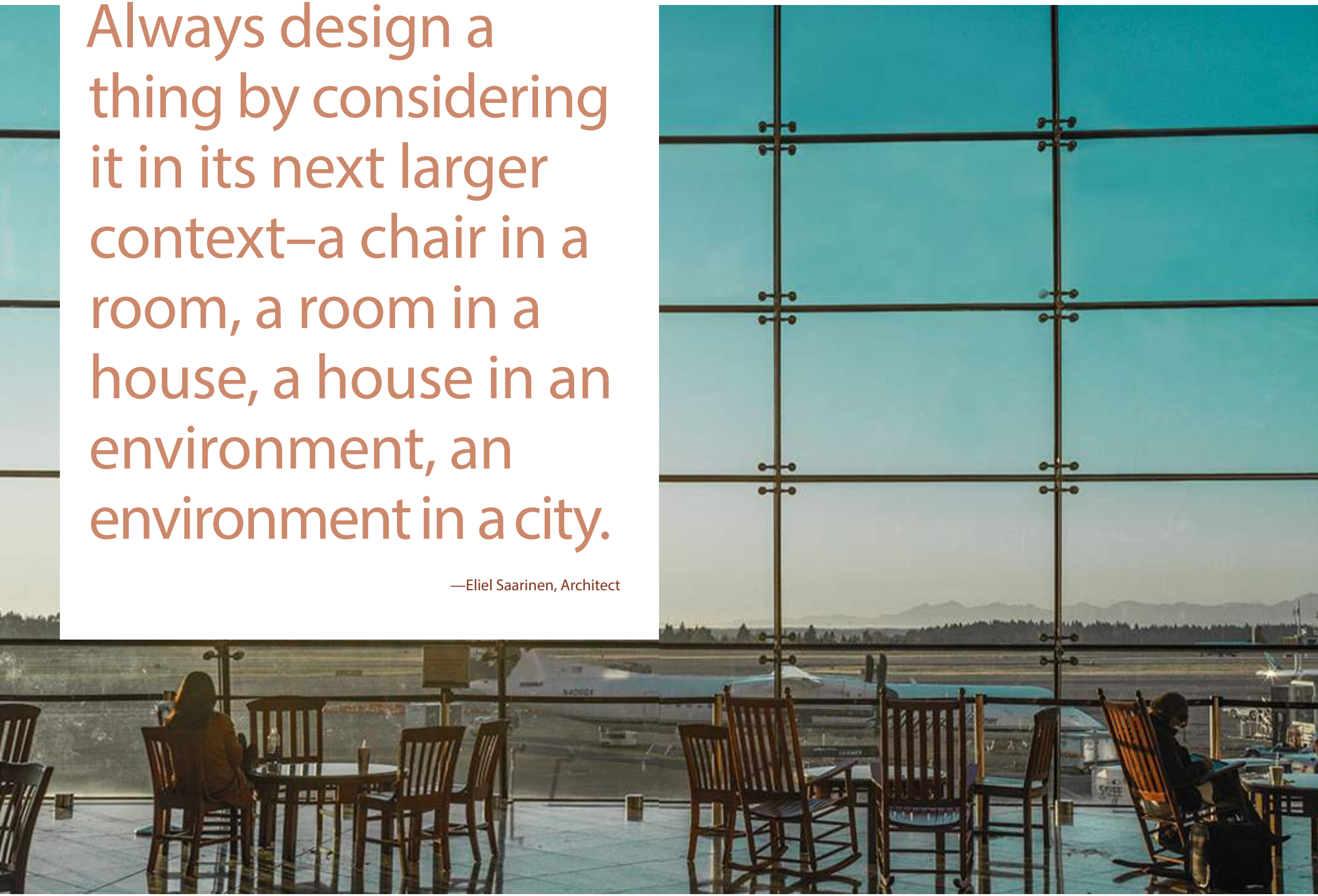
Other entities/partners are also an important source of non-airline revenue generation. Luggage cart rentals, banking, rental cars, luggage wrap, vending, even shoe shine stands are just some of the services that your design must respond to. Understanding the variety of space requirements to allow is just one aspect of planning for success.

Happy passengers, ready to fly, is the objective.

How your design works to this end, benefiting both tenants, and therefore SEA, is crucial.

Always design a thing by considering it in its next larger context–a chair in a room, a room in a house, a house in an environment, an environment in a city.

—Eliel Saarinen, Architect



The holistic approach of the Design Vision Document, combining the aspirational with practical considerations contained in the architectural guidelines, will provide a framework for the successful planning, design and implementation of projects at SEA airport for consultants, their partners, and SEA tenants.

SEA embraces a dynamic, collaborative design process with its design partners. These creative partnerships will drive our future.

Design creates culture. Culture shapes values. Values determine the future.

—Robert Peters, Design Educator

2

DESIGN GUIDELINES

SEA
Seattle-Tacoma International Airport

2

DESIGN GUIDELINES

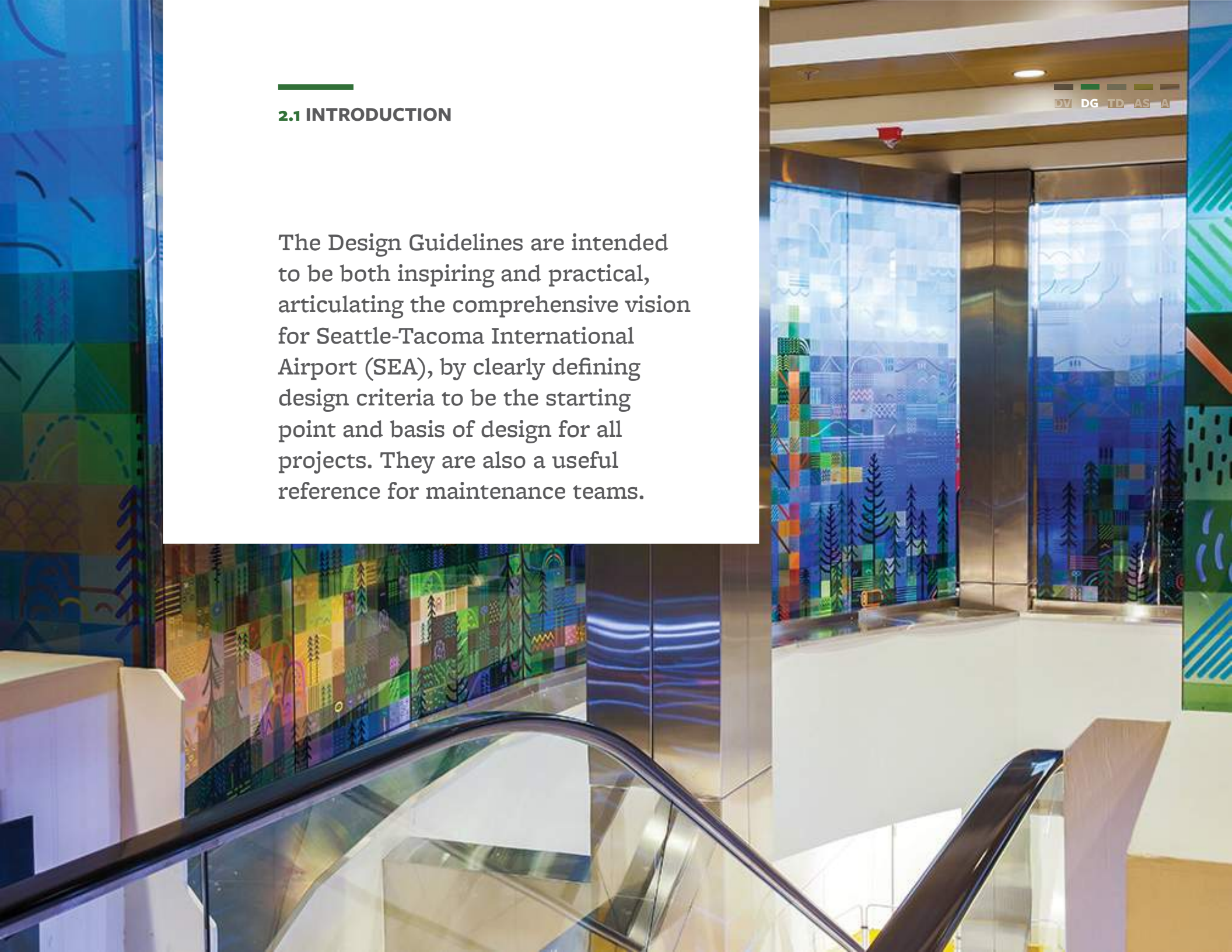
2.1 Introduction
- Purpose
- Audience
- Organization
- Procedures for Use
- Administration

2.2 Planning
- Regulations & Reviews
  - Review Authorities
  - Regulations
  - Design Checklist
  - Product Selection & Bid
- Project Types
  - Owner Types
  - Construction Types
- Project Teams
- Planning Considerations
  - Accessibility/ADA
  - Acoustics
  - Circulation
  - Connectivity
  - Integrated Design
  - Building Systems
  - Security
  - Storage
  - Sustainability
- Design Criteria
  - Consistency & Variance
  - Design Strategies
  - Structural
    - Basis of Structural Design
    - Structural Elements & Standards
    - Structural Drawing Requirements
  - Mechanical
  - Electrical
  - Artwork
- Zones
  - Airport Site Plan
  - Main Terminal Access Plan
  - Secure vs. Non-secure
  - Main Terminal Levels
  - Ticketing/Concourse Level
  - Baggage Claim/Ramp Level
  - Bridge Level
  - STS Level
  - Pre-Security
  - Concourse Access

2.3 Space Types
- Non-secure
  - Skybridges
  - Curbside (Arrivals)
  - Curbside (Departures)
  - Baggage Claim
  - South Arrivals (GML) Hall
  - Check-In Lobby
  - Esplanade
  - Mezzanine
  - Passageways
  - Parking Garage
- Secure
  - Security Checkpoints
  - Central Terminal
  - Concourses
  - Subgrade Transit Stations
  - Corridors
  - Holdrooms
  - Aircraft Passenger Loading Bridge
  - International Arrivals
- Amenities & Support
  - Conveying
  - Restrooms
    - Concept
    - Types
    - Nodes
  - Nursing Suite
  - Lactation Room & Modular Pods
  - Interfaith Prayer & Meditation Room
  - Sensory Rooms
  - Services Animal Relief Areas
  - Children's Play Area
  - Lounges
  - Storage
  - Loading Docks

2.1 INTRODUCTION

The Design Guidelines are intended to be both inspiring and practical, articulating the comprehensive vision for Seattle-Tacoma International Airport (SEA), by clearly defining design criteria to be the starting point and basis of design for all projects. They are also a useful reference for maintenance teams.



PURPOSE

Design Vision
Design Guidelines
Introduction
Purpose
Audience
Organization
Procedures for Use
Administration
Planning
Space Types
Tenant Spaces
Architectural Standards
Appendix

As a general rule, these guidelines cover visible architectural elements of the SEA Airport's public-facing real estate facilities, including for SEA tenants. The Design Guidelines are intended to provide a flexible framework, allowing for new discoveries and appropriate responses to each project's unique conditions.

Project teams should first reference these guidelines at the start of each project. They may look to their SEA project manager for clarification or additional insight on project requirements.

The Design Guidelines is an evolving document and will be updated periodically as conditions and criteria change over time to keep up with product availability, and to incorporate new recommendations and best practices. Please check back often for updates to this document.

This document is intended to accomplish the following:

- Outline the design strategies, providing fundamental principles to guide project teams in developing the design of each project.
- Provide a clear basis for design reviews by the **Architecture Review Committee (ARC)**, which has responsibility for reviewing the design of all projects at SEA Airport to assure compliance with the Design Guidelines.
- Set the tone for unity and consistency in the Airport's appearance, drawing a link between existing and new.
- Consolidate relevant information by providing a summary of related documents, resources, authorities, or other entities that are applicable to design work at SEA.

AUDIENCE

Design Vision
Design Guidelines
Introduction
Purpose
Audience
Organization
Procedures for Use
Administration
Planning
Space Types
Tenant Spaces
Architectural Standards
Appendix

The guidelines are primarily intended for an architecture and design audience (including administrators, project managers, and facilities maintenance personnel), both internal SEA employees and external consultants and vendors. This includes technical consultants (including engineering, maintenance, environmental, F&I) who are being on-boarded.

This document operates in conjunction with other disciplines' design guidelines. Design consultants should review the documents in the Resources section for further information on requirements for each particular project. Also, all projects must proceed in accordance with the **SEA Regulations for Airport Construction (RAC)**, which is available from the Port of Seattle and the Resources section of this document.

The users of the guidelines are responsible for:

- Verifying that they have received the latest version of the guidelines to ensure they are following the most recent specifications in their projects.
- Becoming familiar with and meeting the intent of the guidelines.
- Using good judgment while applying the guidelines to the project.
- Requesting owner approval of a material or product that varies from the guidelines (using the **Variance Request form** - see Resources), if it is necessary because of specific conditions.
- Abiding by the requirements of the guidelines without sacrificing creative and innovative solutions.
- Providing feedback to the owner on the use of the guidelines.
- Coordinating work with other applicable SEA standards and regulations.
- Presenting designs for selected projects to the design review committees.

Design Vision
Design Guidelines
Introduction
Purpose
Audience
Organization
Procedures for Use
Administration
Planning
Space Types
Tenant Spaces
Architectural Standards
Appendix

There are five main sections to this document: Design Vision, Design Guidelines, Tenant Spaces, Architectural Standards, and Appendix/Resources. Project teams should work across these sections to ensure their projects are meeting Airport goals and expectations.

Design Vision

The Design Vision aims to set the vision and direction for the Airport going forward. As we work to improve and expand our facilities, new projects and decisions should aspire to align with the Design Vision. The Design Vision sets the long-term direction for the Airport and is not intended to change often.

Design Guidelines

The Design Guidelines provide a breakdown of how we understand and talk about the Airport. They also provide clearly defined design criteria to be followed on all projects. As well as identify the various zones, space types, and the physical features of the facilities.

Tenant Design

Establishes minimum acceptable standards of design applicable to tenant spaces, including dining and retail establishments, throughout the airport campus.

Architectural Standards

In some cases, the Architectural Standards provide specific recommendations or standards. At other times, they define minimum performance requirements for which project teams should seek equal or better solutions, to be approved by SEA. Additionally, some areas of the Airport will need to maintain legacy features. As such, these guidelines also contain legacy specifications that may be phased out over time, as appropriate. The Design Vision and your project manager help define what, why, and when something should continue following the legacy specifications.

Appendix/Resources

The Resources section provides links and references to other documents and tools that may impact Airport projects. Project teams are expected to work across documents to ensure their efforts meet all expectations relevant to their project.

ORGANIZATION

Design Vision
Design Guidelines
Introduction
Purpose
Audience
Organization
Procedures for Use
Administration
Planning
Space Types
Tenant Spaces
Architectural Standards
Appendix

These guidelines supersede the following documents:

- STIA Design Guidelines (1999)
- Landscape Design Guidelines (2000)
- STIA Architectural Standards (2008)
- Casework Standards Manual (2016)
- Vitra Meda Gate Seating Standards (2017)
- Maintainability and Janitorial Standards (2017)
- Restroom Design Standards (2015)
- Dining & Retail Design Guidelines (2017)

For guidelines relating to the base building, non-public areas or tenant spaces, project teams should refer to the following documents:

- Tenant Design and Construction Process Manual
- Tenant Improvement Construction General Requirements
- Brand, Signage and Advertising
- Parking garage
- Port offices and maintenance facilities
- Non-public Tenant spaces

Additionally, the resources section serves as a reference tool, providing the following:

- Definitions and Acronyms
- Documents and Forms
- Design Intent Drawings

Design Vision
Design Guidelines
Introduction
Purpose
Audience
Organization
Procedures for Use
Administration
Planning
Space Types
Tenant Spaces
Architectural Standards
Appendix

The following summarizes the procedures for use of the guidelines:

- The requirement to comply with the guidelines is part of the required project information identified in the Request for Qualifications advertising work as part of the design consultant selection process.
- The guidelines are part of the required project information transmitted to design consultants at the beginning of a project.
- The Port of Seattle project manager is responsible for providing the design consultant with the latest version of the guidelines.
- The design consultant will meet with the Port of Seattle project manager during negotiation to review the design consultant scope and ensure that all aspects of the guidelines are followed and planned well. This meeting will take place once the design consultants have familiarized themselves with the latest version of the guidelines.
- The Professional Services Agreement and design consultant scope of services requires that the consultant be familiar with and conform to the guidelines.
- The Port of Seattle project manager is responsible for seeing that the design consultant's design is in conformance with and consistent with the guidelines.
- Reviews by the Port of Seattle Aviation Facilities and Infrastructure (F&I) Department include verification of conformance with the guidelines.
- The Port of Seattle project manager requires a Variance Request from the design consultant for any requested variance from the guidelines.
- The Port of Seattle project manager forwards Variance Requests to the F&I Architectural Review Committee, which is the reviewing and approving/disapproving body for variances and conformance with the guidelines.

Design Vision
Design Guidelines
Introduction
Purpose
Audience
Organization
Procedures for Use
Administration
Planning
Space Types
Tenant Spaces
Architectural Standards
Appendix

The owner of this document is the Aviation Facilities and Infrastructure Department. They are responsible for the development, implementation, long-term application, and enforcement of the guidelines.

Their responsibilities include:

- Obtaining the latest information from the field concerning the adequacy of the guidelines.
- Obtaining input from and identifying needs of the airport terminal environment from the public, tenants, and employees.
- Establishing the level of quality for finishes that meet the expectations of the public, tenants, and employees.
- Providing information for updating and revising the guidelines to reflect changing needs of the airport terminal environment.
- Providing feedback to users on issues that affect the guidelines.
- Keeping the guidelines up-to-date with the latest revisions.
- Updating the Change Log with changes to this document.

As this document evolves over time, changes will be noted with the icons below:

New

The “new” icon represents that an item has recently changed or is newly listed.

Archive

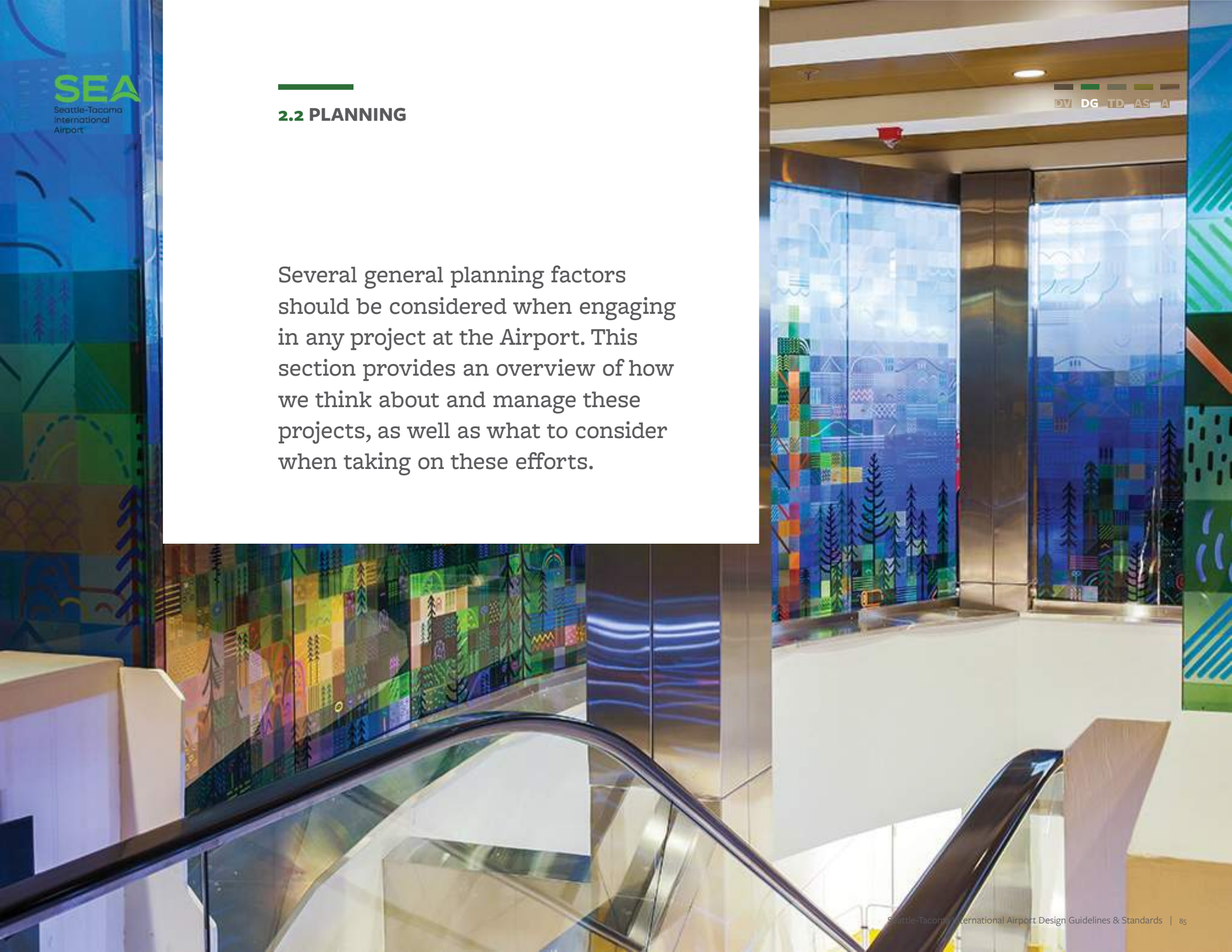
The “archive” icon notes that an item is archived, and therefore only to be used in legacy areas for “patch and match” fixes. Any projects or repairs requiring large application of archived items should be reviewed with the project manager to see if the area should be renovated to meet current standards.

Sustainable

The “sustainable” icon represents that there may be opportunities for an item to align with SEA’s sustainability goals.

2.2 PLANNING

Several general planning factors should be considered when engaging in any project at the Airport. This section provides an overview of how we think about and manage these projects, as well as what to consider when taking on these efforts.



Design Vision
Design Guidelines
- Introduction
- **Planning**
  - **Regulations & Reviews**
    - Review Authorities
    - Regulations
    - Design Checklist
    - Product Selection & Bid
  - Project Types
  - Project Teams
  - Planning Considerations
  - Design Criteria
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

This section provides a summary of related documents, resources, authorities, and other entities that are applicable to design work at SEA. Please refer to the Resources section for an expanded list of resources. Your project manager can provide more details regarding which documents, regulations, and authorities may be relevant to your project.

Contents

- Review Authorities
- Regulations
- Design Checklist
- Product Selection & Bidding

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Review Authorities
Regulations
Design Checklist
Product Selection & Bid
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Airport Building Department is the authority which has jurisdiction and reviews for all building permits. The Airport's Fire Department is the reviewer for fire protection permitting.

Design Review Committees

Design Review Committees provide additional in-person design review to the consultants. These committees meet regularly to review projects that are currently in design. The projects meet with the committees at 30%, 60%, and 90% milestones or as determined needed. The meetings are collaborative discussions between the subject matter expert (SME) and designers that review the progress of the design and allow a chance for team dialogue. Each design team needs to be aware of the demands that will affect our ability to deliver and meter utility services, and to have a clear demarcation between what the relevant Port projects will need to install and what the tenant will need to install in accordance with Port standards. The criteria used to determine which projects are reviewed by these committees are specific to each department. The project manager is required to set up the meetings with the individual committees.

There are eight Design Review Committees:

- Architectural Review Committee (ARC)
- Facility Asset Review Meeting (FARM)
- Mechanical Utility System Team (MUST)
- Proactive Electrical System Team (PEST)
- SEA Telecommunications Architecture Team (START)
- Wayfinding and Visual Environment Team (WAVE)
- Water Infrastructure System Evaluation (WISE)
- Sustainable Project Analysis & Review Collaboration (SPARC)

REVIEW AUTHORITIES

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Review Authorities
Regulations
Design Checklist
Product Selection & Bid
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

ARC: Architectural Review Committee

ARC looks at the overall design for function and appearance, how the project interfaces and integrates with its context and surroundings, and particular conditions or requirements that are challenging to the design team. ARC reviews most projects of all sizes that are public-facing. They range in size from the major new construction to smaller projects such as major carpet replacement, furnishings, and tenant spaces. Most projects are reviewed at completion of 30%, 60%, and 90% design completion, but larger or more complex projects are usually presented at 15% design completion or concept development phase.

Occasionally, ARC will do specially requested additional reviews to address unusual design challenges. Some non-public, back-of-house projects are reviewed again if they include unusual, challenging conditions or if the design team and project manager would like feedback and assistance.

In-person or virtual design reviews can be accomplished much more effectively and more quickly through discussion than with the individual-comment process of the document reviews. The review meetings provide significantly higher overall design quality and better finished products.

FARM: Facility Asset Review Meeting

The Facility Asset Review Meeting construct focuses on ensuring a well-coordinated transfer of assets between project delivery and ownership. As assets enter and exit service, coordination is required between groups of stakeholders that maintain and manage them. The Facility Asset Review provides a place where project delivery can coordinate with Accounting, Facilities & Infrastructure, Finance & Budget, and Maintenance and otherwise asset management.

MUST: Mechanical Utility System Team

The MUST review team meets with A&E's prior to their start of design to explain the systems, requirements, and proclivities of design and construction at SEA. The Airport mechanical design is unique and SEA has specific requirements. Operating chilled water temperatures, central system heating and chilled water, air pressurization, tenant requirements all come into play in the MUST discussions with the ME's. The team includes representatives from F&I, ABD, FIRE, and Maintenance. Projects need to be clear about what utilities or utility-related hardware are require, for example whether natural gas is needed or if an additional meter is needed in the early phases of the project.

REVIEW AUTHORITIES

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Review Authorities
Regulations
Design Checklist
Product Selection & Bid
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

PEST: Proactive Electrical System Team

Projects need to be aware of increased electric demand requirements and any metering and sub-metering requirements. Changes to leasable space that will result in an installation of a meter-able (or at least flat rate billable) tenant, requiring installation of new metering capacity, need to be addressed in the early phases of a project. PEST can help clarify what the application for service entails.

START: SEA Telecommunications Architecture Team

The SEA Telecommunications Architecture Team includes representatives from Maintenance, ICT and F&I. START meetings are an opportunity for the consultant to meet with concerned departments together and understand the practices and design guidelines we follow at the airport and ask questions before they go on their own. The committee can provide suggestions to improve the infrastructure or any cost saving measures. Cable TV infrastructure needs to be reviewed from a capacity and interconnection standpoint. General design review usually focuses only on project-related matters. The START committee looks at a project to see how it fits in to the entire Airport.

WAVE: Wayfinding and Visual Environment

WAVE is intended to provide oversight to the holistic airport experience and review design projects that don't fall within scope of the ARC committee, as well as to develop the future vision for the airport visual environment. WAVE is invested in the idea that the visual environment is important to the overall success of the Airport. It is committed to improving communication and collaboration between departments related to initiatives that impact the public spaces, but do not fall under purview of other design review processes. WAVE is committed to continually evaluating and improving wayfinding through the visual environment of the airport, for a world class passenger experience at SEA.

WISE: Water Infrastructure System Evaluation

REVIEW AUTHORITIES

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Review Authorities
Regulations
Design Checklist
Product Selection & Bid
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

SPARC: Sustainable Project Analysis and Review Collaboration

For larger capital projects the Port will conduct a project-specific sustainable project analysis and review collaboration (SPARC) process to identify and request analyses of new sustainability opportunities or initiatives relevant to the specific project. SPARC teams are project-specific to ensure relevant subject matter experts are available for each project and related sustainability initiative as appropriate.

Port of Seattle Points of Contact

The project manager is always the initial point of contact for the design team, however it is critical that teams verify additional points of contact with the project manager.

REGULATIONS

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Review Authorities
Regulations
Design Checklist
Product Selection & Bid
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Regulations for Airport Construction

Refer to **Resources** section for additional information on the **Regulations for Airport Construction (RAC)** document.

Building Codes

Design Consultants are required to meet all current applicable laws, codes and regulations, including the Americans with Disabilities Act (ADA).

Sample codes include:

- International Building Code
- International Mechanical Code
- International Fuel & Gas Code
- International Existing Building Code
- International Fire Code
- International Residential Code (if applicable structure is built)
- IAPMO/ANSI Uniform Plumbing Code
- Washington State Energy Code
- ASCE Standard ASCE/SEI 7-10
- Accessible & Usable Buildings & Facilities ICC A117.1

Guide Specification

The Port of Seattle maintains a guide specification which is used by both the Aviation and the Seaport Divisions. The guide specification is intended as a foundation from which design teams can build their project specifications. When using the guide specification, designers shall employ track changes for the purposes of efficient design review by the Port. The guide specification is not intended to cover specific projects. Each design team is required to review and modify the specification to suit the specific project requirements.

Drafting Standards

The Port has both CAD and BIM standards which are summarized in a separate document. Please refer to **Resources** for additional information.

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Review Authorities
Regulations
Design Checklist
Product Selection & Bid
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

This section provides guidelines to assist the designers during the submittal process by establishing standard practices that achieve uniformity and quality designs.

Note: The Standards are not meant to relieve the Architect of Record from the responsibility to prepare a complete and comprehensive set of construction documents.

Design Submittal Guidelines

- Drawings shall be prepared in accordance with Port of Seattle A/E Design Submittal Requirements. Drawings and specifications will be completed in detail to define installation and operation of all systems.
- Drawings shall comply with Port of Seattle "CAD Standards."
- Drawings shall be coordinated with specifications to ensure that all items indicated in the drawings are covered by specification documents and that all specification sections relate to items in the drawings.
- Drawings shall be created at a 1/8-inch per foot scale with enlarged plans at ¼-inch per foot or greater (with multiple sections) shall be provided for all mechanical rooms, toilet rooms, shafts, and any other areas of complexity.
- Provide Phasing plans as required to maintain Airport's 24 hours per day operation.
- Specifications: Port of Seattle Guide Specifications shall be edited to incorporate these Standards and to suit project requirements.
- Architectural Standard legend, symbols, and abbreviations will be incorporated and modified to indicate all symbols and abbreviations used in the project construction documents. Sheets shall be presented in the following order:
  - Cover Sheet
  - Drawing Index
  - General Notes
  - Architectural Standard Legend and Symbols
  - Abbreviations
  - Building Area and Boundary Plan
  - Code Diagrams
  - Architectural Site Plan
  - Floor Plans (all levels and includes: phasing, demolition, enlarged floor plans, reflective ceiling, furniture, etc.)
  - Elevations (exterior)
  - Building and Wall Sections
  - Interior Elevations
  - Details
  - Schedules

DESIGN CHECKLIST

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Review Authorities
Regulations
Design Checklist
Product Selection & Bid
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Basis of Design

Basis of design documents shall address the following at minimum:

- Design criteria: Indicate all codes, design standards and guidelines used for the design. Include the title and date of the edition used for the project.

Submittal Requirements

Submittals shall be in accordance with POS A/E Design Submittal requirements. Design submittal shall include the following Architectural requirements for each design phase:

Conceptual Design (15%)

- Cover Sheet
- Sheet Index
- Site Plans - Architectural
- Architectural Plans
- Reflected Ceiling Plans
- Exterior Building Elevations
- Building and Wall Sections
- Schedules
- Outline Specifications
- Basis of Design

Schematic Design (30%)

Further development of the (15%) Conceptual Design and include additional drawing sheets like:

- Interior Elevations
- Details
- Specifications - Draft-w/marked up Port specifications where used. E-Specs tied to BIM model

Design Development (60%)

Further development of the (30%) Schematic Design and include additional drawing sheets like:

- Waterproofing Plans
- Enlarged Wall Exterior Elevations
- Specifications - Draft Full Specifications. E-Specs tied to BIM model

Construction Documents (90% or 100%)

Further development of the (60%) Design Development. Final product will be a complete Construction Document set with all drawings complete and ready for construction.

PRODUCT SELECTION & BIDDING

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Review Authorities
Regulations
Design Checklist
Product Selection & Bid
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

SEA Airport is owned and operated by the Port of Seattle, a special purpose government agency. As such, the procurement process for any architectural materials, finishes, furniture, casework and equipment, must be competitive. With the exception of pre-approved sole-sourced product specifications (see **Variance Request** process), include at least three approved manufacturers or detail the minimum performance criteria. Design teams must consider all three options.

It is the intent of SEA Airport to encourage the use of materials and products that are made with local, renewable, or recycled resources. To that end, preference will be given to products that contain a high percentage of recycled material and to those that are manufactured and/or sourced locally. In addition, fabricators and installers are required to utilize means and methods of design, installation, disposal and maintenance that are resource efficient and will minimize the introduction of toxic substances into the interior of the Airport. Project designers should incorporate design practices and features that promote energy efficiency and conservation. These include considerations relating to solar orientation, thermal insulation, sun-shading devices, fenestration, and daylighting.

Depending on project funding sources and requirements, compliance with Buy American or other limitations on materials, manufacturing, and sourcing locations need to be considered. Not all products listed in the Architecture Guidelines & Standards comply with Buy American, project teams will need to work with Port stakeholders to determine alternative products and materials to comply with funding requirements.

For additional information about product and material selection, see the **Sustainability** section. Individual projects may need to achieve a green building certification (such as LEED) or project specific sustainability goals.

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Owner Types
Construction Types
Project Teams
Planning Considerations
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

We categorize SEA project types in two ways: owner type and construction type. Each of these categories provides different information about the project. Regardless of scale or scope, every project consists of these categories. Several criteria are outlined to determine project category, with focus on owner and configuration. Together, these categories further define and determine other project parameters, such as limitations and processes to which your project should adhere.

This document focuses on Port of Seattle projects of all construction types. See **Tenant Design** and **Resources** sections for additional information for tenant projects.

Owner Types

The owner type defines the type of group or organization responsible for the design, construction, operations, and maintenance of an airport area.

- Port of Seattle (Port)
- Airport Dining & Retail Tenants (ADR)
- Tenant (airlines and other non-ADR)
- Federal Agencies

Construction Types

The construction type describes the scope of construction, based on the history of the project.

- New construction/ Expansion
- Renovation - Major
- Renovation - Minor
- Furniture and Equipment Procurement
- Signage

OWNER TYPES

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Owner Types
Construction Types
Project Teams
Planning Considerations
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

OWNER TYPE	DESCRIPTION	EXAMPLES
Port of Seattle (Port/POS)	Areas of the airport managed and maintained by the Port of Seattle	• Circulation • Holdrooms • Concourses • Curbside • Check-in lobby • Esplanade • Central Terminal • Restrooms • Animal relief areas • Waiting areas • New buildings or additions
Airport Dining and Retail (ADR) Tenants	Areas of the airport managed, maintained, and operated by ADR tenants	• Restaurants • Stores • Pop-up shops • Vending
Tenant (airlines and other non-ADR)	Areas of the airport managed, maintained, and operated by airline and other non-ADR tenants	• Airline check-in • Baggage dropoff • Boarding • Lounges • Building additions • Offices • Ground transportation services
Federal Agency	Areas of the airport managed, maintained, and operated by the TSA and similar organizations	• TSA security areas • Projects that have federal funding • U.S. Customs & Border Protection (CBP) • Federal Aviation Administration (FAA) • Federal inspections areas

CONSTRUCTION TYPES

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - **Project Types**
    - Owner Types
    - **Construction Types**
  - Project Teams
  - Planning Considerations
  - Design Criteria
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

CONSTRUCTION TYPE	DESCRIPTION	DISRUPTION	EXAMPLES
New Construction or Expansion	A new construction project includes ground-up construction, building additions, and construction projects which gut everything except for the structure. Demolition is part of this construction type.		• New satellites • Building expansion • Gut renovations
Renovation - Major	Fixed project budget. Includes any necessary demolition and construction barricades.	Facilities disruption	• Restroom renovation • Relocations of airlines • Tenants • Central terminal improvements • Infrastructure
Renovation - Minor	Fixed project budget. Includes any necessary demolition and construction barricades.	Minimal impact, minor public disruption	• Walls on baggage claim • Casework • Carpet • Paint • Office renovations
Furniture & Equipment Procurement	Floor, walls, are ceiling not changed. Furnishings and Equipment FF&E are.	Minimal	• Furniture • Equipment • Movable stuff • Buses, ramps • FF&E • Stanchions
Tenant	Areas managed by Airport tenants.	Varies	• Airlines, TSA, baggage carts • Specific lease area, including vertical surfaces
Signage	Signage group has say on all types and covers all guidelines, whether standalone, update, or part of a larger project.	Minimal	• Signage and wayfinding • Advertisements • Retail and tenant • Replacing static to dynamic • Temporary and permanent

PROJECT TEAMS

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

The success of SEA projects relies heavily on coordination and collaboration across multiple teams and individuals, both internal and external to the Airport.

The SEA project manager will lead most projects and must be able to answer questions regarding project design, process, and completion. The particular structure of each project team will vary depending on project requirements, but some parties that will be engaged are listed below (this is not a comprehensive list):

Internal

- Port of Seattle (Port)
- Project Manager
- Project Management Group
- Architecture Review Committee (ARC) and other Design Review Committees
- Airport Terminal Line of Business
- Facilities and Infrastructure Department
- Aviation Maintenance
- Contract Administrator

External

- Design Consultants
- Engineers
- General Contractor
- Airport Dining & Retail (ADR)
- Tenant (Airlines)
- Federal Agencies

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - **Planning Considerations**
    - Accessibility/ ADA
    - Acoustics
    - Circulation
    - Connectivity
    - Integrated Design
    - Building Systems
    - Security
    - Storage
    - Sustainability
  - Design Criteria
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

A number of planning considerations are important to address during the early stages of any project.

Cost awareness should be considered throughout the project, such that teams should be conscious of the financial impact of design, procurement, construction, and ongoing maintenance. Teams should provide meaningful recommendations for efficiencies and savings.

Consistency & Variance

Some projects may be required to match the existing materials and conditions in lieu of complying with these guidelines (verify with the Port of Seattle project manager and F&I Architecture).

Existing Conditions

Understand impact of scope, how new work will tie into existing conditions, phasing, and clear demo scope.

Make sure any existing art within scope of work area is discussed and coordinated with Art Manager.

Contents

- Accessibility/ADA
- Acoustics
- Circulation
- Connectivity
- Integrated Design
- Building Systems
- Security
- Storage
- Sustainability
- Maintainability

ACCESSIBILITY/ ADA

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - **Planning Considerations**
    - **Accessibility/ ADA**
    - Acoustics
    - Circulation
    - Connectivity
    - Integrated Design
    - Building Systems
    - Security
    - Storage
    - Sustainability
  - Design Criteria
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

SEA Airport is committed to providing appropriate facilities and services for all travelers including those with disabilities.

This section summarizes the relevant codes and resources to be used by design teams for projects at SEA Airport.

All projects at SEA Airport should be concerned with providing accessibility for travelers and staff. Accessibility design is most successful when well considered early in the design process. Considering accessible routes will affect siting decisions and circulation design. Considering accessible spaces and fixtures will affect the area allotted to restrooms and other specific use spaces. Waiting to add accessible features to a completed design will increase cost, complexity, and create less accessible facilities.

For projects with significant accessibility issues, it is suggested that designers seek the guidance of reputable groups that represent people with disabilities and understand their environmental needs. Local groups, such as the Washington Governor's Committee on Disability and Employment, Easter Seal Society of Washington, Washington Coalition for Citizens with Disabilities, and Lighthouse for the Blind have all participated in past reviews of facility accessibility for The Port of Seattle. These and many others may act as resources to assist in understanding accessibility issues.

While SEA projects will all meet American Disabilities Act (ADA) requirements, it is important that designers seek to go beyond ADA, aiming for Universal Design. This accounts not only for ability, but age, size, gender, and other factors which render spaces less accessible to a portion of users.

To help understand the needs of people with disabilities, the President's Committee on Employment of Persons with Disabilities has fact sheets available on their website for review or to order at www.pcepd.gov.

ACCESSIBILITY/ ADA

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - **Planning Considerations**
    - **Accessibility/ ADA**
    - Acoustics
    - Circulation
    - Connectivity
    - Integrated Design
    - Building Systems
    - Security
    - Storage
    - Sustainability
  - Design Criteria
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

What is an accessible facility?

In theory, an accessible facility is a built environment that has no barriers to people with disabilities. In practice, it is one that has been designed to comply with specific laws or codes which act as minimum dimensions that allow only a narrow range of users to experience ease of use. The Port of Seattle's design goals for SEA go beyond accessibility as defined in the laws and codes, to the overarching principal of Universal Design when possible (though not as a requirement). Universal Design is the idea of designing for the widest range of ability, with as few barriers as possible. By considering a wider range of users, even those with temporary physical limitations will be accommodated.

Accessibility Regulations in Washington State

Provisions for accessibility design are a part of the State Building Code for publicly and privately funded buildings of "public accommodation." The state Barrier-Free Regulations reside under WAC 51-50-005, Washington State Amendments to the International Building Code, Chapter 11. Enforcement for accessibility issues within the state falls to the local building official. If followed to the letter of the code, this now signifies a good faith effort of the designer to comply with the ADAAG. The Port of Seattle requires that current versions of all codes and laws be followed during the design and construction process.

Selecting Goals

The governing commission of SEA aims to make it the most accessible airport. It should be safe and accessible for all and designed to fit everyone: young or old, able or disabled, English or non-English speakers. All projects must meet the specifications defined and regulated by the Americans with Disabilities Act (ADA), as many of the design guidelines outlined by the ADA benefit all.

SEA currently offers apps which aid wayfinding for persons with a hearing or visual impairment, and is investigating ways to make the airport more accessible, including improved wayfinding strategies. Once finalized, those guidelines will be included here.

ACOUSTICS

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - **Planning Considerations**
    - Accessibility/ ADA
    - **Acoustics**
    - Circulation
    - Connectivity
    - Integrated Design
    - Building Systems
    - Security
    - Storage
    - Sustainability
  - Design Criteria
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

The intent of this section is to provide acoustical guidelines for the design of all projects at the Airport. It is not intended that this guide provide solutions regarding sound and vibration, but rather that it identify issues requiring consideration and define acoustical criteria for architectural components, mechanical systems, and audio/video systems.

These guidelines do not replace the need for interpretation and response to each project's unique conditions by a qualified acoustical consultant. Any project with significant acoustical issues should include the design input of a qualified acoustician.

Regulatory Criteria

The Mechanical Standards and Regulations for Airport Construction also include information regarding acoustical requirements for projects at SEA Airport. Design teams should review these documents and coordinate with their project manager if there are issues requiring clarification or interpretation.

ACOUSTICS

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Accessibility/ ADA
Acoustics
Circulation
Connectivity
Integrated Design
Building Systems
Security
Storage
Sustainability
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Architectural Components

The airport environment is, by its very nature, a highly charged, active area. Diverse crowds constantly move through the spaces. Some of the patrons find themselves with excess time allowing them the luxury to browse the retail facilities and leisurely enjoy the surroundings. Others are hurrying to meet a scheduled flight and need only be pointed in the right direction.

The airport facilities need to respond to both of these user groups; providing a stimulating environment for exploration, while controlling the potential confusion associated with the combined sounds of aircraft arrivals and departures, paging and flight information announcements, general crowd activity and music, etc. from the retail spaces.

Building Shell

By code, the exterior envelope of the facility must meet the Noise Level Reduction, NLR, of 35 dBA.

Interior Spaces

An acoustical consultant should be retained to develop the construction appropriate for specialty areas such as conference/ auditorium spaces, administrative offices, FAA, and Immigration areas or mechanical rooms.

Providing an acoustically compatible system of partitions, ceiling, doors, and relights, etc. is also essential to the performance of the space. The sound isolation will only be as good as the weakest element.

Water Features

Water features may be incorporated into the design of interior spaces within the Airport, provided that the noise level of the feature does not exceed 50 dBA at 5 feet from the feature.

Water features have been problematic with wildlife and maintenance. Water feature projects will need to address and include bird deterrents and total cost of ownership evaluation of the systems.

Note: This limits water features to smooth water flow. If more dramatic water features are desired, mock-ups should be prepared to confirm that noise levels will be acceptable to the Port.

CIRCULATION

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Accessibility/ ADA
Acoustics
Circulation
Connectivity
Integrated Design
Building Systems
Security
Storage
Sustainability
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Maintaining open circulation paths for passengers is important to their overall satisfaction. This includes making sure pathways are free from obstacles, lines of sight are clear, and the layout is intuitive.

The International Air Transport Associations (IATA) Terminal Design Guidelines contains more detail about egress routes and should be referenced on all projects (see **Resources**).

The control of queues is also essential to ensuring circulation routes remain clear. SEA prefers that stanchions are fixed in position for this reason, but also allows for greater accessibility.

The stanchion option is listed in **Equipment** - Port uses magnetic stanchions.

CONNECTIVITY

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Accessibility/ ADA
Acoustics
Circulation
Connectivity
Integrated Design
Building Systems
Security
Storage
Sustainability
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

The various technologies available at SEA can be referenced at the following link:

https://www.portseattle.org/sea-tac/customer-services-amenities

Room naming and numbering at SEA needs to be coordinated with key stakeholders including POSFD, Aviation Maintenance, F&I Signage & Wayfinding, and F&I Architecture.

Special routing and equipment required for communications systems should be discussed early, and often revisited as technology improves.

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Accessibility/ ADA
Acoustics
Circulation
Connectivity
Integrated Design
Building Systems
Security
Storage
Sustainability
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

An integrated process ensures that design solutions are thoughtful and aligned with the strategic and sustainability goals of SEA. The process should also consider the total cost of ownership, raw materials, and maintenance.

Project teams should engage the various stakeholder groups through their project manager in the initial planning stages of projects and at stages throughout to ensure the design is iterative.

Stakeholders include (but not limited to):

- Facilities and Infrastructure
- Maintenance
- Technology (ICT)
- Operations
- Environmental
- Security
- Art – especially when artwork is to be integral with a material, finish, or building element

General Guidelines

The allocation or zoning of ceiling, wall, and even sub-floor spaces for services is a critical consideration essential to achieving high-quality service, ease of maintenance access, and control of clutter.

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Accessibility/ ADA
Acoustics
Circulation
Connectivity
Integrated Design
Building Systems
Security
Storage
Sustainability
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Building Systems includes MEP (mechanical, electrical and plumbing) telecommunications, conveyance, and civil engineering. It is managed by specialists within SEA.

A summary of high-level requirements are outlined below, but please refer to the additional documents listed in the Resources chapter for more information. When planning for location, infrastructure, and maintenance access to MEP equipment, coordinate with your SEA project manager. Please also refer to Design Criteria and MEP standards for more information.

Mechanical

- Place thermostats according to local code requirements
- Mechanical elements in ceilings should be in locations that are easily serviced with minimum disruption to public activity

Electrical

- Provide power and data in open areas, either integrated into the furniture or concealed in the floor

Plumbing

- Place drinking fountains according to local code requirements and near restrooms.
- Provide water bottle refill stations at each drinking fountain location.

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Accessibility/ ADA
Acoustics
Circulation
Connectivity
Integrated Design
Building Systems
Security
Storage
Sustainability
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

SEA employees and passengers must be kept safe and secure.

Security measures require a combination of procedures and equipment with the aim of deterring unauthorized entry. Project teams should consult their SEA project manager for specific security requirements including secure areas or equipment (cameras, alarms, emergency call box).

Some additional general guidelines include:

- Eliminate spaces or equipment where people can hide bags, etc.
- All storage rooms shall be secure access only
- The placement of security equipment should be consistent across the site (for example, the placement of the door handle to card reader)
- Blast Resistant Glazing in public facing or public adjacent areas

STORAGE

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - **Planning Considerations**
    - Accessibility/ ADA
    - Acoustics
    - Circulation
    - Connectivity
    - Integrated Design
    - Building Systems
    - Security
    - **Storage**
    - Sustainability
  - Design Criteria
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

Design teams should coordinate storage requirements and locations with their SEA project managers at the beginning of projects.

Storage Needs

- Port of Seattle Facilities
- Common Use (shared by multiple tenants; needed in the check-in lobby and holdrooms)
- Airport Dining and Retail Tenant merchandise storage
- Janitorial closets (storage for janitorial tilt carts between times of active use).
- Elevator and escalator construction barricades (portable, fold-out partition barricades should be distributed for convenience and accessibility)
- The location and placement of fire extinguishers, AEDs, first aid kits, and trauma kits should be considered during the design development phase.
- Emergency safety equipment (blankets, water, emergency response supplies) and emergency preparedness supply storage should be an integral part of the design process. A minimum of 2 storage locations should be provided and incorporated into the design scope. Storage shall be highly visible and clearly marked. Coordinate specific requirements with project manager.
- Equipment (maintenance lifts, carts, barricades, stanchions, utility carts, and trash carts)
- Passenger (wheelchairs, passenger transport carts, luggage carts, abandoned luggage)
- Signage

General Guidelines

- Storage locations should be convenient but not visually obtrusive
- Storage should be integrated wherever possible
- All storage areas or closets must be secure access
- Sealed concrete floor is not required, but acceptable for maintenance lift storage
- Storage for lifts need to have 10 foot high doors and dedicated electrical outlets
- The space needs to be big enough to maneuver the lift in and out
- Storage rooms should have robust wainscoting

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Accessibility/ ADA
Acoustics
Circulation
Connectivity
Integrated Design
Building Systems
Security
Storage
Sustainability
Design Criteria
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Sustainable design creates buildings and infrastructure that enhance our quality of life, reduce negative impacts to the environment and people, and increase resilience to climate change impacts.

The Port of Seattle addresses sustainable design through various regulatory and policy mechanisms including:

Environmental Compliance Requirements

The Port of Seattle adheres to applicable, regulatory requirements pertaining to management of stormwater, industrial wastewater, natural resources, contaminated materials and soils. Regulatory requirements include but are not limited to NEPA/SEPA and the Port's National Pollutant Discharge Elimination System (NPDES) permit.

Century Agenda

Introduced in 2012 to mark the 100 year anniversary of the Port, the Commission adopted the Century Agenda to establish the Port's ambitious vision for the next 25 years. It contains six goals that set the course for the organization and a sound structural framework that helps operating divisions set tactical objectives to keep the Port on track to its destination.

Sustainable Evaluation Framework

The Port Commission adopted Resolution 3768 directing staff to develop a Sustainable Evaluation Framework (SEF) to institute a Port-wide process that reduces the environmental and societal impacts associated with capital projects and key operational decisions and provides transparency for the commission, the public, and Port staff. Medium and large projects (as identified by AVENV staff) are required to go through the Sustainable Project Assessment and Review Collaborative (SPARC) process (stakeholder convenings) to identify and evaluate sustainability and equity strategies.

This section of the Guidelines outlines SEA's Guiding Principles to sustainable design and suggests strategies that minimize negative environmental impacts. The strategies listed are typically assessed for SEA projects, although each design team may evaluate additional strategies.

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - **Planning Considerations**
    - Accessibility/ ADA
    - Acoustics
    - Circulation
    - Connectivity
    - Integrated Design
    - Building Systems
    - Security
    - Storage
    - **Sustainability**
  - Design Criteria
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

Green Building Certification

The Port of Seattle has a green building program to facilitate the inclusion of sustainable design features into capital projects. SEA is a Leadership in Energy and Environmental Design (LEED) Master Site under the United States Green Building Council (USGBC). Master Site LEED credits may be applied to individual LEED projects within the Master Site boundary, both Port- and tenant-led (the Port's Rules, Regulations, Standards, and project specifications should be referenced for requirements) . For Port-owned projects pursuing LEED Certification, the Port has a minimum requirement of achieving LEED Silver Certification, although higher levels are encouraged.

The Port is also interested in pursuing additional green building and infrastructure certifications, such as Envision, WELL, and FitWel. Projects that not pursuing third-party certifications are still encouraged to incorporate current sustainable design best practices into design.

Approach Overview

As a large hub airport, the Port's Aviation Division is developing hundreds of capital projects throughout its facilities at any given time. The Port of Seattle Commission is committed to reducing our carbon footprint by investing in solutions to become the greenest and most efficient port in the nation and we are further committed to assisting and incentivizing those we do business to reach these goals. The SEF guides these analyses and requires each project team (through the SPARC process) to evaluate what sustainability and equity design options are cost effective, reduce negative environmental impacts, and meaningfully address equity. Below are the SEF design criteria and example strategies.

Sustainable Design Categories/Strategies

The Sustainable Evaluation Framework (SEF) is applied to all SEA projects. For small projects, AVENV staff suggest voluntary sustainability and equity strategies. For medium and large projects, the SEF requires that projects assess various sustainability and equity strategies. The SEF categories, e.g. Equity, Energy and Atmosphere, and sample strategies are included below. This list is not an inclusive list but does represent strategies historically assessed for SEA projects. Design teams should consider current best practices and select additional strategies for evaluation via the SPARC process. AVENV staff will also provide design teams with specific methodologies that must be used to quantify cost, environmental, and social impacts of selected strategies.

01 Equity
02 Energy and Atmosphere
03 Water/Wastewater
04 Waste
05 Materials and Resources
06 Transportation/Mobility
07 Climate Resiliency
08 Habitat Restoration and Land Stewardship

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

This section establishes general design criteria as well as requirements for specific materials and systems. This section should be utilized for general design direction and providing assistance to design teams to coordinate their work with Port expectations and other design teams.

Specific information about finishes and performance requirements can be found in the Architectural Elements, Casework, Furniture, Finishes, and Equipment sections within section 4, Architectural Standards..

Contents

- Consistency & Variance
- Design Strategies
- Structural
- Mechanical
- Electrical
- Artwork

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - Planning Considerations
  - **Design Criteria**
    - **Consistency & Variance**
    - Design Strategies
    - Structural
    - Mechanical
    - Electrical
    - Artwork
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

SEA is an amalgam of various architecture styles and materials influenced by the time period of construction.

With this in mind, a combination of consistency and variance is the design intent or vision for the Airport. A consistent approach has been defined for finishes, most notably flooring, wall-coverings and columns. Instances where design teams can employ variations have also been noted in the Finishes section.

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - Planning Considerations
  - **Design Criteria**
    - Consistency & Variance
    - **Design Strategies**
    - Structural
    - Mechanical
    - Electrical
    - Artwork
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

The design strategies in this section are interwoven and interdependent. It is intended that design teams thoroughly integrate these strategies as a unified design approach.

These strategies are not intended to be seen as independent of one another. However, in the following pages, it is useful to consider each strategy separately as a means of identifying critical issues that each design team needs to address.

Contents

- Spatial Experience
- Space Allocation
- Wayfinding
- Diversity
- Services & Amenities

DESIGN STRATEGIES

Spatial Experience

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Visually Open & Engaging

Public spaces should be clearly organized, visually open and engaging, and generously scaled, as appropriate to the use of the space. Public circulation areas should be comfortably sized to allow for easy traveler movement during peak traffic periods. Vertical circulation between floor levels should be very open, enabling clear wayfinding and offering opportunities for spatial drama and visual connectivity.

Materials and finishes in public spaces should enhance the sense of openness and visual engagement. Glazing in lobby spaces should be as transparent as possible, to maximize visibility and openness. Interior mezzanine rails should be glazed or otherwise detailed in a way to maximize visibility. Primary interior material palettes should be very light to enhance the sense of openness and natural lighting.

Public spaces should be free of physical impediments that would reduce ease of movement. “Controlling clutter” is not just an operational issue. Designers should develop clear zones for service elements, creating a framework that allows future evolution of service needs without compromising the image and coherence of the public spaces. Service elements should be consolidated and located in alcoves or otherwise well integrated to avoid congestion in public circulation paths.

Natural daylighting and exterior views are an essential aspect of achieving open and engaging public spaces. Daylighting and views should be carefully integrated with artificial lighting and control of solar glare and heat gain, to achieve a strong connection to the natural environment without compromising energy efficiency and functional considerations.

The use of clerestory windows in lieu of skylights should be considered where possible, as clerestory windows are more easily maintained and are less prone to developing water infiltration problems. Where skylights are used, it is recommended to use translucent glazing. Skylights should not be placed over areas where sensitive equipment such as security will be located.

Integration of landscaping, both in exterior locations and where appropriate as interior features, supports the design vision and enriches the traveler’s spatial experience.

DESIGN STRATEGIES

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Appropriate Spatial Hierarchy

Public spaces should be organized in a hierarchy that creates a clear and comfortable traveler experience. Primary public circulation paths should have generous ceiling heights, while secondary spaces—such as holdrooms and support spaces—should typically have lower ceilings. Low ceilings in primary circulation paths, such as those in the existing concourses B, C, and D, are to be avoided.

Materials, finishes, and artwork can also support and clarify the intended spatial hierarchy. Primary spaces can be given greater emphasis through use of featured materials or through prominent integration of artwork. Lighting and signage should also be developed in ways that strengthen and support the spatial hierarchy.

Choreographed Experience

The traveler's experience follows a sequential cycle while moving through the airport: approach, decision, arrival, relaxation. The design of the public spaces should be appropriate to the travelers' needs and emotional state at each step of these sequential experiences. Clarity and good visibility are essential throughout the sequence.

01 Approach: In approaching a new space or decision point, travelers seek reassurance and clues to assist with wayfinding. The spatial organization in these approach routes should be very clear, to minimize traveler confusion and uncertainty. The space itself should naturally lead travelers toward their destination. Finishes, artwork, and lighting should enrich the experience without creating significant distractions to travelers.

02 Decision: At points where paths diverge or options are presented to travelers, spaces should be generously scaled to allow travelers to slow and make decisions. Primary paths should be emphasized spatially, while secondary paths should be clearly defined and legible, without confusing the natural hierarchy with more important routes. Materials, lighting, and clear signage all enhance the decision-making process.

03 Arrival: The creation of gateways, focal points, or other transitional elements can help travelers recognize and celebrate their arrival in a new space or intermediate destination. These transition points are ideal locations for dramatic artwork or specially designed architectural elements. Material transitions offer more subtle ways to enhance the arrival sequence.

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

04 Relaxation: After arriving at destinations such as holdrooms or concession areas, (and to a lesser extent ticketing and baggage claim), travelers have an opportunity to relax and enjoy their surroundings, as they await the next step in their journey. The character of these spaces should create a relaxing and enjoyable environment, offering exterior views and ample natural light. The design character and material expression should balance a sense of drama with comfort and reassurance to travelers.

Integration of Tenant Spaces and Other Amenities

Integration of tenant spaces (like: retail facilities) enhances the traveler experience, and should be fully considered and integrated early in the design process. Any tenant spaces that remain in publicly accessible areas, past the terms of their lease, must follow Port standards.

DESIGN STRATEGIES

Space Allocation

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Floor Area Space Allocation

Space allocation typically is determined through a programming process at the outset of each project. This section provides information about space allocation, generally. More information is available about specific spaces in the Space Types section.

Wall and Ceiling Space Allocation

Space allocation is not only an issue related to floor area. The allocation or "zoning" of ceiling, wall, and even sub-floor spaces for services is also a critical consideration, and essential to achieving high quality service, ease of maintenance access, and control of clutter.

Considerations

- Ceiling access: Assure that mechanical elements above ceilings are zoned in locations that are easily serviced with minimum disruption to public activity.
- Zoning of services on walls: typical locations or methods for integrating miscellaneous elements such as water fountains and electrical outlets, should be defined to maintain a consistent image.
- Routing of special systems: Space needed for routing and maintenance should be defined and coordinated with appropriate stakeholders.
- Advertising: Typical methods of locating and integrating advertising should be established to maintain the cohesiveness of SEA. (The ADR manages the advertising contract. Any proposed modifications to advertising locations need to be reviewed with ADR.)
- Signage: Wayfinding and informational signage needs to be considered throughout the design process. See signage standards.

DESIGN STRATEGIES

Wayfinding

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Open and Clear Traveler Circulation

Maintaining good visibility and clear circulation paths are essential. The design and layout of all public spaces must use this as a fundamental basis of design.

Effective Message Systems

Primary wayfinding signage, service signage, FID's, and advertising all must be effectively integrated into a coherent whole, which enables travelers to easily find the information they need in a timely manner.

Signage systems must be designed such that each system is legible and given the appropriate level of emphasis. Primary wayfinding signage must be visually emphasized to avoid confusion and visual clutter.

Advertising should be integrated in clear zones that are highly visible, but not in conflict with primary wayfinding. Advertising should not be in conflict with art nor installed in calmer areas or concessions. Additionally, it should not be on columns, elevator doors, or in other locations in which it disrupts the clarity of the architecture or wayfinding experience.

DESIGN STRATEGIES

Diversity

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Coherent Image: Holistic Experience

Achieving unity and consistency throughout the airport is essential to creating a coherent image for the airport. The selection of materials and design expression should be developed to relate well with existing and other new designs. Details should support the design character of the specific project, and each project should be seen as an integral part of the entire traveler experience.

In addition to the coherence of the architectural details, it is also important that all services, commercial elements, landscaping, and movable furnishings support and strengthen the entire design character.

Diversity of Creative Expression

The airport is large enough to accommodate and benefit from diverse architectural and artistic expressions within different parts of the airport. This diversity can enrich the overall character of the airport, but it should be balanced with a commitment to maintaining continuity of material palette and general architectural principles. These moments should be thoughtful and done with intention considering how they fit in with the Airport as a whole and why, how, and where these moments happen.

Enhancement of Existing Architecture

Renovations and expansions of existing architecture should seek ways of maintaining existing high quality materials or elements, while creating stronger continuity with newer portions of the facility. For instance, in the main terminal, the introduction of lighter materials and finishes could be balanced with refurbishing rather than replacing the dark granite wall cladding.

Consistent Use of Clean Simple Materials, Honestly Expressed

Consistent material use is important to achieving continuity throughout the airport. The intent is to maximize consistency while still allowing appropriate variations and development of feature elements within specific areas.

DESIGN STRATEGIES

Services & Amenities

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Ease of Access & Use

All services and amenities must be easy for travelers to find and use. Services should be grouped in zones that, while easily accessible do not clutter or confuse the primary activities in public spaces.

Well Organized & Efficient

Services and amenities must be efficiently organized to meet traveler needs and expectations.

Clean & Well Maintained: Control of Clutter

Public spaces should be designed to be easily cleaned and maintained, and should integrate service elements in a way that reduces and controls clutter. Appropriately sized, well located, and readily accessed storage areas should be designed and provided to support long and short term storage of cleaning, maintenance, and other items.

Appropriate Sizing for Current & Future Needs

Designs should be carefully developed to meet current demands. Designs should consider potential future changes or developments and make provisions to allow for future growth or expansion. This is not a mandate to "over-design" the initial systems; rather, design teams should look ahead to future possibilities, and with the Port, make sound long-term decisions that provide appropriate levels of future flexibility.

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - Planning Considerations
  - **Design Criteria**
    - Consistency & Variance
    - Design Strategies
    - **Structural**
      - Basis of Structural Design
      - Structural Elements & Standards
      - Structural Drawing Requirements
    - Mechanical
    - Electrical
    - Artwork
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

The Port of Seattle (Port) is the owner of the Seattle-Tacoma International Airport (STIA) with numerous structures built at different times to different structural standards. As airport facilities are replaced, added, or upgraded, the Port intends to improve structural safety and minimize the potential for interruption of airport operations that may be caused by structural issues.

The following information is intended to:

- Enhance structural design of STIA airport facilities
- Meet project goals
- Maintain future flexibility of renovations
- Establish uniform design criteria for structures

Basis of Structural Design

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - Planning Considerations
  - **Design Criteria**
    - Consistency & Variance
    - Design Strategies
    - **Structural**
      - **Basis of Structural Design**
      - Structural Elements & Standards
      - Structural Drawing Requirements
    - Mechanical
    - Electrical
    - Artwork
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

Building Code

The Port of Seattle Airport Building Department (Port ABD) adopts the current Washington State Building Code (WSBC) and the Washington State Existing Building Code (WSEBC). The WSBC and WESBC are based on the IBC and IBEC respectively and include the Washington state specific amendments and additions.

New Structural Projects

Design for all new building structures or nonbuilding structures shall follow the current Washington State Building Code. Design for all new bridge structures shall follow the current American Association of State Highway Transportation Officials (AASHTO), "LRFD Bridge Design Specifications."

Substantial Renovation Projects

Substantial renovations of existing buildings will require an initial structural review and assessment of the building's seismic lateral force-resisting systems. The seismic review shall establish the existing structure's seismic performance characteristics and feasibility for seismic upgrade. Feasibility for upgrade to both Life Safety and Immediate Occupancy standards should be established. Based on the results of the structural seismic assessment / feasibility study and the life expectancy of the structure, seismic performance objectives shall be established in the Basis of Design or during the Concept phase with input from the stakeholders.

All repairs, alterations, changes of occupancy, changes of use, relocations, and additions to existing building structures or existing nonbuilding structures shall comply with the WSEBC.

Basis of Design - Structural

All projects with structural engineering scope shall prepare and submit a Basis of Design document at the earliest possible Design milestone, no later than 30% Design Submittal.

The Basis of Design shall include as applicable, but not be limited to, the following:

- Written description of the proposed structural systems including gravity, lateral, and foundation systems
- Written description of proposed modifications for existing structures
- A structural evaluation and assessment of the existing structure. The evaluation shall establish the existing structure's performance characteristics and feasibility for modification and shall consider the cumulative effect of all prior additions and alterations
- Applicable Design Building Codes and Design Standards (including WSEBC and/or ASCE 41), and Material Standards
- Structural Material Properties
- Geotechnical Design Criteria including all design criteria for:
  - ◊ Foundations (shallow, piles, drilled pier, etc.)
  - ◊ Basements
  - ◊ Tunnels
  - ◊ Retaining walls
  - ◊ Subsurface utility (vaults, duct bank, etc)
  - ◊ Report name, date, and company

Basis of Structural Design

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Basis of Structural Design
Structural Elements & Standards
Structural Drawing Requirements
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Basis of Design - Structural (continued)

- Design Loading Criteria, including but not limited to:
  - ◊ Seismic Design Criteria
  - ◊ Wind Design Criteria
  - ◊ Snow Design Criteria
  - ◊ Superimposed Dead Loads
  - ◊ Live Loads
  - ◊ Thermal Loads
  - ◊ Equipment Loads
  - ◊ Operational and Specialty Equipment Loads
  - ◊ Other Loads as applicable (blast, impact, etc.)
- Floor Vibration Criteria - especially for facilities accessible to and frequently used by the public
- All projects that involve existing structures shall comply with the WSEBC. The following information shall be added to the Basis of Design when the WSEBC is used:
  - ◊ List of as-built projects used for design, including:
    - o POS Project Tracking Number (e.g. STIA-6939)
    - o Project name
    - o All historical Geotechnical Reports, including report name, report date, and name of Geotechnical company
  - ◊ Classification of Work (Repairs, Alteration Level 1, 2, or 3, Change of Occupancy, Relocated, or Addition)
  - ◊ Historic Building designation (if applicable)
  - ◊ Include reference to any required evaluation reports. Reference must include title of report, report number (if exists), date of report, and author of report (can be name of company preparing the report and not the stamping EoR)
  - ◊ Type of Repair if applicable (Repairs for Less Than Substantial Structural Damage, Snow Damage, Disproportionate Earthquake Damage, Substantial Structural Damage to Vertical Element of the Lateral Force-Resisting System, Substantial Damage to Gravity Load-Carrying Components, or Substantial Structural Damage to Snow Load-Carrying Components)
  - ◊ Compliance Method (Prescriptive, Work Area, or Performance)
- The following information shall be added to the Basis of Design when ASCE 41 - Seismic Evaluation and Retrofit of Existing Buildings is used:
  - ◊ Performance Objective, including the following:
    - o Structural Performance Level
    - o Nonstructural Performance Level
    - o Seismic Hazard Level
  - ◊ Level of Seismicity
  - ◊ Building Type: per ASCE 41 Section 3.2.1
  - ◊ Evaluation Procedure
  - ◊ Retrofit Procedure
  - ◊ Evaluation report title, report number, date, and author/ company

STRUCTURAL

Basis of Structural Design

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Basis of Structural Design
Structural Elements & Standards
Structural Drawing Requirements
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Non-Structural Systems

Minimum structural design requirements are under development.

IBC Risk Category

All structures, nonbuilding structures, and components and cladding as a part of the Terminal, Concourses, and Satellites shall be deemed a minimum Risk Category III for structural design using the Washington State Building Code.

- Exceptions: The following locations and buildings shall be deemed Risk Category IV:
  - ◊ All Port Fire Department facilities
  - ◊ All Port Police Department facilities
  - ◊ Aviation Control Tower

Structural Calculations

All structural calculations must be submitted to and approved by Port Structural Aviation Facilities & Infrastructure (F&I) group prior to submitting to Port ABD for Permitting.

Similar to as-built record drawings, the structural calculation package will be archived for future use by the Port and consultants. The submitted structural calculation package shall be comprehensive and include all structural design calculations for the project. This shall include, but not be limited to all delegated design calculations, any design calculations that have been separated out of the project as "Early Work", design-build packages, etc.

Structural Load Criteria

Dead Loads

Structural dead load criteria are under development.

Live Loads

To allow flexibility for future reconfiguration, the live load for the Terminal, Concourses, and Satellites shall be a minimum of 100-psf (this includes office areas). Live load reduction per the code shall be allowed for columns and walls. Live load reduction shall not be permitted for horizontal framing, including connections.

All mechanical rooms shall be designed for a minimum of 150-psf live load.

All floors shall be able to support the Aviation Maintenance (AVM) lifts. The lifts used by AVM and the associated loading information can be found in the Appendix under the Maintainability Standards.

Wind Loads

Wind Exposure Category is C.

Basic Wind Speed shall be per current Building Code.

Basis of Structural Design

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - Planning Considerations
  - **Design Criteria**
    - Consistency & Variance
    - Design Strategies
    - **Structural**
      - **Basis of Structural Design**
      - Structural Elements & Standards
      - Structural Drawing Requirements
    - Mechanical
    - Electrical
    - Artwork
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

Structural Load Criteria (continued)

Seismic Loads

Structural seismic load criteria are under development.

The minimum Seismic Design Category at STIA is Seismic Design Category D.

Snow Loads

Roof Snow load shall be a minimum of 25 psf.

Drift loads shall be considered in all snow load calculations.

Where a new structure, addition, or alteration of an existing structure results in snow drift loads on an adjacent existing structures or portions thereof, the adjacent existing structure shall be evaluated for the additional drifting snow loads and strengthened as required.

Floor Vibration

Framing systems such as floors, pedestrian bridges, monumental stairs, etc. shall be designed to limit structure-borne vibrations to acceptable levels.

Design inputs and acceptance criteria shall consider planned use/occupancy of the structure, presence of equipment, vehicular traffic, etc. The criteria shall be based on industry accepted literature, such as "AISC Design Guide 11: Vibrations of Steel-Framed Structural Systems, Latest Edition."

Vibration design criteria shall be provided in a Basis of Design document prior to the 30% Design milestone. The criteria shall be reviewed and discussed with the Port of Seattle and agreed upon prior to proceeding beyond 30% design.

In the absence of an alternative agreement by the Port or more stringent specifications from equipment manufacturers, the following minimum acceptance criteria shall govern:

Occupancy/Use	Acceleration Limit
Public Assembly	1.5% g
Offices, quiet areas	0.5% g
Pedestrian Bridges	1.5% g
Monumental Stairs	1.7% g (normal descent) 3.0% g (rapid descent)

Basis of Structural Design

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Basis of Structural Design
Structural Elements & Standards
Structural Drawing Requirements
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Structural Load Criteria (continued)

Baggage Handling System (BHS)

Structures shall be designed to support localized reactions from the BHS. This shall include, but not be limited to, dead, live, dynamic, wind, and seismic loads.

To allow for future reconfigurations of the BHS, a distributed superimposed dead load of 40-psf shall be used to account for reactions from the BHS. This shall apply to the level directly above and directly below the BHS area. If the BHS occupies the level above and below a framing level, then the framing level shall be designed to concurrently accommodate 40-psf above the framing level and 40-psf below the framing level. Specific reactions to the structure must be checked by the Engineer of Record (EoR) prior to installation.

Projects that add or modify the existing BHS shall provide loading diagrams that indicate location, magnitude, and direction of all loads imposed on the structure, including, but not limited to, lateral loads such as seismic forces, dynamic forces, wind forces, etc.

For loading as a result of new baggage handling systems applied to existing framing members the following Load and Resistance Factor Design (LRFD) load combinations shall apply:

- BHS Load Combination 1 1.2D + 1.0L + 1.6B + 1.6C
- BHS Load Combination 2 1.2D + 1.6L + 1.0B + 1.0C

Where:

D is the total dead load (including baggage conveyor and catwalk dead loads)

L is the unreduced live load of the floor that supports the BHS

B is the baggage conveyor live load, including any dynamic loads as a result of operation

C is the catwalk live load

For loading as a result of new baggage handling systems applied to new structural framing members the IBC load combinations shall be used.

Reference KPFF memo for IAF Baggage Handling System Loads dated October 26, 2018.

Basis of Structural Design

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - Planning Considerations
  - **Design Criteria**
    - Consistency & Variance
    - Design Strategies
    - **Structural**
      - **Basis of Structural Design**
      - Structural Elements & Standards
      - Structural Drawing Requirements
    - Mechanical
    - Electrical
    - Artwork
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

Structural Load Criteria (continued)

Security Screening Loads

Structural security screen load criteria are under development.

Impact/Other Loads

Structural impact/other load criteria are under development.

Jet Blast/Propeller Wash Loads

Loading as a result of jet blast/propeller wash shall be per FAA Advisory Circular 150/5300-13B, Appendix C, "Jet Blast and Propeller Wash."

Cladding elements exposed to the Air Operations Area (AOA) jet blast shall be designed for 50-PSF applied to any 15-SF area.

- Exception: Inset penthouse structures 40-ft or more above the AOA apron level.

Explosive Blast Loads

Structural explosive blast load criteria are under development.

Fall Arrest/Restraint Loads

All new and existing structures providing support to new fall arrest/restraint systems shall support loads imposed by the system.

Fall arrest/restraint loading shall, at minimum, meet the loading requirements of IBC 1607.11 and 1607.11.4. The EoR shall coordinate with Port Safety and the fall arrest/restraint manufacturer to determine if more stringent loading or deflection criteria are required.

Basis of Structural Design

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Basis of Structural Design
Structural Elements & Standards
Structural Drawing Requirements
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Structural Load Criteria (continued)

Vehicle Barrier/Bollard Loads

Airside structures and pad-mounted equipment exposed to Ground Service Equipment (GSE) or other vehicle traffic shall be protected by yellow painted bollards and k-rails designed for vehicle impact.

GSE impact loads shall be based on the type and speed of GSE anticipated for that location. The following criteria have been created for two types of GSE. However, if warranted, other criteria may be submitted to F&I for review and approval.

1. Light Barrier/Bollard Design Criteria
   a. Shall meet loading requirements of IBC 1607.10.
2. Medium Barrier/Bollard Design Criteria
   a. Vehicle/Weight = MA60 TUG (7,500-lb Min – 10,000-lb Max)
   b. Vehicle Speed = 15-MPH
   c. Dynamic Penetration = 3-ft (Distance travelled after impact)
   d. Impact Height = 18-in
3. Large Barrier/Bollard Design Criteria
   a. Vehicle/Weight = TBL-600 TUG (135,000-lb)
   b. Vehicle Speed = 3-MPH Min – 5-MPH Max
   c. Dynamic Penetration = 3-ft (Distance travelled after impact)
   d. Impact Height = 18-in

All structural steel columns exposed to Ground Service Equipment shall be encased in reinforced concrete to a minimum height of 6-ft above the apron.

Apron Slabs and Structures Surcharged by Aircraft Loading

Apron slabs, tunnels below runways/taxiways, and adjacent retaining walls shall be designed to support loads generated by the largest aircraft and ground service equipment (GSE).

GSE may be considered as 140,000-lb.

Tunnels and retaining walls under/adjacent to roadways or apron slabs shall be designed for traffic surcharge from vehicular traffic based on geotechnical engineer's recommendations, which shall consider the above aircraft and GSE loading at airside.

Maintenance Loading Requirements

See AVM lift requirements under the Live Load subsection.

Structural Elements & Standards

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - Planning Considerations
  - **Design Criteria**
    - Consistency & Variance
    - Design Strategies
    - **Structural**
      - Basis of Structural Design
      - **Structural Elements & Standards**
      - Structural Drawing Requirements
    - Mechanical
    - Electrical
    - Artwork
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

Seismic Joints/Expansion Gaps

The width of existing seismic joints shall not be reduced by new design or construction.

Where a new structure is designed adjacent to an existing structure, a seismic joint shall be placed between the two structures unless the existing structure is seismically evaluated and designed to accommodate the new addition. The new seismic joint must account for the movement of the new structure and the existing structure based on current codes for both structures. Movement of the existing structure shall include the cumulative effect of all prior additions and alterations.

Cover plates shall be allowed to move freely on one side of the joint to prevent plate buckling.

Light Poles

Light pole design within or adjacent to the Air Operations Area (AOA) shall be designed to account for jet blast/propeller wash loading.

Passenger Loading Bridges (PLB)

The design for PLB shall follow FAA Advisory Circular 150/5220-21C – Aircraft Boarding Equipment.

It is understood that the PLB is a delegated design but when submitting the structural calculation package for the PLB foundation design it must include the PLB delegated design (long-form version). It is acceptable for the PLB delegated design calculation to be included as an appendix to the foundation design structural calculation package.

All loading information for the PLB foundation, as required by the WSBC, must be shown on the Structural General Notes Drawing. This includes operational and stowage wind design information.

Anchorage of the PLB structural lateral force-resisting system (LFRS) shall meet the seismic requirements for ACI 318 LFRS anchorage.

Floor and Structural Wall Penetrations

All new penetrations through the existing structure (floor, wall, beam, etc.) shall be structurally evaluated. All structural load path or strength impacts of the new penetration shall be considered and shall include the cumulative effect of all prior additions and alterations.

Structural Elements & Standards

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Basis of Structural Design
Structural Elements & Standards
Structural Drawing Requirements
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Architecturally Exposed Concrete Floor

Limit concrete cracking in architecturally exposed concrete floors. The Port encourages the use of provisions found in the following standards to limit concrete floor cracking:

- ACI 224 - Control of Cracking in Concrete Structures
- ACI 301.1 - Guide to Concrete Floor and Slab Construction

The Port also encourages the following design considerations to limit concrete floor cracking:

- Provide suitable reinforcement
- Provide synthetic fiber reinforcing
- Provide proper concrete floor joint types and layout
- Avoid slab restraints
- Consider limiting the minimum cement content and adjust the water-cement ratio (w/cm) based on the exposure conditions

Nonstructural Component Seismic Submittals

Seismic certification of components

Where required by project specifications, seismic certification of electrical, mechanical, and architectural equipment and components shall be submitted to the Port. Submittals must demonstrate that seismic certifications meet each of the following conditions:

- The certification was granted under the same building code (e.g. the 2022 California Building Code and the 2021 Washington State Building Code are both based on the 2021 IBC)
- The seismic accelerations used for certification meet or exceed the project's specified seismic accelerations

Seismic certifications by product manufacturers or by the California Department of Health Care Access and Information (HCAI), formerly known as OSHPD, are acceptable given that they meet the conditions above.

Design of seismic bracing, attachment, and anchorage

The design of seismic bracing and attachments shall be performed by a Washington State registered Professional or Structural Engineer as required by the Washington Administrative Code (WAC) 18.43.040 (1)(a)(iv) and WAC 18.43.020 (12).

Seismic bracing and attachment submittals must include the following:

- A set of sealed and signed drawings (plans, details, etc.) that includes project-specific seismic bracing, attachment, and equipment anchorage details, and the location of all seismic bracing and attachment elements
- Sealed and signed structural calculations demonstrating that the drawings comply with all WSBC and Port requirements

STRUCTURAL

Structural Elements & Standards

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - Planning Considerations
  - **Design Criteria**
    - Consistency & Variance
    - Design Strategies
    - **Structural**
      - Basis of Structural Design
      - **Structural Elements & Standards**
      - Structural Drawing Requirements
    - Mechanical
    - Electrical
    - Artwork
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

Post-Installed Concrete Anchors

All post-installed concrete anchors (PICA) shall meet the following design requirements:

- ICC certification
- Evaluation compliance with current building code
- Seismic certification
- Design utilizing cracked concrete designation

All required holes for PICAs shall have existing concrete reinforcement located prior to drilling of the hole. Do not damage any existing concrete reinforcing. If existing concrete reinforcing is damaged, immediately notify the EoR and Structural F&I.

All anchors for attachment of non-structural components shall be removeable wherever possible.

Where demolition includes anchors that are not removeable, the anchor shall be ground, drilled, or otherwise removed past the surface and the remaining hole repaired to be flush.

Deferred/Delegated Design

All Deferred Submittals must be listed in the drawings in a consolidated location.

Additional Deferred/Delegated design criteria are under development.

Structural Drawing Requirements

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Basis of Structural Design
Structural Elements & Standards
Structural Drawing Requirements
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Structural Grid

Due to the airport's complex network of buildings, the Port keeps a uniform building grid numbering system. All new projects are required to use the existing grid numbering system, and new grid lines shall be reviewed with key stakeholders for proper naming convention before 30% design.

Columns located in back-of-house, baggage handling, mechanical, and other areas that are not publicly accessible shall have a written grid number located at a height easily seen for identification in the field.

Existing Drawings

The Port maintains a library of drawings from past projects. The designer must research all construction completed at the project site or within the vicinity of the project, including but not limited to adjoining structures and utilities.

Structural Plans

All structural plans shall:

- Include a key map clearly indicating the plan limits within STIA or the structure
- Clearly identify all expansion joints and clearly differentiate between existing and new expansion joints
- Clearly identify all elements of the lateral force resisting system (LFRS). Clearly differentiate between existing and new LFRS elements. Elements shall include, but not be limited to:
  - ◊ Columns (Moment frame, brace frame, etc.)
  - ◊ Beams (Moment frame, brace frame, drag/collector, diaphragm chord, etc.)
  - ◊ Braces
  - ◊ Walls (shear walls, etc)

Structural Notes

In addition to the requirements in the Washington State Building Code (WSBC) Section 1603, the following information shall be added to the Structural Notes when applicable:

- List of as-built projects used for design, including:
  - ◊ POS Project Tracking Number (e.g. STIA-6939)
  - ◊ Project name
- Geotechnical design parameters, including:
  - ◊ Gravity and lateral foundation parameters
  - ◊ Below grade lateral earth, surcharge, and seismic pressures
  - ◊ List of new and historical Geotechnical Reports used in design, including:
    - o Name of geotechnical report
    - o Name of Geotechnical company
    - o Date of report

Structural Drawing Requirements

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Basis of Structural Design
Structural Elements & Standards
Structural Drawing Requirements
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Structural Notes (continued)

All projects that involve existing structures shall comply with the WSEBC. The following information shall be added to the Structural Notes when the WSEBC is used:

- Classification of Work (Repairs, Alteration Level 1, 2, or 3, Change of Occupancy, Relocated, or Addition)
- Historic Building designation if applicable
- Type of Repair if applicable (Repairs for Less Than Substantial Structural Damage, Snow Damage, Disproportionate Earthquake Damage, Substantial Structural Damage to Vertical Element of the Lateral Force-Resisting System, Substantial Damage to Gravity Load-Carrying Components, or Substantial Structural Damage to Snow Load-Carrying Components)
- Compliance Method (Prescriptive, Work Area, or Performance)
- Report title, number, date, and author of all required evaluation reports

The following information shall be added to the Structural Notes when ASCE 41 - Seismic Evaluation and Retrofit of Existing Buildings is used:

- Performance Objective: Includes the following:
  - ◊ Structural Performance Level
  - ◊ Nonstructural Performance Level
  - ◊ Seismic Hazard Level
- Level of Seismicity
- Building Type: per ASCE 41 Section 3.2.1
- Evaluation Procedure
- Retrofit Procedure
- Evaluation report title, report number, date, and author/ company

Load Maps

Where applicable, the structural drawings shall include clear verbiage indicating the location of loading (approved by Structural F&I) or load maps. Loading to be noted shall include but not be limited to:

- All design live loads, including vehicles, lifts, and other mobile equipment
- Baggage Handling System (BHS) load allowances
- Superimposed dead loads
- Art loading allowances

Record Drawings

It is critical that as-built record documents of all projects be filed with the Port, incorporating all Design Bulletins, RFIs, and any other documents that changed the permitted design.

MECHANICAL

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Mechanical requirements are documented separately; please see the Resources section. Design teams should coordinate with their project manager in acquiring the most current mechanical standards. Acoustical considerations are an important aspect of mechanical systems.

Please refer to the Planning section for more information on Sustainable Design and Acoustics recommendations. Project teams are encouraged to explore these concepts as they relate to mechanical issues, to the extent feasible within the project budget and other parameters.

ELECTRICAL

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - Planning Considerations
  - **Design Criteria**
    - Consistency & Variance
    - Design Strategies
    - Structural
    - Mechanical
    - **Electrical**
    - Artwork
  - Zones
- Space Types

Tenant Spaces
Architectural Standards
Appendix

Electrical requirements are documented separately. Design teams should coordinate with their project manager in acquiring the most current electrical standards.

Project teams are encouraged to explore sustainability concepts as they relate to electrical issues, to the extent feasible within the project budget and other parameters.

ARTWORK

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Consistency & Variance
Design Strategies
Structural
Mechanical
Electrical
Artwork
Zones
Space Types
Tenant Spaces
Architectural Standards
Appendix

Artwork requirements are documented separately in the Port of Seattle Art Policy and Guidelines. Design teams should coordinate with their project manager in acquiring the most current artwork standards.

Coordination between art and architecture needed during design and construction for large installations and incorporating art in cohesive and intentional ways.

Art coordination elements:

- Lighting
- Electrical - power supply
- Substrate - plywood backing at walls
- Structural framing support
- Weight and Size limitations
- Niches

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - Planning Considerations
  - Design Criteria
  - **Zones**
    - Airport Site Plan
    - Main Terminal Access Plan
    - Secure vs. Non-secure
    - Main Terminal Levels
    - Ticketing/ Concourse Level
    - Baggage Claim/ Ramp Level
    - Bridge Level
    - STS Level
    - Pre-Security
    - Concourse Access
  - Space Types

Tenant Spaces
Architectural Standards
Appendix

The Airport consists of various zones of spaces with complex but important relationships.

This section aims to provide clarity as to the relationships, locations, and components of the zones.

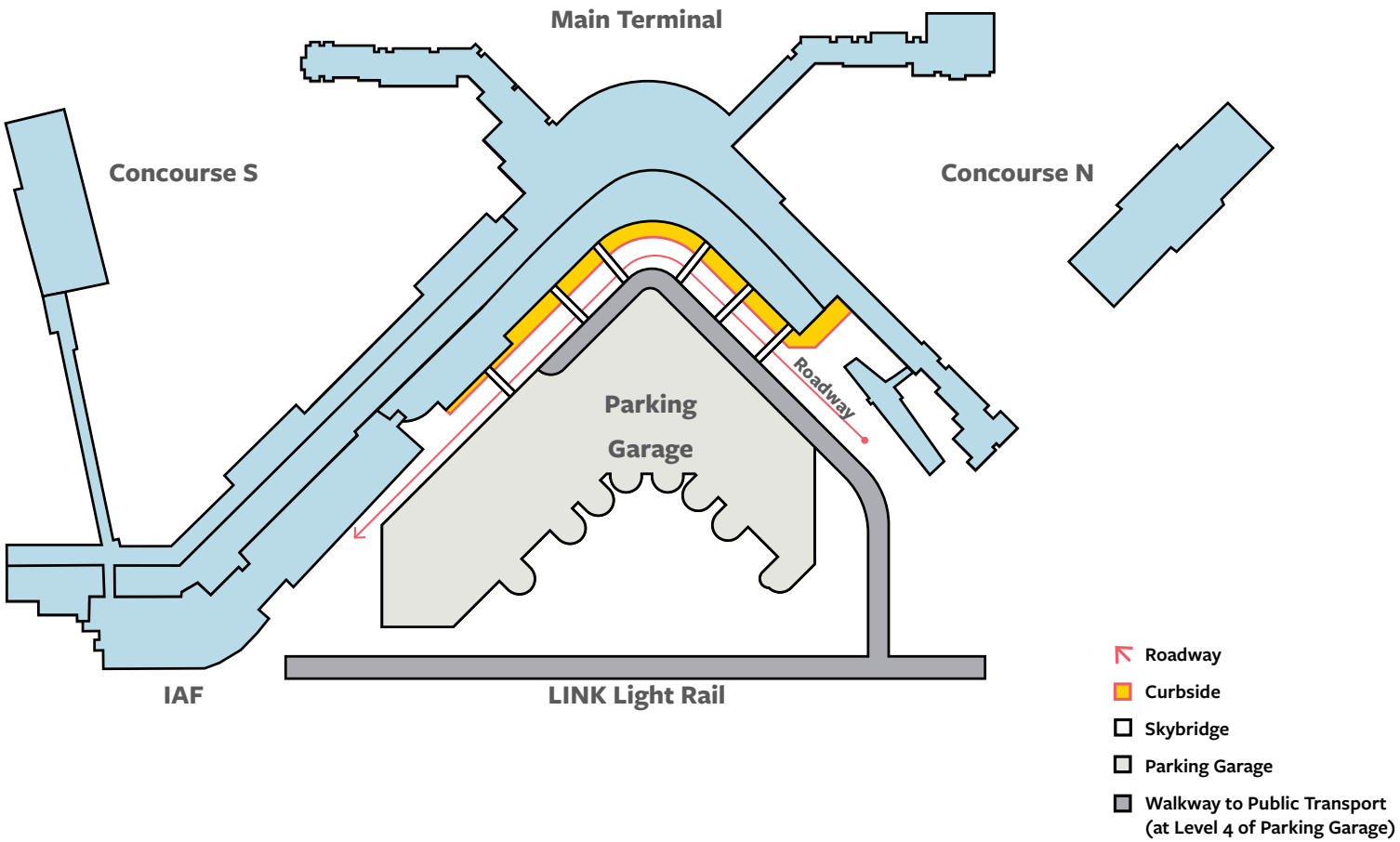
Contents

- Airport Site Plan
- Main Terminal Access Plan
- Secure vs. Non-secure
- Main Terminal Levels
- Pre-Security Ticketing/ Concourse Level
- Baggage Claim/ Ramp Level
- Bridge (Skybridge/ Promenade) Level
- Satellite Transit System (STS) Level
- Pre-Security
- Concourse Access

AIRPORT SITE PLAN

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Airport Site Plan
Main Terminal Access Plan
Secure vs. Non-secure
Main Terminal Levels
Ticketing/ Concourse Level
Baggage Claim/ Ramp Level
Bridge Level
STS Level
Pre-Security
Concourse Access
Space Types
Tenant Spaces
Architectural Standards
Appendix

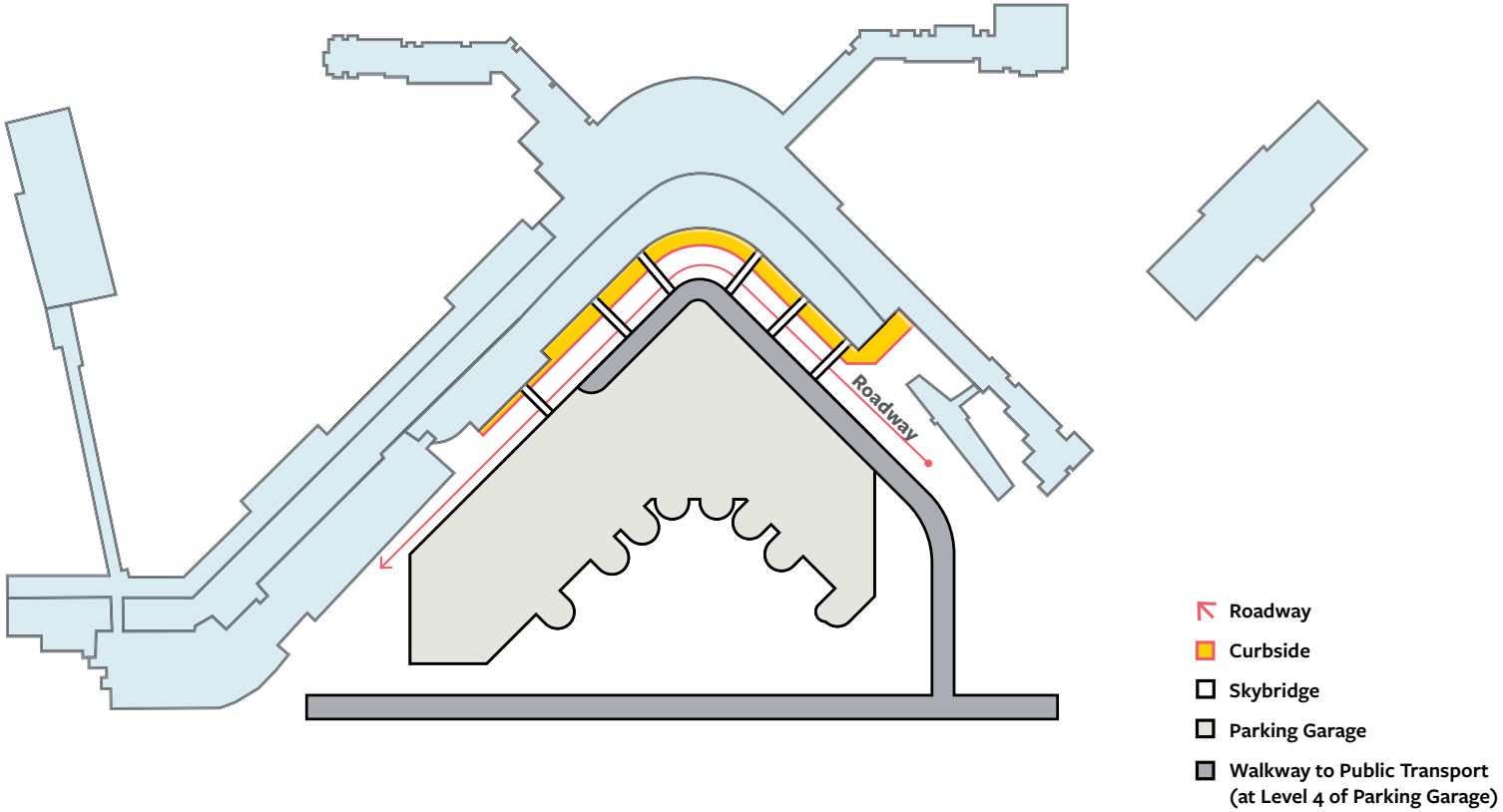
The Airport site is comprised of a system of several buildings and roadways. These buildings were built at different times, but all function together to support our passengers on their journeys.



MAIN TERMINAL ACCESS PLAN

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Airport Site Plan
Main Terminal Access Plan
Secure vs. Non-secure
Main Terminal Levels
Ticketing/ Concourse Level
Baggage Claim/ Ramp Level
Bridge Level
STS Level
Pre-Security
Concourse Access
Space Types
Tenant Spaces
Architectural Standards
Appendix

Passengers can arrive to the Airport through several means. However there are only two main access points in which they can enter the Main Terminal, other than gate access from their plane. Passengers can access the Main Terminal from the Curbside Zones on either level of the main roadway (Airport Expressway) and the Skybridges that feeds in pedestrian from fourth level of the Parking Garage.



SECURE VS. NON-SECURE

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Airport Site Plan
Main Terminal Access Plan
Secure vs. Non-Secure
Main Terminal Levels
Ticketing/ Concourse Level
Baggage Claim/ Ramp Level
Bridge Level
STS Level
Pre-Security
Concourse Access
Space Types
Tenant Spaces
Architectural Standards
Appendix

Areas of the Airport campus are understood as falling into two main categories: Secure and Non-secure.

Secure

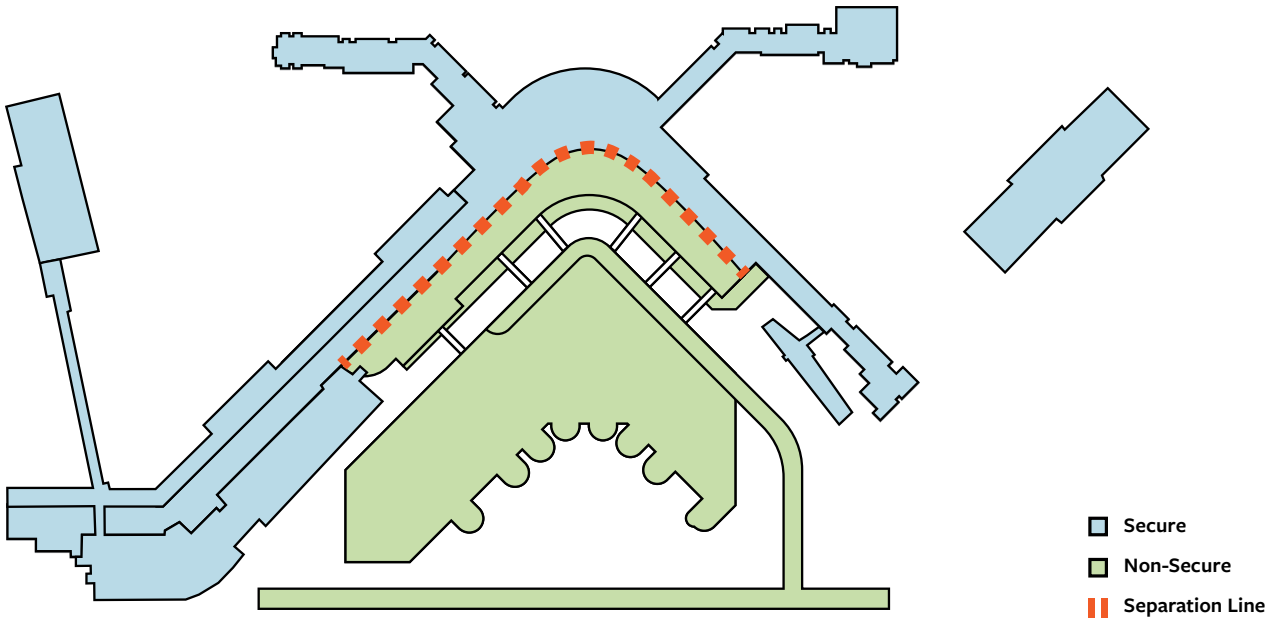
The Secure zone includes buildings and infrastructure that are connected and provide access to activities that happen in the air, such as airplanes and flying. They are accessible only by passing through security. It includes the following:

- Concourses / Ramp
- Central Terminal

Non-Secure

The Non-secure zone includes buildings and infrastructure that are connected to activities that happen on land, such as driving and accessing the city. It includes the following:

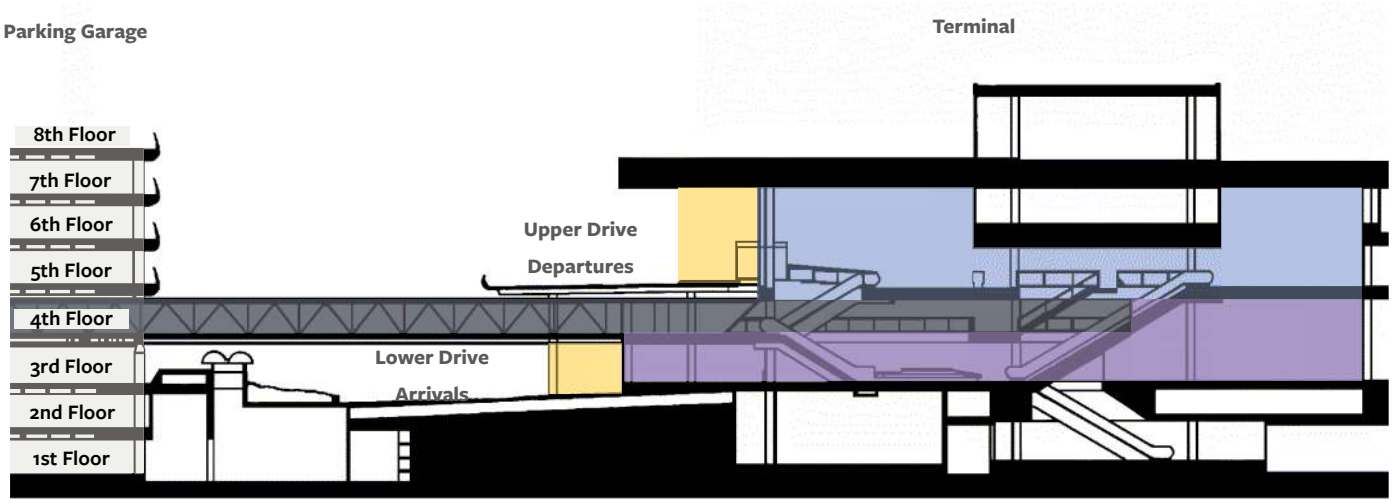
- Roadway and Curbside
- Parking
- SoundTransit Access



MAIN TERMINAL LEVELS

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Airport Site Plan
Main Terminal Access Plan
Secure vs. Non-secure
Main Terminal Levels
Ticketing/ Concourse Level
Baggage Claim/ Ramp Level
Bridge Level
STS Level
Pre-Security
Concourse Access
Space Types
Tenant Spaces
Architectural Standards
Appendix

The Main Terminal is made of a system of spaces that must work together to create a positive passenger experience. It is important to understand the different zones and how they work together to ensure decisions are appropriate for each space and compatible with those adjacent. This section describes the main zones of the Main Terminal and their vertical relationships.

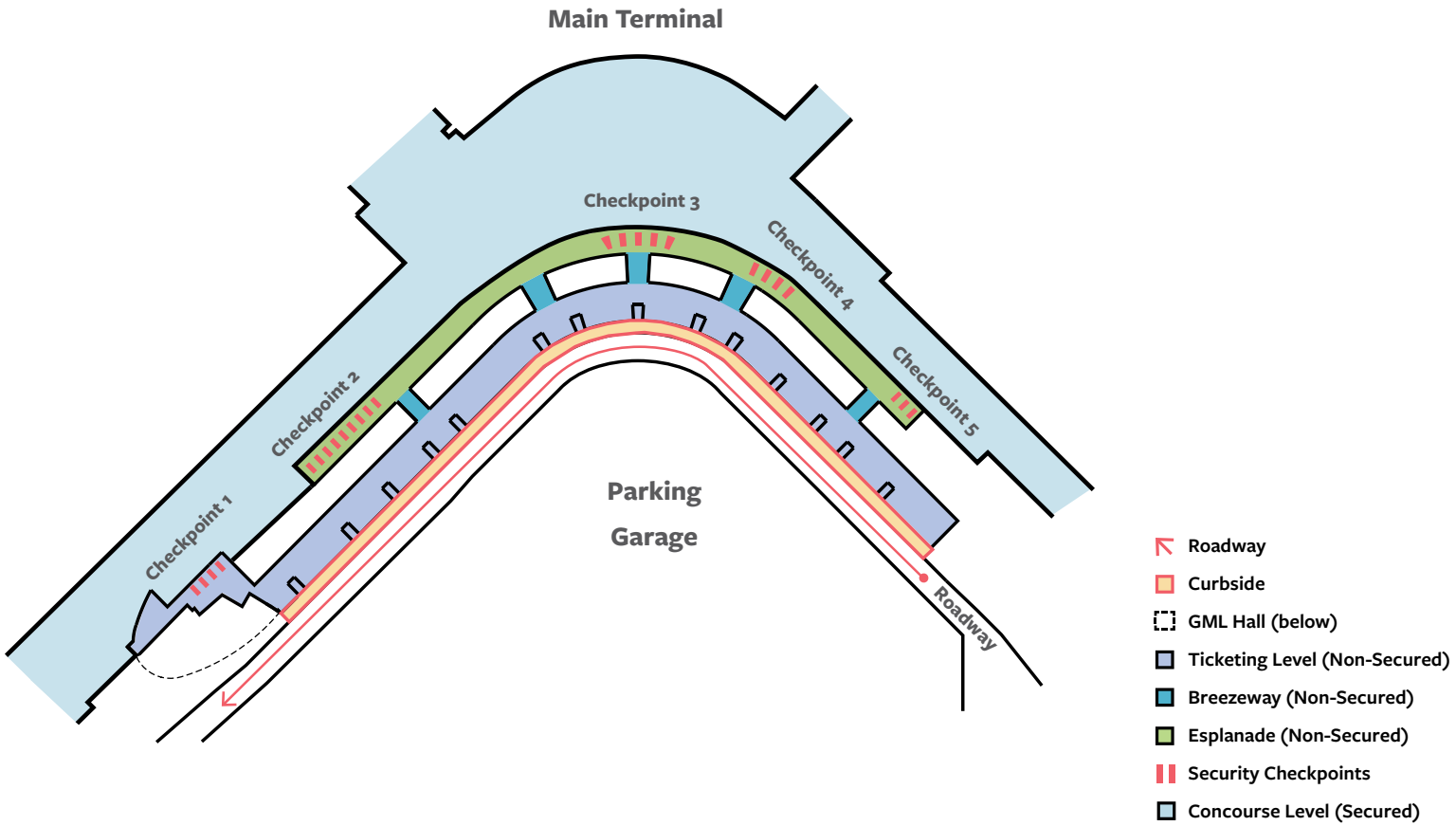


TICKETING/ CONCOURSE LEVEL

Upper Drive / Departures

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Airport Site Plan
Main Terminal Access Plan
Secure vs. Non-secure
Main Terminal Levels
Ticketing/ Concourse Level
Baggage Claim/ Ramp Level
Bridge Level
STS Level
Pre-Security
Concourse Access
Space Types
Tenant Spaces
Architectural Standards
Appendix

From the Curbside (Upper Drive/ Departures) passengers enter the Main Terminal on the Ticketing Level (non-secured). On this level, passengers can check-in to their flights at either a self service kiosk or agent service counter before proceeding to the Breezeways paths leading to Checkpoints. Once through the Security Checkpoints, passengers are on the secured side of the Terminal also known as the Concourse Level and can proceed to their gate.

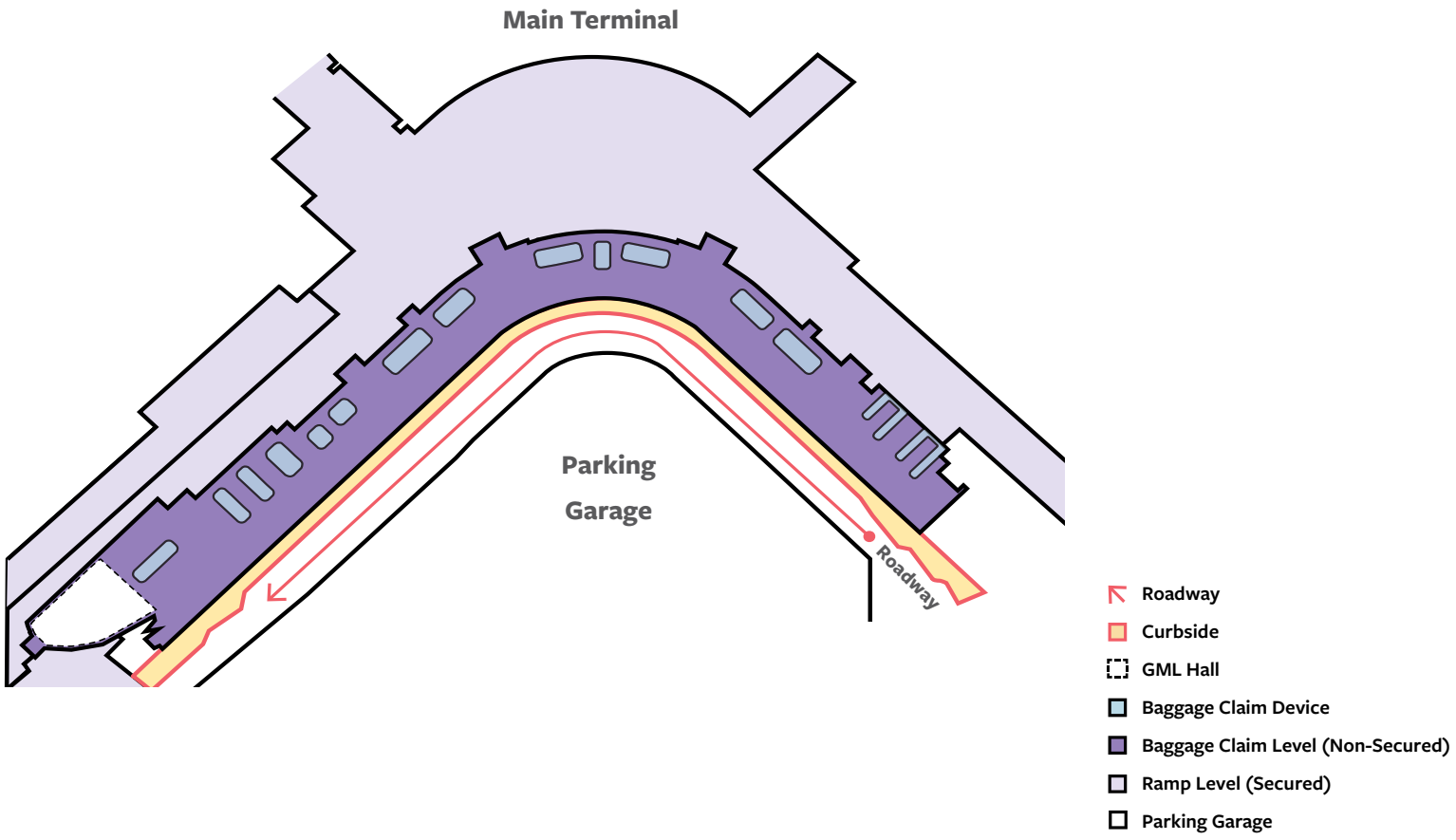


BAGGAGE CLAIM/ RAMP LEVEL

Lower Drive / Arrivals

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Airport Site Plan
Main Terminal Access Plan
Secure vs. Non-secure
Main Terminal Levels
Ticketing/ Concourse Level
Baggage Claim/ Ramp Level
Bridge Level
STS Level
Pre-Security
Concourse Access
Space Types
Tenant Spaces
Architectural Standards
Appendix

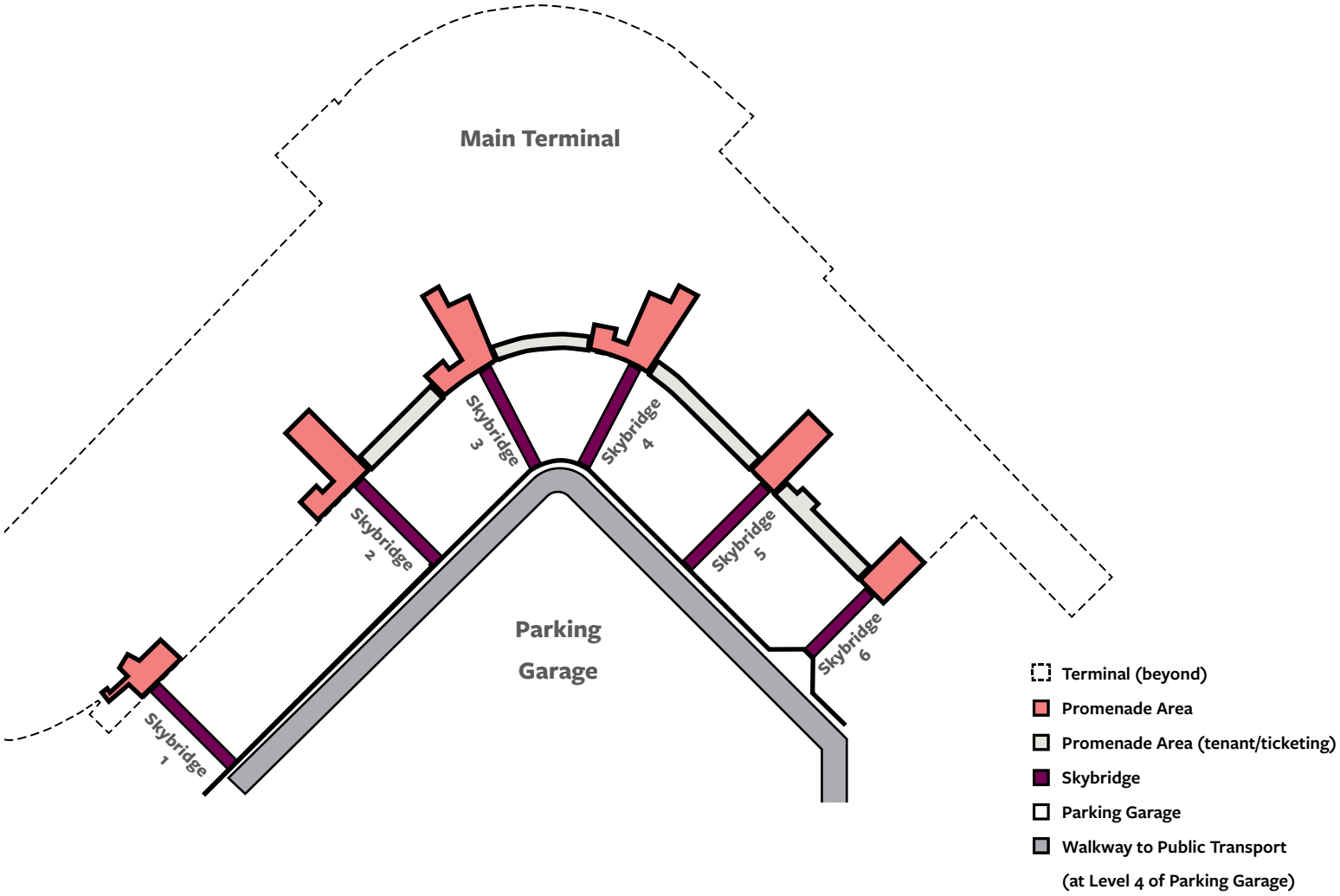
Passengers departing their fights will make their way to Baggage Claim to exit the secured side of the Terminal. On Baggage Claim Level (non-secured), passengers can head towards the Parking Garage, obtaining their checked bag(s), meet local family and friends, and access the Rental Car Shuttle from the Curbside (Lower Drive/ Arrivals). As passengers are waiting for their bag(s) at the assigned baggage claim device, Airport Operation is busy on the secured side (Ramp Level) moving bags across the Terminal to and from the planes.



BRIDGE LEVEL

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Airport Site Plan
Main Terminal Access Plan
Secure vs. Non-secure
Main Terminal Levels
Ticketing/ Concourse Level
Baggage Claim/ Ramp Level
Bridge Level
STS Level
Pre-Security
Concourse Access
Space Types
Tenant Spaces
Architectural Standards
Appendix

The Bridge Level (non-secured) connects passengers between the Parking Garage and the Main Terminal. Passengers cross over the Lower Drive/ Arrivals Roadway and Curbside areas to access either structure.



SATELLITE TRANSIT SYSTEM LEVEL

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Airport Site Plan
Main Terminal Access Plan
Secure vs. Non-secure
Main Terminal Levels
Ticketing/ Concourse Level
Baggage Claim/ Ramp Level
Bridge Level
STS Level
Pre-Security
Concourse Access
Space Types
Tenant Spaces
Architectural Standards
Appendix

The Satellite Transit System (STS) provides underground transportation between the concourses in the secure zone. It is composed of three routes: South Loop (blue), Shuttle (yellow), and North Loop (green). The interior finishes at the stations integrate the color associated with their loop to reinforce wayfinding.

South Loop (Blue)

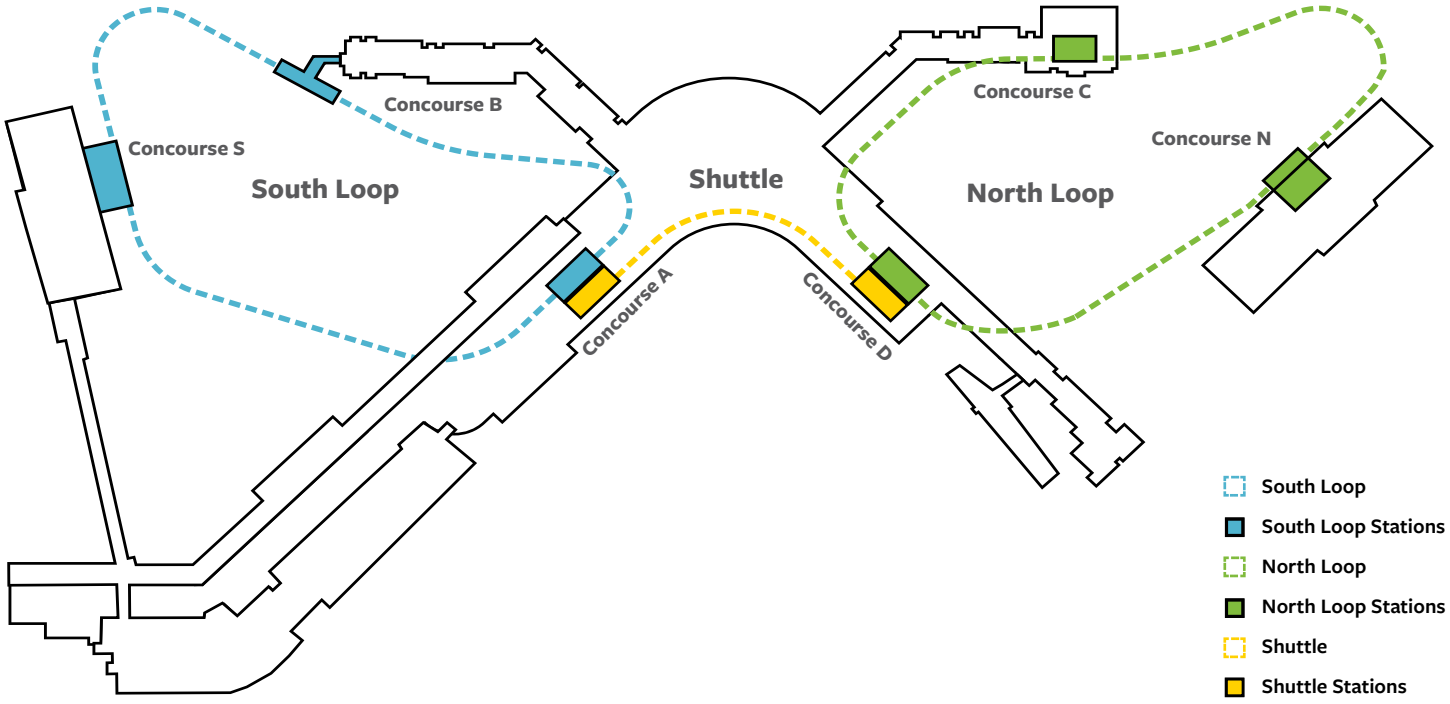
The South Loop connects Concourses A, B, and S.

Shuttle (Yellow)

The Shuttle connects the South and North Loops and Concourses A and D.

North Loop (Green)

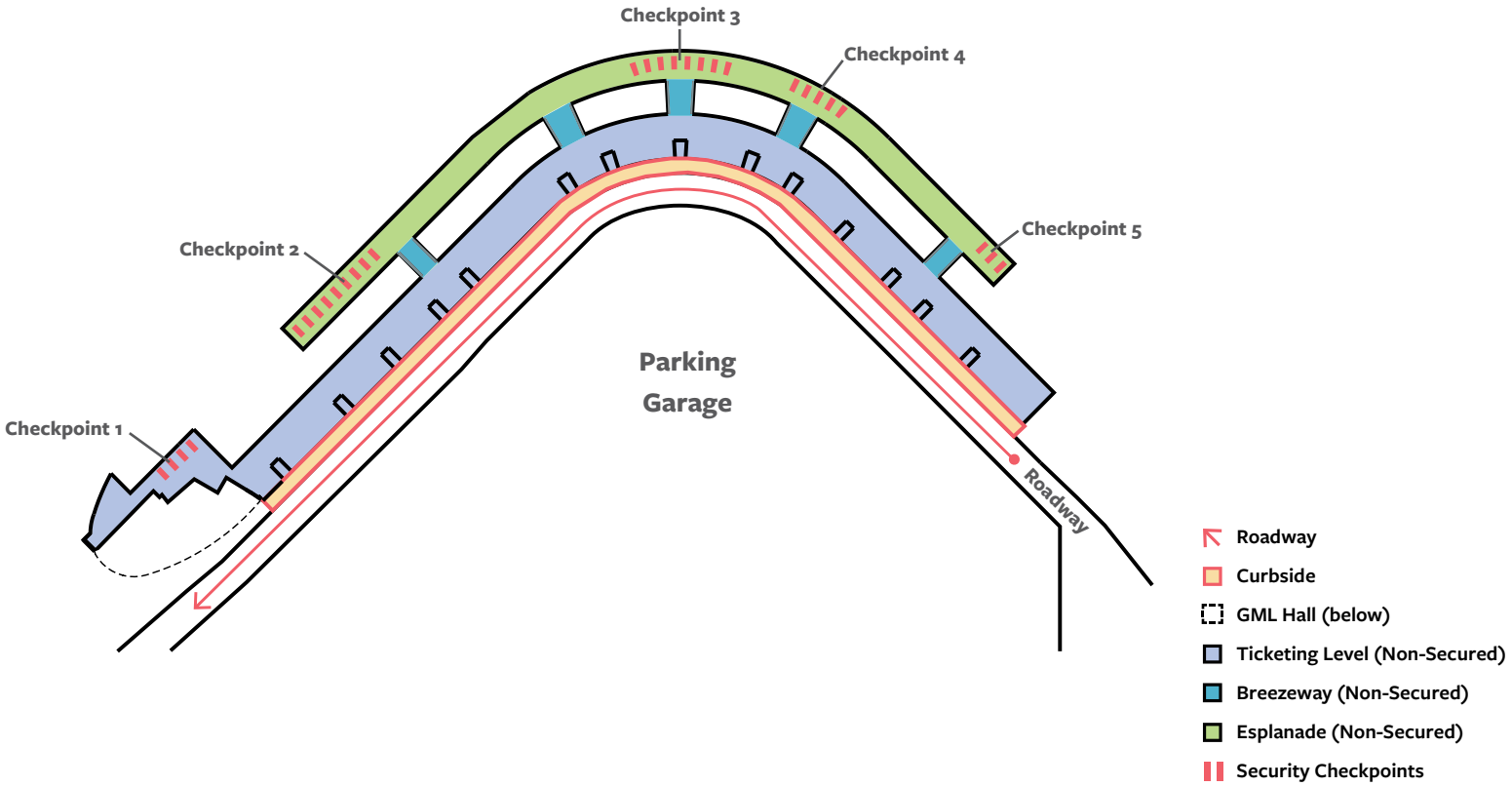
The North Loop connects Concourses C, D, and N.



PRE-SECURITY
Ticketing Level

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Airport Site Plan
Main Terminal Access Plan
Secure vs. Non-secure
Main Terminal Levels
Ticketing/ Concourse Level
Baggage Claim/ Ramp Level
Bridge Level
STS Level
Pre-Security
Concourse Access
Space Types
Tenant Spaces
Architectural Standards
Appendix

Prior to going through the Security Checkpoints, passengers are considered to be in the pre-security zone of the Terminal. This includes the curbside area of the Upper Drive/ Departures and the interior area of the building known as the Ticketing Level.



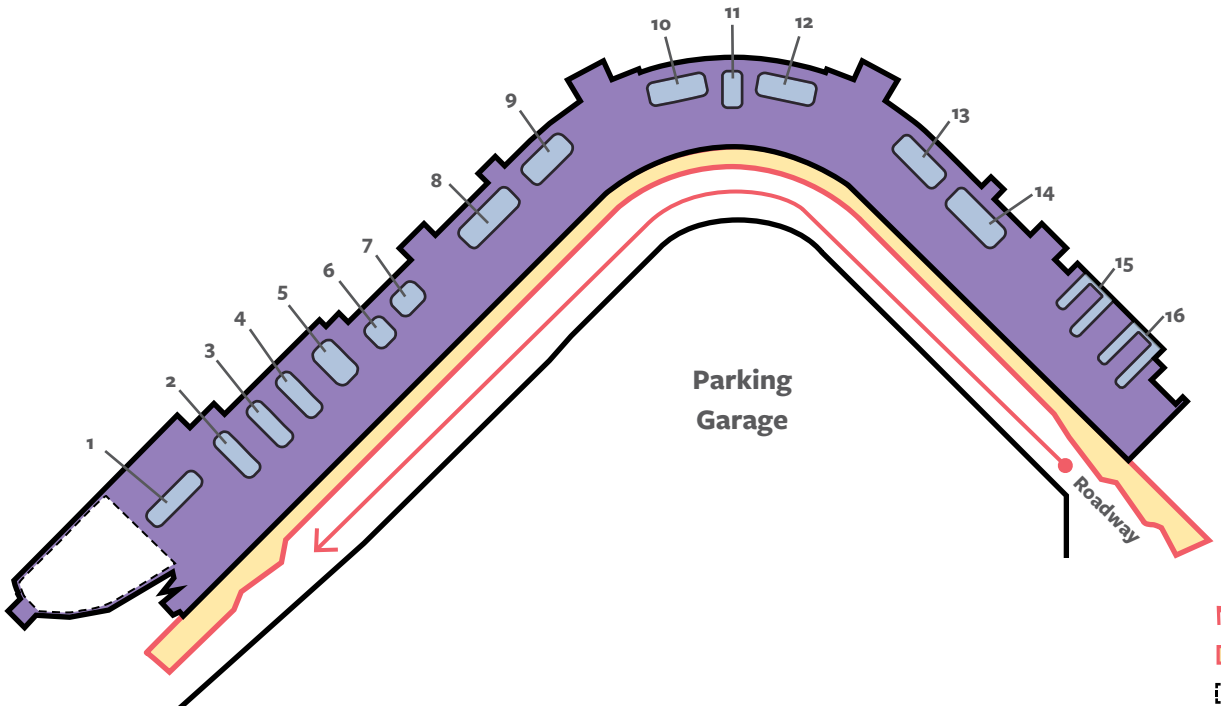
PRE-SECURITY

Baggage Claim Level

Design Vision
Design Guidelines
- Introduction
- **Planning**
  - Regulations & Reviews
  - Project Types
  - Project Teams
  - Planning Considerations
  - Design Criteria
  - **Zones**
    - Airport Site Plan
    - Main Terminal Access Plan
    - Secure vs. Non-secure
    - Main Terminal Levels
    - Ticketing/ Concourse Level
    - Baggage Claim/ Ramp Level
    - Bridge Level
    - STS Level
    - **Pre-Security**
    - Concourse Access
  - Space Types

Tenant Spaces
Architectural Standards
Appendix

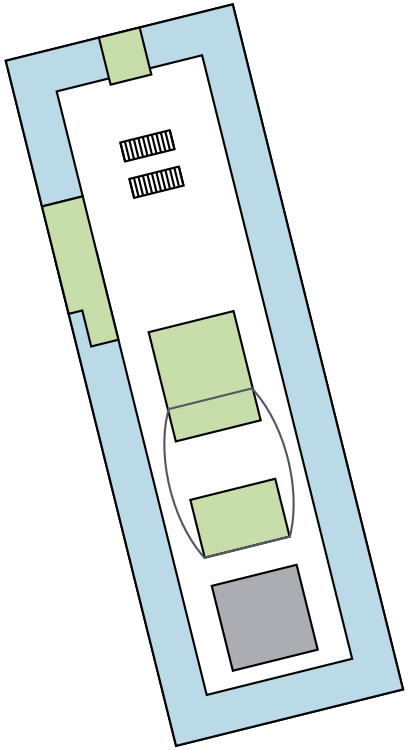
Passengers waiting for their bags by a Baggage Claim Device are located on the Baggage Claim Level of the Terminal This area along with the curbside (Lower Drive / Arrivals) are also considered part of the pre-security zone.



CONCOURSE ACCESS

Design Vision
Design Guidelines
Introduction
Planning
Regulations & Reviews
Project Types
Project Teams
Planning Considerations
Design Criteria
Zones
Airport Site Plan
Main Terminal Access Plan
Secure vs. Non-secure
Main Terminal Levels
Ticketing/ Concourse Level
Baggage Claim/ Ramp Level
Bridge Level
STS Level
Pre-Security
Concourse Access
Space Types
Tenant Spaces
Architectural Standards
Appendix

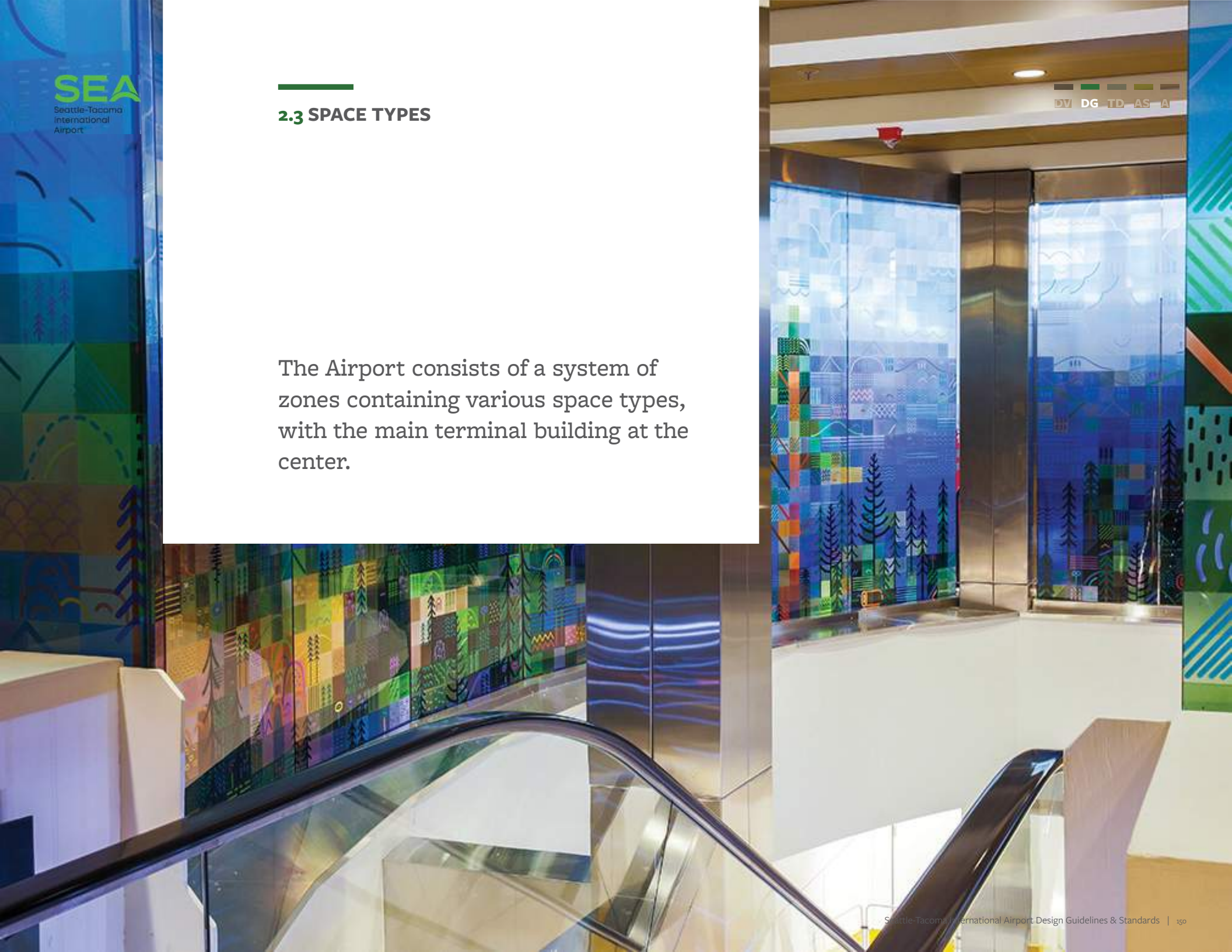
The Concourses serve the same purpose: connecting passengers to their gates for boarding. While most Concourses are accessible by foot, directly from security, Concourse N and Concourse S are accessed by the Satellite Transit System (STS).



Holdrooms
ADR
Circulation
Restrooms

2.3 SPACE TYPES

The Airport consists of a system of zones containing various space types, with the main terminal building at the center.



Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

The various zones of the terminal building can be categorized in a number of ways, including by level, Port- or tenant-owned, secure or non-secure, and by base building, tenant, or ADR management.

A number of diagrams in the Planning section show this delineation of zones. Each zone contains a number of space types. In this section, each space type is described and detailed with planning notes and requirements for architectural elements, furniture, and equipment.

Their designation according to the zones above is also listed. Space types that occur in both secure and non-secure areas are listed under Amenities & Support.

Non-secure

- Skybridges
- Curbside (Arrivals)
- Curbside (Departures)
- Baggage Claim
- South Arrivals (GML) Hall
- Check-In Lobby
- Esplanade
- Mezzanine
- Passageways
- Parking Garage

Secure

- Security Checkpoints
- Central Terminal
- Concourses
- Subgrade Transit Stations
- Corridors
- Holdrooms
- Aircraft Passenger Loading Bridge
- International Arrivals

Amenities & Support

- Conveying (Elevators, Escalators, Moving Walkways)
- Restrooms
- Nursing Suite
- Lactation Room & Modular Pods
- Interfaith Prayer & Meditation Room
- Sensory Room
- Service Animal Relief Areas
- Children's Play Areas
- Lounges
- Storage
- Loading Docks

SKYBRIDGES

Non-secure

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - **Non-secure**
    - **Skybridges**
    - Curbside (Arrivals)
    - Curbside (Departures)
    - Baggage Claim
    - South Arrivals (GML)
    - Check-In Lobby
    - Esplanade
    - Mezzanine
    - Passageways
    - Parking Garage
  - Secure
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Skybridges are pedestrian bridges that connect the fourth floor of the Parking Garage to the terminal at the Skybridge level.

Planning Considerations

- As a high traffic area, flooring material is critical for durability, aesthetic, and catching moisture.

Fenestration

- Public Entrance Doors
- Storefront Glazing

Equipment

- Security Camera

Ceilings

- Linear Metal Ceiling

Finishes

- Carpet Tile
- Walk-Off Mat
- Interior Paint Type 3

CURBSIDE (ARRIVALS)

Non-secure

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Skybridges
Curbside (Arrivals)
Curbside (Departures)
Baggage Claim
South Arrivals (GML)
Check-In Lobby
Esplanade
Mezzanine
Passageways
Parking Garage
Secure
Amenities & Support
Tenant Spaces
Architectural Standards
Appendix

The (Arrivals) Curbside walkway is the zone between the arrivals level roadway curb and the front of the terminal, typically used by passengers who have picked up their bags in baggage claim and are on their way out of the airport.

Planning Considerations

- The space should feel enlivened with sufficient seating.
- Zero curb at passenger drop off areas.
- Confirm any provisions for smoking areas with the project manager. Keep smoking areas away from doors and air intake.
- Preserve passenger experience by limiting systems exhaust into the Arrivals Drive.
- Coordinate infrastructure mounted on the Departures Drive above with the future Main Terminal Infrastructure Project ceiling.

Building Envelope

- Curtain Wall
- Curbside Soffit
- Exterior Paint

Structure

- Concrete Columns
- Concrete Floor

Fenestration

- Public Entrance Doors

Equipment

- Security Camera
- Bird Control
- Bollards
- Exterior Waste/Recycle Receptacle
- Cigarette Trash Receptacle (at designated smoking areas)

CURBSIDE (DEPARTURES)

Non-secure

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Skybridges
Curbside (Arrivals)
Curbside (Departures)
Baggage Claim
South Arrivals (GML)
Check-In Lobby
Esplanade
Mezzanine
Passageways
Parking Garage
Secure
Amenities & Support
Tenant Spaces
Architectural Standards
Appendix

The (Departures) Curbside walkway is the zone between the departures level roadway curb and the front of the terminal, typically used by passengers arriving for flights.

Planning Considerations

- The space should be clear of excess equipment of impediments for entering airport.
- There are some areas for curbside check in and available baggage conveyors associated on this level.
- Accessible curb ramps need to be provided at minimum every 100′.
- Confirm any provisions for smoking areas with the project manager. Keep smoking areas away from doors and air intake.

Building Envelope

- Curtain Wall
- Curbside Soffit
- Exterior Paint

Structure

- Concrete Columns
- Concrete Floor

Fenestration

- Public Entrance Doors

Equipment

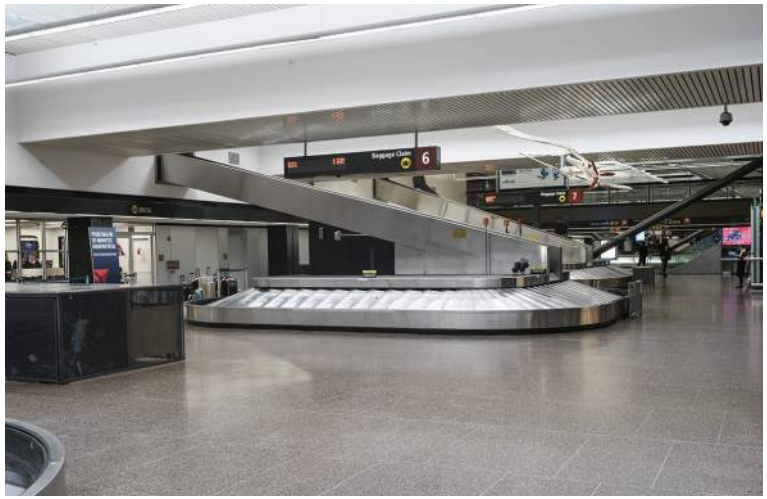
- Security Camera
- Bird Control
- Stanchions
- Bollards
- Exterior Waste/Recycle Receptacle
- Cigarette Trash Receptacle (at designated smoking areas)
- Walk-off carpet tiles

BAGGAGE CLAIM

Non-secure

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - **Non-secure**
    - Skybridges
    - Curbside (Arrivals)
    - Curbside (Departures)
    - **Baggage Claim**
    - South Arrivals (GML)
    - Check-In Lobby
    - Esplanade
    - Mezzanine
    - Passageways
    - Parking Garage
  - Secure
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix



The Baggage Claim is the non-secure lobby and hall on the arrivals level of the terminal. It includes the baggage claim devices and the area around them, the escalator wells, and the landing circulation areas from the entry doors to Curbside (Arrivals). It extends from the north end of the terminal to the South Arrivals Hall (Gina Marie Lindsey Hall).

Planning Considerations

- Original columns finished in black granite should remain; any additional columns should follow new column guidelines.
- Some ADR tenant spaces and information kiosks are provided in this area.
- Consider appropriate storage solutions and locations for this area.
- Columns should react to surrounding conditions; remaining clad in black granite, exposed concrete, or fitted with a new white metal column cover depending on the surrounding conditions.

BAGGAGE CLAIM

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - **Non-secure**
    - Skybridges
    - Curbside (Arrivals)
    - Curbside (Departures)
    - **Baggage Claim**
    - South Arrivals (GML)
    - Check-In Lobby
    - Esplanade
    - Mezzanine
    - Passageways
    - Parking Garage
  - Secure
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Fenestration

- Public Entrance Doors

Partitions

- Demountable Partitions

Conveying

- Baggage Claim Rails

Furniture

- Meda Gate Seating

Finishes

- Terrazzo Flooring
- Walk-Off Mat
- Interior Paint
- Concrete Paint
- Wall Covering
- PLam Wall System 2
- Metal Wall System
- Wall & Corner Guards
- Stainless Steel Base
- Granite Column Cover

Ceilings

- Acoustic Ceiling Tile
- Linear Metal Ceiling

Equipment

- Security Camera
- Baggage Claim Devices
- Interior Waste/Recycling Receptacles
- Bicycle Racks / Storage
- Maintenance Lifts

SOUTH ARRIVALS (GINA MARIE LINDSEY) HALL

Non-secure

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - **Non-secure**
    - Skybridges
    - Curbside (Arrivals)
    - Curbside (Departures)
    - Baggage Claim
    - **South Arrivals (GML)**
    - Check-In Lobby
    - Esplanade
    - Mezzanine
    - Passageways
    - Parking Garage
  - Secure
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

The South Arrivals Hall, also known as the Gina Marie Lindsey Arrivals Hall, was named after a former director of the Airport. It is a large-scale, double height public gathering space at the south end of the terminal on the arrivals level, but is also experienced from the departures and mezzanine levels.

Planning Considerations

- The South Arrivals Hall is very light and bright by design, but should transition in a complementary way to the older terminal buildings and areas, which have darker finishes.
- Structure to remain exposed in a white finish.
- Provide freestanding furniture for ease of moving for maintenance.

SOUTH ARRIVALS (GINA MARIE LINDSEY) HALL

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - **Non-secure**
    - Skybridges
    - Curbside (Arrivals)
    - Curbside (Departures)
    - Baggage Claim
    - **South Arrivals (GML)**
    - Check-In Lobby
    - Esplanade
    - Mezzanine
    - Passageways
    - Parking Garage
  - Secure
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Building Envelope

- Curtain Wall

Fenestration

- Public Entrance Doors

Conveying

- Interior Stairs
- Guardrails

Finishes

- Stone Flooring
- Fixed Floor Mats
- Interior Paint
- Urethane Semi-Gloss
- Wallcovering
  - PLam Wall System 1
  - Metal Wall System
  - Wood Paneling
  - Stone Wallcovering

Ceilings

- Acoustic Ceiling Tile
- Linear Metal Ceiling

Equipment

- Fire Extinguisher
- Fire Extinguisher Cabinet
- Interior Waste/Recycle Receptacles
- Stanchions
- Emergency Cones
- Bird Control

CHECK-IN LOBBY

Non-secure

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - **Non-secure**
    - Skybridges
    - Curbside (Arrivals)
    - Curbside (Departures)
    - Baggage Claim
    - South Arrivals (GML)
    - **Check-In Lobby**
    - Esplanade
    - Mezzanine
    - Passageways
    - Parking Garage
  - Secure
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

The Check-In Lobby is on the departures level of the terminal. It spans from the entry doors at Curbside (Departures) to the Esplanade. It is inclusive of the connecting corridors (the passageways) to the Esplanade and extends from the north end of the terminal to the South Arrivals Hall.

Planning Considerations

- Original columns finished in black granite.
- Signage is supplied by SEA for all common use check-in casework. Some airlines may provide their own signage, as approved by SEA. Appropriate storage should be provided.
- Intend to make Check-In continuous with the Esplanade.

CHECK-IN LOBBY

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - **Non-secure**
    - Skybridges
    - Curbside (Arrivals)
    - Curbside (Departures)
    - Baggage Claim
    - South Arrivals (GML)
    - **Check-In Lobby**
    - Esplanade
    - Mezzanine
    - Passageways
    - Parking Garage
  - Secure
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Fenestration

- Public Entrance Doors

Conveying

- Guardrails

Casework

- Check-In Lobby Counters
- Check-In Baggage Scale Shell
- Flight Information Display

Furniture

- Meda Gate Seating

Finishes

- Terrazzo - Legacy Flooring
- Walk-Off Mat
- Fixed Floor Mats
- Interior Paint
- Wallcovering
  - PLam Wall System 1
  - Metal Wall System
  - Wood Paneling System
  - Stone Wallcovering
  - Granite Column Cover

Ceilings

- Acoustic Ceiling Tile
- Linear Metal Ceiling

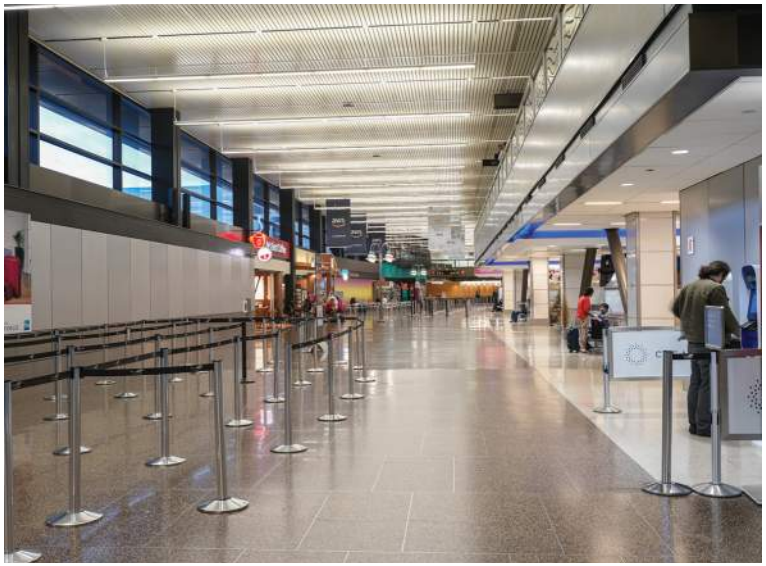
Equipment

- Security Cameras
- Fire Extinguisher
- Fire Extinguisher Cabinet
- Planters
- Emergency Cones
- Stanchions
- Interior Waste/Recycle Receptacles
- Bird Control

ESPLANADE

Non-secure

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Skybridges
Curbside (Arrivals)
Curbside (Departures)
Baggage Claim
South Arrivals (GML)
Check-In Lobby
Esplanade
Mezzanine
Passageways
Parking Garage
Secure
Amenities & Support
Tenant Spaces
Architectural Standards
Appendix



The Esplanade is the circulation hall on the departures level of the terminal behind the Check-In Lobby. It is accessible from the Check-In Lobby through the Passageways, which pass through the tenant check-in areas.

Planning Considerations

- The Esplanade should have a similar look and feel to the Check-In Lobby.
- Vending machines to be located in an alcove, where loaded pallet jacks don't need to cross over expansion joints to get to them, and not below an access panel.
- Consider opportunities for artwork in this space.
- Consider stanchion placement, especially for the Checkpoint overflow lanes.

ESPLANADE

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - **Non-secure**
    - Skybridges
    - Curbside (Arrivals)
    - Curbside (Departures)
    - Baggage Claim
    - South Arrivals (GML)
    - Check-In Lobby
    - **Esplanade**
    - Mezzanine
    - Passageways
    - Parking Garage
  - Secure
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Conveying

- Elevator

Casework

- Flight Information Display

Finishes

- Terrazzo - Light
- Terrazzo - Accent
- Terrazzo - Legacy
- Fixed Floor Mats
- Interior Paint
- Wallcovering
- Stainless Steel Wall Base
- PLam Wall System 1
- Metal Panel System
- Wood Panel System
- Wall & Corner Guards
- Granite Column Covers

Ceilings

- Linear Metal Ceiling

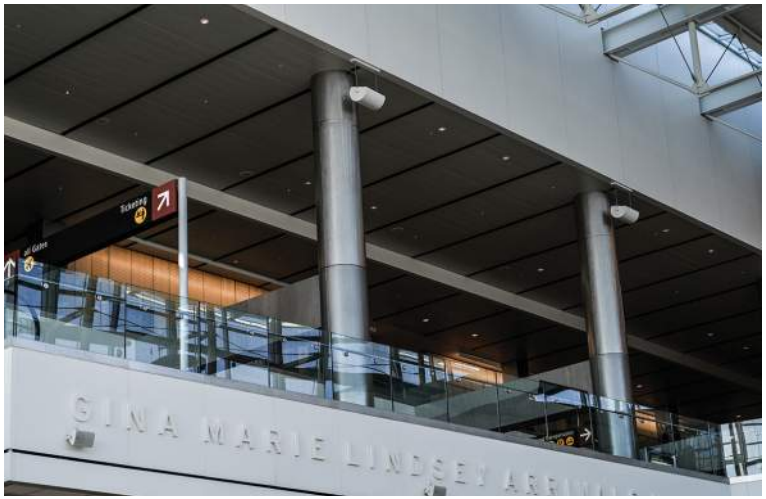
Equipment

- Security Camera
- Fire Extinguisher
- Fire Extinguisher Cabinet
- Emergency Cones
- Stanchions
- Interior Waste/Recycle Receptacles
- Bird Control

MEZZANINE

Non-secure

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Skybridges
Curbside (Arrivals)
Curbside (Departures)
Baggage Claim
South Arrivals (GML)
Check-In Lobby
Esplanade
Mezzanine
Passageways
Parking Garage
Secure
Amenities & Support
Tenant Spaces
Architectural Standards
Appendix



The mezzanine is located above and visible from the Esplanade. There is limited passenger access, as it includes Port of Seattle, airline, and other offices.

Planning Considerations

- Railing to be glass to maintain openness and transparency.
- Railings to have standard stainless steel shoe, consistent throughout the mezzanine.

MEZZANINE

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - **Non-secure**
    - Skybridges
    - Curbside (Arrivals)
    - Curbside (Departures)
    - Baggage Claim
    - South Arrivals (GML)
    - Check-In Lobby
    - Esplanade
    - **Mezzanine**
    - Passageways
    - Parking Garage
  - Secure
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Conveying

- Guardrails

Finishes

- Interior Paint

Ceilings

- Linear Metal Ceiling

Equipment

- Security Camera
- Fire Extinguisher
- Fire Extinguisher Cabinet
- Bird Control

PASSAGEWAYS

Non-secure

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - **Non-secure**
    - Skybridges
    - Curbside (Arrivals)
    - Curbside (Departures)
    - Baggage Claim
    - South Arrivals (GML)
    - Check-In Lobby
    - Esplanade
    - Mezzanine
    - **Passageways**
    - Parking Garage
  - Secure
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

The Passageways are the perpendicular walkways connecting the Check-In Lobby and the Esplanade on the departures level, passing between tenant check-in areas. Some contain circulation up to the Mezzanine or down to the Baggage Claim. The passageways are also known as breezeways.

Planning Considerations

- Consider art integration in this space.
- Passageways should remain clear of stanchions and queueing to provide maximum circulation between the Check-In Lobby and the Esplanade.

Conveying

- Interior Stairs
- Escalators
- Metal Railings (at structure)
- Guardrails (at stairs and escalators)

Ceilings

- Acoustic Ceiling Tile

Finishes

- Interior Paint Type 2 (at structure)
- Wallcovering
  - PLam Wall System 1
  - Wood Paneling System

Equipment

- Bird Control

PARKING GARAGE

Non-secure

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Skybridges
Curbside (Arrivals)
Curbside (Departures)
Baggage Claim
South Arrivals (GML)
Check-In Lobby
Esplanade
Mezzanine
Passageways
Parking Garage
Secure
Amenities & Support
Tenant Spaces
Architectural Standards
Appendix

The Parking Garage is an eight-level parking structure. Its fourth level connects to the Skybridge level of the terminal building and is the only parking level that aligns with the Airport. Passengers park their cars in the Parking Garage and also utilize the structure to access Sound Transit.

Planning Considerations

- The cruise area is on level 1.
- Rental cars, Uber, etc. are accessed on level 3.
- Elevator lobbies to be suitable for wet conditions.
- Parking lots shall be designed to eliminate problems associated with pavement cleaning and snow removal.
- Garage should have restrooms and janitorial closets.
- Concrete to remain raw and exposed except for when painted for wayfinding.
- Light levels should be bright enough to make the garage safe and easy to see other vehicular and pedestrian traffic.

Conveying

- Stairs
- Rails
- Elevators
- Escalators

Finishes

- Carpet Tile (in elevator lobbies)
- Exterior Paint (at elevator lobbies)
- Concrete Paint

Equipment

- Security Camera
- Fire Extinguisher
- Fire Extinguisher Cabinet
- Exterior Waste/Recycle Receptacles

SECURITY CHECKPOINTS

Secure

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - **Secure**
    - **Security Checkpoints**
    - Central Terminal
    - Concourses
    - Subgrade Transit Stations
    - Corridors
    - Holdrooms
    - Aircraft Passenger Loading Bridge
    - International Arrivals
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

The Security Checkpoints divide the non-secure and secure areas of the Airport, helping the TSA ensure safe flights for our passengers. They connect the Esplanade and the Concourses.

Planning Considerations

- Finishes vary by location, but should coordinate with existing finishes and surrounding areas.
- Furniture and floor mats provided by TSA.
- Stanchions supplied by SEA with base determined by floor condition.
- Demountable partitions used to create enclosed areas to be approved by ARC.

Casework

- Flight Information Display

Finishes

- Terrazzo - Light
- Interior Paint Type 1
- Wallcovering
  - Wood Paneling System
  - PLam Panel System 1
  - Wall & Corner Guards

Partitions

- Demountable Partitions

Ceilings

- Acoustic Ceiling Tile

Equipment

- Security Cameras
- Stanchions
- Interior Waste/Recycle Receptacles
- Bird Control

CENTRAL TERMINAL

Secure

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Security Checkpoints
Central Terminal
Concourses
Subgrade Transit Stations
Corridors
Holdrooms
Aircraft Passenger Loading Bridge
International Arrivals
Amenities & Support
Tenant Spaces
Architectural Standards
Appendix

Central Terminal is the main, large-scale public gathering space on the departures level. Providing passengers a place to relax and refresh, it is home to many food and beverage options and has ample seating. Occasionally, local musicians may be invited to perform in the space. The second floor is accessible by stairs and elevators.

Planning Considerations

- Floor is granite stone.
- Walls have stone.
- Granite stone in select feature areas.
- Any stone used should match existing materials.
- Neutral columns between concessions must maintain existing stone.

CENTRAL TERMINAL

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - **Secure**
    - Security Checkpoints
    - **Central Terminal**
    - Concourses
    - Subgrade Transit Stations
    - Corridors
    - Holdrooms
    - Aircraft Passenger Loading Bridge
    - International Arrivals
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Building Envelope

- Curtain Wall

Conveying

- Stair
- Guardrail

Casework

- Flight Information Display

Finishes

- Terrazzo Flooring
- Stone Flooring
- Interior Paint Type 1
- Urethane Semi-Gloss
- Wallcovering
  - Stone Wallcovering System
  - Limestone Travertine
  - Gazelle Granite
  - Wall & Corner Guards
  - Base & Wainscot
  - Chair Rails

Ceilings

- Acoustic Ceiling Tile
- Metal Ceiling Tile
- Gypsum Board Ceiling (at soffits)

Equipment

- WiFi
- Fire Extinguisher
- Fire Extinguisher Cabinet
- Planters
- Interior Waste/Recycle Receptacle
- Bird Control
- Vending
- Security Cameras

CONCOURSES A, B, C, D, N & S

Secure

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - **Secure**
    - Security Checkpoints
    - Central Terminal
    - **Concourses**
    - Subgrade Transit Stations
    - Corridors
    - Holdrooms
    - Aircraft Passenger Loading Bridge
    - International Arrivals
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Passengers travel through the Concourses to reach their flights on the departures level. The Concourses consist of wide circulation paths, holdrooms, aircraft boarding gates, airline check-in counters, and some ADR concession areas. Concourses A, B, C, and D are attached to the main terminal, connecting to Central Terminal and Security Checkpoints. Concourses N and S are accessible by the Satellite Transit System (STS).

Planning Considerations

- Finishes vary by location, but should coordinate with existing.
- No exposed concrete on column or wall bases. These should be clad in metal panels.
- Cameras and WiFi routers should be minimal in size and blend in with the surrounding finishes.

CONCOURSES A, B, C, D, N & S

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - **Secure**
    - Security Checkpoints
    - Central Terminal
    - **Concourses**
    - Subgrade Transit Stations
    - Corridors
    - Holdrooms
    - Aircraft Passenger Loading Bridge
    - International Arrivals
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Fenestration

- Concourse Entry/Exit Doors

Casework

- Ticket Lift Podium (Concourses C, D, N, S)
- Flight Information Display

Finishes

- Terrazzo - Light
- Interior Paint Type 1
- Wallcovering
  - PLam Wall System 1
  - Fabric Wrapped Panel
  - Base & Wainscot
  - Chair Rails
- Wall & Corner Guards
- Column Enclosures

Ceilings

- Acoustic Ceiling Tile
- Metal Tile Ceiling
- Gypsum Board Ceiling (at soffits)

Equipment

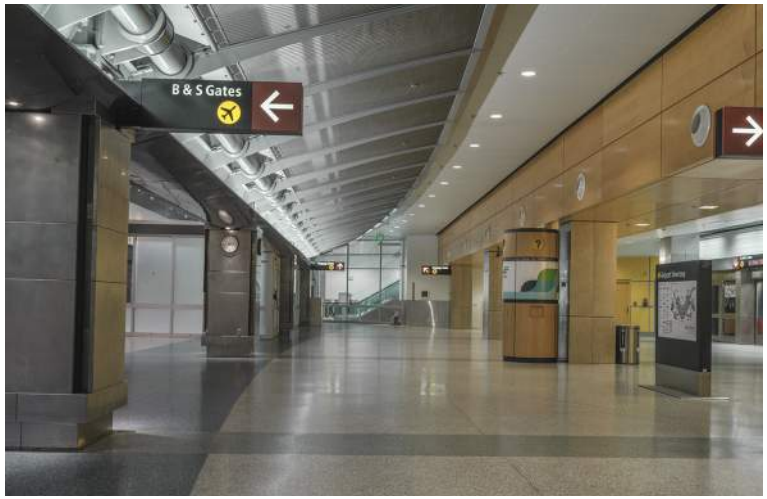
- Security Cameras
- Wall Power
- WiFi Diffuser
- Fire Extinguisher
- Fire Extinguisher Cabinet
- Emergency Cones
- Interior Waste/Recycle Receptacle
- Vending

SUBGRADE TRANSIT STATIONS

Secure

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - **Secure**
    - Security Checkpoints
    - Central Terminal
    - Concourses
    - **Subgrade Transit Stations**
    - Corridors
    - Holdrooms
    - Aircraft Passenger Loading Bridge
    - International Arrivals
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix



The Satellite Transit System (STS) Stations connect passengers from the main terminal to concourses. The subgrade stations include the escalator/ elevator wells, the Mezzanine circulation level, the station lobbies, and the trains themselves. The four STS Stations are connected by three train lines.

Planning Considerations

- Passengers are most interested in finding their gate; color coding is not an important strategy to continue as long as wayfinding is clear.
- STS stations' design intent is to feel comparable to a premiere city subway station. Each station has an overhead metal structure with ambient lighting.
- Acknowledge confusion of passengers and importance of wayfinding.

STS Routes:

North Loop - (green)
- connects Concourses D, N, and C

South Loop - (blue)
- connects Concourses A, S, and B

Shuttle between North & South Loops (yellow)
- connects Concourses A and D

SUBGRADE TRANSIT STATIONS

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - **Secure**
    - Security Checkpoints
    - Central Terminal Concourses
    - **Subgrade Transit Stations**
    - Corridors
    - Holdrooms
    - Aircraft Passenger Loading Bridge
    - International Arrivals
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Fenestration

- STS Doors

Conveying

- Interior Stairs
- Guardrails
- Metal Railings

Finishes

- Terrazzo - Light
- Interior Paint Type 1
- Wallcovering
  - PLam Wall System 1
  - Wood Paneling System
  - Base & Wainscot
  - Chair Rails
- Stainless Steel Column Enclosures

Ceilings

- Metal Ceiling Tile
- Linear Metal Ceiling

Equipment

- Security Cameras
- Emergency Cones
- Fire Extinguisher Cabinet
- Interior Waste/Recycling Receptacles

CORRIDORS

Secure

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Security Checkpoints
Central Terminal
Concourses
Subgrade Transit Stations
Corridors
Holdrooms
Aircraft Passenger Loading Bridge
International Arrivals
Amenities & Support
Tenant Spaces
Architectural Standards
Appendix

Corridors are used to connect various areas of the Airport together. It is important that they are kept clean and clear to facilitate passengers' quick and easy circulation and navigation.

Planning Considerations

- Maintain a minimum 80" headroom and minimum 48" width along all pathways.
- Include access for future removal and replacement of equipment through the doorways, route to and through the rooms, corridors, and elevators.
- All routes and conveyances shall be sized and aligned to accommodate removal and replacement of major equipment without disassembly from factory shipped configuration.
- Specify corner protection.
- Back of house corridors need additional durable wainscoting with plywood backing.

CORRIDORS

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - **Secure**
    - Security Checkpoints
    - Central Terminal Concourses
    - Subgrade Transit Stations
    - **Corridors**
    - Holdrooms
    - Aircraft Passenger Loading Bridge
    - International Arrivals
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Conveying

- Metal Railings (at stairs and ramps)

Casework

- Flight Information Display

Finishes

- Interior Paint Type 1
- Wallcovering
- Column Enclosures

Ceilings

- Acoustic Ceiling Tile
- Gypsum Board Ceiling (at soffits)

Equipment

- Security Cameras
- WiFi Diffuser
- Fire Extinguisher Cabinet
- Emergency Cones
- Vending

HOLDROOMS

Secure

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Security Checkpoints
Central Terminal
Concourses
Subgrade Transit Stations
Corridors
Holdrooms
Aircraft Passenger Loading Bridge
International Arrivals
Amenities & Support
Tenant Spaces
Architectural Standards
Appendix

Holdrooms are the waiting areas located at each gate. They provide seating and charging stations to passengers. Occasionally, these spaces also include artwork.

Planning Considerations

- Size and location vary on a case by case basis.
- Power outlets to be distributed across the floor and positioned underneath seating. See additional information in the Furniture Architectural Standard.
- Stanchions set up by tenant.
- Frames at boarding doors vary by Concourse and could include portals to be harmonious with Holdroom finishes.

HOLDROOMS

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - **Secure**
    - Security Checkpoints
    - Central Terminal Concourses
    - Subgrade Transit Stations
    - Corridors
    - **Holdrooms**
    - Aircraft Passenger Loading Bridge
    - International Arrivals
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Fenestration

- Concourse Entry/Exit Doors

Casework

- Charging Station
- Gate Check-In Counter
- Flight Information Display

Furniture

- Holdroom Seating
- Accent Seating

Finishes

- Carpet Tile
- Interior Paint Type 1
- Wallcovering
  - Fabric Wrapped Panel System
  - Fabric Wallcovering
  - Base & Wainscot
  - Chair Rails
- Column Enclosures

Ceilings

- Acoustic Ceiling Tile

Equipment

- Floor Power Cover
- Wall Power
- WiFi Diffusers
- Stanchions
- Stanchion Bases
- Interior Waste/Recycle Receptacle

AIRCRAFT PASSENGER LOADING BRIDGE

Secure

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Security Checkpoints
Central Terminal
Concourses
Subgrade Transit Stations
Corridors
Holdrooms
Aircraft Passenger Loading Bridge
International Arrivals
Amenities & Support
Tenant Spaces
Architectural Standards
Appendix

Aircraft Passenger Loading Bridges connect passengers from the Airport Holdrooms and gates to their planes. They are the last opportunity to make a positive impact on passengers' experience with SEA before their departure. Likewise, they provide the first impression for arriving passengers.

Planning Considerations

- Holdroom doors to Passenger Loading Bridges require special hardware connected to the smoke alarms in the bridge. See the updated hardware in the Port of Seattle Guide Specification.
- Slip resistance in flooring material is critical. Provide ASTM E303-22 Pendulum Test Report of flooring material in wet and dry conditions that is third-party tested with engineer stamp. Must achieve minimum pendulum test value of 45 for both wet and dry tests.

Fenestration

- Concourse Entry / Exit Doors

INTERNATIONAL ARRIVALS

Secure

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Security Checkpoints
Central Terminal
Concourses
Subgrade Transit Stations
Corridors
Holdrooms
Aircraft Passenger Loading Bridge
International Arrivals
Amenities & Support
Tenant Spaces
Architectural Standards
Appendix

The new International Arrivals Facility (IAF) welcomes passengers from international flights arriving at SEA. This facility consolidates the baggage claim and federal inspection processing for all international travelers and connects to arriving gates in Concourse A and S. Baggage claim and federal inspection services are housed in this facility.

Planning Considerations

- Security is priority - maintain secure area.
- This facility is the first impression international travelers have entering the US or Seattle, quality of finishes and having a Pacific Northwest Sense of Place is important.

INTERNATIONAL ARRIVALS

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - **Secure**
    - Security Checkpoints
    - Central Terminal Concourses
    - Subgrade Transit Stations
    - Corridors
    - Holdrooms
    - Aircraft Passenger Loading Bridge
    - **International Arrivals**
  - Amenities & Support

Tenant Spaces
Architectural Standards
Appendix

Fenestration

- Concourse Entry/Exit Doors

Conveying

- Guardrails
- Queue Rails
- Baggage Claim Rails

Casework

- Flight Information Display

Furniture

- Meda Gate Seating

Finishes

- Terrazzo
- Carpet Tile
- Wood Flooring
- Interior Paint Type 1
- Wallcovering
  - PLam Wall System 3
  - Base & Wainscot
  - Chair Rails
  - Wall & Corner Guards
- Stainless Steel Column Covers

Ceilings

- Linear Metal Ceiling

Equipment

- Security Camera
- Fire Extinguisher
- Fire Extinguisher Cabinets
- Stanchions
- Interior Waste/Recycle Receptacles
- Emergency Cones

CONVEYING

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

One of the first points of contact for passengers, the elevator lobbies, escalators, moving walkways, and other areas of conveying should be clean and simple by design. Visual interest can be created through the selection of materials and the application of light.

Planning Considerations

- Do not provide single elevators or escalators.
- Coordinate quantity of vertical and horizontal transportation elements with building code requirements as well as expected passenger traffic flow.
- Storage for emergency barricades should be considered.
- Storage opportunities beneath escalators should be considered.
- Refer to **Mechanical Systems Standards** for additional information.
- Elevators should not use glass walls.

Conveying

- Guardrails
- Metal Railings

Finishes

- Terrazzo - Light
- Interior Paint Type 1
- Wallcovering
- Metal Wall System

Ceilings

- Linear Metal Ceiling

Equipment

- Emergency Cones & Barricades

RESTROOMS

Amenities & Support

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - **Restrooms**
      - Concept
      - Types
      - Nodes
    - Nursing Suite
    - Lactation Room & Modular Pods
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - Service Animal Relief Areas
    - Children's Play Area
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix

Restrooms are often the first and last place passengers visit when they arrive at or depart from an airport. They should be welcoming, clean, and easy to maintain. There are two overarching types of restroom layouts: multi-fixture and single-fixture. Each type has several sub-types that accommodate a variety of passengers.

Planning Considerations

- Restroom layouts consist of multiple nodes including an Entrance Node, Sink Node, Toilet / Urinal Node, and Pipe Chase Node.
- Provide minimum 36″ clear width chases behind all plumbing walls, preferably with access from the exterior of the restrooms or just inside it. Eliminate chases that cannot meet required width or are too narrow to access.
- Provide 40ml waterproofing membrane in all wet areas.
- Color and material palette should be light for walls and ceiling, with medium to dark tones on the floor. Incorporate color to accent key feature areas behind sinks or toilets. Finishes should reinforce a bright and clean appearance.
- Frame out any leftover space created within rows of toilet partitions with new walls.
- Standard size stalls doors to be on a 5 degree hold open.
- Additional considerations apply to pre-security restrooms and should be confirmed with project manager.
- Restroom fixture count should exceed code (IBC Appendix Chapter 29, Minimum Plumbing Fixtures, Table A-29-A) for toilet fixture counts. Fixture counts to be confirmed with project manager.
- Reference the **Mechanical Systems Standards** for all mechanical and plumbing requirements.
- Reference the **Maintainability Standards**

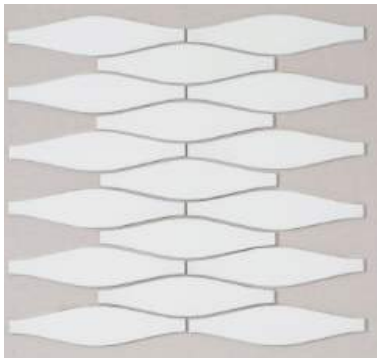
RESTROOMS

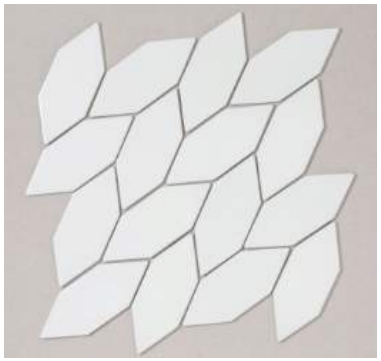
Pre-Security Main Terminal Architectural Restroom Concept

Amenities & Support

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - **Restrooms**
      - **Concept**
      - Types
      - Nodes
    - Nursing Suite
    - Lactation Room & Modular Pods
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - Service Animal Relief Areas
    - Children's Play Area
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix





Planning Considerations

- Generally more economical finish palette than post-security; consistent with durability needed for pre-security areas
- Spaces should be designed such that they can be hosed down for cleaning purposes
- Prefer porcelain tile with anti-graffiti coating and epoxy grout, larger tiles and less grout lines used; base tiles should be no darker than the floor tile
- Consider vertical or horizontal field tile orientation based on site conditions (i.e. reducing vertical compression, or stretching out already visually long spaces)
- Prefer the use of stainless steel coved internal trim between floor tiles and base tiles
- Sealant color around mirrors and in other locations should match adjacent surfaces
- Mezzanine Level: Accent tiles aligning with the sky (left tile shape) - whites and blues
- Ticketing Level: Accent tiles aligning with mountains and hills (left tile shape) - blues, grays, purples
- Bridge Level: Accent tiles aligning with trees (right tile shape) - lighter greens
- Baggage Level: Accent tiles aligning with the forest floor (right tile shape) - darker greens
- Reference **Restroom Types** for additional information

RESTROOMS

Concourse Architectural Restroom Concepts

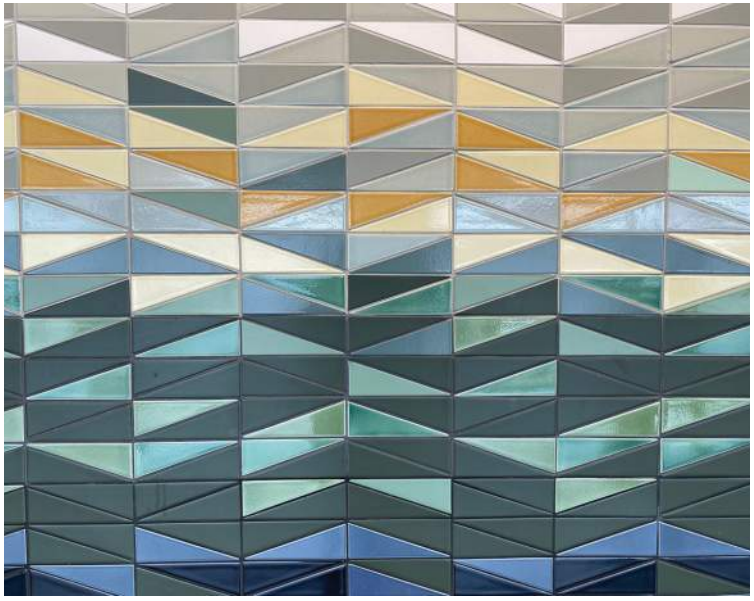
Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

The existing concourse restroom design should act as a guide; design teams are encouraged to explore alternative finishes and layouts and present them to SEA. While there is value in reusing existing precedent, the SEA vision should be carefully reviewed to identify opportunities for new and unique architectural moves.

Planning Considerations

- Review **Design Vision** section for high level concepts
- Take into consideration what has been designed in the past, while innovating on what could be designed in the future
- Exercise creativity in implementation of the design vision, aligning with the concourse specific themes
- Build upon the ideas in the vision and translate them into architectural execution
- It is not required to simply copy the existing style of a restroom - there is always room for changes, adjustments, and tweaks



RESTROOMS - TYPES

Introduction

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

Throughout the airport, there are various types of restrooms. Each type accounts for a different location (pre-security, post-security), layout (multi-fixture, single-fixture, compartmentalized, shared), or experience (gendered, all-gender) for the passenger.

Restroom Types

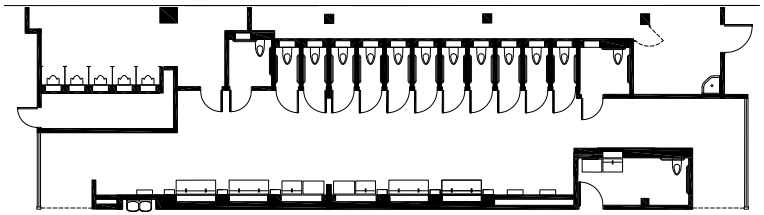
- Type 1A: Multi-Fixture All-Gender Shared
- Type 1B: Multi-Fixture All-Gender Compartment
- Type 1C: Multi-Fixture Gendered
- Type 2/2A: Family Restroom/Single Fixture Assisted Use
- Type 3: Pre-Security Multi-Fixture Gendered
- Type 4/4A: Pre-Security Family Restroom/Single Fixture Assisted Use
- Type 5: Ramp Level Restrooms

RESTROOMS - TYPE 1A

Multi-Fixture All Gender Shared

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix



Multi-fixture all gender restrooms are restrooms that any person can use regardless of their gender. They benefit a variety of users, including transgender and gender non-conforming individuals, caretakers and parents who assist someone of opposite gender, and provide a safe place for those in human traffic situations.

Planning Considerations

- Provide a galley layout with full height stalls and shared open washing area. A separate room dedicated to urinals should be provided if space is available; alternatively urinals can be enclosed in full height stalls.
- All stalls to be ambulatory, in addition to the minimum code requirements for wheelchair accessible stalls.
- Integrate maintenance and janitorial flexibility in the design to allow portions of the restroom to be closed off while still allowing users access to other portions of space.
- Perimeter entries are preferred for ease of access and minimizing egress distances.
- Use restroom Type 1A recommended when converting existing gendered restrooms to all gender restrooms.
- A family restroom (single-fixture assisted use) with baby changing table must be included as a part of the restroom design.

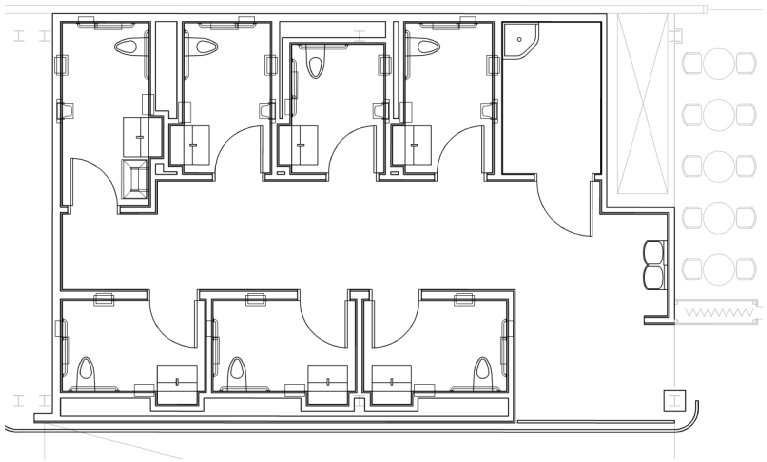
RESTROOMS - TYPE 1B

Multi-Fixture All Gender Compartment

Amenities & Support

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - **Restrooms**
      - Concept
      - **Types**
      - Nodes
    - Nursing Suite
    - Lactation Room & Modular Pods
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - Service Animal Relief Areas
    - Children's Play Area
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix



Compartment restrooms offer an alternative design solution to multi-fixture all-gender shared restrooms. Privacy is increased further while offering individual fixtures and amenities within each compartment rather than a shared open washing area.

Planning Considerations

- Compartment style restrooms are preferred when converting existing gendered restrooms to all gender restrooms. They offer additional privacy, and the ability to close individual compartments for service and repair.
- Provide compartmentalized stalls that include a toilet, sink, and associated accessories in one enclosed private space.
- Integrate maintenance and janitorial flexibility in the design to allow accessibility of plumbing fixtures and infrastructure from within compartments, or provide adequate chase space to allow access behind compartments.
- A family restroom (single-fixture assisted use) with baby changing table must be included as a part of the restroom design.

RESTROOMS - TYPE 1C

Multi-Fixture Gendered

Amenities & Support

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - **Restrooms**
      - Concept
      - **Types**
      - Nodes
    - Nursing Suite
    - Lactation Room & Modular Pods
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - Service Animal Relief Areas
    - Children's Play Area
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix

Multi-fixture gendered restroom (Men's or Women's Restroom) entrances should be separate with flexibility to close a portion of the space for cleaning and maintenance. The layout for these restrooms should contain a centralized entry with a simple dividing wall that would allow easy conversion to a multi-fixture all gender restroom in the future.

Planning Considerations

- New 'greenfield' projects at SEA must incorporate centralized entries with a single demising wall that can be easily converted to all gender restrooms in the future.
- Provide a galley layout with sinks and toilets.
- Women's fixture count should exceed minimum code requirements when possible. Ideally provide 50% more women's fixtures than men's to increase efficiency and provide the best customer service possible.
- Family restroom should be accessible from the corridor beyond the restrooms rather than from within.
- Urinals should be in full height stalls to simplify an all gendered restroom conversion in the future.
- All stalls to be ambulatory, in addition to the code minimum requirement for accessible stalls.
- For larger restroom layouts, where there are two banks of toilets and sinks for the same gender, provide the ability to close off one half of the restroom for cleaning / maintenance.

RESTROOMS - TYPE 2/2A

Family Restroom / Single-Fixture Assisted-Use

Amenities & Support

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - **Restrooms**
      - Concept
      - **Types**
      - Nodes
    - Nursing Suite
    - Lactation Room & Modular Pods
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - Service Animal Relief Areas
    - Children's Play Area
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix

Single-fixture assisted-use restrooms (Family Restroom) offer flexibility to users with a higher level of privacy. One is required at each multi-fixture restroom location and at least one in every Concourse is required to include an adult changing station. Type 2A is the same as a Family Restroom but includes an adult changing table.

Planning Considerations

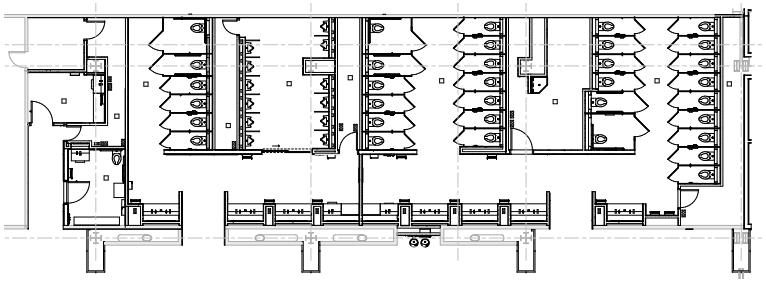
- Each assisted-use restroom should be ADA compliant with a baby changing table and an adult changing table (for Type 2A) when space is available.
- Type 2A restrooms must include an adult changing table. In constrained spaces, a baby changing table can be omitted with Port approval if it is determined there is already one available in the nearby vicinity.
- Provide open / occupied indicator for door lock and automatic door hardware.
- Reference the **Signage Guidelines and Standards** for restroom signage requirements.
- Provide a 10″ deep ledge 2″ above sink deck for placing belongings while washing.
- Above the mirrors provide accent panel with tiles that follow the concourse theme. Tiles in restrooms should have continuity both within the interior of the restroom as well as the exterior wall exposed to the concourse. Accent tiles are highlighted by a recessed LED wall wash fixture in soffit.

RESTROOMS - TYPE 3

Pre-Security Multi-Fixture Gendered

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix



Multi-fixture gendered restroom (Men's or Women's Restroom) entrances should be separate with flexibility to close a portion of the space for cleaning and maintenance. Pre-security restrooms must be designed to endure even heavier use than post-security restrooms as they are accessible to all people: both passengers and visitors.

Planning Considerations

- New 'greenfield' projects at SEA must incorporate centralized entries with a single demising wall that can be easily converted to all gender restrooms in the future.
- Provide a galley layout with sinks and toilets.
- Women's fixture count should exceed minimum code requirements when possible, ideally 50% more women's fixtures than men's.
- Family restroom should be accessible from the corridor beyond the restrooms rather than from within.
- Urinals should be in full height stalls to simplify an all gendered restroom conversion in the future.
- If compartment style, ambulatory stalls above code minimum quantity are preferred, in addition to the code minimum requirement for wheelchair accessible stalls.
- Accessories such as mirrors should be fixed surface mounted, with simple durable frames to limit damage.
- Preference is for tamper-proof ceiling-mounted lighting.
- Restrooms within the Main Terminal should align with the Main Terminal Architectural Restroom Vision.

RESTROOMS - TYPE 4/4A

Pre-Security Family Restroom / Single-Fixture Assisted-Use

Amenities & Support

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - **Restrooms**
      - Concept
      - **Types**
      - Nodes
    - Nursing Suite
    - Lactation Room & Modular Pods
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - Service Animal Relief Areas
    - Children's Play Area
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix

Single-fixture assisted-use restrooms (Family Restroom) offer flexibility to users with a higher level of privacy. One is required at each multi-fixture restroom location and at least one on the Mezzanine and Ticketing levels in the Main Terminal are required to include an adult changing station. Type 4A is the same as a Family Restroom but includes an adult changing table.

Planning Considerations

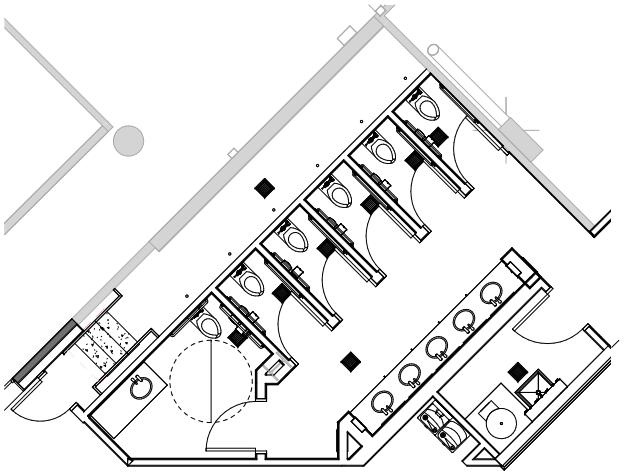
- Each assisted-use restroom should be ADA compliant with a baby changing table and an adult changing table (for Type 4A) when space is available.
- Type 4A restrooms must include an adult changing table. In constrained spaces, a baby changing table can be omitted with Port approval if it is determined there is already one available in the nearby vicinity.
- Provide open / occupied indicator for door lock and automatic door hardware.
- Reference the Signage Guidelines and Standards for restroom signage requirements.
- Provide a 10″ deep ledge clear of the mirror 2″ above sink deck for placing belongings while washing.
- Above the mirrors provide accent panel with tiles that follow the Main Terminal Architectural Restroom Vision. Look for opportunities to use accent tiles elsewhere within the restrooms.
- The exterior of the restroom should be uniquely differentiated from the rest of the concourse to reinforce visibility and consider integration of secondary informational graphics.

RESTROOMS - TYPE 5

Ramp Level Restrooms

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix



Ramp level restrooms can be gendered or all-gender. These spaces offer SEA employees and contractors a convenient and accessible restroom. Often directly accessed from the outdoors, ramp level restrooms need extremely durable, dirt-resistant, and vandal-resistant finishes. Attempts should be made to balance durability with aesthetics.

Planning Considerations

- Provide a galley layout with sinks and toilets.
- Preferred stall type is full height partition compartments, subject to project-specific constraints.
- Provide open/occupied indicator for door lock and automatic door hardware.
- Finishes should be especially durable to be able to endure a harsh environment and additional wear and tear.
- Accessories such as mirrors should be fixed surface mounted, with simple durable frames to limit damage.
- Mirrors will not use integrated lighting - light fixtures should provide adequate lighting, but should also be tamper proof and vandal-resistant.
- Finishes should have graffiti-resistant coatings and the highest possible durability level.
- Reference the Signage Guidelines and Standards for restroom signage requirements.

RESTROOMS - ALL TYPES

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - **Restrooms**
      - Concept
      - **Types**
      - Nodes
    - Nursing Suite
    - Lactation Room & Modular Pods
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - Service Animal Relief Areas
    - Children's Play Area
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix

Fenestration

- Restroom Doors (Type 2/2A only)
- Custodial Closet Doors
- Access Panels
- Yellow chain separation between spaces in large multi-fixture restrooms

Finishes

- Tile Flooring
- Interior Paint Type 1
- Wall Tile
- 12″ Stainless Steel Base at exterior
- Terrazzo at exterior

Ceilings

- Acoustic Ceiling Tiles
- Gypsum Board Ceiling
- Gypsum Board Soffit (spanning length of the sink node)

Equipment / Accessories

- Power Activated Door Operator (Accessible Stalls only)
- Restroom Occupancy Indicators
- Toilet
- Sink/Faucet (accessible two-person trough where applicable)
- Floor Drain
- Waste Receptacle
- Napkin Disposal Receptacle
- Recessed Lighted Mirror
- Full-Length Mirror (near entrance)
- Grab Bars (where applicable)
- Toilet Paper/Cover Dispenser
- Soap Dispenser
- Paper Towel Dispenser
- Diaper Dispenser
- Sanitary Napkin Dispenser
- Biohazard Disposal Cabinet
- Garment Hook & Shelves (Type 2/2A)
- Baby Changing Station
- Adult Changing Station (Type 2A)
- Toddler Safety Seat (Type 2/2A)

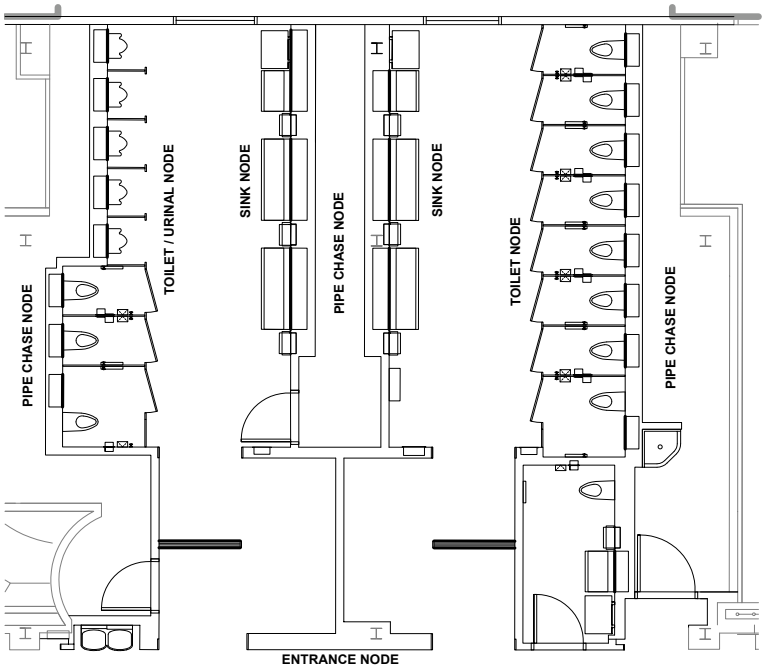
Pipe Chase Node

- Fenestration
  - Chase Doors
- Finishes
  - Waterproof Traffic Coating
  - Sealed concrete floor (floor slopes to floor drain)
  - Sealant/waterproofing should go from the horizontal surface up the wall 4″
- Ceilings
  - Open to Structure
- Equipment
  - Two single gang duplex outlets
  - Mop Sink
  - Floor Drain
  - Braced Spigot (with integral bucket hook)
  - Mop Rack / Shelf
  - 18″ deep shelving for 60 cubic feet of supplies
  - Hooks on wall to hang 36″ wide vacuum

RESTROOMS - NODES

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix



Restroom design elements have been divided into series of modular "nodes" that can be combined in multiple ways to create a cohesive design throughout the airport campus. These nodes include the entrance, sink, toilet/urinal, and pipe chase.

Planning Considerations

- Restroom finishes should align with the overall conceptual design themes for each concourse. Colors and orientation of wall and floor tile finishes must be confirmed with the Airport.
- Large format floor tiles flow out from restroom and abut existing concourse terrazzo floor.
- Extend wall tile materiality from the interior of the restroom to the exterior concourse facade to highlight the entry and differentiate the restroom from the rest of the concourse.
- Coordination with the Art Program should occur early in any restroom project to determine if art can be incorporated into the project.

RESTROOMS - NODES

Entrance Node

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

The entrance node of the restroom acts as a beacon for passengers walking through the concourse, providing easy identification of the amenities provided that area.

Planning Considerations

- Provide minimum 6'-0" clear door-less entry.
- Provide a decorative divider at the entrances of the restrooms. Divider should compliment design of concourse restroom facade.
- Provide 12" brushed stainless steel base and sturdy jambs to protect the decorative materials on the concourse wall and dividers.
- Provide direct access to family / single-fixture assisted-use restrooms and pipe chases from the concourse.
- Provide a high-low accessible drinking fountain with water bottle filler station.
- Entries shall be designed so that they can be easily modified to an all gender restroom configuration in the future.
- Provide gypsum board soffits with continuous indirect LED lighting fixtures custom backlit, metal signage letters centered above entrance to restrooms.
- Reference the Signage Guidelines and Standards all restroom signage requirements.
- Integrate flush mounted recessed digital displays on the exterior concourse wall near each restroom wall sign. The monitor is to provide information to passengers about scheduled cleaning, other nearby restrooms, and how many stalls are available.

RESTROOMS - NODES

Sink Node

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

With a larger and more open design, the sink node in the restrooms provides users more flexibility to move around within the space. Inclusive to this node are baby changing stations and grooming stations.

Planning Considerations

- Sink are to be mounted with a 2" space between deck back and wall.
- Provide a semi-recessed touchless paper towel dispenser and waste receptacle between each sink.
- Provide an integral, removable shroud below the sink to conceal pipes and other items.
- Behind and 2" above sink deck, provide a 10" deep ledge for placing belongings while washing.
- Above the mirrors provide accent panel with tiles that follow entrance theme. Accent tiles are lit by a recessed LED light strip in soffit.
- For the grooming node, provide a shelf with lighted mirror above and a duplex outlet centered between the two.
- Provide a staging area for custodial carts to be parked during cleaning without interfering with customer flow and experience.
- Mirrors above sinks need to have enough clearance around the top and bottom edges in order to safely remove the mirror for maintenance. Exposed edges of tile around mirrors shall be intentionally finished with trim, such as a Schluter strip.

RESTROOMS - NODES

Toilet / Urinal Node

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

To support SEA accessibility goals, ambulatory stalls should be the default typical stall size unless fixture counts are unable to be met within the project footprint. In pre-security locations, the default in limited-space areas is a standard stall to allow increased overall fixture count.

Planning Considerations

- Full height compartment stalls are to be provided for Type 1B multi-fixture all-gendered restrooms and considered for multi-fixture gendered restrooms identified for future all-gender conversion.
- Rigid ceiling hung stalls with stainless steel partitions could be used for Type 1 - Restrooms, when accepted by the Port.
- All standard toilet partition stall doors should swing outwards and hold open at 5 degrees to inform passengers which stalls are available, along with an occupancy indicator in the ceiling above the door. All ambulatory and accessible toilet partition stall doors must be self-closing.
- There should be no sight-line into the stalls from the corridor.
- Surface mount and through-bolt all accessories on one side of a partition to the same accessories on the opposite side of the partition.
- Continue the corresponding restroom theme along back wall of the Toilet / Urinal Nodes.
- Provide a 10" deep x 24" wide ledge for belongings on the back wall of toilet/ urinal stalls. Adjust shelf height at ADA fixtures locations.
- Urinals to be separated with wall hung divider partitions.

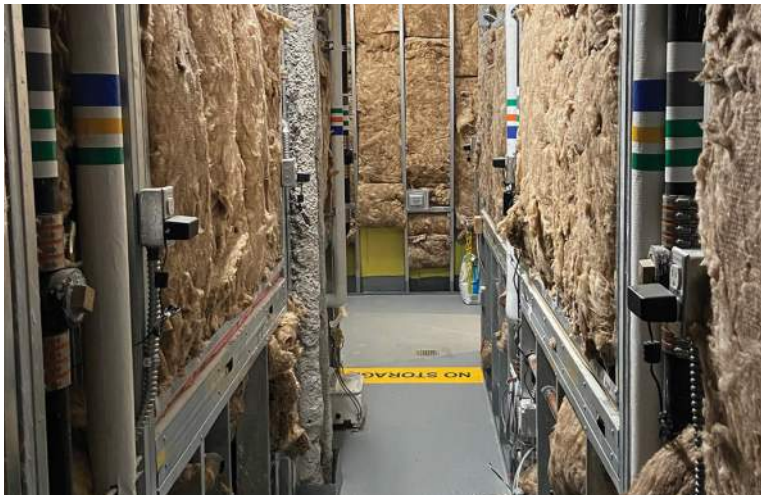
RESTROOMS - NODES

Pipe Chase Node

Amenities & Support

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - **Restrooms**
      - Concept
      - Types
      - **Nodes**
    - Nursing Suite
    - Lactation Room & Modular Pods
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - Service Animal Relief Areas
    - Children's Play Area
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix



A pipe chase is to be provided behind plumbing walls for access to sinks, toilets, and urinals. These chases also serve as a place to store custodial equipment and supplies, and can be combined with larger custodial closets.

Planning Considerations

- The custodial area should be at the entrance of the node and be separated from the pipe chase by a lockable door.
- The custodial area should have (at minimum) a mop sink, dedicated locations for storage carts/equipment and receptacles for equipment. Mop sink and Pipe Chase area will need to follow requirements for wet floor.
- Pipe chases are to be 3'-0" wide by 7'-6" high, with a minimum 2'-0" clear circulation space to be maintained throughout chase, free of any obstructions. Chases should maintain a straight and consistent path without jogs to the maximum extent possible.
- Vertical pipes, ductwork for exhaust, and conduit at toilet and urinal niches are to run between niches.
- Bulk soap storage tank(s) is to be located in sink pipe chase and be readily accessible for refilling.
- Illuminated mirror and LED lighting drivers to be located and accessible in pipe chases.
- Each concourse should have at least one central custodial storage area for paper stock and cleaning supplies. The custodial area should have 18" deep shelving for approximately 60 cubic feet of supplies.
- Where a standard chase is not feasible the space behind trash receptacles shall be used to access the soap refill.
- Drywall within plumbing chases must be finished and painted.

NURSING SUITE

Amenities & Support

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - Restrooms
      - Concept
      - Types
      - Nodes
    - **Nursing Suite**
    - Lactation Room & Modular Pods
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - Service Animal Relief Areas
    - Children's Play Area
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix

The Nursing Suite is a quiet, private space designed to help ease the stress of traveling on parents and families. The room provides a safe, comfortable place for nursing and pumping with additional privacy.

Planning Considerations

- Provide a minimum of one Nursing Suite per Concourse that ideally includes or is directly adjacent to a Type 2 Assisted-Use Restroom, Lactation Room, and Custodial Room.
- The space should be designed with a mix of comfortable soft seating and flat surfaces with easy access to receptacles.
- Provide a cleanup area for washing hands and cleaning pump parts. Cleanup area will need to follow requirements for wet floor within the **Architectural Standards - Finishes section**.
- When possible incorporate natural daylight in addition to soft, dimmable circadian lighting.
- Doors into a Nursing Suite should be wood with a frosted glass vision lite.
- Provide areas for strollers and luggage storage inside the space that are within line of sight of the seating areas.
- Individual Nursing Areas and Lactation Rooms within the suite are not required to have locking doors but must include option of an additional level of privacy such as a curtain. Lockable doors with no vision lites are preferred for individual nursing areas within the suite when possible. In a standalone Individual Nursing Area, the door should be lockable for privacy.

NURSING SUITE

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

Fenestration

- Nursing Suite: Wood Door w/ Frosted Glass Vision Lite
- Lactation Rooms: Solid Wood Door
- Access Panels

Furniture

- Accent Seating
- Table

Finishes

- Tile or Resilient Flooring
- Interior Paint
- Wall Tile
- Wallcovering System - Acoustic Panels
- Wall Base

Ceilings

- Acoustic Ceiling Tiles
- Gypsum Board Ceiling

Equipment

- Power Activated Door Operator
- Sink
- Faucet
- Floor Drain
- Mirror
- Full-Length Mirror
- Soap Dispenser
- Paper Towel Dispenser
- Diaper Dispenser
- Biohazard Disposal Cabinet
- Garment Hook & Shelves
- Baby Changing Station
- Interior Waste / Recycle Receptacle
- Water Heater

LACTATION ROOM & MODULAR PODS

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

Lactation Rooms and Modular Pods are private spaces for nursing parents to use a breast pump. The space should be private, lockable, have a table or counter, comfortable seating, with direct access to power, and within close proximity to running water.

Planning Considerations

- While Nursing Suites are preferred, available space sometimes dictates the use of single user Lactation Rooms & Modular Pods. Where multi-user modular pods are used provide separation between users with a maximum of three users within the space.
- Provide a minimum of one Lactation Room per Concourse that is near a Restroom and adjacent to or within a Nursing Suite. If a Lactation Room is not possible, provide a modular Nursing Pod.
- All Nursing Rooms and Pods must be ADA accessible.
- Space requires a lockable door and should include an open / occupied indicator.
- The space should be designed with a mix of comfortable soft seating and flat surfaces with easy access to receptacles.
- When possible incorporate natural daylight in addition to soft / dimmable circadian lighting.
- Provide a sink and cleanup area for washing hands and cleaning pump parts. Cleanup area will need to follow requirements for wet floor.

LACTATION ROOM & MODULAR PODS

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - Restrooms
      - Concept
      - Types
      - Nodes
    - Nursing Suite
    - **Lactation Room & Modular Pods**
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - Service Animal Relief Areas
    - Children's Play Area
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix

Fenestration

- Solid Wood Door for Lactation Rooms
- Access Panels

Furniture

- Accent Seating
- Table

Finishes

- Tile
- Resilient Flooring
- Interior Paint
- Wallcovering System - Acoustic Panels
- Wall Base

Ceilings

- Acoustic Ceiling Tiles
- Gypsum Board Ceiling

Equipment

- Power Activated Door Operator
- Full-Length Mirror
- Garment Hook & Shelves
- Paper Towel Dispenser
- Interior Waste / Recycle Receptacle
- Nursing Pod (when a Lactation Room is not possible)

INTERFAITH PRAYER & MEDITATION ROOM

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

Interfaith Prayer and Meditation Rooms are fully enclosed spaces intended for meditation or prayer. The space is a peaceful environment where passengers can safely practice their faith or meditation practices away from other airport activity.

Planning Considerations

- Design the room to be used by people of any faith. Therefore, the overall tone of the room shall be religiously neutral other than required elements to support religious prayer and meditation.
- Provide a calming color palette with a neutral base. As well as natural textures and materials to add tactile richness to the room. Consider using a biophilic design approach when designing the space.
- Incorporate art to enhance space.
- Design space with open floor space, kneeling area with kneeler, meditation alcove(s) with bench, and additional movable seating.
- Any storage of personal items needs to be within line of sight of the seating areas.
- Provide STC levels of 45 minimum, 50-60 preferred.
- Access to receptacles should be limited, to avoid passengers from lingering.
- Locate off of concourses and near restrooms. Entrance can be adjacent to Sensory Room.

INTERFAITH PRAYER & MEDITATION ROOM

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - Restrooms
      - Concept
      - Types
      - Nodes
    - Nursing Suite
    - Lactation Room & Modular Pods
    - **Interfaith Prayer & Meditation Room**
    - Sensory Rooms
    - Service Animal Relief Areas
    - Children's Play Area
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix

Fenestration

- Door - wood door with vision lite
- Access Panels

Furniture

- Accent Seating - movable

Finishes

- Padded Carpet Tile Floor
- Tile, Resilient Flooring (wet area and entry)
- Interior Paint
- Wallcovering System - Acoustic Panels
- Wall Base

Ceilings

- Acoustic Ceiling Tiles
- Gypsum Board Ceiling

Equipment

- Foot Wash Station
- Paper Towel Dispenser
- Garment Hook & Shelves
- Interior Waste / Recycle Receptacle
- Water Heater
- Low Movable Privacy Screens (and place to store in space)

Required Elements

- Dimmable Lighting
- Acoustic Treatments
- Qibla - indicator towards Mecca
- Mizrach - indicator towards Jerusalem
- Open Floor Area for prayer
- Alcove for Kneeling
  - with Kneeler
- Meditation alcove(s) - comfortable seat/bench with back support
- Storage - near entry
  - Shoe Storage
  - Bench
  - Prayer Items

SENSORY ROOM

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

Sensory Room provides a multi-functional space for passengers with sensory related issues to decompress or recover within their travel experience. The space is intended to provide opportunities for both proprioceptive and vestibular input for users and their families.

Planning Considerations

- Provide a variety of privacy options within room. Provide spaces for individuals of all ages and larger space for families.
- Include multiple types of furniture to accommodate sensory needs of neurodiverse passengers. Limit any furniture or equipment that would make noise or contain water.
- Provide durable replaceable padded finishes with rounded corners, when possible.
- Consider using a biophilic design approach within the space with calming color palette.
- STC levels of 45 minimum, 50-60 preferred.
- Provide soft / dimmable circadian lighting.
- Provide above code required number of power receptacles.
- Provide balance of view angles of people entering and exiting space while maintaining feelings of privacy.
- Storage for personal items within line of sight of sitting areas.
- Locate off of concourses and near restrooms. Entrance can be adjacent to Interfaith Prayer and Meditation Room.

SENSORY ROOM

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

Fenestration

- Door - wood door with vision lite
- Access Panels

Furniture

- Accent Seating

Finishes

- Carpet Tile
- Rubber Tile
- Vinyl Tile
- Padded Floor
- Interior Paint
- Wallcovering System - Acoustic Panels
- Padded Wall Panels
- Wall Base

Ceilings

- Acoustic Ceiling Tiles
- Gypsum Board Ceiling

Equipment

- Garment Hook & Shelves
- Interior Waste / Recycle Receptacle and paper towel dispenser - built in
- Security Cameras

SERVICE ANIMAL RELIEF AREAS

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

Today's passengers often travel with service animals and pets. Service Animal Relief Areas (S.A.R.A.) provide an opportunity for our animal passengers to stretch and relieve themselves before departing, connecting or arriving at the airport.

Planning Considerations

- Provide a minimum of one S.A.R.A per concourse that is design to meet all ADA /Federal Regulations. Designs for S.A.R.A.'s must include a review by a local service animal training organization.
- It is ideal that S.A.R.A. are located no further than 15 minutes from any gate (based on a walking pace of 200 ft/min).
- Provide two different floor surfaces, sub-floor, and 4" baseboard waterproofing membrane.
- DO NOT provide communal drinking bowls but do provide a water bowl filling station.
- Provide a dedicated Custodial Room directly adjacent to the S.A.R.A.
- Use finishes acceptable for wet areas. Wall panels and flooring are to be designed to withstand power washing.
- The pet pad area should be designed and built using a flushable plumbed system. Surface of pet pad should be a combination of turf and non-turf.
- Provide ventilation at minimum to the same standard as a restroom, preferably higher. When in use air exchanges shall increased to allow for a clean and fresh experience.
- Locate on main concourse circulation paths adjacent to restrooms.

SERVICE ANIMAL RELIEF AREAS

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - Restrooms
      - Concept
      - Types
      - Nodes
    - Nursing Suite
    - Lactation Room & Modular Pods
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - **Service Animal Relief Areas**
    - Children's Play Area
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix

Fenestration

- Stainless Steel Doors
- Access Panels
- Stainless Steel Custodial Doors

Furniture

- Bench
- 3-D Device (to encourage urination)

Finishes

- Tile Flooring
- Traffic Coating (Custodial Room)
- Artificial turf (specifically designed as an animal relief surface)
- Interior Paint
- Wall Tile

Ceilings

- Acoustic Ceiling Tiles
- Gypsum Board Ceiling
- Open to structure (Custodial Room)

Equipment (S.A.R.A)

- Power Activated Door Operator
- Sink (for passengers' hand washing)
- Faucet
- Floor Drain
- Waste Receptacle
- Recessed Lighted Mirror
- Soap Dispenser
- Paper Towel Dispenser
- Retractable Long Hose
- Pooper scooper (with long handle)
- Bag Dispenser (for animal waste collection bags)
- Interior Waste/Recycle Receptacle (for bagged animal waste disposal)

Equipment (Custodial Room)

- Mop Sink
- Floor Drain
- Braced Spigot (with integral bucket hook)
- Mop Rack / Shelf
- Area to hang additional turf to be cleaned and dried
- Retractable Hose with wall mounted hose reel

CHILDREN'S PLAY AREA

Amenities & Support

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - Restrooms
      - Concept
      - Types
      - Nodes
    - Nursing Suite
    - Lactation Room & Modular Pods
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - Service Animal Relief Areas
    - **Children's Play Area**
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix

Children's Play Areas provide equipment and toys for our younger passengers' entertainment and seating for their accompanying adults. Overall goals of the play areas are to provide a safe place to play and for children to expend their energy before getting on a plane.

Planning Considerations

- Design the space to be used by children (up to the age of 6).
- Goal of providing one per Concourse. Locate off of main concourse circulation. Provide internal or locate adjacent to restrooms, and nursing suite.
- Reflect the theme of the concourse that the play area is in (see Design Vision).
- Provide an area to accommodate luggage, strollers, and shoe storage (for children) within line of sight of the resting zone.
- STC levels of 45 minimum, 50-60 preferred due to higher acoustic requirements in the space to limit outside noise and sound intrusion to other spaces.
- Provide durable materials and padded finishes with rounded corners.
- Provide a resting zone with a mix of comfortable soft seating and flat surfaces with easy access to receptacles for parents, guardians, and children.
- When possible incorporate high ceiling and natural daylight, in addition to circadian lighting.
- Consider incorporating technology in the design of the space like interactive media walls.

CHILDREN'S PLAY AREA

Design Vision
Design Guidelines
- Introduction
- Planning
- **Space Types**
  - Non-secure
  - Secure
  - **Amenities & Support**
    - Conveying
    - Restrooms
      - Concept
      - Types
      - Nodes
    - Nursing Suite
    - Lactation Room & Modular Pods
    - Interfaith Prayer & Meditation Room
    - Sensory Rooms
    - Service Animal Relief Areas
    - **Children's Play Area**
    - Lounges
    - Storage
    - Loading Docks

Tenant Spaces
Architectural Standards
Appendix

Fenestration

- Storefront

Furniture

- Accent Seating

Finishes

- Carpet Tile
- Rubber Tile
- Vinyl Tile
- Padded Floor
- Interior Paint
- Wallcovering System - Acoustic Panels
- Padded Wall Panels
- Wall Base

Ceiling

- Acoustic Ceiling Tiles
- Gypsum Board Ceiling

Equipment

- Security Camera
- Garment Hook & Shelves
- Interior Waste/Recycle Receptacle

LOUNGES

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

Lounges are where passengers go for relaxation, food, and comfort away from the crowded airport.

Planning Considerations

- Incorporate high quality finishes and unique designs that reflect the Pacific Northwest SEA Vision.
- SEA branded lounges design to be cohesive with SEA Concourse Themes (see Design Vision).
- Majority of lounge customers are individual travelers.
- Provide maximum amount of seating that still provides a comfortable and relaxed experience. Lounge should not feel crowded or cramped. Seating count of 45-55 SF/passenger.
- Access to daylight and exterior views is a priority.
- Entries to lounges need to be recognizable from the concourse level for wayfinding but subtle enough to not compete with other signage.
- Reception area to be appropriately sized to comfortably allow for waiting area and queue inside door. Office near reception.
- Provide a variety of seating types and zones to accommodate varied passenger interests, including but not limited to: tables for eating, individual lounge chairs, work counters, group seating, etc.
- Provide power at minimum 75% of each seating type per zone.
- Provide a bar with ample seating.
- Provide a kitchen with adjacent servery. Food is cooked on site, coordinate with kitchen consultants.
- Provide minimum of two individual showers, nursing room, and family restroom.

STORAGE

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

Storage is an important component of our Airport, allowing the Airport and our tenants to store important items and equipment when not in use. Well-designed storage is conveniently located, adequately sized, and appropriately marked. Specific requirements will vary and depend on intended contents and location.

Planning Considerations

- Consider ways to integrate storage into architectural design to make it as inconspicuous as possible.
- Provide easy access to necessary tools and materials where needed.
- Consider placement and sizing based on items stored.
- Consider charging requirements for tool storage.
- Consider storage for emergency supplies.
- Consider storage for janitorial tilt carts between times of active use.
- Consider storage for tenant, ADR, and common use items such as stanchions and signage.

LOADING DOCKS

Amenities & Support

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

The Loading Docks are where recycling and waste are compacted, stored, and loaded onto trucks for disposal. It also serves as delivery location for tenants and other airport needs.

Applicable LEED Credit Requirements:
MR – Storage & Collection of Recyclables

Planning Considerations

- Locations for trash compactors to include overhead clearance (minimum 14') for the compactor to be tilted up and slid off of the flatbed truck. Also, ample maneuvering room must be included. Clearances must comply with DOT requirements.
- Trash collection areas need to have reinforced membrane waterproofing (both floors and walls), non-skid flooring, power washing equipment, drains, and separators.
- Reinforce the surrounds of the building opening, in addition to bollards.
- All finishes need to be suitable for wet locations, including but not limited to light fixtures.
- Add elevated loading dock and space for at least three, 30 cubic yard, fully enclosed compactors. Compactors should have sufficient space between them to allow for easy human access for maintenance and disposal of solid wastes via optional side doors.
- Provide space for the truck moving compactors to move in and out without interfering with other load dock, terminal, or airfield operations and without requiring multi-point turns.

LOADING DOCKS

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

- Provide guide rails for inserting and removing the compactors. Guide rails shall extend / protect over (minimum H20 rated) slot drain grates without obstructing service access.
- Provide robust backstop on guide rails to prevent inadvertent significant horizontal load and mitigate risk of compactor impacting other infrastructure.
- Provide space for a cardboard baler, including space to store bales awaiting pickup and easy access to the bales for pickup. (Include vertical space for the ram also - not just the footprint.)
- Provide space for a bottle shredder, including drainage, and sufficient space to store shredded bottles awaiting pickup.
- Provide space for additional dumpsters for specialty items such as compost and glass — and ideally, also for metals and plastic with space for easy access.
- Provide space for a sufficient number of cooking oil tanks, with space for access by the oil hauler.
- Provide easy access for all users of the solid waste system to the control systems used for each of the compactors; including footprint space for the hydraulic and electric power systems.
- Provide easy access for all users of the various solid waste systems to the doors of the equipment. Design so that minimal physical effort is required to load the compactors/ baler and there is sufficient space for structures and/or equipment required to ensure safe operation of the various systems.
- Layout should be visible from a single pan-tilt-zoom digital camera.
- Provide drainage and sewage capabilities to accommodate drains for each compactor and drainage for the barrel washing station.
- Use of trash compactors is currently logged by users; provide connectivity for data.
- Provide power and compressed air for all relevant equipment.
- Provide electrically heated water pressure washer with retractable hose and reel. Hose should reach the furthest location in the space plus an extra 10′.
- Design the floor space and dock space for easy cleaning with water. Include macerators in the drains and floor and wall materials that will not facilitate accumulation of biological materials that contribute to odors.

LOADING DOCKS

Design Vision
Design Guidelines
Introduction
Planning
Space Types
Non-secure
Secure
Amenities & Support
Conveying
Restrooms
Concept
Types
Nodes
Nursing Suite
Lactation Room & Modular Pods
Interfaith Prayer & Meditation Room
Sensory Rooms
Service Animal Relief Areas
Children's Play Area
Lounges
Storage
Loading Docks
Tenant Spaces
Architectural Standards
Appendix

- All drains shall go to sanitary systems, without need for pumps. Provide a drain basket, with mesh no larger than 1/4" openings positioned to be accessible for service and not blocked by equipment
- Dock levelers are required.
- Provide enclosed access, so that system operators do not have to carry materials outside during inclement weather.
- Provide stripping to indicate no parking (for various haulers), safety rails and toe kicks to prevent falling off dock and safety interlocks on compactors to prevent activation with personnel inside the danger area.
- Provide hand wash station and eye wash station.
- Provide space for a cart / barrel washing station and drying station with wall mounted clips for hanging floor mats for washing and drying extra.
- Provide staging area for material delivery. Designated area to be stripped and large enough to temporary place large deliveries of items like kegs, pallets, etc...
- Additional asset space for consideration includes cooking oil tanks (8'x5' for a pair), glass dumpster (8'x22'), swing dumpster for on demand streams (metal, CDL, etc).
- Roll down doors controls for operator to be binary full open or close; with manual jog inside secured control box.
- Provide access pathways between grades and supporting ladders with fiberglass covered treads and yellow contrasting nosing.

3

TENANT DESIGN

SEA
Seattle-Tacoma International Airport

3

TENANT DESIGN

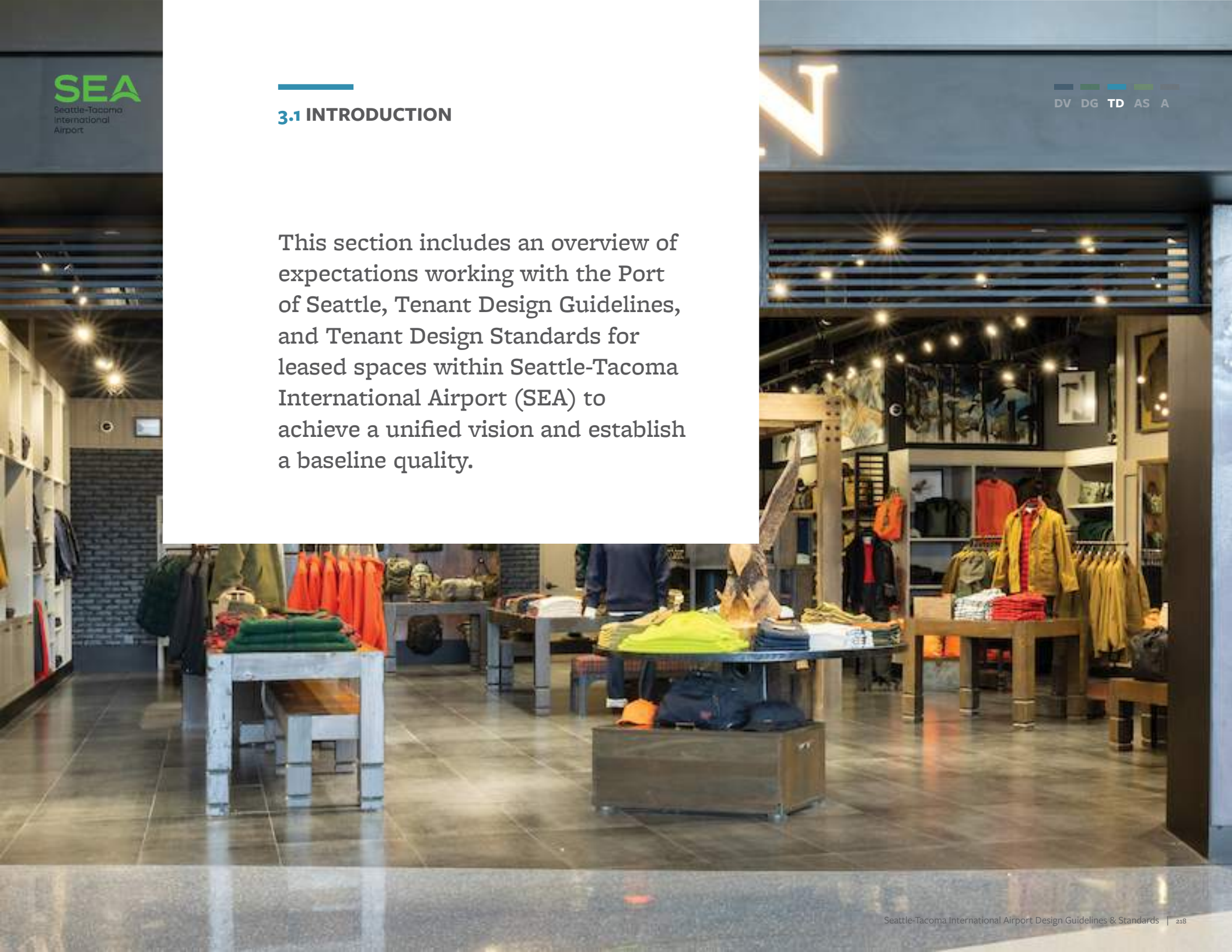
3.1 Introduction
- Tenant Guidelines and Standards
- Overview of Process
- Architectural Review
- Base Building

3.2 Tenant Design Vision & Design Guidelines
- Tenant Design Vision
- Tenant Design Guidelines
- Facilities & Infrastructure
- Maintenance
- Sustainability
- Tenant Design Intent
- Accessibility
- Layout Guidelines
  - Dining
  - Retail

3.3 Tenant Design Standards
- Storefronts
  - Design Approach
  - Zones
  - Location Specific Considerations
  - Piers
  - Security Closures
  - Materials & Finishes
  - Signage
    - Storefront Signage
    - Promotional Signage
    - Secondary & Informational
    - Digital Media & Audio
- Interior Materials & Finishes
  - Vertical Surfaces
  - Flooring
  - Wall Base
  - Ceilings
- Furniture & Fixtures
  - Seating
  - Shoeshine
- Kiosks & RMU's
  - Kiosks
  - RMU's
- Lighting

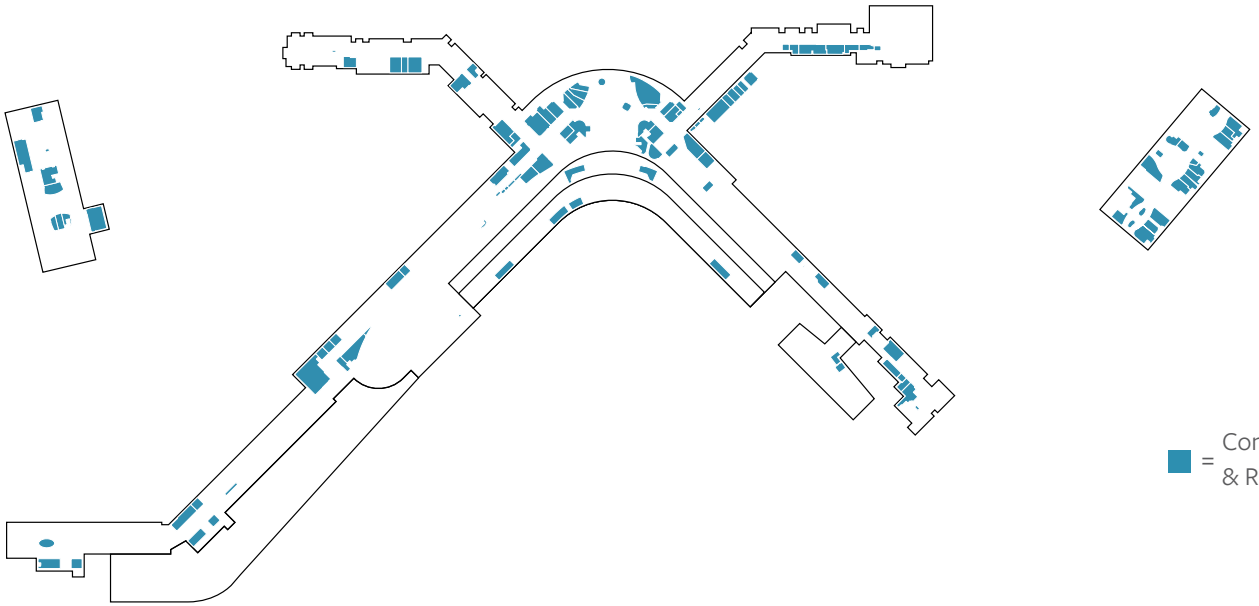
3.1 INTRODUCTION

This section includes an overview of expectations working with the Port of Seattle, Tenant Design Guidelines, and Tenant Design Standards for leased spaces within Seattle-Tacoma International Airport (SEA) to achieve a unified vision and establish a baseline quality.



Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Guidelines & Standards
Overview of Process
Architectural Review
Base Building
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Architectural Standards
Appendix

This design guideline establishes minimum acceptable standards of design applicable to tenant spaces, including dining and retail establishments, throughout the airport campus at SEA.



In all areas of the airport, passenger facing tenant spaces, such as concessions, reflect an overarching design influence and identity.

Specifically tailored to tenants, the Guidelines and Standards addressed in the Tenant Design section within SEA's Architecture Design Guidelines & Standards states acceptable materials, closures, signage and lighting, all of which reinforce the intent of the comprehensive design philosophy of the airport.

Dining and retail tenants, along with their architects, interior designers, contractors are encouraged to contact their Port of Seattle Airport Dining & Retail representative prior to beginning conceptual design work to discuss specific design related questions and/or concepts.

OVERVIEW OF PROCESS

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Guidelines & Standards
Overview of Process
Architectural Review
Base Building
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Architectural Standards
Appendix

The Port of Seattle follows a specific process for both design and construction. This process is outlined in the **Tenant Design and Construction Process - Tenant Manual,** which can be obtained on the Port of Seattle website. This document is intended to be used with other Port regulations and standards. All aspects of the space and tenant improvements are subject to approval from the Port Of Seattle. Designs will go through required Port Design Review Processes to meet with stakeholder groups, as applicable to the project. All designs must receive approval from all governing authorities such as the Port of Seattle Fire Department (POSFD) and Airport Building Department (ABD).

Designers must abide by all requirements established in Port documents relating to review processes, submittal procedures, drawing requirements, construction guidelines, security requirements, building and life safety code requirements, etc.

These standards do not replace applicable building codes that take precedence. The architect or designer is responsible for complying with all applicable building codes, Port standards, and regulations that impact design and construction; meet with building department and fire department officials to discuss requirements specific to their space; and coordinate with airport and airline terminal managers during construction.

All work to be done within the Terminal must adhere to the design intent of these standards. Any specific design questions or concerns should be communicated early in the design process to the Port Representative.

These Design Guidelines do not address every condition or detail individual tenants may encounter. Tenants are therefore required, during the early design stages, to consult with their Port Representative to determine specific design standards and conditions that are acceptable.

ARCHITECTURAL REVIEW

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Guidelines & Standards
Overview of Process
Architectural Review
Base Building
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Architectural Standards
Appendix

As part of the Design Review process, architectural feedback from Port of Seattle to the design teams will be provided through, but not limited to, drawing review sessions and committee meetings. To better communicate design drawings, photo-realistic renderings and materials boards are required.

Design Renderings

When attending Architectural Review Committee (ARC) meetings, or other interaction requesting Port of Seattle feedback, design renderings must be provided. These high-quality 3D color renderings must show the storefront, the space layout, the sides of the store (if applicable) inclusive of the surroundings. Photo renderings are encouraged, especially to show the storefront in context.

The renderings should reflect the complete and final look of the store. The renderings shall be prepared by a professional designer. Sketches or unfinished renderings will not be accepted.

Physical Material Boards

At 60% design, provide minimum (1) physical materials board of finishes for tenant spaces. Provide (1) board to Port of Seattle Aviation Facilities & Infrastructure (F&I) Architecture team for review. Discuss with Port PM if second board needs to be provided to Port of Seattle Airport Dining & Retail (ADR) or Project Management Group (PMG) for construction site use.

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Guidelines & Standards
Overview of Process
Architectural Review
Base Building
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Architectural Standards
Appendix

Physical Material Boards

After submitting boards, any change of material must be approved by F&I and new samples provided.

The materials boards prepared shall remain property of the Port for the duration of the project.

- All boards should be prepared with material finish schedule provided on the back of the board for material name, style, color, sizes, finishes, and manufacturers.
- Fabrication Material: ¼" x 11"x 17"
  - ◊ Gator foam board, cardboard, plywood or any other lightweight but resilient material. Black board preferred.
- Samples required: Minimum size 4"x4" per sample
  - ◊ Finishes - Floor finishes, Floor bases, Grouts, Paint colors, Wood species and finishes, Fabrics, upholstery, Exterior finishes, Seating furniture cut sheets, Wall finishes, Fixture and cabinet materials and finishes, Graphic, murals, Doors, gates
  - ◊ Storefront - Storefront mullions, Storefront glass (if other than clear safety), Storefront base, Storefront awnings, Storefront specialties
  - ◊ Ceiling - Entry ceiling, Main ceiling, Accent ceiling, Specialty Ceiling
  - ◊ Signage - Sign letters, Sign background materials, Sign color palette, Sign fill material

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Guidelines & Standards
Overview of Process
Architectural Review
Base Building
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Architectural Standards
Appendix

Drawings attached to the tenant's lease provide a basic plan of the leased premises and constitute the contractual boundaries of the project. Tenant is responsible for connecting to all base building utility systems, providing a complete and operational facility, and must meet all requirements of the Port of Seattle Facility and Infrastructure Standards.

It is imperative that the tenant develops a full understanding of the existing base building and systems before any design work is started. Although the Port intends to provide basic functional systems (i.e., mechanical, electrical, fire protection, etc.) for tenant connections, the Port does not guarantee that all tie-in points will be within the tenant's leased area. If the tenant needs to tie into systems at a location beyond the tenant's leased area, such location shall be as approved by the Port Representative. It shall be the tenant's responsibility to provide such connections, unless approved otherwise, within the tenant's lease. Context of adjacent finishes and architectural elements surrounding tenant spaces need to be considered during the design process.

It is the responsibility of the tenant's designer to research and obtain copies of existing drawings and specifications pertaining to the space in question. For projects within new terminal construction, tenants will be required to coordinate with the base building contractors.

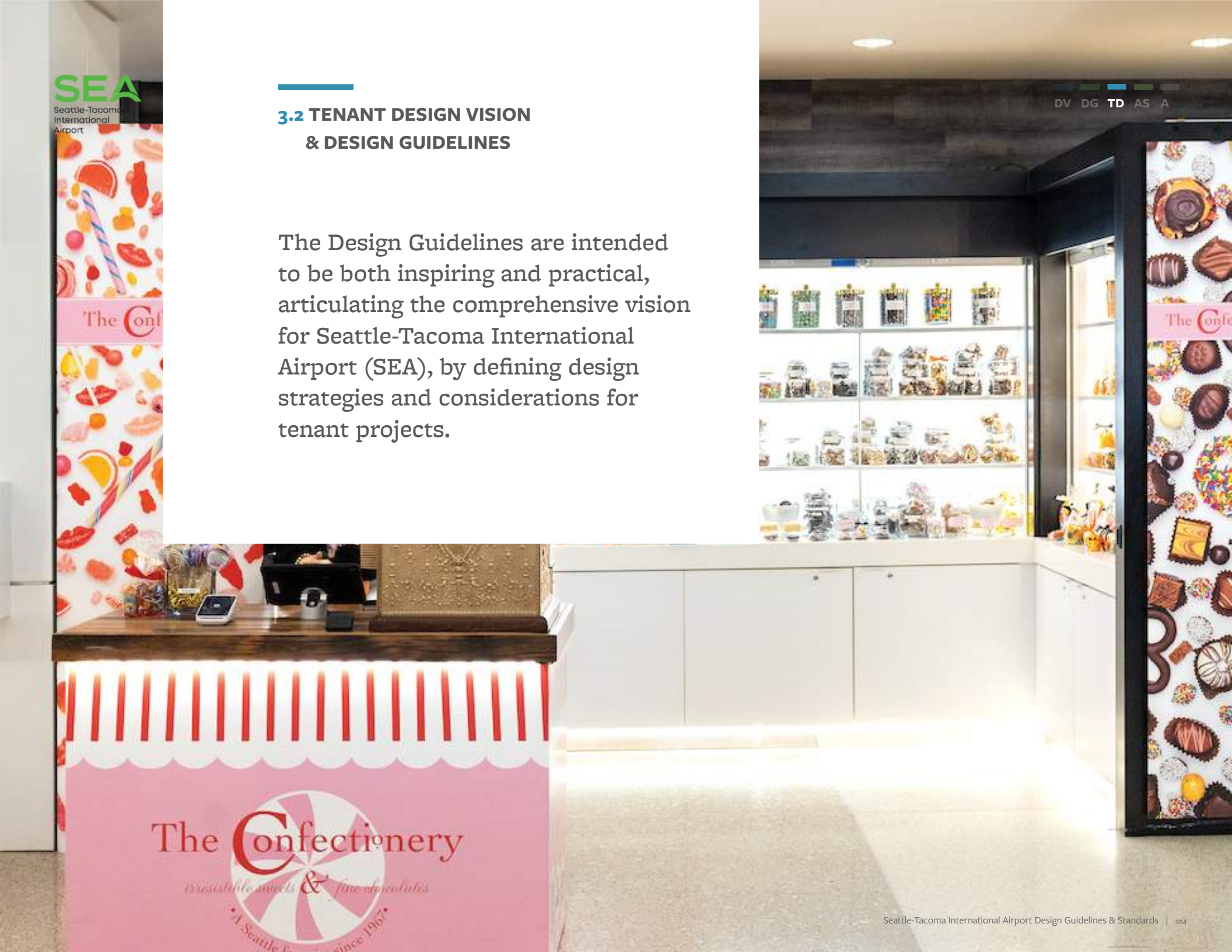
Tenants may request AutoCAD files of the exhibit drawings from the Port Representative.

If record drawings are not available, tenant will be responsible to survey the existing conditions prior to the start of design. The designer must develop a full understanding of the existing structural, mechanical, electrical, plumbing, fire sprinkler, and voice/data systems, and confirm viability of designed changes with the Port Representative. It is required that the designer field-verify all conditions prior to the beginning of design. Tenant is to notify the Port Representative in writing of any existing conditions found during the field-verification that may impact tenant's approved design; including but not limited to capacity of existing systems and the presence of regulated materials.

Design teams are encouraged and may contractually be required to plan a site visit to confirm as-built conditions of base building systems. This site visit also provides an opportunity to understand the adjacent context in which the project is set.

3.2 TENANT DESIGN VISION & DESIGN GUIDELINES

The Design Guidelines are intended to be both inspiring and practical, articulating the comprehensive vision for Seattle-Tacoma International Airport (SEA), by defining design strategies and considerations for tenant projects.



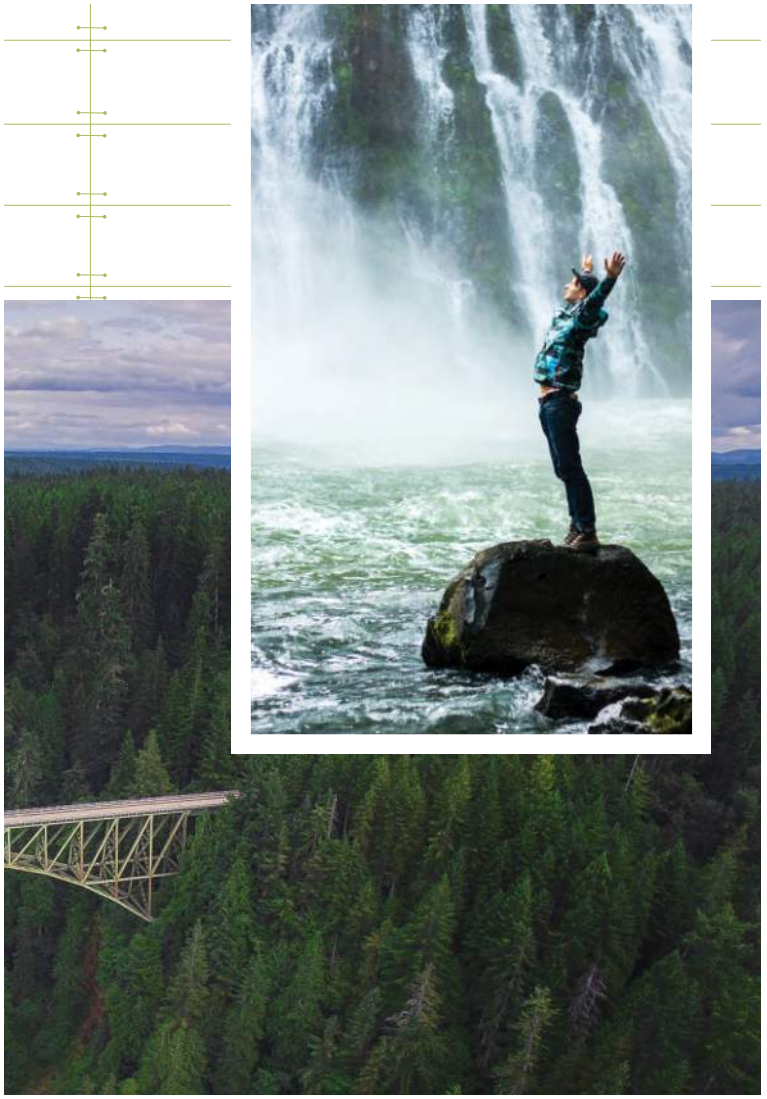
TENANT DESIGN VISION

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Tenant Design Standards
Architectural Standards
Appendix

The Design Vision of SEA airport applies to tenants with public facing spaces. Design teams must review the entire section and pull inspiration from Northwest Sense of Place ideas or elements.

Designs for public facing tenant spaces need to embrace the qualities of the Northwest by synthesizing the region's natural beauty, international orientation, and local arts and culture. Supporting this design point of view are practical considerations that will ensure the successful implementation and realization of tenant designs. The **Design Vision** section within the SEA Architecture Design Guidelines & Standards clarify the unifying themes for the airport and apply to tenant spaces, including dining and retail offerings at SEA. Review the design elements in the **Northwest Sense of Place** section within the Design Vision for inspiration for public facing tenant spaces.

Every design is evaluated on its individual merits for approval. Design concepts that appear generic and without relevance to the Northwest Sense of Place look and feel will not be accepted.

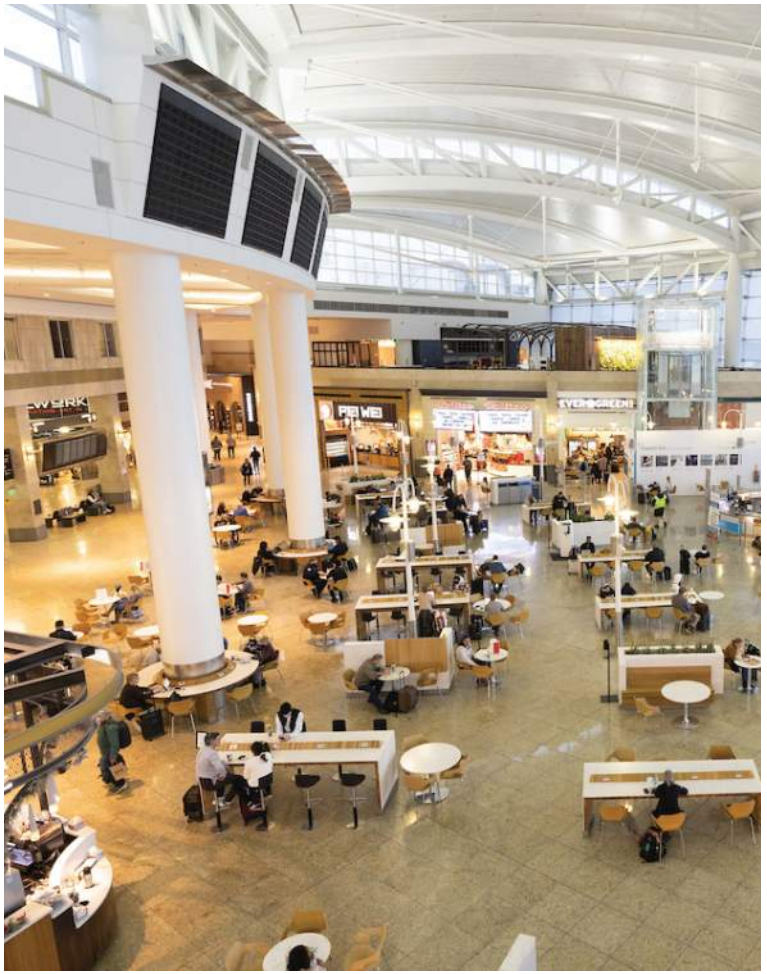


TENANT DESIGN GUIDELINES

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Tenant Design Standards
Architectural Standards
Appendix

The Tenant Design Guidelines section is intended to:

- Articulate the design vision of SEA as a premier, world-class airport and establish the level of design quality expected to reach our goal of a 5 star airport (rated by Skytrax).
- Outline the design strategies and considerations to clarify Port priorities in the design of each project.
- Provide a clear basis for design reviews by the **Design Review Committees**, which have responsibility for reviewing the design of all projects at SEA to assure compliance with these and other related Guidelines and Standards.



Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Tenant Design Standards
Architectural Standards
Appendix

Expectations of infrastructure systems are described at a high level overview in this document, tenants and their design teams must comply with each of the Port of Seattle Design Standards for all utility and infrastructure systems.

Utilities are available but in limited quantities at SEA; Tenants must conduct site surveys and commission other parties to establish the adequacy of the systems to serve their Operation; this information shall be obtained prior to the design of the location.

While high level requirements for Electrical, Mechanical and other systems are found in this Guidelines booklet, Tenants are directed to read the available specific Design Standards for each system to be used by the Tenant.

These Standards are available online at: http://www.portseattle.org/

Tenants should be aware that fixed base building electrical, mechanical and other services pass through leased premises in some locations, a site visit with the Port Representative shall be arranged by the Tenant immediately upon lease execution to establish if any encumbrances are present.

In all such cases where they are, Tenants must design their space to accommodate these elements and provide, at Tenant's cost, access panels for Port crews to perform maintenance and repairs.

Tenants are also responsible to provide a meter (type and make specified by the Port) for each Utility to be used in its operation.

Application for Connection – All projects must submit Applications for Connection when proposing to connect to SEA utilities and systems. Updated applications are submitted throughout the design process.

FACILITIES & INFRASTRUCTURE

Specific Building Systems

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Tenant Design Standards
Architectural Standards
Appendix

Any and all Electrical/Mechanical equipment devices that will permanently interact with the existing Terminal Building systems must meet the published Port Standards.

Fire Alarm

Each Tenant shall provide a fire alarm system consisting of both initiating and signaling devices within the leased area and provide coverage for the new space configuration.

Sprinkler Systems

The Port of Seattle Fire Department supervises and enforces all codes related to sprinklers, which shall be extended by the Tenant under the guidance of a Fire Protection engineer and be provided with an isolation valve for every location.

Communications

Tenants must use the existing building "backbone" communications infrastructure for connecting to the outside or in between locations. Port will identify existing infrastructure locations and communication connections points. Tenant to provide Demarcation panel to connect all Communication devices. For complete diagrams and information consult the Communications Design standards.

Electrical

The electrical design must comply with NEC in force for the current year plus Washington State amendments which are enforced by the WA State Labor & Industries Dept.

Tenant shall make Application for Connection to this utility in the manner prescribed in the Electrical Design Standards. In most cases, 30-day feeder panel meter readings are required prior to approval for connection of any new load to the existing system, however small they may seem. Tenant must connect to and place its meter in a Port designated point of connection to be agreed upon in a site survey by the Tenant's Electrical Engineer. Where existing meter is provided at Point of Connection, tenants can connect to and use existing meter. Tenants are responsible for any accessories to make meter connection.

Natural Gas

Natural Gas service is available in most but not the entire Airport. If present, Tenant shall connect to the main line and extend the service to its location. Service may come from the Port or directly from Puget Sound Energy (pse.com) depending on location; in all cases, the Tenant shall provide and install the meter in the Port's designated room or designated location on ramp level. Normal delivery pressure is 0.5 PSI.

Specific Building Systems

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Tenant Design Standards
Architectural Standards
Appendix

Plumbing

Domestic Cold and Hot water are available from the Port at several locations throughout the Terminal. Tenant shall install a meter and tap into the systems as directed by the Port with a Reduced Pressure Backflow Preventer in all cases. Steam-to-Hot-Water converters are the preferred method of obtaining hot water for tenant use, however, if these systems are not feasible, a Tenant may install a water heater that meets Washington State Energy Code at Tenant's cost and maintenance. No plastic piping is allowed at the Airport.

Sanitary waste and grease waste service shall be installed and maintained up to the point of connection to the main by Tenant at Tenant's cost and expense.

Grease waste points of connection are also available in most of the Terminal, these lines use 304 Stainless Steel pipe and must be extended by the Tenant for its use. The Port has installed and services the Grease Interceptors for common use by all Tenants. Total capacity and location of grease interceptors required to coordinate with F&I Mech, F&I Civil, and King County (which will be done after Application for Connection is submitted). All grease-waste producing kitchen appliances must be connected to these interceptors. Vent lines are also available throughout the Terminal building as well. Garbage disposers connected to the plumbing lines are not permitted at the Airport.

Heating, Ventilating & Air Conditioning

The Port supplies conditioned air free of charge to the Tenant inside the Terminal for the life of the lease; the Tenant must furnish and install distribution duct and pipe into the leased space. The system must be designed by a licensed WA State Mechanical Professional Engineer and meet the published Standards. A pre-design Test and Balance report must be conducted by a Port pre-qualified Testing & Balancing Firm at Tenant's cost prior to development of any design.

HVAC systems are a combination of Air and Hydronic Water in all concourse buildings, the Port will work in conjunction with the Tenant Designer to assess which combination shall result in the ideal combination of both to serve the space. Tenants desiring to achieve LEED or similarly rated facilities shall design systems that comply with those site-specific requirements.

HVAC systems must allow for proper pressurization of Tenant spaces at all times, even when the space is closed.

FACILITIES & INFRASTRUCTURE

Specific Building Systems

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Tenant Design Standards
Architectural Standards
Appendix

Refrigeration

The tenant must supply refrigerated display units with heated evaporator pans. Large systems should be combined with condensing units remotely located. Review Mechanical Standards regarding specific requirements for remote condensing units for refrigeration equipment. Maintenance of refrigeration systems shall be sole responsibility of the Tenant.

Cooking Equipment

All cooking equipment (gas or electrical) must be entirely contained under the correct Type hood and interlocked with an exhaust fan. Maintenance of all cooking equipment and hoods (along with associated ductwork, exhaust fans, and related accessories) are the sole responsibility of the tenant. See Cooking Equipment Ventilation Standards for ventilation requirements based on type of equipment to be provided in the space.

Exhaust systems

Any Tenant design must comply with ventilation requirements per Washington State Mechanical Code. Food Service operators must provide all cooking equipment and any fixtures and modify the building to meet Port Standards plus all applicable codes, whichever is more stringent. Kitchen Equipment suppliers are not allowed to submit designs directly but do so through a WA State licensed Mechanical Professional Engineer, who shall design the system and be responsible for its performance.

Any appliance capable of raising foods temperature over 100 Degrees F shall be provided with a targeted exhaust or U.L. listed commercial exhaust hood. Port standards for Type I and Type II hoods meet or exceed IMC and NFPA standards due to the nature of the Air Handling systems of the building, please consult the published Mechanical Design Standards and Cooking Equipment Ventilation Standards for specific requirements.

No stand-alone hood control panels or Make Up air units are allowed at SEA Airport, all exhaust fan and interlocks shall be performed and scheduled by the building's control system (Siemens DDC) without a Tenant OFF switch.

Type 1 hoods must have high efficiency baffles, and each tenant is required to have a cleaning program in place. The Port also recommends a wet self-cleaning system when applicable. Hood ducts must be Liquid-Tight. Each Type 1 or Type 2 extraction hood must have a dedicated exhaust fan. Multiple hoods being served by a single extraction fan shall not be permitted.

The tenant must provide all necessary fire protection systems for extraction hoods and cooking equipment. The systems shall tie into building life safety systems. Exhaust Fan status shall be displayed on the Port of Seattle central DDC system.

MAINTENANCE

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Tenant Design Standards
Architectural Standards
Appendix

Electrical and Mechanical systems tied to the base building, with some exceptions, are to be maintained by the Tenant. Tenants must consult with the Port's Facilities Manager regarding the existing Preventive Maintenance Program to confirm the extent of the Port's maintenance of any systems. Delineation of maintenance for systems that tie into base building infrastructure are to be discussed with Port Team (ADR, PMG, F&I, AVM).

See Appendix for **Maintainability Standards**. Tenants and their design teams to review all standards and apply as needed to port maintained systems within tenant spaces.

Coordinate Division 01 and technical sections of Port Guide Specifications with project team for inclusion and adherence in permit documents.

Important Maintainability elements for tenant spaces:

- Equipment and infrastructure that needs to be maintained or tested by Port, must be accessed. Coordinate access panels with AV Maintenance and F&I or locate in open ceiling.
- During design, document and clarify the equipment and extent of what will be maintained by Tenant or by Port. Discuss and review with Port stakeholders.

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Tenant Design Standards
Architectural Standards
Appendix

In 2007, the Port adopted the vision, "to become the cleanest, greenest, most energy efficient port in the nation." To support this commitment, the Port has developed the following guidance. SEA is a Master Site registered under the United States Green Building Council. Master Site Credits obtained by the airport may be eligible for concession LEED certification if sought. Tenants are encouraged to pursue LEED certification for commercial interiors. (All USGBC LEED references in this section refer to LEED Version 4.0.)

Tenants at SEA shall consider the following:

- Increase water efficiency to reduce the burden on municipal water supply and wastewater systems. As applicable, install water efficiency equipment that is EPA WaterSense® labeled. Use kitchen sinks, dishwashers, ice makers and steam cookers that use 20 percent less water than standard fixtures established as a baseline that meet the requirements of the Energy Policy Act of 1992.
- Develop and implement strategies to reduce energy consumption. Develop energy efficient lighting programs that are more efficient than required by the energy code. Refer to ANSI/ASHRAE/IESNA Standard 90.1 and ASHRAE 189.1, Standard for Design of High-Performance Green Buildings.
- Install ENERGY STAR® designated equipment and appliances in the unit, including appliances, office equipment, electronics, and commercial food service equipment (but excluding HVAC and lighting).
- Divert at least 75 percent of construction waste from landfills. Utilize a construction and demolition waste recycling hauler (in addition to a typical waste hauler) that can document percentages of the weight or volume of diverted materials. This waste may include (but is not limited to) wood, concrete, drywall, masonry, roofing, siding, structural metal, wire, insulation, asphalt, and packaging materials related to construction or demolition.
- Utilize construction materials with recycled content for a minimum of 10 percent of the total value of all materials. Possible materials include ceiling tile, wallboard, wall and floor tiles, carpet and metal finishes (LEED MRc4 Recycled Content). Consider the use of rapidly renewable materials, such as straw board, bamboo, poplar OSB, or wool.

SUSTAINABILITY

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Tenant Design Standards
Architectural Standards
Appendix

- Source wood materials that are certified by the Forest Stewardship Council (FSC). This "Seal of Approval" is awarded to forest managers who adopt environmentally and socially responsible forest management practices. Companies that manufacture and sell products made from FSC wood must be able to provide Chain-of-Custody (COC) documentation.
- Use materials and products that are extracted, harvested or recovered, as well as manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation. Possible materials include wood, millwork, concrete and specialty countertop materials (LEED MRc5 Regional Materials). For sourcing purposes, our region is defined by a distance of 500 miles.
- Use environmentally considerate cleaning products, disinfectants, polishes and floor finishes. Also, consider the use of janitorial paper products and trash bag liners with a high recycled material content.
- Display signage detailing green practices and their benefits to the customer.
- Reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants. To ensure the health and safety of passengers and workers, all tenants minimally must provide:
  - ◊ All adhesives, sealants, paints, and coatings, are no- or low-VOC (LEED V4 Materials and Resources)
  - ◊ Resilient flooring, rubber flooring, and prefinished wood flooring must be FloorScore or Greenguard Gold certified. Carpeting and carpet cushion need to be CRI Green Label Plus or Green Label certified (respectively).
  - ◊ All composite wood and agrifiber products (MDF, plywood, etc.), including core materials, must contain no added urea-formaldehyde resins as detailed in LEED IEQc4.4.

TENANT DESIGN INTENT

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Tenant Design Standards
Architectural Standards
Appendix

The design intent of a tenant space are a combination of elements to suppport the tenant's brand statement and fit within the design vision at SEA. Signage and storefronts need to be considered as part of the design from the first conceptual idea through to the final construction drawings. The design should not only act to identify a tenant space or product offering, but also add to the overall creative expression of the space.

To accomplish this, the design development must adhere to the same overarching design principles outlined in the Standards. When applied appropriately the signage and design of the tenant space can further the expression of the **Northwest Sense of Place** design style.

All of these elements listed in the **Architecture Design Standards & Guidelines** and **SEA Signage Standards** are intended to help tenants produce a design that supports their brand strategy. While designed to blend into the overall tenant program at SEA, when these guidelines are followed, the result will be a design with an honest regional flavor, modern simplicity, and increased consumer appeal.

To avoid overly cliché Northwest concepts, designers should:

- Have a strong concept about the Northwest inspiration for the design of the space that enhances the dining or retail concept. Using a mix of design elements in the Design Vision section can help solidify the inspiration and strongly represent the Northwest Sense of Place.
- Be more creative than design concepts built around the Space Needle or Mount Rainier, for example; reflect the vibe of the Northwest, not imitate the Northwest. Be more creative than simply using replicas of Northwest landmarks. Using icons in a subtle way is clever, fun and acceptable, but simply adding a model of Mt. Rainier does not substitute for true Northwest design influence.
- Use photographs sparingly and wisely, if at all. Photographs of Northwest icons are like replicas -- adding them to a concept does not suffice for Northwest design.

ACCESSIBILITY

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Tenant Design Standards
Architectural Standards
Appendix

Port of Seattle encourages tenants to go above minimum code required accessibility elements. SEA strives to be the most accessible airport and our tenant spaces, especially airport dining and retail tenants, reflect that goal.

- The interior layout must provide a minimum aisle width to meet accessible code requirements throughout. In designing the space, give thoughtful consideration to creating ample room for wheeled luggage and passengers with mobility devices. Studies show that a lack of adequate space results in fewer customers entering the space and lower sales volumes.
- Reach ranges for casework, countertops, and most merchandise need to be within accessible reach ranges.
- Provide accessible options for each seating type provided in the space. For example, in a space with counter seating and free standing tables, there must be accessible seating for both types. For tenants with a 21+ seating area separated from open dining area, both sections must provide accessible seating options.
- We also encourage tenants to consider providing additional accommodations such as: braille menus, notepads for communicating with deaf people, and other support elements. For more information contact SEA ADA Coordinator.

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Dining
Retail
Tenant Design Standards
Architectural Standards
Appendix

The Port encourages a creative approach when designing tenant spaces to balance functional spaces with engaging design. Use materials and detailing to complement the storefront and interior design while reinforcing brand identity.

Tenant Design

- Unique merchandising opportunities that are visually striking and approachable for travelers are encouraged.
- A restaurant tenant should give particular attention to the creative display of food, beverages and packaged items. The objective is to create an impression of freshness.
- Visual organization of equipment in the space, as well as function is important to balance flow with aesthetics.
- Designs must account for Concourse constraints to facilitate the flow of customers in and out of the space. See **Location Specific Considerations** in Tenant Design Standards.

Sight Lines

- Identify the best possible sight lines from the primary circulation path to all areas of the concession with priority for 1. Signage, 2. Entry and 3. Key Merchandise, in that order.
- Avoid views from public spaces into back of house areas.
- Design adequate trash-handling facilities in tenant spaces
- It is not permitted for trash to be exposed to public view in tenant space.

Back-of-House

- Provide space for back-of-house functions (based on industry standard sizing) within leased space. Space allotted to the back-of-house functions in retail spaces, such as storage rooms and offices, should be minimized.
- Connect from a leased space to Port back-of-house corridor, through tenant back-of-house space, not in view of retail or dining spaces whenever possible. Sightlines into back of house areas should be eliminated or at least minimized.
- Use durable materials for back-of-house spaces. Pallet Jacks and other equipment can easily damage walls and doors during stocking.
- Select and detail adequate door sizes and types that lead to back of house areas.
- Coordinate with Port for use of remote tenant storage spaces as available. Consult with the Port of Seattle Fire Department regarding the quantity and type of materials to be stored.

LAYOUT GUIDELINES

Dining

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Dining
Retail
Tenant Design Standards
Architectural Standards
Appendix

Queuing

- Provide adequate customer queuing area within lease line.
- Queue should not overflow into adjacent circulation or airport spaces.
- Queuing areas for Retail Merchandising Units (RMUs) and kiosks must be reviewed and approved by the Port representative.

Seating

- Seating to be provided within the lease line.
- Provide seating to accommodate diverse passenger types and accessibility requirements.
- Seating may be allowed in front of the storefront, upon Port approval.
- In a food court concept, seating is not required to be provided within leased space.

Bars

- Any tenants that sell alcohol must comply with the Washington Administrative Code (WAC) and the Revised Code of Washington (RCW) for all requirements.
- Provide clear boundary to separate restaurant seating from 21+ bar area.

LAYOUT GUIDELINES

Dining

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Dining
Retail
Tenant Design Standards
Architectural Standards
Appendix

Grab & Go

- Cases need to be located near front or entry of space,
- Create dedicated browsing space of cases separated from queue
- Make sure that the flow of queuing and entering space is not being obstructed by Grab & Go cases.

Food Pick Up

- Pick-up locations need to be clearly identified.
- Pick-up location needs to be visible from main circulation outside of entrance.
- Separate approach and waiting area within lease line that is not part of queuing line.

Self-Order Kiosks

- Self-order kiosks are allowed, subject to Port approval.
- Locate near entry within leased space separated from standard queuing line.
- Locate within sightlines of employees for assisting customers with ordering.

LAYOUT GUIDELINES

Dining

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Dining
Retail
Tenant Design Standards
Architectural Standards
Appendix

GENERIC OPEN MARKET GUIDELINE

For a tenant space that is an open market, with multiple places to order or pick up food, and branded differently within the space, traditional storefront facades are not applicable inside of the open market. The outermost storefront of the space will need to comply with storefront design standards.

Additional considerations:

- Spaces that abut the exterior walls can use a bulkhead approach to create character and signage, but they need to be positioned to maintain the market ambience. For example, a soffit over a serving counter would be fine but not if it extends into the dining or circulation areas.
- The majority of the food and retail spaces should be thought of as a kiosk with a lower profile and with signage and security enclosures integrated into the unit's design.
- Except for small displays, merchandise should not be displayed above 54".
- Signage should occur a minimum of 8' AFF, be unique in character, sculptural, and as transparent as possible.
- The floor area within market zone is considered the tenant's floor and therefore floor penetrations are allowed in the terrazzo floor. Close coordination with the Port's Project Manager is required for any floor penetrations in this area.

LAYOUT GUIDELINES

Retail

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Vision
Tenant Design Guidelines
Facilities & Infrastructure
Maintenance
Sustainability
Tenant Design Intent
Accessibility
Layout Guidelines
Dining
Retail
Tenant Design Standards
Architectural Standards
Appendix

Draw Customers In

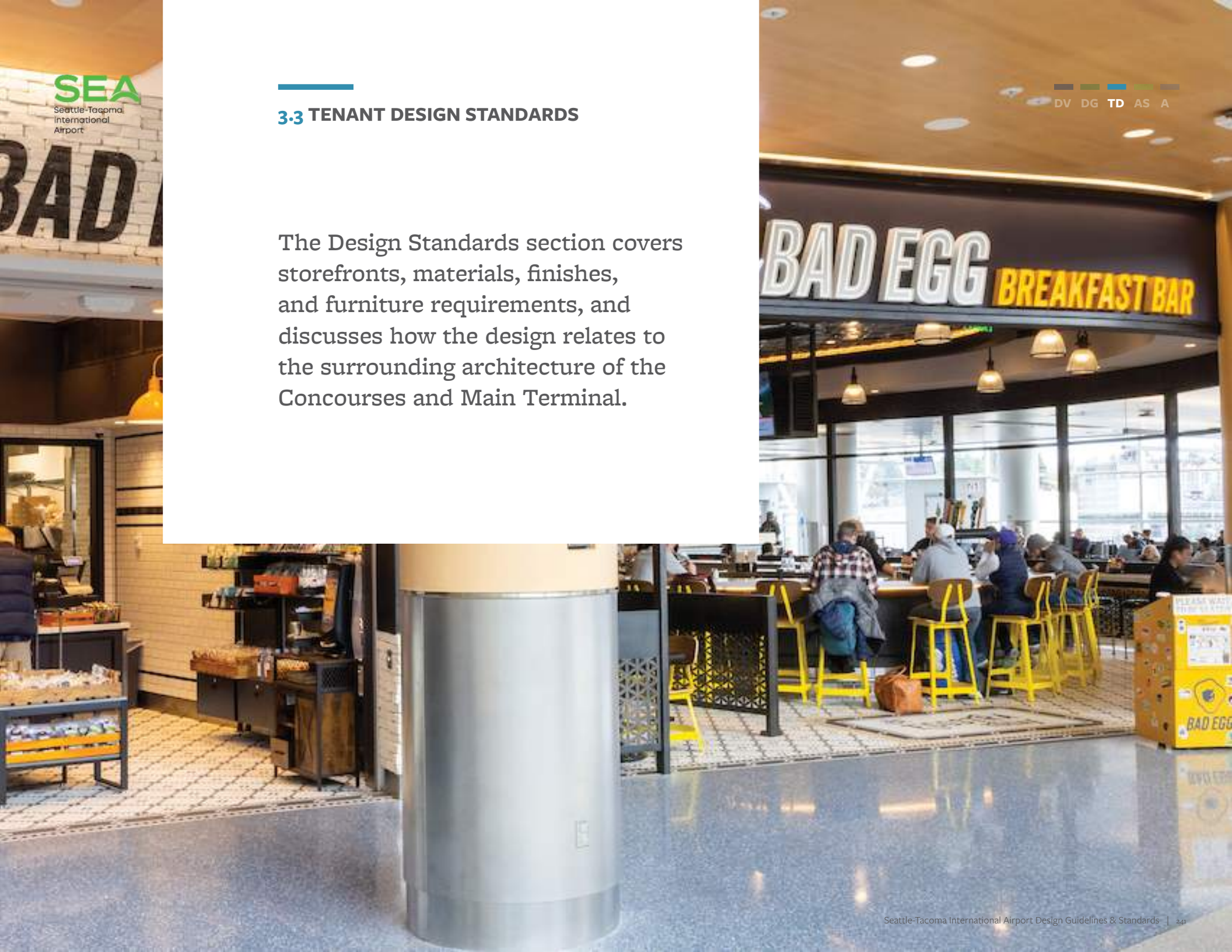
- Arrange entry sequence, casework locations, and layered displays to draw customers into space.
- Merchandising layout for convenience retail must balance product/fixture quantities with travel aisles for customers with carry-on luggage or with mobility devices.
- Fixture height should be graduated low in front and working higher toward the back.
- Provide additional lighting, graphics, or design elements on back walls to visually pull customers through the store.

Check-out

- Balance product displays with clarity for check-out locations.
- Provide at least one accessible height compliant check-out location.

3.3 TENANT DESIGN STANDARDS

The Design Standards section covers storefronts, materials, finishes, and furniture requirements, and discusses how the design relates to the surrounding architecture of the Concourses and Main Terminal.



Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Design Standards provide location specific considerations, storefront elements, signage, interior materials, seating, and lighting recommendations for tenant space at SEA.

The airport is one terminal divided into six different concourses with varying architectural styles. When designing tenant spaces the specific elements in each location need to be reviewed and taken into consideration.

For all public facing tenant spaces, the storefront is an important element for review. New designs need to balance branding, connection to **Northwest Sense of Place** design elements, surrounding context, and signage.

For interiors within tenant spaces, consider finishes that are durable to high volume traffic and that have a high quality feel to enhance customer experience throughout SEA.

Additional considerations are for lighting types, methods, and elements. Make sure to reference the Electrical Design Standards for specifics.

STOREFRONTS

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

The storefront is the most visible and prominent element of each location; it sets the tone and makes the strongest brand statement for an operator. Therefore, it is essential that the storefront design relate to and reflect the Northwest Sense of Place design vision. The following definitions and guidelines will help to ensure a successful design.

Opening

The tenant storefront opening is the area defined as the clear horizontal distance between lease lines and vertically as the distance from the finished floor to the existing Concourse ceiling or soffit above. The tenant storefront opening acts as the transition between the tenant space and the concourse. The tenant storefront opening varies in width and height at each tenant location.

Tenant Lease Line

The tenant lease line is the dividing line between the tenant space and the concourse. Typically, the neutral piers and storefront are in line with the tenant lease line, but not always. Verify the exact lease line location as shown on the lease outline drawings (LOD) provided by the Port. No tenant signage, stanchions, or furnishings allowed outside of lease line, unless approved by Port (see **Display Extensions**).

STOREFRONTS

Design Approach

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

The Port encourages tenants to design impactful three-dimensional storefront and signage to clearly brand their space while keeping with the character of the terminal and the **Northwest Sense of Place** theme.

Storefronts must adhere to the following design criteria:

- Storefronts should be primarily open to create easy customer access. Maximize exposure of the tenant area within lease line. Ideally 75% of any storefront opening, measured in linear feet, will be transparent either by openings or through the use of clear glazing. Up to 25% of opening can be solid walls or fixed window displays.
- Conform to the Northwest Sense of Place vision and materials allowed. Storefront designs should tie tenant signage with interior architectural elements, to strengthen the brand impact.
- Façade treatments must extend across the full width of the storefront.
- Do not block or obscure key sight lines to adjacent tenants.
- Physically integrated security devices, grilles, into the storefront design. Hidden when not in use.
- Where display extensions are allowed, they should utilize materials and detailing that compliment the storefront design to reinforce retail brand and identity.
- On a case by case basis, the Port will consider the removal of a base building element such as a canopy or column surround, to implement the tenant's design scheme. Discuss with Port PM costs associated with altering base building.
- Where tenants are adjacent to holdroom areas, they are encouraged to design open concepts that provide a visual and physical interaction with the hold rooms.
- No flooring penetrations of any kind, for any reason, are allowed past the lease line. Adhesive connections may be used with Port approval.
- Tenant's finish floor must extend to the lease line and abut the terrazzo concourse floor, which will remain and cannot be covered by the tenant's floor.

STOREFRONTS

Design Approach

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Materials

Storefront materials greatly influence the passenger's first impression of a dining and retail space. Therefore, materials selected for the storefront should be high quality, durable finishes should be able to withstand heavy passenger traffic and abuse from luggage, carts and hand trucks.

For additional information on materials, including approved materials for use in storefronts, see **Materials & Finishes**. Excluding doors, the storefront must have a durable base, minimum height to be determined per location.

Locks

All tenant door cylinders must be by the Port of Seattle Lock Shop or Best Lock Company. A Knox-Box is required on the outside of each tenant space that has approved non-standard keying. See the document Regulations for Airport Construction (RAC) for additional keying information. Tenant must obtain room numbering from the Port.

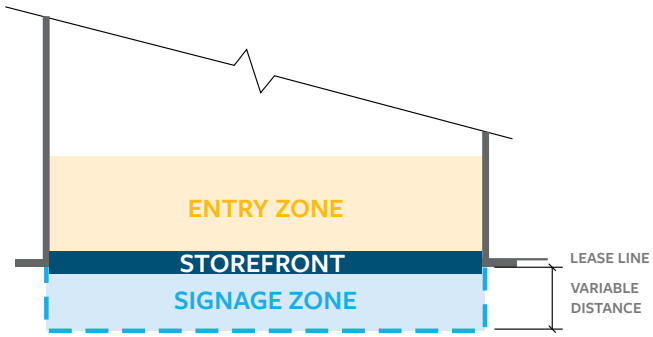
STOREFRONTS

Zones

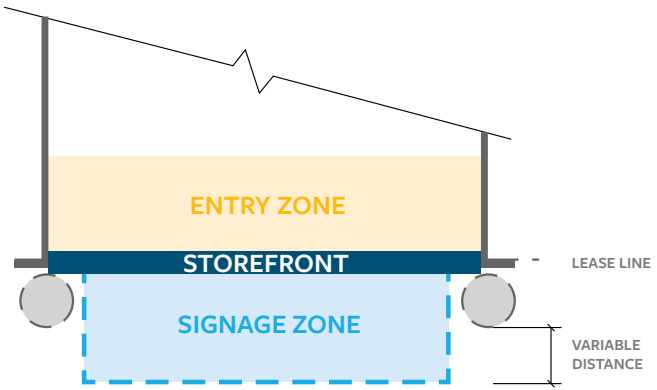
Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

The tenant storefront should appear visually separate from the architecture of the concourse or terminal. The intent of the zones are to provide a way to organize and communicate opportunities to create unique brand architecture for each location. These Zones apply to all business types, including merchandise, services and food. The Port has approval authority over all aspects of the tenant's design and function within the storefront zones. The Port does not allow any dining, service or retail operator alterations to occur in these zones without prior written approval.

Each storefront at SEA is divided into two zones: the Entry Zone and the Signage Zone. These zones should be treated and designed as one.



STOREFRONT A - PLAN VIEW



STOREFRONT B - PLAN VIEW

STOREFRONTS

Zones

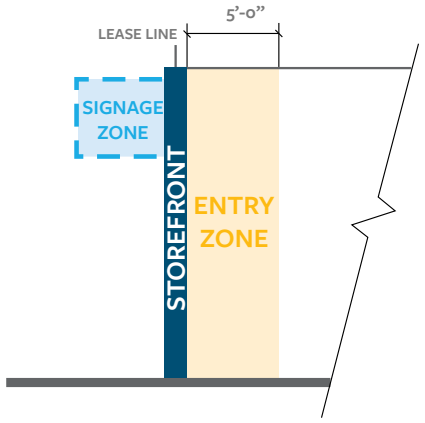
Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Entry Zone

Typically this zone is the first five feet (5'-0") behind the tenant lease line into the space.

For retail tenants, merchandise should be displayed in this area, but no tenant point-of-sale counters, service counters, etc. may be placed within this zone. In locations that have visual obstructions at the entry, such as building columns, the retail display zone may extend past the lease line, only with written approval from the Port. Even though this area is typically behind the lease line, it is still subject to Port approval to ensure consistent, professional display presentation standards at SEA.

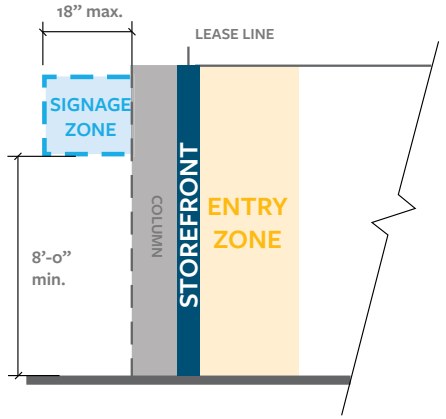
For dining tenants, this entry zone is where the queuing starts or where the host stand should be placed. Any grab and go or ordering kiosks should be in the zone or connected to. As type of space allows, seating can also be placed in this Zone.



STOREFRONT A - SECTION VIEW

Signage Zone

This zone is defined as the area in which tenant signage is allowed. This zone is intended to contain bold, colorful, three-dimensional graphics and brand icons that take advantage of easy and prominent sight lines for people moving through the concourses. Tenants are encouraged to work with their Port Representative from the beginning of the design process to create impactful and unique signage. To enhance visibility, signage may project out from the storefront up to 18" beyond any adjacent visual obstacles, such as columns. The bottom of the signage zone cannot be lower than eight feet (8'-0") above the finish floor. The exact limit of each zone varies by location. For the exact limit of the zone for a particular space, refer to your lease and consult with your Port Representative.



STOREFRONT B - SECTION VIEW

STOREFRONTS

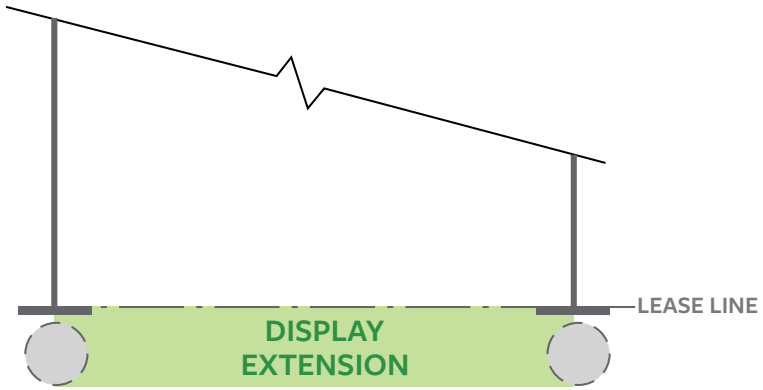
Zones

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Display Extensions

Display Extensions are subject to Port approval. Display extensions are intended to allow storefronts that are hidden due to the site architecture to have a merchandise presence forward of the lease line. When a Display Extension occurs, the tenant is allowed "feature fixtures" and promotional graphics. The Port defines a feature fixture as any fixture that highlights a category of product in a unique way. For example, nesting tables with folded T-shirts can be considered a feature fixture. The following diagram illustrates a typical use of the display extension. For the exact limit of the zone at a particular space, refer to your lease. Food service operators are also encouraged to explore creative ways to use this space to promote their products/services.

Note: Up to 30% of the floor area that comprises a Display Extension zone may be used for merchandising products and graphics. Display denser greater than 30% is not allowed.



DISPLAY EXTENSION ZONE - PLAN VIEW

STOREFRONTS

Location Specific Considerations

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Each area of SEA Airport has its own unique architectural style based on the latest renovation. Tenants and Designers are strongly encouraged to do a physical survey of the Facility prior to starting your design development due to the variety of conditions present. Variances to these requirements will be considered by the Port on a case-by-case basis, if justified by unique building conditions.

Concourse A

The columns on the west side of Concourse A angle into the concourse being smaller at the base than the top. The forward most line of the storefront is set to align with the top of the column. In width, the storefront must be kept 18" away from the column. The columns in Concourse A cannot be altered in any way including the addition of cladding, temporary or permanent. The one exception to this is that tenants may locate blade signage on the columns.

Concourse B

The unique architectural elements in Concourse B are the lower ceiling (9'-6") and the colonnade running 10' OC in front of the storefronts along the southern side of the concourse. Design tenant space to maximize passenger access to daylight along window walls. Artificial lighting for the storefronts in this zone is critical in drawing people's attention; tenants and their designers should pay special attention to look for ways to light the storefront and merchandise.

For information on signage allowed on columns in Concourse B, see **Sign Band.**

STOREFRONTS

Location Specific Considerations

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Concourse C

Where columns are contained within a storefront opening, refer to **Contained Piers**. Information regarding piers that are considered contained and design approvals shall be provided by the Port.

The C Concourse Expansion (CCE) project is under construction. Tenants proposing on this project need to review the CCE Tenant Handbook and adhere to:

Overall Architectural Vision for Tenant Spaces In CCE:

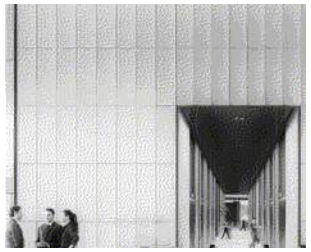
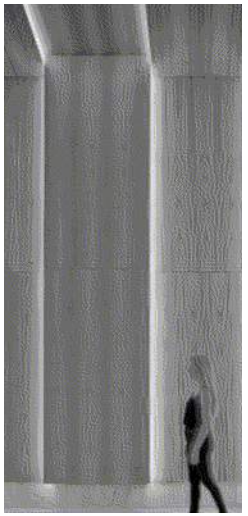
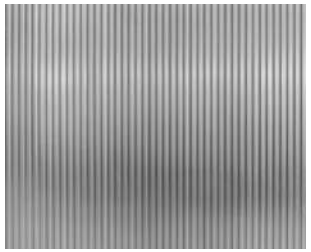
- Simple, elegant designs with low-gloss materials and neutral color palette. Textured materials with accent lighting vs busy/loud storefronts with overly colorful graphics.
- Storefront must maintain curvature of base building and black metal portal frame. No additional build out within portal frame. The Port prefers a single material outside portal frame, with a possible secondary material as accent.
- Materials shall be vertically oriented.
- Branding colors in Signage at storefront and blade signs only. Signage must be internally illuminated and adhere to Port tenant signage standards.
- Contained Piers within storefront portal shall be clad with storefront materials.

Specific Materials (no faux/foam materials):

- Concourse & Mezzanine:
  - ◊ Concrete Panels (fluted, textured, Glass Fiber Reinforced Concrete (GFRC))
  - ◊ Tile (low-gloss or matte finish)
  - ◊ Dimensional Stone (no rounded nor rough face stone)
  - ◊ Solid Surface
  - ◊ Glass (textured, frit, frosted, or back painted)
  - ◊ Pre-finished Metal (panels, scales, woven/open grid, trim)
- Mezzanine - above materials and in addition:
  - ◊ Brick (modern shapes, no red brick)

Color Palette:

- Light, neutral, muted earth tones (white, griege)
- Accent colors permitted at storefront and contained piers to support branding on Mezzanine level, CC-29, and CC-30.
- Black accents at CC-29 and CC-30.

STOREFRONTS

Location Specific Considerations

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Concourses D

The most common issue for storefronts on D Concourse is where columns are contained within a storefront opening. For this condition, refer to **Contained Piers** of these guidelines. Information regarding piers that are considered contained and associated design approvals shall be provided by a Port Representative.

Concourse N

Recently renovated, the architecture of N Concourse emphasizes natural materials and colors, curved soffits and floor patterns under the wood-clad undulating central spine clerestory. The dining and retails spaces throughout the concourse should consider utilizing the existing lighting cove above the storefront, ways to incorporate signage for visibility with adjacent tenant spaces, and base building columns. Reference N Concourse Tenant Handbook.

Concourse S

Major renovation for S Concourse is planned, for more information reach out to Port Project Manager.

STOREFRONTS

Location Specific Considerations

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Central Terminal (CTE)

Tenants in the CTE must coordinate design with existing base building finishes, even when within tenant lease lines or storefront. Neutral piers have limestone wall panels, Santa Cecilia granite stone floors, and black granite wall base panels. New demising walls between leased areas will need to be treated as neutral piers and must be reviewed by Port for materials. Large, central columns will remain as is. Existing limestone wall panels, black metal cap at top of walls, and decorative lighting sconces must be retained.

Base building metal and glass panels and trim above storefront may be covered or replaced with tenant finish. Incorporate black accents within storefront to maintain cohesiveness in CTE.

Main Terminal - Baggage Claim & Ticketing

Public facing non-secure side, use durable materials. Security is important consideration. Customers may have more bags or baggage carts, increase size of circulation aisles within tenant spaces.

At baggage level, tenant locations along Arrivals Drive window wall, use frosted film or maximize daylight.

On ticketing, extremely busy area, tenant spaces to keep flow open and try not to block sightlines (corner spaces, maximize clear glazing).

STOREFRONTS

Piers

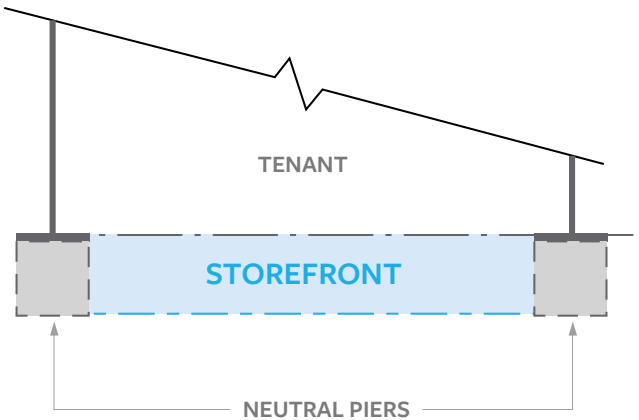
Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

There are two types of piers within the storefronts, neutral piers and contained piers.

Neutral Piers

Neutral piers are part of the base building architecture and serve to visually separate individual tenant lease areas and are centered on the demising walls. Neutral piers extend from finish floor to bottom of soffit or ceiling. The appearance of these piers cannot be moved, altered, or hidden behind other finishes. They are intended to be part of the base building and must be protected during construction. Any damage to the neutral pier during tenant improvements will be repaired and the costs will be charged to the tenant. Blade signs can be located in neutral piers depending on Concourse, subject to Port approval.

See construction detail and photos for examples of neutral piers at SEA. Verify in field neutral piers at tenant spaces. If no neutral pier exists, discuss with Port Representative.



NEUTRAL PIERS - PLAN VIEW

STOREFRONTS

Piers

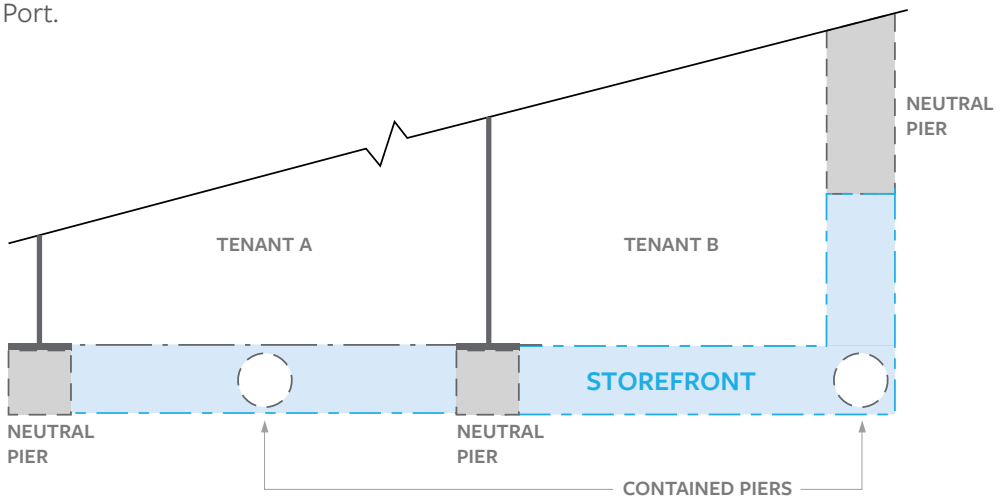
Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Contained Piers

In a multi-bay tenant configuration, where structural columns and other base building elements occur within a storefront, the element is considered "contained". Any modifications to these elements will be reviewed on a case-by-case basis for approval by the Port, and made at the tenant's expense.

When allowed, the tenant can incorporate the pier into the design of the storefront. This includes changing the pier cladding to match the tenant storefront materials. In instances where the leased space fronts the concourse on two sides, the Port encourages the tenant to treat both faces as storefronts. The corner column is considered a contained pier and incorporated into the design.

When a tenant space faces both a concourse and a holdroom, the tenant may visually connect to the holdroom with windows but cannot open into the holdroom. Storefront materials may wrap around to holdroom. Design extensions into holdrooms must be reviewed with and approved by Port.



NEUTRAL & CONTAINED PIERS - PLAN VIEW

STOREFRONTS

Security Closures

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

The airport is open to the public 24 hours a day, every day. While businesses are not always in operation, it is important for the passenger experience that units are attractive at all hours of the day and night, whether they are closed or open. The Port requires tenants to provide security closures while maintaining visual access. In case of a unit that is open 24/7/365 the Port may approve a waiver to this requirement.

All door tracks and operating hardware shall be concealed from the concourse and integrated into the design and detailing of the tenant storefront.

Closures

Closures shall consist of one of the following:

- Swing frameless glass doors on pivots with a six inch (6") high bottom rail in an approved finish. A setback of three feet (3'-0") minimum from lease line to allow for outward-swinging doors. Inward swinging doors are allowed if they meet code and are identified as "to remain open."
- Single track frameless glass sliding doors.
- Aluminum and glass sliding doors integrated into the store design or with concealed storage.
- Sliding aluminum grille door with recessed top hung track in an approved finish. No floor track allowed. Infill panels for folding screens are to be tempered glass, not Lexan. Grille finish shall be anodized aluminum. Sliding grilles should be Dynaflair's Elegance model or an approved equal.
- Rolling overhead aluminum grille with recessed side tracks.
- Security Closures must be coordinated with HVAC pressurization, minimum 50% free area for air flow.

STOREFRONTS

Materials & Finishes

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Recommended Materials

- Natural Materials
  - ◊ Granite, marble, and other natural stone, glass, wood, cast resin and metal.
- Glass
  - ◊ Multi-pane clear, beveled, etched or sandblasted glass in metal frames or butt -joined.
  - ◊ All glass must be laminated or tempered.
- Metal
  - ◊ Metals should be anodized aluminum, stainless steel, zinc or a similar durable finish.

Discouraged Materials

- Large areas of smooth painted drywall (especially if within reach of passengers)
- Sharp or rough surfaces
- Pegboard walls
- Corner guards (surface applied)
- Stucco or plaster treated with an exaggerated texture

Other Elements

- Exposed corners should have integral protection. Surface applied corner guards not integrated into the overall look of the storefront are not allowed.
- Suggested storefront wall base materials are natural stone or brushed stainless steel. Other materials will be considered if, in the opinion of the Port Representative, they meet the durability criteria.

STOREFRONTS

Signage

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Signage is a key component of any business's brick and mortar brand statement. It should be given significant attention in the design from the first conceptual ideas to the final construction drawings.

Signage is divided into five main categories:

- Storefront
- Permanent Promotional
- Temporary Promotional
- Secondary Signage
- Informational

Each category has its own criteria as outlined below. The signage design not only identifies a shop or food venue, but adds to the overall creative expression of the space. Premium quality fabrication is required.

Digital media and audio guidelines are also addressed in this section.

STOREFRONTS

Signage

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Each location is allowed one storefront identity sign on the face of the storefront façade. Corner locations are allowed one sign for each storefront face. The signage is to be located within the Signage Zone. All tenant storefront identification signage is subject to Port approval. In addition to this section, comply with Signage Standards.

Requirements

- Signs must be lit externally or through internal illumination. External light sources must be mounted to the storefront. The airport's ceiling or piers are not acceptable locations for external store signage lighting. All light sources must be U.L. listed.
- Digital Display signs (LED/LCD screens) are not allowed for main identification signage at storefronts. Promotional digital display signage is allowed and subject to Port approval for location.
- Signage must set in from the edge of the demising wall a minimum of three feet (3'-0").
- Signs are to be compatible and complementary to adjacent and facing storefronts and coordinated with overall terminal signage and graphic requirements. Letter size and location should be appropriate in scale and proportion to the overall storefront design.
- Three-dimensional signs must be finished on all sides. Non-three dimensional signage is subject to Port Representative approval.
- Language should be English except brand names, as approved by the Port.
- The primary wording of all signs shall include the concession trade name. The addition of any descriptors or taglines is subject to Port approval and reviewed on a case-by-case basis. In general, the addition of a tag element must, in the opinion of your Port Representative, enhance the look of the sign and the overall storefront design.
- All signage brackets and fastenings shall be concealed or incorporated as a part of the overall design presentation.
- Light levels must be approved by the Port.

STOREFRONTS

Signage

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Recommended Sign Types and Materials

- Exposed neon, edge lit, reverse halo, open face and reverse channel, sculpted or resin formed letters
- Dimensional metal letters flush with or pin-mounted to fascia surface
- Channel letters
- Externally illuminated signage
- Sculptural, three-dimensional treatments that project from the storefront where possible
- Digital menus

Prohibited Signs

- Non-fire rated materials
- Vacuum formed or injection-molded plastic signs
- Cabinet or "can" signs with illuminated translucent backgrounds and silhouetted letters
- Exposed neon tube applied directly to fascia element or mounted against a highly polished or reflective surface
- Flashing, moving, sequencing, audible or odor-producing signs
- Stickers or trademarks
- Carpet or rubber entry mat signs
- Internally illuminated awnings
- Exposed lamps, with the exception of non-flashing neon
- Charge card signs can be attached to storefront glazing but not to the storefront itself
- Any signs deemed unsuitable by the Port

STOREFRONTS

Signage

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Blade Signs

In addition to the main identity sign, the Port allows and encourages (but does not require) the use of blade signs in specific locations to provide improved visibility. Each tenant is allowed one blade sign per concourse store front. Blade sign(s) should be adorned with the tenant's logo/identity mark and fabricated by the tenant's sign fabricator. The sign must be two sided with a maximum area of five hundred square inches (500 in2) on each side. The sign cannot protrude more than forty-eight inches (48") from the exterior tenant wall. The design and location must be approved by the Port Representative prior to installation. If blade signs already exist at locations being remodeled, they must be replaced (or removed if no blade sign is desired) at the tenants expense.

Awnings

Awnings are an allowed type of storefront signage. Awnings should have only letters or iconographic symbols designating the tenant's trade name and should be applied to the valance or apron, scaled appropriately to the overall apron height.

Plaques

Etched plaques that are non-illuminated, non-ferrous metal or sandblasted stone with etched and in-filled letter graphics are permitted. Plaques must have one-inch (1") returns and be mounted with non-ferrous concealed anchors. Tenants are allowed two plaques per location, subject to Port Representative approval.

Tenants with plaques cannot also have awnings – a choice must be made between the two sign types.

STOREFRONTS

Signage

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Glazing Graphics

Small-scale glazing graphics no larger than four inches (4") in height are permitted. They should be applied low and directly to the exterior surface of the unit's show window with Port Representative approval. Graphics must be silk-screened, gold or silver leaf, pressure sensitive die-cut vinyl, metal appliqué on glass, or glass etching. Hand painting is not permitted.

Additional Requirements

In the Central Terminal, no penetration of the base building stone veneer wall is allowed for signage attachment or electrical routing with the exception of the attachment of blade signs.

In Concourse B, there is an additional column band signage allowed:

- Tenants are encouraged to brand the columns adjacent to their spaces using the sign band provided by the Port. The existing column dimension is 25" diameter. The outside diameter of the sign band is 27". The overall circumference of the sign band is 84.78". The sign band is comprised of two pieces that butt up against each other. The tenant will need to provide two vinyl bands that are 43" x 18.5". Those dimensions include 1/4"+ bleed space on each side of height and width. The column sign band is two pieces that form a ring around the top of the column. There will be a joint between the two halves that is minimal. The Port will install the sign band and the tenant will have to provide the vinyl wrap. The columns receiving a sign band are determined by the Port. The Port must approve all design elements in this area.

STOREFRONTS

Promotional Signage

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Permanent Promotional

Permanent promotional signage is allowed within a tenant unit if certain requirements are met. This signage can be digital and static or dynamic, but it must be part of a cohesive visual merchandising strategy. All content is subject to Port Representative review and approval.

- No pricing information can be part of the sign when displayed at the storefront, except for menus for service based businesses such as restaurants, barber shops or spas.
- Dynamic content signs must show static information for a minimum of 15 seconds per image.
- "Appear" (no transition) and "dissolve" are the only approved formats for transitioning between images. Spinning, expanding, twirling or any other animated activity is not allowed.
- All menu boards must be professionally designed and fabricated. Menu boards are permitted at the storefront, but can't be hung from the ceiling directly in front of storefront bulkhead. Push-in style letters are unacceptable. All menu boards mounted to walls must be visually integrated into Display Zone.
- Permanent promotional signage is reviewed on a case-by-case basis.

Temporary Promotional

One temporary sign, such as advertising placards, banners, and pennants, featuring a limited time offer is allowed per concession and required Port Representative approval. This signage is intended to allow concessionaires the opportunity to promote price and/or brand offerings.

- The sign must be located within the retail display zone. The Port may remove any sign that migrates into the terminal area.
- Signs may only be fabricated on durable substrates that match the intended life of the sign. Signs made of paper or other non-durable materials will not be permitted. Sign holders should be of a material able to withstand the abuse from travelers coming in contact with it. The sign holder should also reflect and tie into the overall design of space. If a sign isn't durable enough and shows wear the Port will remove it.
- Maximum size of temporary promotional signs is 30"w x 78"h.

STOREFRONTS

Secondary & Informational Signage

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Secondary Signage

Secondary signage to identify: product departments, food pick up locations, etc. Secondary signage to be incorporated into the overall concept and design of the space. For retail, only the most significant departments should receive signage.

Informational Signage

Informational signage within the concession is permitted, but should be minimized. The Port reserves the option of requesting elimination or redesign of signage if it overpowers the merchandise or overall design.

Any paper signage to display hours, health code ratings, etc need to be in a sleeve or placard to display. Paper signs taped to walls or windows are not allowed.

STOREFRONTS

Digital Media & Audio

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Design Approach
Zones
Location Specific Considerations
Piers
Security Closures
Materials & Finishes
Signage
Storefront Signage
Promotional Signage
Secondary & Informational
Digital Media & Audio
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Digital Media

The use of most LED screens (or other monitors) at storefronts must conform to permanent promotional signage criteria.

Televisions or other monitors displaying moving content will not be permitted within five feet (5'-0") of the lease line, including the storefront itself, except when the content is the specific product for sale and that product is the primary product of the tenant. For example, if a tenant's business is retailing DVD movies, the Display Zone can feature monitors with movies. However, a tenant selling fly fishing gear cannot use monitors to show a video of someone using the gear while fishing (even if that video is for sale in the store, since it is not the primary product of the store).

Televisions or other monitors displaying content that adds to the overall merchandising concept and design of the space, such as a sports channel in a sports bar, or a news monitor in a news branded news/gift store, is allowed within five feet (5'-0") of the lease line, subject to Port review.

Any screens with potential for "burn in" cannot be used for digital media.

Digital media used in a truly unique application that adds to the overall concession program are encouraged and will be reviewed on a case-by-case basis.

Self-Serve kiosks that include digital signage need to be sized appropriately, located appropriate and require Port Approval.

Audio

Digital media with sound may not carry beyond the Display Zone. Absolutely no sound may encroach into public areas or into any other unit, either through the walls or via storefronts.

The Port will grant more consideration to concessionaires who use sound to support product sales, such as headphones or music. However, at no time will the Port allow any noise that conflicts with other uses of the terminal, such as the public address system.

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Vertical Surfaces
Flooring
Wall Base
Ceilings
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

The following sections identify materials that may be used in tenant spaces at SEA. All materials must be non-combustible, fire resistant, and meet applicable codes. All materials will be reviewed and are subject to approval by the Port.

General Standards

In all cases, materials must express **Northwest Sense of Place** design and reflect the highest level of quality, finish, and detail.

All materials must be suitable for high traffic settings (commercial grade materials). Tenants should be aware that baggage carts, wheeled baggage and airline courtesy carts create high-impact zones at both storefronts and shop interiors. Tenants are strongly encouraged to incorporate design and materials that will withstand abuse and maintain an attractive appearance.

Alternative materials that are not listed within these guidelines may be presented to the Port for consideration.

The Port of Seattle's Facilities & Infrastructure and Airport Dining & Retail teams reserve the right to reject any proposed tenant finishes and materials that, in the Port's opinion, are considered to be in aesthetic conflict with the concourse finishes and/or adjacent approved finishes.

All signage and graphics will be reviewed on a case-by-case basis.

Fire Ratings

Materials and assemblies must comply with applicable flame-spread ratings and fire resistance. All construction and fire resistive material requirements must comply with the UBC, UFC and NFPA (most current edition) for Fire Zone 2. Special attention must be paid to adhesives, cabinet panel cores, veneers and coatings. These will be reviewed in detail by the Fire and Building Departments.

INTERIOR MATERIALS & FINISHES

Vertical Surfaces

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Vertical Surfaces
Flooring
Wall Base
Ceilings
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

The most common type of wall constructed by tenants will be composed of metal studs (minimum 25 gauge) and drywall. These components must conform to applicable regulatory requirements and codes. The Port will provide an unfinished demising wall construction at all tenant spaces, this could be open studs or have drywall or existing finishes from a previous tenant. Storefronts must be supported directly from the building structural system where such support is necessary. The base building bulkhead and ceiling may not be used for such support.

Temporary Construction Walls

In areas where temporary walls are needed they will be constructed by the Port. The Port pays for the installation of the barricade and any graphics applied to it. The Port will coordinate the content of the graphics with each tenant.

Recommended Materials

- Natural Stone
  - ◊ Marble, granite, sandstone, limestone, quartz and slate are encouraged. Stone should be sealed, as appropriate, for the particular stone.
- Metals
  - ◊ The creative use of exposed metal as an accent material within the store environment is encouraged. Approved metals include bronze, brass, copper, stainless steel, pewter, nickel, iron, aluminum and chrome. Finishes include sandblasted, imprinted, painted, etched, brushed, textured, polished, anodized, and factory enameled. Products may be extruded or rolled, sheet, perforated, welded wire fabric or mesh. Sheet products shall be either heavy gauge or detailed to prevent "oil-canning." No scratches, warping, dents, or other imperfections are allowed. Seams must be detailed to enhance the overall design.

INTERIOR MATERIALS & FINISHES

Vertical Surfaces

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Vertical Surfaces
Flooring
Wall Base
Ceilings
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Recommended Materials

- Glass
  - ◊ Windows should consist of clear glass in a frameless butt -glazed system or an approved aluminum or wood framing system. Glass allowed includes tempered clear glass, decorative and art glass. Art glass may be colored, textured, stamped, cast, fused, etc. Vinyl films may be applied to the glazing to enhance the design.
- Wood
  - ◊ All exposed wood must be natural or finished with clear stains of approved color values or painted color to be approved by the Port Representative. Samples for wood finish must include exact species, stain and finish. All wood work must be kiln-dried and Class I fire-retardant treated per Code requirements. Encouraged woods include maple, oak, cherry, walnut, fir, hemlock, pine, cedar and mahogany. Detailing to minimize marring and scratching should be considered when wood is used.
- Painted Finishes
  - ◊ Shop and field applied paint finishes may be utilized. Colors and textures are to be approved by the Port Representative. Painted walls must be coated with a primer-sealer prior to application of at least two finish coats.

Acceptable Materials

- Plastic Laminates
  - ◊ Plastic laminates must be shop applied and limited to areas where corner impact and chipping will not become an issue. Detailing of plastic laminates must consider treatment of joints and edges. Imitations of natural materials, such as granite, marble or stone are not accepted. Wood grain laminates are subject to Port review and approval. Refer to the Port Architectural Standards and Casework Standards for technical requirements. Solid core laminate is preferred for durability and laminates with a contrasting core will be reviewed on a case by case basis.

INTERIOR MATERIALS & FINISHES

Vertical Surfaces

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Vertical Surfaces
Flooring
Wall Base
Ceilings
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Acceptable Materials

- Tile
  - ◊ Tile allowed includes glass, natural stone, ceramic, and porcelain. Any size tile is allowed. Use of quarry tiles should be limited to the back of house or kitchen applications. Sealant should be applied as recommended by the manufacturer. Keep the location of the tile in mind when selecting grout colors. Use darker tone grout in high traffic areas where dirt collects. Use of light mortar should be restricted to vertical surfaces a minimum of eight inches (8") above the finished floor (AFF). Only Polyurethane fused or Epoxy grouts shall be used at the Airport. Joint widths not to exceed 1/8".
- Mirror
  - ◊ Allowed mirror includes clear, colored and bronze. Mirror fastening should avoid J–molding trim whenever possible. Use of mirror on storefronts is not allowed.
- Display walls
  - ◊ "Slat-wall" type display systems are a flexible and effective means of displaying merchandise, however, tenants are cautioned regarding their use. If used, slat-wall systems should be of the highest commercial quality, with attractive finishes and used sparingly for merchandise display and not as a general wall surface. Hardwood trim, moldings and adjoining casework that frame the slat-wall panels are required. Use of slat-wall systems is subject to review and approval by the Port Representative. Generally, three inch (3") on center (OC) plastic laminated slat-wall is not allowed. Resin or extruded metal slat-wall with slats at one inch (1") OC or greater than six inch (6") OC is preferred.

INTERIOR MATERIALS & FINISHES

Vertical Surfaces

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Vertical Surfaces
Flooring
Wall Base
Ceilings
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Prohibited Materials

- Pegboard walls and pegboard fixturing systems
- Vinyl tile, sheet vinyl, or other sheet goods flooring within the area of public view (reclaimed rubber flooring may be acceptable and is reviewed on a case-by-case basis)
- Shingles (asphalt)
- Field painted aluminum
- Plywood paneling (simulating T&G boards)
- Simulated materials, such as plastic stone or brick
- Live plants and non-fire rated plastic plants
- Fluorescent paint
- Any material that, in the Port Representative's opinion, is low quality, non-durable and/or difficult to maintain

INTERIOR MATERIALS & FINISHES

Flooring

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Vertical Surfaces
Flooring
Wall Base
Ceilings
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Flooring Standards

- The level of the finished floor within the tenant area must align with the finished floor elevation of the concourse.
- No raised or depressed floors for general sales will be permitted.
- No raised thresholds are permitted. If a transition is required in floor level, it shall not exceed 2% in slope and shall only occur on the interior side of the unit closure line.
- Any method of cutting or feathering of any unit flooring to meet the public concourse floor level must be approved by a Port Representative.
- The leveling screed, floor finish and partitions shall have a maximum dead load of 20 PSF.
- The Tenant must provide a stainless steel transition strip to separate the concourse floor material and unit floor material.
- Operators with plumbing service must provide a 40 mil waterproofing, anti -fracture membrane in all wet areas such as kitchens, food preparation areas, etc.
- All flooring materials shall be durable, high quality and slip-resistant.

New Construction

The Port will provide an unfinished structural slab concrete floor recessed below the finished floor elevation for all premises within new construction.

Existing Spaces

Some facilities within the terminal may require the removal of existing flooring. In these cases, the tenant is responsible for removing any existing flooring, and providing the necessary substrate for the new flooring, including a vapor barrier where required. In areas where base building terrazzo must be removed, the tenant may encounter regulated materials, such as asbestos. The tenant is to coordinate with the Port for the removal of any flooring.

INTERIOR MATERIALS & FINISHES

Flooring

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Vertical Surfaces
Flooring
Wall Base
Ceilings
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Slab Floor Penetrations

Any required concrete slab core-drilling shall be done by tenant at their own expense, per Port approval. No penetrations are permitted without a GPR scan of the slab, at cost to the tenant. The Port may require structural documentation from the tenant that the penetrations do not compromise the structural integrity of the slab. In areas where hazardous materials are found, the Port will be responsible for core drilling. All slab penetrations must be sealed to meet fire separation requirements per applicable codes. No penetrations are allowed in the terrazzo floors within the concourses.

Expansion Joints

Some units will have building expansion joints passing through the space. In these locations, the tenant will provide and install, per Port standards, all required expansion joint fillers and covers. Expansion joints shall be installed to conform and align with terminal building expansion joints.

Live Load

The maximum live load shall not exceed 100 PSF (unreduced). In cases where a tenant proposes to introduce floor loads exceeding 100 PSF (i.e., safe, aquariums, etc.), the tenant will be responsible for verifying structural adequacy and coordination with the Port Representative. The tenant will be responsible for the costs of engineering and construction of any structural upgrades.

INTERIOR MATERIALS & FINISHES

Flooring

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Vertical Surfaces
Flooring
Wall Base
Ceilings
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Acceptable Materials

- Wood
- Porcelain
- Ceramic tile
- Tinted concrete, textured or polished
- Natural stone
  - ◊ Natural stone should be installed with eased or chamfered edges and properly grouted and sealed per industry standards. When used as flooring, these materials must maintain a friction coefficient of 0.6 when tested in accordance with ASTM C1028.
  - ◊ Stone should be sealed, as appropriate, for the particular stone.
- Terrazzo
- Rubber tile
- The following materials are acceptable on a case-by-case basis:
- High performance commercial carpet
- Marmoleum
- Quarry tile
- LVT plank tile

INTERIOR MATERIALS & FINISHES

Flooring

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Vertical Surfaces
Flooring
Wall Base
Ceilings
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Prohibited Materials (within public view)

- Vinyl composite tile (VCT)
- Rubber tile
- Sheet vinyl
- Artificial versions of stone, marble, tile or other natural material
- Brick or simulated brick
- Low grade carpet
- Unfinished concrete floors
- Any material that, in the Port's opinion, is low-quality, non-durable and /or difficult to maintain.

Material Considerations

- Storage areas must have a minimum finish of sealed concrete.
- In all wet areas where water is used, such as kitchens, wait stations and bars, the tenant must provide a durable and cleanable flooring surface with a minimum six-inch (6") high cove base or as required by the Health Department code (whichever is higher). Epoxy grout must be used on tile.
- An **interior waterproof membrane** must be installed in all wet areas - see Architectural Standards.

INTERIOR MATERIALS & FINISHES

Wall Base

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Vertical Surfaces
Flooring
Wall Base
Ceilings
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

The tenant will provide a consistently maintained wall base, a minimum of six inches (6") high, of an appropriately durable material, throughout the entire visible interior.

Acceptable Materials

- Stone tile
- Ceramic tile
- Stainless steel
- Wood

Prohibited Materials (within public view)

- Pre-finished metals other than stainless steel
- Plastic laminate
- Rubber or vinyl base

INTERIOR MATERIALS & FINISHES

Ceilings

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Vertical Surfaces
Flooring
Wall Base
Ceilings
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

All unit ceilings are subject to Port approval and must conform to all regulatory requirements and codes having jurisdiction.

Design

Ceilings should be designed for a natural transition from the entrance to the sales area, and complement the overall aesthetic design of the premises, fixtures, and equipment layout.

- The Port encourages soffit drops and multi –planed ceiling designs, when used creatively.
- Flat acoustic ceiling tile is not acceptable. At a minimum, tiles must be 2' x 2' and have a Tegular (rabbeted) edge.
- The tenant must provide accessible ceilings and/or access panels in all areas where access is required to mechanical, electrical, and fire protection equipment located above the ceiling. Where fixed base building electrical and mechanical services may pass through public areas of the tenant lease space, the tenant must accommodate these components within their design and ensure that the appropriate access is provided.
- Ceilings within the customer area of the tenant's premises must include a finished ceiling and be gypsum drywall or approved suspended metal or acoustical tile. Open-to-structure ceiling designs utilizing ducts, lighting grids or other sculptural elements will be reviewed on a case-by-case basis. The Port may allow an open ceiling, if in the opinion of the Port, it enhances the overall concept and passenger experience.

Acceptable Materials

- Wood
- Gypsum wallboard
- Suspended metal
- Acoustical tile

INTERIOR MATERIALS & FINISHES

Ceilings

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Vertical Surfaces
Flooring
Wall Base
Ceilings
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Prohibited Materials (within public view)

- Flat acoustic ceiling tile without a Tegular (rabbeted) edge
- Exposed ceilings open to the structure above (except when, in the opinion of the Port, they enhance the overall concept)

New Construction

- Ceilings in tenant spaces within new construction will be unfinished to the underside of the structural floor deck above, with a bulkhead on the lease line.

Existing Spaces

- Some tenant spaces within the terminal may require demolition of existing ceiling elements prior to construction. Existing ceilings cannot be reused unless they are a hard surface and in the opinion of the Port are in like-new condition or can be made to be in a like-new condition.

Ceiling Support Systems

- Suspension systems must be grid type, either exposed or concealed, to accept various types of ceiling panels and/or gypsum wallboard. System components must support the ceiling assembly with a maximum deflection of 1/36 of the span of any component. Where a suspension system is to be installed in a high moisture environment, such as a commercial kitchen, use of a roll-formed aluminum grid is required.
- Ceiling systems must be supported directly from structure or may be indirectly supported by a secondary intermediate support system, which will provide stiffness equal to that of the originally tested elements.
- Avoid layouts that will produce border areas less than 1/4 of a ceiling panel width. Lighting fixtures and mechanical diffusers must be independently supported at all four corners.

FURNITURE & FIXTURES

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Furniture & Fixtures
Seating
Shoeshine
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Furniture and fixtures must be commercial quality, designed for the intended function, and able to withstand heavy customer use. The tenant is advised to pay particular attention to the materials, finishes, and construction of the furniture to ensure long service-life and an attractive appearance. Tenant furniture is subject to review and approval by the Port.

Integrated Design

- All millwork, counters, and furniture for retail, lounges, or food and beverage establishments, shall be an integral part of the overall design. This integration must be expressed in its character, quality, and construction.
- Any food service equipment that is within sight of customers must be coordinated and integrated; including the finish and trim on all factory-finished surfaces of coolers, freezers and other casework and equipment, either natural or painted.

Surfaces

- Recommended countertop or table top materials include quartz, natural stone, composite, solid surface, concrete, appropriately treated solid wood surfaces, and metal (stainless steel).

Tables & Chairs

- Table tops and edges should be of durable surface materials and easily cleaned. Use of plastic laminate is typically not acceptable, unless Port approved.
- Table bases should be of suitable scale and construction to provide stability and durability.
- Chair frames are to be metal or solid wood. Upholstery, where used, should be selected for its ability to be easily maintained, and commercial grade fabric, vinyl or leather. Fabrics should have a pattern that aids in keeping a clean appearance.

FURNITURE & FIXTURES

Seating

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Furniture & Fixtures
Seating
Shoeshine
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

When tenants are required to provide public seating outside the lease line, it must conform to the following guidelines:

- The seating system must be designed for high-traffic areas.
- The furniture must consist of minimal parts with the desire that parts are interchangeable and reusable between seating groups. Inventory management of parts must be minimized and easily tracked.
- Furniture must be free of sharp corners, protruding elements, or any other projections that could create a safety hazard for human impact and movement in and around the furniture.
- Furniture cannot be attached to the floor and chairs must have appropriate glides to prevent scratches and damage to finish floors. Spare gliders must be purchased and maintained in stock at all times the seating is in service.
- Seating observed with 1/16" joint play in any direction must be removed from service.

Aesthetics

- Appearance should be timeless to work with SEA now and in the future.
- Clean lines, minimal materials and simple forms create visually pleasing seating.
- Details should be simple and durable with attention to the quality of craftsmanship and clean welds.

FURNITURE & FIXTURES

Seating

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Furniture & Fixtures
Seating
Shoeshine
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Chairs

- Comfort and Ergonomics
  - ◊ Comfortable for short-term seating
  - ◊ Accommodate people of varying body types
  - ◊ Small children can be seated without fear of falling through the back (provide high chairs as well)
  - ◊ Seat should be at a good height so that passengers are able to get up out of the seat, especially for the aging population
  - ◊ Arms on chairs are allowed, but limit to no more than 50% of seats.
- Maintenance, Performance, and Durability
  - ◊ Weight should be light enough to move, but sturdy enough to stand up against wear and tear
  - ◊ Durability – Scratch and wear resistant materials must be used, such as: wood, metal
  - ◊ Cleaning of the chair - Minimize crevices, corners or other features where dirt can accumulate, requiring special cleaning
  - ◊ Finishes shall be appropriate for all high-traffic areas

Tables

- Comfort and Ergonomics
  - ◊ Tabletop should be comfortable to sit at and appropriate to chair height
  - ◊ Size – Diameter or width should be large enough to have room for passenger items and there should be a combination of two-top or four-top tables.
- Maintenance, Performance, and Durability
  - ◊ Heavy base to prevent movement and support table top
  - ◊ Cleaning of table base – Minimize crevices, corners or other features where dirt can accumulate, requiring special cleaning
  - ◊ Flat, curved base, legged base
  - ◊ Table top should be flat without reveals that could collect dirt. In addition, they must be able to withstand typical cleaning supplies.
  - ◊ All fasteners must be durable

FURNITURE & FIXTURES

Shoeshine

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Furniture & Fixtures
Seating
Shoeshine
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Shoeshine locations must also present a simple, elegant, sophisticated appearance. Shoeshine stands are also subject to heavy abuse from passenger luggage, carts, and floor buffers, so careful material selection and detailing to maintain an attractive appearance is important. Operational items, such as lockable storage for supplies and tools must also be accommodated in the design. While polish, brushes and polish cloths must be available for ready use, the stand design must provide convenient storage such that a clean, neat and professional appearance is easily and continually maintained.

- Standard measurements should be approximately eight feet (8'-0") or ten feet (10'-0") wide by four feet six inches (4'-6") deep.
- Creative designs utilizing materials aligned with the Northwest Sense of Place design aesthetic are required.
- Materials must be subdued, using metals, such as brushed stainless, natural wood that is fire retardant, and solid core plastic laminate or other solid surfaces with maximum flame spread specifications for local code.
- Design must incorporate a cash register that can be stored in a lockable cabinet.
- The stand must accommodate a post that can display a sign for pricing and hours of operation, or a filler backboard displaying this information.
- Customer seating should be stationary. Stand chairs can be metal or wood. Color of upholstered seats should coordinate with other stand trims. Chairs shall be low backed, include armrests and located on a raised platform with non-slip access steps.
- Chrome polishing footrests may be fixed or adjustable and located at a height to prevent excessive stooping by employees.
- Other stand features should include a hook, post, or similar for customer jackets; a shelf or post for customer packages or baggage and cup-holders at chairs.
- Any floor mats used in front of the stand must be black rubber, or match in color with other stand finishes.

KIOSKS & RMU'S

Kiosks

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Kiosks
RMU's
Lighting
Architectural Standards
Appendix

Kiosks are subject to the same guidelines as in-line tenant spaces, thereby supporting the overall design aesthetic of the airport while presenting a unique and compelling brand image. Kiosks should present a permanent appearance, utilizing quality materials in a simple, yet elegant manner and allow for the display of products and services in a clear and sophisticated way such that customer interaction is intuitive.

General Considerations

- Consideration must be given to the design and finish of all exposed surfaces. Kiosks are typically free-standing, therefore exposed to views on all sides.
- Kiosks are especially susceptible to damage from passenger luggage and carts. Careful selection and detailing of materials is essential.
- Tenants must carefully plan their operation with respect to display and storage of merchandise and trash handling.
  - ◊ Adequately enclosed storage for back-stock, supplies and trash must be provided either within the kiosk or in a remote location.
  - ◊ These materials may not be left on the floor either inside or outside the kiosk. A clean, professional appearance must be maintained at all times.
  - ◊ Required security closures must be either decorative or hidden during hours of operation. When the kiosk is closed, the security closure should appear as an integrated and attractive part of the design.

Lighting

The general lighting level varies throughout the airport and may not be sufficient for the services provided at a kiosk. Therefore, appropriate fixtures should be incorporated into the design to provide adequate lighting for functional and aesthetic purposes. Lighting can be used to highlight displays, signs, and architectural elements, as well as add character and appeal to the overall appearance of the design. However, the lighting should neither overpower the space nor cause a distraction to passengers moving past the space.

KIOSKS & RMU'S

Kiosks

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Kiosks
RMU's
Lighting
Architectural Standards
Appendix

Signage

Free-standing kiosks are restricted to a primary "identification" sign displaying the logo. The sign should be compatible in size and finish with the overall kiosk design. Kiosks are generally limited to one identification sign or one identification graphic parallel with the main concourse in which it is located. If the Kiosk's orientation works with signs perpendicular to the concourse, these signs should be dual sided in order to capture travelers approaching from multiple directions.

Where a business is located in an island-type, free-standing configuration within a terminal, the height of the tenant enclosure and/or ornamental entrance will be subject to approval. As a general rule, design features shall not exceed ten (10'-0") to twelve (12'-0") feet in height. All free-standing vertical elements shall be engineered to withstand seismic forces.

Design Considerations

- Use of wood, metal, glass and stone to create distinctive kiosk shapes and three-dimensional iconic forms that support the tenant's brand are encouraged.
- Canopies should be light, airy and open to maximize visibility into the kiosk while maintaining site lines to airport signage and adjacent tenants. Kiosks cannot block the key sight-lines to other businesses and facilities.
- Canopies constructed of wood, metal and glass that support three-dimensional signage and lighting are encouraged.
- Incorporate light fixtures into design for adequate lighting of functional and aesthetic purposes.
- Electrical conduits and transformers may not be exposed; these items must be concealed by the millwork or graphics of the kiosk.
- The use of Terminal power outlets is expressly forbidden; each individual Kiosk shall make application to Electrical and any other Utility necessary to operate the Facility.
- Food and beverage tenants must have a waterproof membrane under the full footprint of kiosk.

KIOSKS & RMU'S

Retail Merchandising Units (RMU)

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Kiosks
RMU's
Lighting
Architectural Standards
Appendix

The key difference between a retail merchandising unit (RMU) and a kiosk is that the RMU shall be designed so that it is movable. In addition, RMUs have a maximum height of six feet (6'-0") AFF so that they do not interrupt sight lines to other tenants or airport signage and do not require anchorage to floor. Refer to your lease documents for other size limitations.

Like kiosks, RMUs should present a simple, sophisticated appearance. They must conform to the same design standards as other dining and retail spaces, therefore, creative designs utilizing materials with a Northwest flavor are highly encouraged.

RMUs are also subject to heavy abuse from passenger luggage, carts, and floor buffers, so careful material selection and detailing to maintain an attractive appearance is important.

LIGHTING

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Lighting that creates visual interest and excitement is key to a company's success. Lighting serves to focus the customer's attention on merchandise, or create the perfect mood for a meal while enhancing the interior and storefront design. In general, interior lighting should be warm and inviting. Lighting in the storefront entrance and display zone should strongly accent merchandise and encourage shopper exploration. Storefront lighting should not create glare in the concourse or interfere with the existing concourse area lighting or informational displays.

The Port encourages tenants to use a lighting designer to assist in employing the most current and effective lighting techniques while minimizing electrical consumption. All lighting must meet the current version of the Washington State non-residential energy code.

Lighting Standards

- All lamps must be shielded in a manner to minimize glare. The Port may require the tenant to adjust fixture aiming after installation if such lighting conflicts with airport design or passenger flow.
- Electrode connections for neon type lighting must be kept out of customer reach.
- Wherever possible, designers should consider using LED fixtures. The light quality can match that of incandescent or fluorescent bulbs with far less energy use allowing for more lighting while still meeting the energy code requirements.
- The use of fluorescent fixtures in concession spaces is not allowed. LED lighting is preferred since it is more flexible, energy efficient and kinder to the environment. If there is a specific need for a fluorescent fixture the Port will review it on a case by case basis.
- A 7-day, 24-hour calendar-type timer control must be provided by the tenant for illumination of the tenant's storefront display windows and signage (including blade signs).
- All fixtures shall be commercial quality, U.L. listed and approved by the Port.
- Be sure to allow sufficient access to the lighting for repair and maintenance.
- Special fixtures, bulbs or filters to create mood lighting and achieve a desired atmosphere, for uses such as restaurants, cafes, and bars are encouraged, but must be approved by the Port.
- All lighting shall be energy-conserving.

LIGHTING

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Lighting Standards

- Tenants are required to work with a licensed engineer to ensure designs meet all applicable building and energy codes.
- Tenants shall be responsible for egress lighting within their spaces and are expected to use battery systems for such lighting. No emergency generator systems are available.

Recommendations

- Use, where appropriate, recessed light fixtures or fixtures that innately diffuse the light source.
- Use a mix of lighting fixture styles to express the design concept. For example, use accent fixtures bracketed off walls or pendant fixtures suspended over bars and cash wrap areas, combined with recessed wall washers.
- Light the ceiling and wall planes to add drama, excitement and a sense of spaciousness to the storefront and interior.
- Storefronts should be brightly and dramatically lit to focus attention on merchandise, and contrast with lighting levels in the concourse.
- Lighting in the storefront entrance and retail zone should strongly accent display fixtures and merchandise that encourages shopper exploration.
- Vary light levels within the space to add visual interest and direct customer movement through the space.
- Provide appropriate light levels for varying areas, such as magazine displays versus point-of-sales, food preparation versus dining areas.
- Address the quality of light, such as using lamps with a high color rendering index (CRI) or color corrected sources.

LIGHTING

Design Vision
Design Guidelines
Tenant Spaces
Introduction
Tenant Design Vision & Design Guidelines
Tenant Design Standards
Storefronts
Interior Materials & Finishes
Furniture & Fixtures
Kiosks & RMU's
Lighting
Architectural Standards
Appendix

Prohibited Lighting Applications

- No surface-mounted fixtures with exposed lamps, except for those of a decorative nature.
- No fluorescent fixtures will be permitted within the retail zones, unless specifically approved.
- No exposed raceways, crossovers, conduits, conductors, transformers and other equipment visible to the public.
- No moving, strobe or flashing lights.
- No light sources with a CRI less than 80.

Storefront Lighting

- Track lighting in display windows should be recessed in coves or pockets unless, in the opinion of the Port Representative, the track head enhances the overall concept. Attractive fixtures do not automatically qualify as enhancing the concept.
- Spotlighting may be achieved using recessed, adjustable angle fixtures or track-mounted adjustable spotlights.

Natural Lighting

- Tenants are encouraged to allow natural lighting into public spaces next to exterior windows wherever possible and maintain maximum views to the airfield through the exterior windows. .
- Where non-public areas adjoin exterior windows (such as storage, kitchen or office space), the tenant shall provide translucent window film on all exterior glazings (subject to Port Representative approval). Film must be continuous between mullions, both vertically and horizontally. In addition, when film is used to block vision into the space the tenant must provide lighting so that the windows "glow" from the exterior during the tenant's hours of operation.
- Blacked out windows are not permitted.

4

ARCHITECTURAL STANDARDS

SEA
Seattle-Tacoma International Airport

4

ARCHITECTURAL STANDARDS

4.1 Architectural Elements
- LEED Requirements
- Exterior
- Interior

4.2 Building Envelope
- Curtain Walls
  - Structural Glass
  - Glazed Aluminum
- Glazing
  - Tinted Glass
  - Clear Glass
  - Blast Protection
  - Glazing Film
- Panel Systems
  - Translucent
  - Metal Foam
  - Preformed Metal
  - Bronze Anodized Aluminum
  - Aluminum
- Concrete Masonry Unit (CMU)
- Vestibule
- Soffits

4.3 Roofing
- PVC
- Metal
- Parapets
- Roofing Elements
- Skylights

4.4 Structure
- Concrete
  - Columns
  - Beams
  - Walls
  - Floor
- Exposed Steel Structure
  - Beams & Bracing
- Pavement
- Expansion Joints

4.5 Fenestration
- Doors
  - Public Entrance Doors
  - Concourse Entry / Exit Doors
  - Hollow Metal Doors
  - Flush Panel Hollow Metal Doors
    - Restrooms
    - Nursing Room
    - 60-Min Fire-Rated
  - Double Doors
  - Framed Glass Doors
  - Overhead Roll-Up Doors
    - Exterior
    - Interior
  - STS Doors
- Windows
  - Glazed Partitions
  - Storefront
- Louvers & Grilles
  - Grilles
  - Grilles & Screens
  - Louvers
  - Louvers & Vents
- Access Panels

4.6 Partitions
- Demountable Partitions
- Gypsum Wallboard
- Green-Board

4.7 Conveying
- Stairs
  - Exterior
  - Interior
- Rails
  - Metal Railings
  - Guardrails
  - Queue Rails
  - Baggage Claim Rails
- Elevators

4.8 Casework
- Check-In Lobby Counter
- Ticket Lift Podium
- Gate Check-In Counter
- Flight Information Display
- Charging Station

4.9 Furniture
- Checkpoint Seating
- Holdroom Seating
- Accent Seating
  - Recliners
  - Sofa-Style
  - Bench
  - Individual Seat
  - Ottoman
  - Lounge Seating

4.10 Lighting

4.11 Finishes
- Flooring
  - Waterproof Membrane
  - Traffic Coating
  - Resilient Flooring
  - Carpet Tile
  - Terrazzo
  - Stone Flooring
  - Tile Flooring
  - Broadloom Area Rug
  - Walk-Off Mat
  - Fixed Floor Mat
  - Astro Turf
  - Transition Details
  - Expansion Control Cover Plates
- Paint
  - Paint Type By Location
  - Specialty Coatings
- Wallcovering
  - Systems
  - Materials
  - Details
- Column Enclosures
  - Granite
  - Stainless Steel
  - Manufactured Metal
  - Stucco
  - Textured Column Finish
  - PLam
  - Gypsum Board

4.12 Ceilings
- Acoustic Ceiling Tile (ACT)
- Metal Ceiling
  - Tile
  - Linear
  - Gypsum Board Ceiling

4.13 Equipment
- Fire/Life Safety
  - Fire Extinguisher Cabinet
  - AED / Trauma Kit Cabinet
  - Emergency Cones
- Restroom Accessories
  - Partitions
  - Receptacle & Dispenser
  - Mirror & Glass
  - Grab Bars
  - Hooks & Shelves
  - Changing Station
  - Step Stool
  - Toddler Seat
  - Occupancy Sensor
- Bollards & Stanchions
  - Bollard
  - Magnetic Stanchion
  - Stanchion Ribbon
- Landscape Containers
  - Movable Interior Landscape Containers
  - Planters
- Waste Receptacles
  - Interior Receptacle
  - Exterior Receptacle
  - Cigarette Trash Receptacle
- Miscellaneous
  - Bird Control
  - Bag Dispenser
  - Compactor

4.1 ARCHITECTURAL ELEMENTS

Architectural elements relate to both the exterior base building and the interior, and to both existing structures and new construction. This chapter provides some general guidelines on each approved item.

LEED REQUIREMENTS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
LEED Requirements
Exterior
Interior
Building Envelope
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

To align with our sustainability goals, below are some LEED requirements we encourage projects to follow:

Applicable LEED Credit Requirements

- MR – Building Product Disclosure & Optimization – Environmental Product Declarations
- MR – Building Product Disclosure & Optimization – Material Ingredients
- MR – Building Product Disclosure & Optimization – Sourcing of Raw Materials

Roofing and Structural (Pavement)

- SS – Heat Island Reduction

Equipment (Plumbing)

- WE – Indoor Water Use Reduction

Lighting

- SS – Light Pollution Reduction

EXTERIOR

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
LEED Requirements
Exterior
Interior
Building Envelope
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

The exterior of our buildings is the face of the Airport to the city. Passengers experience the exterior when arriving by car and plane, and through photographs of the Airport. Quality exterior design and construction ensures the longevity of our facilities and the well-being of our passengers, partners, and employees. The guidelines below aim to support these goals.

Exterior

- Any future external building finish is to be white.
- Finishes should be cleanable and abrasion resistant.
- Parapets are required to meet OSHA standards. Roofs must have 42" parapets, as the 4' elevation is the limit where fall protection is required. Where parapets are unworkable, Personal Fall restraint, fall arrest and fall prevention systems are necessary.
- Rooftop anchors or swing staging is required for window cleaners who use bosun chairs. If staging on rollers or tracks, it needs an enclosed shelter for storage with lighting and room for inspections.
- Glazing should match existing.
- An overall aim is to minimize glare while maximizing access to daylight and views.
- Light Shelves in new construction can be used.
- Frit (applied opaque lines to diffuse light) should be considered for existing glazing, instead of window shades.
- Bird Control measures should be installed inside and outside the terminal buildings, namely at parapets, fixtures, pipes, and horizontal mullions. The aim is to minimize possible perch points. For specifications, a single metal line is preferred over barbs.
- Exterior metal, such as stairs, shall not have exposed galvanization. Powder coating and aluminum are acceptable.
- Exterior stair treads should not be exposed metal. Cover metal treads with anti-skid fiberglass treads with contrasting integral nosing.

INTERIOR

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
LEED Requirements
Exterior
Interior
Building Envelope
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

The interior of our buildings is experienced more intimately by our passengers, as they spend time in our facilities while in transit. Quality interior design and construction enforces a positive, cohesive identity for SEA Airport.

Interior

- Partitions are used throughout the airport to create private rooms for security screening or offices for tenants. Acoustics and privacy are important, but so are visibility and access to natural light.
- Demountable partitions for creating enclosed rooms in open areas must be approved by ARC.
- Temporary partitions, used during renovations, must be approved by ARC.
- When specifying windows and doors, project teams should consider whether a higher up-front cost will result in lower long-term maintenance costs. The AVM Maintainability Standards offer door sizing guidelines to accommodate minimum equipment clearances.
- While the ceiling height within the building may vary, a typical door height per project should be established.
- A number of railing styles can be seen throughout the airport. Where possible the new standard should be followed. In some locations, it may be necessary to match a legacy standard.

4.2 BUILDING ENVELOPE

The building envelope is the skin of the Airport. Its components work together so that the Airport looks good and works well.

CURTAIN WALLS

Structural Glass

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
Building Envelope
Curtain Walls
Structural Glass
Glazed Aluminum
Glazing
Panel Systems
Concrete Masonry Unit (CMU)
Vestibule
Soffits
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

CATEGORIES	Glazing
ACCEPTABLE MATERIALS	Clear laminated tempered glass Insulated units Suspended or ground-supported Fittings or metal mullions Glass fins Fritted Glass Photovoltaic glass Electrochromic systems
NOTES	• Single source responsibility to be maintained for the entire system, including fabrication, installation, and total coordination of all curtain wall components. • Curtain Walls must be designed so that they can be maintained, design must include ability to access and replace glass panels. Provide minimum 3'-0" clear for access on interior. Provide exterior infrastructure for cleaning. • When providing views to airfield, minimize reflectivity of glazing on exterior side.
LOCATIONS	Building Exterior

CURTAIN WALLS

Glazed Aluminum

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
Building Envelope
Curtain Walls
Structural Glass
Glazed Aluminum
Glazing
Panel Systems
Concrete Masonry Unit (CMU)
Vestibule
Soffits
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

CATEGORIES	Glazing
RECOMMENDED MANUFACTURERS	Benson Industries Flour City Architectural Harmon Glass
FINISHES	Exterior and interior aluminum to have a three-coat spray, shop-applied, high performance fluorocarbon coating with a minimum of 70% Kynar 500 resin.
ACCEPTABLE MATERIALS	Anodized Aluminum
NOTES	• Bird Control at parapets, pipes, and horizontal mullions. Front-set glazing preferred for bird control methods. • Silicone sealants are not acceptable except for glazing systems designed for silicone joints. All exterior envelope penetrations subject to weather shall have redundancy built into the weatherproofing. • Ensure uniformity of color and visual appearance in all frame components and glazing surfaces. • Exposed fasteners finished to match adjacent aluminum. • Provide stainless steel protection cover with non-directional, 100 grit, brushed finish along sill mullions at floor. • Where new system is connecting or adjacent to existing system, match or provide similar finish as existing.
LOCATIONS	Building Exterior

GLAZING

Tinted Glass

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
Building Envelope
Curtain Walls
Glazing
Tinted Glass
Clear Glass
Blast Protection
Glazing Film
Panel Systems
Concrete Masonry Unit (CMU)
Vestibule
Soffits
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

CATEGORIES	Window Wall
RECOMMENDED MANUFACTURERS	Viracon PPG LOF Guardian
SIZE	Float glass shall be 1/4" minimum thickness.
FINISHES	Frit on windows
ACCEPTABLE MATERIALS	Gray insulated glass with low-E coating, with frit pattern Gray insulated glass, uncoated Gray insulated glass, uncoated, with sandblast Gray monolithic glass, uncoated Gray insulated glass with low-E coating Gray laminated insulated glass

NOTES

- Silicone sealants are not acceptable except for glazing systems designed for silicone joints. All exterior envelope penetrations subject to weather shall have redundancy built into the weatherproofing.
- Within energy conservation goals, increase natural daylight transmittance and enhance visibility.
- As translucent insulating panel is used as a secondary glazing material at Concourses B, C, and D, new concourses may also use translucent insulating panel in a similar manner.
- Translucent glazing will be required where visibility must be obscured. In such cases, fritted glazing is preferred over sandblasting. Sandblasted finish to be used only in areas not accessible to the public.
- Insulated glass shall be double glazed, dual sealed units, with air space between panes hermetically sealed with sealant at the perimeter of the unit.
- Vision glass shall be heat strengthened.
- Radar reflection on glass must be taken into consideration. For all airside exterior glazing, refer to "FAA Requirements".
- Specify performance criteria for shading co-efficient, and solar energy, UV, visible light, and infrared transmittance.
- Exterior windows to have a Sound Transmission Class (STC) rating of 38 minimum.

LOCATIONS

Concourses B, C, and D - Gray tinted insulated glass, lighter than the existing. Secondary panels are "Kalwall".
International Arrivals Hall - Clear, low-E coated insulated glass.
Main Terminal - Utilize gray glass that is lighter than, but still compatible with, the existing dark gray glass.

GLAZING

Clear Glass

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
Building Envelope
Curtain Walls
Glazing
Tinted Glass
Clear Glass
Blast Protection
Glazing Film
Panel Systems
Concrete Masonry Unit (CMU)
Vestibule
Soffits
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

CATEGORIES	Window Wall
ACCEPTABLE MATERIALS	Clear insulated glass with low-E coating Clear insulated glass with low-E coating, with frit pattern Translucent laminated glass Anodized Aluminum Mullions
NOTES	• Frit is used on windows. • Bird Control at parapets, pipes, and horizontal mullions • Silicone sealants are not acceptable except for glazing systems designed for silicone joints. All exterior envelope penetrations subject to weather shall have redundancy built into the weatherproofing. Clear low-E coated insulated glass is to be used in custom designed curtain wall, as used in the International Arrivals Hall. • Insulated glass shall be double glazed, dual sealed units, with air space between panes hermetically sealed with sealant at the perimeter of the unit. • Vision glass shall be heat strengthened. • Radar reflection on glass must be taken into consideration. For all airside exterior glazing, refer to “FAA Requirements” in Section 1. • Specify performance criteria for solar energy transmittance, shading co-efficient, ultraviolet transmittance, visible light transmittance and infrared transmittance. • Exterior windows to have a Sound Transmission Class (STC) rating of 38 minimum.
LOCATIONS	Building Exterior

GLAZING

Blast Protection

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
Building Envelope
Curtain Walls
Glazing
Tinted Glass
Clear Glass
Blast Protection
Glazing Film
Panel Systems
Concrete Masonry Unit (CMU)
Vestibule
Soffits
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

CATEGORIES	Blast Protection
DESCRIPTION	Blast protection for glazing systems (windows, curtain walls, railings, etc) on public facing glazing
REQUIREMENTS	Minimize injuries due to shrapnel in event of explosion Type II Ballistic/Blast Protection as set forth in United States DOJ - NIJ Standard 0108.01
PRODUCTS	Glazing Window Film
NOTES	• For new glazing systems - provide blast protection integrated with glazing systems to avoid voiding warranties • For existing glazing - replace glazing or provide window film • Adding window film to existing glazing can void warranties - discuss with Port AVM and F&I • Reference Department of Defense UFC 4-010-01 Standards for additional glazing design criteria considerations. See Low and Medium sections of *Table 2-1 Levels of Protection - New and Existing Buildings* • Review locations with Port stakeholders (including Security, F&I, AVM)
LOCATIONS	Glazing adjacent to Public Roadways All glazing that is in Public Facing areas (interior & exterior)

GLAZING

Glazing Film

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
Building Envelope
Curtain Walls
Glazing
Tinted Glass
Clear Glass
Blast Protection
Glazing Film
Panel Systems
Concrete Masonry Unit (CMU)
Vestibule
Soffits
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

CATEGORIES	Diffuse Light, Blast Protection, Block Views Beyond, Anti-Graffiti
DESCRIPTION	Blast protection for glazing systems (windows, railings, etc) on public non-secure side of Main Terminal
REQUIREMENTS	For Blast Protection film - see Blast Protection Page Diffuse Light & Block Views Anti-Graffiti
PRODUCTS	Glazing Window Film
NOTES	• For new glazing systems - provide blast protection integrated with glazing systems to avoid voiding warranties • For existing glazing - replace glazing or provide window film • Adding window film to existing glazing can void warranties - discuss with Port AVM and F&I
LOCATIONS	Curbside - Arrivals / Departures Checkpoints Main Terminal

PANEL SYSTEMS

Translucent

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
Building Envelope
Curtain Walls
Glazing
Panel Systems
Translucent
Metal Foam
Preformed Metal
Bronze Anodized Aluminum
Aluminum
Concrete Masonry Unit (CMU)
Vestibule
Soffits
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

CATEGORIES	Glazing
PRODUCT NAME	For Aluminum Extrusions: Kynar 500 coating system or Hylar 5000 coating system
RECOMMENDED MANUFACTURERS	Kalwall Skywall
FINISHES	Aluminum Extrusions: Fluoropolymer finish multiple coats; thermally cured; non-specular; as fabricated mechanical finish; acid chromate-fluoride-phosphate chemical coating.
HARDWARE SET	Glazing gaskets, manufacturer standard extruded heat-cured silicone rubber structural glazing adhesive; manufacturer recommended neutral curing silicon sealant.
ACCEPTABLE MATERIALS	Aluminum Extrusions
NOTES	• Silicone sealants are not acceptable except for glazing systems designed for silicone joints. All exterior envelope penetrations subject to weather shall have redundancy built into the weatherproofing. • Coordinate the structural glass curtain wall interface with other exterior closure trades so the exterior wall system components function properly. • Ensure uniformity of color and visual appearance in all frame components and glazing surfaces. • Single source responsibility to be maintained for the entire system, including fabrication, installation, and total coordination of all work components. • Glazing must be designed so that they can be maintained, design must include ability to access, clean and replace panels.
LOCATIONS	Building Exterior for Concourses A, B, C, D

PANEL SYSTEMS

Metal Foam

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
Building Envelope
Curtain Walls
Glazing
Panel Systems
Translucent
Metal Foam
Preformed Metal
Bronze Anodized Aluminum
Aluminum
Concrete Masonry Unit (CMU)
Vestibule
Soffits
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

CATEGORIES	Cladding & Panels
RECOMMENDED MANUFACTURERS	Centria ASP. I.B.P Kingspan
COLOR	Metal panels of the terminal to match existing anodized bronze color. Metal panels at the concourses to match existing white color.
FINISHES	Fluoropolymer finish - Lilly "Visalure" 2 Metalescent" or an equivalent pearlescent finish.
ACCEPTABLE MATERIALS	"Galvalume" sheet coated with zinc-aluminum alloy Galvanized steel sheet (G90 hot dipped galvanized).
NOTES	• The surface of the metal panel shall be smooth and dead flat. • Textured surface not permitted because textured panels hold contaminants that increase streaking and are difficult to clean. • Panels to be self-cleaning, with a finish that is durable to climatic conditions. • Match existing systems where required. • Specify systems that attain a watertight condition mechanically; where joint sealers are required, the sealer shall not streak or stain the panel surface. Sealant joints should be minimized. • Radar reflection shall be taken into consideration for all airside exterior metal wall panels. • Panel material shall have a minimum Sound Transmission Calls (STC) rating of 40.
LOCATIONS	Building Exterior

PANEL SYSTEMS

Preformed Metal

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
Building Envelope
Curtain Walls
Glazing
Panel Systems
Translucent
Metal Foam
Preformed Metal
Bronze Anodized Aluminum
Aluminum
Concrete Masonry Unit (CMU)
Vestibule
Soffits
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

CATEGORIES	Cladding & Panels
COLOR	Metal panels of the terminal to match existing anodized bronze color. Metal panels at the concourses are to match the existing white color.
FINISHES	The exterior and interior of the metal panels shall receive a three-coat, spray applied, high performance fluorocarbon coating containing a minimum of 70% Kynar 500 resin.
NOTES	• The surface of the metal panel shall be smooth and dead flat. • Textured surface not permitted because textured panels hold contaminants that increase streaking and are difficult to clean. • Panels to be self-cleaning, with a finish that is durable to climatic conditions. • Match existing systems where required. • Specify systems that attain a watertight condition mechanically; where joint sealers are required, the sealer shall not streak or stain the panel surface. Sealant joints should be minimized. • Radar reflection shall be taken into consideration for all airside exterior metal wall panels. • Panel material shall have a minimum Sound Transmission Calls (STC) rating of 40.
LOCATIONS	Building Exterior

PANEL SYSTEMS

Bronze Anodized Aluminum

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- **Building Envelope**
  - Curtain Walls
  - Glazing
  - **Panel Systems**
    - Translucent
    - Metal Foam
    - Preformed Metal
    - **Bronze Anodized Aluminum**
    - Aluminum
  - Concrete Masonry Unit (CMU)
  - Vestibule
  - Soffits
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Cladding & Panels
COLOR	Metal panels of the terminal to match existing anodized bronze color. Metal panels at the concourses are to match the existing white color.
FINISHES	Colors to match existing bronze anodized aluminum finishes
NOTES	• The surface of the metal panel shall be smooth and dead flat. • Textured surface not permitted because textured panels hold contaminants that increase streaking and are difficult to clean. • Panels to be self-cleaning, with a finish that is durable to climatic conditions. • Match existing systems where required. • Specify systems that attain a watertight condition mechanically; where joint sealers are required, the sealer shall not streak or stain the panel surface. Sealant joints should be minimized. • Radar reflection shall be taken into consideration for all airside exterior metal wall panels. • Panel material shall have a minimum Sound Transmission Calls (STC) rating of 40.
LOCATIONS	Building Exterior at Terminal

PANEL SYSTEMS

Aluminum

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
Building Envelope
Curtain Walls
Glazing
Panel Systems
Translucent
Metal Foam
Preformed Metal
Bronze Anodized Aluminum
Aluminum
Concrete Masonry Unit (CMU)
Vestibule
Soffits
Roofing
Structure
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

CATEGORIES	Cladding & Panels
COLOR	Metal panels of the terminal to match existing anodized bronze color. Metal panels at the concourses are to match the existing white color.
FINISHES	Clear or color anodized
NOTES	• The surface of the metal panel shall be smooth and dead flat. • Textured surface not permitted because textured panels hold contaminants that increase streaking and are difficult to clean. • Panels to be self-cleaning, with a finish that is durable to climatic conditions. Match existing systems where required. • Specify systems that attain a watertight condition mechanically; where joint sealers are required, the sealer shall not streak or stain the panel surface. Sealant joints should be minimized. • Radar reflection shall be taken into consideration for all airside exterior metal wall panels. • Panel material shall have a minimum Sound Transmission Calls (STC) rating of 40.
LOCATIONS	Building Exterior

CONCRETE MASONRY UNIT (CMU)

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- **Building Envelope**
  - Curtain Walls
  - Glazing
  - Panel Systems
  - **Concrete Masonry Unit (CMU)**
  - Vestibule
  - Soffits
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Envelope
FINISHES	Colored Mortar Pigments: Iron oxides with demonstrated record of satisfactory performance in mortar mixes. Moisture Control: Water repellent additives for blocks and mortar; surface applied water repellent treatment. Architectural Finishes Painted (standard block)
ACCEPTABLE MATERIALS	Hollow load bearing units; integrally colored Common Honed Ground face finish - or other architectural finishes Profiled face units (require approval by the Design Review Committee)
NOTES	• Architectural finish CMUs at Exterior Ramp Level = block color dark gray color • Non-architectural finish CMU Walls at Exterior Ramp Level = paint "Ramp Gray" by Sherwin Williams. • For painted finishes, finish coat to be exterior masonry latex flat coating. • Exposed mortar joints between masonry units shall be visually and dimensionally consistent. • Joints to be tooled concave. Other joint profiles may be allowed based on the ability to drain or shed water from joint. • Blocks and mortar to have water repellent additives, block filler, and coatings; all finish surfaces to receive water repellent treatment.
LOCATIONS	Building Exterior

VESTIBULE

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- **Building Envelope**
  - Curtain Walls
  - Glazing
  - Panel Systems
  - Concrete Masonry Unit (CMU)
  - **Vestibule**
  - Soffits
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Envelope
DESCRIPTION	A thickened zone of the building envelope which allows people to enter the building, by passing through a buffer that separates the interior and exterior environments from coming in direct contact.
NOTES	Provide at main entrances in areas where wind-driven rain prevails.
LOCATIONS	Building Exterior at building entrances

SOFFITS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- **Building Envelope**
  - Curtain Walls
  - Glazing
  - Panel Systems
  - Concrete Masonry Unit (CMU)
  - Vestibule
  - **Soffits**
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Envelope
MATERIAL	Paint White For Linear Metal Ceiling System: Panels to have backed enamel finish, white color to match existing For Metal Panel System: Fluoropolymer exterior finish
ACCEPTABLE MATERIALS	Mineral Fiber Tile Metal Soffit • For Linear Metal Ceiling System: Match existing panel profile • For Metal Panel System: Minimum 20 gauge corrosion resistant sheet metal
HARDWARE SET	Hold-down clips
NOTES	• Panel texture to be smooth • Perforations to match existing • The exterior soffit system along the terminal drive to match the interior ceiling system within the ticket lobby, where makes sense. • The terminal drive metal soffit system is an interior/exterior system. • Panels shall be formed to snap on and be securely retained on carriers without separate fasteners. • The exterior soffit system along the terminal drive to match the interior ceiling system within the ticket lobby. • The terminal drive metal soffit system is an interior/exterior system. • Soffit system to match adjacent wall panel system.
LOCATIONS	Building Exterior at Curbside Arrivals and Departures Mineral Fiber - Exterior Ramp Level

4.3 ROOFING

The roof supports several systems and keeps our occupants sheltered and dry.

PVC

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- **Roofing**
  - **PVC**
  - Metal
  - Parapets
  - Roofing Elements
  - Skylights
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Exterior
RECOMMENDED MANUFACTURERS	Sarnafil Inc. Johns Manville Carlisle SynTec Systems
DESCRIPTION	Mechanically fastened over metal deck; seams hot air welded; fully adhered over insulating substrate
SIZE	Walking pads: 24" wide minimum
COLOR	White or light colored Walking treads: light grey
FINISHES	Typical roof field: 60 mil white or off-white PVC membrane Roof fields with limited access control and subject to moderate walking over the entire roof surface: 80-mil white or off-white PVC membrane
HARDWARE SET	Membrane roofing fasteners: galvanized steel, plain or with factory applied corrosion resistant coating
ACCEPTABLE MATERIALS	Reinforced PVC single-ply membrane roofing or sheet metal walking treads: 90 mil PVC walking tread/pad, welded onto surface of 60 mil roofing membrane. Reinforcement: polyester

PVC

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- **Roofing**
  - **PVC**
  - Metal
  - Parapets
  - Roofing Elements
  - Skylights
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

NOTES

- Select the roofing system on a life-cycle cost basis.
- For ease of maintenance, specify a long-lasting premium roofing system commensurate with the facility life cycle and architectural theme.
- Design shall account for the slope of the building frame. This is preferred over other methods, such as tapering the roof to achieve a positive slope.
- Provide roof drainage overflows through parapet walls, where field drain overflows are not constructible.
- Provide slip resistant walkway pads on low-slope roofs subject to heavy foot traffic to prevent roof damage.
- At roof walkways, penthouse door entries, and other high traffic roof areas, walking treads shall be provided with a color contrasting to the field color to clearly define the pathways.
- Provide adequate clearance between roof surfaces and other objects to allow access for roof repairs and replacement.
- Maintain clear access pathways to get maintenance materials and equipment to and across the roofs. This includes coordinating conduits, piping, and expansion joints. Do not install pipes or conduits across walkways without installing permanent low slope crossover ramps, with hand rails and slip resistant walking surface for delivering materials using hand trucks.
- Do not design for use of access hatches or forklift/crane without approval.
- Specify a minimum slope of 1/2" per foot to ensure positive drainage of the roof surface. (Slope of 1/4" minimum per code can be allowed in certain circumstances, discuss with Port Representatives).
- Specify 1" slope per foot for roofing crickets, diamonds, and saddles.
- No asphalt based products are allowed above or over PVC roof material.
- Provide white 60 mil minimum PVC roof membrane on standard roofs; 85 mil PVC on unusual surfaces.
- Flame spread index is 25 at minimum when tested in accordance with ASTM E84.
- Roofing shall meet Factory Mutual requirements for conditions of use, including minimum 1-120 Wind test at the Port of Seattle.
- Do not use pop rivets on exposed sheet metal details.
- Provide 1/2" coverboard.

METAL

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- **Roofing**
  - PVC
  - **Metal**
  - Parapets
  - Roofing Elements
  - Skylights
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Exterior
RECOMMENDED MANUFACTURERS	AEPSpan MBCI
DESCRIPTION	Non-low slope roofs with Sheet Metal Roofing, Standing Seam Canopies, Walkway covers, accent roofing Metal gauge thickness to prevent oil canning, consider span lengths, width of sheets
COLOR	Overall metal roof - light color for high reflectivity For accent areas, canopies - color can vary depending on project Color to be approved by Port of Seattle
FINISHES	Factory Finished coated metal
HARDWARE SET	Sheet metal roofing fasteners: use only screw fasteners with integral cap and grommet. Face fasten sheet metal only. Fasteners to be compatible with the metal through which it is fastened.
ACCEPTABLE MATERIALS	Metal roofing systems

PARAPETS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- **Roofing**
  - PVC
  - Metal
  - **Parapets**
  - Roofing Elements
  - Skylights
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Exterior
NOTES	• Provide 42" high parapet walls or rails on roofs, bridges, and other elevated walk surfaces above 48"; where not feasible, provide other fixed fall protection system for 2 or more concurrent personnel. • Parapets, cants, and curbs should be used to provide an overall pleasing and unified appearance for the building facade, concealing unsightly or complex roof-scapes. Their design should respond to the specific conditions and sight lines of the individual project. • Parapets to be designed to slope inwards towards roof.

ROOFING ELEMENTS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- **Roofing**
  - PVC
  - Metal
  - Parapets
  - **Roofing Elements**
  - Skylights
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Gutter
NOTES	• Buildings with gutters shall have concrete downspouts connected to storm drain system. • Exposed galvanized metal is not allowed unless approved by Port Environmental

CATEGORIES	Roof Drain
NOTES	• Roof drains shall be designed to avoid water damage to structural system. • For drains located at low points, consider the deflected position of the structure under load. • Interior roof drains are preferred over perimeter drains on low-slope roofs. • Exposed galvanized metal is not allowed unless approved by Port Environmental.

CATEGORIES	Roof Expansion Joints
NOTES	• If expansion joints (EJ) are required, verify that they are placed at the high point, with drainage directed away. • Expansion joints shall allow movement in three directions. • Interior and exterior EJ are specified wherever the wall can move relative to an abutting wall, curb, or other building component. • Curbs for expansion joints, area dividers, roof hatches, and rooftop equipment shall be sized to permit a base flashing height that is a minimum of 8" and a maximum of 12", from top of curb to top of roofing.

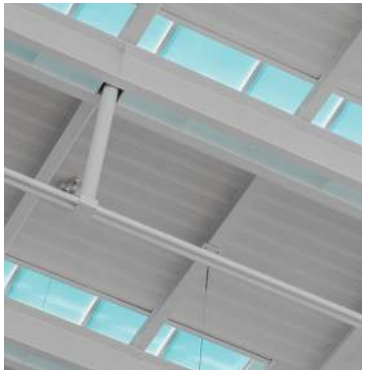
CATEGORIES	Roof Sealant
PRODUCTS	Urethane construction sealant Kemcaulk 900, Sikaflex, Vulkem
NOTES	• Sealants shall be approved by the manuf. of adjacent surfaces for compatibility. • No silicone sealants are allowed. Exceptions are products that specify a particular sealant for warranty, such as Dow 795.

SKYLIGHTS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- **Roofing**
  - PVC
  - Metal
  - Parapets
  - Roofing Elements
  - **Skylights**
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Exterior
PRODUCT NAME	For Aluminum Extrusions: Kynar 500 coating system or Hylar 5000 coating system For Skylight Systems: Okeeffe's, Inc., Evergreen House, DeaMor, Kalwall
RECOMMENDED MANUFACTURERS	Kalwall Skywall
DESCRIPTION	Translucent Panel System
FINISHES	For aluminum extrusions: fluoropolymer finish with multiple coats; thermally cured; non-specular; as fabricated mechanical finish; acid chromate-fluoride-phosphate chemical coating
HARDWARE SET	Glazing gaskets, manufacturer standard extruded heat-cured silicone rubber Structural glazing adhesive; manufacturer recommended neutral curing silicon sealant.
ACCEPTABLE MATERIALS	Aluminum extrusions Glazing: match existing skylights gray insulated glass with high performance low-E coating.
NOTES	• Silicone sealants are not acceptable except for glazing systems designed for silicone joints. All exterior envelope penetrations subject to weather shall have redundancy built into the weatherproofing. • Coordinate the interface with other exterior closure trades so the combined exterior wall system components function properly. • Maintain single source responsibility for the entire system, including fabrication, installation, and total coordination of all work. • Skylights shall be designed for personnel loading without additional fall protection. • Skylight must be capable of sustaining the weight of a 200-pound person with a safety factor of 4. Adhere to WAC 296-880.



4.4 STRUCTURE

The structure supports the Airport architecture and is a key part of building construction. Exposed columns are consistent with the desired look-and-feel of our space.

CONCRETE

Columns

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- **Structure**
  - **Concrete**
    - **Columns**
    - Beams
    - Walls
    - Floor
  - Exposed Steel Structure
  - Pavement
  - Expansion Joints
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Superstructure
FINISHES	If left uncovered, use sealed plain concrete finish If painted, verify with Port Light sandblast to eliminate slight imperfections Column enclosures
ACCEPTABLE MATERIALS	Cast-in-place concrete
NOTES	• Choice of finishes and textures must take into consideration the material's ability to resist abuse and conceal slight imperfections or minor physical damages. • Finish new concrete columns to closely match the appearance of existing columns. • Plain (unfinished) cast-in-place concrete finish is preferred at columns although painted concrete is an acceptable finish. If plain sealed concrete finish is used, remove all scales, stains, and form markings to ensure surface is smooth and uniformly clean before applying sealer. • Use only penetrating type of concrete sealers. Film forming sealers may not be able to hold against outward moisture migration. • In areas accessible by the public, use a permanent or non-sacrificial type of anti-graffiti coating, or other applicable soil and dirt control coating, that does not alter the appearance of the exposed concrete surface.

CONCRETE

Beams

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- **Structure**
  - **Concrete**
    - Columns
    - **Beams**
    - Walls
    - Floor
  - Exposed Steel Structure
  - Pavement
  - Expansion Joints
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Superstructure
FINISHES	Stucco Pre-cast concrete panels Manufactured metal cover If left uncovered, use sealed, plain concrete finish If light sandblast finish, seal prior to sandblast
ACCEPTABLE MATERIALS	Cast-in place concrete
NOTES	• Concrete surfaces to be appropriately sealed before applying finishes. Choice of finishes and textures shall take into consideration the material's ability to resist abuse, and conceal slight imperfections or minor physical damages. • Use only penetrating type of concrete sealers. Film forming sealers may not be able to hold against outward moisture migration. • In areas accessible by the public, use a permanent or non-sacrificial type of anti-graffiti coating, or other applicable soil and dirt control coating, that does not alter the appearance of the exposed, concrete surface.
LOCATIONS	Curbside (Arrivals) Curbside (Departures) Parking Garage

CONCRETE

Walls

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- **Structure**
  - **Concrete**
    - Columns
    - Beams
    - **Walls**
    - Floor
  - Exposed Steel Structure
  - Pavement
  - Expansion Joints
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Superstructure
FINISHES	Textured finish is recommended, such as brush-hammered, medium sandblast minimum Stucco Pre-cast concrete panels Manufactured metal panels
ACCEPTABLE MATERIALS	Cast-in-place concrete
NOTES	• Concrete surfaces to be appropriately sealed before applying finishes. Choice of finishes and textures shall take into consideration the material's ability to resist abuse, and conceal slight imperfections or minor physical damages. • Use only penetrating type of concrete sealers. Film forming sealers may not be able to hold against outward moisture migration. • In areas accessible by the public, use a permanent or non-sacrificial type of anti-graffiti coating, or other applicable soil and dirt control coating, that does not alter the appearance of the exposed, concrete surface. • For sidings and panels, provide clearance at panel edges, corners, and transitions. • Use concealed fasteners where practical. • All structural, expansion, and movement joints shall be appropriately covered.

CONCRETE

Floor

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- **Structure**
  - **Concrete**
    - Columns
    - Beams
    - Walls
    - **Floor**
  - Exposed Steel Structure
  - Pavement
  - Expansion Joints
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Superstructure
DESCRIPTION	Sealed concrete floor Polished concrete floor
NOTES	• Epoxy sealant to be applied to floors in electrical and communications rooms. • Bagwell, which is not slab on grade, should have a waterproof coating with grit for vehicle traction. Bagwell slab on grade should have epoxy non-skid finish. • Unless otherwise indicated, all other concrete floors shall receive a hardener and sealer, and not receive paint. • Concrete joints to be tooled into original pour (saw cut joints not preferred). • See **Finishes** for wet area finishes on concrete floors.
LOCATIONS	Curbside (Arrivals) Curbside (Departures) Conveying - Elevators (new projects; charges of lifts) Storage Janitor Closet Parking Garage Loading Dock Back of House Spaces

EXPOSED STEEL STRUCTURE

Beams & Bracing

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
Building Envelope
Roofing
Structure
Concrete
Exposed Steel Structure
Beams & Bracing
Pavement
Expansion Joints
Fenestration
Partitions
Conveying
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

CATEGORIES	Superstructure
FINISHES	Depending on location finish color may vary Verify with Port for approved color
ACCEPTABLE MATERIALS	Structural steel
NOTES	• Ensure uniform finish color in all exposed parts of the steel structure. • Color to match existing and adjacent exposed structural steel. • Fasteners, nuts, and washers finished to match adjacent steel. • Passenger Facing - exposed steel fireproofing to be intumescent paint. Any other types of fireproofing (spray-coating) must be covered with architectural finishes. • Back of House - spray applied fireproofing can be left exposed but must be protected with finish is less than 6'-0" above finish floor or at locations where damage is likely at any height.

PAVEMENT

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- **Structure**
  - Concrete
  - Exposed Steel Structure
  - **Pavement**
  - Expansion Joints
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Exterior Superstructure
ACCEPTABLE MATERIALS	Portland cement concrete (PCC)
NOTES	• Coordinate with F&I Civil for pavement. Architectural pavement includes - walkways, courtyards, sidewalks. • In areas subject to acid spills, an acid-resistant coating shall be applied to PCC pavement. • Concrete pavement design accommodates for maximum joint spacing of 20 feet. Match existing layout. • Joint resealing project design provides for complete removal of old joint seal material. • Joint width is at least 12 millimeters, regardless of joint seal type (i.e., preformed or field- poured). • Control Joints to be tooled into original concrete pour (saw cut joints are not preferred).

EXPANSION JOINTS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- **Structure**
  - Concrete
  - Exposed Steel Structure
  - Pavement
  - **Expansion Joints**
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Superstructure
FINISHES	Metal floor cover plates Metal wall cover plates Ceiling cover plates
NOTES	• Expansion and control joints shall be located to accommodate building movement, with interior bellows sloped to drain. • All expansion joints at interior and exterior finishes shall be covered with appropriate expansion joint covers. • Ensure a smooth transition at interface of joint cover and adjacent finish. • At walkways - provide stainless steel finish or inlay finish. • At walkways - ensure expansion joint covers have minimal gaps, rigid materials, and vertical elevation changes all comply with accessibility codes.
LOCATIONS	As required for structural soundness - consult with structural engineer

4.5 FENESTRATION

The Airport employs various types of fenestration throughout the building to provide access, daylight, and ventilation to the building and its occupants.

DOORS

Public Entrance Doors

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - **Doors**
    - **Public Entrance Doors**
    - Concourse Entry/ Exit Doors
    - Hollow Metal Doors
    - Flush Panel HM Doors
    - Double Doors
    - Framed Glass Doors
    - Overhead Roll-Up Doors
    - STS Doors
  - Windows
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Exterior
DESCRIPTION	Automatic sliding doors
HARDWARE SET	Overhead motion sensor Stainless Steel
ACCEPTABLE MATERIALS	Tinted glass Anodized aluminum frames
NOTES	• No exposed fasteners are allowed. • All exterior doors to have full height glass.
LOCATIONS	Skybridge Check-In Lobby Baggage Claim Lobby South Arrivals Hall (GML)

DOORS

Concourse Entry/Exit Doors

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - **Doors**
    - Public Entrance Doors
    - **Concourse Entry/ Exit Doors**
    - Hollow Metal Doors
    - Flush Panel HM Doors
    - Double Doors
    - Framed Glass Doors
    - Overhead Roll-Up Doors
    - STS Doors
  - Windows
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Exterior
FINISHES	Stainless steel door frames (No. 4 brushed) Metal doors are anodized aluminum (clear or colored), powder coated or stainless Steel should have metal finish (No. 4 brushed or hollow metal exterior doors with paint finish)
ACCEPTABLE MATERIALS	Stainless steel door frames Metal doors: anodized aluminum or hollow metal exterior door
LOCATIONS	Aircraft Passenger Loading Bridges

DOORS

Hollow Metal Doors

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - **Doors**
    - Public Entrance Doors
    - Concourse Entry/ Exit Doors
    - **Hollow Metal Doors**
    - Flush Panel HM Doors
    - Double Doors
    - Framed Glass Doors
    - Overhead Roll-Up Doors
    - STS Doors
  - Windows
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
RECOMMENDED MANUFACTURERS	Hardware: Intellikey
FINISHES	Doors to have paint finish Frames to have metal finish Sheet material to have sanded finish that is non-directional, 100 grit Formed or cast materials with flat faces are required to have sanded finish that is non-directional, 100 grit. Formed or cast materials with curved or shaped surfaces are required to have a No. 4 brushed finish Bead blast finishes, sealers and coatings are not allowed
HARDWARE SET	Lever type door pulls Best Series 35H, Core Housing 7, Lever Style 15, contour / angle return, Trim Style H, Finish 626: verify with the Port of Seattle General Foreman, Lock and Key Shop Finish: Standard stainless steel finish: US26D Kick-plate (on push side): Stainless Steel, 8400 Series 12" (or 18" as required) x US26D, Ives Or similar.
ACCEPTABLE MATERIALS	16-gauge minimum brushed stainless steel Painted metal frames are subject to approval by the project manager, and shall match the color of surrounding wall finishes. The Port of Seattle prefers unpainted frames to eliminate the cost and effort of repainting them. If glazed, use tempered clear glass, translucent laminated glass, or clear polished wire glass
NOTES	• Doors must accommodate the AVM lifts which will likely be used in the facility. There must be at least one entrance point in each high ceiling area for the required articulating lift to service the zone. • Bead-blasted finish, sealers, and coatings are not allowed on any stainless steel finish. • Fire-rated glazing is required for all rated doors. • Door relites require clear, tempered glazing.

DOORS

Flush Panel Hollow Metal Door

Restrooms

CATEGORIES	Interior
RECOMMENDED MANUFACTURERS	Hardware: Intellikey
SIZE	Door panel height: 8’ - 0”
COLOR	Door frame should be inset into rough opening.
HARDWARE SET	Lever type door pulls Mortised lock-set, keyed on both sides Concealed finger pull, both sides Concealed offset mortised hinge with non-removable pins Smoke gasket Overhead concealed closer with kick-plate (on push side): stainless steel, 8400 series 12” (or 18” as required) x US26D, Ives Or similar.
ACCEPTABLE MATERIALS	16” - gauge minimum brushed stainless steel, hollow metal door and frame assembly
NOTES	• Fire protection rating, as required. • Bead-blasted finish, sealers, and coatings are not allowed on any stainless steel finish. • Use flexible sealant at the joints of grouted wall tile to door frames.
LOCATIONS	Restrooms

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - **Doors**
    - Public Entrance Doors
    - Concourse Entry/ Exit Doors
    - Hollow Metal Doors
    - **Flush Panel HM Doors**
      - **Restrooms**
      - Nursing Room
      - 60-Min Fire-rated
    - Double Doors
    - Framed Glass Doors
    - Overhead Roll-Up Doors
    - STS Doors
  - Windows
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

DOORS

Flush Panel Hollow Metal Door

Nursing Room

CATEGORIES	Interior
RECOMMENDED MANUFACTURERS	Hardware: Intellikey
SIZE	Door panel width: 3’ - 0” Door panel height: 7’ - 0”
HARDWARE SET	Mortised lock-set with thumb turn and key override, privacy indicator Lever, both sides Hinges with non-removable pins Smoke gasket Overhead concealed closer with swing restrictor Kick-plate (on push side): Stainless Steel, 8400 Series 12” (or 18” as required) x US26D, Ives or similar.
ACCEPTABLE MATERIALS	16” -gauge minimum brushed stainless steel hollow metal door and frame assembly
NOTES	• Fire protection rating, as required. • Bead-blasted finish, sealers, and coatings are not allowed on any stainless steel finishes. • Use flexible sealant at the joints of grouted wall tile to door frames.
LOCATIONS	Nursing Suite (prefer solid wood door with vision lite; hollow metal as alternative) Lactation Room (prefer solid wood door; hollow metal as alternative) Family Restrooms

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - **Doors**
    - Public Entrance Doors
    - Concourse Entry/ Exit Doors
    - Hollow Metal Doors
    - **Flush Panel HM Doors**
      - Restrooms
      - **Nursing Room**
      - 60-Min Fire-rated
    - Double Doors
    - Framed Glass Doors
    - Overhead Roll-Up Doors
    - STS Doors
  - Windows
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

DOORS

Flush Panel Hollow Metal Door

60-Minute Fire-Rated

CATEGORIES	Interior
RECOMMENDED MANUFACTURERS	Hardware: Intellikey
SIZE	Door panel width: 3' - 6" Door panel height: 7' - 0"
HARDWARE SET	Mortised lock-set, storeroom Lever, both sides Hinges with non-removable pins Standard card reader Smoke gasket Overhead concealed closer with 180 degree swing Kick-plate (on push side): Stainless Steel, 8400 Series 12" (or 18" as required) x US26D, Ives Or similar.
ACCEPTABLE MATERIALS	16" -gauge minimum brushed stainless steel hollow metal door and frame assembly
NOTES	• Fire protection rating, as required. • Bead-blasted finish, sealers, and coatings are not allowed on any stainless steel finishes. • Use flexible sealant at the joints of grouted wall tile to door frames.
LOCATIONS	Janitor Closet

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - **Doors**
    - Public Entrance Doors
    - Concourse Entry/ Exit Doors
    - Hollow Metal Doors
    - **Flush Panel HM Doors**
      - Restrooms
      - Nursing Room
      - **60-Min Fire-rated**
    - Double Doors
    - Framed Glass Doors
    - Overhead Roll-Up Doors
    - STS Doors
  - Windows
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

DOORS

Double Doors

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - **Doors**
    - Public Entrance Doors
    - Concourse Entry/ Exit Doors
    - Hollow Metal Doors
    - Flush Panel HM Doors
    - **Double Doors**
    - Framed Glass Doors
    - Overhead Roll-Up Doors
    - STS Doors
  - Windows
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
DESCRIPTION	Magnetic hold at fire-rated walls
SIZE	10’ x 6’ (3’ leaf)
LOCATIONS	Storage

DOORS

Framed Glass Doors

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - **Doors**
    - Public Entrance Doors
    - Concourse Entry/ Exit Doors
    - Hollow Metal Doors
    - Flush Panel HM Doors
    - Double Doors
    - **Framed Glass Doors**
    - Overhead Roll-Up Doors
    - STS Doors
  - Windows
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Exterior
RECOMMENDED MANUFACTURERS	Hardware: Best Cylinders or Intellikey Glass: Viracon, PPG, LOF, Guardian
SIZE	Door panel width: 3’ - 3 3/4” or 3’ - 6 1/2” Door panel height: 8’ - 2 1/4” or 8’ 2 3/4” Float glass: minimum 1/4” thick
FINISHES	Metal to be clear or colored anodized, or color powder coated Hardware finish to be US26D, where hardware requirements are verified with Port of Seattle General Foreman, Lock and Key Shop
HARDWARE SET	Electrified rim exit panic device, fail-secure Panic hardware Continuous geared hinge with electric transfer - tamper resistant enclosure Biometric card reader with pin pad Request-to-exit device Smoke gasket Overhead concealed closer: LCN Model 4314 ME-SF 24V, 0°-180° swing with no pressure Threshold

DOORS

Framed Glass Doors

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - **Doors**
    - Public Entrance Doors
    - Concourse Entry/ Exit Doors
    - Hollow Metal Doors
    - Flush Panel HM Doors
    - Double Doors
    - **Framed Glass Doors**
    - Overhead Roll-Up Doors
    - STS Doors
  - Windows
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

ACCEPTABLE MATERIALS

Metal door frames are anodized aluminum (clear or colored); powder coated, or stainless steel (No. 4 brushed)
Metal doors are anodized aluminum (clear or colored); powder coated or stainless steel (metal finish, No. 4 brushed or Hollow metal exterior doors with paint finish)
Glazing:
Clear insulated glass with low-E coating
Clear insulated glass with low-E coating, with frit pattern
Gray insulated glass, uncoated
Gray insulated glass, uncoated, with sandblast
Gray monolithic glass, uncoated
Gray insulated glass with low-E coating
Gray laminated insulated glass

NOTES

- All door glazing must match adjacent window or curtain wall system glazing.
- Insulated glass shall be double-glazed and dual sealed with air space between hermetically sealed panes with silicone at the perimeter of the unit.
- Vision glass is to be heat strengthened.
- Specify performance criteria for solar energy transmittance, shading co-efficient, ultraviolet transmittance, visible light transmittance, and infrared transmittance.
- All exterior doors to have a Sound Transmission Class (STC) rating of 33 minimum.

LOCATIONS

Holdrooms

DOORS

Overhead Roll-Up Doors

Exterior

CATEGORIES	Exterior
ACCEPTABLE MATERIALS	Galvanized Non-painted Fabric: used for high-speed roll-up doors at the ramp level

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - **Doors**
    - Public Entrance Doors
    - Concourse Entry/ Exit Doors
    - Hollow Metal Doors
    - Flush Panel HM Doors
    - Double Doors
    - Framed Glass Doors
    - **Overhead Roll-Up Doors**
      - **Exterior**
      - Interior
    - STS Doors
  - Windows
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

DOORS

Overhead Roll-Up Doors

Interior

CATEGORIES	Interior
RECOMMENDED MANUFACTURERS	Hardware: Intellikey
FINISHES	Unpainted slats Sheet material sanded finish to be non-directional (100 grit) Formed or cast materials with flat faces are required to have non-directional sanded finish (100 grit) Formed or cast materials with curved or shaped surfaces are required to have a no. 4 brushed finish Bead blast finishes, sealers and coatings are not allowed
ACCEPTABLE MATERIALS	Anodized aluminum Natural Stainless steel
NOTES	• Fire protection rating, as required. • Bead-blasted finish, sealers, and coatings are not allowed on any stainless steel finish. • At all locations where fire-rated door and frame assemblies are required, provide assemblies which comply with the applicable National Fire Protection Association (NFPA) requirements, and have been tested and labeled in accordance with ASTM standards by an agency acceptable to governing authorities. • All doors to meet ADA requirements. • UL listing is required by code. • Coordinate with the Port of Seattle General Foreman. • Reference Lock and Key Shop for detailed hardware information.

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - **Doors**
    - Public Entrance Doors
    - Concourse Entry/ Exit Doors
    - Hollow Metal Doors
    - Flush Panel HM Doors
    - Double Doors
    - Framed Glass Doors
    - **Overhead Roll-Up Doors**
      - Exterior
      - **Interior**
    - STS Doors
  - Windows
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

DOORS

Satellite Transit System Doors

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - **Doors**
    - Public Entrance Doors
    - Concourse Entry/ Exit Doors
    - Hollow Metal Doors
    - Flush Panel HM Doors
    - Double Doors
    - Framed Glass Doors
    - Overhead Roll-Up Doors
    - **STS Doors**
  - Windows
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
RECOMMENDED MANUFACTURERS	Hardware: Intellikey
ACCEPTABLE MATERIALS	Stainless steel doors Stainless steel frames Tempered clear glass Translucent laminated glass Clear polished wire glass
NOTES	• Fire protection rating, as required. • Bead-blasted finish, sealers, and coatings are not allowed on any stainless steel finish. • Clear, tempered glazing is required for door relites.
LOCATIONS	Transit Stations

WINDOWS

Glazed Partitions

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - Doors
  - **Windows**
    - **Glazed Partitions**
    - Storefront
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
RECOMMENDED MANUFACTURERS	Julius Blum/Blumcraft Livers Bronze Company Newman Brothers, Inc.
DESCRIPTION	Interior glazing to create a permanent partition between spaces
FINISHES	Stainless steel base uses sheet material that requires non-directional, minimum 100 grit sanded finish Formed or cast materials with flat faces are required to have sanded finish that is non-directional, minimum 100 grit Formed or cast materials with curved or shaped surfaces are required to have a no. 4 brushed finish Bead blast finishes, sealers and coatings are not allowed
ACCEPTABLE MATERIALS	Glazing: clear glass, translucent laminated glass, monolithic float glass, sandblasted glass, fritted glass Metal: Stainless steel
NOTES	• Translucent, sandblasted, or fritted glazing will be required where visibility must be obscured. Sandblasted glazing is susceptible to fingerprints and should not be used in areas accessible to the public. Frit is preferred. • All glazing must be tempered. Cut glass to size, and shape and drill holes prior to tempering. • Glass panel sizes shall allow easy removal and re-installation. Panels that are too heavy may be cumbersome and would need extra measures for safe handling. • Glass panels to be butt-jointed and should not have horizontal mullions. • Full height partitions at security areas are to be continuous along the floor to prevent items from passing below. • All glass partitions, free standing or with top supports, must have a stainless steel base of 4" height to match the standard glass guardrail system. • Provide certified safety glazing where required. • Grind exposed edges smooth, using methods recommended by manufacturer.

WINDOWS

Storefront

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - Doors
  - **Windows**
    - Glazed Partitions
    - **Storefront**
  - Louvers & Grilles
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
ACCEPTABLE MATERIALS	Aluminum or stainless steel window frames Clear, non-colored glass Translucent laminated glass Sandblasted glass Fritted glass
NOTES	• Translucent, sandblasted, or fritted glazing will be required where visibility must be obscured. Sandblasted glazing is susceptible to fingerprints and should not be used in areas accessible to the public. Frit is preferred. • Provide certified safety glazing where required. • All glazing shall be tempered. Cut glass to size, and shape and drill holes prior to tempering. • Grind exposed edges smooth, using methods recommended by the manufacturer. • Submit minimum 12" square samples for each glass type, except clear monolithic glass. • Window frames shall be unpainted for ease of maintenance.

LOUVERS & GRILLES

Grilles

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - Doors
  - Windows
  - **Louvers & Grilles**
    - **Grilles**
    - Grilles & Screens
    - Louvers
    - Louvers & Vents
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
COLOR	To match color of surrounding wall, subject to approval by the Port of Seattle
FINISHES	For aluminum, use shop applied enamel or Fluoropolymer finish For stainless steel, sheet material is required to be non-directional, 100 grit Formed or cast materials with flat faces are required to be non-directional, 100 grit Formed or cast materials with curved or shaped surfaces are required to be no. 4 brushed Bead blast finishes, sealers, and coatings are not allowed
ACCEPTABLE MATERIALS	Aluminum Stainless steel Galvanized steel
NOTES	• All HVAC grilles shall be installed visually symmetrical and compatible with surrounding architectural elements. • Grilles free area to be calculated by engineer to meet airflow requirements. • Blank-off panels to be fabricated from sheet metal, to match the same metal and finish as louvers.

LOUVERS & GRILLES

Grilles & Screens

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - Doors
  - Windows
  - **Louvers & Grilles**
    - Grilles
    - **Grilles & Screens**
    - Louvers
    - Louvers & Vents
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Exterior
FINISHES	Aluminum: clear or colored anodized, powder coated, primed and painted, enamel Stainless steel: No. 4 brushed metal finish. Stainless steel flat surfaces to be non-directional minimum 100 grit Galvanized steel: powder coated, primed and painted, enamel
HARDWARE SET	Fasteners for aluminum to be aluminum, stainless steel, or galvanized steel Fasteners for steel or galvanized to be stainless steel or galvanized steel Fasteners for stainless steel to be stainless steel Finish fastener heads that are exposed to view to match adjacent surface
ACCEPTABLE MATERIALS	Fabricate all blades and frames from extruded aluminum, stainless steel, or galvanized steel
NOTES	• All HVAC grilles shall be installed visually symmetrical and compatible with surrounding architectural elements. • Exterior wall louvers/grilles need to be rainproof, self-draining, and have bug screen.

LOUVERS & GRILLES

Louvers

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - Doors
  - Windows
  - **Louvers & Grilles**
    - Grilles
    - Grilles & Screens
    - **Louvers**
    - Louvers & Vents
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Exterior
FINISHES	All aluminum blades and frames are fabricated from extruded aluminum Stainless steel use No. 4 brushed metal finish Stainless steel flat surfaces to be non-directional 100 grit Brushed galvanized steel Powder coated Primed and painted Enamel
HARDWARE SET	Fasteners for aluminum members to be aluminum, stainless steel, or galvanized steel Fasteners for steel or galvanized members to be stainless steel or galvanized steel Fasteners for stainless steel members to be stainless steel Finish fastener heads that are exposed to view to match adjacent surface
ACCEPTABLE MATERIALS	Aluminum, Stainless Steel, or Galvanized Steel
NOTES	• Louvers shall be storm proof with 45-degree stationary blades. • Exterior wall louvers/grilles need to be rainproof, self-draining, and have bug screen.

LOUVERS & GRILLES

Louvers & Vents

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - Doors
  - Windows
  - **Louvers & Grilles**
    - Grilles
    - Grilles & Screens
    - Louvers
    - **Louvers & Vents**
  - Access Panels
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
FINISHES	For Aluminum, use extruded aluminum finish (anodized, clear or colored, powder coated, primed, and painted, enamel) For stainless steel: sheet material is required to be non-directional, 100 grit Formed or cast materials with flat faces are required to be non-directional, 100 grit Formed or cast materials with curved or shaped surfaces are required to be no. 4 brushed Bead blast finishes, sealers and coatings are not allowed For galvanized steel: brushed, powder coated, primed and painted, enamel Finish to match surrounding wall or ceiling color, unless approved otherwise
HARDWARE SET	Fasteners for aluminum members to be aluminum, stainless steel, or galvanized steel Fasteners for steel or galvanized members to be stainless steel or galvanized steel Fasteners for stainless steel members to be stainless steel Finish fastener heads that are exposed to view to match adjacent surface
ACCEPTABLE MATERIALS	Extruded aluminum Stainless steel Galvanized steel
NOTES	• Installation of units shall be visually symmetrical and compatible with architectural requirements; reveals and recesses to fit accordingly. • Louvers are stationary 45-degree blades.
LOCATIONS	All space types

ACCESS PANELS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- **Fenestration**
  - Doors
  - Windows
  - Louvers & Grilles
  - **Access Panels**
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

Ceiling

CATEGORIES	Interior
SIZE	24” x 24”
MATERIAL	Finished metal - painted, pre-finished Inlay type with same finish material as adjacent finish surface
NOTES	• Where many access panels will be needed, consider changing material type to an acoustic or metal panel ceiling • Ceiling access panels do not require keys; shall use flat blade screwdriver to open. Install 8’ on center. • Access Panel locations and sizes other than 24”x 24” must be confirmed with Aviation Maintenance, see **Maintainability Standards** for additional considerations during design

Wall

CATEGORIES	Interior
SIZE	24” x 24”
MATERIAL	Finished metal - painted, pre-finished Inlay type with same finish material as adjacent surface
NOTES	• Access doors shall be keyed to match existing port maintenance keys. • Access Panel locations and sizes other than 24”x 24” must be confirmed with Aviation Maintenance, see **Maintainability Standards** for additional considerations during design

4.6 PARTITIONS

Partitions separate and define spaces. Their construction and finishes allow spaces to function as intended.

DEMOUNTABLE PARTITIONS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- **Partitions**
  - **Demountable Partitions**
  - Gypsum Wallboard
  - Green-Board
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
DESCRIPTION	Used by tenants to create administrative, storage, or private areas for screening.
COLOR	Silver anodized aluminum Frosted glass
NOTES	• Coordinate with surrounding finishes. • Can be full pane or dividing mullions.
LOCATIONS	Baggage Claim Security Checkpoints

GYPSUM WALLBOARD

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- **Partitions**
  - Demountable Partitions
  - **Gypsum Wallboard**
  - Green-Board
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
DESCRIPTION	Impact resistant
FINISHES	Neutral, light, and subtle Paint Wallcovering Column Enclosures
NOTES	• If using metal stud wall construction, the bottom track of the wall needs to be designed and secured to the floor to resist impacts from motorized pallet jacks. • Gypsum wallboard finishes shall only be used in areas on wall or column covers which are not susceptible to damage and not accessible to the public. The exception shall be for use on temporary walls and columns. • In high traffic areas, a durable finish shall be used as a removable wainscot to protect the wall from people and carts. In general the lowest 24" of walls receive the most damage; therefore a removable wainscot 36" high (with or without a 12" base) is required so that maintenance can repair and replace without removing the entire wall panel. • In general, for maintenance purposes, wall surfaces shall have no texture.

GREEN-BOARD

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- **Partitions**
  - Demountable Partitions
  - Gypsum Wallboard
  - **Green-Board**
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
DESCRIPTION	Mold-resistant
NOTES	• Gypsum wallboard finishes shall only be used in areas on wall or column covers which are not susceptible to damage and not accessible to the public. The exception shall be for use on temporary walls and columns. • In high traffic areas, a durable finish shall be used as a removable wainscot to protect the wall from people and carts. In general the lowest 24" of walls receive the most damage; therefore a removable wainscot 36" high (with or without a 12" base) is required so that maintenance can repair and replace without removing the entire wall panel. • In general, for maintenance purposes, wall surfaces shall have no texture.
LOCATIONS	Janitor Closet

4.7 CONVEYING

Conveying systems help us get to where we're going faster. It's important that these areas are kept clear, clean, and well demarcated.

STAIRS

Exterior

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- **Conveying**
  - **Stairs**
    - **Exterior**
    - Interior
  - Rails
  - Elevators
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Exterior
FINISHES	Hot-dipped galvanized after fabrication
ACCEPTABLE MATERIALS	Stringers: steel Treads: steel safety flooring Risers: steel sheet Landings: steel safety flooring Railings: steel
NOTES	• Provide with non-slip nosing and tread. • Solid treads and risers (with no openings) are required. • STIA exterior stairs are occasionally used for passenger loading and unloading. • Concrete treads are acceptable, but subject to approval. • All bolts shall be stainless. • All welding sites shall be treated with a galvanized coating. • Paint finishes are not allowed. • Match visual appearance of existing stairs on Concourse B, C, and D. • All exterior galvanized metal must be painted or coated.
LOCATIONS	Aircraft Passenger Loading Bridges

STAIRS

Interior

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Architectural Elements
Building Envelope
Roofing
Structure
Fenestration
Partitions
Conveying
Stairs
Exterior
Interior
Rails
Elevators
Casework
Furniture
Lighting
Finishes
Ceilings
Equipment
Appendix

CATEGORIES	Interior
FINISHES	Paint finish to be used on steel stair structural supports and framing members exposed to view Public Facing Stair Treads - terrazzo Back of House Stair Treads - concrete Pre-cast or inlay contrasting strips
NOTES	• Uniform finish color to be used in all exposed portions. • Paint finish shall be cleanable. • In all stairwells, a 5'-0" high wainscot shall be applied using a paint three to four shades darker than the standard white. • Extend stairwell landing where possible to have wrap-around handrail at same level (see photo >) • Where possible, provide natural light in stairwells or open staircases along exterior walls

RAILS

Metal Railings

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- **Conveying**
  - Stairs
  - **Rails**
    - **Metal Railings**
    - Guardrails
    - Queue Rails
    - Baggage Claim Rails
  - Elevators
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Exterior
FINISHES	Steel is hot-dipped galvanized after fabrication Stainless steel sheet material is required to be non-directional, 100 grit Formed or cast materials with flat faces are required to be non-directional, 100 grit Formed or cast materials with curved or shaped surfaces are required to be no. 4 brushed Bead blast finishes, sealers, and coatings are not allowed
ACCEPTABLE MATERIALS	Steel, or stainless steel
NOTES	• Close exposed, open ends of railings using same material as the member. • Wall mounted handrails shall be returned to the wall. • Handrails are left unpainted for ease of maintenance. • Connections and accessories to be finished to match railing finishes.
LOCATIONS	Aircraft Passenger Loading Bridges

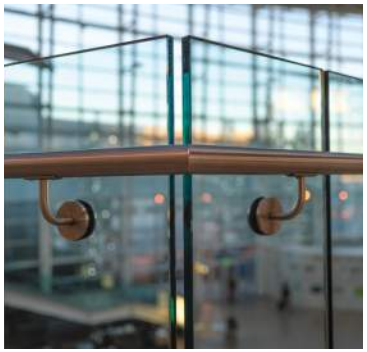
RAILS

Guardrails

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- **Conveying**
  - Stairs
  - **Rails**
    - Metal Railings
    - **Guardrails**
    - Queue Rails
    - Baggage Claim Rails
  - Elevators
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
RECOMMENDED MANUFACTURERS	Julius Blum Blumcraft Livers Bronze Company Newman Brothers Inc.: Econorail" glass rail system
FINISHES	Stainless steel base: sheet material with sanded finish is required to be non-directional, 100 grit Formed or cast materials with flat faces are required to have sanded finish that is non-directional, 100 grit Formed or cast materials with curved or shaped surfaces are required to have a No. 4 brushed finish Bead blast finishes, sealers, and coatings are not allowed
ACCEPTABLE MATERIALS	Clear 3/4" solid glass with stainless steel handrail and base
NOTES	• Railings, guardrails, and metalwork shall be shop fabricated per code and industry standard. • Aluminum railings are not allowed. • Glass panel sizes shall be selected to ensure easy removal and re-installation. Panels that are too heavy may be cumbersome and would need extra measures for safe handling. • All rails and guardrails are to be provided with a 4" high base to protect glass from maintenance procedures and carts. • For railings at seismic bracing, infill panels and bases are not allowed. • Provide tall glass railings or railings with blast protection for non-secure locations or other locations determined by project.
LINKS	Design Intent Drawings



RAILS

Queue Rails

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- **Conveying**
  - Stairs
  - **Rails**
    - Metal Railings
    - Guardrails
    - **Queue Rails**
    - Baggage Claim Rails
  - Elevators
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
ACCEPTABLE MATERIALS	Stainless steel, metal panel top surface
LOCATIONS	International Arrivals Federal Inspection Services International Arrivals Baggage Claim

RAILS

Baggage Claim Rails

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- **Conveying**
  - Stairs
  - **Rails**
    - Metal Railings
    - Guardrails
    - Queue Rails
    - **Baggage Claim Rails**
  - Elevators
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Interior
FINISHES	Stainless steel base: sheet material with sanded finish is required to be non-directional, 100 grit Formed or cast materials with flat faces are required to have sanded finish that is non-directional, 100 grit Formed or cast materials with curved or shaped surfaces are required to have a No. 4 brushed finish Bead blast finishes, sealers, and coatings are not allowed
ACCEPTABLE MATERIALS	Stainless steel handrail and base with perforated metal screen
NOTES	• Railings, guardrails, and metalwork shall be shop fabricated per code and industry standard. • Aluminum railings are not allowed.
LOCATIONS	Baggage Claim Lobby International Arrivals Baggage Claim

ELEVATORS

Cab Finishes

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- **Conveying**
  - Stairs
  - **Rails**
    - Metal Railings
    - Guardrails
    - Queue Rails
    - Baggage Claim Rails
  - **Elevators**
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

TYPE	Public Use Elevators
FINISHES	Base, Railings, & Wainscot - stainless steel, brushed or seastone finish Walls - back painted glass, cast glass, metal, solid surface Flooring - terrazzo (resilient flooring in parking garage) Ceilings - metal panels, cove lighting
NOTES	• Provide handrails and base rails - design of rails location specific • Durable materials, high quality finishes, emphasize bright modern look & feel • Smallest joints possible at seams and corners (eliminate trash collection gaps) • Coordinate with Signage Standards for directories & button design

TYPE	Staff Only Elevators (not Freight)
FINISHES	Base, Railings, & Wainscot - stainless steel, brushed finish Walls - metal, laminates, phenolic Flooring - resilient flooring, terrazzo Ceilings - metal panels, cove lighting and/or flush mounted lighting
NOTES	• Provide handrails and base rails - design of rails location specific • Durable materials, cost effective price ranges

TYPE	Freight Elevators
FINISHES	Base & Walls - diamond plated steel with plywood backing Railings - flat bar base rail, handrails - stainless steel brushed finish Flooring - resilient flooring, broom finish concrete Ceilings - metal panels with flush mounted lighting
NOTES	• Provide handrails and base rails • Durable materials • Hooks for blankets

4.8 CASEWORK

Casework is present in most space types where airlines operate: namely the check-in lobby and the holdrooms. Where the space is shared by multiple airlines, referred to as “common use,” the casework is supplied by SEA. In other instances, the airlines provide their own casework. SEA provided casework is detailed in this section, each item referencing the shop drawings that apply.

CASEWORK

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- **Casework**
  - Check-In Lobby Counter
  - Ticket Lift Podium
  - Gate Check-In Counter
  - Flight Information Display
  - Charging Station
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

In order to maintain a unified look throughout the terminal public areas, all casework and cabinetry must consistently conform to these guidelines:

- Design intent of casework is standardize the shell and structure of the casework; internal modular components can then fit into the shell, allowing for maximum customisability for airlines and future flexibility.
- Surface materials must exhibit a matte and even appearance, and must be resistant to dents, scratches, nicks, and other deformities caused by arbitrary public abuse.
- Color and finish must be fade resistant, have a uniform color intensity throughout the finish, and shall not exhibit visual changes in color or appearance when scratched or subjected to fingerprints.
- Casework design shall be based on modular panel components, factory produced, and interchangeable for flexibility.
- Easy access for maintenance must be integrated into the design, while concealing access panels to the best degree possible.
- Concealed mechanical fasteners are used for the assembly of components. They shall be rigid, sturdy, and give an overall neat and unobtrusive appearance, showing no loose or poorly constructed joints. Square butt joints are preferred for solid surface. Include eased edges.
- Use commercial grade hardware and use master keying system for all locks, compatible to POS key cores.
- Select materials that are expected to be available in the future.
- Preference will be given to the use of wood products made from FSC (Forest Stewardship Council) certified wood. Overall, preference for plywood. Cabinet drawers must be plywood.

New

Archive

Sustainable

CASEWORK

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- **Casework**
  - Check-In Lobby Counter
  - Ticket Lift Podium
  - Gate Check-In Counter
  - Flight Information Display
  - Charging Station
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

- All casework shall meet the requirements for AWI Premium Grade and be registered for and receive certification under AWI Quality Certification Program for Premium Grade. The use of composite wood (e.g., MDF, particleboard, plywood, agrifiber board etc.) made with glues or resins that contain added urea-formaldehyde is prohibited. This prohibition includes any part of any assembly fabricated on or off site.
- Per the requirements of NFPA415, 4.1.2, all materials within the airport terminal are required to carry a classification of either Class A or Class B Fire Rating.
- Consideration should be given to evolution of technology, airline processes, and minimizing the footprint of the units.
- Units should be modular to account for present and future airline needs, allowing for changes that do not require destructive changes to casework shells.

CASEWORK

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- **Casework**
  - Check-In Lobby Counter
  - Ticket Lift Podium
  - Gate Check-In Counter
  - Flight Information Display
  - Charging Station
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

There are three primary types of casework, depending on the concourse location and the needs of the space:

- **Check-In Lobby** — Check-In Lobby Counter and Baggage Scale (passenger check-in and bag drop-off)
- **Concourses A & B** — Boarding gate cabinets made of red cedar
- **Concourses C, D, N & S** — Boarding gate cabinets made of maple

Additionally, there are other types of casework found around the airport:

- **Miscellaneous** — Flight Information Display
- **Concourses** — Charging Stations - Varies by location

Applicable LEED Credit Requirements:

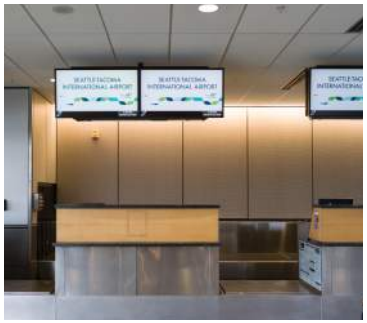
- MR – Building Product Disclosure & Optimization – Environmental Product Declarations
- MR – Building Product Disclosure & Optimization – Material Ingredients
- MR – Building Product Disclosure & Optimization – Sourcing of Raw Materials

CHECK-IN LOBBY COUNTER

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- **Casework**
  - **Check-In Lobby Counter**
  - Ticket Lift Podium
  - Gate Check-In Counter
  - Flight Information Display
  - Charging Station
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

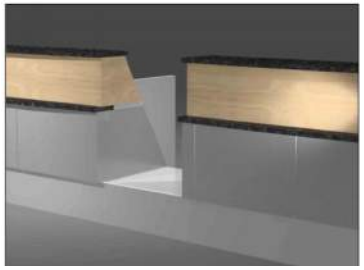
Appendix

SIZE	5’ - 7” L 3’ - 6 1/8” W 4’ - 1 1/4” H
COMPONENTS	Podium shell Podium insert (including the printer cabinet)
FINISHES	Refer to drawings
NOTES	• Provide and maintain access to power outlets when providing cabinet inserts. • Seal inside of work counter to cover any gaps. • On vertical surface of casework adjacent to scales, eliminate any overhangs of material that can be damaged by heavy baggage. • Coordinate drawer hardware with weight of equipment.
LOCATIONS	Check-In Lobby



CHECK-IN BAGGAGE SCALE SHELL

SIZE	2’ - 6” L 1’ - 10” W 1’ - 0” H
FINISHES	Stainless steel
NOTES	• Top of scale must be removable. • Scales need to be 20” wide minimum, 20” preferred
LOCATIONS	Check-In Lobby



TICKET LIFT PODIUM

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- **Casework**
  - Check-In Lobby Counter
  - **Ticket Lift Podium**
  - Gate Check-In Counter
  - Flight Information Display
  - Charging Station
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

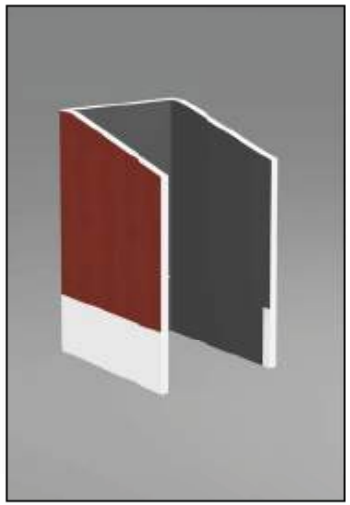
Appendix

SIZE	2’ - 3” L 2’ - 9” W 4’ - 0 1/8” H
COMPONENTS	Podium shell Podium insert
FINISHES	Maple wood veneer Stainless steel
NOTES	• Seal inside of work counter to cover any gaps. • Protect and reinforce corners.
LOCATION	Concourses C, D North, South Satellites

Section B - Gate Lobby Casework

Ticket Lift P

Front View



Rear View

RENDERED ILLUSTRATIONS

BTIA Casework Standards
Issued: 09/01/03

GATE CHECK-IN COUNTER

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- **Casework**
  - Check-In Lobby Counter
  - Ticket Lift Podium
  - **Gate Check-In Counter**
  - Flight Information Display
  - Charging Station
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

SIZE

Counter:
7’ - 0” L
3’ - 6” W
3’ - 11” H

Backstand:
6’ - 4” L
2’ - 6” W
9’ - 2” to 10’-8” H

COMPONENTS

Gate check-in counter
Backstand
Boarding Gate Reader (BGR) stand
Gate Podium

FINISHES

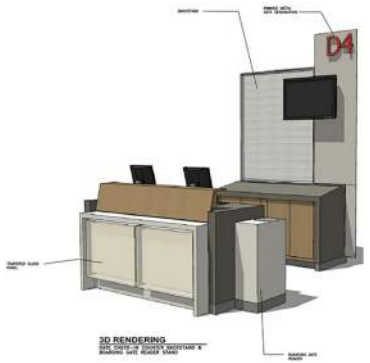
Refer to drawings

NOTES

- Design intent is for standardization of outer appearance and shell. Airline specific casework would be coordinated per project requirements and fit into shell.
- Front panels of shell to be removable to access electrical chase.
- This casework is also the standard for ground transport and cruise ship counters.
- Provide and maintain access to power and data outlets when providing cabinet inserts.
- Provide power and data outlets in furred wall by backstand, rather than the cabinet back. Coordinate cutouts with cabinetry.
- Design backstand to be transparent to not block light.
- Align back of backstand to prevent passenger access to plane from behind; place near gate door.
- Integrate boarding gate reader into gate check-in counter whenever possible.
- Provide robust foot rail on counter on side with workstations.
- Doors to be standards hinged doors, no pocket doors.

LOCATIONS

Holdroom



FLIGHT INFORMATION DISPLAY

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- **Casework**
  - Check-In Lobby Counter
  - Ticket Lift Podium
  - Gate Check-In Counter
  - **Flight Information Display**
  - Charging Station
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

SIZE	11' - 8" L (varies depending on number of monitors units included) 1' - 10 7/8" W 9' - 8 8" H
FINISHES	Stainless steel
NOTES	• Flight Information Displays (FIDs) can be ceiling, wall, or floor mounted.
LOCATIONS	Check-In Lobby Esplanade Central Terminal Concourses & Satellites Holdrooms

CHARGING STATION

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- **Casework**
  - Check-In Lobby Counter
  - Ticket Lift Podium
  - Gate Check-In Counter
  - Flight Information Display
  - **Charging Station**
- Furniture
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

SIZE	13’ - 3” L 3’ - 6” W 4’ - 8” H
COMPONENTS	Countertops Divider with power and lighting Stools anchored to floor
FINISHES	Metal base Wood veneer Solid surface
NOTES	• The charging station is a counter height ledge that provides passengers a place to rest and charge their devices. • 25% of available seats to be accessible stations. • Passengers are likely to lean on this perch, so it should support the appropriate weight. Provide additional support mid-span on long countertops. • Charging stations shall come with floor mounted seating units. Seats should have automatic returns and no height adjustment. • Charging station outlet receptacles shall be easily replaceable, meet Electrical Systems Standards and provide both standard 120V and USB charging options. • Provide access panels to electrical chase. Locate access door under counter and out of ‘kick-zone’ of passengers sitting. Provide hinged door or dual locks. • Provide robust anchorage or reinforced support at floor to prevent damage of vertical edges and warping.
LOCATIONS	Holdrooms

4.9 FURNITURE

Furniture is situated throughout SEA for customer comfort and waiting. Seating includes chairs, benches, and ganged gate seating located in interior public areas such as holdrooms, baggage claim, check-in lobby, and dining areas.

FURNITURE

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- **Furniture**
  - Checkpoint Seating
  - Holdroom Seating
  - Accent Seating
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

Different seating options for interior public areas shall be provided, so the passengers will have various waiting options.

New

Archive

Sustainable

Furniture Counts, Types & Layout

- Provide Holdroom seating for 70% of passengers. Port of Seattle to provide the number of passengers per holdroom, based on the largest aircraft utilizing gate.
- Once 70% of required holdroom seating is provided, introduce a variation of 5-10% of accent seating.
- Maintain 5'-0" aisle spacing between rows of seats. Exceptions require Port of Seattle approval, exceptions will be needed for Concourse D.
- 75% of general Holdroom seating should be powered. 100% of ADA seating to be powered.
- Seating with arms is to be provided in areas where people are prone to use the seats for sleeping.
- Gate seating arrangement should be perpendicular to windows.
- Tables will be provided in select public areas to provide alternative waiting options.
- Dining furniture - tables to be reviewed by Port of Seattle. Goal is 25% accessible seating in dining areas and open ADR spaces. Dining chairs currently used: Encore Ole, and Agati Sensi.
- Nursing Suites & Rooms - comfortable chairs or sofas. Select high back options in open room for additional privacy when sharing space.

FURNITURE

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- **Furniture**
  - Checkpoint Seating
  - Holdroom Seating
  - Accent Seating
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

Seating Finishes & Materials

- Fire Rating - Must comply with Port of Seattle Fire Department requirements - Per NFPA 415, 4.1.2, all materials used within airport are required to carry classification of Class A or Class B fire rating (in conjunction with Chapter 8 of IBC). All furniture in airport public spaces must be minimum CAL 117-13 compliant. Custom furniture shall be treated to provide minimum Class B fire rating. Plastic or injection molded furniture without minimum Class B rating will not be allowed.
- Seating color may vary throughout the airport, see Design Vision for concourse theme colors. Color should be determined based on context (e.g., terrazzo, carpet) and project design.
- Powder coated finishes not preferred. Finished metal or wood.
- Preference will be given to products with a high percentage of recycled content and/or manufactured within 500 miles of the project.
- Furniture listed in standard pages are pieces currently used, we are open to all commercial furniture companies. Other vendors we have pieces from include: Hightower, Airport Seating Alliance, Kusch+Co (V-travel).
- When selecting a new seating type, it is necessary to test units for a year prior to final procurement. Discuss with F&I and Operations for installations prior to project implementation.
- Fabric - highly durable and cleanable fabric required. Fabric Requirements: CAL117 Flammability, Bleach Cleanable (diluted), UV and Stain Resistant, exceed 500,000 double rub Wyzenbeek or have previous heavy use installations. Preference for one million double rub fabric selections.
- All furniture units (except in lounges), need to be anchored to floor, have no removable cushions or parts, and designed to help eliminate crumb/trash catching in crevaces.
- Prefer single cushion with no center seams, as most observed fabric wear and tears have occurred at seams.

CHECKPOINT SEATING

Bench

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- **Furniture**
  - **Checkpoint Seating**
    - **Bench**
  - Holdroom Seating
  - Accent Seating
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Accent Seating
PRODUCT NAME	Vector Seating System
FINISH	Frame: Dark Grey Metallic Texture Powdercoat Seat Slat: Cumaru Hardwood with fire rated coating
MANUFACTURER, MODEL	Forms + Surfaces Vector Bench, Backed, Seat Dividers
DESCRIPTION	Modular bench seating, with backing and seat dividers
NOTES	• Interchangeable modules include linear benches in 2, 4, 6, and 8- foot lengths. Verify with Port on length. • Furniture to be attached to the floor. • Ensure size and weight of pieces will fit in doorways and elevators from point of delivery to placement location, and that weight does not exceed structural limitations. • Ask the furniture dealer to create a fully-dimensioned furniture plan based on the final installation including circulation clearances.
LOCATIONS	Checkpoints, Recompose Areas

HOLDROOM SEATING

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- **Furniture**
  - Checkpoint Seating
  - **Holdroom Seating**
  - Accent Seating
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Holdroom Seating
PRODUCT NAME	Meda Gate Airline
FINISH	Seat Shell: Polyurethane integral-skin foam Armrest, Base and Legs: Polished aluminum Table Units: Black solid core laminate Power Modules: Polished aluminum with black cable channels Cup holder: Polished aluminum
MANUFACTURER	Vitra
DESCRIPTION	Modular seating system with chrome finishes
NOTES	• Interchangeable modules with multiple combinations, lengths and accessories. Verify with Port on systems. Finishes: • Typical seat shell color for Holdrooms: Basalt "Dark" Gray (RAL 7012) and black for Concourse D Annex, only. Parking Garage - Pantone 3308 green. • Colored seat shells are optional, especially when there is no room for accent seating. Components: • Slip glides required for carpet flooring. • Magnetic glide required for hard flooring locations. • (2) arm rests per seat for all concourse seating. • Non-secure: shared arm rest, no power, no cup holders, no tables. • Where there is back-to-back seating, dual seating rows preferred. • No tables preferred to increase seating capacity. Layout & Clearances: • Place seats away from wall to avoid back rest hitting structure behind. • As a precaution, provide chair rail at seat back height where seats hit walls. • Clearance to wall should be: 10" from wall to back edge of leg; 9" to back edge of glide or 33" from wall to seat front. • Allow a minimum of 5'-0" between rows of seats. Exceptions require Port of Seattle approval, exceptions will be needed for Concourse D.

HOLDROOM SEATING

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- **Furniture**
  - Checkpoint Seating
  - **Holdroom Seating**
  - Accent Seating
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

NOTES

Power:

- Non-secure - prefer no power in seating.
- Secure side - prefer all to have power.
- Power module placed between seats for powered units (on T-form)
- Power arm configuration (top to bottom): 50% (1) reversible USB-A, (1) USB-C, electrical 120V, electrical 120V. Other 50% with (3) electrical 120V.
- On designated ADA seating units provide electrical outlets on ends of the rows, so outlets are accessible by individuals sitting in wheelchairs next to unit.
- At other locations when possible, power outlets should be placed at the end of a row of seats so someone with a wheelchair can easily access the outlet.
- Male end electrical plug shall be standard straight cord, NOT right angle. Port preference is for short straight cord electrical plug that fits into floor outlets.

Accessibility:

- It is recommended that at least one end seat not have an arm rest.
- ADA designator inlay: black symbol on white
- Raised ADA seats typically on the outside unless the entire row is ADA. Include raised arms for raised ADA seats.
- Use entire row of all ADA seating when applicable to the seating layout.
- Allocate 20% or more of total Holdroom seating for ADA seats.
- Locate ADA seats near gate door and in line of sight to podium.

Installation:

- Ensure size and weight of pieces will fit in doorways and elevators from point of delivery to placement location, and that weight does not exceed structural limitations.
- Ask the furniture dealer to create a fully-dimensioned furniture plan based on the final installation including circulation clearances.

LOCATIONS

Concourses, Holdrooms, Waiting Areas
Meda Gate - Concourses A, B, C, N, D Annex, IAF
Airline - Concourses S, D, Non-Secure Main Terminal (Baggage Claim, Ticketing, Mezzanine), Parking Garage (Cruise Lobby, Cruise Waiting, Ground Transportation)

ACCENT SEATING

Recliner

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- **Furniture**
  - Checkpoint Seating
  - Holdroom Seating
  - **Accent Seating**
    - **Recliner**
    - Sofa-Style
    - Bench
    - Individual Seat
    - Ottoman
    - Lounge Seating
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Accent Seating
PRODUCT NAME	Meda Gate - Recliner Airline - Recliner
FINISH	Seat Shell: Polyurethane integral-skin foam Armrest, Base and Legs: Polished aluminum Table Units: Black solid core laminate Power Modules: Polished aluminum with black cable channels Cup holder: Polished aluminum
MANUFACTURER	Vitra
DESCRIPTION	Modular reclining lounge chair with chrome finishes
NOTES	• Interchangeable modules with multiple combinations, lengths and accessories. Verify with Port on systems. • Slip glides required for carpet flooring and anti-slip glides for hard flooring locations. • (2) arm rests per seat • Power module placed between seats for powered units (on T-form) • Power arm configuration (top to bottom): (3) electrical 120V. • Male end electrical plug shall be standard straight cord, NOT right angle. Port preference is for short straight cord electrical plug that fits into floor outlets. • Ensure size and weight of pieces will fit in doorways and elevators from point of delivery to placement location, and that weight does not exceed structural limitations. • Ask the furniture dealer to create a fully-dimensioned furniture plan based on the final installation including circulation clearances.
LOCATIONS	Concourse, Holdrooms

ACCENT SEATING

Sofa-style

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- **Furniture**
  - Checkpoint Seating
  - Holdroom Seating
  - **Accent Seating**
    - Recliner
    - **Sofa-Style**
    - Bench
    - Individual Seat
    - Ottoman
    - Lounge Seating
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Accent Seating
FINISH	Upholstery Seat Leg Finish: Chromed
MANUFACTURER, MODEL	Agati - Gee Straight, Gee Curve Vitra - Soft Wait
DESCRIPTION	Upholstery modular lounge chair, with multiple configurations
NOTES	• Interchangeable modules with multiple combinations, lengths and accessories. Verify with Port on systems. • Optional straight or curved configurations. • Work with Manufacturer to confirm suitable fabric materials. Previous installations have utilized fabrics: Mayer Caressa, Mayer Durango and Momentum Silica. • Fabric Requirements: CAL117 Flammability, Bleach Cleanable (diluted), UV and Stain Resistant, exceed 500,000 double rub Wyzenbeek or have previous heavy use installations. • Plastic laminate occasional tables with built in power. • Ensure size and weight of pieces will fit in doorways and elevators from point of delivery to placement location, and that weight does not exceed structural limitations. • Ask the furniture dealer to create a fully-dimensioned furniture plan based on the final installation including circulation clearances. • Allow 18" clearance along building perimeter for manual window cleaning or 36" minimum where a lift is required. • Furniture to be attached to the floor.
LOCATIONS	Concourse, Holdrooms Public Areas Club at SEA

ACCENT SEATING

Bench

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- **Furniture**
  - Checkpoint Seating
  - Holdroom Seating
  - **Accent Seating**
    - Recliner
    - Sofa-Style
    - **Bench**
    - Individual Seat
    - Ottoman
    - Lounge Seating
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Accent Seating
PRODUCT NAME	Gee - Custom Bench
FINISH	Upholstery Seat Leg Finish: Chromed
MANUFACTURER, MODEL	Agati Custom Bench, Vista
DESCRIPTION	Upholstery modular bench, chrome leg, and powered table
NOTES	• Interchangeable modules with multiple combinations, lengths and accessories. Verify with Port on systems. • Work with Manufacturer to confirm suitable fabric materials. Previous installations have utilized fabrics: Mayer Caressa, Mayer Durango and Momentum Silica. • Fabric Requirements: CAL117 Flammability, Bleach Cleanable (diluted), UV and Stain Resistant, exceed 500,000 double rub Wyzenbeek or have previous heavy use installations. • Plastic laminate occasional tables with built in power. • Ensure size and weight of pieces will fit in doorways and elevators from point of delivery to placement location, and that weight does not exceed structural limitations. • Ask the furniture dealer to create a fully-dimensioned furniture plan based on the final installation including circulation clearances. • Allow 18" clearance along building perimeter for manual window cleaning or 36" minimum where a lift is required. • Furniture to be attached to the floor.
LOCATIONS	Concourse, Holdrooms Public Areas

ACCENT SEATING

Individual Seat

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- **Furniture**
  - Checkpoint Seating
  - Holdroom Seating
  - **Accent Seating**
    - Recliner
    - Sofa-Style
    - Bench
    - **Individual Seat**
    - Ottoman
    - Lounge Seating
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORIES	Accent Seating
PRODUCT NAME	Fan Lounge
FINISH	Upholstery Seat Leg Finish: Chromed
MANUFACTURER, MODEL	Agati Fan Lounge
DESCRIPTION	Upholstered lounge chair, chrome disc base with self-centering cylinder
NOTES	• Fabric Requirements: CAL117 Flammability, Bleach Cleanable (diluted), UV and Stain Resistant, exceed 500,000 double rub Wyzenbeek or have previous heavy use installations. • Ask the furniture dealer to create a fully-dimensioned furniture plan based on the final installation including circulation clearances. • Freestanding or floor mounted with automatic return.
LOCATIONS	Concourse, Holdrooms Public Areas

ACCENT SEATING

Ottoman

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- **Furniture**
  - Checkpoint Seating
  - Holdroom Seating
  - **Accent Seating**
    - Recliner
    - Sofa-Style
    - Bench
    - Individual Seat
    - **Ottoman**
    - Lounge Seating
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORY	Accent Seating
FINISH	Upholstery Seat
MANUFACTURER, MODEL	Hightower - Prism Hightower - Kilo Island
DESCRIPTION	Upholstered ottoman
NOTES	• Anchored to floor. • Work with Manufacturer to confirm suitable materials. • Fabric Requirements: CAL117 Flammability, Bleach Cleanable (diluted), UV and Stain Resistant, exceed 500,000 double rub Wyzenbeek or have previous heavy use installations.
LOCATION	Concourse, Holdrooms

ACCENT SEATING

Lounge Seating

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- **Furniture**
  - Checkpoint Seating
  - Holdroom Seating
  - **Accent Seating**
    - Recliner
    - Sofa-Style
    - Bench
    - Individual Seat
    - Ottoman
    - **Lounge Seating**
- Lighting
- Finishes
- Ceilings
- Equipment

Appendix

CATEGORY	Accent Seating
PRODUCT NAME	Ginkgo Ply Lounge
FINISH	Upholstery Seat Exposed Veneer Shell: Oak or Walnut Leg Finish: Chrome
MANUFACTURER, MODEL	Davis Ginkgo Collection
DESCRIPTION	Upholstered lounge chair
NOTES	• Two back heights available as upholstered or wood veneer. • Four Prong - memory return swivel base • Optional footrest with exposed shell • Work with Manufacturer to confirm suitable materials. • Fabric Requirements: CAL117 Flammability, Bleach Cleanable (diluted), UV and Stain Resistant, exceed 500,000 double rub Wyzenbeek or have previous heavy use installations.
LOCATION	Club at SEA, First Class Lounge

4.10 LIGHTING

A series of lighting options are used throughout SEA. Selections should be reviewed for performance, light distribution, energy efficiency, budget, maintenance requirements, and aesthetic qualities.

LIGHTING

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- **Lighting**
- Finishes
- Ceilings
- Equipment

Appendix

The overall lighting strategy for SEA is to be lighter and brighter. Some general guidelines are outlined below:

- Use standard, rather than custom options when selecting light fixtures.
- All lighting should be LED fixtures.
- Accent lights can be used at decision points, as a highlight/ feature, and on artwork.
- Ceiling lighting is preferred over lighting that is integrated into furniture or wall sconces (except in restrooms or special locations).
- Where possible, conform to LEED best practices.
- Diffused field lighting should be used in ACT systems.
- Coffered lighting should be used at columns and where drywall ceilings end.
- Project teams should ensure compliance with local standards and codes for lighting efficiency, lumen output, and power consumption.
- Lighting controls should be provided to reduce unnecessary lighting when daylight levels are adequate or when spaces are unoccupied.
- Lighting fixtures should be coordinated with adjacent finishes; the same finish should be used throughout the same area.
- Metal paneled ceiling, particularly linear metal ceilings, should employ up-lighting.

Applicable LEED Credit Requirements:

- SS – Light Pollution Reduction
- MR – Building Product Disclosure & Optimization – Environmental Product Declarations
- MR – Building Product Disclosure & Optimization – Material Ingredients
- MR – Building Product Disclosure & Optimization – Sourcing of Raw Materials

4.11 FINISHES

Finishes help define the look, feel, and character of the airport, supporting coherency and legibility of the Airport design and experience.

FINISHES

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

Finishes are used throughout the airport and include the following subcategories:

- Flooring
- Paint
- Wallcovering
- Column Enclosures

Some general notes on the categories are provided here, including where consistency and variance apply. The following pages document each approved material, detailing performance criteria where appropriate, approved manufacturers, and the space types where it can be used.

SEA Airport is understandably an amalgamation of numerous time periods, and therefore also materials. Throughout the airport, there are a number of legacy finishes (not to be used on future projects) that will remain until a large project is undertaken to replace them. Legacy finishes have been included in the guidelines and are marked with a legacy icon. They should only be used for maintenance, repair, or replacement purposes.

Applicable LEED Credit Requirements:

- IEQ – Low-Emitting Materials
- MR – Building Product Disclosure & Optimization – Environmental Product Declarations
- MR – Building Product Disclosure & Optimization – Material Ingredients
- MR – Building Product Disclosure & Optimization – Sourcing of Raw Materials

New

Archive

Sustainable

FLOORING

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

Flooring types have been chosen primarily for their durability or acoustic properties, depending on the area. A number of general guidelines apply below, and the approved materials are detailed on the following pages.

Best Practices

- Terrazzo is the flooring preferred for any circulation areas.
- Accent colors of terrazzo are used for visual interest and wayfinding only.
- Any artwork in the terrazzo floor should be flush with the surface and should be approved by ARC.
- If wood is to be used, orient with the end grain facing up on the surface.
- Carpet tile is used in holdrooms. The same type should be used throughout a concourse, but it may vary between concourses.
- Carpet selected should have a pattern and mixture of tones to help conceal stains and seams.
- The pattern on the carpet can vary in scale depending on the size of the space
- The carpet should be colored in medium to dark tones of muted neutral colors (e.g., gray, brown, khaki) in order to easily hide stains.
- CRI (Carpet and Rug Institute) Green Label Plus certification (or its equivalent) is required for all new carpet and carpet tiles installed on site.
- Flooring in restrooms shall be durable and easily cleanable floor tile, in medium to dark tones.

Desired Finishes

- Primarily light-colored neutral terrazzo with accents that align with concourse themes (accent colors may vary)
- Carpet tile
- Walk-off mats

Legacy Finishes

- Terrazzo (dark brown) will be replaced as areas are renovated.

Safety

- Slip resistance in flooring material is critical. Provide ASTM E303-22 Pendulum Test Report of flooring material in wet and dry conditions that is third-party tested with engineer stamp. For flooring on sloped surfaces, any proposed flooring materials must achieve minimum pendulum test value of 45 for both wet and dry tests.

FLOORING

Waterproof Membrane

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - **Waterproof Membrane**
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

DESCRIPTION

In any Port or Tenant space, other than slab on grade, waterproofing must be provided below flooring systems in wet areas.
Wet areas - areas with fixtures or equipment that are plumbed.

PRODUCT

Waterproof Anti-fracture membrane
40 mil (mm) minimum thickness
Fabric reinforced laminate sheet, self-stick back, fully weldable or seam-able seams

MANUFACTURERS

NAC Products - Strataflex
Protecto Wrap - AFM-WM Anti Fracture Waterproof Membrane
Compotite - Composeal Gold
W.R. Meadows - MEL-ROL Procon Membrane

NOTES

- Provide waterproofing under wet areas.
- Use of manufacturer's recommended accessories are required.
- Expand membrane 5'-0" from wet areas and minimum 4" up face of walls within that area.
- Penetrations within wet walls and wall cavities will need to be part of waterproofing system when they are within the 5'-0" distance from wet areas.
  - In inaccessible chases or wall cavities above critical infrastructure (BHS, Comm, Elec, etc.), see traffic coating requirements for inside of studs.
  - In inaccessible chases or wall cavities not located above critical infrastructure, use waterproof fire-rated sealant around all penetrations through floor.
- Any renovations that move wet area will need to completely remove and reinstall waterproof membranes.
- Show extent of waterproof membrane and assembly details in design drawings.
- Coordinate waterproof membrane with flooring materials and adhesives.
- 8 hour flood test required at all floor drains and sinks in wet areas. Confirm specifications have a flood test requirement listed.
- Avoid wet areas over expansion joints.
  - Where expansion joints occur through wet areas, a detailed review with Port AVM and F&I is required.
  - Gutter and drain tube assembly at expansion joints in wet area will need to be connected to waste lines and coordinate with other disciplines.

LOCATIONS

Kitchens, Bars, Restrooms

FLOORING

Traffic Coating

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - **Traffic Coating**
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

DESCRIPTION	In any Port or Tenant space, for back of house spaces, equipment rooms, plumbing chases, where no finish floor will be provided. Required for Wet areas - areas with fixtures or equipment that are plumbed.
PRODUCT	Fluid Applied Traffic Coating System - slip resistant (no PMMA products)
MANUFACTURERS	Masterseal Traffic Coating Kemperol 2K-PUR Tremco Vulkem

NOTES	• Provide traffic coating at wet areas in entire room or chase.
	• Coat around floor penetrations and up penetrations 4" min.
	• Coat inside of open stud cavities and 4" min. up back of walls.
	• Any renovations that relocate wet area(s) will need to completely remove and reinstall traffic coating.
	• Show extent of traffic coating and assembly details in design drawings.
	• Confirm specifications have an 8 hour flood test at all floor drains and sinks in wet areas.
	• Avoid wet areas over expansion joints.
	  • Where expansion joints occur through wet areas, a detailed review with Port AVM and F&I is required.
	  • Gutter and drain tube assembly at expansion joints in wet area will need to be connected to waste lines and coordinate with other disciplines.

LOCATIONS	Plumbing Chases Back of House Equipment Rooms

FLOORING

Resilient Flooring

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - **Resilient Flooring**
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Columns Enclosures
- Ceilings
- Equipment

Appendix

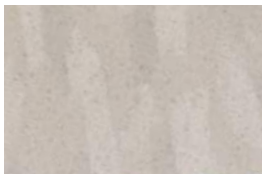
DESCRIPTION	Use Resilient flooring in any Port or Tenant space (for back of house, office spaces, hallways) where sealed concrete and carpet are not appropriate.

NOTES	• Select product compatible with existing concrete slab moisture, especially of concern for slab on grade locations.
	• Tile flooring is preferred over sheet product
	• High slip resistance needed, especially if on a sloped surface
	• Sustainability Selection Considerations:
	  ◦ PVC free
	  ◦ Low VOC Emissions
	  ◦ Cradle to Cradle Certified

LOCATIONS	Back of House Office Spaces

Static Dissipative Tile

DESCRIPTION	Communication Rooms - use Static Dissipative Tile (SDT)
PRODUCT	Excelon SDT tile
MANUFACTURERS	Armstrong Flooring
NOTES	• Basis of Design - Armstrong, Excelon SDT tile, color: 51953 pearl white, with light gray wall base. • Light gray floor color preferred for ease of finding any dropped materials.
LOCATIONS	Communication Rooms



FLOORING

Carpet Tile

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - **Carpet Tile**
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

DESCRIPTION

Linear-organic patterned carpet, with pattern scale based on the size of the space
All carpet shall meet air quality test criteria of CRI (Carpet and Rug Institute) Green Label plus certification
Flammability is less than or equal to .45, Class I
8 lbs/inch resistance to delamination per ASTM D1335 test method
+/- 0.20% max change in dimensional stability per ASTM D7570
Loop pile (no cut pile); Pile tuft between .125" to .218"
100% type 6 premium branded fiber, trilobal fiber shape
Modification ratio of 2 or less
TARR rating or 3.5 or higher
Polymer type identification to AATCC TM 20
Stain testing 8 or better to AATCC 175
Colorfastness to light to AATCC 16.3 to 40 AFU, minimum rating of 4 using AATCC gray scale for color change
Include open cell secondary cushion backing, no PVC
Solution dye; no vat dye or printed patterns
Smoke density (NFPA-258-T or ASTM-E-648) less than or equal to 450
Must pass Methenamine Pill Test and be specified as self-extinguishing
Recycled content

COLOR

Neutral colors

NOTES

- Refer to Port's Guide Specifications - Section 09 68 13 Tile Carpeting
- Conceal the carpet seam.
- Do not use a quarter turn pattern.
- Preference is for carpet tile that appears like broadloom.
- For new installations do not use large graphic patterns that make seams difficult to match.
- Select patterns that permit random replacement of single tiles without disrupting the overall effect.
- Choose colors and patterns that can effectively camouflage dirt and stains, and allow easy cleaning, maintenance, and repairs.

LOCATION

Holdrooms, Skybridges, Office Space, Seating Areas

FLOORING

Terrazzo

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - **Terrazzo**
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

FINISH	Non-slip surface type sealer
NOTES	• Requires approval by Port F&I Architecture • Terrazzo finish is to be used in all stairs in public circulation areas. • Terrazzo colors and finishes on stairs must match, or be compatible with the adjacent terrazzo floor finishes and other adjacent floor treatments • Use pre-cast terrazzo stair treads and risers, terrazzo base, and non-skid nosing insert.
DESIGNATION	STEP TZ-4
LOCATION	South Baggage Claim Level GML Hall
AGGREGATE MIX	3/8" Epoxy Resin: General Polymers #21769 75% Bottechino #0,1,2,3,4,5 5% Black 5% Demarco Gray #1,2 5% White #1 5% Clear Glass #3,5 5% Amber Glass #1

DESIGNATION	STEP TZ-2
LOCATION	Ticketing and Baggage Claim Level
AGGREGATE MIX	3/8" Epoxy Resin: General Polymers #23517 75% Raven Black #0,1,2 25% Cream Botte #0,1,2

FLOORING

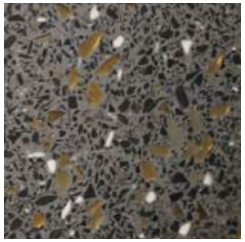
Terrazzo

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - **Terrazzo**
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

DESIGNATION	STEP TZ-1 CTE ET-2
LOCATION	South Ticketing and Mezzanine levels GML Hall - Stairs
AGGREGATE MIX	3/8" Epoxy Resin: General Polymers, "Sandrift," #18817 80% Bottechino #0,1,2 10% White #1,2 10% Clear Glass #3

DESIGNATION	STEP TZ-5 CTE ET-6
LOCATION	GML Hall, Concourse A, and CTE - Restrooms and Janitorial Closets
AGGREGATE MIX	3/8" Epoxy Resin: General Polymers "Charcoal" #19503 80% Black #0,1,2 10% White #01,2, 10% Amber Glass #3 or clear glass to match existing location (Amber glass at GML Hall and Concourse A locations and clear glass at CTE)



DESIGNATION	STEP TZ-3 CTE ET-3
LOCATION	South Ticketing Level Main Terminal Central - Esplanade, Checkpoint 3, Breezeway
AGGREGATE MIX	3/8" Epoxy Resin: White to match existing 60% White and Gold #0,1,2 15% White glass 15% Clear glass 10% Mother of Pearl Roman Tile & Mosaic #4297, #TI-3 04-28-9

FLOORING

Terrazzo

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - **Terrazzo**
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

DESIGNATION	STEP TZ-6
LOCATION	South Terminal Expansion Project
AGGREGATE MIX	3/8" Epoxy Resin: Match Pratt & Lambert #1426 "ANCESTRAL White" 30% "Cactus Canyon" Green Marble 20% "Chewelian" White Marble, 15% "Cardiff" Green Marble 20% Mother-of-Pearl 15% CS Amber #9 Glass

No image provided

DESIGNATION	STEP TZ-7
LOCATION	-
AGGREGATE MIX	3/8" Epoxy Resin: Match Engineer's Sample 70-80% Clear Glass #2 15-30% White & Gold Marble #01,2, 0-15% Mother-of-Pearl size 2

No image provided

DESIGNATION	CTE ET-4
LOCATION	Main Terminal Central - Esplanade (Compass Design)
NOTE	• Compass design is part of the Art Program • Coordinate with Port Art
AGGREGATE MIX	100% Green Epoxy Resin 60% Sage Green Glass #1 20% Light Green Glass #1 15% Mother-of-Pearl # 2 5% Black Glass #1

FLOORING

Terrazzo

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - **Terrazzo**
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

DESIGNATION	CTE ET-5
LOCATION	Main Terminal Central - Esplanade (Compass Design)
NOTE	• Compass design is part of the Art Program • Coordinate with Port Art
AGGREGATE MIX	100% Blue Epoxy Resin 85% Blue Plastic 98 15% Mother-of-Pearl #2

DESIGNATION	Concourse B - Field (Formula 553-1)
LOCATION	Concourse B - Stream
NOTE	• Bronze fishes in stream are part of the Art Program • Coordinate with Port Art
AGGREGATE MIX	General Polymers #40873 10% Chewalla White #0 25% Chewalla White #1 12 ½% Chewalla White #2 12 ½% CC Green #2 10% Mop #2 (Mother of Pearl) 5% CS Amber 9 #1 25% Marble Mix Seed 2 ½% T-Blue 5 #1 7 ½% Mop #2 25% CR Green 6 #2 25% Ant Green #2 10% CS Amber 9 #1 15% CO Blue 7 #1 15% CO Blue 7 #2

FLOORING

Terrazzo

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - **Terrazzo**
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

DESIGNATION	Delta Sky Club TZ-1
LOCATION	Concourse S - Delta Sky Club elevator lobby
AGGREGATE MIX	"Terroxy" epoxy "lighter SEA brown" #522 40% Chew Black #1 45% Chew Black #2 10% Chew Cream #2 5% Chew Cream #1 Filler MW 200 (Note: Rough 24-80; fine 50 resin grout; polish 120 pads) (Sealer: 1 coat TESCO Crystal Seal High gloss solvent)

No image provided

DESIGNATION	Delta Sky Club TZ-2
LOCATION	Concourse S - Delta Sky Club
AGGREGATE MIX	"Terroxy" epoxy Sandrift #1462 80% Inyo Bronze # 0, 1, 2; 800 800 800 by Terrazzo and Marble Supply Co. (Chicago) 10% Chew White #1 10% Clear Glass #2 by Terrazzo and Marble Supply Co. (Sealer: 1 coat TESCO Crystal Seal II High gloss) (2 coats ZEP Floor Finish 3 wet look sheen)

No image provided

FLOORING

Terrazzo

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - **Terrazzo**
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

DESIGNATION	Concourse B TER-1, 1995
LOCATION	Concourse B
AGGREGATE MIX	Ancestral White Epoxy (GP) 20% CH. White #0 30% CH. White #1 15% CH. White #2 10% CC Green #2 15% Mother of Pearl #2 10% Amber Glass #1

DESIGNATION	Concourse B TER-2, 1995
LOCATION	Concourse B
AGGREGATE MIX	Ancestral White Epoxy (GP) 20% CH. White #0 15% CC Green #1 15% CC Green #2 5% Cardiff Green #1 10% Cardiff Green #2 20% Mother of Pearl #2 15% Amber Glass #1

FLOORING

Stone Flooring

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - **Stone Flooring**
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

NOTES	Stone flooring is not to be used as a finish material for any interior public space, except in special spaces, such as the Central Terminal and the South Arrivals Hall.
LOCATIONS	Central Terminal South Arrivals Hall (GML)

FLOORING

Tile Flooring

Type 1

PRODUCT NAME	Ambassador AM36 Ceramic Tile
DESCRIPTION	Porcelain ceramic tiles with integral material and color
SIZE	Minimum of 12" x 12"
COLOR	Medium to medium light color palette
FINISH	Minimal surface texture for easy and effective cleaning Medium or dark colored epoxy grout Unglazed Matte finish Slip resistant Cushion edge type Glazed (as accents only)
NOTES	• High quality installation is essential to minimize the risk of cracking. • Base to be coved for ease of maintenance. • At slab-on-grade locations, include an anti-fracture membrane / coating system below tile flooring.
LOCATIONS	North, South Satellites

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - **Tile Flooring**
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

FLOORING

Tile Flooring

Type 2

DESCRIPTION	Porcelain ceramic tiles with integral material and color
SIZE	Minimum of 12" x 12"
COLOR	Medium to medium light color palette
FINISH	Minimal surface texture for easy and effective cleaning Medium or dark colored epoxy grout Unglazed Matte finish Slip resistant Cushion edge type Glazed (as accents only)
NOTES	• High quality installation is essential to minimize the risk of cracking. • Base to be coved for ease of maintenance. • At slab-on-grade locations, include an anti-fracture membrane / coating system below tile flooring.
LOCATIONS	Animal Relief Area

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - **Tile Flooring**
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

FLOORING

Broadloom Area Rug

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - **Broadloom Area Rug**
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

LOCATIONS

Check-In Lobby
Baggage Claim Lobby
Esplanade

FLOORING

Walk-Off Mat

Type 1

PRODUCT NAME	Obex Tile CutX - Drift (Interior); Obex Bar Mono - Grey (Exterior)
DESCRIPTION	Linear grayscale ashlar pattern Heavy duty fiber-based textile created for vestibule application Tufted cut-pile monofilament fibers designed to capture dirt and debris Total thickness 0.5" (bar product varies from tile)
SIZE	12" x 12" tiles for Interior 48" long planks for Exterior
NOTES	• Walk-off mats are in high traffic areas and must be durable. The mats are to be a stiff, non-slip, brush-like material and act as a transition from the exterior to interior. • Walk off mats will be installed on top of concrete ramps and at portal entries. • Interior applications use tiles similar to carpet, installed in an ashlar pattern. Linear patterns should align with pedestrian path of travel. • The interior tiles will be installed from the center point so tiles at each edge will be no less than one-half tile and equal in width. • Exterior applications are installed with aluminum click-together frame members with walk off mat inserts, on top of concrete. • Provide edge members in single lengths. • Consider trim pieces needed at edges in both interior and exterior applications.
LOCATIONS	Check-In Lobby Baggage Claim Lobby Departures and Arrivals Drive Portals

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - **Walk-Off Mat**
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

FLOORING

Walk-Off Mat

Type 2

PRODUCT NAME	Abrasive Action II Walk-Off Mat 6'-0" Roll Powerbond
DESCRIPTION	Basket weave or checkerboard pattern with recessed extruded aluminum Units of edge grain laminated and chenille buffed rubber tire mats 3/8" to 7/16" thick Rubber tires are recycled
SIZE	12" x 12"
NOTES	• Walk-off mats are in high traffic areas and must be durable. The mats are to be rubber tire floor mats and act as a transition from the exterior to interior. • Mats will be recessed in frames set in terrazzo floors. • The recessed mat frames will require corner pins, or reinforcing and installation anchors. • The floor mats will be installed from the center point so tiles at each edge will be no less than one-half tile and equal in width. • Extruded aluminum shall be ASTM B 221, with alloy 6063-T%. • Provide edge members in single lengths.
LOCATIONS	Check-In Lobby Baggage Claim Lobby South Arrivals Hall (GML)

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - **Walk-Off Mat**
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

FLOORING

Walk-Off Mat

Type 3

PRODUCT NAME	Abrasive Action II Walk-Off Mat 6'-0" Roll Powerbond
DESCRIPTION	Basket weave or checkerboard pattern with recessed extruded aluminum Units of edge grain laminated and chenille buffed rubber tire mats 3/8" to 7/16" thick Rubber tires are recycled
SIZE	12" x 12"
NOTES	• Walk-off mats are in high traffic areas and must be durable. The mats are to be rubber tire floor mats and act as a transition from the exterior to the interior. • Mats will be recessed in frames set in terrazzo floors. • The recessed mat frames will require corner pins, or reinforcing and installation anchors. • The floor mats will be installed from the center point so tiles at each edge will be no less than one-half tile and equal in width. • Extruded aluminum shall be ASTM B 221, with alloy 6063-T%. • Provide edge members in single lengths.
LOCATIONS	Skybridge

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - **Walk-Off Mat**
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

FLOORING

Fixed Floor Mat

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - **Fixed Floor Mat**
    - Astro Turf
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

DESCRIPTION	Rubber tire mats with recessed mat frame and mat installation adhesive
SIZE	Size and style to fit floor mat type
FINISH	Edge grain laminated and chenille buffed rubber tire mats 3/8" to 7/16" thick 12" square tiles are to be set in a basket weave or checkerboard pattern
NOTES	• Mats will be recessed in frames set in terrazzo floors. • The recessed mat frames will require corner pins, or reinforcing and installation anchors. • The floor mats will be installed from the center point so tiles at each edge will be no less than one-half tile and equal in width. • Preference will be given to products with a high percentage of recycled content.

FLOORING

Astro Turf

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - **Astro Turf**
    - Transition Details
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

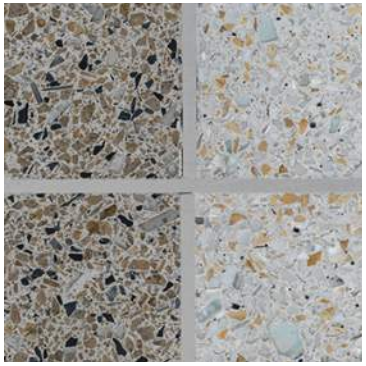
DESCRIPTION	Washable permeable surface with drainage system underneath
LOCATIONS	Animal Relief Area
NOTES	• Artificial turf specially designed as an animal relief surface, treated to inhibit the spread of disease, for indoor (and outdoor) areas

FLOORING

Transition Details

Terrazzo to Terrazzo

FINISH	Zinc
NOTES	Plastic dividers are not allowed.
LOCATIONS	All areas with terrazzo flooring
LINKS	Design Intent Drawings



Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - **Transition Details**
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

FLOORING

Transition Details

Floor Tile to Wall Tile

PRODUCT NAME	Basis of Design: Schluter DILEX
FINISH	Brushed Stainless Steel
NOTES	• For long runs, use in-line connectors that hide behind the cove so that they are not visible • Use standard manufacturer inside and outside corner pieces
LOCATIONS	All Restrooms, Nursing Suites, etc.

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - **Transition Details**
    - Expansion Control
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

FLOORING

Expansion Control Cover Plates

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - **Flooring**
    - Waterproof Membrane
    - Traffic Coating
    - Resilient Flooring
    - Carpet Tile
    - Terrazzo
    - Stone Flooring
    - Tile Flooring
    - Broadloom Area Rug
    - Walk-Off Mat
    - Fixed Floor Mat
    - Astro Turf
    - Transition Details
    - **Expansion Control**
  - Paint
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

PRODUCT NAME	MM Systems Series HDT 2-1 Extra Heavy Duty
FINISH	Stainless steel satin finish Pre-finished aluminum
LOCATIONS	All areas with expansion joints

PAINT

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - **Paint**
    - Paint Type By Location
    - Specialty Coatings
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

To keep the airport looking clean and scuff free long term, select paints that support ideal finish look and maintenance. When developing finish plans and specifications consider the following:

Best Practices

- Paint finishes for walls should be chip-resistant and suitable for high-traffic areas.
- Low VOC paint should be specified.
- Any accent paint on walls should be discussed with F&I and Maintenance. Accent paints will be reviewed and approved on a project-by-project basis.
- Port provides standards for finish paint sheen and color, design teams specify and contractors use compatible primers.
- Any painted drywall should be above 8 feet (out of passengers' reach). Add wallcovering below 8 feet in main circulation areas.
- Use powder coating as appropriate and where any surface damage will be limited or out of public view.
- Exterior Galvanized metals must be coated for environmental compliance.
- Paint entire surface - corner to corner. Small area touch ups not acceptable.
- To ensure consistent color, always order enough paint to complete the job and mix all containers of the same color before application.

Standard Colors

- Port Super White
- White
- Light Gray (Nomadic Travels)
- Medium Gray (Light Gray)
- Ramp Gray
- Black (Tricorn Black)

PAINT

Paint Type By Location

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - **Paint**
    - **Paint Type By Location**
    - Specialty Coatings
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

LOCATION	FINISH PAINT TYPE	SHEEN	STANDARD COLOR(S)	NOTES
Walls - Main Circulation Areas	Acrylic	Satin (up to 8′-0″) Flat (above 8′-0″)	Port Super White White	• At 8′-0″ transition to Flat sheen in White
Walls & Ceiling - Restrooms	Acrylic	Semi-Gloss	Port Super White	
Ceilings	Acrylic	Flat	White	
Hollow Metal Doors & Frames	Acrylic	Semi-Gloss	Interior - Light Gray (Nomadic Travels) Exterior - Ramp Gray	• Exterior Doors & Frames to use Specialty Coatings, see Exterior Metals.
Exposed Structural Framing	Acrylic	Semi-Gloss		• Can be white, gray, or accent color depending on exact location
Exterior Walls - Ramp Level	Acrylic	Flat	Ramp Gray	
Concrete	Acrylic	Flat or Satin		
CMU	Acrylic	Flat or Satin		• Block filler applied to painted CMU. • Sealer to be applied to ground face or other approved architectural finish CMU (unpainted).
Exterior Metals	Specialty coating			
Skybridge	Acrylic	Semi-Gloss	Black (Tricorn Black)	
Interior Columns	Acrylic	Semi-Gloss		• Can be white, gray, or accent color depending on exact location
Floor	Epoxy			• Use to increase slip resistance • Use traffic coating for wet areas

PAINT

Specialty Coatings

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - **Paint**
    - Paint Type By Location
    - **Specialty Coatings**
  - Wallcovering
  - Column Enclosures
- Ceilings
- Equipment

Appendix

Galvanized Metals

FINISH	Primer: zinc-rich non-ferrous urethane primer, high solids polyamide epoxy, or urethane, as recommended by topcoat manufacturer for adhesion to new galvanized surfaces and compatibility with finish coat material Intermediate coat: high solids polyamide epoxy or urethane Finish coat: urethane
NOTES	• Finishes shall be cleanable and abrasion resistant. • Allow for ease of matching finishes in-situ.

Slip Resistant Floor Coating

BASIS OF DESIGN PRODUCT	ArmorSeal 8100 Epoxy (Part A) B70A8160 (Sherwin Williams) ArmorSeal 8100 Epoxy (Part B) B70A8100 (Sherwin Williams)
DESCRIPTION	Aluminum oxide non-slips #46-70 grit for combination with matrix - for use in back of house spaces or exterior surfaces needing additional traction (also see Traffic Coating as alternative flooring type for wet areas)
COLOR	Haze gray
FINISH	Satin
NOTES	• Coating to be 2-part water-based epoxy. • Add H&C Sharkgrip Slip-Resistant Additive. • Non-skid inserts must be provided at stair tread nosings, ramps, and other sloped floor surfaces; and shall be installed flush to the floor to minimize dirt entrapment and chipping. • A medium colored, non-skid material is preferable to maintain a tidy appearance by hiding soiling and staining.

WALLCOVERING

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

Walls are subjected to much wear and tear, primarily from luggage and luggage carts. Durability and longevity of finishes are the primary concerns. Some additional guidelines apply:

- Acoustic treatment should be considered for vertical surfaces, especially in the holdrooms.
- The fabric used on stretched or tackable wall panels should have a suitable noise reduction coefficient (NRC).
- Wood is an accent only and should be used with a wainscot.
- Wood paneling used as a wallcovering should ideally wrap around the corner to feel continuous and create a transition into the next space.
- Stone is acceptable for feature or accent but it should match existing finishes.
- A chair rail should be installed on all public-facing areas.

SEA has defined wall panel systems as outlined below. Any additional variations must be approved.

High-traffic area (anywhere that's visible and accessible) wall panel system (total height 8 feet):

- Ribbed panels: alternating directions
- 12" stainless steel base (angel hair finish)
- 24" wainscot (above base or 36" without base)
- 60" panel on top

Low-traffic (baggage claim back wall) or back of house:

- Rubber Base
- PLam panels
- Diamond plated steel with plywood backing (back of house with motorized carts, pallet jacks)

WALLCOVERING

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

Holdrooms:

- Wainscot
  - Solid core PLam (phenolic core)
  - 12" stainless steel base
  - 24" wainscot (above base or 36" without base)
- Chair rail above all wainscots at a height that aligns with furniture heights, so as to protect the wall from banging
- Variable material above wainscot, but it must be:
  - Replaceable
  - Cleanable
  - Modular
  - Acoustic
  - Durable

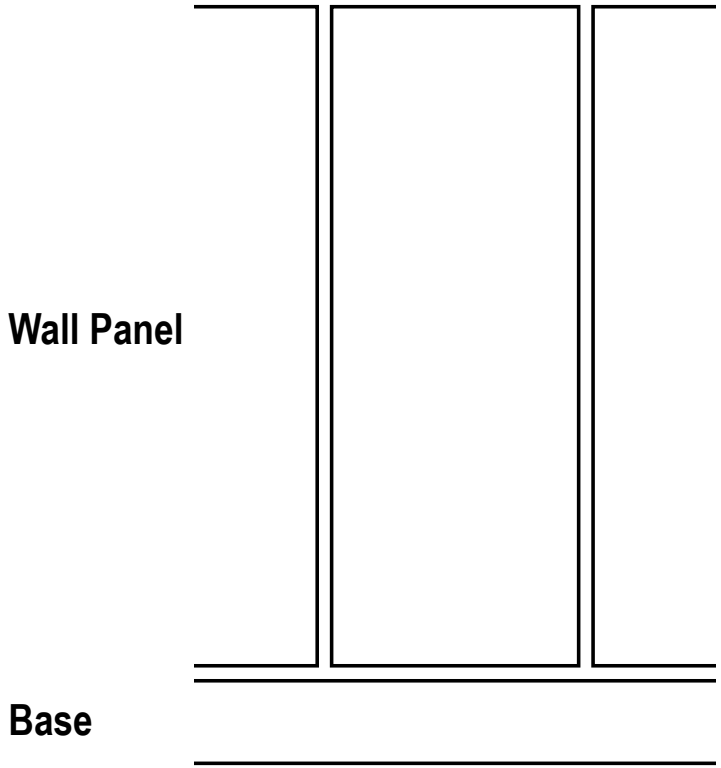
Acceptable top material:

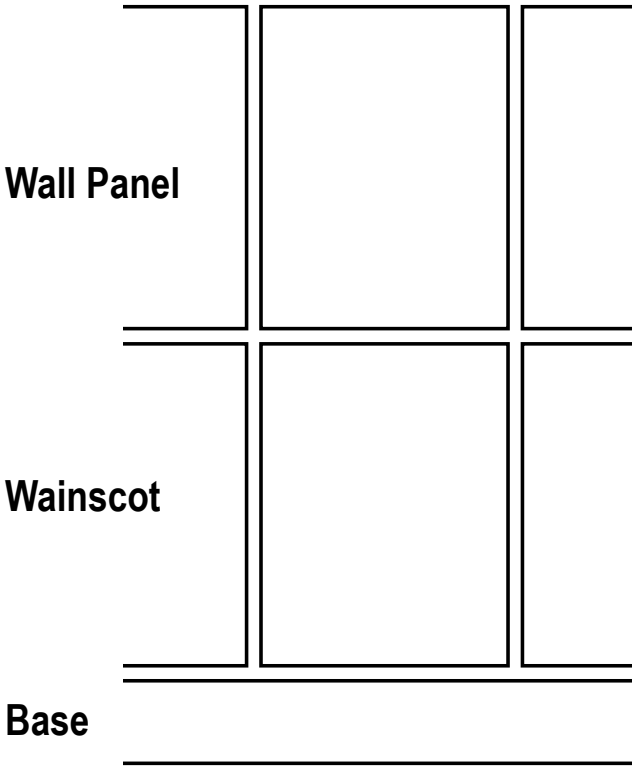
- Fabric
- Paint on Drywall (above 8 feet)
- Wood Paneling
- Metal Panel

WALLCOVERING

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix





WALLCOVERING

Systems

PLam System Type 1

ACCEPTABLE MANUFACTURERS	Formica Nevamar WilsonArt Laminart InPro Sanparrel
DESCRIPTION	Colored, high-pressure decorative laminate with solid color core Panel trim: stainless steel flat bar, half round trim, or aluminum trim
SIZE	Panel trim: PVC edging to be 2mm or 3mm thick flat strip 36" base and wainscot on high traffic areas
COLOR	Neutral color
FINISH	Matte finish Panel trim: wood tape PVC edging
NOTES	• Old standard followed in south pier. • Hang on a French Cleat system. • For plastic laminate, apply full coverage of manufacturer's recommended quantity of adhesive to each surface. • Generally, light to medium neutral colors and subtle patterns are preferred. • Custom colors and textured plastic laminate finishes are not allowed.

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Systems

PLam System Type 1

NOTES

- Plastic laminate panel walls must be provided with a separate wainscot panel of a relatively heavy-duty material, such as stainless steel laminate or other acceptable metal laminate finishes. Although the wainscot finish and plastic laminate are of different materials, they must be visually compatible. Standard wainscot height is 36" from finish floor.
- Use manageable panel sizes and concealed metal cleats for panel attachment so individual panels can be easily removed and replaced for repairs and cleaning.
- Details that allow panel removal and replacement should not sacrifice the finished wall's overall tidy and uncluttered appearance; do not use exposed fasteners.
- Maximum reveal widths between panels to be 1/4".
- Masonite spacers, black, or dark painted, must be provided at reveal locations.
- Edges at reveals shall be stainless steel or aluminum trim.
- Provide durable protection for all panel edges exposed to potential damage.
- Plastic laminate panels to be trimmed with either stainless steel flat bar, stainless steel half round panel trim, vinyl (PVC) panel trim, or aluminum trim. Stainless steel and other metal laminate wainscot panels to be trimmed with stainless steel flat bar.
- Metal edges shall be chamfered or rounded.
- Formed edges and joints in the plastic laminate panel face are not allowed.
- Sealant at floor junctions shall be dark colored and detailed so deep pockets will not form to collect dust and dirt.

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Systems

PLam System Type 1

LOCATIONS	Esplanade
	Passageways
	Check-In Lobby
	Promenade
	Central Terminal
	South Arrivals Hall (GML)
	Concourses A, B, C, D
	North, South Satellites
	Satellite Transit System Stations
	International Arrivals
	Federal Inspection Services
	International Arrivals Baggage Claim
	Aircraft Passenger Loading Bridges

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Systems

PLam System Type 2

ACCEPTABLE MANUFACTURERS	Formica Nevamar WilsonArt Laminart InPro Sanparrel
DESCRIPTION	Full height panels with a rubber base for non high traffic areas Colored high-pressure decorative laminate with solid color core Panel trim: stainless steel flat bar, half round trim or aluminum trim
COLOR	Neutral color
FINISH	Matte finish Panel trim: wood tape PVC edging

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Systems

PLam System Type 2

NOTES

- For plastic laminate, apply full coverage of manufacturer's recommended quantity of adhesive to each surface.
- Generally, light to medium neutral colors and a subtle pattern are preferred.
- Custom colors and textured plastic laminate finishes are not allowed.
- Plastic laminate panel walls must be provided with a separate wainscot panel of a relatively heavy-duty material, such as stainless steel laminate or other acceptable metal laminate finishes. Although the wainscot finish and plastic laminate are of different materials, they must be visually compatible. Standard wainscot height is 36" from finish floor.
- Use manageable panel sizes and concealed metal cleats for panel attachment so individual panels can be easily removed and replaced for repairs and cleaning.
- Details that allow panel removal and replacement should not sacrifice the finished wall's overall tidy and uncluttered appearance; do not use exposed fasteners.
- Maximum reveal widths between panels to be 1/4".
- Masonite spacers, black, or dark painted, must be provided at reveal locations.
- Edges at reveals shall be stainless steel or aluminum trim.
- Provide durable protection for all panel edges exposed to potential damage.
- Plastic laminate panels to be trimmed with either stainless steel flat bar, stainless steel half round panel trim, vinyl (PVC) panel trim, or aluminum trim. Stainless steel and other metal laminate wainscot panels to be trimmed with stainless steel flat bar.
- Metal edges shall be chamfered or rounded.
- Formed edges and joints in the plastic laminate panel face are not allowed.
- Sealant at floor junctions shall be dark colored and detailed so deep pockets will not form to collect dust and dirt.

LOCATIONS

Baggage Claim Lobby

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

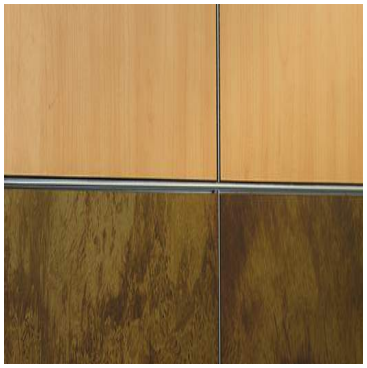
Appendix

WALLCOVERING

Systems

PLam System Type 3

ACCEPTABLE MANUFACTURERS	Formica Nevamar WilsonArt Laminart InPro Sanparrel For Panel Trim: Wood tape PVC Edging
DESCRIPTION	Dual-tone wall system Colored high-pressure decorative laminate with solid color core Panel trim: stainless steel flat bar, half round trim, or aluminum trim
FINISH	Matte finish, neutral colors



Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Systems

PLam System Type 3

NOTES

- For plastic laminate, apply full coverage of manufacturer's recommended quantity of adhesive to each surface.
- Generally, light to medium neutral colors and a subtle pattern are preferred.
- Custom colors and textured plastic laminate finishes are not allowed.
- Plastic laminate panel walls must be provided with a separate wainscot panel of a relatively heavy-duty material, such as stainless steel laminate or other acceptable metal laminate finishes. Although the wainscot finish and plastic laminate are of different materials, they must be visually compatible. Standard wainscot height is 36" from finish floor.
- Use manageable panel sizes and concealed metal cleats for panel attachment so individual panels can be easily removed and replaced for repairs and cleaning.
- Details that allow panel removal and replacement should not sacrifice the finished wall's overall tidy and uncluttered appearance; do not use exposed fasteners.
- Maximum reveal widths between panels to be 1/4".
- Masonite spacers, black, or dark painted, must be provided at reveal locations.
- Edges at reveals shall be stainless steel or aluminum trim.
- Provide durable protection for all panel edges exposed to potential damage.
- Plastic laminate panels to be trimmed with either stainless steel flat bar, stainless steel half round panel trim, vinyl (PVC) panel trim, or aluminum trim. Stainless steel and other metal laminate wainscot panels to be trimmed with stainless steel flat bar.
- Metal edges shall be chamfered or rounded.
- Formed edges and joints in the plastic laminate panel face are not allowed.
- Sealant at floor junctions shall be dark colored and detailed so deep pockets will not form to collect dust and dirt.

LOCATIONS Restrooms

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Systems

Metal Wall System

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

DESCRIPTION

Wainscot (36" A.F.F.)
- Lower panel: ribbed stainless steel
- Upper panel: smooth stainless steel

Stainless steel:
- Sheet material is required to be non-directional, 100 grit
- Formed or cast materials with flat faces are required to be non-directional, 100 grit
- Formed or cast materials with curved or shaped surfaces are required to be No. 4 brushed
- Bead blast finishes, sealers, and coatings are not allowed

FINISH

Use finishes which give the overall surface a matte and non-reflective look, and an even color tone throughout

Finishes shall not exhibit visual changes when subjected to fingerprints and scratches

NOTES

- Metal wall panels shall be provided with a separate wainscot panel of the same metal material or another acceptable metal laminate finish. If of different materials, wainscot finish, and metal panel finish shall be visually compatible.
- Use manageable panel sizes and concealed metal cleats for panel attachment so individual panels can be easily removed and replaced for repairs and cleaning.
- Details that allow panel removal and replacement should not sacrifice the finished wall's overall tidy and uncluttered appearance; do not use exposed fasteners.
- Maximum reveal widths between panels to be 1/4".
- Masonite spaces, black, or dark painted, shall be provided at reveal locations.
- Provide durable protection for all panel edges exposed to potential damage with stainless steel flat bar or aluminum trim. Stainless steel or aluminum trim finish shall match or blend well with the metal panel finish and color.
- Exposed fasteners shall not be used.
- Sealant at floor junctions shall be dark colored and detailed so deep pockets will not form to collect dust and dirt.
- Sandblasted finish, sealers, and coatings are not allowed in any stainless steel finish.

WALLCOVERING

Systems

Metal Wall System

LOCATIONS	Elevator
	Check-In Lobby
	Baggage Claim Lobby
	Esplanade
	Central Terminal
	South Arrivals Hall (GML)

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Systems

Wood Paneling System

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

DESCRIPTION	Consider wrapping finish around corners to make any transition in finish or space feel continuous and smoother 3/4" thick minimum all face solid veneer plywood panels with fire retardant finish
COLOR	Maple or similar light wood (Anigre is no longer an acceptable species.)
FINISH	Transparent clear sealer Transparent stain
NOTES	• Use uniform grained and light colored wood finishes to maintain an open and bright interior space quality. • Wood panels to be used only in areas that are protected and out of public reach (above 8 feet). • Wood panel walls shall be provided with a separate wainscot panel of a relatively heavy-duty material, such as stainless steel laminate or other acceptable metal laminate finishes. Standard wainscot height is 36" from finish floor. • Use manageable panel sizes and concealed metal cleats for panel attachment so individual panels can be easily removed and replaced for repairs and cleaning. • Details that allow panel removal and replacement should not sacrifice the finished wall's overall tidy and uncluttered appearance; do not use exposed fasteners. • Maximum reveal widths between panels to be 1/4". • Masonite spaces, black, or dark painted, must be provided at reveal locations. • Panel edges at reveals to have stainless steel or aluminum trim. • Provide durable protection for all panel edges exposed to potential damage with stainless steel or aluminum flat bar. • Sealant at floor junctions shall be dark colored and detailed so deep pockets will not form to collect dust and dirt. • Composite wood and adhesives, used on any fabrications built for the interior of the Airport, will not contain added urea-formaldehyde.

WALLCOVERING

Systems

Wood Paneling System

LOCATIONS	Check-In Lobby
	Baggage Claim Lobby
	Esplanade
	Central Terminal
	South Arrivals Hall (GML)
	Concourses A, B, C, D
	North, South Satellites
	Satellite Transit System Stations

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Systems

Stone Wallcovering System

NOTES	Approval from the Port of Seattle is required for any intended use of stone wall facing in specially designated areas.
LOCATIONS	Central Terminal South Arrivals Hall (GML)

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Systems

Fabric Wrapped Panel System

DESCRIPTION	Acoustic panel core with acoustically absorbent semi-rigid fiberglass.
NOTES	• Use manageable panel sizes and concealed metal cleats for panel attachment so individual panels can be easily removed and replaced for repairs and cleaning. • Details that allow panel removal and replacement should not sacrifice the finished wall's overall tidy and uncluttered appearance; do not use exposed fasteners. • Use square edge acoustic panels with appropriate edge protection where edges are susceptible to damage. • Use panels rated for high impact.
LOCATIONS	Concourses A, B, C, D Holdrooms
LINKS	Design Intent Drawings

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Systems

Pre-Cast Concrete Panels System

ACCEPTABLE MANUFACTURERS	Tecon Pacific Architectural Pre-Cast Structures Panorama Building Systems, Ltd. Olympian Pre-Cast, Inc. Walters & Wolf Pre-Cast
FINISH	Light sandblast to eliminate imperfections
NOTES	• Concrete surfaces to be appropriately sealed prior to application of finishes. • Choice of finishes and textures shall take into consideration the material's ability to resist abuse and conceal slight imperfections or minor physical damages. • Use only penetrating type of concrete sealers. Film forming sealers may not be able to hold against outward moisture migration. • In areas accessible by the public, use a permanent or non-sacrificial type of anti-graffiti coating, or other applicable soil and dirt control coating, that does not alter the appearance of the exposed, concrete surface. • For sidings and panels, provide clearance at panel edges, corners, and transitions. • Use concealed fasteners where practical. • All structural and movement joints shall be appropriately covered.

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - **Systems**
    - Materials
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Materials

Plastic Laminate

NOTES	For plastic laminate, apply full coverage of manufacturer's recommended quantity of adhesive to each surface.

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - **Materials**
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Materials

Fabric Wallcovering

PRODUCT NAME	Xorel
ACCEPTABLE MANUFACTURERS	Carnegie - Xorel
DESCRIPTION	Vinyl coated fabrics or wall fabrics
FINISH	Fabric material, colors, and finishes shall be durable and able to maintain and sustain appearances To ensure a neat appearance, use only non-staining, non-pigmented adhesives, and concealed cleats If required, use stainless steel or aluminum trims and metal accessories
NOTES	• Use only woven fabrics and synthetic fibers. • Fabric wallcovering to be used only in low traffic, passive areas; the fabric finish itself shall be above wainscot level. • Avoid using in areas exposed to damage and abuse. Panel system should allow easy removal and replacement of individual panels without damage to adjacent panels. • Fabric to be directly glued down to core panel. • Fabric wrapped panels shall be butt-jointed or use reveals between fabric panels. In cases where a reveal is necessary between a fabric panel and a panel of a different finish material, provide Masonite spaces, painted to match or be compatible with the panel finishes. Maximum reveal width is 1/4". • End walls exposed to traffic shall be appropriately protected to prevent damage to the fabric material.
LOCATIONS	Holdrooms

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - **Materials**
    - Details
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Materials

Limestone Travertine

DESCRIPTION	Legacy wallcovering material
LOCATIONS	Central Terminal

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - **Materials**
    - Details
  - Column Enclosures
- Ceilings
- Equipment

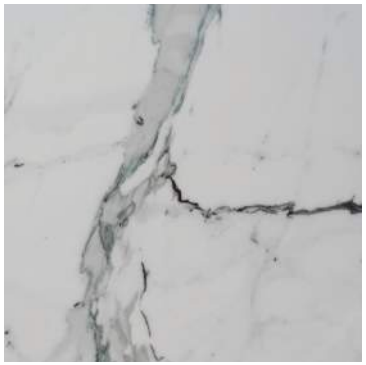
Appendix

WALLCOVERING

Materials

Gazelle Granite

DESCRIPTION	Legacy wallcovering material
LOCATIONS	Central Terminal



Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - **Materials**
    - Details
  - Column Enclosures
- Ceilings
- Equipment

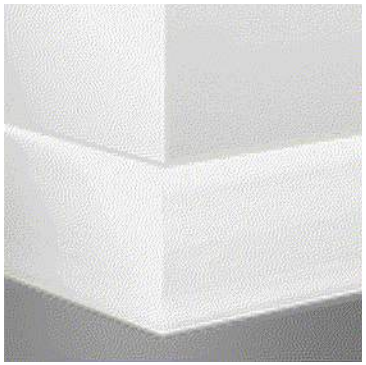
Appendix

WALLCOVERING

Details

Rubber Wall Base

PRODUCT NAME	Millwork Mandalay Rubber Wall Base



Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - Materials
    - **Details**
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

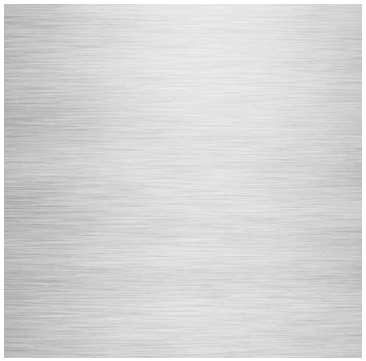
Details

Base & Wainscot

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - Materials
    - **Details**
  - Column Enclosures
- Ceilings
- Equipment

Appendix

PRODUCT NAME	Stainless steel
DESCRIPTION	Backed stainless steel base laminated to MDF and to be trimmed with stainless steel flat bar or half-round trim, or aluminum flat bar or half-round trim
SIZE	12" high wall base 24" high wainscot if above 12" wall base 36" high wainscot
FINISH	Stainless steel: angel hair (non-directional) Granite: honed Pre-cast terrazzo: polished or unpolished Trim: wood tape PVC edging Finish and colors must be visually compatible and consistent with the overall wall appearance Stainless steel: Non-directional, 100 grit Formed or cast materials with flat faces are required to be non-directional, 100 grit Formed or cast materials with curved or shaped surfaces are required to be no. 4 brushed Bead blast finishes, sealers, and coatings are not allowed
NOTES	• Bumper rails or hard-surface wainscot shall be specified and shown on the walls in high-traffic corridors. • Wall base material and finish shall be compatible with, if not similar to, the adjacent wall and floor finish material.



WALLCOVERING

Details

Base & Wainscot

NOTES

- A base must be provided where a wainscot of a durable materials is not preferred.
- For new installations and renovations, base height is a minimum of 12" from finish floor. Base height shall also protect the wall surface from damage caused by floor maintenance equipment. Match adjacent existing base heights where necessary and applicable.
- Wall bases shall be stainless steel, granite, terrazzo, or pre-cast terrazzo.
- 14-gauge or 16-gauge stainless steel shall be backed with wood for impact resistance. 10-gauge stainless steel shall be detailed for rigidity.
- Detail reveal or junction between base and wall/wainscot panel to allow removal of base and/or wall/wainscot panel without damage to either.
- Detail the junction between base and finish floor to prevent dirt from collecting into the junction.
- Where a wainscot is preferred in lieu of a base, the standard wainscot height shall be 36" from finish floor.
- Chair rails to top all wainscot.
- Use manageable panel sizes and concealed metal cleats for panel attachment so individual panels can be easily removed and replaced for repairs and cleaning.
- Do not use exposed fasteners. Metal edges to be chamfered or rounded.
- Sealant at floor junctions shall be dark colored and detailed so deep pockets will not form to collect dust and dirt.

LOCATIONS

Storage
Check-In Lobby
Baggage Claim Lobby
Promenade
Central Terminal
South Arrivals Hall (GML)
Concourses A, B, C, D
North, South Satellites
Satellite Transit System Stations
International Arrivals
Federal Inspection Services
International Arrivals Baggage Claim
Janitor

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - Materials
    - **Details**
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Details

Back-of-House Wainscot

DESCRIPTION	Diamond-Plated Stainless steel with Plywood Backing
SIZE	(Optional: 12" high wall base - sacrificial wood) 36" high wainscot
FINISH	Stainless steel: diamond-plate Backing: plywood (not MDF)
NOTES	• Bumper rails or hard-surface wainscot shall be specified and shown on the walls in high-traffic corridors. • High Traffic corridors - areas where motorized lifts, pallet jacks, carts, move people or materials. • Wall base material and finish shall be compatible with, if not similar to, the adjacent wall and floor finish material. • Protect outside corners with additional wall guards or bollards.

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - Materials
    - **Details**
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Details

Chair Rails

NOTES	• Rails shall protect walls from furniture striking the walls but must not create a hazard for individuals striking their heads on the railing while sitting down.
LOCATIONS	Holdrooms

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - Materials
    - **Details**
  - Column Enclosures
- Ceilings
- Equipment

Appendix

WALLCOVERING

Details

Wall & Corner Guards

DESCRIPTION	Stainless steel, fastened mechanically and with adhesive Granite column covers are exceptions and shall have vinyl corner guards and black stone-faced columns in terminal (where susceptible to damage, use black vinyl corner guards)
SIZE	Minimum height above finish floor to be 36”
FINISH	Color and finish to match wall surfaces and finishes, or match column finishes, whichever is deemed more visually compatible Stainless steel corner guard: sheet material is required to be non-directional, 100 grit Formed or cast materials with flat faces are required to be non-directional, 100 grit Formed or cast materials with curved or shaped surfaces are required to be no. 4 brushed Bead blast finishes, sealers, and coatings are not allowed Vinyl corner guards: to match column facing
NOTES	Aluminum corner guards are not allowed.
LOCATIONS	All space types

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - **Wallcovering**
    - Systems
    - Materials
    - **Details**
  - Column Enclosures
- Ceilings
- Equipment

Appendix

COLUMN ENCLOSURES

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - Wallcovering
  - **Column Enclosures**
    - Granite
    - Stainless Steel
    - Manufactured Metal
    - Stucco
    - Textured Column Finish
    - PLam
    - Gypsum Board
- Ceilings
- Equipment

Appendix

A number of column enclosure treatments exist throughout the airport, some of them tied to the base building materials. Going forward, a few standard approaches have been defined and are outlined below. Additionally, some general guidelines include:

- Existing main terminal building exterior column enclosures to remain dark in color, the same on both levels, in order to be architecturally cohesive.
- Interior concrete columns within the main terminal may adopt the approaches outlined below.
- All columns within the same area should receive the same material treatment.
- Columns should be kept free of signage, advertising, and equipment as much as possible.
- Alternative approaches to column enclosures in ADR areas are subject to review.
- Legacy finishes to not be used include all paint (white or white with gray base), white metal cladding, and stainless steel corner guards.

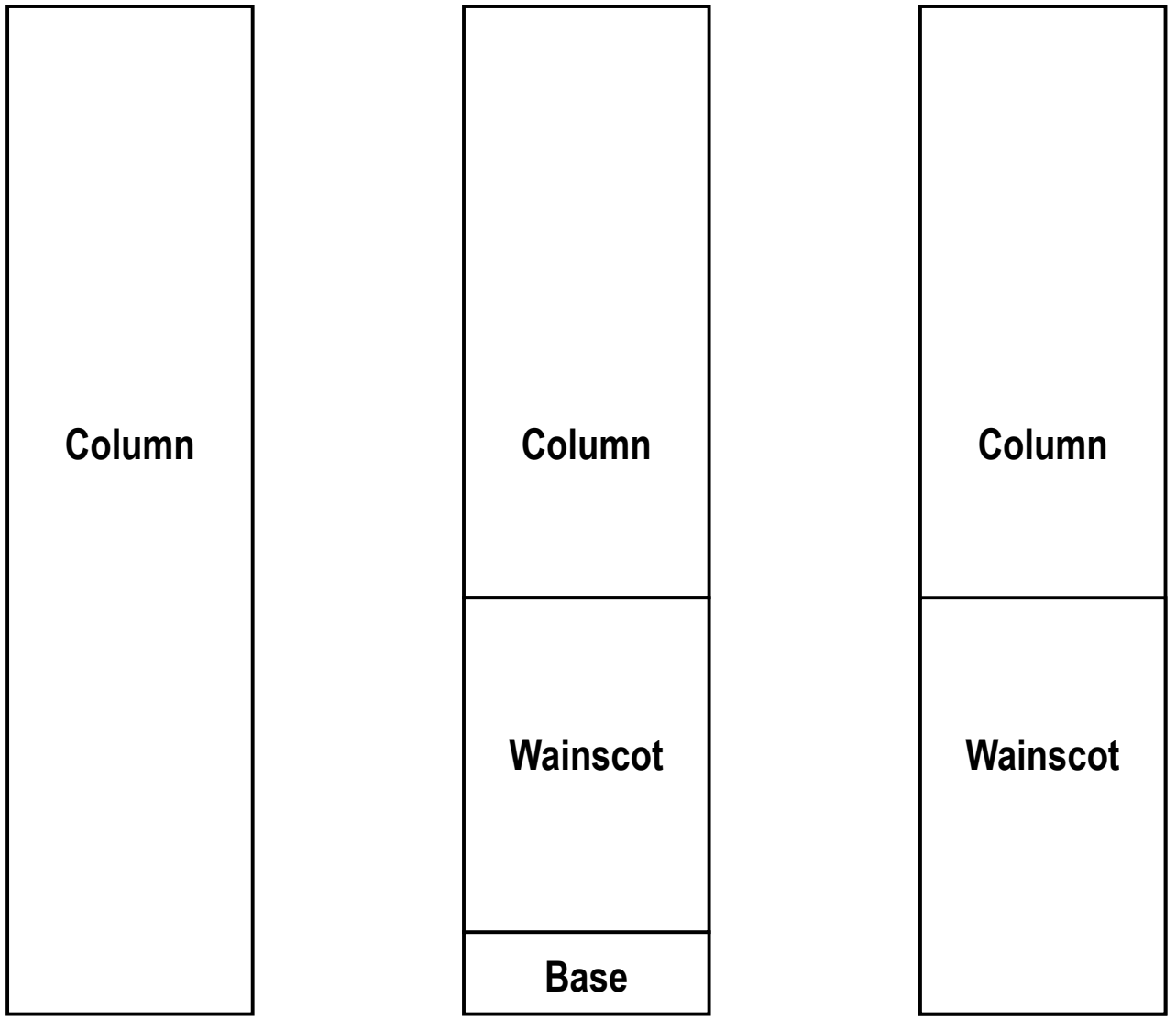
Preferred treatments:

- All stainless steel wrap
- Stainless steel wainscot 36” high (heavy gauge angel hair finish)
  - The top of columns may be a place for artistic work with ARC approval
- Existing materials
  - Black Granite
  - Cement (exterior)

COLUMN ENCLOSURES

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - Wallcovering
  - **Column Enclosures**
    - Granite
    - Stainless Steel
    - Manufactured Metal
    - Stucco
    - Textured Column Finish
    - PLam
    - Gypsum Board
- Ceilings
- Equipment

Appendix



COLUMN ENCLOSURES

Granite

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - Wallcovering
  - **Column Enclosures**
    - **Granite**
    - Stainless Steel
    - Manufactured Metal
    - Stucco
    - Textured Column Finish
    - PLam
    - Gypsum Board
- Ceilings
- Equipment

Appendix

DESCRIPTION	Black granite
SIZE	3/4" thick
FINISH	Vinyl corner guards
NOTES	• Anodized aluminum reveal to match existing columns with no exposed fasteners. • This highly durable cover material shall be used as a finish for all surfaces within public reach. A different material can thus be used above this height to mitigate costs (e.g., painted gypsum board). Use painted GWB in areas deemed to be above public reach. Exceptions to this finish must be used only above the 36" wainscot height. • Painted metal covers may be used only above the 36" wainscot height. • Always provide a minimum base height of 12" or a wainscot height of 36", whichever is applicable. Acceptable base and wainscot materials are stainless steel, granite, and height pressure plastic laminate to match the column cover.
LOCATIONS	Check-In Lobby Baggage Claim Lobby Promenade Esplanade
LINKS	Design Intent Drawings

COLUMN ENCLOSURES

Stainless Steel

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - Wallcovering
  - **Column Enclosures**
    - Granite
    - **Stainless Steel**
    - Manufactured Metal
    - Stucco
    - Textured Column Finish
    - PLam
    - Gypsum Board
- Ceilings
- Equipment

Appendix

DESCRIPTION	Sheet metal gauge selected for damage resistance Stainless steel base: 14 or 16 gauge, backed with wood for impact resistance Round columns: 14-gauge minimum unbacked Square columns: 12-gauge minimum unbacked Minimum 14 gauge is recommended for column covers
FINISH	Non-directional, 100 grit Formed or cast materials with flat faces are required to be non-directional, 100 grit Formed or cast materials with curved or shaped surfaces are required to be no. 4 brushed Bead blast finishes, sealers, and coatings are not allowed
NOTES	• This highly durable cover material shall be used as a finish for all surfaces within public reach. A different material can thus be used above this height to mitigate costs (e.g., painted gypsum board). Use painted GWB in areas deemed to be within public reach. Exceptions to this finish must be used only above the 36" wainscot height. • Painted metal covers may be used only above the 36" wainscot height. • The Port of Seattle to approve any use of textured steel to ensure that the surface will not collect dust and be easy to clean. • Always provide a minimum base height of 12" or a wainscot height of 36", whichever is applicable. Acceptable base and wainscot materials are stainless steel, granite, and height pressure plastic laminate to match the column cover. • Columns must be protected with column corner guards of compatible durable material. • Polished stainless steel finish is not allowed.
LOCATIONS	South Satellites
LINKS	Design Intent Drawings

COLUMN ENCLOSURES

Manufactured Metal

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - Wallcovering
  - **Column Enclosures**
    - Granite
    - Stainless Steel
    - **Manufactured Metal**
    - Stucco
    - Textured Column Finish
    - PLam
    - Gypsum Board
- Ceilings
- Equipment

Appendix

DESCRIPTION

Columns: minimum 16-gauge smooth galvanized steel for durability at locations
Beams: minimum 18-20 gauge smooth galvanized steel, with detailing appropriate to maintain a flat surface appearance
All exterior fasteners or fasteners in wet areas to be series 300 stainless steel

FINISH

Exterior and interior of metal panels to receive a shop-applied three-coat spray application of high performance fluorocarbon coating with a minimum of 70% Kynar 500 resin

NOTES

- This highly durable cover material shall be used as a finish for all surfaces within public reach. A different material can thus be used above this height to mitigate costs (e.g., painted gypsum board). Use painted GWB in areas deemed to be above public reach. Exceptions to this finish must be used only above the 36" wainscot height.
- Painted metal covers may be used only above the 36" wainscot height.
- Always provide a minimum base height of 12" or a wainscot height of 36", whichever is applicable. Acceptable base and wainscot materials are stainless steel, granite, and height pressure plastic laminate to match the column cover.
- Columns must be protected with column corner guards of compatible durable material.

LOCATIONS

Concourses A

COLUMN ENCLOSURES

Stucco

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - Wallcovering
  - **Column Enclosures**
    - Granite
    - Stainless Steel
    - Manufactured Metal
    - **Stucco**
    - Textured Column Finish
    - PLam
    - Gypsum Board
- Ceilings
- Equipment

Appendix

FINISH	Three-coat Portland cement plaster, white Portland cement for finish coat Smooth finish with sand aggregate in finish coat Sealed prior to finish
NOTES	• This highly durable cover material shall be used as a finish for all surfaces within public reach. A different material can thus be used above this height to mitigate costs (e.g., painted gypsum board). Use painted GWB in areas deemed to be above public reach. Exceptions to this finish must be used only above the 36" wainscot height. • Painted metal covers may be used only above the 36" wainscot height. • Always provide a minimum base height of 12" or a wainscot height of 36", whichever is applicable. Acceptable base and wainscot materials are stainless steel, granite, and height pressure plastic laminate to match the column cover. • Columns must be protected with column corner guards of compatible durable material.

COLUMN ENCLOSURES

Textured Column Finish

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - Wallcovering
  - **Column Enclosures**
    - Granite
    - Stainless Steel
    - Manufactured Metal
    - Stucco
    - **Textured Column Finish**
    - PLam
    - Gypsum Board
- Ceilings
- Equipment

Appendix

NOTES

- The ARC to approve any use of textured steel to ensure that the surface will not collect dust and will be easy to clean.
- This highly durable cover material shall be used as a finish for all surfaces within public reach. A different material can thus be used above this height to mitigate costs (e.g., painted gypsum board). Use painted GWB in areas deemed to be above public reach. Exceptions to this finish must be used only above the 36" wainscot height.
- Painted metal covers may be used only above the 36" wainscot height.
- Always provide a minimum base height of 12" or a wainscot height of 36", whichever is applicable. Acceptable base and wainscot materials are stainless steel, granite, and height pressure plastic laminate to match the column cover.
- Columns must be protected with column corner guards of compatible durable material.
- Polished stainless steel finish is not allowed.

LOCATIONS

Concourses A, B, C, D
North, South Satellites

COLUMN ENCLOSURES

PLam

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - Wallcovering
  - **Column Enclosures**
    - Granite
    - Stainless Steel
    - Manufactured Metal
    - Stucco
    - Textured Column Finish
    - **PLam**
    - Gypsum Board
- Ceilings
- Equipment

Appendix

ACCEPTABLE MANUFACTURERS	Formica Nevamar WilsonArt Laminart InPro Sanparrel
FINISH	Colored high-pressure decorative laminate with solid core, matte finish Vinyl corner guards
NOTES	• This highly durable cover material shall be used as a finish for all surfaces within public reach. A different material can thus be used above this height to mitigate costs (e.g., painted gypsum board). Use painted GWB in areas deemed to be above public reach. Exceptions to this finish must be used only above the 36" wainscot height. • Painted metal covers may be used only above the 36" wainscot height. • Always provide a minimum base height of 12" or a wainscot height of 36", whichever is applicable. Acceptable base and wainscot materials are stainless steel, granite, and high pressure plastic laminate to match the column cover. • Columns must be protected with column corner guards of compatible durable material.
LOCATIONS	North, South Satellites International Arrivals Federal Inspection Services International Arrivals Baggage Claim

COLUMN ENCLOSURES

Gypsum Board

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- **Finishes**
  - Flooring
  - Paints
  - Wallcovering
  - **Column Enclosures**
    - Granite
    - Stainless Steel
    - Manufactured Metal
    - Stucco
    - Textured Column Finish
    - PLam
    - **Gypsum Board**
- Ceilings
- Equipment

Appendix

FINISH	Paint
NOTES	• Use painted GWB in areas deemed to be above public reach. Exceptions to this finish must be used only above the 36" wainscot height. • Always provide a minimum base height of 12" or a wainscot height of 36", whichever is applicable. Acceptable base and wainscot materials are stainless steel, granite, and high pressure plastic laminate to match the column cover. • Columns must be protected with column corner guards of compatible durable material.

4.12 CEILINGS

Ceilings offer architectural and visual interest, as well as sound-absorbing acoustic properties. Additionally, they hide potentially unsightly infrastructure and mechanical systems from sight.

CEILING

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- **Ceilings**
  - Acoustic Ceiling Tile (ACT)
  - Metal Ceiling
  - Gypsum Board Ceiling
- Equipment

Appendix

Best Practices

- Ceilings should be clean and simple.
- Acoustic properties and performance are the most important criteria.
- Ceiling height should be maximized, while taking into consideration cost and access for MEPF infrastructure.
- Utilize the same ceiling system throughout a concourse .
- Limit the use of hard ceilings to accent areas and soffits.
- Drywall soffits to be painted white.
- Metal ceilings and wood ceilings can be used in feature areas.
- Align floor and ceiling treatments, particularly in public spaces.
- Provide access panels in all ceiling types. They should be able to be maneuvered by one person without assistance.
- Up-lighting is preferred on paneled ceilings.

Desired finishes

- Acoustic Ceiling Tile (ACT)
- Metal Panels
- Wood Panel
- Gypsum Board

Legacy finishes

- Textured Acoustic Ceiling Tile (ACT)
- Linear Metal Ceiling

Applicable LEED Credit Requirements:

- IEQ – Low-Emitting Materials

New

Archive

Sustainable

ACOUSTIC CEILING TILE (ACT)

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- **Ceilings**
  - **Acoustic Ceiling Tile (ACT)**
  - Metal Ceiling
  - Gypsum Board Ceiling
- Equipment

Appendix

PRODUCT NAME	Ultima Regular 1912 Ceiling Tile
ACCEPTABLE MANUFACTURERS	Armstrong
SIZE	24” x 24” x 3/4” 24” x 48” x 3/4”
COLOR	White
NOTES	• Allow an access panel. • For wire suspended ceilings, wrap “tails” of the wires tight to the main cord of wire. Tails shall not interfere with tile removal or pose a safety hazard for maintenance activities. • Use acoustical panels that comply with all requirements for fire resistance, thermal, sound, noise reduction properties, deflection, contraction, and expansion. • Installation shall allow damaged tiles to be easily removed and replaced. • Ensure future availability of acoustic tile product to match initial installation. • Suspension system will be airport standard grid system. • No concealed grids or splines will be allowed. • Install smoke barriers as required by code. Smoke barriers to have clear glazing and frameless concealed fasteners.
LOCATIONS	Throughout Terminal

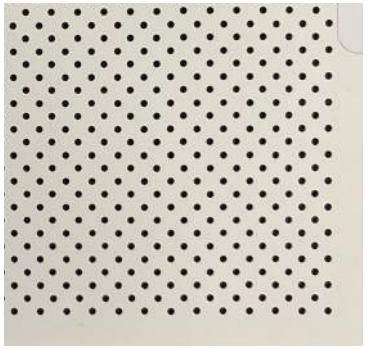
METAL CEILING

Tile

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- **Ceilings**
  - Acoustic Ceiling Tile (ACT)
  - **Metal Ceiling**
    - **Tile**
    - Linear
  - Gypsum Board Ceiling
- Equipment

Appendix

ACCEPTABLE MANUFACTURERS	Armstrong Metalworks Lindner CertainTeed
DESCRIPTION	Perforation pattern - staggered centers, small openings, close spacing. Armstrong - M15 (RD 1612), min. NRC = 0.70
SIZE	24" x 24" 24" x 48"
COLOR	White, Wood Look
FINISH	Baked enamel, fluorocarbon resin, or powder coated; with adhered acoustic inserts Ceiling color shall be white throughout to maintain a quality of openness and brightness in the interior space, unless other finish is desired and approved.
NOTES	• Durability, ease of tile removal and replacement, as well as ease of cleaning should all be considered in product choice. • Painted finish allowed if listed finish types above aren't available. • Other panel sizes can be considered, on a per project basis. • Perforation pattern type consistent unless higher NRC required. • Coordinate with Port of Seattle (carpenter shop) before removing or replacing existing metal ceiling tiles. Improperly removed or installed ceiling material may create an overhead hazard. • Install smoke barriers as required by code. Smoke barriers to have clear glazing and frameless concealed fasteners. • Steel panels shall be 20-gauge minimum. Aluminum panels shall be minimum .04" thick. • Discuss with AVM and F&I Architecture grid types: standard lay-in, reveal, torsion spring.
LOCATIONS	Concourses Restrooms Main Terminal



METAL CEILING

Linear

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- **Ceilings**
  - Acoustic Ceiling Tile (ACT)
  - **Metal Ceiling**
    - Tile
    - **Linear**
  - Gypsum Board Ceiling
- Equipment

Appendix

PRODUCT NAME	(A) Paraline 1 Integral Splice Perforated Texture Steel Ceiling
ACCEPTABLE MANUFACTURERS	(A) USG (B) Simplex Ceilings
DESCRIPTION	Linear perforated metal ceiling system
SIZE	(A, C) 4” (B) 12”
COLOR	(A, B) White (C) Dark Bronze All linear metal ceilings shall match existing. In other spaces, ceiling color shall be white to maintain a quality of openness and brightness in the interior space.
NOTES	• Paint linear ceiling light for refresh projects. • Salvage for turnover to the Port of Seattle. • Coordinate with POS (carpenter shop) before removing or replacing existing metal ceiling tiles. Improperly removed or installed ceiling material may create an overhead hazard. • Durability, ease of plank removal and replacement, as well as ease of cleaning should all be considered in product choice. • Install smoke barriers as required by code. Smoke barriers to have clear glazing and frameless concealed fasteners.

GYPSUM BOARD CEILING

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- **Ceilings**
  - Acoustic Ceiling Tile (ACT)
  - Metal Ceiling
  - **Gypsum Board Ceiling**
- Equipment

Appendix

FINISH	Three-coat paint finish system for all exposed work Flat finish Non-textured treatment Tapered edges
NOTES	• Gypsum board ceiling finishes shall only be used in areas that are not easily susceptible to damage and soiling, and where ceiling space accessibility is not required. • Use corrosion resistant coated steel trims, control joints, and accessories. • Install smoke barriers as required by code. Smoke barriers to have clear glazing and frameless concealed fasteners.
LOCATIONS	Restrooms Soffits

4.13 EQUIPMENT

Equipment is installed throughout SEA for safety, sanitation, and amenities.

EQUIPMENT

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - Restroom Accessories
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

Each approved piece of equipment is detailed on the following pages. In some instances minimum performance criteria have been listed, in other cases recommended manufacturer(s) or distributor(s) have been included. Consult with your SEA project manager regarding the particular equipment requirements of your project. However, some general guidelines apply:

- Food and drink vending machines should be located near escalators but in locations reachable for delivery or service without crossing expansion joints.
- Fold out signs to alert passengers about hazards should be conveniently located and accessible, while not being visually obtrusive.
- Trash receptacles should be modular and expandable, and contain composting (at food areas), mixed recyclable receptacles, as well as compactors.

New

Archive

Sustainable

FIRE/LIFE SAFETY

Fire Extinguisher Cabinet

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - **Fire/Life Safety**
    - **Fire Extinguisher Cabinet**
    - AED/Trauma Kit Cabinet
    - Emergency Cones
  - Restroom Accessories
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Safety
PRODUCT NAME	Fire Extinguisher Cabinet, recessed
MANUFACTURER	Larsen's Manufacturing Company J.L. Industries
MODEL	Architectural Series AL-2409-6R, Vertical Duo Break Glass Door by Larsen's Manufacturing Company or matching product
SIZE	Tub (interior dimensions): width 12", height 27", depth 7 3/4" Frame (outer dimensions): width 15 3/8", height 30 3/8" Wall opening: width 13", height 28", depth 7 5/8"
NOTES	• Preference is for cabinets to be recessed mounted, with 3/8" flat trim. • When recessed is not possible, provide semi-recessed 1 1/2" trim square, protruding not more than 2-1/2" from face of the wall. • Each cabinet shall be sized accordingly to house one fire extinguisher. • Coordinate with Port Fire for equipment. • Coordinate with Port Signage for signage, include signage on cabinet and signage above on wall. • Color finish will vary depending on location, preference is stainless steel. • When possible, install adjacent to AED/ Trauma Kit Cabinet.
LOCATIONS	All areas

FIRE/LIFE SAFETY

AED/ Trauma Kit Cabinet

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - **Fire/Life Safety**
    - Fire Extinguisher Cabinet
    - **AED/Trauma Kit Cabinet**
    - Emergency Cones
  - Restroom Accessories
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Safety
PRODUCT NAME	AED/ Trauma Kit Cabinet, recessed
MANUFACTURER	Activar Construction Products Group Inc. Larsen's Manufacturing Company
MODEL	Ambassador Series, Steel Fire Extinguisher Cabinet, C2037F10, Full Glass or matching product
SIZE	Tub (critical interior dimensions): width 12", height 27", depth 7 3/4" Frame (outer dimensions): width 15 3/8", height 30 3/8" Wall opening: width 13", height 28", depth 7 5/8"
NOTES	• Preference is for cabinets to be recessed mounted, with 3/8" flat trim. • When recessed is not possible, provide semi-recessed 1 1/2" trim square, protruding not more than 2-1/2" from face of the wall. • Provide Alarm on/ off key switch, to sound when door is open. • Each cabinet shall be sized accordingly to house one AED and one Trauma Kit. • Cabinet to include, one J-Hook (FE20C) to hang Trauma Kit on top of AED (or vice versa) • Coordinate with Port Emergency Preparedness and Port Fire for equipment. • Comply with POSFD maximum distance of AED placement. • Provide signage on cabinet and signage above on wall. Coordinate with Port Signage. • Finish color will vary depending on location, preference is stainless steel. • When possible, install adjacent to Fire Extinguisher Cabinet. • During construction, AED/Trauma Kit Cabinets need to be provided in temporary barricade walls. Coordinate with Port Project Managers and Port Emergency Preparedness.
LOCATIONS	Post Security Areas Coordinate with Port Emergency Preparedness for Pre-Security requirements

FIRE/LIFE SAFETY

Emergency Cones

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - **Fire/Life Safety**
    - Fire Extinguisher Cabinet
    - AED/Trauma Kit Cabinet
    - **Emergency Cones**
  - Restroom Accessories
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Safety
PRODUCT NAME	Emergency Safety Cone Caution Wet Floor
DESCRIPTION	Folding safety cone, indicating Caution / Wet Floor on 4 sides
NOTES	• Used by maintenance for temporary signage to indicate slip or trip hazards. • Provided with plastic case that is mounted on wall for emergency cones to slide in. • Locate on walls and columns so it is easy accessed by staff, at minimum of 100 feet apart. • Install within acceptable accessible reach range height on walls and columns. • Install near wet areas like restrooms and drinking fountains.
LOCATIONS	All hard surfaces throughout the terminal.

RESTROOM ACCESSORIES

Partition

Toilet Partition

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - **Partition**
    - Receptacle & Dispenser
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Accessories
PRODUCT NAME	Toilet Partition Stalls Urinal Partition Screen
FINISH	Partition: Stainless Steel, Diamond Plate Pattern Partition Hardware: Stainless Steel or Dull Chrome
MANUFACTURER, MODEL	Bradley Corporations, Mills Partitions Series 600 Sentinel American Specialties, Inc, Ultimate Privacy Global Steel Product Corporations
DESCRIPTION	Prefer ceiling hung toilet partition with out-swinging stainless steel door hardware. Floor-to-ceiling anchored partitions are an acceptable alternate where appropriate. Wall mounted urinal screen
SIZE	Door size, 72" H, with gap at bottom 10" A.F.F. Panel size, 72" H, with gap at bottom 10" A.F.F. Wall mounted urinal screen 60" H, with gap at bottom 10" A.F.F.
NOTES	• Privacy design with sight-line trim at doors. • Provide adjustable gravity hinges that hold the door open when not in use. • Accessible and ambulatory stalls must have hinges that return the door to the closed position. • Provide bumper and stop. • Toilet compartments partitions and screens are to be secured rigidly in place with adequate blocking, diagonally braced red-iron bracing above the ceiling for mounting pilasters. Partitions are to be rigid without any racking. • Provide occupancy indicators and latch on toilet stall doors. Coordinate with Restroom occupancy sensors/ accessories, if being installed. • Prefer latch assembly for partition hardware over a thumb turn. • Provide internal reinforcement in metal units for compartment mounted hardware and accessories. • Coordinate with Port Signage for signage on partitions.

RESTROOM ACCESSORIES

Partition

Toilet Partition

NOTES (CONTINUED)

- Consider different partition options that more easily allow for stalls to meet ambulatory clear width requirements. Where possible, it is preferred that all stalls within a restroom can meet ambulatory requirements.
- Ambulatory stall width requirements generally work best with compartment style restrooms. When using partitions, consider options like floor-to-ceiling mounted partitions or additional structural bracing within the ceiling to accommodate wider clear widths and narrower pilasters.
- Stalls designated as ambulatory must meet ALL requirements for ambulatory stalls.
- Stalls designated as accessible must meet ALL requirements for accessible stalls.

LOCATIONS Restroom

LINK SEA Signage Standards

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - **Partition**
    - Receptacle & Dispenser
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Receptacle & Dispenser

Paper Towel Dispenser

CATEGORIES	Accessories
PRODUCT NAME	Paper Towel Dispenser
FINISH	Stainless Steel, Satin
MANUFACTURER, MODEL	American Specialties Inc, (ASI) 68523AC-4 Bobrick, B-29744 (discontinued model has been replaced with new model and same ID)
DESCRIPTION	Semi-recessed automatic touchless roll towel dispenser
NOTES	• 8" W x 8" Dia. standard towel roll up to 800 ft. Dispensing adjustable by length, delay, and paper economy. • Lockable cabinet. Provide CAT 74 (Bobrick) replacement cylinders and keys. • Provide all electric behind the towel dispenser, 2 quad outlets and 2 regular outlets inside the Pipe Chase / Custodial Area. • Install paper towel dispenser adjacent to the lavatory and waste receptacle. • Provide paper towel dispenser, preferably near but not directly above the baby changing station. • Provide flexibility for additional paper towel dispensers in the future by identifying locations and wiring for those dispensers in the design documents.
LOCATIONS	Restroom Nursing Suite
LINKS	Electrical System Standards Mechanical System Standards

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - **Receptacle & Dispenser**
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Receptacle & Dispenser

Waste Receptacle

CATEGORIES	Accessories
PRODUCT NAME	Waste Receptacle
FINISH	Stainless Steel, Satin
MANUFACTURER, MODEL	American Specialties Inc, (ASI) 0458-DX Bobrick, 368-60 Bradley, 334
DESCRIPTION	Semi-recessed waste receptacle, container locks into cabinet, removable for servicing.
NOTES	• Reusable, removable vinyl liner (ASI model: 25-Py) • Lockable cabinet. Provide CAT 74 (Bobrick) replacement cylinders and keys. • Provide waste receptacle adjacent to paper towel dispenser. • Provide flexibility for additional waste receptacles in the future by identifying locations in the design documents.
LOCATIONS	Restroom Nursing Suite

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - **Receptacle & Dispenser**
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Receptacle & Dispenser

Paper Towel Dispenser & Waste Receptacle

CATEGORIES	Accessories
PRODUCT NAME	Paper Towel Dispenser with waste receptacle
FINISH	Stainless Steel, Satin
MANUFACTURER, MODEL	Bobrick, B-39747 Bobrick, B-39617
DESCRIPTIONS	Semi-recessed automatic touchless roll towel dispenser with semi-recessed waste receptacle
NOTES	• Reusable, removable vinyl liner (model: 368-16) • Lockable cabinet. Provide CAT 74 (Bobrick) replacement cylinders and keys. • Provide electrical receptacles behind the towel dispenser, 2 quad outlets and 2 regular outlets inside the Pipe Chase / Custodial Area. • Install paper towel dispenser adjacent to the lavatory. • Provide near but not directly above the baby changing station. • Provide flexibility for additional paper towel dispensers in the future by identifying locations and wiring for those dispensers in the design documents.
LOCATIONS	(NSAT) Restroom
LINKS	Electrical System Standards Mechanical System Standards

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - **Receptacle & Dispenser**
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Receptacle & Dispenser

Toilet Paper Dispenser

CATEGORIES	Accessories
PRODUCT NAME	Toilet Paper Dispenser
FINISH	Stainless Steel, Satin
MANUFACTURER, MODEL	American Specialties Inc, (ASI) 0039 Bobrick, B-5425
DESCRIPTION	Partition or surface mounted, low profile jumbo-roll Toilet paper dispenser
NOTES	• Dispenser to hold two 9" diameter jumbo-rolls with 3" to 2.25" cores. • Lockable cabinet. Provide CAT 74 (Bobrick) replacement cylinders and keys.
LOCATIONS	Restroom

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - **Receptacle & Dispenser**
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Receptacle & Dispenser

Toilet Waste Receptacle

CATEGORIES	Accessories
PRODUCT NAME	Toilet Waste Receptacle (Sanitary Napkin Receptacle)
FINISH	Stainless Steel, Satin
MANUFACTURER, MODEL	American Specialties Inc, (ASI) 0852 Bobrick, B-270
DESCRIPTION	Partition or surface mounted, waste receptacle
SIZE	10" H x 7.5" W x 3-13/16" D
NOTES	• Capacity of 1.2 gallon with disposable liner bags. • No locks. • Waste receptacles to be installed in all restrooms.
LOCATIONS	Restroom

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - **Receptacle & Dispenser**
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Receptacle & Dispenser

Toilet Seat Cover Dispenser

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - **Receptacle & Dispenser**
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Accessories
PRODUCT NAME	Toilet Seat Cover Dispenser
FINISH	Stainless Steel, Satin
MANUFACTURER, MODEL	American Specialties Inc, (ASI) 0477-SM Bobrick, B-221
DESCRIPTION	Partition or surface mounted, seat cover dispenser
NOTES	• Dispenser to hold 250 single or half fold paper toilet seat covers. • No locks.
LOCATIONS	Restroom

RESTROOM ACCESSORIES

Receptacle & Dispenser

Toilet Paper & Seat Cover Dispenser, Waste Receptacle

CATEGORIES	Accessories
PRODUCT NAME	Toilet Paper & Seat Cover Dispenser, Waste Receptacle
FINISH	Stainless Steel, Satin
MANUFACTURER, MODEL	Bobrick, B-3574 (Recessed flush) Bobrick, B-3571 (Dual access, 1-sided flush) Bobrick, B-357 (Dual Access) Bobrick, B-3579 (Surface mounted- BOH)
DESCRIPTION	Combination toilet paper & seat cover dispenser with waste receptacle
NOTES	• Seat cover dispenser to hold 500 single or half fold paper toilet seat covers. • Toilet paper dispenser to hold two rolls per compartment. • Waste receptacle, capacity of 0.8 gallon with disposable liner bags. • Lockable cabinet. Provide CAT 74 (Bobrick) replacement cylinders and keys. • At the NSAT Restrooms, the waste receptacles are installed in the Women's Restroom. The Port goal is to install waste receptacles in all restrooms.
LOCATIONS	(NSAT) Restroom

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - **Receptacle & Dispenser**
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Receptacle & Dispenser

Biohazard Disposal Receptacle

CATEGORIES	Accessories
PRODUCT NAME	Biohazard Disposal Receptacle (Sharps Container)
FINISH	Stainless Steel, Satin
MANUFACTURER, MODEL	American Specialties Inc, (ASI) 0548 Bobrick, B-35016
DESCRIPTION	Fully recessed sharps disposal cabinet
NOTES	• Biohazard receptacle to accommodate 1 Becton, Dickinson, and Co. (BD) sharps collector, model: 305443. • Lockable cabinet. Provide FAB 11 replacement cylinders and keys. • Provide biohazard receptacle, near the entrance/ exit of all restrooms, including BOH restrooms.
LOCATIONS	Restroom

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - **Receptacle & Dispenser**
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Receptacle & Dispenser

Sanitary Napkin Dispenser

CATEGORIES	Accessories
PRODUCT NAME	Sanitary Napkin Dispenser
FINISH	Stainless Steel, Satin
MANUFACTURER, MODEL	American Specialties Inc, (ASI) 0468-25 Bobrick, B-37063C (semi-recessed B-370634C, surface mounted B2706C) Bradley, B-4017
DESCRIPTION	Fully recessed dual sanitary napkin/ tampon dispenser, free push button operation
NOTES	• Lockable cabinet. Provide CAT 74 (Bobrick) replacement cylinders and keys. • Provide dispenser, near the entrance/ exit of the restrooms. • Provide FAB 11 cylinders and keys for coin boxes. • Where fully recessed is not possible, semi-recessed or surface mounted may be allowed
LOCATIONS	Restroom

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - **Receptacle & Dispenser**
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Receptacle & Dispenser

Diaper Dispenser

CATEGORIES	Accessories
PRODUCT NAME	Diaper Dispenser
FINISH	Stainless Steel, Satin
MANUFACTURER, MODEL	Koala Kare, KB 143-SS Global Industrial, 106-SS
DESCRIPTION	Recessed diaper dispenser, coin operation
NOTES	• Lockable cabinet. Provide CAT 74 (Bobrick) replacement cylinders and keys. • Provide diaper dispenser, preferably near the baby changing station. • Provide FAB 11 cylinders and keys for coin boxes.
LOCATIONS	Restroom Nursing Suite

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - **Receptacle & Dispenser**
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Mirror & Glass

Light Integrated Mirror

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - **Mirror & Glass**
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Accessories
PRODUCT NAME	Light Integrated Mirror (either Integrated, or Halo Backlit)
FINISH	Clear Anodized Aluminum White Acrylic Lens
MANUFACTURER	Form + Surfaces Paris Mirror Film: Armorcoat Safety & Security, Solargard, 3M Safety & Security
DESCRIPTION	Dimmable LED integrated mirror
SIZE	At single sinks: Nominal 24" W x 32" H At double sinks: Nominal 60" W x 35" H ***Confirm mirror direction with Port stakeholders prior to proceeding
NOTES	• Mirrors should have a 4-mil clear vandal resistant anti-graffiti film and be provided at each washing station. • Provide an additional "vanity station" mirror with integral illuminated LED panels and GFCI outlet above the counter for personal appliances where feasible. • For 60" W mirrors at double sinks, include two integral illuminated LED panels the same as the smaller mirror. • Include integrated mirror lighting above sinks, at baby changing stations, and at grooming station • Mirrors shall be easily replaceable. Hung on cleats and not tightly bounded or constrained by finishes or other projecting items. • Mirrors shall not be glued in place. • Provide adequate clearance around mirror so that it can be safely removed from cleats. Finish all tile edges surrounding mirror with a Schluter strip. • Where hung at accent tile, include 6" accent tile border on either side of mirror
LOCATIONS	Restroom
LINK	Electrical System Standards

RESTROOM ACCESSORIES

Mirror & Glass

Full Length Mirror

CATEGORIES	Accessories
PRODUCT NAME	Full Length Mirror
SIZE	2'-0" wide
NOTES	• Mirrors should have a 4-mil clear vandal resistant anti-graffiti film and be provided in each multi-user restroom. • Mirrors shall be easily replaceable: Channel framed, hung on cleats on top of wall finishes and not tightly bounded/ constrained by finishes or other projecting items. • Mirrors shall not be glued in place. • Full length mirror shall be installed adjacent to the "vanity station" and align the top of the mirror with the adjacent lighted mirror and align the bottom with the metal trim at tile base. • Provide lighting overhead; no integrated mirror lighting. • Where mirror cannot be installed on cleats over finishes, install recessed with face of mirror in-line with face of adjacent finishes. Provide Schluter strip around tile edges surrounding mirror and sealant.
LOCATIONS	Restroom

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - **Mirror & Glass**
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Mirror & Glass

Full Length Mirror Sealant

CATEGORIES	Accessories
PRODUCT NAME	Sealant
NOTES	• Full length mirrors should include sealant to close the gap between the glazing and adjacent tile trim when installed recessed into tile walls • Sealant should match the adjacent Schluter strip trim finish as closely as possible • Use "stainless steel finish" sealant where possible • Ensure that sealant will not negatively corrode or affect adjacent glazing
LOCATIONS	Restroom

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - **Mirror & Glass**
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Mirror & Glass

Welded Frame Mirror

CATEGORIES	Accessories
PRODUCT NAME	Welded Frame Mirror
MANUFACTURER, MODEL	Bobrick, B-290 series Or approved equal
DESCRIPTION	Glass mirror with stainless steel angle frame
NOTES	• Mirrors should have a 4-mil clear vandal resistant anti-graffiti film and be provided at each washing station. • Mirrors shall be easily replaceable. Hung on cleats and not tightly bounded/constrained by finishes or other projecting items. • Mirrors shall not be glued in place. • Full length mirror shall be installed adjacent to the “vanity station” and align the top of the mirror with the adjacent lighted mirror and align the bottom with the metal trim at tile base. (Typical size: 6’-4 H x 3’-10” W) • Custom size mirror above “vanity station”.
LOCATIONS	(NSAT) Restroom

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - **Mirror & Glass**
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Mirror & Glass

Channel Frame Mirror

CATEGORIES	Accessories
PRODUCT NAME	Channel Frame Mirror
NOTES	• Mirrors should have a 4-mil clear vandal resistant anti-graffiti film and be provided at each washing station, plus an additional full length mirror per restroom. • Provide an additional "vanity station" mirror with ledge and GFCI outlet above the counter for personal appliances where feasible. • Mirrors shall be easily replaceable. Hung on cleats and not tightly bounded/constrained by finishes or other projecting items. • Mirrors shall not be glued in place.
LOCATIONS	Restroom (Pre-security restrooms in the Main Terminal on Baggage Claim, Ticketing and Mezzanine Levels)

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - **Mirror & Glass**
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Mirror & Glass

Decorative Glass

CATEGORIES	Accessories
PRODUCT NAME	Decorative Glass
MANUFACTURER	Forms + Surface Berman Glass Nathan Allen
DESCRIPTION	Back applied image glass with kiln cast glass
NOTES	• Nest laminated Hikaru + Obsidian (vertical) with custom graphic interlayer. Custom design and location will depend on Restroom location within the terminal. Coordinate with Port for location and design. • Tempered low iron glass. • Top and bottom lite, to provide a continuous glow to the glass. • Fit tight to frame and glass, with a minimum of 1/4" gap.
LOCATIONS	Restroom
LINK	Electrical System Standards

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - **Mirror & Glass**
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Grab Bars

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - Mirror & Glass
    - **Grab Bars**
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Accessories
PRODUCT NAME	Straight Grab Bar
FINISH	Stainless Steel, Satin with Safety Grip
MANUFACTURER, MODEL	American Specialties Inc, (ASI) 3800-P series Bobrick, B-6806 series Bradley, 812 series
DESCRIPTION	1 1/2" dia. grab bars with snap on flange covers
NOTES	• Lengths and locations as show in drawings.
LOCATIONS	Restroom

RESTROOM ACCESSORIES

Garment Hooks & Shelves

Double Garment Hook

CATEGORIES	Accessories
PRODUCT NAME	Double Garment Hook
FINISH	Stainless Steel
MANUFACTURER, MODEL	American Specialties Inc, (ASI) 7312 Bradley, 9125
DESCRIPTION	Double robe hook with wall flange and concealed mounting bracket
NOTES	• Hooks should have a capacity greater than 50lbs. • Hooks should be provided in stalls and near the baby changing station. • Shelving should be wide integrated, recessed ledges at least 12" - 16" deep above urinals, water closets and lavatories for personal items. • When ledges are not possible, deep shelving between urinals and lavatories is acceptable but shall not be constructed and placed to create hazards for pedestrians using the various fixtures. • Ledges should be designed at accessible heights for accessible urinals, water closets, and lavatories.
LOCATIONS	Restroom

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - Mirror & Glass
    - Grab Bars
    - **Hooks & Shelves**
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Garment Hooks & Shelves

Single Robe Hook

CATEGORIES	Accessories
PRODUCT NAME	Single Robe Hook
FINISH	Solid Aluminum, matte finish with rubber bumper
MANUFACTURER, MODEL	Bobrick, B212 Or approved equal
NOTES	• Hooks should be provided in stalls, but nowhere else. • Shelving should be wide integrated, recessed ledges at least 12" - 16" deep above urinals, water closets and lavatories for personal items. • When ledges are not possible, deep shelving between urinals and lavatories is acceptable but shall not be constructed and placed to create hazards for pedestrians using the various fixtures. • Ledges should be designed at accessible heights for accessible urinals, water closets, and lavatories.
LOCATIONS	(NSAT) Restroom

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - Mirror & Glass
    - Grab Bars
    - **Hooks & Shelves**
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Garment Hooks & Shelves

Mop Holder

CATEGORIES	Accessories
PRODUCT NAME	Mop Holder with Shelf
FINISH	Stainless Steel
MANUFACTURER, MODEL	Bobrick, B-224 Or approved equal
DESCRIPTION	Surface mounted, mop and broom holder
NOTES	• Spring-loaded rubber cam holders • Rack to hold up to 4 mops or brooms • Locate above mop sink or out of circulation path.
LOCATIONS	Pipe Chase/ Custodial Area

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - Mirror & Glass
    - Grab Bars
    - **Hooks & Shelves**
    - Changing Station
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Changing Station

Counter Baby Changing Station

CATEGORIES	Accessories
PRODUCT NAME	Baby Changing Station
MANUFACTURER, MODEL	Wall mounted baby changing counter Nylon strap with plastic buckles
DESCRIPTION	Solid surface
NOTES	• Countertop baby changing stations are required. • Stations should be located near waste receptacles and paper towel dispenser. • Stations should be located adjacent to a lavatory. • Baby changing stations should not be located inside ADA stalls. • Nylon straps must be detailed such that they can be easily replaced.
LOCATIONS	Restroom Nursing Suites

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - **Changing Station**
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Changing Station

Recessed Baby Changing Station

CATEGORIES	Accessories
PRODUCT NAME	Baby Changing Station
FINISH	Stainless Steel (exterior)
MANUFACTURER, MODEL	Koala Kare, KB300-SS Or approved equal
DESCRIPTION	Horizontal, recessed baby changing station
NOTES	• Provide only when a countertop baby changing station is not possible. • Stations should be located near waste receptacles and paper towel dispenser. • Baby changing stations should not be located inside ADA stalls.
LOCATIONS	Restroom Nursing Suites

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - **Changing Station**
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Changing Station

Adult Changing Station

CATEGORIES	Accessories
PRODUCT NAME	Adult Changing Station
MANUFACTURER, MODEL	Pressalit, SCT-3000 Koala Bear, KB3000 Or approved equal
DESCRIPTION	Electrically height adjustable, adult changing station
NOTES	• Stations should be located near waste receptacles and paper towel dispenser. • Adult changing stations should be provided in single-fixture, assisted-use restrooms (family restrooms) in addition to baby changing stations. • Consider placement of wired remote control, so it not damaged by the mechanics of the system and easy to access.
LOCATIONS	Restrooms (Single-Fixture, Assisted-Use)
LINKS	Electrical System Standards

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - **Changing Station**
    - Step Stool
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

RESTROOM ACCESSORIES

Step Stool

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - **Step Stool**
    - Toddler Seat
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Accessories
PRODUCT NAME	Step Stool
FINISH	Stainless Steel, with marine grade non-slip tread
MANUFACTURER, MODEL	Step 'n' Wash, SNW-SS 975B KinderStep, KSE-1
NOTES	• Secure to floor. • Provide one step stool near public lavatory
LOCATIONS	Restroom

RESTROOM ACCESSORIES

Toddler Safety Seat

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - **Toddler Seat**
    - Occupancy Sensor
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Accessories
PRODUCT NAME	Toddler Safety Seat
FINISH	High-Density Polyethylene, Light Gray
MANUFACTURER, MODEL	American Specialties Inc, (ASI) 9020 Koala Kare, KB102 Sanliv, 5862
DESCRIPTION	Wall mounted child protection seat
NOTES	• Provide in single-fixture, assisted-use restrooms (family restrooms) • Location of toddler safety seat should be that it does not obstruct other functions in the restroom, nor near the Automatic Swing Door Operator button.
LOCATIONS	Restrooms (Single-Fixture, Assisted-Use)

RESTROOM ACCESSORIES

Occupancy Sensor

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - **Restroom Accessories**
    - Partition
    - Receptacle & Dispenser
    - Mirror & Glass
    - Grab Bars
    - Hooks & Shelves
    - Changing Station
    - Step Stool
    - Toddler Seat
    - **Occupancy Sensor**
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Technology
PRODUCT NAME	Restroom Occupancy Sensors
MANUFACTURER	Tooshlights Zurn Or approved equal
NOTES	• Provide ceiling mounted indicator light above each stall door entrance • Provide smart latch system and/or deadbolt
LOCATIONS	Restroom

BOLLARDS & STANCHIONS

Bollards

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - Restroom Accessories
  - **Bollards & Stanchions**
    - **Bollards**
    - Magnetic Stanchion
    - Stanchion Ribbon
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Security
PRODUCT NAME	Bollard
FINISH	Stainless steel
NOTES	• Where bollards are installed, anchor bolts shall be designed for GSE tug impact. (Pushback tugs on the AOA weigh up to 160,000 pounds.) • Bollards installed at slab on grade shall be concrete filled: minimum 6" diameter pipe, painted safety yellow, and with 3' embedment. • Provide bollards, timbers, rails, or jersey barriers to protect charging stations and other equipment. • Provide bollards and guide rails at the service entrances and freight elevators to prevent pallets from damaging the door frame and the edges of doors with horizontal travel.
LOCATIONS	Curbside (Arrivals) Curbside (Departures) Parking Garage Loading Dock Ramp Level

BOLLARDS & STANCHIONS

Magnetic Stanchion

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - Restroom Accessories
  - **Bollards & Stanchions**
    - Bollards
    - **Magnetic Stanchion**
    - Stanchion Ribbon
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Miscellaneous
PRODUCT NAME	Magnetic Stanchion
FINISH	Satin Aluminum
MANUFACTURER	Lavi Industries (sole-source competition waiver #2023-007)
DESCRIPTION	Magnetic bases attached to magnets adhered to floor with double sided tape
NOTES	• All stanchions should match within the same space and have breakaway belt ends. • Black ribbon with SEA branding, typical. • Red ribbon with "Emergency Exit" for egress paths. • Rails to include concealed retractable belt. • Provide a cover plate for the rail base. • Belt lengths at checkpoint should be 13 feet, to reduce number of post needed. • All perimeter stanchions next to path of travel and circulation areas, should have double-belted systems for accessibility. • Stanchions to be placed minimum 36″ wide for aisles and 60″ minimum at turns to comply with accessible clearances. Minimum measurements are between edge of stanchion base to edge of stanchion base. • Comply and coordinate with Port Aviation Operations for queuing standards.
LOCATIONS	Check-In Lobby Esplanade Security Holdrooms

BOLLARDS & STANCHIONS

Stanchion Ribbon

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - Restroom Accessories
  - **Bollards & Stanchions**
    - Bollards
    - Magnetic Stanchion
    - **Stanchion Ribbon**
  - Landscape Containers
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Miscellaneous
PRODUCT NAME	Retractable Stanchion Ribbon
FINISH	Stainless Steel with florescent yellow ribbon
MANUFACTURER	Lavi Industries, Beltrac Public Guidance System Global Industries Visiontron Retracta Belt Wall Mount
DESCRIPTION	Stanchion base should be minimal and as flush to wall as possible
NOTES	• Stanchions should be located from a distance that passengers should be able to see the restrooms are closed. • Provide ribbon at 4'-0" A.F.F. • Belts to be 1.5" longer than the area they are spanning. • Belt to include (2) no entry symbol with the verbiage "Closed for Maintenance"in the middle. If not available as standard option, must be provided under custom options. • When possible provide a magnet end, rather than a clip system.
LOCATIONS	Restroom - Entrance Nodes

LANDSCAPE CONTAINERS

Movable Interior Landscape Containers

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - Restroom Accessories
  - Bollards & Stanchions
  - **Landscape Containers**
    - **Movable Interior Landscape Containers**
    - Planters
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Landscaping
FINISH	No. 4, non-directional, 100 grit brushed stainless steel finish or painted black aluminum
NOTES	• Planters and other landscape containers must be in locations where they do not interfere with or block public view of directional and informational signage. • Design and finishes must be consistent or compatible with the adjacent interior finishes. • Use stainless steel or aluminum materials. • Preference shall be given to products that contain a high percentage of recycled content and/or are manufactured within 500 miles of the project.
LOCATIONS	All areas

LANDSCAPE CONTAINERS

Planters

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - Restroom Accessories
  - Bollards & Stanchions
  - **Landscape Containers**
    - Movable Interior Landscape Containers
    - **Planters**
  - Waste Receptacles
  - Miscellaneous

Appendix

CATEGORIES	Landscaping
NOTES	• Interior landscaping would be desirable in key locations within the terminals if adequate natural light is available to ensure healthy and sustainable planting that does not incur excessive maintenance costs. • The decision to integrate interior planting will involve expert landscape consultants, who understand the specific environmental and maintenance issues for the specific space being considered. • Preference is for realistic-looking artificial or preserved plants. • Anywhere live plants are considered, discussion is needed to ensure that pests are not attracted to the plants.
LOCATIONS	All areas

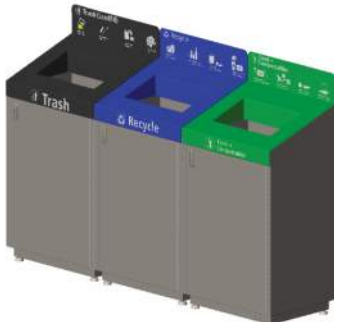
WASTE RECEPTACLES

Interior Receptacle

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - Restroom Accessories
  - Bollards & Stanchions
  - Landscape Containers
  - **Waste Receptacles**
    - **Interior Receptacle**
    - Exterior Receptacle
    - Cigarette Trash Receptacle
  - Miscellaneous

Appendix

CATEGORIES	Trash, recycling and compost
PRODUCT NAME	Single Stream - Removable Top - Receptacle Unit
DESCRIPTION	Single receptacles grouped together to collect trash, recyclables and compost throughout the airport to improve public access to recycling, reduce visual clutter, divert waste from landfills and minimize maintenance
MANUFACTURER	Architectural Brass
FINISH	Stainless steel base with powder coat removable top
SIZE	Single Unit size, 24" W x 18" D x 48" H
NOTES	• Currently, compost collection in public terminal spaces only occurs in food court/market place areas. However, the Port may choose to extend compost collection to additional airport public areas in support of Century Agenda and Environmental Strategy Plan goals. • Distribute receptacles evenly throughout interior airport facilities, in high-traffic areas, and near point sources that generate waste. Grouping (at minimum) trash and recycling units together. • Side-loading service doors are preferred over top-loading alternatives. • Fiber glass liner that maintain separate streams of collection, with finger grommets for easy removal and a gallon capacity of 39 gallons. • Labels that communicate trash, recycling, and compost disposal options use a combination of F&I Signage approved text, color and symbols. • Stand-alone or grouped modular receptacles of similar design with distinguishing signage may be collocated as an alternative where combined receptacles are not practical. • Provide dedicated circuit for trash compactors (one compactor circuit at every other column along both sides of the walkways or concourses). Trash compactor unit to be provided by the Port.
LOCATIONS	All interior areas



WASTE RECEPTACLES

Exterior Receptacle

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - Restroom Accessories
  - Bollards & Stanchions
  - Landscape Containers
  - **Waste Receptacles**
    - Interior Receptacle
    - **Exterior Receptacle**
    - Cigarette Trash Receptacle
  - Miscellaneous

Appendix

CATEGORIES	Trash and recycling
PRODUCT NAME	Single Stream - Removable Top with Weather Top - Receptacle Unit
DESCRIPTION	Single receptacles grouped together to collect trash and recyclables throughout the exterior of the airport to improve public access to recycling, reduce visual clutter, divert waste from landfills and minimize maintenance
MANUFACTURER	Architectural Brass
FINISH	Stainless steel base with powder coat removable top and stainless steel weather top
SIZE	Single Unit size, 24" W x 18" D x 49" H
NOTES	• Currently the collection of compost only occurs within interior airport spaces. However, it is the Port's goal is to provide collection of compost throughout the airport (in addition to recycling and waste collection) as it supports our Century Agenda and Environmental Strategy Plan goals. • Distribute receptacles evenly throughout interior airport facilities, in high-traffic areas, and near point sources that generate waste. Grouping (at minimum) trash and recycling units together. • Side-loading service doors are preferred over top-loading alternatives. • Fiber glass liner that maintain separate streams of collection, with finger grommets for easy removal and a gallon capacity of 39 gallons. • Labels that communicate trash, recycling, and compost disposal options use a combination of F&I Signage approved text, color and symbols. • Stand-alone or grouped modular receptacles of similar design with distinguishing signage may be collocated as an alternative where combined receptacles are not practical.
LOCATIONS	All exterior areas, including Parking Garage

WASTE RECEPTACLES

Cigarette Trash Receptacle

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - Restroom Accessories
  - Bollards & Stanchions
  - Landscape Containers
  - **Waste Receptacles**
    - Interior Receptacle
    - Exterior Receptacle
    - **Cigarette Trash Receptacle**
  - Miscellaneous

Appendix

CATEGORIES	Trash and recycling
PRODUCT NAME	Humo Ash Urn
DESCRIPTION	Receptacle for tobacco ash and cigarette butts.
MANUFACTURER	Landscape Forms
FINISH	Stainless Steel brushed finish
SIZE	5" D x 36" H, Capacity 1.25 Gallon
NOTES	• Ash trays will be located only in designated exterior smoking areas and not within 25 feet of entry doors or ventilation air intakes. • Coordinate or match ash tray/ash urn design with that of exterior waste receptacle to achieve a consistent look and minimize visual clutter.
LOCATIONS	Curbside - Arrivals / Departures

MISCELLANEOUS

Bird Control

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - Restroom Accessories
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - **Miscellaneous**
    - **Bird Control**
    - Bag Dispenser
    - Compactor

Appendix

CATEGORIES	Pest Control
DESCRIPTION	System utilized to eliminate or deter bird perching and/ or nesting by minimizing perch points
NOTES	• Birds pose an issue for both interior and exterior surfaces at the airport. • Proposed bird deterrents, to be reviewed and approved by Port Wildlife. • A single metal line is preferred over barbs.
LOCATIONS	On beams, parapets, pipes, horizontal mullions, etc.; use as appropriate inside and outside the building.

MISCELLANEOUS

Bag Dispenser

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - Restroom Accessories
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - **Miscellaneous**
    - Bird Control
    - **Bag Dispenser**
    - Compactor

Appendix

CATEGORIES	Pet Relief
PRODUCT NAME	Dog Waste System Dispenser
DESCRIPTION	Receptacle for Dog Waste bags
MANUFACTURER	Uline
FINISH	Powdered coated aluminum
SIZE	9" L x 3" W x 16" H
NOTES	• Install within 5 feet of S.A.R.A., grass area for easy access. • For interior applications coordinate receptacle with adjacent room accessories. • For exterior applications, receptacle to be installed on post with sign and trash receptacle (with a closing lid).
LOCATIONS	Curbside - Arrivals / Departures S.A.R.A.

MISCELLANEOUS

Compactor

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
- Architectural Elements
- Building Envelope
- Roofing
- Structure
- Fenestration
- Partitions
- Conveying
- Casework
- Furniture
- Lighting
- Finishes
- Ceilings
- **Equipment**
  - Fire/Life Safety
  - Restroom Accessories
  - Bollards & Stanchions
  - Landscape Containers
  - Waste Receptacles
  - **Miscellaneous**
    - Bird Control
    - Bag Dispenser
    - **Compactor**

Appendix

CATEGORIES	Trash and recycling
PRODUCT NAME	30 cubic yard model
MODEL NUMBER	JV (SCR-02, SC-T2, SC-02)
SIZE	8' x 22'
NOTES	• Each requires 12'x22' footprint, with 45' space in the front to allow freedom of maneuver for a 32' long hauling truck and 14' vertical clearance for hauls in enclosed locations. Although a 30 cubic yard compactor is 8'x22', the additional space is required for personnel to access for side use, maintain, and ensure clean hauls. • Requires a dedicated120V 20A circuit.

5

APPENDIX

5

APPENDIX

5.1 Resources
- Definitions & Acronyms
- Regulations
- Northwest Sense of Place Guidelines

5.2 Forms & Document Library
- Utilities Connections Applications
- Documents

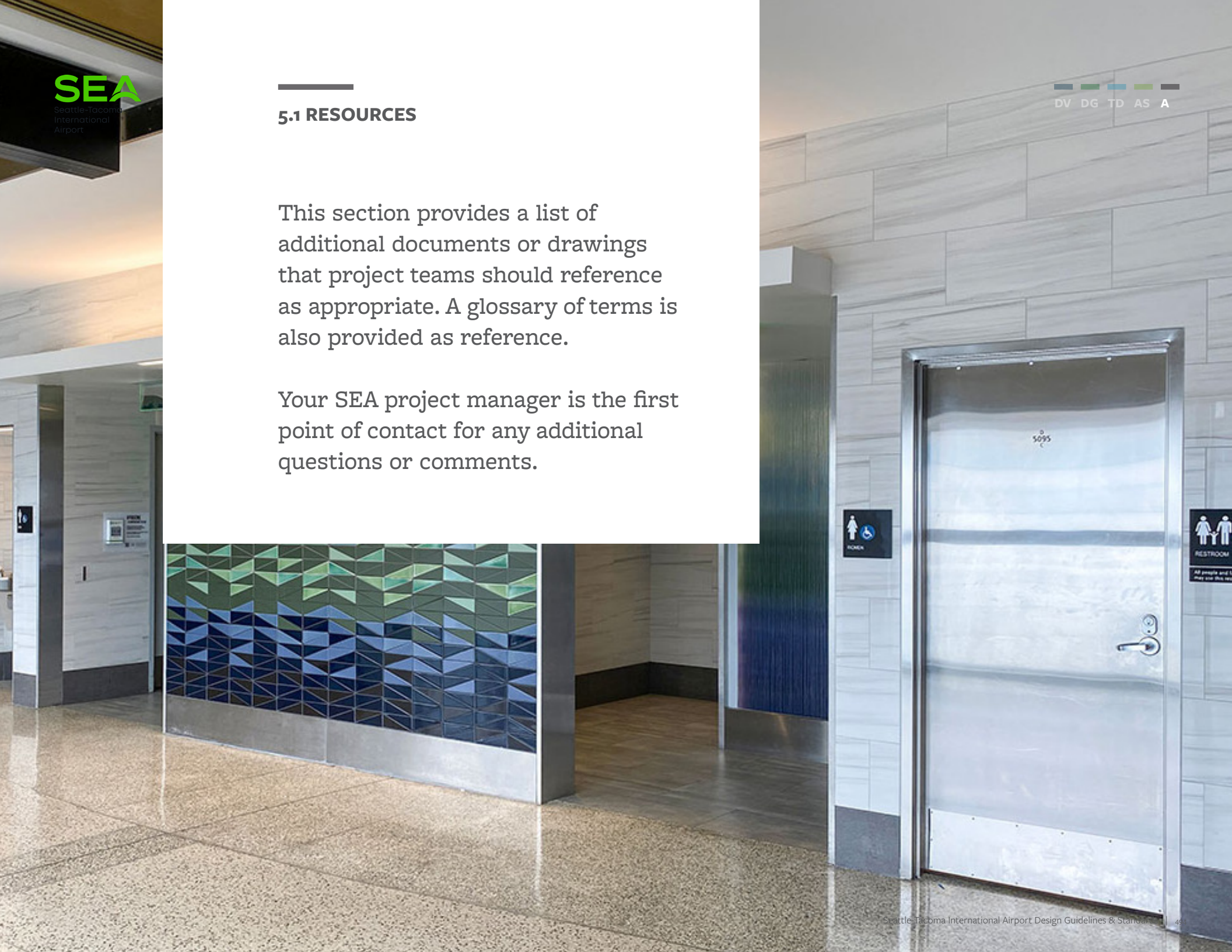
5.3 Maintainability Standards
- General Directions
- Architecture
- Janitorial
- Civil/Site Work
- Pavement & Grounds
- Roof & Roofing
- Fall Protection
- Plumbing & Wastewater
- HVAC & Steam
- Fire Protection
- Baggage Handling Systems
- Baggage Ramp
- PLB Maintainability Standards
- Electrical
- Electronic Systems

5.4 Design Intent Drawings

5.1 RESOURCES

This section provides a list of additional documents or drawings that project teams should reference as appropriate. A glossary of terms is also provided as reference.

Your SEA project manager is the first point of contact for any additional questions or comments.



DEFINITIONS & ACRONYMS

A full list of definitions and acronyms is also available at http://compass.portseattle.org/aviation/Pages/Acronyms.aspx .

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- **Resources**
  - **Definitions & Acronyms**
  - Regulations
  - Northwest Sense of Place Guidelines
- Forms & Document Library
- Maintainability Standards
- Design Intent Drawings

ITEM	DEFINITION
A/E	Architect/Engineer
ADR	Airport Dining and Retail
AP	Acquisition Plan
AV	
CA	Contract Administrator
CE	
CM	Construction Management
COMMISSION	Port of Seattle Commission
CPO	Central Procurement Office
EN	Engineering
ERL	Environmental Remediation Liability
F&B	Finance and Budget
F&I	Facilities and Infrastructure
FTE	Full-time Employee
IC	Investment Committee
MEPF	Mechanical Electrical Plumbing Fire
MII	Majority in Interest (airlines)
NEPA	
OSR	Office of Social Responsibility
PCS	Port Construction Services
PE	
PM	Project Manager
PM	Project Manager
PMG	Project Management Group
RDR	Requesting Department Representative
RFQ	Request for Qualification
RFS	Request for Service (w/CPO)
RM	Risk Management
RMM	Regulated Materials Management
RT	Review Team
SA	Service Agreement (consultant contract)
SD	Service Directive
SEA	Seattle-Tacoma International Airport
SEPA	
SME	Subject Matter Expert
SOQ	Statement of Qualifications
SOW	Scope of Work
START	SeaTac Telecommunications Architecture Review Team
STIA	Seattle-Tacoma International Airport

REGULATIONS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Definitions & Acronyms
Regulations
Northwest Sense of Place Guidelines
Forms & Document Library
Maintainability Standards
Design Intent Drawings

Laws and codes for accessibility design in Washington State include:

Chapter 51-40 WAC: Uniform Building Code and Uniform Building Code Standards (contains Chapter 11 ACCESSIBILITY amendments) is available through:

Community Trade and Economic Development
Washington State Building Code Council
Post Office Box 48300
Olympia, Washington 98504-8300
(360) 753-1184

Americans with Disabilities Act Accessibility Guidelines is available through:
Calling the ADA information Line of the U.S. Department of Justice at (800) 514-0301 (voice) or (800) 514-0383 (TDD).

A recognized resource for the background on accessibility design in Washington State with illustrations of design suggestions is **Accessibility design for all: an illustrated handbook.** It is available through:

Easter Seal Society of Washington
521 2nd Avenue, West
Seattle, Washington 98119
(206)281-5700
(800)678-5708

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Definitions & Acronyms
Regulations
Northwest Sense of Place Guidelines
Forms & Document Library
Maintainability Standards
Design Intent Drawings

Seattle and the Pacific Northwest are viewed as being an exceptional environment, both natural and built, with a character and quality of life that inspire innovation and creativity. Future programs and building projects can strengthen our unique identity—our brand—in an authentic way through a variety of strategies and initiatives. These can be organized around the following major categories, or themes.

Distinctive, awe-inspiring natural environment: Mountains, forests, water, sky

- Views: Connection with outdoors; capture and frame views of mountains, trees/forests, sky/clouds, and weather/rain
- Outdoor spaces and mini-parks: Indigenous plants and trees, stone, water; provide more, as close as possible to building public areas; add to secure side
- Site landscaping: Indigenous plants and trees, stone, water; enhance main north entry, curbsides/"gorge"; integrate nature with buildings
- Water features and concepts: Indoors and out
- Quality of natural light, clarity of the air: Expanses of glass, skylights, clerestories
- Design forms and detailing: Natural features, organic expression
- Indigenous, natural materials and finishes: Wood, stone, patinated metal
- Colors, patterns, textures: Muted gray and brown neutrals; accents of blue, green, cedar
- Art and exhibits: Aquariums, interactive marine-life touching pools; experiential rooms/zones that create Northwest settings combining visual elements with elements of other senses, such as sound, smell, and touch—forest, beach, working waterfront/marina, neighborhoods, market; similar to sustainable lounge concept

  Static graphic displays: Large-scale photos, photo murals—inexpensive, easily integrated to provide high-impact thematic overlay throughout terminal

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Definitions & Acronyms
Regulations
Northwest Sense of Place Guidelines
Forms & Document Library
Maintainability Standards
Design Intent Drawings

- Dynamic displays: Video screens, digital walls, projections, screensavers on monitors. Real-time video—Ballard Locks, local beaches, neighborhoods, etc
- Seasonal displays

Dynamic, vibrant built environment—cities, neighborhoods, parks, buildings: Historic and present

- Contemporary, Modernist architecture: Simple, subdued, restrained, elegant; honest expression of form, structure, materials; open, spacious; classic, timeless
- Historic references in building elements: Pioneer Square, Pike Place Market, neighborhoods
- Art and exhibits: AIA sustainable architecture models exhibit, Seattle historic theater exhibit; experiential rooms/zones that create Northwest settings combining visual elements with elements of other senses, such as sound, smell, and touch—forest, beach, working waterfront/marina, neighborhoods, market; similar to sustainable lounge concept
- Static graphic displays: Large-scale photos, photo murals—inexpensive, easily integrated to provide high-impact thematic overlay throughout terminal
- Dynamic displays: Video screens, digital walls, projections, screensavers on monitors; real-time video—Ballard Locks, local beaches, neighborhoods, etc
- Seasonal displays

Pioneering, innovative, cutting-edge spirit: Early settlers, trade/commerce, industry (timber, fishing, biotech, Boeing, amazon, Starbucks, Costco), technology (Microsoft), arts and culture

- New, innovative technology: Building components, finishes, systems; wayfinding/information display on signs and hand-held devices (iBeacons, STQRY)
- Art, exhibits, demonstrations; logging/timber and skills; experiential rooms/zones that create Northwest settings combining visual elements with elements of other senses, such as sound, smell, and touch—forest, beach, working waterfront/marina, neighborhoods, market; similar to sustainable lounge concept
- References in building elements: Form, details, patterns, colors, materials

- Static graphic displays: Large-scale photos, photo murals—inexpensive, easily integrated to provide high-impact thematic overlay throughout terminal
- Dynamic displays: Video screens, digital walls, projections, screensavers on monitors; real-time video—Ballard Locks, local beaches, neighborhoods, etc

NORTHWEST SENSE OF PLACE GUIDELINES

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Definitions & Acronyms
Regulations
Northwest Sense of Place Guidelines
Forms & Document Library
Maintainability Standards
Design Intent Drawings

Rich, diverse culture and history: Events, the arts, entertainment, sports, education

- Art and exhibits: More glass art—Pilchuck School, Chihuly; experiential rooms/zones that create Northwest settings combining visual elements with elements of other senses, such as sound, smell, and touch—forest, beach, working waterfront/marina, neighborhoods, market; similar to sustainable lounge concept
- Music: More live performances, buskers; more variety in broadcast music; visual displays
- Other live performances and demonstrations: Theater, dance, improv, stand-up comedy, magic, mime, glass-blowing, rock climbing and other outdoor activities, etc
- References in building elements: Form, details, patterns, colors, materials
- Static graphic displays: Large-scale photos, photo murals—inexpensive, easily integrated to provide high-impact thematic overlay throughout terminal
- Dynamic displays: Video screens, digital walls, projections, screensavers on monitors; real-time video—Ballard Locks, local beaches, neighborhoods, etc
- Seasonal displays
- Entertainment/activity venues: Climbing wall

People: Who we are today, and the groups and individuals who have been significant in the region's past.

- Airport employees: Friendly, helpful, proud of what they do; an open, welcoming environment
- Art and exhibits, live performance, demonstrations: Ethnic dance, Native American basket-weaving and weaving; experiential rooms/zones that create Northwest settings combining visual elements with elements of other senses, such as sound, smell, and touch—forest, beach, working waterfront/marina, neighborhoods, market; similar to sustainable lounge concept
- References in building elements: Form, details, patterns, colors, materials
- Static graphic displays: Large-scale photos, photo murals—inexpensive, easily integrated to provide high-impact thematic overlay throughout terminal
- Dynamic displays: Video screens, digital walls, projections, screensavers on monitors; real-time video—Ballard Locks, local beaches, neighborhoods, etc

NORTHWEST SENSE OF PLACE GUIDELINES

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Definitions & Acronyms
Regulations
Northwest Sense of Place Guidelines
Forms & Document Library
Maintainability Standards
Design Intent Drawings

Thriving international trade, commerce, tourism.

- Visitor information centers and displays: Enhance, expand, add interactive displays; kiosks and apps that sell tickets to local attractions and events
- Art and exhibits: Experiential rooms/zones that create Northwest settings combining visual elements with elements of other senses, such as sound, smell, and touch—forest, beach, working waterfront/marina, neighborhoods, market; similar to sustainable lounge concept
- Static graphic displays: Large-scale photos, photo murals—inexpensive, easily integrated to provide high-impact thematic overlay throughout terminal
- Dynamic displays: Video screens, digital walls, projections, screensavers on monitors; real-time video—Ballard Locks, local beaches, neighborhoods, etc
- References in building elements: Form, details, patterns, colors, materials

Green values: Creating and maintaining a sustainable environment.

- Building materials: Local sourcing, recycled content, etc
- User practices and behavior: Water conservation, recycling, composting, PC Air, electric vehicle charging stations and service vehicles, bicycle facilities
- Art and exhibits, demonstrations: Environmental outreach displays, green walls, Seattle AIA sustainable building exhibit; experiential rooms/zones that create Northwest settings combining visual elements with elements of other senses, such as sound, smell, and touch—forest, beach, working waterfront/marina, neighborhoods, market; similar to sustainable lounge concept
- Static graphic displays: Large-scale photos, photo murals—inexpensive, easily integrated to provide high-impact thematic overlay throughout terminal
- Dynamic displays: Video screens, digital walls, projections, screensavers on monitors; real-time video—Ballard Locks, local beaches, neighborhoods, etc

Dining, retail, advertising: Develop relationships with appropriate brands and concepts.

- Genuine local flavor
- New restaurants and chefs: Incubator food concepts, with short lease cycle and communal tables; combine food with music
- Food trucks and stands

Demonstrations, tastings: Fish-throwing ala Market, wine/beer sampling

NORTHWEST SENSE OF PLACE GUIDELINES

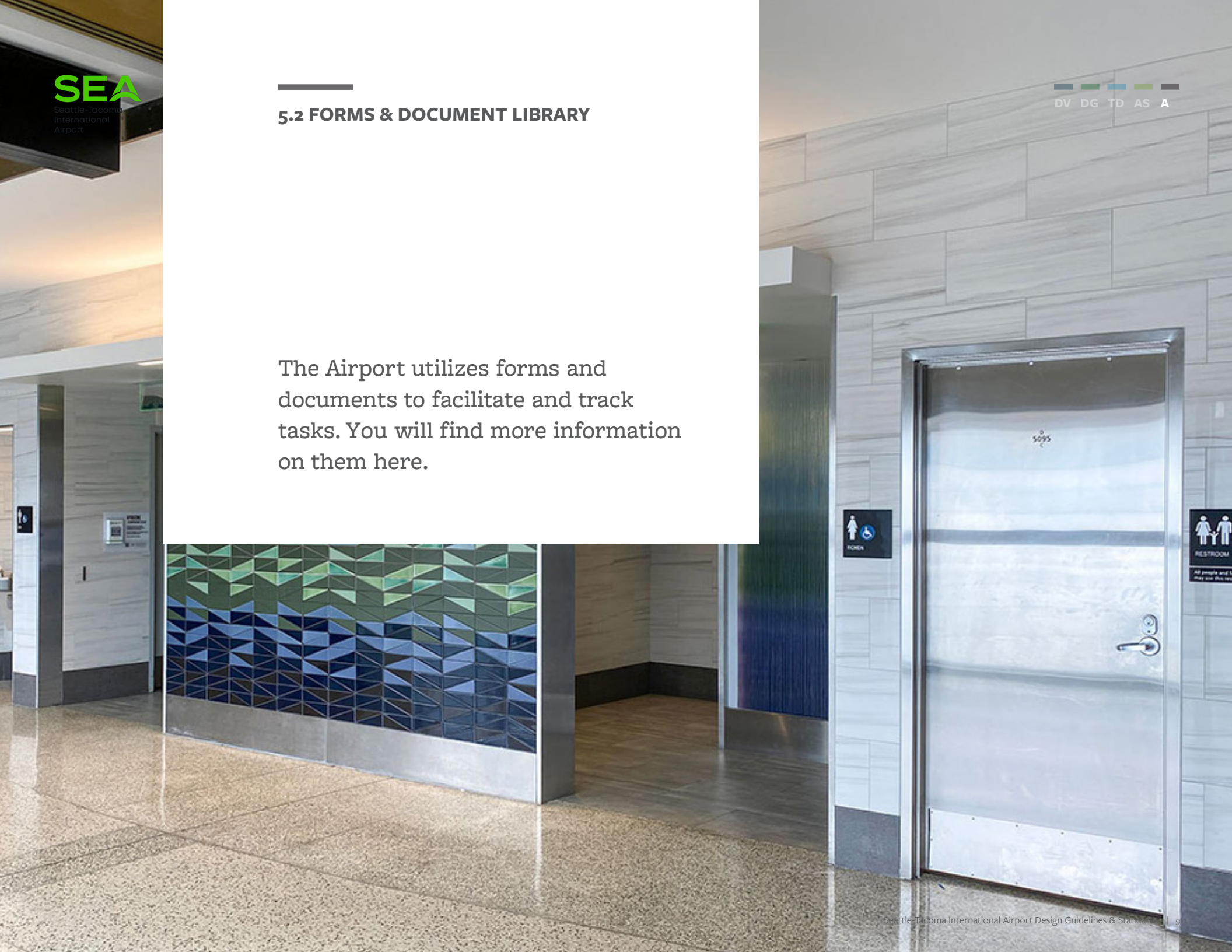
Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Definitions & Acronyms
Regulations
Northwest Sense of Place Guidelines
Forms & Document Library
Maintainability Standards
Design Intent Drawings

Other Contributors to Sense of Place:

- Several additional themes were identified that although not specific to a Northwest character, are significant and desirable for a memorable sense of place at SEA
- Designing around the passenger journey by responding to the passenger mindset:
- Own the passenger experience
- Convey the excitement of travel: importance of landside entry by road or train could be better
- Focus groups: incorporate feedback
- Wayfinding and environmental design: Making the airport understandable, communicating our story
- An open environment with inclusive design: Ensuring easy access for everyone
- Go beyond the ADA when appropriate, with focus on best practices and customer service rather than only legal compliance
- Reinforce with technology

5.2 FORMS & DOCUMENT LIBRARY

The Airport utilizes forms and documents to facilitate and track tasks. You will find more information on them here.



UTILITIES CONNECTIONS APPLICATIONS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Forms & Document Library
Utilities Connections Applications
Documents
Maintainability Standards
Design Intent Drawings

Listed below are all utilities connections applications. Your Project Manager will work with you to complete their forms for your project.

- Communication Systems
- Electrical Systems
- Industrial Wastewater Systems
- Mechanical Systems
- Natural Gas Systems
- Sanitary Waste System
- Storm Drainage System
- Water System
- Radio Frequency Systems

DOCUMENTS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Forms & Document Library
Utilities Connections Applications
Documents
Maintainability Standards
Design Intent Drawings

CATEGORY	DOCUMENT	VERSION	DESCRIPTION	LINK	CONTACT
Brand + Signage	Signage Standards		The Signage Standards Manual for Seattle-Tacoma International Airport (STIA) contains the standards for all airport signage and the regulations governing the design, construction, and installation of airport signs.		
Brand + Signage	Brand Guide		These guidelines include direction on everything from visual identity do's and don'ts to logo usage and more.		
	Maintenance Guidelines		Documents regarding the upkeep and maintenance for the airport.		
	Standard Details		Drawings of typical architectural details.		
Tenant Improvement	Construction General Requirements (CGR)	2015	These Seattle-Tacoma International Airport (STIA) Tenant Improvement Construction General Requirements are all inclusive and intended to address a wide variety of tenant and concessionaire projects.		Port construction project representative (Construction Manager, Project Manager, Engineer or Inspector)
Tenant Improvement	Design and Construction Process Manual	2015	STIA Tenant Improvement Design and Construction Process Manual are for use by the Tenant's Design Team (TDT) and should be used in conjunction with Regulations for Airport Construction (RAC 2014). This manual will help guide the TDT through the design and construction at STIA for any tenant mid-term refurbishment, improvement project, or new construction.		Port construction project representative (Construction Manager, Project Manager, Engineer or Inspector)

DOCUMENTS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Forms & Document Library
Utilities Connections
Applications
Documents
Maintainability Standards
Design Intent Drawings

CATEGORY	DOCUMENT	VERSION	DESCRIPTION	LINK	CONTACT
Construction	Construction Safety	v03.22.16	Document outlining the requirements for construction safety at the airport and a plan for preventing job-related accidents.		Manager of Construction Safety Management (206)-787-5587
	MEP		Guidelines regarding the Mechanical, Electrical, and Plumbing requirements.		
	AV		Audio/Visual guidelines.		
Construction	Rules (Regulations) for Airport Construction (RAC)	2014	This document provides an orientation to the various Port departments associated with completing a construction project and guidelines to supplement the Construction General Requirements in project documents associated with the Seattle Tacoma International Airport (STIA). It serves as guide for contractors to better understand the focus of each department highlighting areas of concern and guidelines for successfully completing a project . For Tenant Improvement projects, it does not add to, alter, or delete any portion(s) of existing or future leases. If there is a conflict between a lease and this document, the terms of the lease shall govern.		Port construction project representative (Construction Manager, Project Manager, Engineer or Inspector)

DOCUMENTS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Forms & Document Library
Utilities Connections
Applications
Documents
Maintainability Standards
Design Intent Drawings

CATEGORY	DOCUMENT	VERSION	DESCRIPTION	LINK	CONTACT
Maintenance	Maintainability and Janitorial: Concourse D Hardstand Terminal	2016	These Maintainability Standards are drafted with the intent to support Total Cost of Ownership, Maintainability and Sustainability. To support a safe and efficient work environment in order to maintain the Airport, its functions, and the assets of the Port of Seattle. These Standards are supplementary to the Port's F&I Standards, Performance Specifications, and Engineering Specifications. Compliance with Inter Local Agreements and regulatory requirements is mandatory.		
Maintenance	General Drawing Notes POS AVM Maintainability Standards	2017	For the general drawing notes page, these are built off of the POS AVM Maintainability Standards.		
Landscape Design Guidelines		2000	This document is intended to be used in conjunction with the POS Landscape Design Standards to help guide the vision of future development at STIA. Where any conflicts occur between these two documents, the Landscape Design Standards take precedence over any recommendations presented in these guidelines. This document contains three parts: 1. Themes and images; 2. Conceptual plan; and 3. Appendix.		

DOCUMENTS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Forms & Document Library
Utilities Connections
Applications
Documents
Maintainability Standards
Design Intent Drawings

CATEGORY	DOCUMENT	VERSION	DESCRIPTION	LINK	CONTACT
Landscape Design Master plan and Standards		2006	This document is currently being updated to be consistent with the 2018 ILA. The building department is also adding a permit for clearing and grading, which will include revised tree retention and vegetation mitigation development standards.		
Architecture and Interiors	Regulations for Airport Construction (RAC)	1996			
Architecture and Interiors	Restroom Design Standards	1999			
Architecture and Interiors	Communication Implementation Plan	1999			
Architecture and Interiors	POS Interim Landscape Design Standards for STIA	2000			
Facilities & Infrastructure	Mechanical Systems Standards	1999			
Facilities & Infrastructure	Electrical Systems Standards	1999			
Facilities & Infrastructure	Water and Sanitary Waste Systems Standards	1999			

DOCUMENTS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Forms & Document Library
Utilities Connections
Applications
Documents
Maintainability Standards
Design Intent Drawings

CATEGORY	DOCUMENT	VERSION	DESCRIPTION	LINK	CONTACT
Graphics and Signage	Advertising Graphic and Display Design Guidelines	1996			
Graphics and Signage	STIA Signing and Graphics Guidelines				
Graphics and Signage	Environmental Graphic Design Master Plan	2001			
Graphics and Signage	Roadway and Garage Signage Master Plan	1999			
	Variance Request Form		Used to requesting owner approval of a material or product that varies from the guidelines if it is necessary because of a specific condition.		
	Request for Qualifications				
	Professional Services Agreement				
	Port of Seattle Tenant Agreement				
	AV/PMG Procedure Manual				

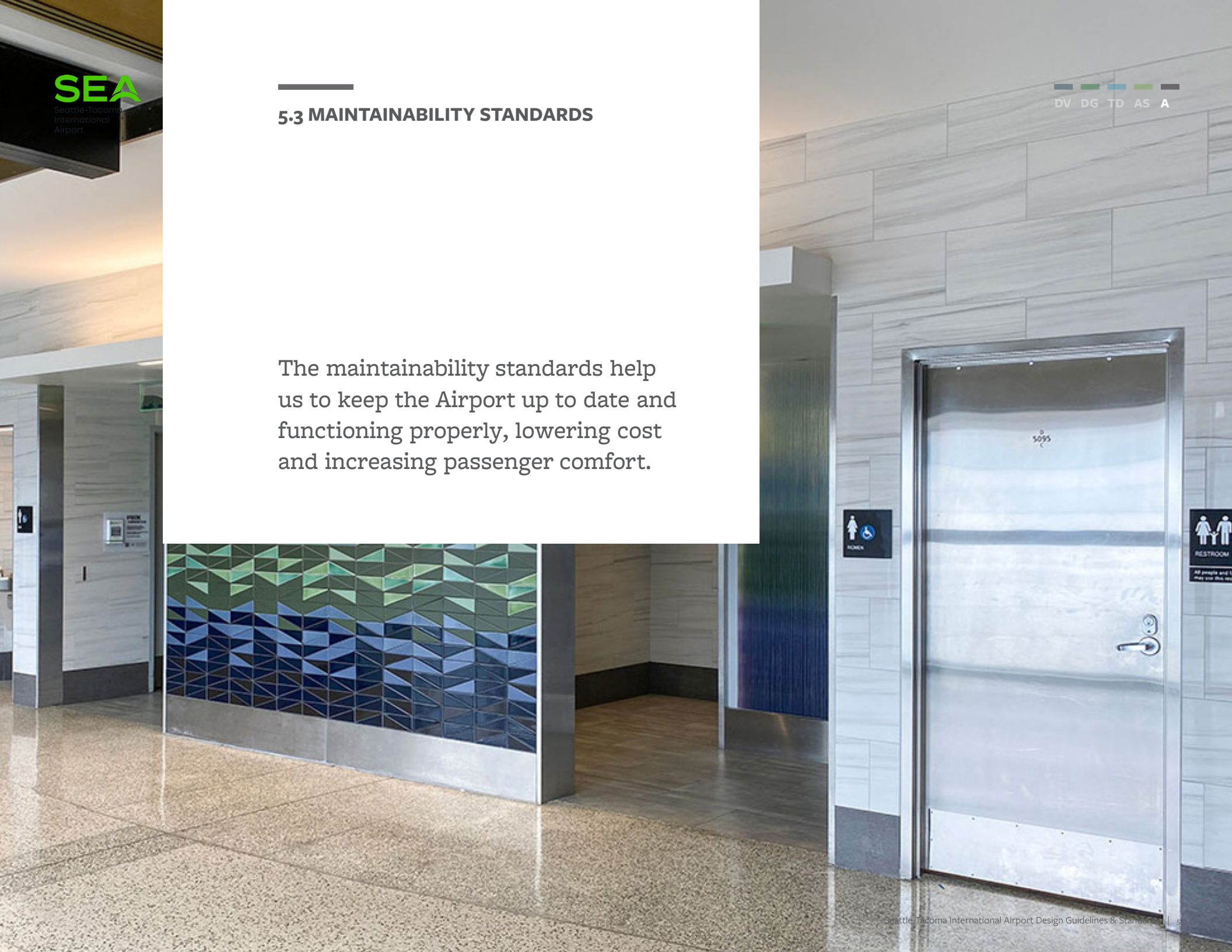
DOCUMENTS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Forms & Document Library
Utilities Connections
Applications
Documents
Maintainability Standards
Design Intent Drawings

CATEGORY	DOCUMENT	VERSION	DESCRIPTION	LINK	CONTACT
	Guide Specifications		A foundation from which design teams can build their project specifications, not intended to cover specific projects.		Port of Seattle
	CAD Standards		CADD and drafting standards		Project manager
	POS Communications Standards		A complete list of CMS nomenclatures for when listing spaces, pathways, cable, and termination hardware ID's.		
	Committee Meetings Scheduling			http://collab.portseattle.org/sites/avficommittee/SitePages/Home.aspx	
	Committee Meeting SharePoint			http://collab.portseattle.org/sites/avficommittee	
	AV/PMG Project Process Documentation		Detailed documentation of the process for projects to reach each project status.		Aviation Project Management Group

5.3 MAINTAINABILITY STANDARDS

The maintainability standards help us to keep the Airport up to date and functioning properly, lowering cost and increasing passenger comfort.



MAINTAINABILITY STANDARDS

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

These Maintainability Standards are drafted with the intent to support Total Cost of Ownership, Maintainability, and Sustainability. To support a safe and efficient work environment in order to maintain the Airport, its functions, and the assets of the Port of Seattle. These Standards are supplementary to the Port's F&I Standards, Performance Specifications, and Engineering Specifications. Compliance with local agreements and regulatory requirements is mandatory.

Note: The following standards are to be incorporated into their relevant discipline's standards at a later date. All design, aesthetic, architectural, or passenger-facing references have been incorporated into the Design Guidelines & Architectural Standards.

MAINTAINABILITY STANDARDS

General Directions

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - **General Directions**
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Technical Review:

- Aviation Maintenance Technical Review Team will participate in walk-throughs, field reviews, design reviews, Plan-In-Hand field reviews, Requests for Information, Change Orders, Punch Lists, and decisions that deviate from these standards.
- Provide a submittal log for all materials and equipment for POS to select items for review. Detailed drawings for review shall include equipment schedules, locations, and specifications. For all equipment schedules, indicate and specify the necessary units, capacities, types, sizes, and special notes.
- Provide As-Built drawings for review and record drawings.
- Provide Operations & Maintenance Manuals per Port of Seattle Guide Specifications Section 01 78 23.13 – Aviation Operations and Maintenance Documentation.

Asset Management:

- Designer Builder shall provide CMMS form with the first three columns populated (Equipment Description, POS equipment ID #, physical location) by approximately 90% design. The Contractor shall fill the balance of their form based upon actual equipment installed. The document shall be a PDF as part of the O&M Manual and an Excel (live) spreadsheet. The CMMS form will be provided to the designer in excel format.
- Project/Design data management system shall have the ability to integrate with Maximo for data interfacing.
- Submittals that will go into the O&M Manual should be original electronic documents. When scanning is necessary, the scan shall be made with OCR enabled to make the content of the attachments fully text searchable. Contractor submittals and Operations & Maintenance manuals shall be submitted in electronic format of Microsoft Office or PDF with index and tabs, and shall be fully text searchable.
- The Contractor and Subcontractor's literature shall bear the POS project name and number on the first page of the submittals.

MAINTAINABILITY STANDARDS

General Directions

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - **General Directions**
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Sustainability:

- Shop floors slope away from equipment and hydraulic lift shafts, toward adequately sized drains (not less than 2”), and are connected to the appropriate treatment system.
- Weep holes for water drainage shall be oval, not round. This applies to windows, siding, and other surfaces subject to water.
- For interior equipment protection along GSE (tug) travel pathways, 13” high concrete curbs with angle iron embedments at the top exposed corner with removable 12” x 12” timbers are strongly recommended rather than bull rails except at BHS make-up devices. At BHS makeup devices, 6” high raised concrete walkways should be installed for ergonomics and the protection of personnel.
- Outdoor equipment subject to damage by freezing shall be heat traced and insulated or installed in a hot box enclosure sufficient in size to allow full access for maintenance.
- Provide WiFi and cell phone coverage in areas without. Do not degrade existing coverage.
- Radio coverage is required in all spaces. Do not degrade existing radio coverage.
- Salvage materials shall be identified in the 90% design drawing submittals and approved by the Port.

Redundancy:

- Provide redundancy in equipment. Ensure systems that shall remain in operation at all times shall have equivalent or adequate capacity for outages. This is a 24/7 operation and there should never be only one of any critical system or piece of equipment.
  Example: Rather than (1) large fan, provide (2) or more, slightly smaller fans so that if one goes down, the system is still operational at a reduced capacity rather than totally out of service. The two fans should be fed from separate circuits.

Clearance requirements:

- Adequate space shall be provided for the operation and maintenance (O&M) of installed equipment and inspections to equipment. Verify with the manufacturer’s literatures for equipment sizes, clearances and requirements.
- Common conflicts are with conduits, fire sprinkler piping, and clearance in front of electrical boxes in the ceiling, light fixtures, ceiling grids, and access to HVAC boxes for controls.
- Provide 24” clear width and 90” clear height in utility chases. The clear width measurement shall be between the brackets, insulation and all other objects.

MAINTAINABILITY STANDARDS

General Directions

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - **General Directions**
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Maintenance Access:

- Provide safe and efficient pathways for access to equipment.
- All elevated equipment requiring any service has to be safely accessible with a POS standard device such as: lifts, ladders, steps or catwalk (not temporary scaffolding). This includes access to equipment that is above ceiling grids or in recessed locations. Any equipment that exceeds the requirement for servicing by a standard device needs proper access provisions without horizontal or vertical obstructions.
- Equipment installed above ceiling grid shall be installed such that the ceiling grid does not have to be disassembled for maintenance access and that all service points are no more than 24" above the ceiling grid.
- Access to routine service points shall be by foot at ground level without obstruction or by stairways and OSHA and WISHA-compliant access platforms or catwalks.
- Provide clear access to valves and cleanouts.
- Access to equipment rooms shall accommodate pallet jack deliveries, which include minimal ramp break over angles.
- No equipment shall be positioned in a confined space.
- Provide walkways with 80" headroom and width sufficient to move tools and equipment along the pathway.
- Doors and floors must accommodate AVM lifts used in the facility. The articulating lift will be used in high ceiling areas with (at least) one entrance point. Consider travel pathways, floor openings, and obstructions such as escalators, stairwells, and overhead obstructions such as beams and artwork when calculating the reach of lifts and placement of outriggers.
- Provide a dedicated storage room equipped with outlets to accommodate lifts
- Common personnel lifts used inside the airport buildings (subject to change):

Aerial Work Platform:

Model: Genie - GR26J

Stowed Machine dimensions:
6'-6" Height x 9'-1" Length x 3'-9" Width
Max. platform occupnacy: 2
Lift capacity: 500 lbs
Platform height: 25'-11"
Working height: 31'-11"
Machine Weight: 6,250 lb
Power source: Automatic 30 AMP, 24 V battery onboard charger

MAINTAINABILITY STANDARDS

General Directions

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - **General Directions**
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Self-Propelled Scissor Lift:

Model: Genie GS-1930
Stowed Machine Dimensions:
7'-1" Height - folding rails x 6'-0" Length x 2'-6" Width
Max. platform occupnacy: 2 in / 1 out
Lift capacity: 500 lbs
Platform height: 19'-3" indoor, 14'-8" outdoor
Working height: 25'-3" indoor, 20'-8" outdoor
Machine Weight: 3,209 lb

Self-Propelled Scissor Lift:

Model: Genie GS-3246
Stowed Machine Dimensions:
7'-11" Height - folding rails x 8'-0" Length x 3'-10" Width
Max. platform occupnacy: 2 in / 1 out
Lift capacity: 700 lbs
Platform height: 32'-1"" indoor, 22'-0" outdoor
Working height: 38'-1" indoor, 28'-0" outdoor
Machine Weight: 5,358 lb

Bucket Truck for AOA Building Lighting Maintenance:

Model: Altec AA67-E100
Truck Width: 7'-6" (with outriggers down approx: 15'-6")
Truck Length: 36'-9"
Stored Height: 13'-1"
Maximum Working Height: 105'-0"
Bucket truck reach measurements:

MAINTAINABILITY STANDARDS

General Directions

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - **General Directions**
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Equipment Removal and Replacement:

- The doorways, ceilings, approaching and through a room, corridors, and elevators shall be sized and aligned to accommodate removal and replacement of major equipment without disassembly from factory shipped configuration.
- All equipment shall have provisions installed for removing failed components (>50#) in a safe manner. This may require built-in lifting points or hoisting systems. Provide complete lifting information on how each component can be removed and replaced while adhering to this requirement.
- Do not abandon equipment or infrastructure in place, they are to be removed. This includes pipes that penetrate roofs. Patch the holes and surfaces and provide fireproofing to the satisfaction of the AHJ.

Service Lighting:

- Provide at least 25 foot candle lighting on roof access to walkways, in mechanical chases, and all service locations.
- Spaces, such as interstitials containing equipment that requires maintenance, shall be provided with appropriate lighting.

Confined Space:

- Create no confined spaces.

Service Power:

- Provide 120V 20A convenience power outlets in mechanical chases and on roof tops within 25' of service equipment.

Ventilation:

- Provide adequate ventilation for personnel to work in mechanical and electrical chases.

Elevators:

- Paint and label the perimeter edges of the service elevator cab floor to encourage centering of the loads.
- Design with bollards and guide rails at the entrances to service and freight elevators to prevent pallets from damaging the door frame and the edges of doors with horizontal travel.
- Service elevators shall be graphically labeled, inside and outside, to prohibit pallet jacks.
- Freight elevators shall travel from load dock level to the penthouse.
- Size freight elevators to accommodate all equipment replacement on the floors served.
- Size elevators for personnel lifts required to be used in the facility.

MAINTAINABILITY STANDARDS

General Directions

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - **General Directions**
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Future:

- Designer and builder shall design and build with allowances for future upgrades, new technology upgrades, access and loading.

Training:

- Submit an equipment and system matrix for the Port to identify the quantity of hours and shifts which will require training.
- The training requirements will vary based on the equipment selected by the contractor. Equipment which is new to the Port will likely require more training than equipment which matches existing Port equipment.
- Equipment and systems training may be video recorded by the Port. If standard manufacturer's training videos are available for the applicable equipment, provide the manufacturer's video files.
- Provide training sessions for all three shifts. Training days and times are:

MAINTAINABILITY STANDARDS

General Directions

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - **General Directions**
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

POS AVIATION MAINTENANCE TYPICAL CONTRACTOR TRAINING SCHEDULE

Craft	Preferred Day of Week for Training	Preferred Time of Day to Start Training	Lunch Breaks	Notes or Shift Hours
Mechanical Utilities (BLRM)	Days shift: Tuesday Swing shift: Wednesday Grave shift: Wednesday Weekend Day shift: Monday Weekend Grave Shift: Monday	Days 07:00 Swing 16:00 Grave 05:00 Weekend Days 07:00 Weekend Grave 05:00	Days 11:00 - 11:30 Swing 19:00 - 19:30 Grave 04:00 - 04:30 Weekend Days 11:30 - 12:00 Weekend Grave 04:00-04:30	Days 4x10 Swing 4x10 Grave 4x10 Weekend Days 4x10 Weekend Grave 4x10
Conveyor & Passenger Loading Bridge (PLB)	Wednesday Tuesday Night	Days 06:00 Swing 14:00 Grave 23:00	Flexible	Days 4x10 05:00 - 15:00 Swing 4x10 13:30 - 23:30 Grave 4x10 22:00 - 08:00
Carpenters Architectural	Tuesday, Wednesday, Thursday	14:00	11:00 - 11:30 Swing varies	Weekdays 4x10 Days 06:00-16:30 Swing 13:00 - 23:30
Electricians	Day & Swing Wednesday (not 3rd Wed. of the month) Grave Tuesday	Days 07:30 Swing 15:30 Grave 21:30 (or 5:30)	Days 12:00 - 12:30 Swing 18:00 - 18:30 Grave 05:00 - 05:30	Days 5x8 07:00 - 15:30 Swing 5x8 15:00 - 23:30 Grave 4x10 21:00 - 07:30
ET Electronic Technicians	Wednesday	Days 07:30 Swing 15:30 Grave 23:30	Flexible	Varies
Civil Field Crew	Tuesday, Wednesday, Thursday	Days 07:00	Flexible	Varies

POS AVIATION FIRE DEPARTMENT TYPICAL CONTRACTOR TRAINING SCHEDULE

Craft	Preferred Day of Week for Training	Preferred Time of Day to Start Training	Lunch Breaks	Notes or Shift Hours
Fire Department	Tuesday, Thursday	09:00	Flexible	Varies

MAINTAINABILITY STANDARDS

Architecture

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - **Architecture**
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

General Maintenance Notes:

- Weather vestibules shall be provided at main entrances in areas where wind-driven rain prevails.
- Mechanical and electrical equipment rooms should be on the ground floor with doors and pathways of adequate size to accommodate installation and removal of equipment for repair and maintenance. If not on the ground floor, provide freight elevator(s) adequate for the transportation of the equipment without disassembly.
- Building system components shall be accessible for periodic inspection and maintenance.
- Stairway shall be provided in the design for servicing of roof mounted equipment; ladders may be an exception after review with Aviation Maintenance.
- Consider types of traffic in the area - office, public corridor with baggage, and motorized pallet jack traffic.
- Lockers shall have sloped tops.
- Coordinate with POS (carpenter shop) before removing or replacing existing metal ceiling tiles. Improperly removed or installed ceiling material may create an overhead hazard.
- Connect to smoke alarm(s) in the loading bridge and rotunda for closure upon smoke alarm activation.

Doors, Doorways and Access Panels:

- Doors and windows shall be designed to seal correctly and include protection from water running down the face of the structure.
- Windows, doors, and hardware shall be extra heavy duty commercial grade.
- Hinged doors are preferred vs. the roll down screen for closures.
- Design hinged doors and show on the drawings with ~180° swing, unless the swing is blocked by a wall or equipment. This applies to personnel doors as well as cabinetry.
- Preferred model for Airport door closers from holdroom doors to loading bridges: LCN Model 4314 ME-SF 24V, 0°-180° swing with no pressure.
- Thresholds should not be used in equipment room doorways.
- Power and generator room doors should open to the exterior of the building.
- Do not swing doors into corridors or tug drives. Recess the doors into alcoves. If necessary to swing doors into traffic lanes, provide protection for full swing of door so that passing traffic will not strike the door or personnel.
- Doors from back of house (BOH) shall be equipped with robust power openers or electromagnetic hold opens

MAINTAINABILITY STANDARDS

Architecture

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Forms & Document Library
Maintainability Standards
General Directions
Architecture
Janitorial
Civil/Site Work
Pavement & Grounds
Roof & Roofing
Fall Protection
Plumbing & Wastewater
HVAC & Steam
Fire Protection
Baggage Handling Systems
Baggage Ramp
PLB Maintainability Standards
Electrical
Electronic Systems
Design Intent Drawings

connected to the smoke detection system.

- Family Restroom locksets shall be BEST dormitory function 45H7T15H626RH VIB or 45H7T15H626LH VIB
- Access Hatches shall be positioned for maintenance access and shall be 24"x 24" minimum. Overhead access panels shall not exceed 20 pounds and be operable by one person.
- For roll-up and personnel doors, BEST/Stanley sole source compliance is required for locks and locksets utilizing the Airport approved keyways. Cores shall be figure 8, 7 pin. All cabinet locks must accept the BEST 7 pin SFIC core (Small Format and Interchangeable Core).
- New keyed devices shall match existing POS AVM key systems (e.g. controls, equipment panels, access doors); no new keys shall be allowed unless specifically requested and approved by the Port AVM Lock Shop Manager. Current device key list:

Key	Blank	Application
Flat blade screwdriver		Access panels which are not specified with a key
NSR251		Square D Panels
D018		Allen-Bradley pilot devices. Widely used as JAM RESET switches in conveyor system.
270	54G	Access Control Systems (ACS) electrical cabinets for: Interface Termination Box (ITB), power supply cabinets, CK721 cabinets
CAT 45		Plumbing & Piping access panels
CAT 74		Dispensers, Restroom accessories
FAB 11	CCL	Diaper, sanitary napkin coin boxes and sharps containers
B286A	Illinois Lock Co.	Sometimes interchangeable with CAT 45
508CH	Y14	Loading Bridge Cabinet Locks
WEM 2		"Flat Key" (no groove on one side) manufactured by Illinois Lock Co. for Eaton Electrical Panel
Simplex	B	Fire Alarm panels
LL805		Fire Alarm panels
E158	Illinois Lock Co.	Emergency Fuel Shut Off (EFSO)

MAINTAINABILITY STANDARDS

Architecture

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - **Architecture**
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Door coordination on drawings:

- Design drawings shall have correct room and door numbers as issued by Port of Seattle Lock Shop.
- All disciplines drawings shall be cross-checked to determine that access openings are provided, properly sized, proper clearances, and located for servicing the facility and equipment.

Wall coverings:

- Corner protectors shall be specified for corridors. Protection shall be appropriate for the traffic.
- Provide wall construction, panels, and corners to resist cart or pallet impacts.
- Interior wall finishes, corners, and wainscot materials shall be durable and low-maintenance.
- Panels and corners shall be maintainable, replaceable, and readily available in the market.
- Specify and use paint approved for POS environmental requirements and paint standards verified by the Port paint shop.
- Interior and exterior painting schedule should match the existing.
- Chair rails shall be installed in offices and conference rooms to reduce scratches, scuffs, and repainting of walls.

Floor finishes:

- Select floor finishes considering maintenance activities, moisture, soiling (abrasiveness and staining), chemicals, wheel loads, dropped objects, movable furniture, foot traffic, and traffic patterns.
- Provide details for expansion joints for roofs, floors, and walls at required intervals.

MAINTAINABILITY STANDARDS

Janitorial

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - **Janitorial**
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

General:

- Design the facility with durable surfaces for easy cleaning and avoid creation of tight spots which lend themselves to soiling or the accumulation of debris.

Custodial Areas:

- Cleaning supplies and equipment shall be stored out of customers' view when not in use.
- Design adequate clearance to access the shelving without removing the service carts from the room.
- Provide allocated service cart space of at least 34 sqft:
  Utility cart: 24"x51"
  Tilt cart: 33"x73"
  Garbage receptacles: 24" diameter
- 42" wide door with adequate room to maneuver the equipment stored in the room and functionally use the mop sink.
- New facilities shall include a front load washer and dryer, with power, water, and exhaust.
- Depending on the new facility size, space and utilities will need to be provided for powered janitorial equipment. Quantity of each determined by discussion with AVM Manager. The equipment will not be purchased by the project.

Walk behind machine burnisher (Basis is Tenant B5 or B7)

- Machine Height: 43"
- Machine Width: 24.5"
- Machine Length: 59"
- Dedicated 120VAC 20A charging circuit

Walk behind scrubber (Basis Tenant T2)

- Machine Height Maximum (Handle Lowest Position): 36.6"
- Machine Width: 18.8"
- Squeegee Width: 27.4"
- Machine Length: 44.1"
- Cold water hose bib with mop sink or drain to sewer

Wide vacuum cleaner (Basis Tenant V-WA-30)

- Machine Height: 39.75"
- Machine Width: 30.5"
- Machine Length: 36"
- No power required for storage location

Wet Vacuum (Basis Tenant V-WD-15)

- Machine Height: 37.5"
- Machine Width: 15.5"
- Machine Length: 29"
- Cold water hose bib with mop sink or drain to sewer
- No power required for storage location

MAINTAINABILITY STANDARDS

Janitorial

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - **Janitorial**
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Floor Dryer – floor fan (Basis Tenant Commercial Dryer / Air Mover)

- Height: 18.5”
- Width: 15”
- Length: 18”
- No power required for storage location

MAINTAINABILITY STANDARDS

Civil / Site Work

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - **Civil/Site Work**
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Plants:

Coordinate approved plant list from Landscape Standards and the Aviation Wildlife Department.

Drainage:

- Ensure that all areas drain away from the facility.
- Storm drainage system shall be designed to minimize maintenance and account for velocities in open ditches and swales.
- Facility draining and grading design shall provide an easily maintained surface and consider future site development and/or expansion.
- Provide curbs and gutters on streets and parking areas to contain traffic and protect pavement edges.
- Roof drains and overflow drains shall be connected to the existing drainage system.

Manholes & Hand holes:

- All hand holes and manholes located within the shoulder areas of aprons, taxiways, tow ways, runways, and overruns shall be designed to accept FAA required wheel load minimum 100Kip. Trench drains or channel drain system shall be designed to support a minimum of 200,000lb loads per AASHTO M306 or 202,320lbs per EN-1433 Load Class F.
- All handholes and manholes located outside of the locations described above shall have a minimum rating of two times the wheel load of a fully loaded Cobus or H-20, whichever is greater.
- Handholes and manholes in traffic areas shall be secured with bolts or hinged with a spring-loaded, retractable bolt to secure it closed.

MAINTAINABILITY STANDARDS

Pavement & Grounds

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - **Pavement & Grounds**
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Pavement/ground:

- Proper pavement type shall be designed for areas subject to kerosene, gasoline, or oil spills.
- Portland Cement Concrete (PCC) should be used to minimize surface deterioration. In areas subject to acid spills, an acid-resistant coating shall be applied to PCC pavement.
- Lots shall be designed to eliminate problems associated with pavement cleaning and snow removal.
- All foundations located within the AOA shall be flush with grade.
- In areas where mowing will be difficult, or where shade or other conditions do not support lawn growth, specify a low-maintenance ground cover compatible with the Interlocal Agreement and POS wildlife control requirements.
- Specify a low-maintenance ground cover compatible with the Interlocal Agreement and POS wildlife control requirements.

Joints:

- Design provides for joint spacing not greater than 20’ in concrete pavement. Match existing layout.
- Joint resealing project design provides for complete removal of old joint seal material.
- Joint width is at least 12 millimeters, regardless of joint seal type (i.e. preformed or field-poured).
- Spacing and groove types are specified for AC and PCC pavements per FAA specifications.
- Joints shall be installed to eliminate re-entrant corners.

MAINTAINABILITY STANDARDS

Roof & Roofing

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - **Roof & Roofing**
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Roof:

- Do not design for use of access hatches or forklift/crane without approval of Aviation Maintenance.
- Place no obstructions on the roof deck in the travel path of maintenance personnel. Where it is necessary to cross the travel path with obstructions, provide cross-over ramps with handrails for hand truck passage.
- Curbs for mechanical equipment and other roof penetrations shall have 18" separation from adjacent vertical surface for working clearances.
- Curbs and penetrations shall include a minimum of 8" above the insulated roofing material for boots and vertical PVC. Cap and counterflashing shall not be less than 8" above the insulated roof membrane.
- Roof-mounted equipment properly mounted and flashed. Mounting of mechanical and electrical equipment on the roof should be avoided. Rooftop equipment creates difficult flashing details, obstructs drainage paths, increases repairman traffic, accelerates corrosion and equipment weathering, and negatively affects maintainability of both the roof and equipment.
- Roof design shall have provisions to prevent ice, snow and heavy rain from sheeting off the roof.
- Roofs must be adequately protected throughout the construction process to prevent damage. A detailed roof protection plan outlining the methods and materials to be used is required to ensure the roof remains in good condition.

Roof Access:

- Where roof access stairways are impractical for small areas, use ladders with 32"clear width flare at top, round side rails, include abrasive (not sharp) rungs intermediate landings with safety gates. If roof hatch is acceptable to AVM, provide parapet or fall protection at hatch and around the work areas.
- Provide adequate vertical and clearance between roof surfaces and other objects to allow access for roof repairs and roof replacement. For small objects, the clearance would be minimum 18". For larger objects, the clearance would be minimum 48".

Service Power:

- Provide 120V 20A convenience power outlets on roof tops within 25' of service equipment.

MAINTAINABILITY STANDARDS

Fall Protection

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - **Fall Protection**
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Fall Protection:

- Fall protection is required for open-sided floors and platforms above 4'-0", WAC 296-800-26010-1 (http://wisha-training.lni.wa.gov/training/presentations/CompChartFallProtReqts.pdf). This requirement also applies to temporary installations where POS personnel will be working.
- Provide tie-offs for service of elevated equipment. Example is elevated cameras. Access shall be safe and efficient.
- Fall arrest systems shall be designed to support two concurrent users.
- Provide a third party inspection on the installations of new fall protection systems.
- Fall protection system components requiring periodic inspections shall be selected from systems which do not require qualified personnel for the inspections. Select equipment which, per the manufacturer's instructions, may be inspected by competent personnel.

MAINTAINABILITY STANDARDS

Plumbing & Wastewater

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - **Plumbing & Wastewater**
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

General Maintenance Notes:

- Before and after construction, video record underground piping to ensure that it is not blocked with construction debris or crushed.
- Video record underground piping interiors at appropriate times during construction and punch list to ensure that it is not blocked with construction debris or crushed.
- Provide spaces that will not require "confined space" entry requirements.
- POS F&I assigns equipment numbers for mechanical equipment and shall be used on all equipment matrices.
- Drawing details and data shall be provided to allow for later servicing, repair, and redevelopment.
- Provide complete comprehensive, (Isometrics are preferable) multi-level plan as-built.
- Process and Instrument Diagram (PID) as appropriate.

Maintenance Access:

- Provide structural support members and hoists over large pieces (+>50lbs) of equipment to allow removal for maintenance.
- Provide access roads and service areas around outdoor equipment for removing large internal equipment.
- Maintain clear access to valves and cleanouts. Provide appropriately sized and secure access doors in walls and hard ceilings where cleanouts are located.
- Water and sewer lines shall be located in readily accessible areas for cleaning and/or repair (not under paved roads or in heavy traffic areas).
- An adequate building opening and associated passageway shall be provided for large equipment installation and removal.
- All equipment should have adequate space (horizontal and vertical) for a work area to allow repair, adjustment, or removal. (In some places, a maintenance platform may be necessary.)

Electrical/Lighting:

- Quick-disconnect electrical plugs shall be provided on submerged equipment to allow rapid replacement during maintenance.
- Operational lighting in all spaces shall be installed.
- Provide 120V 20A convenience power outlets in mechanical chases so that all locations can be reached with a 25' cord.

Valves:

- Electronic or automatically controlled valves shall have manual override or bypass capability for maintenance or use during power outages.
- Provide sufficient valving provided to isolate minimum system sections (e.g., by floor, wing, bay) for repair or maintenance.
- Provide automatic air vents with isolation valves at all high points and heat exchangers.

MAINTAINABILITY STANDARDS

Plumbing & Wastewater

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - **Plumbing & Wastewater**
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Freeze protection:

- Provide freeze-proof hose bibs in exterior locations.
- Potential freezing problems for piping and plant components shall be considered (example: Heat trace on exposed waterbox pipe).

Equipment Schedules:

- Indicate and specify the necessary units, capacities, types, sizes, and special notes for the operators and maintainers.

Cleanouts:

- Accessible cleanouts with 24" access clearance envelope.
- Cleanouts on pressure lines shall be equipped with clamp-on caps.

Direct Digital Controls (DDC):

- Siemens Direct Digital Control (DDC) - Building Automation System is required. All control systems for heating, ventilation, air conditioning, plumbing, and PC Air systems shall be provided by the Siemens Building Technology Division, no substitutions.
- Graphics shall be created using CAD drawings, program code, and formatting to match existing DDC.

Water:

- Sampling taps with isolation shall be provided to all make-up water system for adequate testing and process control.
- Provide domestic water lines with hose bibs adjacent to equipment for cleaning (freeze-protected).
- Provide domestic water and drain connections to allow bypass of mechanical systems during maintenance.

Piping:

- Install an analog thermometer next to well-type sensors.
- All elevation drops will have an easily accessible low point drain and all elevation gains will have an easily accessible high point vent.
- Provide dielectric unions at connections of dissimilar metals.

Sanitary Waste, Vent and Storm System:

- Provide nearby space for storage of treatment chemicals.
- Provide corrosion test racks.
- Provide system capacities to calculate amount of treatment chemicals required.
- Chemical Pot Feeders: All heating, chilled and process-cooling water systems shall be provided with chemical pot feeders.
- Provide freeze-protection features specified for systems subject to freezing.
- Provide meters for make-up and blow-down water. Provide adequate ventilation and containment.

MAINTAINABILITY STANDARDS

Plumbing & Wastewater

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - **Plumbing & Wastewater**
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Sewage treatment and collection systems:

- Manholes and clean-outs shall be provided to permit maintainability.
- Manholes and tanks shall have ladders securely anchored to the wall. Ladders should be constructed of corrosion-resistant materials, and if the manhole depth is greater than 4 feet, attachment points for safety belts shall be installed. Above grade safety extensions are required on below grade ladders.
- Ladders or handrails exposed to sewage gases shall be made of Stainless Steel.
- Traps and separators shall be provided to prevent oil and grease from entering sewage system.
- Sewer lines shall have sufficient slope to maintain full flow velocity of 0.6 meter (2 feet) per second, and an average flow velocity of 0.4 meter (1.6 feet) per second.

MAINTAINABILITY STANDARDS

HVAC & Steam

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - **HVAC & Steam**
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

General Maintenance Notes:

- POS F&I assigns equipment numbers for mechanical equipment and shall be used on all equipment matrices.
- Contractor shall protect all new and existing equipment and ductwork from construction dust and debris.
- Clean all ductwork prior to placing into service.
- Seal the ends of all new ductwork to prevent contamination until placed into service.
- Special construction features shall include: double sloped drain pans, motor removal rail to cabinet door, sliding racks for prefilters, all filters upstream loaded, extended grease lines where applicable, access doors open such that pressure effects seal, access doors sized for removal of largest internal component, receptacles located inside motor sections, cooling coil drain pan extending 2 feet downstream of cooling coil, magnehelic pressure gauge at each filter section, and gaskets or boots at all factory and field cabinet penetrations (caulking not acceptable).
- Design to provide for adequate air bleeding.
- Slope piping and accessories to allow for drainage.
- Air dryer redundancy with bypass valving for minimum down time.
- Special tools required to service equipment shall be supplied with a lockable metal toolbox for security.

Maintenance Access – provide the following:

- Clearance around equipment for maintenance access shall be sized larger than the biggest piece of equipment to be serviced and/or removed at the location.
- Minimum 24” clear space for maintenance personnel.
- Openings in fan guards for checking fan speed.
- Extended grease fittings for bearings when required for access.
- Provide access doors (appropriately sized for the equipment) for cleaning coils, drain pans, and fan blades.
- Fan coils are installed to allow full opening of access doors.
- Servicing clearance available for coil removal and filter changing.
- Cleaning space specified between cooling and heating coils.
- Coils that can be drained and cleaned.
- Stacked coils shall be independently supported.
- Piping to coils should be offset for easy coil removal.
- Space provided to pull tubes or coils.
- Duct access doors specified on both sides of all dampers.

Air Handling Equipment:

- Inside lights provided for air handlers with at least 2.3 square meters (25 square feet) of coil area. Use exterior mounted switch with indicator light.
- Lights, 15 foot-candle minimum with exterior on/off switch and pilot light provided in duct chases for maintenance use.

MAINTAINABILITY STANDARDS

HVAC & Steam

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - **HVAC & Steam**
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

- 120v, 20amp service receptacle adjacent to roof mounted equipment.
- Air handling units shall be installed in equipment rooms, where possible.
- Air handlers above a suspended ceiling shall be provided with servicing platforms, extending a minimum of 0.4 meter (1.5 feet) from the edge of the equipment, and a clear space 0.9 meter (3 feet) high on the control side and other side where access is necessary.
- Trap provides a minimum difference in inlet-to-outlet elevation of 12 millimeters (1/2 inch) plus the air handling unit (AHU) total static pressure rating.
- AHU – Heating and Cooling Coils: Specifications shall indicate that coils should not exceed a specific size to allow for easy removal.
- AHU may have 2+ coils.
- Hoist and rail systems shall be provided for motor removal to facilitate safe and efficient servicing of air handling equipment.

Compressed Air Systems:

- Pneumatic tank systems specify cut-off pressure, start pressure, and associated tank volume percentages for ease of start-up and servicing.

Steam and Condensate – provide the following:

- Traps mounted 0.3 meter to 0.4 meter (1 foot to 1.5 foot) below steam coil outlet to provide condensate head on the trap.
- Minimum dirt leg of 152 millimeters (6 inches) provided before trap inlet.
- Strainers provided upstream of steam traps, control valves, meters, and pumps.
- Strainer housings equipped with drain valves.
- Isolation valves provided for redundant parallel strainers in critical systems.
- Meters are provided with bypass lines and isolation valves to allow removal of meters with no down time.
- Condensate return lines slope in direction of flow.
- Dielectric unions specified at connections of dissimilar metals.
- Steam traps located to allow maintenance.
- Drain diameter is at least 25 millimeters (1 inch).
- Piping is sloped at least 6 millimeters (0.25 inch) per 0.3 meter (12 inches) in the direction of flow.
- For steam traps: Numbered brass tag specified to be connected to the valve with a brass jack chain. (Tags will be at least 50 millimeters (2 inch) round or square with stamped black-filled lettering. In addition to numbers, tags will be lettered to indicate fluid carried through the valve [e.g., “cw”]. Numbers will be keyed to the mechanical construction drawings.)

MAINTAINABILITY STANDARDS

HVAC & Steam

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - **HVAC & Steam**
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

- Steam equalizing bypass valve installed at main steam valves.

Chillers and Cooling Equipment:

- Flanges (or unions) and isolation valves in condenser water piping are located to allow removal of piping and headers immediately in front of tubes.
- Ample space is provided to inspect and clean condenser tubes.
- Flanges or couplings and isolation valves located to allow piping removal directly in front of device (above, below, and/or to the side).
- Devices sloped to allow for drainage.

Pumps:

- Flow measurement equipment (e.g. orifice plates) specified for pumps and major heat exchange devices.
- Pressure gauges are specified on the discharge side of all major pumps.
- Air bleed-off valves provided at high points in pump discharge lines to allow removal of air locks.
- Floor trenches are provided around pumps to carry water spills to sumps.
- Storm and Sanitary Pumps: Indicate lifting eye in structure above to facilitate removal of sump pumps.

Valves:

- All ball valves shall be fully ported.
- Utilize Ball valves. (rather than gate or butterfly valves)
- Numbered brass tag specified to be connected to the valve with a brass jack chain. Tags shall be at least 50 millimeters (2 inch) round or square with stamped black-filled lettering. In addition to numbers, tags will be lettered to indicate fluid carried through the valve [e.g.: “CW”]. Numbers will be keyed to the mechanical construction drawings and include the Project Number.
- Provide clear access to valves and cleanouts.

Lift Stations:

- Dual submersible pumps with automatic alternating lead pump controls and manual override.
- Wastewater storage capacity to handle short power outages or maintenance downtime.
- Adequate provisions for heat, lighting, and freeze protection
- Explosion-proof switches for enhanced safety.
- Easy access for maintenance personnel and pump replacement.
- External switch for quick connection to a mobile emergency generator.
- Drains from possibly oil- or grease-contaminated sources have separator units.

MAINTAINABILITY STANDARDS

Fire Protection

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - **Fire Protection**
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Fire Sprinkler System:

- Exterior and interior fire protection systems (e.g., standpipes, sprinklers, hoses, accessories, extinguishers) shall be completely described and drawn, and shall conform to appropriate technical manuals and National Fire Protection Agency (NFPA) codes.
- Fire alarm is coordinated with electrical central alarm system.
- Provide sprinkler system piping with free draining to riser drain valves.
- Electrical and mechanical drawings shall show location of fire alarm system appurtenances and automatic fire doors, fire and/or smoke dampers, ceiling dampers, and similar means of fire protection for air duct systems.
- Fire extinguishing systems, smoke evacuation systems, and related systems and equipment shall be designed so operation does not depend upon high maintenance. The design objective is a highly reliable, easily maintainable, and low Total Cost of Ownership for the system.
- Systems shall be compatible with and match existing Airport systems.

MAINTAINABILITY STANDARDS

Baggage Handling Systems

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - **Baggage Handling Systems**
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Definition:

Baggage Handling System is defined as both an area, referred to as BHS Ramp, and as the Baggage Handling System itself (BHS) comprised of (conveyors, service equipment, cat walks, beltways, etc.) all things related to the movement of bags.

General Maintenance Notes:

- The baggage handling system shall be designed so that no scheduled repair/maintenance task requires more than two (2) hours of full-system shutdown, three (3) hours of reduced operation, or any combination of both in excess of three (3) hours.
- All components and sub-systems shall be designed for quick replacement as field installed. All components and assemblies shall be easily disconnected and removed from the equipment without necessity for extensive disassembly.
- Minimize motor and gearbox weights. When larger (greater than 5hp), heavier motors are necessary, provide space for additional crew members to service the equipment and the capability to hoist the equipment to/from the service location.
- Only solid sections should be enclosed inside of walls. No bearings, rollers, or drives inside of walls unless a minimum of 36” clearance available on both sides.

Construction Access:

- Do not work over BHS without securing the conveyor by Lock-Out Tag Out.
- During construction over existing systems provide a solid deck with toe boards over BHS in work areas.

Clearance:

- Conveyor and catwalk is a single unit and must have 80” head clearance, which encompasses a minimum 48” width with 72” clearance for all belts. Safety tape and provide padding for items under 80”.
- A minimum of 48” width with 80” clearance for service catwalks.
- Cross-over conveyor must have 80” clearance above top step.
- When no conveyor/catwalk assembly is installed, a personnel lift is required to work on conveyor and power equipment mounted in overhead areas above 6’. Room for the personnel lift to penetrate the plane of the BHS conveyor is needed; a clear footprint and air space to drive personnel lift on the floor below is needed.

MAINTAINABILITY STANDARDS

Baggage Handling Systems

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - **Baggage Handling Systems**
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Maintenance Access:

- All service points, bearings, shafts, motors, etc. must be accessible and unobstructed with a minimum of 12" clearance for maintenance and removal.
- Walkways should also be made wide enough to access Auto Tag reader (ATR) for service and maintenance.

Sideguards:

- Sideguard height shall be 12" or minimum allowed by regulations.
- Do not permanently attach anything to removable sideguards.

Safety:

- Provide start-up warning with strobe that is accessible and visible. Lenses shall be clear and easily visible. All audible devices shall be properly sized for area.
- The alarm silence shall be readily accessible and for qualified personnel only.
- Conveyor beds are considered elevated walkways and shall meet regulations.
- Provide safety cables per WAC 296. Where installed - Make one end removable to allow for access by maintenance personnel.
- Keyed HOAs are required for areas accessible to non-POS maintenance personnel.
- Safety tape and provide padding for items under 80".
- Emergency Stop Push-Buttons (E-Stops) shall be lockable and located in easily reached areas; consult with conveyor shop for location. E-stop zones shall be clearly identified on all equipment in the field.

Equipment:

- All equipment shall be clearly labeled for system requirements.
- All motor assemblies shall include pick points where rigging would be necessary for removal.

Belts:

- Stainless steel lacing for belt splices. No sewing for belts. For durability and long life for belts. Rip stop fibers shall be integrated into belt material.
- A minimum 12" clearance required all around the belt for long term maintainability and ease of access to pull bearing.
- At Merge conveyors, laced belt or interrupted belt; no continuous belts allowed.
- Belt Tracking: No end roll tracking, always install snub rollers.

MAINTAINABILITY STANDARDS

Baggage Handling Systems

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - **Baggage Handling Systems**
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Motor:

- Minimum 3' long cord with quick (cord plug) disconnects.
- Maximum 5 HP motor size.
- Motor Overloads: Provide access for safe replacement of overloads. Be sure overloads are properly sized and sizing sheet is posted in cabinet.
- Motor Control Panel (MCP): Make sure control station is easily accessible in accordance to the belts it services for ease of securing belts, resetting jams, and motor changes. Keep drawings current throughout the work. Provide As-Built drawings to ensure ease of replacement.

Control Devices:

- Mounted on the accessible side of conveyor so that it can be easily reached for clearing jams and performing maintenance. Consult with Conveyer Shop for placement.

Electrical/Lighting:

- Conduit runs shall not obstruct head clearance or access points.
- Install quick disconnects on motors, VFD's, photo eyes, tachometers, etc.
- Provide a 20amp, 120v circuit sized to prevent nuisance breaker trips.
- Provide 120V 20A utility power outlets throughout all systems reachable with a 25' extension cord.
- Do not install conduit under floor-mounted conveyor.
- Do not block access to light fixtures or illumination from light fixtures.
- Provide a minimum of 10 foot candles at the conveyor bed and all service locations.
- Photocell Functions: Easily accessible for cleaning, adjustment, replacement and quick disconnect.

Rolls and shafts:

- All rolls must be "taper-lock" attached to shaft.
- Taper lock must be removable (not welded).
- Shafts must be chamfered and center drilled (min. 1/8") at both ends.

MAINTAINABILITY STANDARDS

Baggage Ramp

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - **Baggage Ramp**
  - PLB Maintainability Standards
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Attachments:

- With the exception of items directly related to the specific conveyor line, do not support, suspend, or attach conduit, piping, or other infrastructure or equipment to the Baggage Handling Systems (BHS) or the BHS support system.

Construction Access:

- Do not work over BHS without securing the conveyor by Lock-Out Tag Out. Alternatively, provide a solid deck with toe boards over BHS in the work area.

Clearance:

- The Contractor shall recognize and make every effort to preserve the 3'-0" baggage and 7'-6" tug clearance heights. In some cases, low profile conveyor, catwalk, and support equipment will need to be utilized in order to avoid infringement into the right of way clearance areas.
- Clearance deviations require prior approval from Aviation Maintenance.

Flooring

- Tug pathway flooring into/out of the bag well shall be slip resistant.

MAINTAINABILITY STANDARDS

PLB Maintainability Standards

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - **PLB Maintainability Standards**
  - Electrical
  - Electronic Systems
- Design Intent Drawings

General Maintenance Notes:

- These maintainability guidelines apply to new bridges and existing bridges throughout STIA.
- Variations from these practices for the rehabilitation of existing bridges shall be authorized by F&I and AVM.
- All attachment points integral to the initial design and provisions for future accessories (PC Air, 400Hrz, bag chute) shall be considered to avoid welding attachment points in the field.
- Provide permanent communications equipment between control stations and areas requiring routine maintenance (machinery drive areas, power & control panel locations, and ACC).

Maintenance Access:

- Provide a service area not less than 30-inches wide around system drive components.
- Unobstructed access to all zerk fittings, limit switches, and other service points.
- All maintenance access points accessible even after PC Air and the 400Htz are installed.
- 3' of access in a 3D envelope from widest part of column extending vertically into infinity.
- Must be able to reach all limit switches and grease fitting safely from a ladder or the ground.
- Full platform around vertical drive on top of the cab tunnel.
- Platform must be removable in the event the column needs to be replaced.

Add-ons or accessories:

- Design criteria shall include provisions the 400 Hz power attachments.
- Equipment location will not block access to fittings and switches.
- Mounting of the air handling unit can only be placed on the "CAB" tunnel of bridge assembly. Interference of the vertical drives will not be acceptable.
- Provide mounting locations for PC Air lines that do not block maintenance access.
- Design access to service points around the future installation of PC Air.
- Bag Chute
- Location does not obstruct access to maintenance components.
- Considerations for heavy wheelchair load/unload.

MAINTAINABILITY STANDARDS

PLB Maintainability Standards

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - **PLB Maintainability Standards**
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Diagnostic Reference Guide for Maintenance:

- Include diagnostic instrumentation and system fault displays for mechanical and electrical systems. Malfunction information must be presented on a control system monitor located in the bridge control house.
- Data must be automatically recorded and include:
- System descriptive information, such as ladder diagrams and wiring data, must be available on the system memory to enable corrective actions on system malfunctions and to identify areas requiring preventative maintenance.
- Alarm history.

Drive System Bushings:

- All bearing housings and bushings in open machinery drive and lock systems must utilize split-bearing housings and bushings and must be individually removable and replaceable without affecting adjacent assemblies

Lubrication Provisions:

- Bridge system components requiring lubrication must be accessible without use of temporary ladders or platforms.
- Provide permanent walkways and stairwells to permit free access to regions requiring lubrication. Lubrication fittings must be visible, clearly marked, and easily reached by personnel.
- Designs for automatic lubrication systems must provide for storage of not less than three months' supply of lubricant without refilling.
- Refilling locations must be readily accessible to allow for refilling within a period of 15 minutes.

Machinery Drive Systems:

- Design machinery drive assemblies so that components are individually removable from the drive system without removal of other major components of the drive system.
- For example, a speed-reducer assembly can be removed by breaking flexible couplings at the power input and output ends of the speed-reducer.
- Use Environmentally "Green" drive systems. Do not use hydraulic.
- Use solid tires only.

Service Lighting and Receptacles:

- Provide a 120V-20Amp service receptacle above and below Cab for maintenance use.
- Provide supplementary, switchable task lighting under tunnel section and under Cab.

MAINTAINABILITY STANDARDS

PLB Maintainability Standards

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - **PLB Maintainability Standards**
  - Electrical
  - Electronic Systems
- Design Intent Drawings

Trunnions:

- Specify Trunnions bushings and housings of a split configuration. The bearing cap and upper-half bushing (if an upper-half bushing is required) must be removable without span jacking or removal of other components.

Tunnel Sections of Bridge:

- Use slip resistant hardened flooring.
- Provide access to tunnel rollers for servicing. Do not block access panels.
- Secure points to hold transition ramps when servicing underneath.
- No components should interfere with bridge travel or maintenance access.
- Install roof access ladders.

Weatherproofing:

- New and rehabilitated bridge designs must incorporate details to help water drainage and use non-galvanized components.
- Protective coatings shall be resistant to wet Seattle weather conditions.
- Protective coatings shall use an approved substance accessible to Maintenance.

Working Conditions for Improved Maintainability:

- When specified by the Department, for either new or rehabilitated bridge design, use enclosed machinery and electrical equipment areas.
- Install “permanent” non-slip surface to ladder rungs (not a tape-on type).
- Include lock/out and E-Stop options for safety.
- Roof designed to limit standing water.
- Avoid details that trap dirt and water; provide drain holes, partial enclosures, sloped floors, etc., to minimize trapping of water and snow accumulation.
- Provide exterior roof access for Vertical Drive System with handrails around roof perimeter.

MAINTAINABILITY STANDARDS

Electrical

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - **Electrical**
  - Electronic Systems
- Design Intent Drawings

General – provide the following:

- Full compliance with NEC, WAC, RCW. Washington Labor & Industries electrical permit is required to be obtained by the contractor.
- POS Electrical shop and F&I will assign equipment numbers for electrical equipment and shall be used on all electrical equipment matrices.
- On electrical drawings, if home run is new, show the full pathway from the new work to the panel.
- All electrical assemblies shall be UL listed.
- GFCIs shall be self-testing.
- Provide arc flash studies during design. Do not exceed 40 calories per square centimeter.
- Circuit breakers used instead of fuses. Use of circuit breakers increases Reliability and Maintainability (R&M).
- Dual feed/power to facility required to provide increased reliability (redundancy). Feed from both ends keeping tie breakers open.
- Maintenance space provided around generators, switchgear, and auxiliary equipment.
- Provide for adequate space for two workers on all gear rated above 208V.
- Where transformers or other heavy equipment is stacked, provide overhead removal system such as a trolley/hoist. See Equipment Removal and Replacement on page 5.
- Provide a list of recommended spare parts with part numbers, and note any critical or long lead items.
- Electrical equipment rooms, vaults, and substations, shall be ventilated to not exceed a maximum temperature of 32°C (90°F).

Medium voltage cables:

- Underground primary cables are cross-linked polyethylene (XLPE) or ethylene propylene rubber (EPR) with 133% insulation level with outer jacket. Outer jacket is only necessary to protect concentric neutral from corrosion.
- Underground cable splices employ maintenance-free methods and materials (e.g., heat shrink, resin casting).
- Megger test:
- Electrical acceptance testing on complex facilities specified to be accomplished in accordance with NETA ATS 1999.
- Use Port-approved form for documentation which becomes part of the project records.

Grounding and Bonding for electrical systems:

- Grounding systems in compliance with NEC.
- Compression or blast-on connections specified. (Split-bolt connections should not be specified as the quality of installation is inconsistent.)
- Allow for reasonable growth capacity.

MAINTAINABILITY STANDARDS

Electrical

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - **Electrical**
  - Electronic Systems
- Design Intent Drawings

Underground ducts and raceways for electrical systems:

- All hand holes and manholes within apron, taxiway, tow way, runway, and overrun shoulder areas designed for a minimum of 100-kip wheel load or FAA requirements, whichever is greater.
- Sump holes (sealed sump holes in high-water areas) and pulling irons opposite all duct entrances, plus one on center of floor. Consider reinforcing duct entrances to reduce shearing. Specify sealed duct ends to prevent rodent intrusion.
- Metallic Line markers installed above all buried runs used to locate duct routes and turns.
- Cable warning tapes required above all underground cables.

Power Systems Studies:

- Computerized short circuit analysis and coordination study. Study should include line-to-ground faults and coordinate the largest transformer on the feeder.
- Breaker and fuse interrupter ratings are adequate according to findings of the short circuit analysis.
- Electrical acceptance testing on facilities specified to be accomplished in accordance with NETA ATS 1999.
- Breakers are coordinated and higher than minimum AIC ratings utilized.
- Underground cable capacity designed for future growth. Cable size should take into account any de-rating requirements, such as multi- cable ducts.
- Adequate bypass capability so breakers can be serviced (redundancy).
- Electrical review team will review findings for acceptance.

Preferred Substation Locations:

- Located away from perimeter fences and heavy-traffic roads.
- Access roads able to accommodate line maintenance vehicles.

Large Underground Vault:

- Designed with devices and equipment to facilitate removal and replacement of equipment, such as an overhead crane.
- Heat loading considered. Vault may require air conditioning.
- Adequate work space and storage area.
- Maintenance space provided around generators, switchgear, and auxiliary equipment.

Secondary Unit Substations & Switchgear:

- Surge lightning and transient protection installed on service entrances, solid-state uninterrupted power supplies, and isolation transformers.
- Adequate workspace around all equipment for two people.
- Breaker and fuse interrupter ratings are adequate according to findings of the short circuit analysis.
- Dual feed/power to facility required to provide increased reliability (redundancy). Feed from both ends keeping tie breakers open.

MAINTAINABILITY STANDARDS

Electrical

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
Resources
Forms & Document Library
Maintainability Standards
General Directions
Architecture
Janitorial
Civil/Site Work
Pavement & Grounds
Roof & Roofing
Fall Protection
Plumbing & Wastewater
HVAC & Steam
Fire Protection
Baggage Handling Systems
Baggage Ramp
PLB Maintainability Standards
Electrical
Electronic Systems
Design Intent Drawings

- Circuit breakers used instead of fuses.
- Adequate instrumentation.
- No Underground switches.
- Two sets of multi-ratio current transformers (one set each for instruments and relays).
- Low-maintenance breakers (e.g., vacuum, SF6, air).
- Any special maintenance tools required for service to be part of substation supplied equipment.
- Permanent schematics with mimic bus specified to be installed on equipment.

Medium Voltage Switchgear and Transformers:

- Breaker and fuse interrupter ratings are adequate according to findings of the short circuit analysis.
- Circuit breakers used instead of fuses.
- Spare stub-up/conduit (with cap) provided at pad-mounted transformers.
- Adequate workspace around distribution equipment pad-mounted transformer, switches, substation equipment. Sufficient working space for two people.
- Switchgear must have: draw out breakers, lifting brackets for breaker maintenance, easy access for maintenance around the equipment, cable trenches, emergency lighting, and adequate instrumentation.
- Distribution transformers have taps with external changers.
- Pad-mounted transformers have traffic barriers in high-traffic areas e.g., highly visible painted concrete posts.
- External transformers must have: an external tap changer, a pressure- relief valve with alarm contacts, a thermal relay with alarm contacts, a magnetic oil gauge, an oil drain and sample valve, undercoating, and must produce a test report.
- T-stat/alarm well with silencing relays, pushbutton, and indicating light, in weatherproof enclosure.
- Standard transformers (not self-protecting transformers) specified.
- Automatic transfer switch has bypass capability for easy maintenance.
- Auto-start equipment of backup generators capable of being locked out during maintenance.

Low Voltage Switchgear and Transformer:

- Breaker and fuse interrupter ratings are adequate according to findings of the short circuit analysis.
- Circuit breakers used instead of fuses.
- Spare stub-up/conduit (with cap) provided at pad-mounted transformers.
- Adequate workspace around distribution equipment pad-mounted transformer, switches, substation equipment. Sufficient working space for two people.

MAINTAINABILITY STANDARDS

Electrical

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - **Electrical**
  - Electronic Systems
- Design Intent Drawings

- Switchgear must have: draw out breakers, lifting brackets for breaker maintenance, easy access for maintenance around the equipment, cable trenches, emergency lighting, and adequate instrumentation.
- Distribution transformers have taps with external changers.
- Pad-mounted transformers have traffic barriers in high-traffic areas e.g., highly visible painted concrete posts.
- External transformers must have: an external tap changer, a pressure- relief valve with alarm contacts, a thermal relay with alarm contacts, a magnetic oil gauge, an oil drain and sample valve, undercoating, and must produce a test report.
- T-stat/alarm well with silencing relays, pushbutton, and indicating light, in weatherproof enclosure.
- Standard transformers (not self-protecting transformers) specified.
- Automatic transfer switch has bypass capability for easy maintenance.
- Auto-start equipment of backup generators capable of being locked out during maintenance.

Equipment Keys:

- Provide locks that match existing POS keys. See key list under Architecture.
- In the event the system is not automatic, provide Kirk keys on power centers.

Switchboards:

- Breaker and fuse interrupter ratings are adequate according to findings of the short circuit analysis.
- Circuit breakers used instead of fuses.
- Neutral sizes shall not be reduced, even though allowed by NEC.
- Suggest 200% neutral in locations where harmonics are present, and where supplying electronic/computer & server loads.
- Adequate workspace around equipment. Sufficient working space for two people.

Panelboards:

- Breaker and fuse interrupter ratings are adequate according to findings of the short circuit analysis.
- Circuit breakers used instead of fuses.
- Neutral sizes shall not be reduced, even though allowed by NEC.
- Suggest 200% neutral in locations where harmonics are present and where supplying electronic/computer & server loads.
- Adequate workspace around equipment. Sufficient working space for two people.

MAINTAINABILITY STANDARDS

Electrical

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - **Electrical**
  - Electronic Systems
- Design Intent Drawings

Motor control centers:

- Breaker and fuse interrupter ratings are adequate according to findings of the short circuit analysis.
- Circuit breakers used instead of fuses.
- Motor control centers have draw-out breakers, where applicable.
- Motor size and application warrant use of under voltage motor protection.
- Motor control center has adequate workspace to ensure maintainability. Sufficient working space for two people.
- National Electrical Manufacturer's Association (NEMA) standard voltages and frame size specified for motors.

Motor controllers:

- Correct overloads specified for motors. Overloads should be no larger than specified by the NEC.
- Breaker and fuse interrupter ratings are adequate according to findings of the short circuit analysis.
- Circuit breakers used instead of fuses.
- Adequate workspace around equipment. Sufficient working space for two people.
- National Electrical Manufacturer's Association (NEMA) standard voltages and frame size specified for motors.

Emergency Generators:

- Emergency generators are for Life Safety. Do not add loads that are not Life Safety.
- Emergency systems require periodic testing. If other loads, like computers, are on the emergency generators, they will lose power during the regular periodic generator testing.
- Adequate workspace around equipment. Sufficient working space for two people.
- Solid-state exciter (radio frequency interference [RFI] free) and voltage regulator specified.
- Generator compatible with solid-state uninterrupted power supply [SSUPS] installation (e.g., harmonics). Harmonics from SSUPS may interfere with generator controls. Generator must be sized to handle SSUPS in rush current.
- Generators smaller than 750 kW can be skid-mounted.
- Prime power generators grounded in accordance with IEEE Standard142, IEEE Recommended Practice for Grounding of Industrial and Commercial Power Systems, and the National Electrical Code.
- Computerized short circuit analysis and coordination study provided for prime power plants.
- Backup generators can be refueled and oil checked without shutdown.

MAINTAINABILITY STANDARDS

Electrical

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - **Electrical**
  - Electronic Systems
- Design Intent Drawings

- Backup generators have bypass capability with cannon plug-type receptacle for quick connection of mobile electric power (MEP) unit in case of failure.
- Auto-start equipment of backup generators capable of being locked out during maintenance.
- Backup generator prime mover shutdown limited to low oil pressure, high temperature, and over speed. Alarm will be connected to status panel, but consider remote alarm to central status location, such as the energy management and control system [EMCS].
- Alternator has maintenance-free, sealed, 50,000-hour bearing. Consider multitap leads.
- Class C generator regulator has automatic and manual capability, and is easily accessible for maintenance or repair.
- Louvers are thermostatically controlled.
- Battery chargers are float-charge type, adjustable down to 0.1 ampere, and batteries are sealed, maintenance-free type.
- Standby units that cannot tolerate reapplying power without cycling have dropout/lockout relays.
- Exhaust outlets located to avoid intakes of adjacent buildings.
- Audible alarms provided to alert operators of abnormal conditions.
- Voltage generated at distribution level, when possible.
- Control unit soundproofed for larger multi-unit plant.
- Auxiliary fuel tanks placed below grade for emergency generators located within the airfield environment.

Rotary 400 HZ converters:

- Adequate workspace around equipment. Sufficient working space for two people.
- Solid-state exciter (radio frequency interference [RFI] free) and voltage regulator specified.
- Generator compatible with solid-state uninterruptible power supply [SSUPS] installation (e.g., harmonics). Harmonics from SSUPS may interfere with generator controls. Generator must be sized to handle SSUPS in rush current.

Surge Protection For Low-Voltage Electrical Power Circuits:

- Surge lightning and transient protection installed on service entrances, solid-state uninterruptible power supplies, and isolation transformers.

Interior Lighting:

- If emergency lighting is not able to be installed on an emergency circuit, use maintenance-free gel cell-type batteries in emergency lights.
- Vapor proof fixtures provided in rooms containing moisture (e.g., dishwashing rooms).
- Explosion-proof fixtures or systems provided in areas subject to flammable vapors. Hazardous areas are refueler vehicle maintenance bays, paint rooms, and aircraft fuel system docks.

MAINTAINABILITY STANDARDS

Electrical

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - **Electrical**
  - Electronic Systems
- Design Intent Drawings

Egress Lighting:

- Avoid emergency light fixtures that require battery backup. Coordinate the loads, and install on emergency circuits where possible.

Exterior Lighting:

- For exterior lighting, such as on a bridge, provide maintenance access from the interior, or by lowerable assembly or pivoting light pole for access from the roof which has a parapet or from a 65' bucket truck.
- All elevated visual navigational aids incorporate frangible, low- impact resistant, or semi-frangible design principles in accordance with FAA and POS standards.

Corrosion Prevention:

- Galvanized Materials:
- These items apply to all sections below.
- Galvanized electrical equipment installed exposed outdoors shall be painted with a minimum 3 mil coating of paint to prevent zinc runoff to the storm water system.
- Paint application by manufacturer is preferred to field painting for coverage and quality.
- Cathodic Protection: Metallic construction members, either buried or submerged in an electrolyte, have been designed for cathodic protection.

MAINTAINABILITY STANDARDS

Electronic Systems (Telecommunications and Airport Systems)

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - **Electronic Systems**
- Design Intent Drawings

Voice and Data Systems – provide the following:

- Radio Systems are designed to work during power outages because they are life safety systems. Think holistic security for Radio Systems. All components shall reside in safe & secure locations.
- Provide sufficient room for gear to be installed with consideration to added space necessary to extend gear from drawers on their slides and allow technician to align, repair, and troubleshoot.
- Plans shall include consideration for heat load on the HVAC.
- Provide 120V 20A electrical outlets for test and monitoring equipment.
- Sites and equipment rooms need Telephone installations
- Equipment is heavy and bulky and requires racks for installation.
- Antennae need to be located in secure environments where tampering or vandalism is not likely.
- Safety systems shall be provided to provide workers safe access and working conditions so they can be securely tied off as well as instruments and antennae that are under repair/test or removal/replacement. They are heavy, bulky, and if the wind is blowing, can make for dangerous maneuvering.
- Power shall be available for test and/or calibration equipment or battery backup systems as necessary.
- Consideration for a system design that allows for partial de-energization of system that allows for needed Trouble shooting and testing without a total disruption.
- Radio systems are regarded as a “Life Safety” System. Radio coverage is required throughout the facility.
- Room Lighting: bright enough for techs to see with adequate amount on backup power to ensure emergency needs are met during power outages. Minimum of 20 Foot-candles.

Public Address and Paging:

- Shall be intelligible in low and high noise conditions and take into account the hearing impaired.

WiFi and Cell Phone Antennas and Repeaters:

- Most communication rooms have only one entry.
- All communication rooms should have adequate UPS capability to backup systems during voltage transients or power outages for up to 4 hours.
- These are critical systems and shall have redundancy built in.
- Locate support equipment in communication rooms.
- Provide adequate cooling protect equipment.

MAINTAINABILITY STANDARDS

Electronic Systems (Telecommunications and Airport Systems)

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - **Electronic Systems**
- Design Intent Drawings

Common Use Passenger Processing Systems:

- Access to cables and peripherals should be as easy as loading paper.
- Placement of Common Use equipment on pullout drawers or trays with proper cable management systems speeds response time for techs to return to service gate stations.
- Mill work (cabinetry) needs to be of Common Standard for architecture of equipment layout.
- Paper stock has to feed from the bottom for machines to work.
- Millwork should be lockable so Airline personnel have no way to tamper with systems. Some have tried to plug their cell phones into a USB and hope it charges. This will only cause problems.

CUSS:

- Weatherproofing for exterior applications. Weather-rated equipment. Consider location or use of awnings for protection.
- Power and Data accessibility. Avoid wireless systems until product reliability is proven.
- Support enclosures should be weatherproof or resistant or under shelter or awning and not affixed to overhead location in a lane of people traffic or vehicles.
- Choose passenger paths that avoid congestion areas. Determine a clear path for the kiosk location which meets accessibility and traffic flow and don't forget ADA standards to provide kiosks at lower heights to assist people in wheelchairs.
- Provide signage that is specific to the capability of the machine and the airlines it serves. Don't put advertisement in front of passenger faces when they need to be focused on the task of checking in.
- Controlled environments are highly preferred.
- Provide enough 120V 20A electrical outlets so we don't have to use power strips.
- Data outlets separate ICT phone from CUSE.
  Design and install equipment to prevent the accumulation of small papers, trash, and items that may catch fire in warm equipment.
- Provide enough 120V 20A electrical outlets. Technicians visiting site need power for their tools.
- Avoid locating equipment in areas where cell phone usage is poor. A bad signal may delay POS Electronic Technician (ET) in working with tech support to correct an issue.

Video Surveillance:

- Bigger cameras are not always better. Sometimes too big makes for an enticing target for vandalism/tampering.
- Some products are designed to undergo abuse and may be a better choice than cheaper unit with no chance of survival.
- Location in a stairwell may inhibit maintenance should a sufficiently tall ladder may be not usable. And if installed, tie-offs for securing fall protection harness need to be present to protect against falls.

MAINTAINABILITY STANDARDS

Electronic Systems (Telecommunications and Airport Systems)

Design Vision
Design Guidelines
Tenant Spaces
Architectural Standards
Appendix
- Resources
- Forms & Document Library
- **Maintainability Standards**
  - General Directions
  - Architecture
  - Janitorial
  - Civil/Site Work
  - Pavement & Grounds
  - Roof & Roofing
  - Fall Protection
  - Plumbing & Wastewater
  - HVAC & Steam
  - Fire Protection
  - Baggage Handling Systems
  - Baggage Ramp
  - PLB Maintainability Standards
  - Electrical
  - **Electronic Systems**
- Design Intent Drawings

- Installing a camera along a busy road with no place to park a maintenance vehicle or without means to use a snorkel or scissors lift is useless.
- Although camera may be well installed and easily accessible, the design should ensure that any support enclosures or accessories are just as easily accessible. Some present airport designs have support electronics (fiber optic controls) in a ceiling or within a cavity and they are not easily accessible.
- Much of the present airport cameras use 30 year old Coaxial cable that is way below standard for today's cameras. New camera installations require big picture consideration of camera installation. I.e. camera, mounts, cable, power, termination cabinets, transmission systems. Complicated and with many areas where one mistake can cripple the end result.

Security Access Controls:

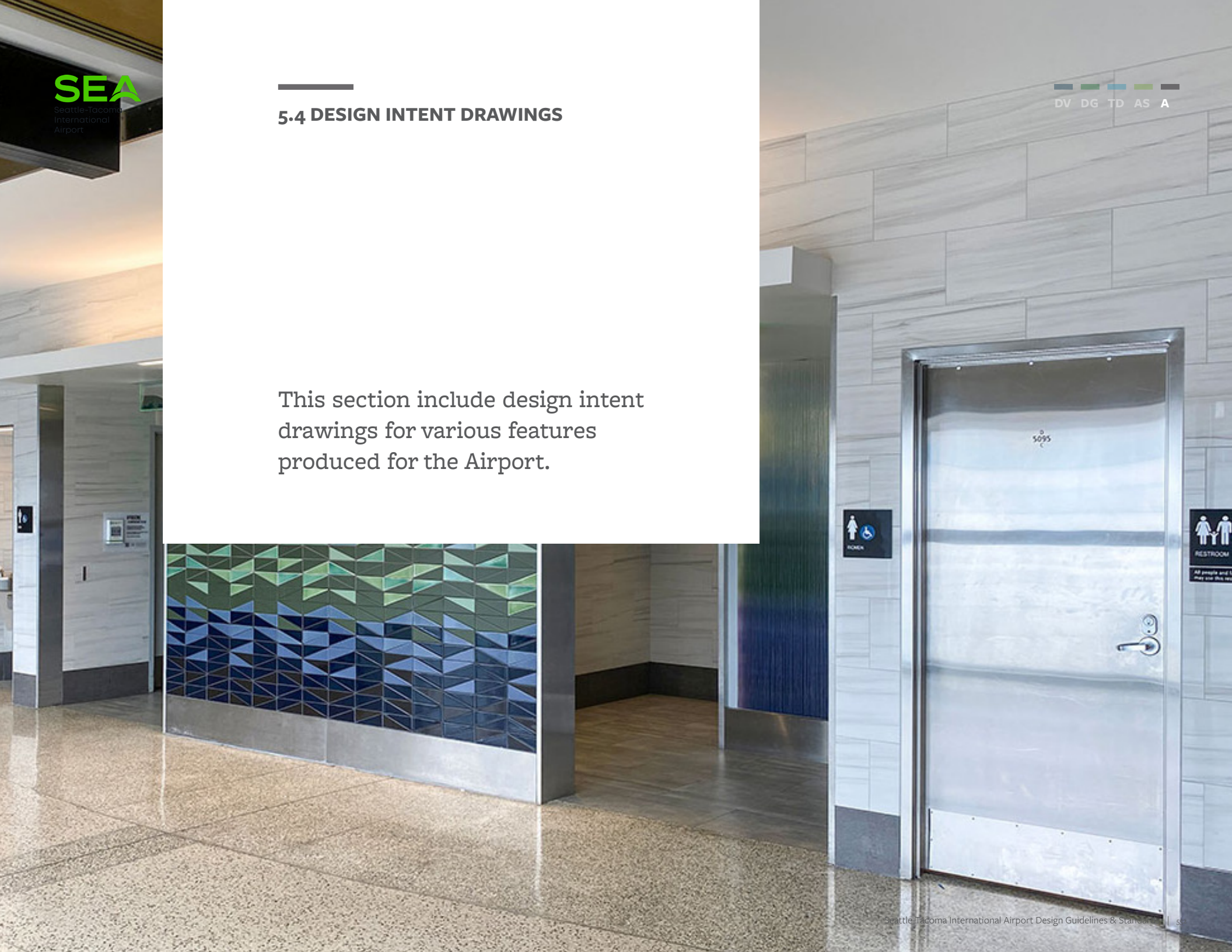
- Access Control enclosures should be near desired door(s). Need to be protected from public tampering. Many cases choosing a high location over door is best but mindful not to be in high traffic areas.
- Protect from harsh environmental elements, such as wind, rain, snow, or even blazing sunshine. Card readers need weather protection and the poles that they are attached to need to be clear of traffic that may damage them. Tugs come to mind.
- Many CCTV cameras outlast their production run and are obsolete when failed. Requires possibility of replacement of large group of cameras to maintain a cohesive look/ appearance or technical limitation.
- CCTV cameras come in many shapes and sizes and with a variety of housings to efficiently work in harsh environments.
- Some are very Tamper-resistant and need to be considered when public have opportunity to tamper with performance of camera.
- Regarding repairs, in many cases a camera or a lens component may be a "throw away" and not worthy of repair.
- Install cameras in accessible locations for maintenance and servicing.

Exit Lane Breach Detection:

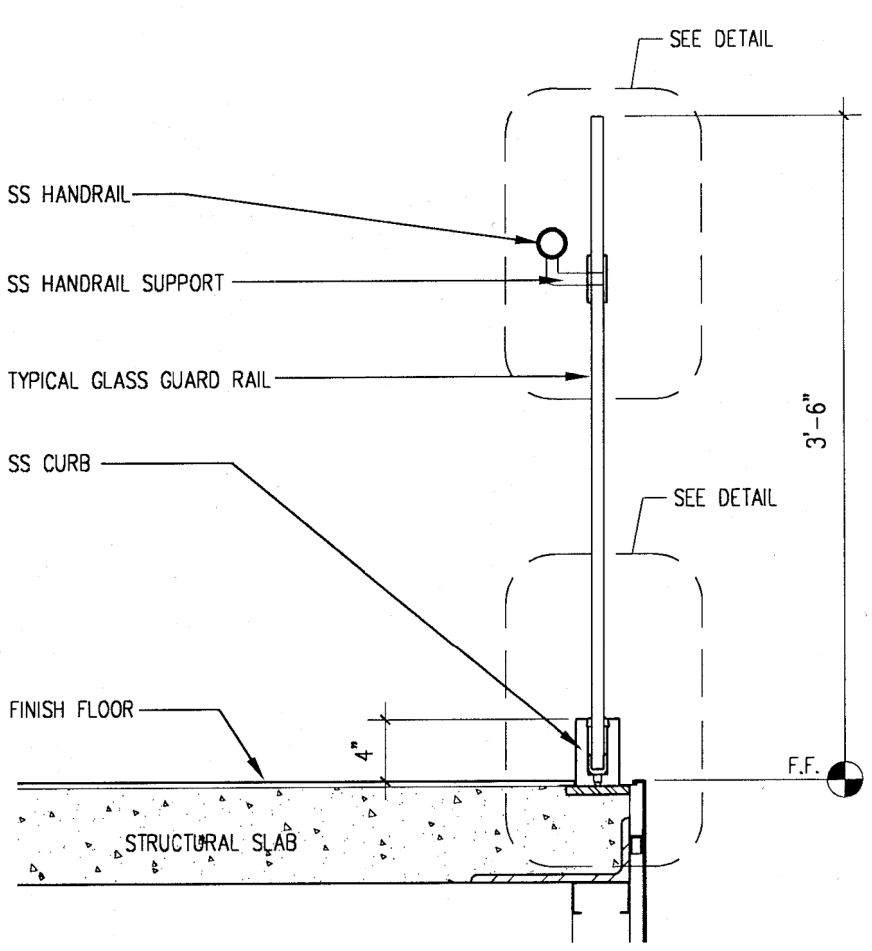
- Need excellent location for system to insure techs have ease of access to multiple sensors, motors, and drive mechanisms.
- If we are considering the "Flip Flow" product, much consideration should be made to understand product reliability before installation.
- Parts cost and ease of technical repairs or the cost of doing business with Parent Company or subsidiary for a Maintenance Coverage with understood response times.

5.4 DESIGN INTENT DRAWINGS

This section include design intent drawings for various features produced for the Airport.



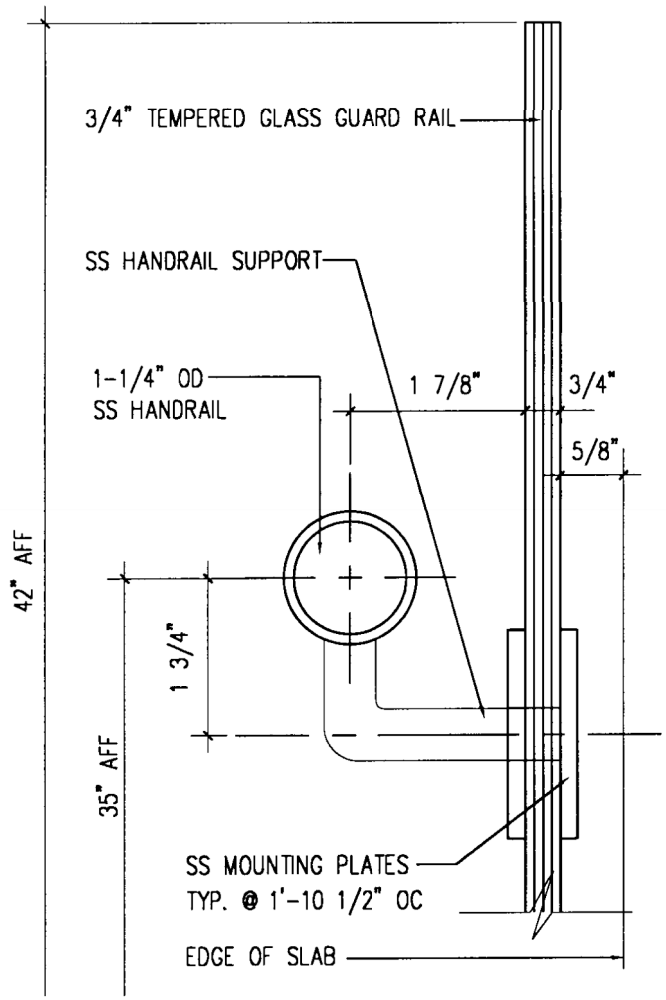
CSI Master Specification Division: 05520



TYPICAL GUARD RAIL SECTION

NTS; For Reference Only

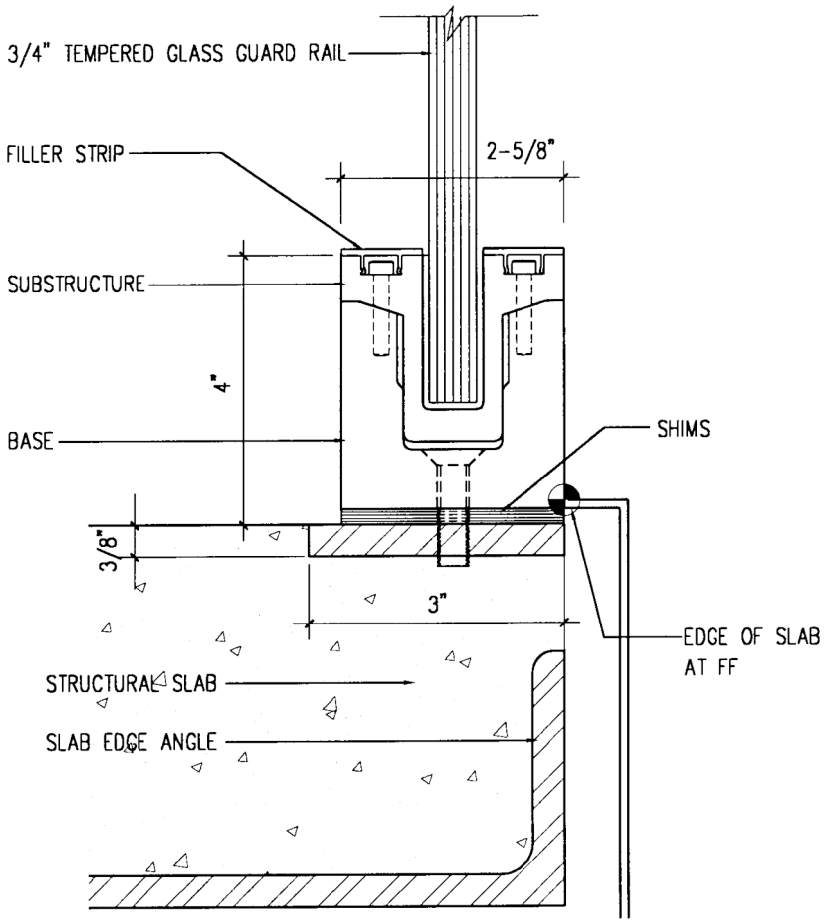
CSI Master Specification Division: 05520



GLASS GUARD RAIL TYPICAL DETAIL @ TOP

NTS; For Reference Only

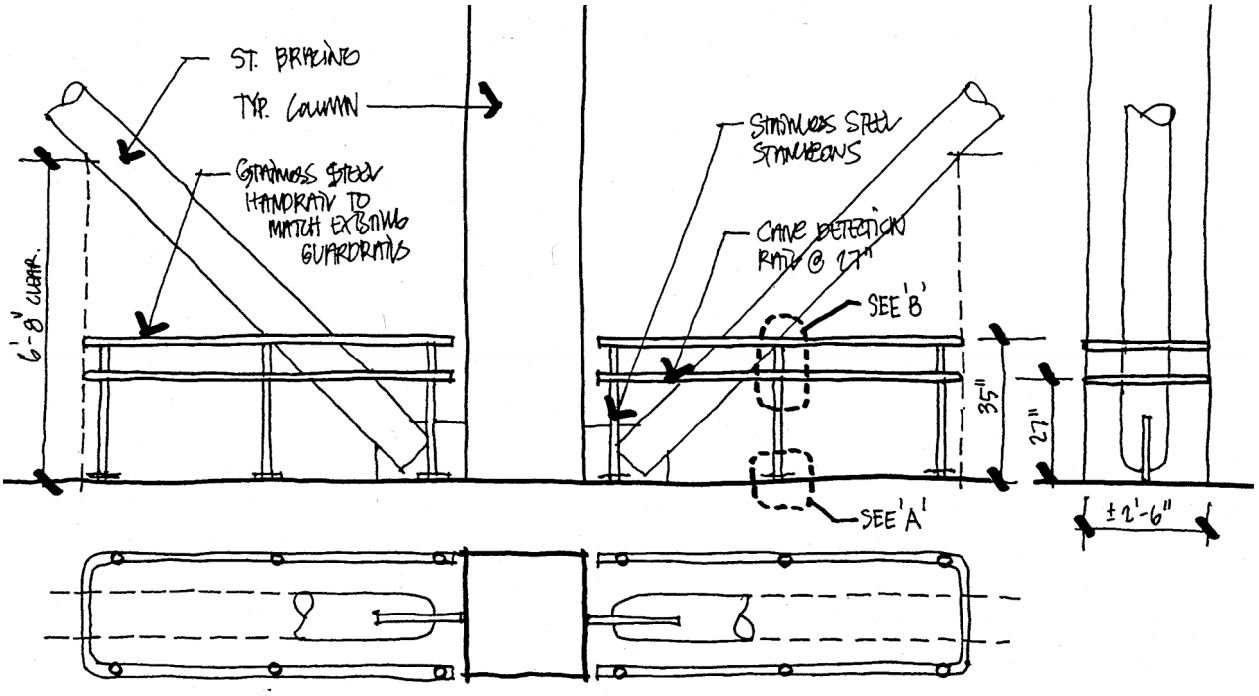
CSI Master Specification Division: 05520



GLASS GUARD RAIL TYPICAL DETAIL @ BASE

NTS; For Reference Only

CSI Master Specification Division: 05520



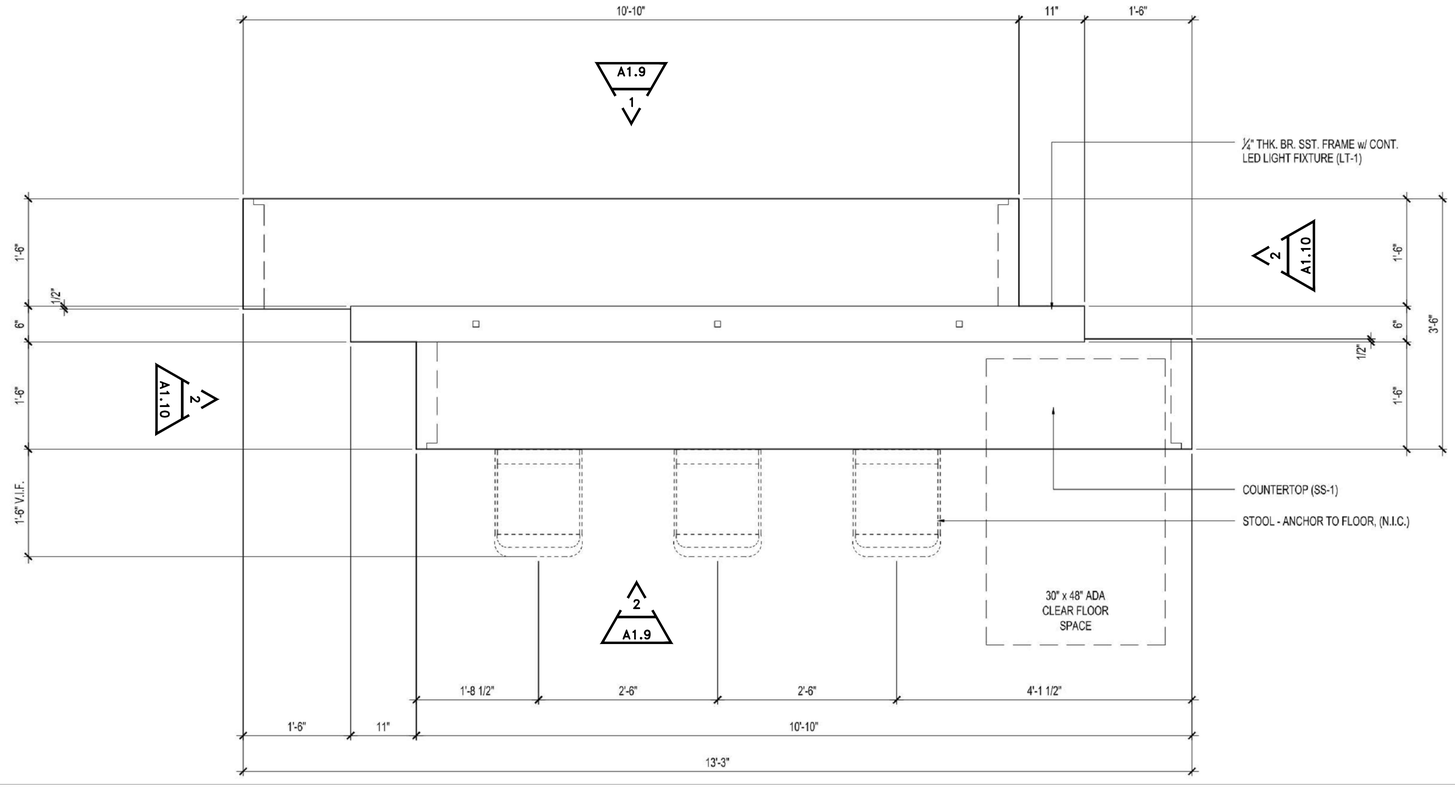
PLAN AND ELEVATION
TYPICAL GUARDRAIL AT SEISMIC BRACES

NTS; For Reference Only

GENERAL NOTES

1. G.C. TO CONFIRM & COORDINATE ALL EQUIPMENT SIZES, CLEARANCES & ACCESS REQUIREMENTS PRIOR TO FABRICATION.
2. REFER TO FLOOR PLAN FOR CHARGING STATION ORIENTATION.

3D RENDERING
CHARGING STATION



FINISH SCHEDULE

REFER TO SPECIFICATIONS FOR ADDITIONAL INFO

MT–1	METAL BASE
WD–1	WOOD VENEER
SS–1	SOLID SURFACE
SS–2	SOLID SURFACE
LT–1	LED LIGHT FIXTURE

ENLARGED PLAN
CHARGING STATION
SCALE: 1" = 1'–0"

1
A1.8

MACKENZIE
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT DNGR./ARCH: BRETT HANSON
DESIGNER:
DRAWN BY: TCU
SCALE: AS SHOWN
DATE:
CHECKED BY:
CHECKED/APPROVED BY:

REVISIONS

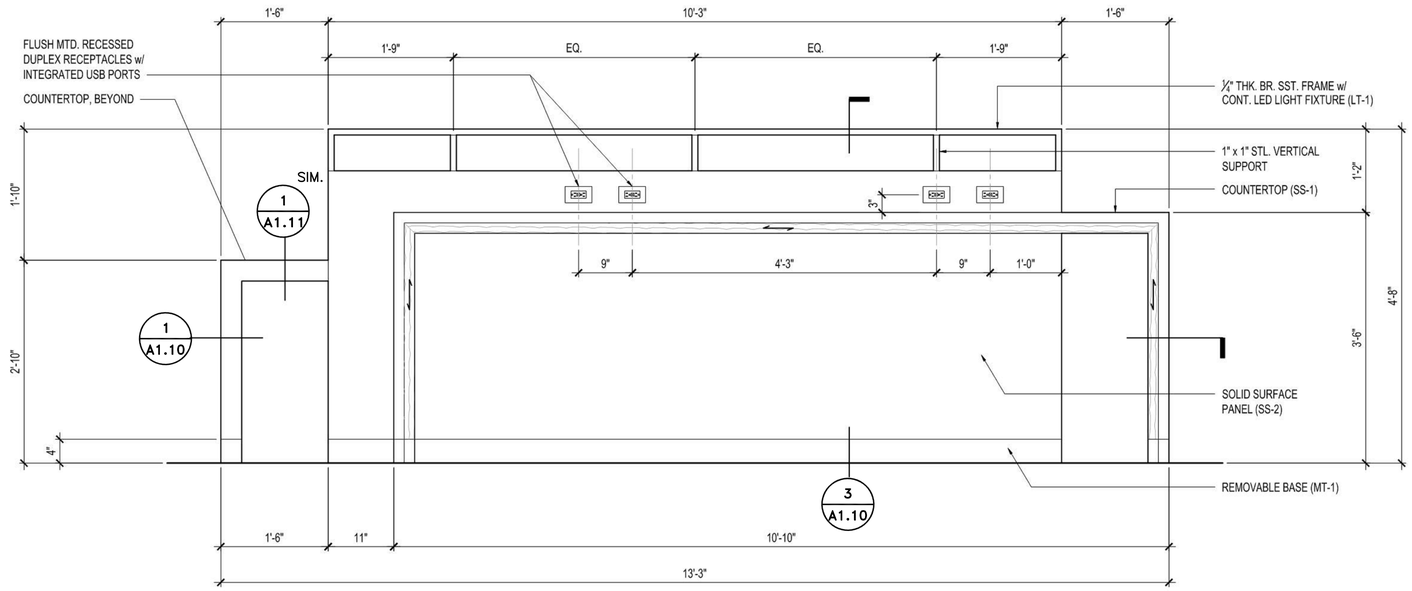
NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

PROJECT MANAGER: PATTY BERGSTEDT
PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE:
DATE:
CHECKED/APPROVED BY:

Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT
PROJECT: STANDARD HOLDROOM CASEWORK
SHEET TITLE: CASEWORK DETAILS CHARGING STATION

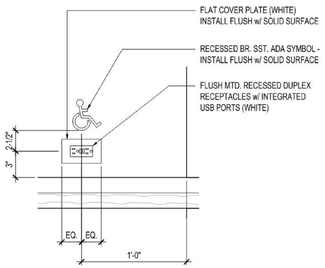
WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
A1.8

PERMIT SET



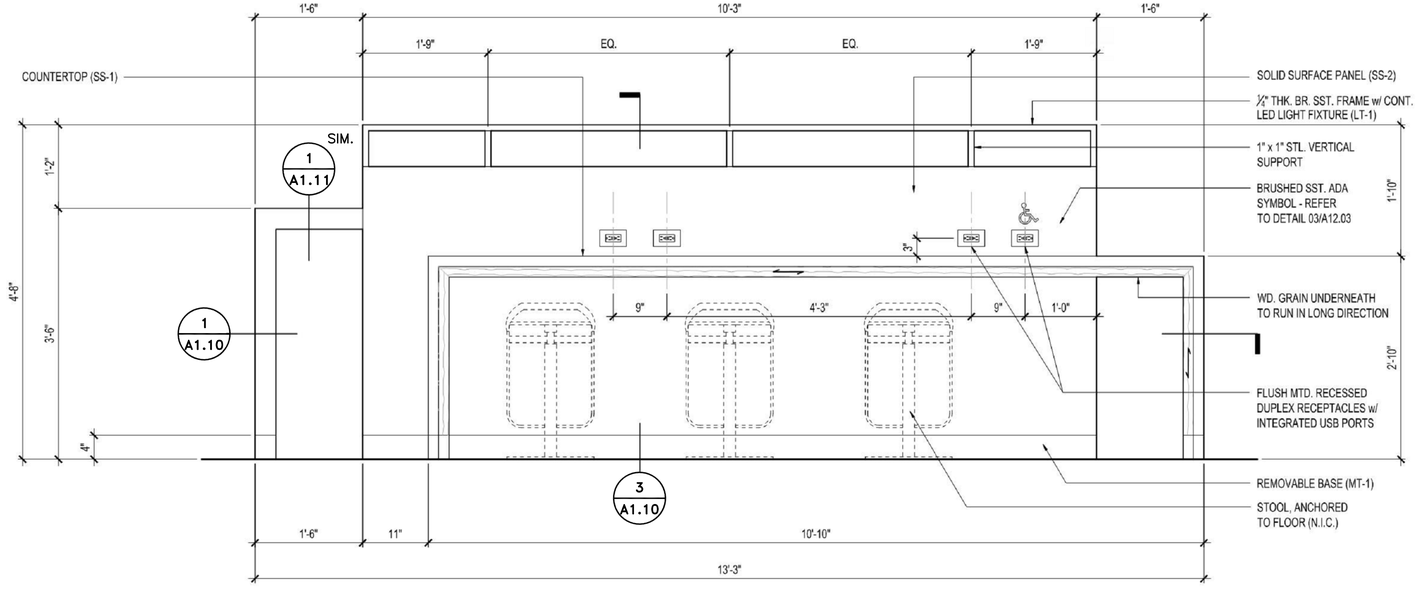
ELEVATION
CHARGING STATION
SCALE: 1" = 1'-0"

1 / A1.9



DETAIL
CHARGING STATION
N.T.S.

3 / A1.9



ELEVATION
CHARGING STATION
SCALE: 1" = 1'-0"

2 / A1.9

GENERAL NOTES

1. G.C. TO CONFIRM & COORDINATE ALL EQUIPMENT SIZES, CLEARANCES & ACCESS REQUIREMENTS PRIOR TO FABRICATION.
2. REFER TO FLOOR PLAN FOR CHARGING STATION ORIENTATION.

FINISH SCHEDULE

REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

MT–1	METAL BASE
WD–1	WOOD VENEER
SS–1	SOLID SURFACE
SS–2	SOLID SURFACE
LT–1	LED LIGHT FIXTURE

LEGEND

WOOD GRAIN DIRECTION

MACKENZIE
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT EXEC. ARCH: BRETT HANSON
DESIGNER:
DRAWN BY: TCU
SCALE: AS SHOWN
DATE:
CHECKED BY:
CHECKED/APPROVED BY:

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

PROJECT MANAGER: PATTY BERGSTEDT
PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE:
DATE:
CHECKED/APPROVED BY:

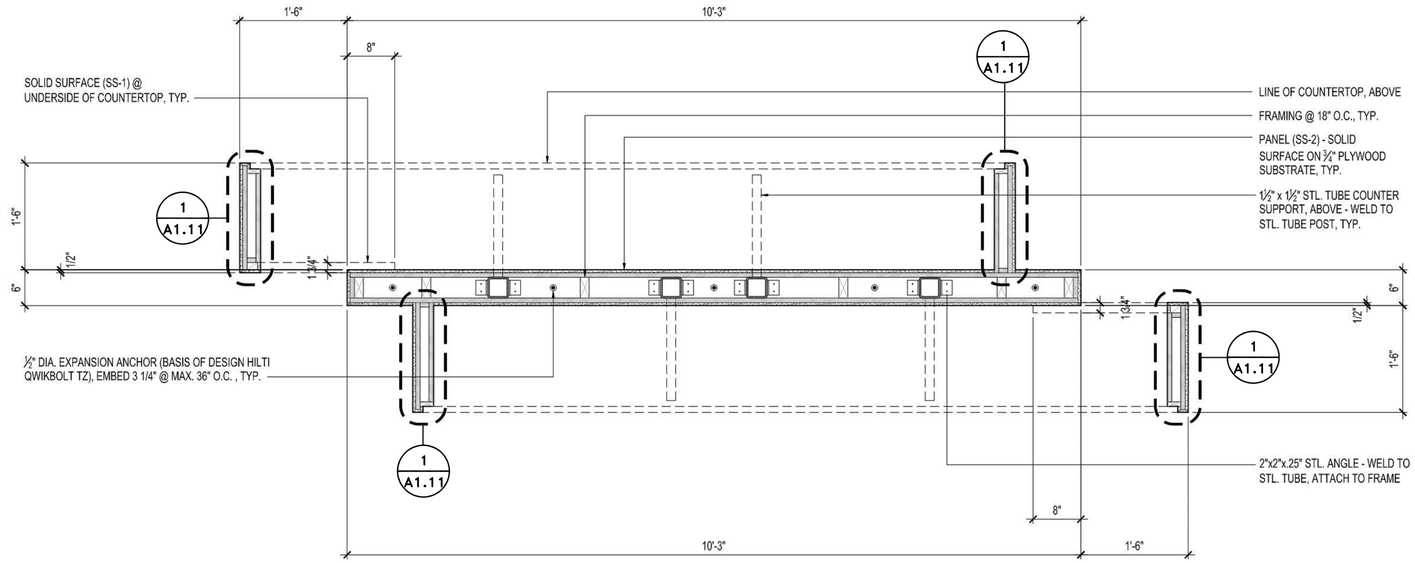
Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
STANDARD HOLDROOM CASEWORK
SHEET TITLE: CASEWORK DETAILS CHARGING STATION

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO. A1.9

PERMIT SET

GENERAL NOTES

1. G.C. TO CONFIRM & COORDINATE ALL EQUIPMENT SIZES, CLEARANCES & ACCESS REQUIREMENTS PRIOR TO FABRICATION.
2. REFER TO FLOOR PLAN FOR CHARGING STATION ORIENTATION.



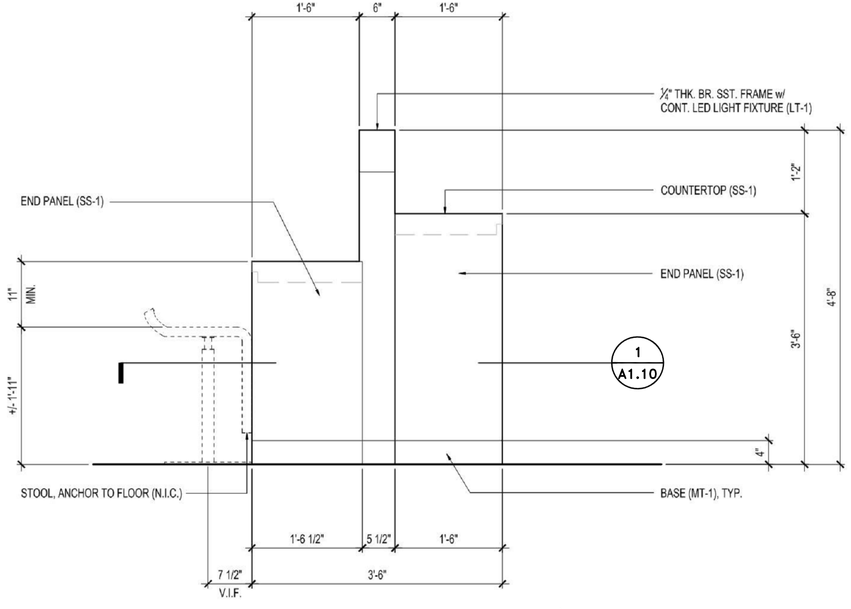
DETAIL
CHARGING STATION
SCALE: 1" = 1'-0"
1 A1.10

FINISH SCHEDULE

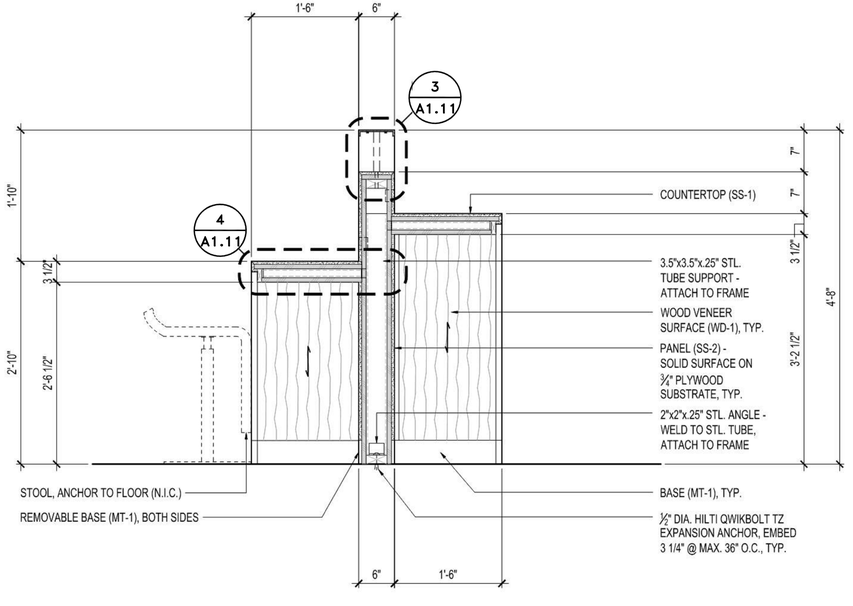
REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

MT-1	METAL BASE
WD-1	WOOD VENEER
SS-1	SOLID SURFACE
SS-2	SOLID SURFACE
LT-1	LED LIGHT FIXTURE

LEGEND



ELEVATION
PODIUM
SCALE: 1" = 1'-0"
2 A1.10



SECTION
CHARGING STATION
1"=1'-0"
3 A1.10

MACKENZIE
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT ENGR./ARCH: BRETT HANSON
DESIGNER:
DRAWN BY: TCU
SCALE: AS SHOWN
DATE:
CHECKED BY:
CHECKED/APPROVED BY:

REVISIONS

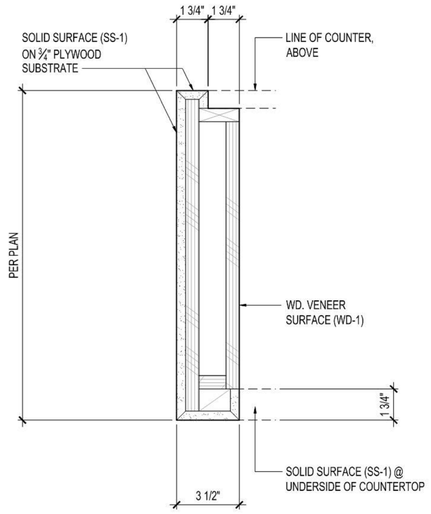
NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

PROJECT MANAGER: PATTY BERGSTEDT
PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE:
DATE:
CHECKED/APPROVED BY:

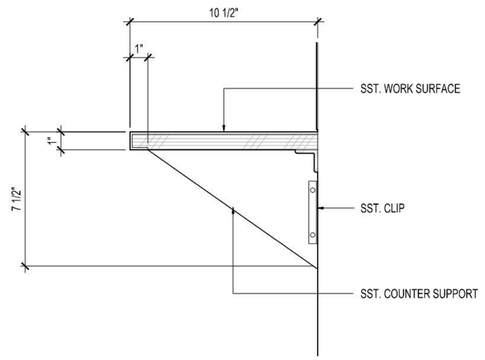
Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
STANDARD HOLDROOM CASEWORK
SHEET TITLE: CASEWORK DETAILS CHARGING STATION

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
A1.10

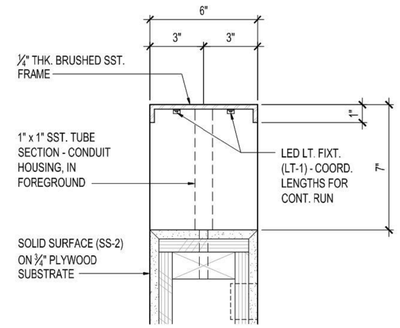
PERMIT SET



DETAIL 1 / A1.11
CHARGING STATION
SCALE: 3" = 1'-0"



DETAIL 2 / A1.11
EXISTING CHARGING STATION RETROFIT
SCALE: 6" = 1'-0"



DETAIL 3 / A1.11
CHARGING STATION
SCALE: 3" = 1'-0"

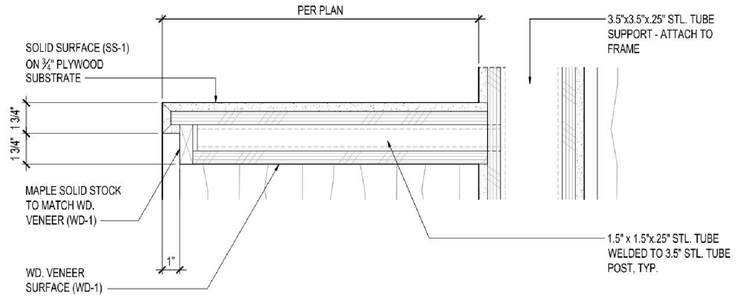
GENERAL NOTES

1. ALL EXPOSED STEEL TO BE STAINLESS STEEL – BRUSHED FINISH, U.N.O. WELD JOINTS PER NOMMA FINISH #1 STANDARD.
2. PROVIDE $\frac{1}{8}$" RADIUS EASED EDGE AT ALL SOLID SURFACE OUTSIDE CORNERS. FOLLOW MANUF. INSTRUCTIONS FOR SURFACE HANDLING, TREATMENT & FINISHING.
3. PROVIDE TIGHT, CLEAN, MITERED CORNERS AT ALL OUTSIDE EDGE CONDITIONS, U.N.O. PER SPECIFICATIONS AND AWI & INDUSTRY STANDARDS.

FINISH SCHEDULE

REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

MT–1	METAL BASE
WD–1	WOOD VENEER
SS–1	SOLID SURFACE
SS–2	SOLID SURFACE
LT–1	LED LIGHT FIXTURE



DETAIL 4 / A1.11
CHARGING STATION
SCALE: 3" = 1'-0"

MACKENZIE
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT DYGR./ARCH: BRETT HANSON
DESIGNER:
DRAWN BY: TCU
SCALE: AS SHOWN
DATE:
CHECKED BY:
CHECKED/APPROVED BY:

REVISIONS

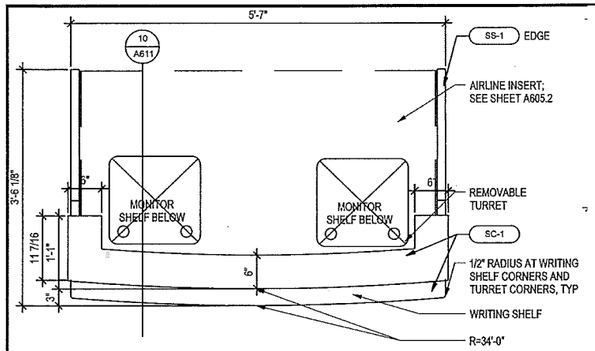
NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

PROJECT MANAGER: PATTY BERGSTEDT
PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE:
DATE:
CHECKED/APPROVED BY:

Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
STANDARD HOLDROOM CASEWORK
SHEET TITLE: CASEWORK DETAILS
CHARGING STATION

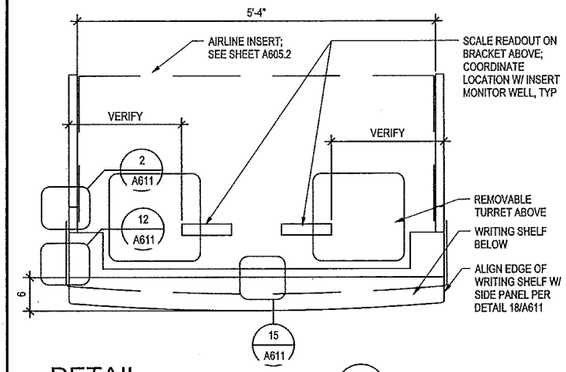
WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
A1.11

PERMIT SET



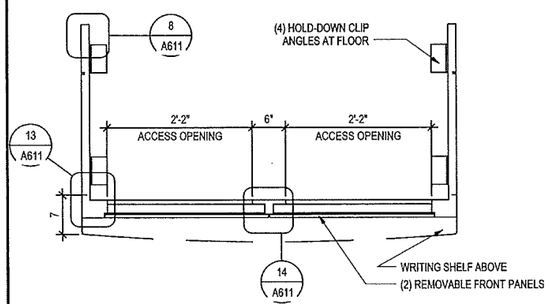
DETAIL 1/A610

AGENT PODIUM SHELL PLAN
SCALE: 1" = 1'-0"



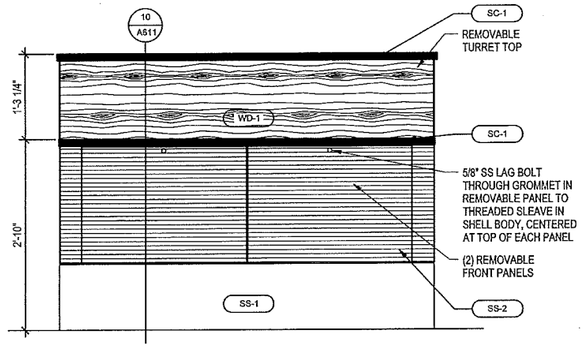
DETAIL 6/A610

AGENT PODIUM SHELL PLAN SECTION THROUGH TURRET
SCALE: 1" = 1'-0"



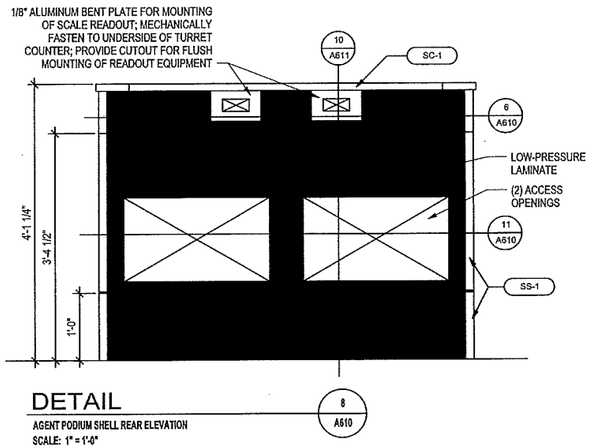
DETAIL 11/A610

AGENT PODIUM SHELL PLAN SECTION THROUGH OPENINGS
SCALE: 1" = 1'-0"



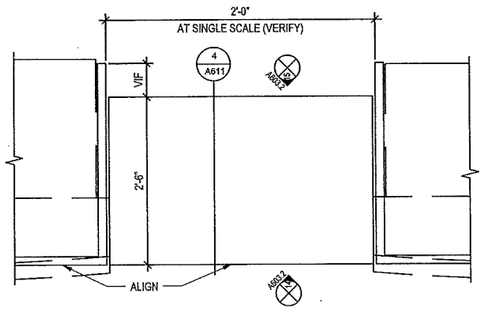
DETAIL 3/A610

AGENT PODIUM SHELL FRONT ELEVATION
SCALE: 1" = 1'-0"



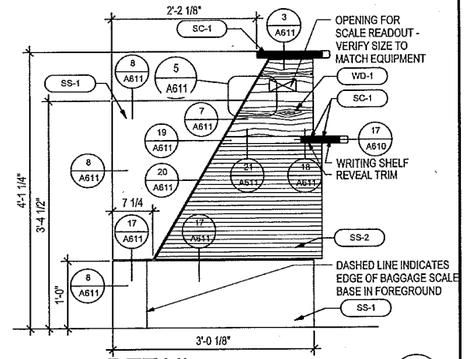
DETAIL 8/A610

AGENT PODIUM SHELL REAR ELEVATION
SCALE: 1" = 1'-0"



DETAIL 13/A610

BAGGAGE SCALE SHELL PLAN (SIM AT SINGLE SCALE)
SCALE: 1" = 1'-0"



DETAIL 5/A610

TICKETING AGENT PODIUM SHELL SIDE ELEVATION
SCALE: 1" = 1'-0"

AGENT PODIUM SHELL AND INSERT GENERAL NOTES

1. PROVIDE 1/8" RADIUS AT ALL FORMED/WELDED CORNERS OF STAINLESS STEEL SHEET LAMINATED PANELS.

2. EASE ALL EXPOSED STAINLESS STEEL FLAT BAR EDGES W/ 1/32" CORNER CHAMFER.

3. MECHANICALLY ATTACH ALL STAINLESS STEEL EDGES; NO VISUALLY EXPOSED SCREW HEADS OR ATTACHMENT ALLOWED

4. ALL PLYWOOD TO BE PREMIUM GRADE

5. ALL CONCEALED OR VISUALLY NON-EXPOSED SURFACES SHALL HAVE LOW-PRESSURE LAMINATE FINISH, UNLESS OTHERWISE NOTED

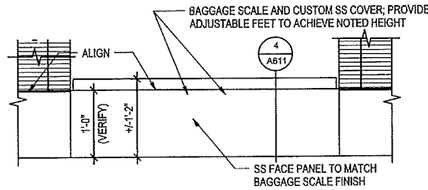
6. ALL ACCESS OPENING EDGES TO BE FACED W/ PLASTIC LAMINATE TO MATCH PANEL FACE, UNLESS OTHERWISE NOTED

7. EASE ALL EXPOSED AND ACCESSIBLE CABINET EDGES, INCLUDING ALL PLYWOOD AND OTHER PANELS, COUNTERTOPS, CABINET BODIES, ETC.

8. TYPICAL DRAWER CONSTRUCTION AND FINISHES SHALL BE AS FOLLOWS:
   - FRONT: 3/4" PLYWOOD W/ LAMINATE-FACED FINISH
   - BOX SIDES AND BACK: 1/2" PLYWOOD W/ CLEAR MATTE FINISH
   - BOX BOTTOM: 1/4" PLYWOOD W/ LAMINATE-FACED FINISH

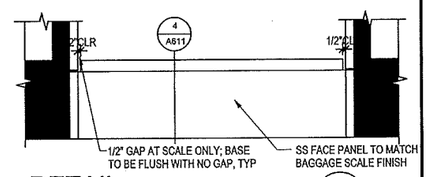
9. REFER TO PORT OF SEATTLE CASEWORK STANDARDS MANUAL FOR FINISH SPECIFICATIONS

10. ALL MATERIALS (PLYWOOD, PARTICLE BOARD, PLAM) TO BE CLASS B MINIMUM RATED PER NFPA 415.



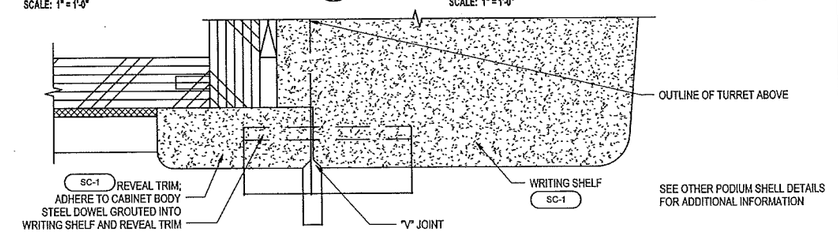
DETAIL 14/A610

BAGGAGE SCALE SHELL FRONT ELEVATION
SCALE: 1" = 1'-0"



DETAIL 15/A610

BAGGAGE SCALE SHELL REAR ELEVATION
SCALE: 1" = 1'-0"



DETAIL 17/A610

AGENT PODIUM SHELL REVEAL TRIM
SCALE: 12" = 1'-0"

MACKENZIE.
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT ENGR./ARCH:	BRETT HANSON
DESIGNED:	KDD
DRAWN BY:	TCU/YNJ
SCALE:	AS NOTED
DATE:	AUGUST 16, 2016
CHECKED BY:	KDD
CHECKED/APPROVED BY:	---

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

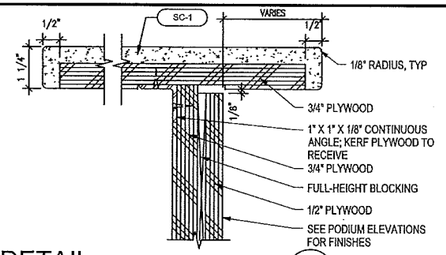
11049 REGISTERED ARCHITECT
Brett Joe Hanson
STATE OF WASHINGTON

PROJECT MANAGER:	PATTY BERGSTEDT
PROJECT ENGINEER:	---
DESIGN ENGINEER:	---
DRAFTER:	---
SCALE:	---
DATE:	AUGUST 16, 2016
CHECKED/APPROVED BY:	---

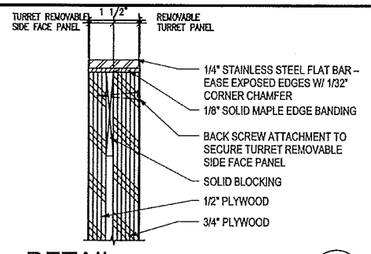
Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
ZONE 5 TICKET LOBBY MODIFICATIONS
SHEET TITLE: DETAILS
SERVICE DIRECTIVE 2

WORK PROJECT NO.	U00253
CONSULTANT'S NO.	
PORT OF SEATTLE NO.	STIA-SW1605 A6.10

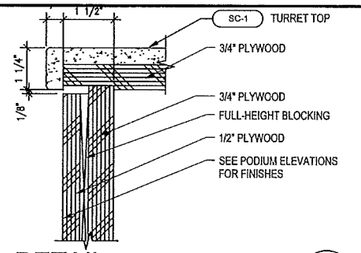
100% SUBMITTAL/ BID DOCUMENTS - AUGUST 16, 2016



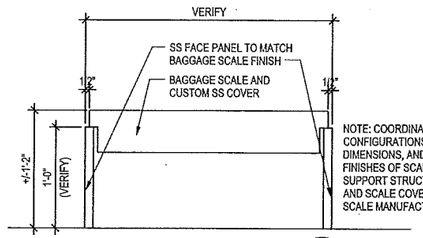
DETAIL 1 A611
AGENT PODIUM SHELL TURRET TOP
SCALE: 6" = 1'-0"



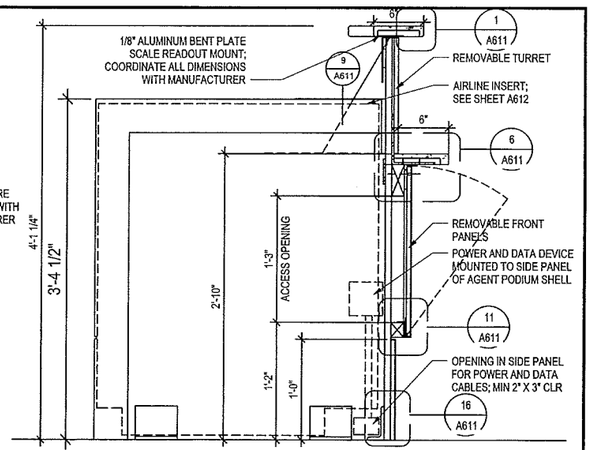
DETAIL 2 A611
AGENT PODIUM SHELL TURRET EDGE
SCALE: 6" = 1'-0"



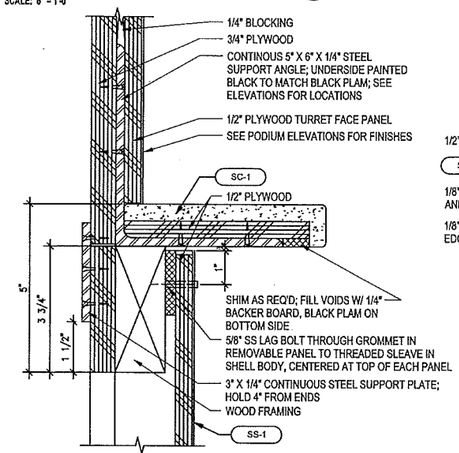
DETAIL 3 A611
AGENT PODIUM SHELL TURRET TOP SIDE
SCALE: 6" = 1'-0"



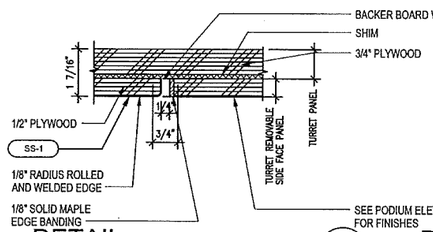
DETAIL 4 A610
BAGGAGE SCALE SHELL SECTION
SCALE: 1 1/2" = 1'-0"



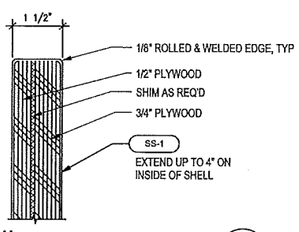
DETAIL 10 A610
AGENT PODIUM SHELL SECTION
SCALE: 1 1/2" = 1'-0"



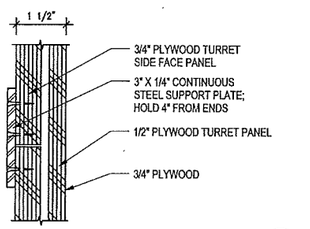
DETAIL 6 A611
AGENT PODIUM SHELL SHELF
SCALE: 6" = 1'-0"



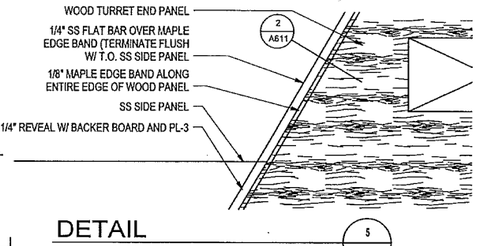
DETAIL 7 A611
AGENT PODIUM SHELL TURRET AT SIDE PANEL
SCALE: 6" = 1'-0"



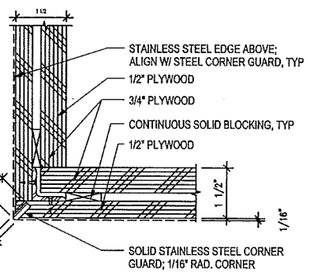
DETAIL 8 A611
AGENT PODIUM SHELL SIDE PANEL TOP (SIM AT PANEL END)
SCALE: 6" = 1'-0"



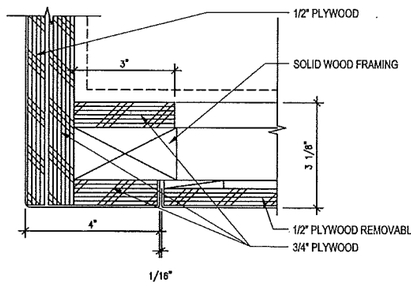
DETAIL 9 A611
AGENT PODIUM SHELL TURRET CONNECTION
SCALE: 6" = 1'-0"



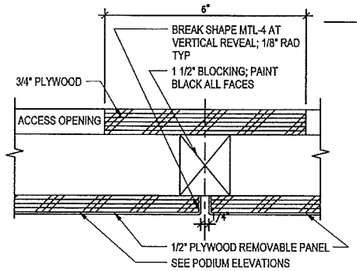
DETAIL 5 A611
AGENT PODIUM TURRET TRIM DETAIL
SCALE: 6" = 1'-0"



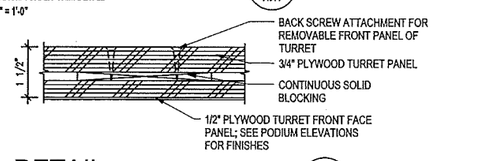
DETAIL 12 A611
AGENT PODIUM SHELL TURRET CORNER
SCALE: 6" = 1'-0"



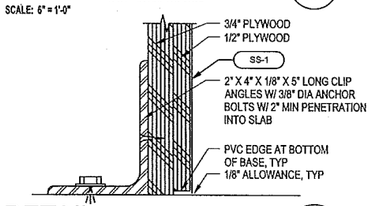
DETAIL 13 A611
AGENT PODIUM SHELL CORNER
SCALE: 6" = 1'-0"



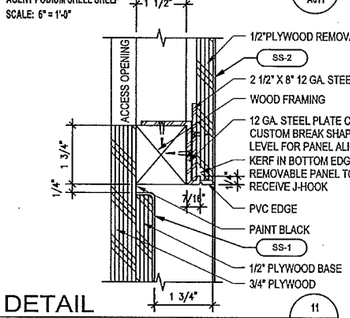
DETAIL 14 A611
AGENT PODIUM SHELL REMOVABLE FRONT PANEL
SCALE: 6" = 1'-0"



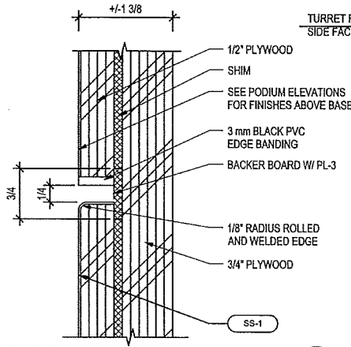
DETAIL 15 A611
AGENT PODIUM SHELL TURRET FRONT
SCALE: 6" = 1'-0"



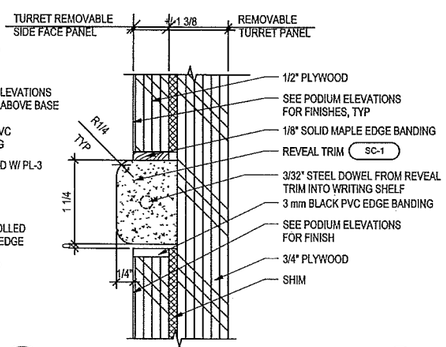
DETAIL 16 A611
AGENT PODIUM SHELL BASE
SCALE: 6" = 1'-0"



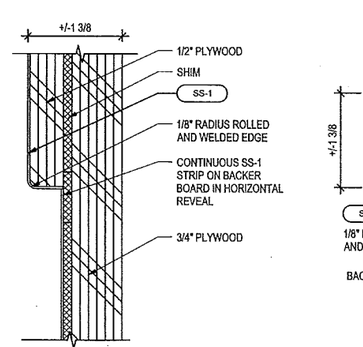
DETAIL 11 A611
AGENT PODIUM SHELL REMOVABLE PANEL AT BASE
SCALE: 6" = 1'-0"



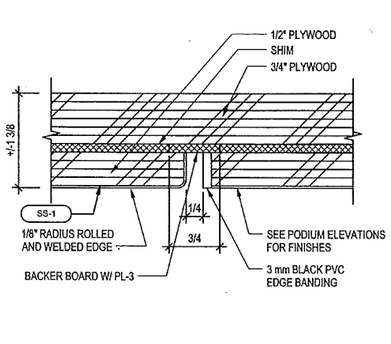
DETAIL 17 A611
AGENT PODIUM SHELL REVEAL AT BASE
SCALE: 12" = 1'-0"



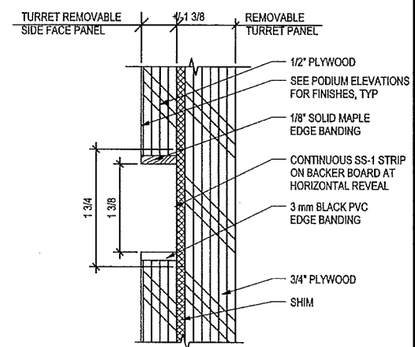
DETAIL 18 A611
AGENT PODIUM SHELL REVEAL AT SHELF
SCALE: 12" = 1'-0"



DETAIL 19 A611
AGENT PODIUM SHELL REVEAL AT SHELF
SCALE: 12" = 1'-0"



DETAIL 20 A611
AGENT PODIUM SHELL REVEAL AT SIDE PANEL
SCALE: 12" = 1'-0"



DETAIL 21 A611
AGENT PODIUM SHELL REVEAL ALIGNED W/ SHELF
SCALE: 12" = 1'-0"

100% SUBMITTAL/ BID DOCUMENTS - AUGUST 16, 2016

MACKENZIE
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT ENGR./ARCH:	BRETT HANSON
DESIGNED:	KDD
DRAWN:	TCU/TNJ
SCALE:	AS NOTED
DATE:	AUGUST 16, 2016
CHECKED:	KDD
CHECKED/APPROVED BY:	--

REVISIONS

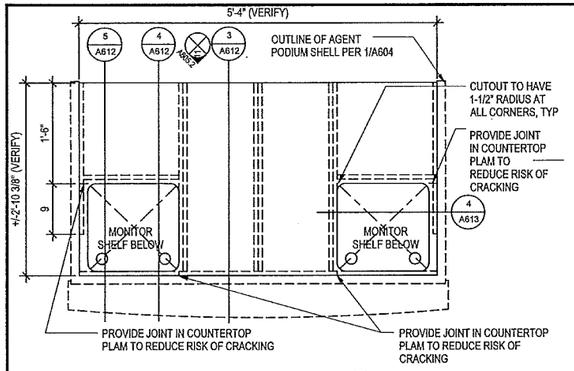
NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

11049 REGISTERED ARCHITECT
Brett Lee Hanson
STATE OF WASHINGTON

PROJECT MANAGER:	PATTY BERGSTEDT
PROJECT ENGINEER:	--
DESIGN ENGINEER:	--
DRAFTER:	--
SCALE:	--
DATE:	AUGUST 16, 2016
CHECKED/APPROVED BY:	--

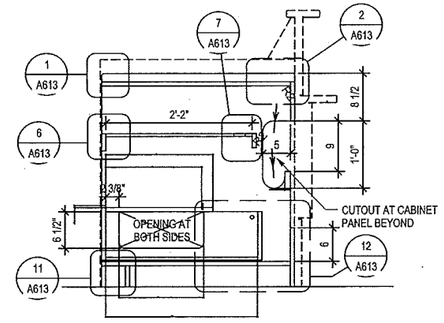
Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
ZONE 5 TICKET LOBBY MODIFICATIONS
SHEET TITLE: DETAILS

WORK PROJECT NO.	U00253
CONSULTANT'S NO.	
PORT OF SEATTLE NO.	STIA-SW1605 A6.11
SERVICE DIRECTIVE	2



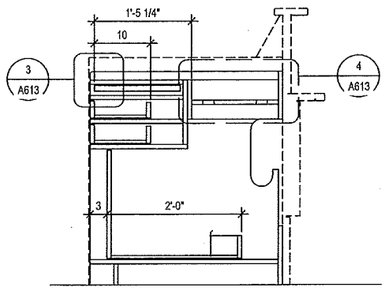
DETAIL 1 / A612

TICKETING INSERT PLAN
SCALE: 1" = 1'-0"



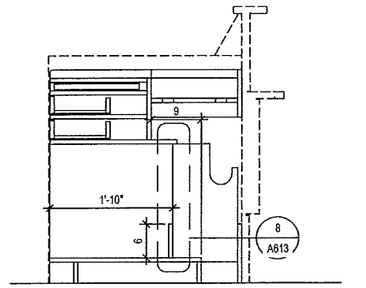
DETAIL 3 / A612

TICKETING INSERT SECTION THROUGH PRINTERS
SCALE: 1" = 1'-0"



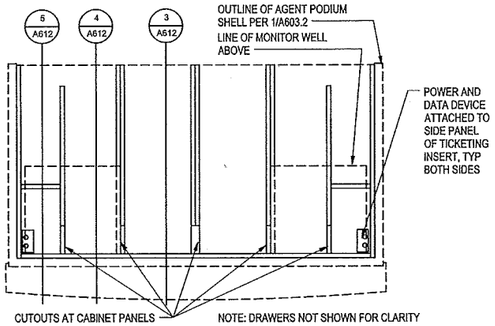
DETAIL 4 / A612

TICKETING INSERT SECTION THROUGH DRAWERS
SCALE: 1" = 1'-0"



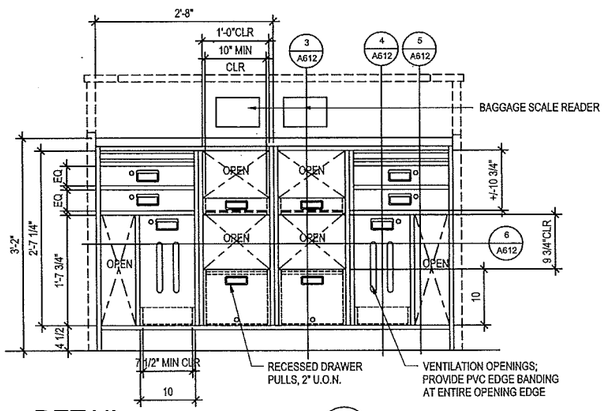
DETAIL 5 / A612

TICKETING INSERT SECTION THROUGH STORAGE WELL
SCALE: 1" = 1'-0"



DETAIL 6 / A612

TICKETING INSERT PLAN SECTION
SCALE: 1" = 1'-0"



DETAIL 11 / A612

TICKETING INSERT ELEVATION
SCALE: 1" = 1'-0"

MACKENZIE.
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT MGR./ARCH:	BRETT HANSON
DESIGNER:	KDD
DRAWN BY:	TCU
SCALE:	AS NOTED
DATE:	AUGUST 16, 2016
CHECKED BY:	KDD
CHECKED/APPROVED BY:	---

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

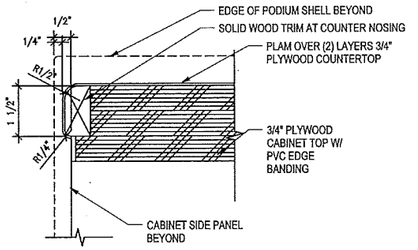
11049 REGISTERED ARCHITECT
Brett Lee Hanson
STATE OF WASHINGTON

PROJECT MANAGER:	PATTY BERGSTEDT
PROJECT ENGINEER:	---
DESIGN ENGINEER:	---
DRAFTER:	---
SCALE:	---
DATE:	AUGUST 16, 2016
CHECKED/APPROVED BY:	---

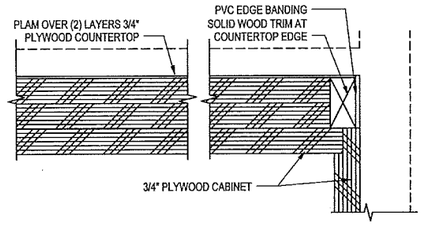
Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
ZONE 5 TICKET LOBBY MODIFICATIONS
SHEET TITLE: DETAILS
SERVICE DIRECTIVE 2

WORK PROJECT NO.	U00253
CONSULTANT'S NO.	
PORT OF SEATTLE NO.	STIA-SW1605 A6.12

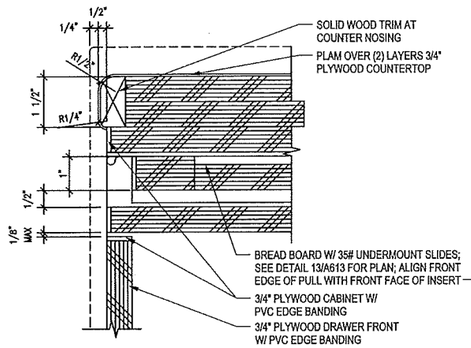
100% SUBMITTAL/ BID DOCUMENTS - AUGUST 16, 2016



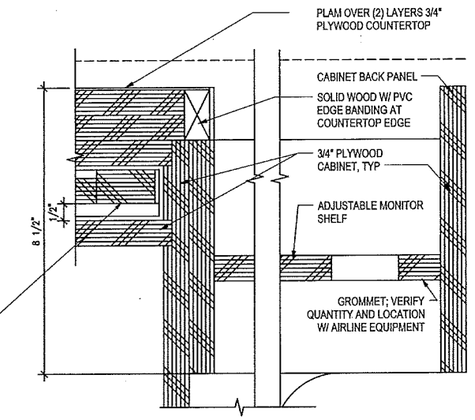
DETAIL 1 / A613
TICKETING INSERT COUNTER NOSING
SCALE: 6" = 1'-0"



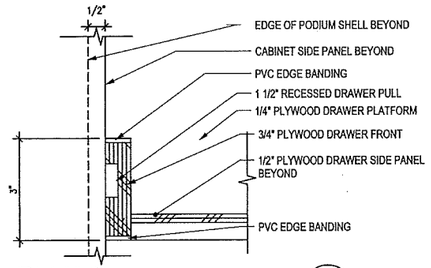
DETAIL 2 / A613
TICKETING INSERT COUNTER
SCALE: 6" = 1'-0"



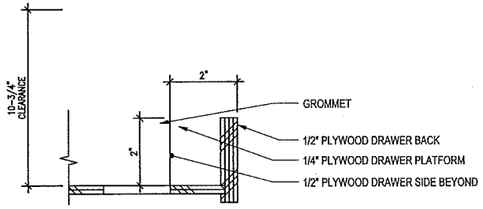
DETAIL 3 / A613
TICKETING INSERT COUNTER AT WRITING SURFACE
SCALE: 6" = 1'-0"



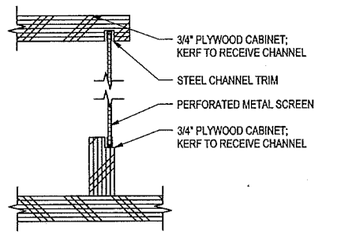
DETAIL 4 / A613
TICKETING INSERT MONITOR WELL
SCALE: 6" = 1'-0"



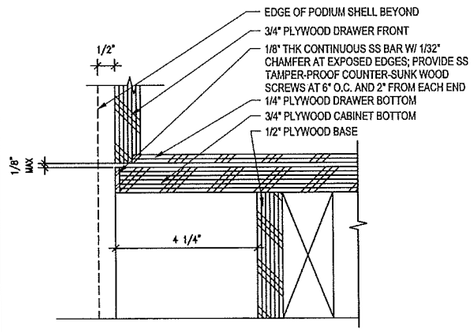
DETAIL 6 / A613
TICKETING INSERT DRAWER FACE
SCALE: 6" = 1'-0"



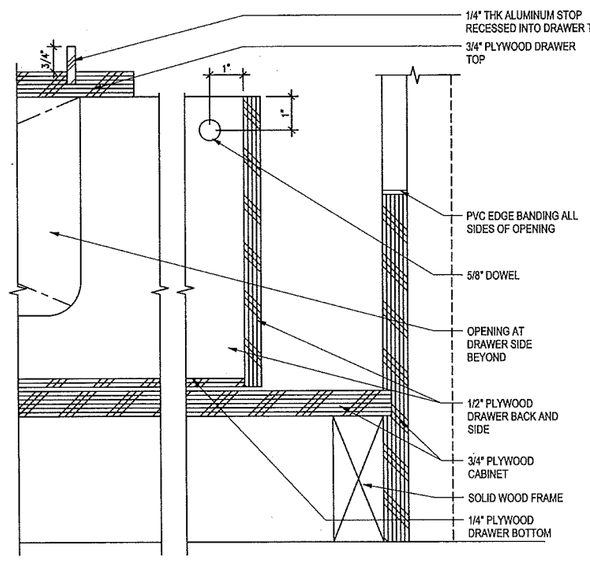
DETAIL 7 / A613
TICKETING INSERT DRAWER BACK
SCALE: 6" = 1'-0"



DETAIL 8 / A613
TICKETING INSERT MESH PARTITION
SCALE: 6" = 1'-0"



DETAIL 11 / A613
TICKETING INSERT BASE
SCALE: 6" = 1'-0"



DETAIL 12 / A613
TICKETING INSERT BACK
SCALE: 6" = 1'-0"

MACKENZIE.
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT MGR./ARCH:	BRETT HANSON
DESIGNER:	KOD
DRAWN BY:	TCU
SCALE:	AS NOTED
DATE:	AUGUST 16, 2016
CHECKED BY:	KOD
CHECKED/APPROVED BY:	--

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

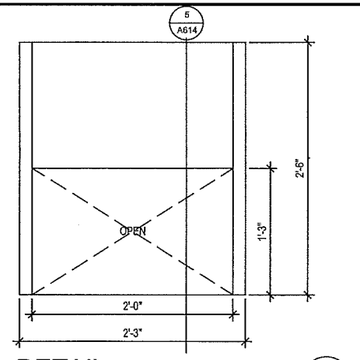
11049 REGISTERED ARCHITECT
Brett Beelman STATE OF WASHINGTON

PROJECT MANAGER:	PATTY BERGSTEDT
PROJECT ENGINEER:	--
DESIGN ENGINEER:	--
DRAFTER:	--
SCALE:	--
DATE:	AUGUST 16, 2016
CHECKED/APPROVED BY:	--

Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
ZONE 5 TICKET LOBBY MODIFICATIONS
SHEET TITLE: DETAILS
SERVICE DIRECTIVE 2

WORK PROJECT NO.	U00253
CONSULTANT'S NO.	
PORT OF SEATTLE NO.	STIA-SW1605 A6.13

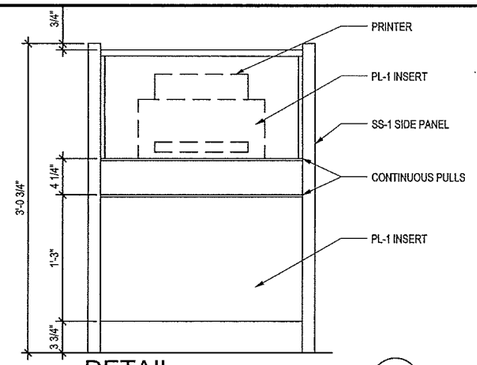
100% SUBMITTAL/ BID DOCUMENTS - AUGUST 16, 2016



DETAIL 1 A614

PRINTER CABINET PLAN - CLOSED CONFIGURATION

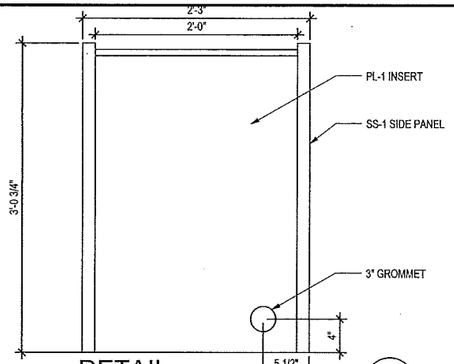
SCALE: 1 1/2" = 1'-0"



DETAIL 2 A614

PRINTER CABINET FRONT ELEVATION - CLOSED CONFIGURATION

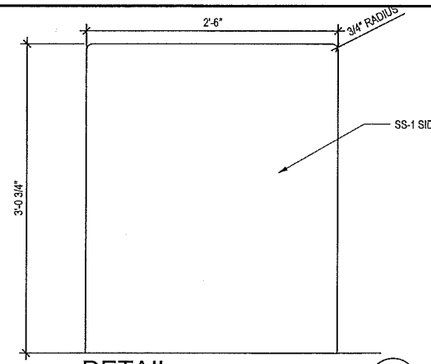
SCALE: 1 1/2" = 1'-0"



DETAIL 3 A614

PRINTER CABINET REAR ELEVATION

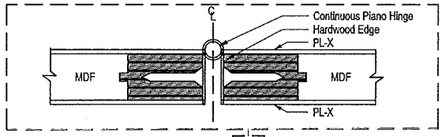
SCALE: 1 1/2" = 1'-0"

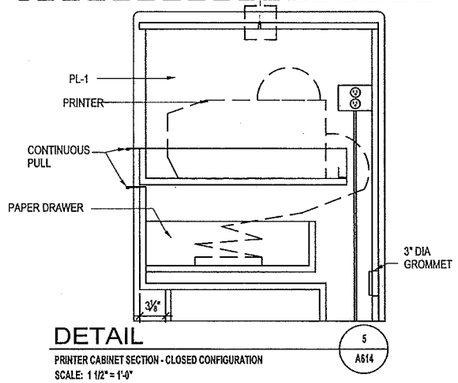


DETAIL 4 A614

PRINTER CABINET SIDE ELEVATION

SCALE: 1 1/2" = 1'-0"





DETAIL 5 A614

PRINTER CABINET SECTION - CLOSED CONFIGURATION

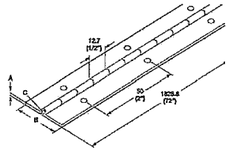
SCALE: 1 1/2" = 1'-0"

HÄFELE — Hinges and Stays

Furniture Hinges

Piano Hinge

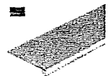
- Hinges are post-plated and free of machine oil
- Stainless steel is 304 grade with a bright annealed (BA) finish
- BA finish provides a shiny, more decorative look
- All holes are countersunk for screws
- Hinges can be cut by the customer to desired length
- Special order Hinges are available in a minimum quantity of 300 ft. (steel) and 150 ft. (stainless steel)



Continuous Hinge
For furniture, cabinetry and machine applications
Knuckle length: 12.7 mm (1/2")
Hole spacing: 50 mm (2")
Length: 1828.8 mm (72")

Material	Finish	Open Width (B)	Gauge (A)	Pin Diameter (C)	Item No.
steel	polished brass	37 (1 1/16")	1.02 (.04")	2.29 (.09")	351.09.513
steel	polished nickel	37 (1 1/16")	1.02 (.04")	2.29 (.09")	351.09.613
steel	polished brass	31.8 (1 1/4")	1.02 (.04")	2.29 (.09")	351.09.523
steel	polished nickel	31.8 (1 1/4")	1.02 (.04")	2.29 (.09")	351.09.623
stainless steel	stainless steel	31.8 (1 1/4")	.64 (.025")	2.54 (.1")	351.10.029
steel	polished brass	38.1 (1 1/2")	1.02 (.04")	2.29 (.09")	351.09.533
steel	polished nickel	38.1 (1 1/2")	1.02 (.04")	2.29 (.09")	351.09.633
stainless steel	stainless steel	38.1 (1 1/2")	.64 (.025")	2.54 (.1")	351.10.039
steel	polished brass	50.8 (2")	1.02 (.04")	2.29 (.09")	351.09.543
steel	polished nickel	50.8 (2")	1.02 (.04")	2.29 (.09")	351.09.643
stainless steel	stainless steel	50.8 (2")	.64 (.025")	2.54 (.1")	351.10.049

Packing: 5 pcs. (includes screws)



View Full-Size

PRINTER CABINET SPEC DATA

SEA AR SC-2
ZONE 1 PRINTER CABINETS
08.05.13

GENERAL NOTES AND SPECIFICATION DATA

1. (2) POS PINTER CABINETS, FREE-STANDING UNITS - COMPLY WITH AWS GRADE PREMIUM INCLUDING "RULES" SECTION, SECURE TO FLOOR WITH ADHESIVE SEALANT ALONG SIDE PANELS.
2. PORT OF SEATTLE, SEATTLE-TACOMA INTERNATIONAL AIRPORT, INTERNATIONAL WINDOW WALL - TICKET COUNTERS AND BAG BELT, MC-0317526, WORK PROJECT #104662, PROJECT MANUAL DIVISION
6 - WOOD AND PLASTICS, SPECIFICATIONS SECTION 06410 - CUSTOM CABINETS APPLIES.
3. "SIDE PANEL" REFERS TO STAINLESS STEEL AND PANELS OF PRINTER CABINET. "INSERT" REFERS TO LAMINATE-FACED CABINET BETWEEN SIDE PANELS. MECHANICALLY FIX INSERT TO SIDE PANELS.
4. SPECIALTY CABINET HARDWARE NOT SPECIFIED IN REFERENCE DOCUMENT LISTED IN #2:
   - 1½" PIANO HINGER, 304 STAINLESS STEEL CONTINUOUS FOR LENGTH OF LID
   - EPCO EDGE PULL, CONTINUOUS, CUSTOM LENGTH ANODIZED ALUMINUM, DP42-L-A (6' STOCK LENGTH)
   - ALUMINUM 90 DEGREE 1½" ANGLE STOCK, ⅛" LEG THICKNESS, MILL FINISH (4' STOCK LENGTH)
5. PROVIDE 3MM PVC EDGE BANDING FOR CABINET INSERT, SHELF FRONT, DRAWER FRONT, EXCEPT AS NOTED - EDGE BANDING TO MATCH ESI NORTH SEAT #2477E.
6. PLASTIC LAMINATE: PL-1, GP GRADE AS SPECIFIED FOR LOCATION, MATCH NEVAMAR MARITIME GRAY#S6027T.
7. SILENCERS AT HINGED CABINET TOP TO BE MECHANICALLY FASTED TYPE, ATTACH TO TOP EDGE OF INSERT SIDE PANELS.
8. EASE CORNERS AND EDGES AT CUT ENDS OF ALUMINUM PULLS AND TRIM 1/32".
9. MACHINE EASE CORNERS AND EDGES AT PLASTIC LAMINATE FACINGS EXCEPT WHERE PVC EDGE BANDING PROVIDED - FOLLOW AWS PREMIUM GRADE RULES SECTION.
10. PROVIDE SHOP DRAWINGS AND SUBMITTALS FOR PRINTER CABINET ACCORDING TO #2 ABOVE.

MACKENZIE
Portland Vancouver Seattle
503.224.9560 360.695.7879 206.749.9500
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT ENGR./ARCH: BRETT HANSON
DESIGNER: KDD
DRAWN BY: TCU
SCALE: AS NOTED
DATE: AUGUST 16, 2016
CHECKED BY: KDD
CHECKED/APPROVED BY: ---

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

11049 REGISTERED ARCHITECT Brad Lee Hanson STATE OF WASHINGTON

PROJECT MANAGER: PATTY BERGSTEDT
PROJECT ENGINEER: ---
DESIGN ENGINEER: ---
DRAWN BY: ---
SCALE: ---
DATE: AUGUST 16, 2016
CHECKED/APPROVED BY: ---

Port of Seattle — SEA-TAC INTERNATIONAL AIRPORT

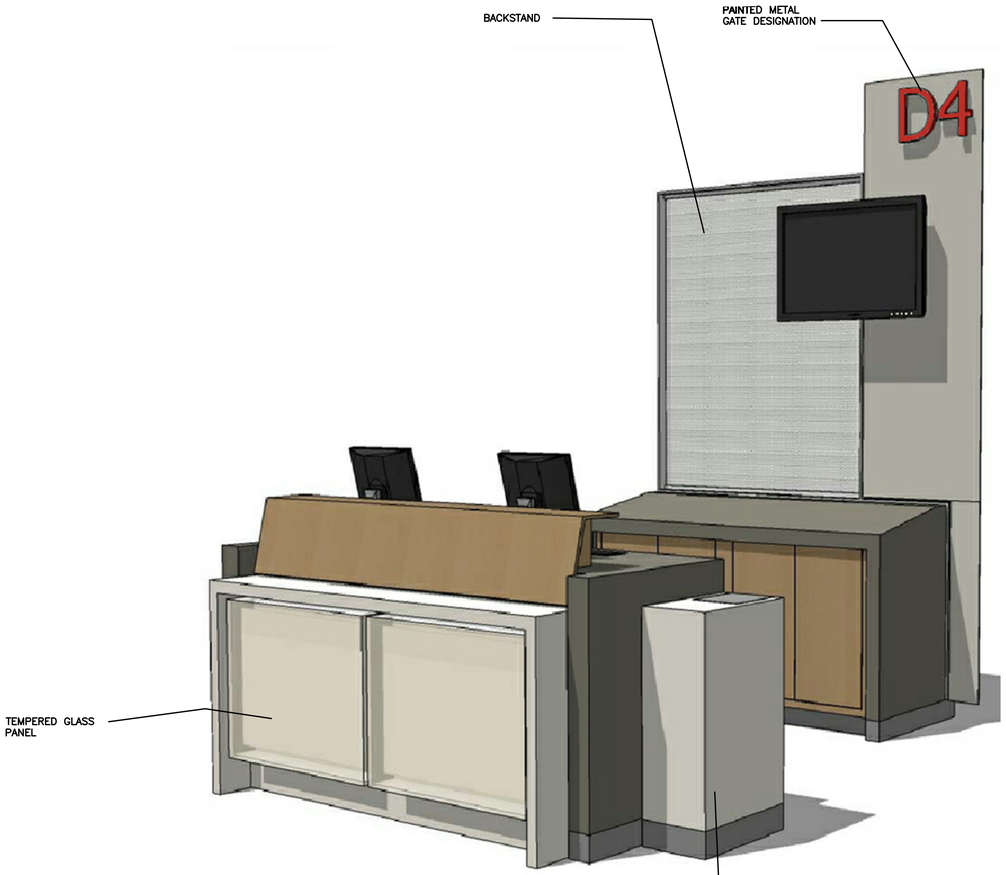
PROJECT: ZONE 5 TICKET LOBBY MODIFICATIONS

SHEET TITLE: DETAILS

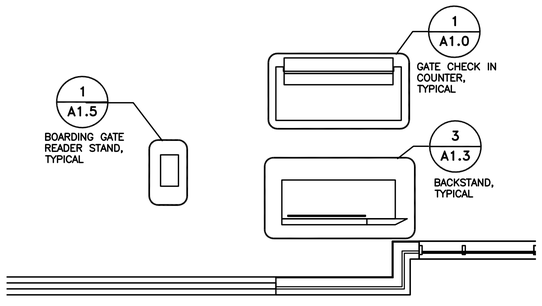
SERVICE DIRECTIVE: 2

WORK PROJECT NO.: U00253
CONSULTANT'S NO.:
PORT OF SEATTLE NO.: STIA-SW1605 A6.14

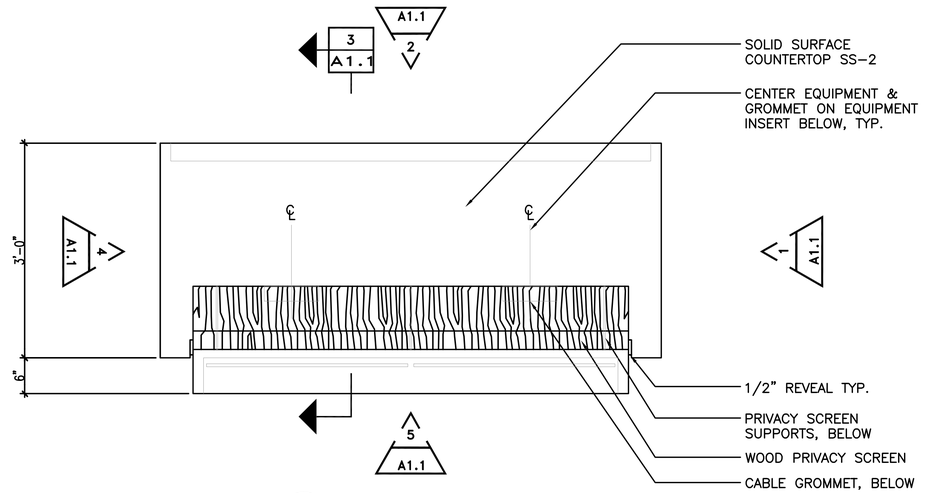
100% SUBMITTAL/ BID DOCUMENTS - AUGUST 16, 2016



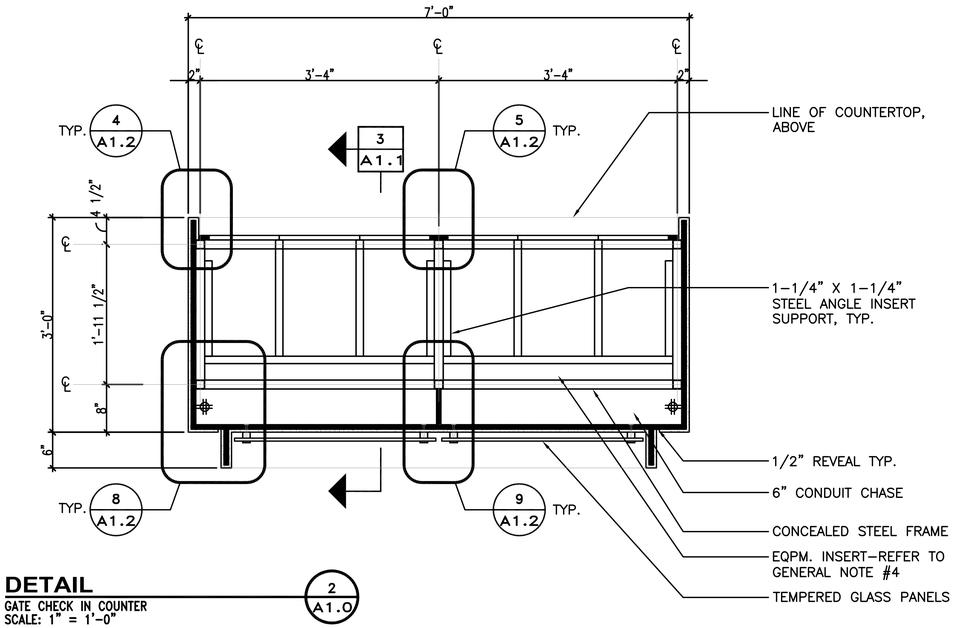
3D RENDERING
GATE CHECK–IN COUNTER BACKSTAND & BOARDING GATE READER STAND



ENLARGED PLAN
GATE CHECK – IN
SCALE: 1/4" = 1'–0"
3 / A1.0



ENLARGED PLAN
GATE CHECK – IN COUNTER
SCALE: 1" = 1'–0"
1 / A1.0



DETAIL
GATE CHECK IN COUNTER
SCALE: 1" = 1'–0"
2 / A1.0

Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mckinze.com
Architecture Interiors Planning Engineering
MACKENZIE

PROJECT ENGR./ARCH: BRETT HANSON
DESIGNER:
DRAWN BY: TCU
SCALE: AS SHOWN
DATE:
CHECKED BY:
CHECKED/APPROVED BY:

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

PROJECT MANAGER: PATTY BERGSTEDT
PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE:
DATE:
CHECKED/APPROVED BY:

Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
STANDARD HOLDROOM CASEWORK
SHEET TITLE: CASEWORK DETAILS
GATE CHECK IN COUNTER

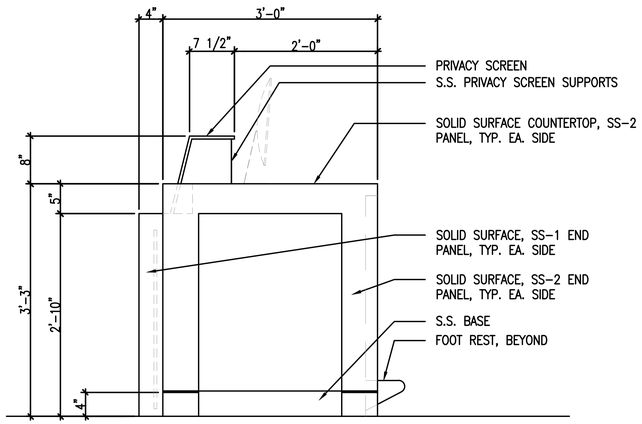
WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
A1.0

PERMIT SET

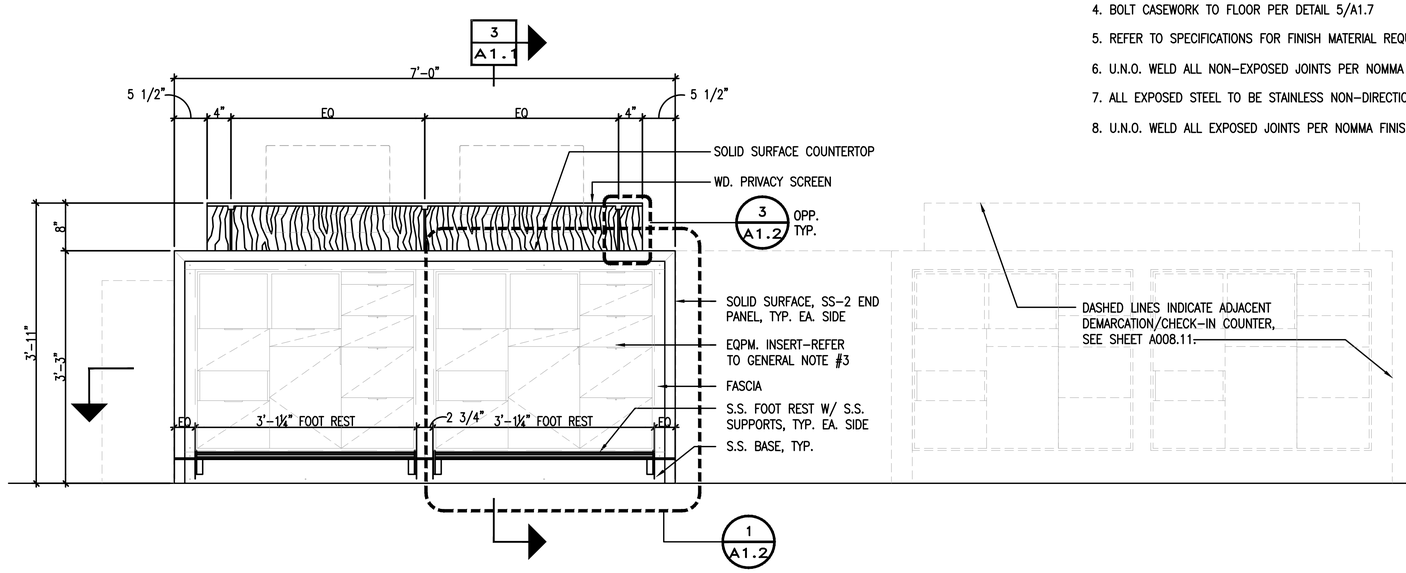
GENERAL NOTES

CONTRACTORS:

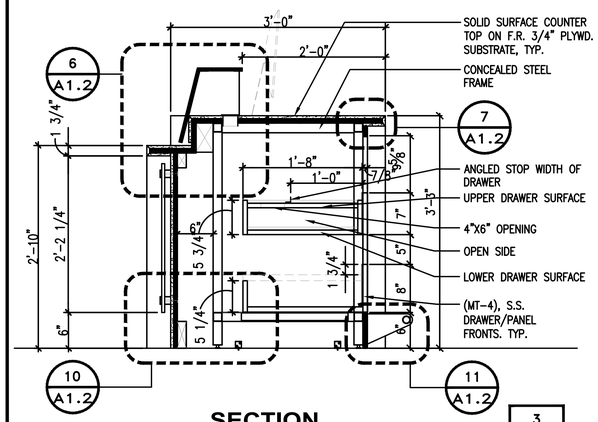
1. G.C. TO CONFIRM AND COORDINATE ALL EQUIPMENT SIZES, CLEARANCES AND ACCESS REQUIREMENTS PRIOR TO FABRICATION.
2. REFER TO FLOOR PLAN FOR GATE CHECK-IN COUNTER/BGR STAND ORIENTATION.
3. ALL CASEWORK SHALL BE CONSTRUCTED OF FIRE RESISTANT TREATED PLYWOOD WITH ALL SURFACES COVERED WITH PLASTIC LAMINATE OR SOLID SURFACE MATERIAL MEETING CLASS B OR HIGHER WHEN TESTED IN ACCORDANCE WITH ASTM E84.
4. BOLT CASEWORK TO FLOOR PER DETAIL 5/A1.7
5. REFER TO SPECIFICATIONS FOR FINISH MATERIAL REQUIREMENTS.
6. U.N.O. WELD ALL NON-EXPOSED JOINTS PER NOMMA FINISH #2 STANDARD.
7. ALL EXPOSED STEEL TO BE STAINLESS NON-DIRECTIONAL FINISH.
8. U.N.O. WELD ALL EXPOSED JOINTS PER NOMMA FINISH #1 STANDARD.



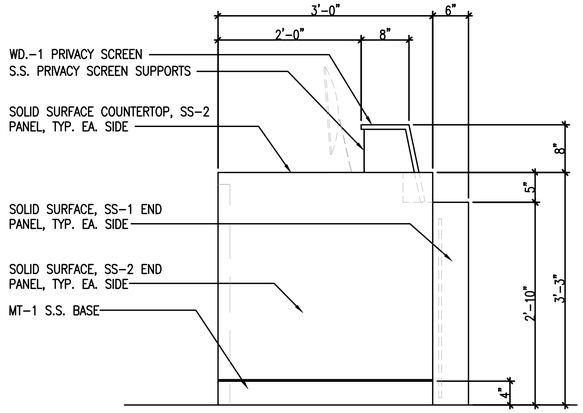
SIDE ELEVATION 1 / A1.1
SCALE:1"=1'-0"



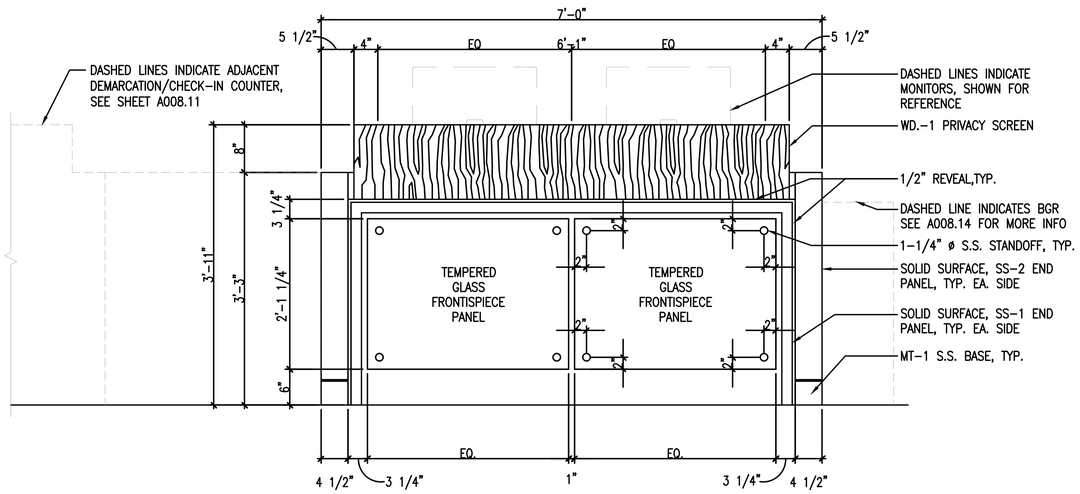
INTERIOR ELEVATION 2 / A1.1
SCALE:1"=1'-0"



SECTION 3 / A1.1
SCALE: 1"=1'-0"



SIDE ELEVATION 4 / A1.1
SCALE:1"=1'-0"



FRONT ELEVATION 5 / A1.1
SCALE:1"=1'-0"

MACKENZIE
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT DIR/ARCH:	BRETT HANSON
DESIGNER:	
DRAWN BY:	TCU
SCALE:	AS SHOWN
DATE:	
CHECKED BY:	
CHECKED/APPROVED BY:	

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

PROJECT MANAGER:	PATTY BERGSTEDT
PROJECT ENGINEER:	
DESIGN ENGINEER:	
DRAFTER:	
SCALE:	
DATE:	
CHECKED/APPROVED BY:	

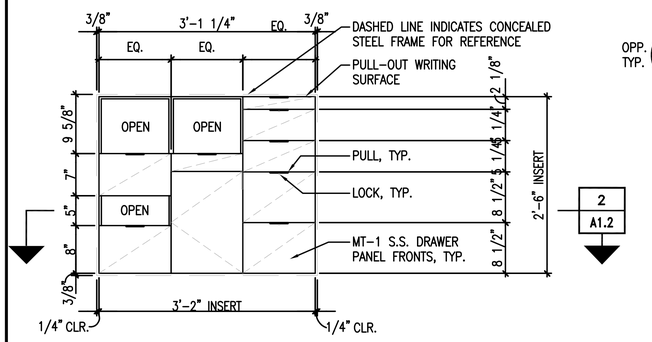
Port of Seattle
SEA-TAC INTERNATIONAL AIRPORT

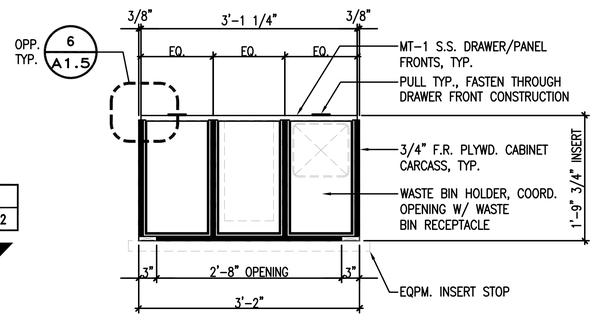
PROJECT: STANDARD HOLDROOM CASEWORK

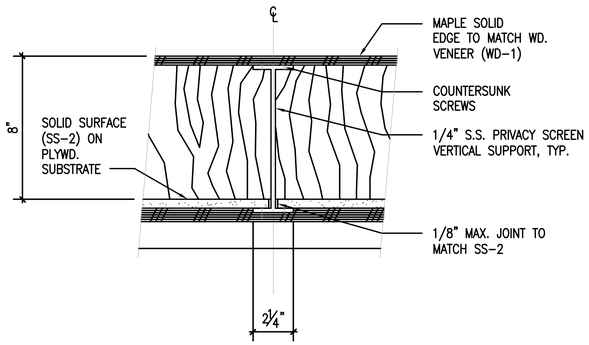
SHEET TITLE: **CASEWORK DETAILS**
GATE CHECK IN COUNTER

WORK PROJECT NO.	
CONSULTANT'S NO.	
PORT OF SEATTLE NO.	A1.1

PERMIT SET





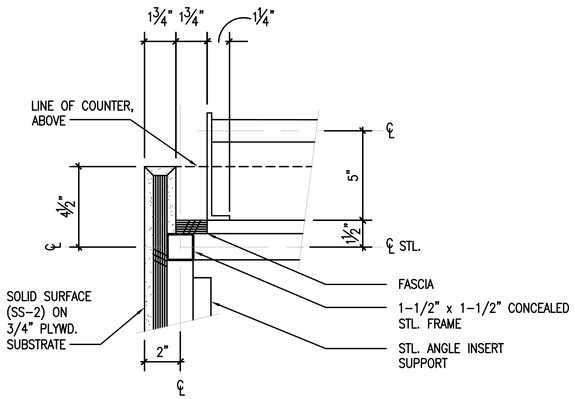


GENERAL NOTES

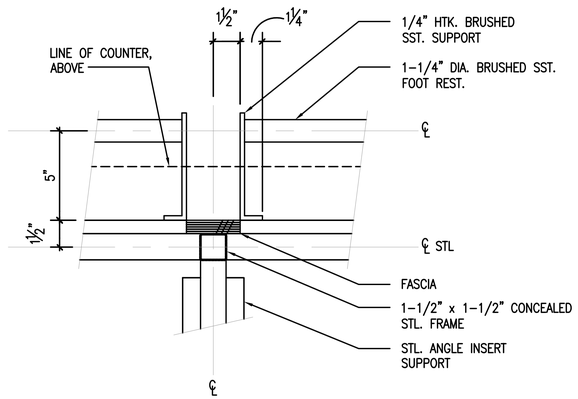
CONTRACTORS:

1. G.C. TO CONFIRM AND COORDINATE ALL EQUIPMENT SIZES, CLEARANCES AND ACCESS REQUIREMENTS PRIOR TO FABRICATION.
2. REFER TO FLOOR PLAN FOR GATE CHECK-IN COUNTER/BGR STAND ORIENTATION.
3. ALL CASEWORK SHALL BE CONSTRUCTED OF FIRE RESISTANT TREATED PLYWOOD WITH ALL SURFACES COVERED WITH PLASTIC LAMINATE OR SOLID SURFACE MATERIAL MEETING CLASS B OR HIGHER WHEN TESTED IN ACCORDANCE WITH ASTM E84.
4. BOLT CASEWORK TO FLOOR PER DETAIL 5/A1.7.
5. REFER TO SPECIFICATIONS FOR FINISH MATERIAL REQUIREMENTS.
6. U.N.O. WELD ALL NON-EXPOSED JOINTS PER NOMMA FINISH #2 STANDARD.
7. ALL EXPOSED STEEL TO BE STAINLESS NON-DIRECTIONAL FINISH.
8. U.N.O. WELD ALL EXPOSED JOINTS PER NOMMA FINISH #1 STANDARD.

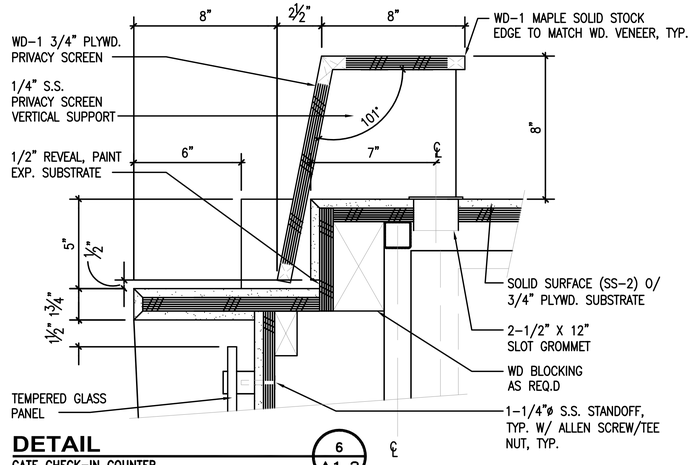
DETAIL 1/A1.2
CHECK-IN PODIUM INSERT TYPE 1
SCALE: 1" = 1'-0"

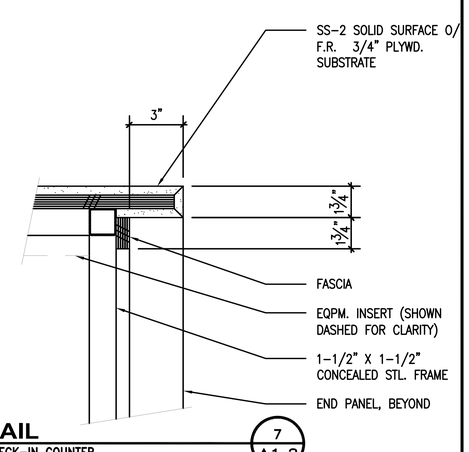


SECTION 2/A1.2
CHECK-IN PODIUM INSERT TYPE 1
1"=1'-0"

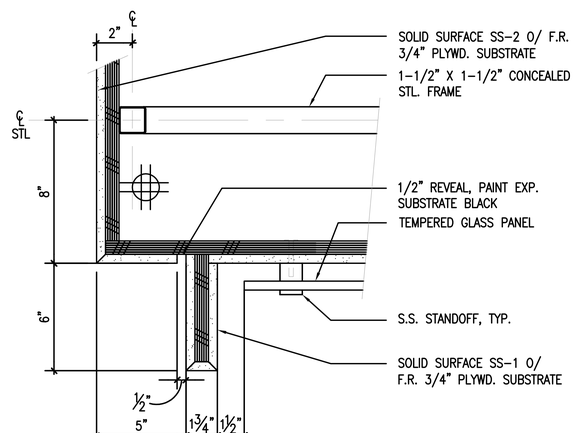


DETAIL 3/A1.2
GATE CHECK-IN COUNTER
SCALE: 3" = 1'-0"

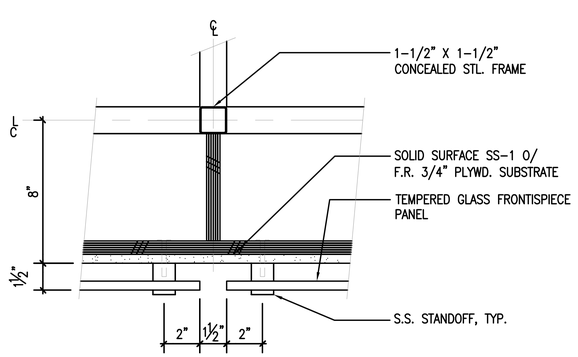




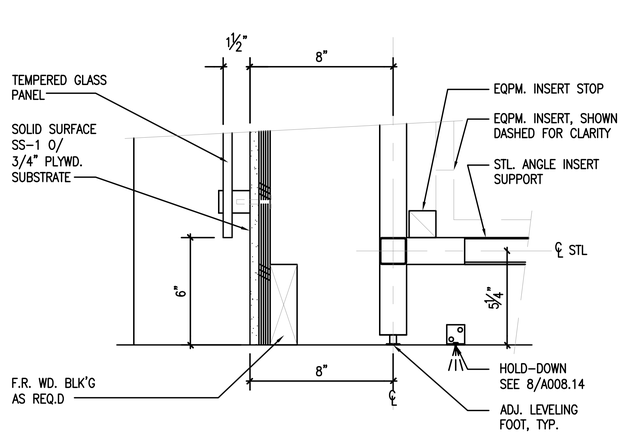
DETAIL 4/A1.2
GATE CHECK-IN COUNTER
SCALE: 3" = 1'-0"



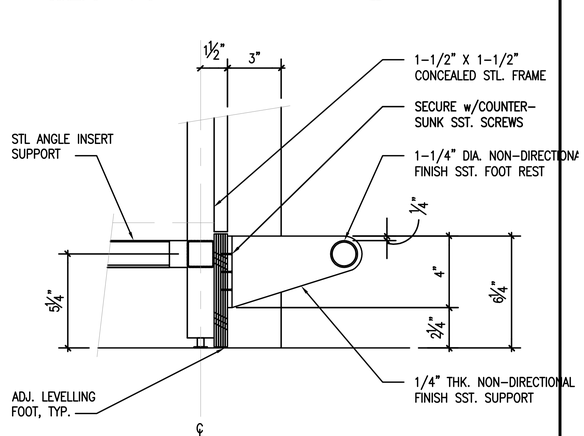
DETAIL 5/A1.2
GATE CHECK-IN COUNTER
SCALE: 3" = 1'-0"



DETAIL 6/A1.2
GATE CHECK-IN COUNTER
SCALE: 3" = 1'-0"



DETAIL 7/A1.2
GATE CHECK-IN COUNTER
SCALE: 3" = 1'-0"



DETAIL 8/A1.2
GATE CHECK-IN COUNTER
SCALE: 3" = 1'-0"

DETAIL 9/A1.2
GATE CHECK-IN COUNTER
SCALE: 3" = 1'-0"

DETAIL 10/A1.2
GATE CHECK-IN COUNTER
SCALE: 3" = 1'-0"

DETAIL 11/A1.2
GATE CHECK-IN COUNTER
SCALE: 3" = 1'-0"

MACKENZIE
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT ENGR./ARCH: BRETT HANSON
DESIGNER:
DRAWN BY: TCU
SCALE: AS SHOWN
DATE:
CHECKED BY:
CHECKED/APPROVED BY:

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

PROJECT MANAGER: PATTY BERGSTEDT
PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE:
DATE:
CHECKED/APPROVED BY:

Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
STANDARD HOLDROOM CASEWORK

SHEET TITLE: CASEWORK DETAILS
GATE CHECK IN COUNTER

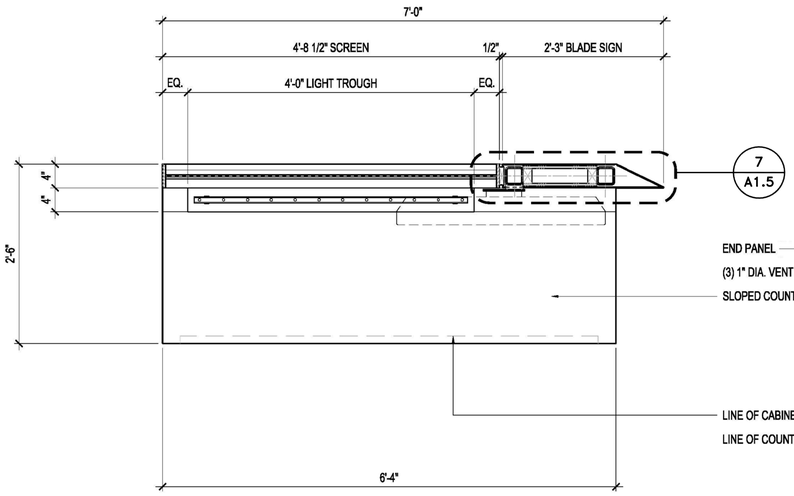
WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
A1.2

PERMIT SET

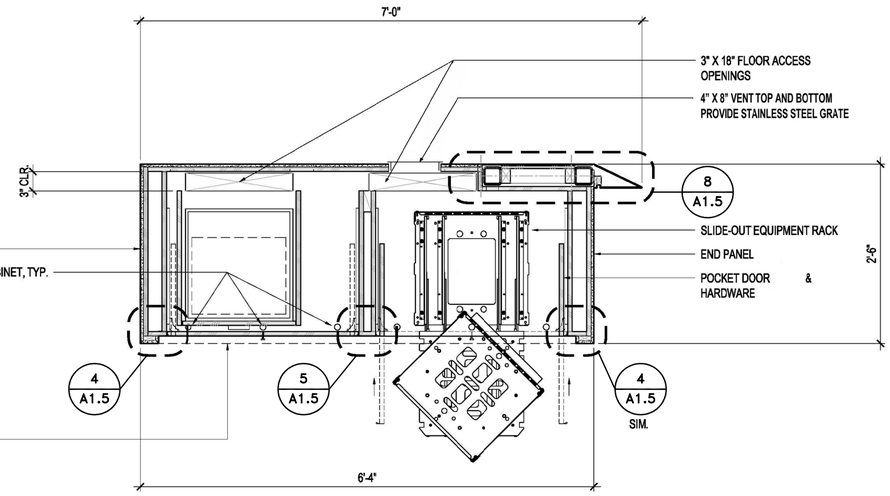
GENERAL NOTES

CONTRACTORS:

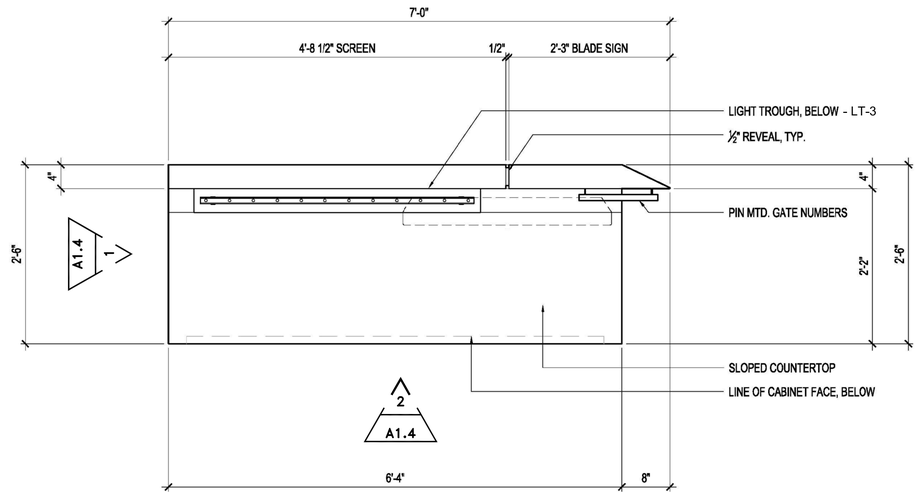
1. G.C. TO CONFIRM AND COORDINATE ALL EQUIPMENT SIZES, CLEARANCES AND ACCESS REQUIREMENTS PRIOR TO FABRICATION.
2. REFER TO FLOOR PLAN FOR GATE CHECK–IN COUNTER/BGR STAND ORIENTATION.
3. ALL CASEWORK SHALL BE CONSTRUCTED OF FIRE RESISTANT TREATED PLYWOOD WITH ALL SURFACES COVERED WITH PLASTIC LAMINATE OR SOLID SURFACE MATERIAL MEETING CLASS B OR HIGHER WHEN TESTED IN ACCORDANCE WITH ASTM E84.
4. BOLT CASEWORK TO FLOOR PER DETAIL 5/A1.7
5. REFER TO SPECIFICATIONS FOR FINISH MATERIAL REQUIREMENTS.
6. U.N.O. WELD ALL NON–EXPOSED JOINTS PER NOMMA FINISH #2 STANDARD.
7. ALL EXPOSED STEEL TO BE STAINLESS NON–DIRECTIONAL FINISH.
8. U.N.O. WELD ALL EXPOSED JOINTS PER NOMMA FINISH #1 STANDARD.



DETAIL 1 / A1.3
BACKSTAND – RIGHT PYLON
SCALE: 1" = 1'–0"
LEFT PYLON OPPOSITE SIMILAR



DETAIL 2 / A1.3
BACKSTAND – RIGHT PYLON
SCALE: 1" = 1'–0"
LEFT PYLON OPPOSITE SIMILAR



ENLARGED PLAN 3 / A1.3
BACKSTAND – RIGHT PYLON
SCALE: 1" = 1'–0"
LEFT PYLON OPPOSITE SIMILAR

Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mckinze.com
Architecture · Interiors
Planning · Engineering
MACKENZIE

PROJECT DIGR./ARCH: BRETT HANSON
DESIGNER:
DRAWN BY: TCU
SCALE: AS SHOWN
DATE:
CHECKED BY:
CHECKED/APPROVED BY:

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

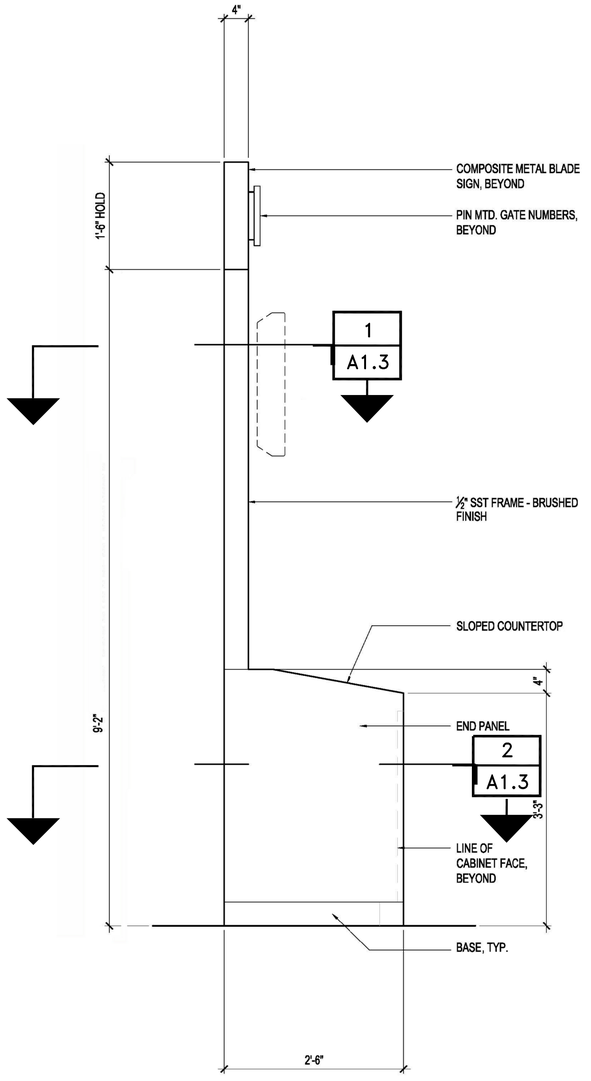
PROJECT MANAGER: PATTY BERGSTEDT
PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE:
DATE:
CHECKED/APPROVED BY:

Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
STANDARD HOLDROOM CASEWORK

SHEET TITLE: CASEWORK DETAILS BACKSTAND

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
A1.3

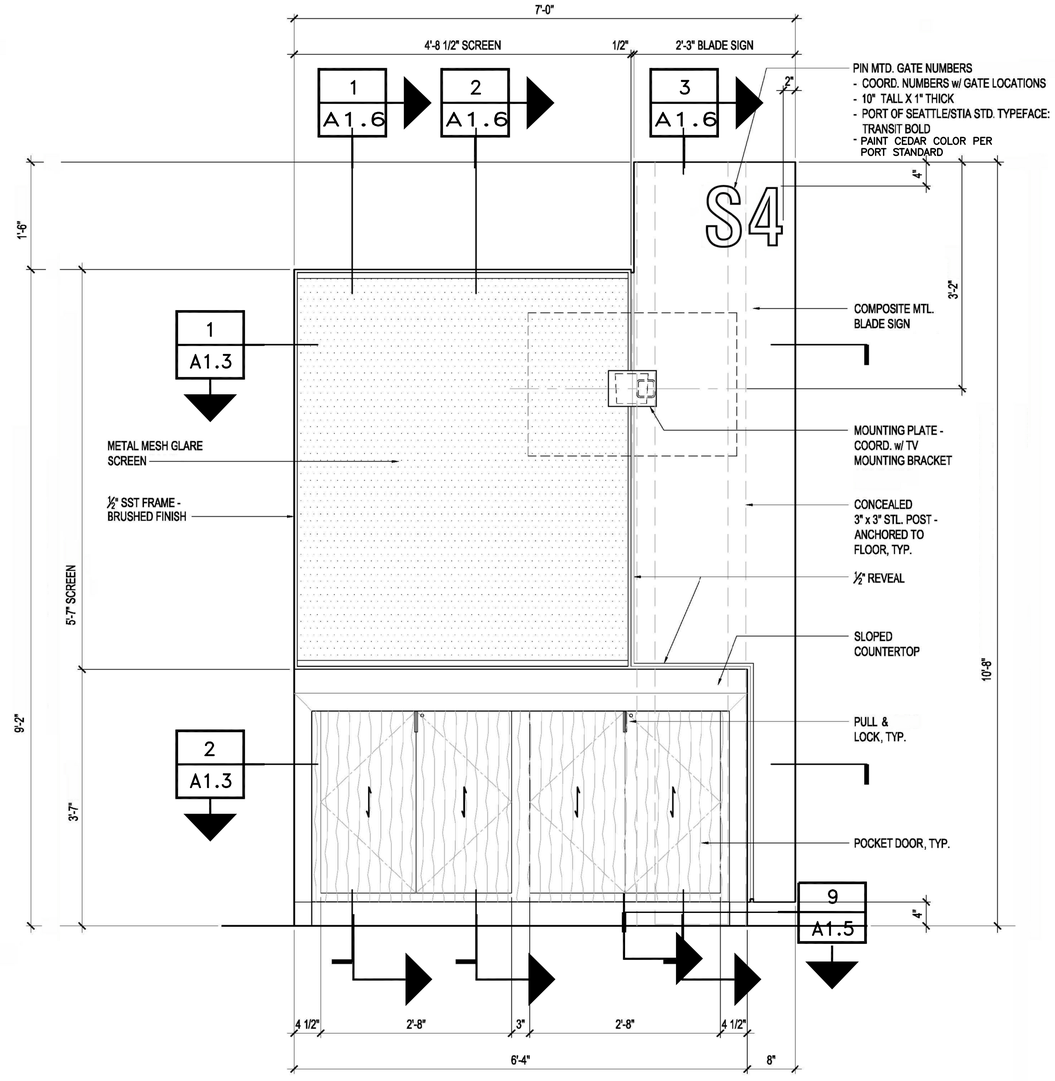
PERMIT SET



ELEVATION

BACKSTAND
SCALE: 1" = 1'–0"

1
A1.4



ELEVATION

BACKSTAND
SCALE: 1" = 1'–0"

2
A1.4

GENERAL NOTES

CONTRACTORS:

1. G.C. TO CONFIRM AND COORDINATE ALL EQUIPMENT SIZES, CLEARANCES AND ACCESS REQUIREMENTS PRIOR TO FABRICATION.
2. REFER TO FLOOR PLAN FOR GATE CHECK–IN COUNTER/BGR STAND ORIENTATION.
3. ALL CASEWORK SHALL BE CONSTRUCTED OF FIRE RESISTANT TREATED PLYWOOD WITH ALL SURFACES COVERED WITH PLASTIC LAMINATE OR SOLID SURFACE MATERIAL MEETING CLASS B OR HIGHER WHEN TESTED IN ACCORDANCE WITH ASTM E84.
4. BOLT CASEWORK TO FLOOR PER DETAIL 5/A1.7
5. REFER TO SPECIFICATIONS FOR FINISH MATERIAL REQUIREMENTS.
6. U.N.O. WELD ALL NON–EXPOSED JOINTS PER NOMMA FINISH #2 STANDARD.
7. ALL EXPOSED STEEL TO BE STAINLESS NON–DIRECTIONAL FINISH.
8. U.N.O. WELD ALL EXPOSED JOINTS PER NOMMA FINISH #1 STANDARD.

MACKENZIE
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT ENGR./ARCH: BRETT HANSON
DESIGNER:
DRAWN BY: TCU
SCALE: AS SHOWN
DATE:
CHECKED BY:
CHECKED/APPROVED BY:

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

PROJECT MANAGER: PATTY BERGSTEDT
PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE:
DATE:
CHECKED/APPROVED BY:

Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
STANDARD HOLDROOM CASEWORK

SHEET TITLE: CASEWORK DETAILS BACKSTAND

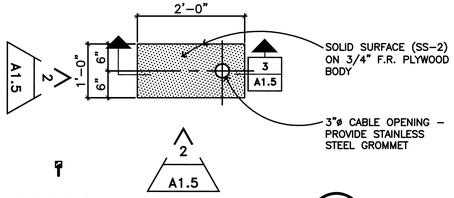
WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
A1.4

PERMIT SET

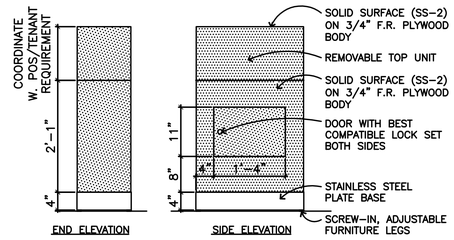
GENERAL NOTES

CONTRACTORS:

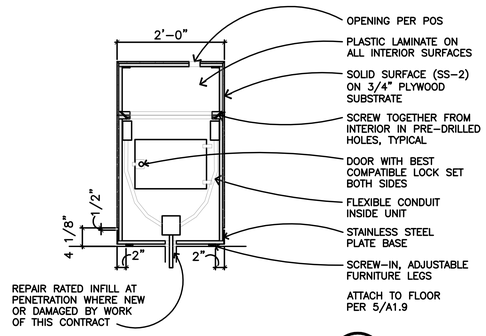
1. G.C. TO CONFIRM AND COORDINATE ALL EQUIPMENT SIZES, CLEARANCES AND ACCESS REQUIREMENTS PRIOR TO FABRICATION.
2. REFER TO FLOOR PLAN FOR GATE CHECK-IN COUNTER/BGR STAND ORIENTATION.
3. ALL CASEWORK SHALL BE CONSTRUCTED OF FIRE RESISTANT TREATED PLYWOOD WITH ALL SURFACES COVERED WITH PLASTIC LAMINATE OR SOLID SURFACE MATERIAL MEETING CLASS B OR HIGHER WHEN TESTED IN ACCORDANCE WITH ASTM E84.
4. BOLT CASEWORK TO FLOOR PER DETAIL 5/A1.7
5. REFER TO SPECIFICATIONS FOR FINISH MATERIAL REQUIREMENTS.
6. U.N.O. WELD ALL NON-EXPOSED JOINTS PER NOMMA FINISH #2 STANDARD.
7. ALL EXPOSED STEEL TO BE STAINLESS NON-DIRECTIONAL FINISH.
8. U.N.O. WELD ALL EXPOSED JOINTS PER NOMMA FINISH #1 STANDARD.



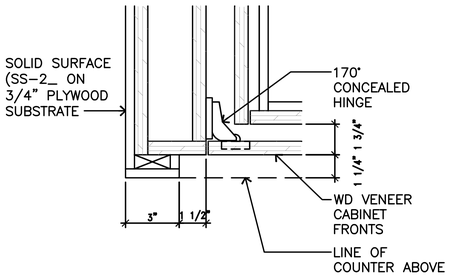
DETAIL 1 / A1.5
BOARDING GATE READER STAND
SCALE: 3/4" = 1'-0"



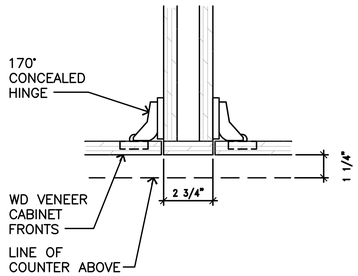
ELEVATION 2 / A1.5
BOARDING GATE READER STAND
SCALE: 3/4" = 1'-0"



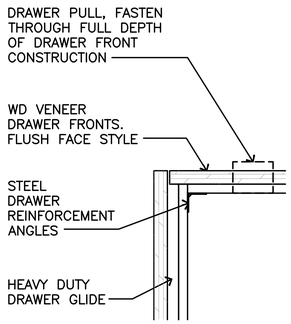
DETAIL 3 / A1.5
BOARDING GATE READER STAND
SCALE: 3/4" = 1'-0"



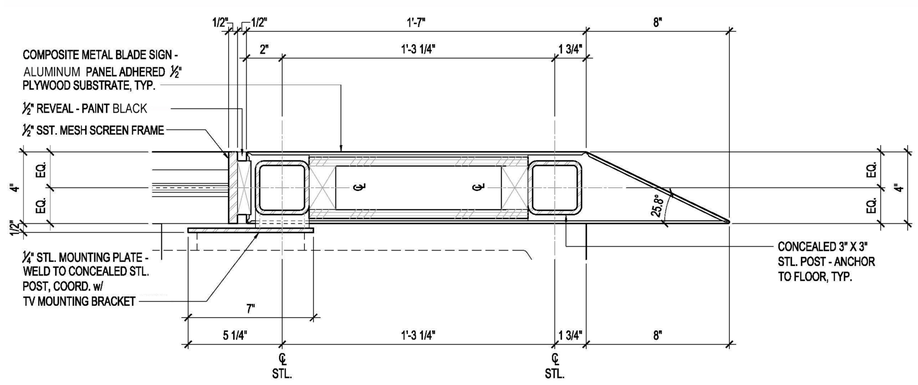
DETAIL 4 / A1.5
BACKSTAND
SCALE: 3" = 1'-0"



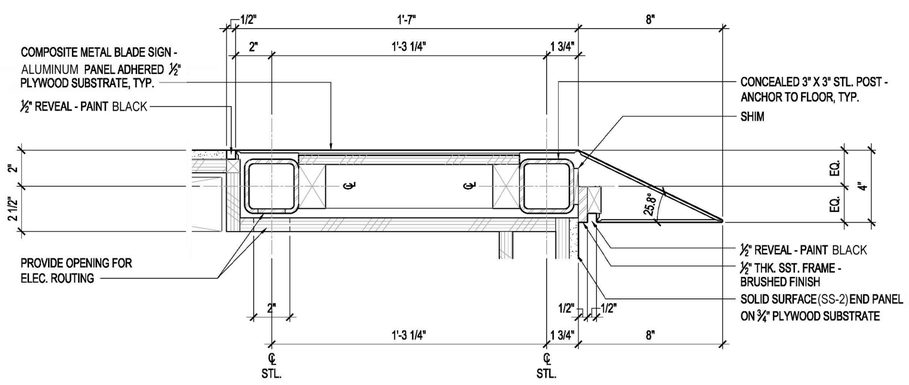
DETAIL 5 / A1.5
BACKSTAND
SCALE: 3" = 1'-0"



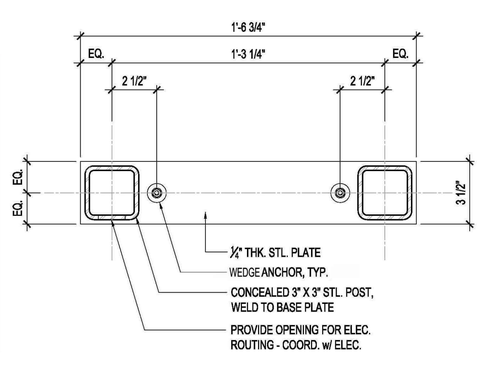
DETAIL 6 / A1.5
DRAWER
SCALE: 3" = 1'-0"



DETAIL 7 / A1.5
BACKSTAND
SCALE: 3" = 1'-0"



DETAIL 8 / A1.5
BACKSTAND
SCALE: 3" = 1'-0"



DETAIL 9 / A1.5
BACKSTAND
SCALE: 3" = 1'-0"

MACKENZIE
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture Interiors Planning Engineering

PROJECT ENGR./ARCH:	BRETT HANSON
DESIGNER:	
DRAWN BY:	TCU
SCALE:	AS SHOWN
DATE:	
CHECKED BY:	
CHECKED/APPROVED BY:	

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

PROJECT MANAGER:	PATTY BERGSTEDT
PROJECT ENGINEER:	
DESIGN ENGINEER:	
DRAFTER:	
SCALE:	
DATE:	
CHECKED/APPROVED BY:	

Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
STANDARD HOLDROOM CASEWORK

SHEET TITLE: **CASEWORK DETAILS**
GATE CHECK IN COUNTER AND BACKSTAND

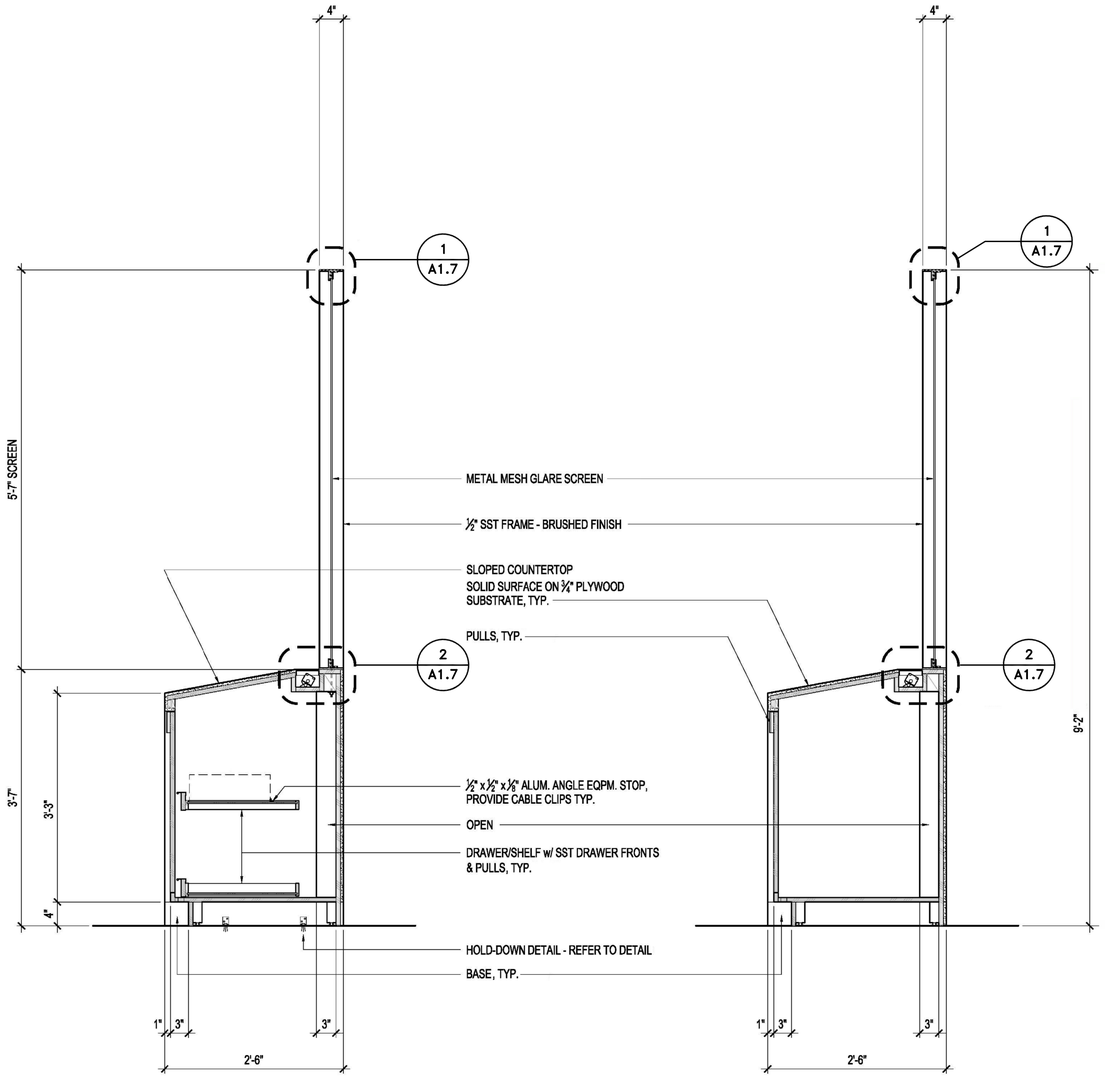
WORK PROJECT NO.	
CONSULTANT'S NO.	
PORT OF SEATTLE NO.	A1.5

PERMIT SET

GENERAL NOTES

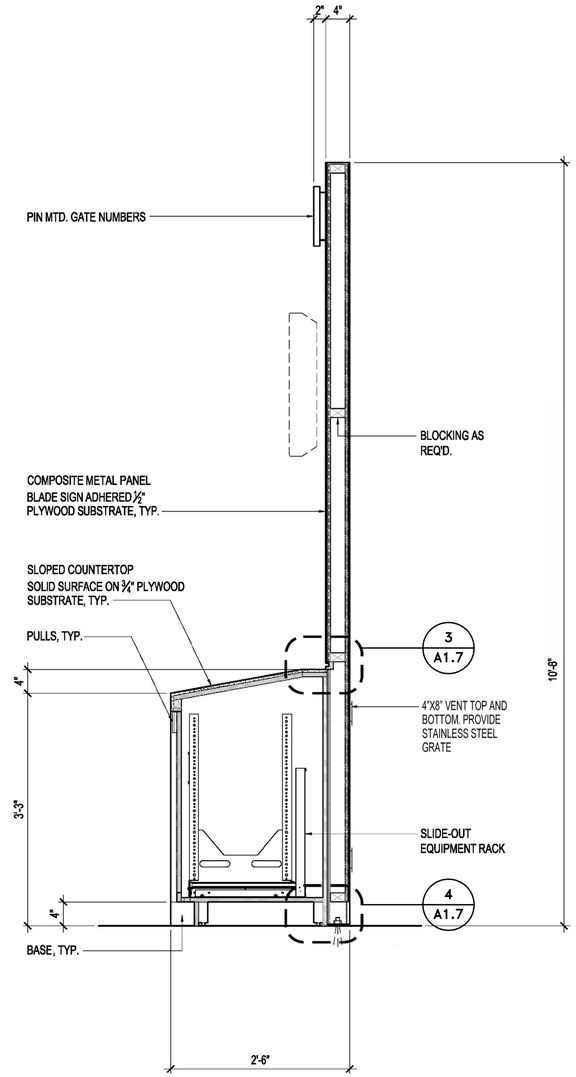
CONTRACTORS:

1. G.C. TO CONFIRM AND COORDINATE ALL EQUIPMENT SIZES, CLEARANCES AND ACCESS REQUIREMENTS PRIOR TO FABRICATION.
2. REFER TO FLOOR PLAN FOR GATE CHECK–IN COUNTER/BGR STAND ORIENTATION.
3. ALL CASEWORK SHALL BE CONSTRUCTED OF FIRE RESISTANT TREATED PLYWOOD WITH ALL SURFACES COVERED WITH PLASTIC LAMINATE OR SOLID SURFACE MATERIAL MEETING CLASS B OR HIGHER WHEN TESTED IN ACCORDANCE WITH ASTM E84.
4. BOLT CASEWORK TO FLOOR PER DETAIL 5/A1.7
5. REFER TO SPECIFICATIONS FOR FINISH MATERIAL REQUIREMENTS.
6. U.N.O. WELD ALL NON–EXPOSED JOINTS PER NOMMA FINISH #2 STANDARD.
7. ALL EXPOSED STEEL TO BE STAINLESS NON–DIRECTIONAL FINISH.
8. U.N.O. WELD ALL EXPOSED JOINTS PER NOMMA FINISH #1 STANDARD.



SECTION 1
BACKSTAND
SCALE: 1" = 1'–0" A1.6

SECTION 2
BACKSTAND
SCALE: 1" = 1'–0" A1.6



SECTION 3
BACKSTAND
SCALE: 1" = 1'–0" A1.6

MACKENZIE
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT ENGR./ARCH: BRETT HANSON
DESIGNER:
DRAWN BY: TCU
SCALE: AS SHOWN
DATE:
CHECKED BY:
CHECKED/APPROVED BY:

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

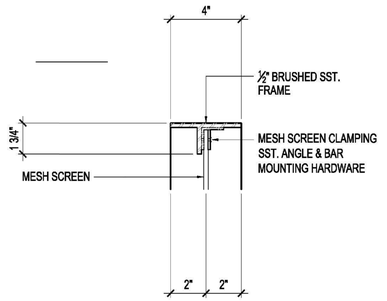
PROJECT MANAGER: PATTY BERGSTEDT
PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE:
DATE:
CHECKED/APPROVED BY:

Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
STANDARD HOLDROOM CASEWORK

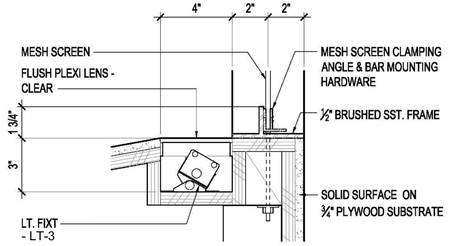
SHEET TITLE: CASEWORK DETAILS
BACKSTAND

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
A1.6

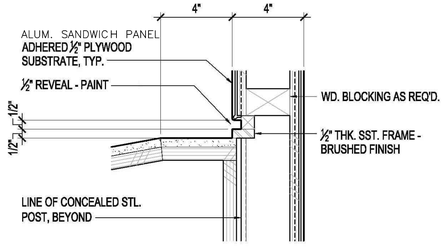
PERMIT SET



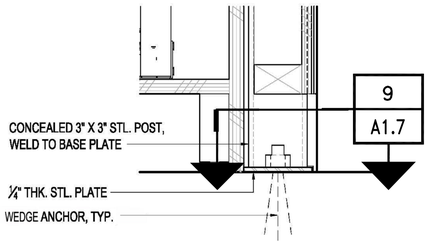
DETAIL 1 / A1.7
BACKSTAND
SCALE: 3" = 1'-0"



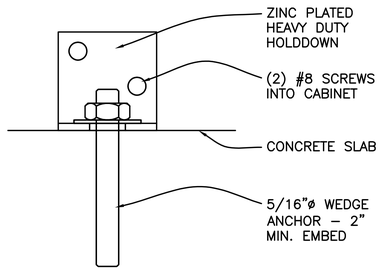
DETAIL 2 / A1.7
BACKSTAND
SCALE: 3" = 1'-0"



DETAIL 3 / A1.7
BACKSTAND
SCALE: 3" = 1'-0"



DETAIL 4 / A1.7
BACKSTAND
SCALE: 3" = 1'-0"



DETAIL 5 / A1.7
CASEWORK HOLD DOWN
SCALE: FULL

GENERAL NOTES

CONTRACTORS:

1. G.C. TO CONFIRM AND COORDINATE ALL EQUIPMENT SIZES, CLEARANCES AND ACCESS REQUIREMENTS PRIOR TO FABRICATION.
2. REFER TO FLOOR PLAN FOR GATE CHECK-IN COUNTER/BGR STAND ORIENTATION.
3. ALL CASEWORK SHALL BE CONSTRUCTED OF FIRE RESISTANT TREATED PLYWOOD WITH ALL SURFACES COVERED WITH PLASTIC LAMINATE OR SOLID SURFACE MATERIAL MEETING CLASS B OR HIGHER WHEN TESTED IN ACCORDANCE WITH ASTM E84.
4. BOLT CASEWORK TO FLOOR PER DETAIL 5/A1.7
5. REFER TO SPECIFICATIONS FOR FINISH MATERIAL REQUIREMENTS.
6. U.N.O. WELD ALL NON-EXPOSED JOINTS PER NOMMA FINISH #2 STANDARD.
7. ALL EXPOSED STEEL TO BE STAINLESS NON-DIRECTIONAL FINISH.
8. U.N.O. WELD ALL EXPOSED JOINTS PER NOMMA FINISH #1 STANDARD.

MACKENZIE
Portland 503.224.9560 Vancouver 360.695.7879 Seattle 206.749.9993
www.mcknze.com
Architecture · Interiors
Planning · Engineering

PROJECT DYGR./ARCH: BRETT HANSON
DESIGNER:
DRAWN BY: TCU
SCALE: AS SHOWN
DATE:
CHECKED BY:
CHECKED/APPROVED BY:

REVISIONS

NO.	DATE	BY	DESCRIPTION	APP'D	NO.	DATE	BY	DESCRIPTION	APP'D

PROJECT MANAGER: PATTY BERGSTEDT
PROJECT ENGINEER:
DESIGN ENGINEER:
DRAFTER:
SCALE:
DATE:
CHECKED/APPROVED BY:

Port of Seattle
PROJECT: SEA-TAC INTERNATIONAL AIRPORT
STANDARD HOLDROOM CASEWORK
SHEET TITLE: CASEWORK DETAILS
GATE CHECK IN COUNTER

WORK PROJECT NO.
CONSULTANT'S NO.
PORT OF SEATTLE NO.
A1.7

PERMIT SET