Port Authority Wayfinding Manual

1

1.1

As a passenger, finding your way is a critical aspect of the airport experience. A great wayfinding experience allows you to seamlessly enjoy every step of the journey — and a negative experience can ruin an entire trip. With this manual, the Port Authority of New York and New Jersey (Port Authority) ensures that a cohesive, consistent wayfinding experience is provided across all Port Authority Aviation facilities.

This manual provides guidance on all factors that help passengers find their way. It outlines key principles of wayfinding and provides detailed specifications for developing, implementing, and maintaining our signage and information system. With a multitude of facilities, parties, and processes involved, it's critical that all stakeholders follow these guidelines to provide a cohesive experience for passengers, visitors, and employees navigating to, from, and through all our airport facilities.

The success of a wayfinding system lies not only in its design, but in its ongoing maintenance. The use, expansion, and continuous updating of this manual is critical. It requires input from all stakeholders who serve passengers at Port Authority Aviation facilities. As new situations arise, this manual will be updated so it remains useful and applicable to all situations.

1.1.1 Intent

This manual provides standards, direction, and regulations for the wayfinding system at Port Authority Aviation facilities. All stakeholders responsible for providing wayfinding should refer to this document when undertaking plans to design new or updated spaces. This ensures that wayfinding signage is planned and designed consistently regardless of the architect or information designer.

It does not provide detailed plans tailored to every facility. It is the responsibility of facility operators to determine how to apply these standards to each specific situation.

This manual is a living document intended to be responsive to current and future challenges. Users of this manual should have a general overview of all sections and in-depth understanding of relevant sections that address their needs. Make sure to check periodically to ensure it reflects current situations and processes. If issues arise that conflict or are not covered by the manual, contact the Port Authority Program Manager of Wayfinding and Connections Solutions (Wayfinding Program Manager).

The manual is divided into ten chapters:

Introduction
Overview and purpose of the manual, explaining its intent, guidelines on its usage, and the process of implementing wayfinding elements in a facility, whether adding one sign or implementing the system in an entirely new terminal.

Wayfinding Vision
This section outlines key tenets upon which a successful wayfinding system is based. Our wayfinding vision sets a high-level understanding of top priorities when shaping an exceptional wayfinding experience that meets the needs of users.

Wayfinding Guidelines
Here we provide an overview of the primary factors informing wayfinding design. These include spatial zoning (positioning of wayfinding, art, branding, and advertising in the environment), terminology, numbering, and information strategy.

Programming & Placement
You'll find guidance here on how to determine the optimal sign type, content, and placement of all elements based on passenger flow and information need at each step of the journey.

Graphic Design
This chapter provides guidelines for all elements necessary to the design of signs and other wayfinding elements.

Sign Types
This section includes guidelines for both static and dynamic elements, organized by sign type. Detailed graphic templates illustrate how grid, layout, and sizing are applied.

Construction
This chapter provides design-intent level guidance on the structure design and fabrication of signs.

Reviews & Approvals
Here we outline the relevant application processes for approval.

Governance
This chapter outlines management, proper maintenance, and enforcement expectations of the wayfinding system.

Resources
Find links to additional manuals and references related to the wayfinding system.

1.1.2 Who This Manual Is For

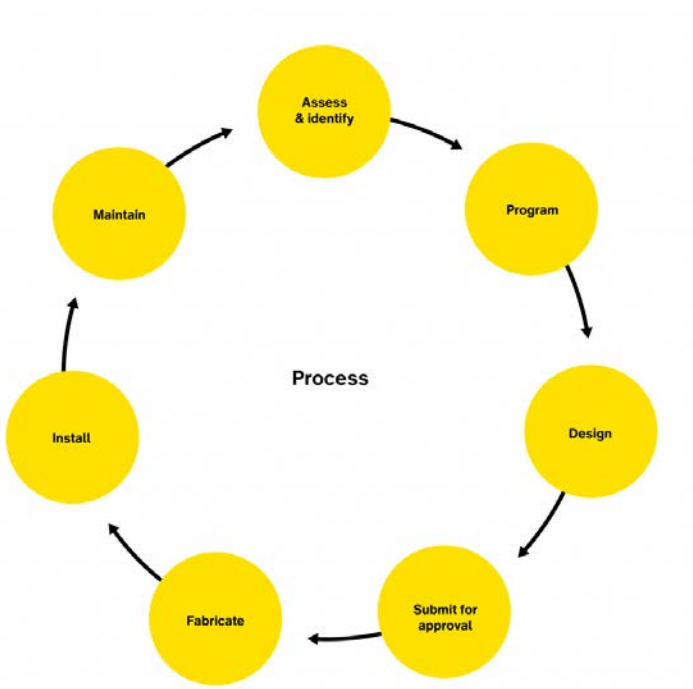
This manual serves as the standards and reference for designers, stakeholders, and operators of Port Authority Aviation facilities. Users may include:

- **Management** involved in wayfinding-related decisions
- **Developers and architects** developing plans for airport facilities, AirTrain stations, and connecting services to Port Authority airports
- **Terminal operators** responsible for operations within a facility
- **Designers** developing signage and elements for Port Authority Aviation facilities
- **Fabricators and contractors** responsible for constructing and supplying wayfinding signage, elements, plans, services, and technologies
- **Maintenance staff** responsible for upkeep of signage and wayfinding elements
- **Airport operations users** such as airlines, enforcement agencies, commercial entities, and advertising providers

1.2

The implementation and maintenance of any wayfinding system is an ongoing process. If you are responsible for adding, monitoring, updating, or maintaining wayfinding in any Port Authority Aviation facility, refer to this manual often to ensure the wayfinding experience is always consistent and as user friendly as possible.

1.2.1 Process Steps



1. Assess environment & identify needs
2. Program signs in sign plan
3. Design signs
4. Submit to Port Authority for review & approval
5. Fabricate signs
6. Install
7. Maintain

A new facility presents a unique opportunity to embed natural wayfinding. Lessening complex user flows in the planning phase will reduce the need for wayfinding elements. When approaching a new development or significant renovation, involve a wayfinding expert early in the design process to help assess and define optimal flows and messaging.

For existing facilities with less substantive changes, maintenance is critical to ensure the wayfinding system remains effective. Changes in passenger flows, construction that affects visibility, or the addition of new elements in the environment from other parties may affect the logic of the wayfinding system. If additional signage or information is needed, follow the relevant process to implement the new intervention.

2

2.1

In order to navigate an airport, passengers and visitors perform a task called wayfinding. This refers to the process of navigating to a destination using direct and indirect cues. In this manual, wayfinding refers to the process as well as the information sources and indications provided.

Wayfinding is more than just signage. It includes subtle cues from light and architectural forms, voice announcements and staff directions, mental maps from past experiences and media, and activity and flow patterns of other passengers.

Each passenger experiences wayfinding in their own personal way. They are influenced by a range of factors, such as stress level, familiarity with travel, cultural background, physical and mental abilities, and emotions. This means there are infinite ways for passengers to experience finding their way in an airport.

Ensuring that users can navigate with ease is at the core of world-class customer experience.

People who are comfortable and confident in finding their way reach their destinations efficiently. This makes them more open to new experiences. It unleashes the potential for smoother operations for airline tenants, increased engagement with retail and restaurants, and higher satisfaction with the airport facility. Ensuring that users can navigate with ease is at the core of world-class customer experience.

This manual offers a comprehensive approach and resources based on the Wayfinding Journey. By approaching wayfinding from the passenger's perspective, you can ensure that you anticipate real scenarios and address

passenger needs.

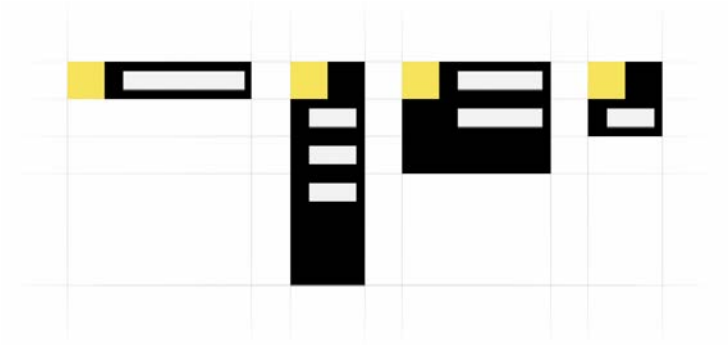
2.1.1 Three Pillars

Three pillars form the foundation of a world-class wayfinding experience: **Brilliant Basics**, **Less is More**, and **Surpass Expectations**.

By focusing on consistent basic elements, a restrained approach to providing information, and creating moments of delight, these pillars ensure an exceptional wayfinding experience.

Brilliant Basics
Wayfinding content and design should be based on international standards and best practices. It must be clear, comprehensive, consistent, conspicuous, and contextual.

Getting the basics right—like clarity of information, consistent visuals, and conspicuous placement—is hard to do. Investing in this fundamental practice will help cement Port Authority airports in the top ranks of airport experience.



Wayfinding should be clear, comprehensive, consistent, conspicuous, and contextual.

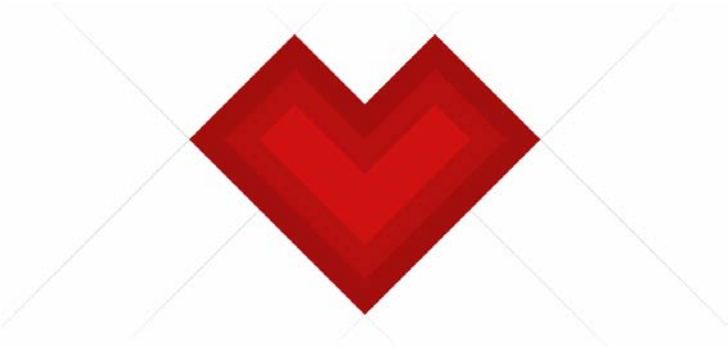
Less is More
The key to successful wayfinding is a streamlined, easy-to-perceive environment. It should be free of visual clutter to allow optimal balance of architecture, art, interior, branding, and commercial activities. Wayfinding elements must be carefully designed and integrated into the architectural design and scale. Do not place more signs than necessary to provide the right information at the right time.

Keeping wayfinding up-to-date is crucial to providing a reliable, enjoyable experience. Often this means limiting and removing information, rather than adding new information.

Having less to look at often means people see more, more clearly.

Surpass Expectations
Getting the basics right ensures that passengers are relaxed, clear minded, and well informed. This unlocks the

opportunity to introduce delightful, only-in-NY/NJ “wow” experiences that they’ll love, inspiring them to come back to the New York/New Jersey region soon.

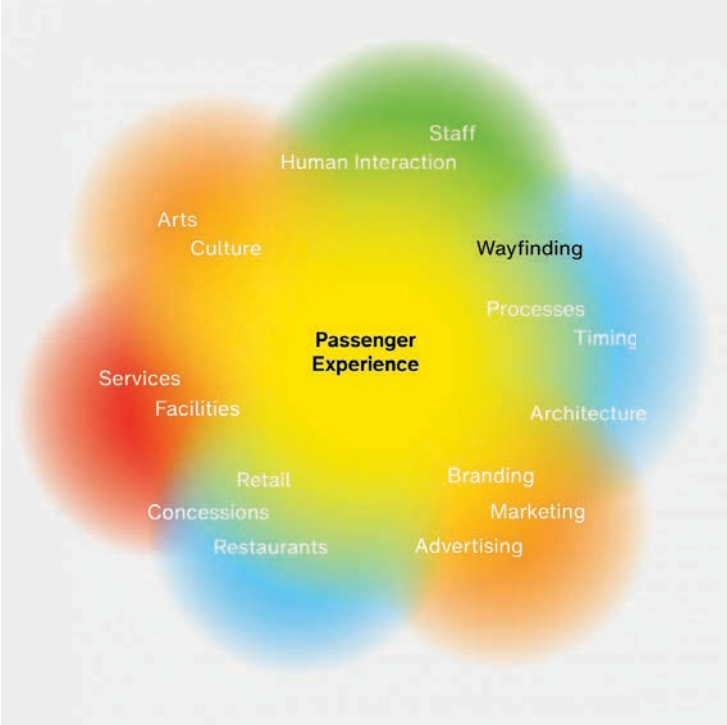


2.2

2.2.1 Customer Experience

Customer experience is the sum of all interactions and perceptions along a journey. It is influenced by all touchpoints a passenger engages with. This begins with preparing at home and spans the full journey of going to, navigating through, and leaving a facility.

Touchpoints along this journey can be online, on a roadway, on public transit, at parking, at check-in, at security, while waiting at the gate, and through all moments in between. Many of these touchpoints are interlinked, contributing to the perception of the overall experience.



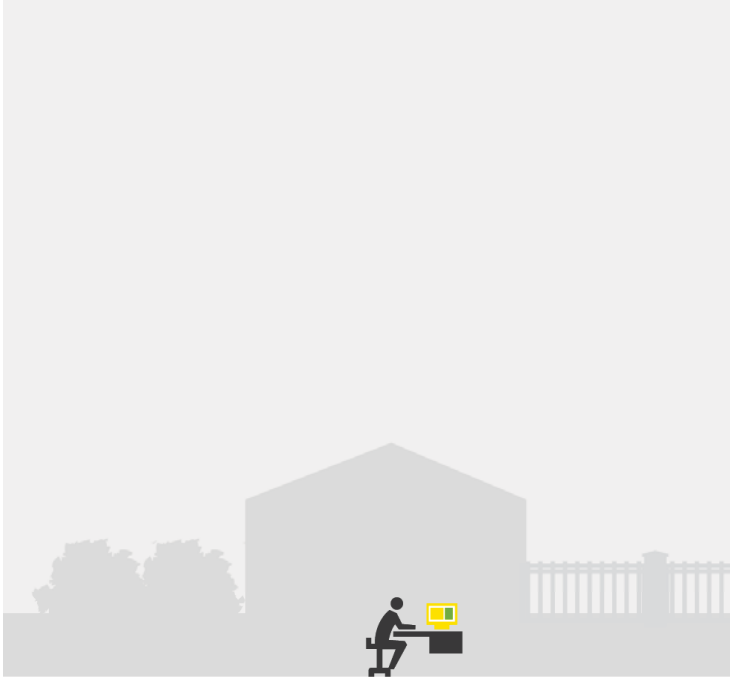
Aspects of the entire passenger experience

The wayfinding journey is a critical portion of the passenger experience and has a significant impact on how an airport is perceived. To define the wayfinding journey and understand decisions made along the way, always consider the range of users, their needs, and the stages through which they progress.

2.2.2 The Departing Journey

The departing journey starts at home. It takes the passenger to the airport, through check-in and security, past leisure facilities, to the gate, and onto the plane. Each stage, and the incremental steps in between, comes with different information needs.

Please note: The following graphics are for illustrative purposes only. They are not actual sign designs. For actual sign designs, see Sign System.



1.At Home

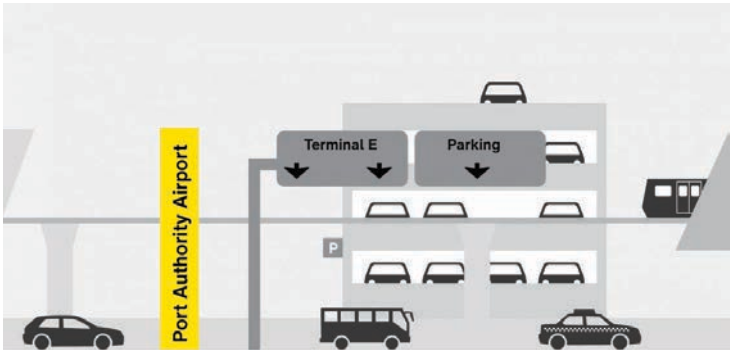
Wayfinding Consideration
Integrated datasets (flights, traffic, parking, wait times) shared across multiple touchpoints (web, mobile) ensure consistent and accurate information, so passengers can make informed decisions about how and when to leave for the airport.

2.Getting There

Wayfinding Consideration
Empowering passengers with information allows them to make informed decisions about getting to the airport. A cab or rideshare may be the most convenient, but not be the fastest. Transparent information, such as costs, helps demystify the options.

3.AirTrain Station

Wayfinding Consideration
This is the first point of entry for many airport users. Strong identification of the airport establishes a sense of arrival to the airport campus. Ease of use can be enhanced by a strengthened connection between public transportation, ground transportation, and the airport. This can be done through consistent naming and terminology, accurate flight information, and seamless payment (or even free usage).

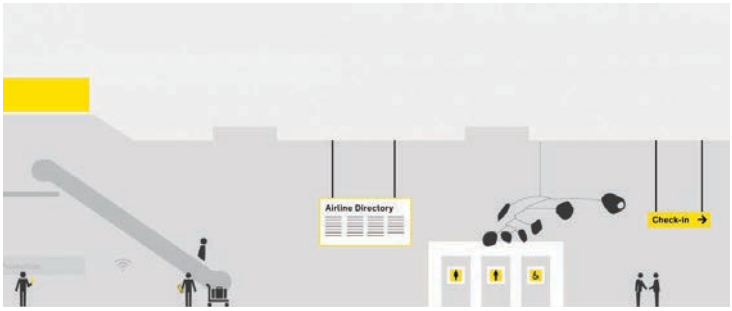


4.Roadways

Wayfinding Consideration
Create a sense of arrival to the airport campus with an identifying landmark. This identifier can be a sculpture, installation, message, or a combination, and prompts excitement for the trip. Identify terminals and entrances with intuitive naming and numbering clearly visible from the roadways.

5.Arriving to the Terminal

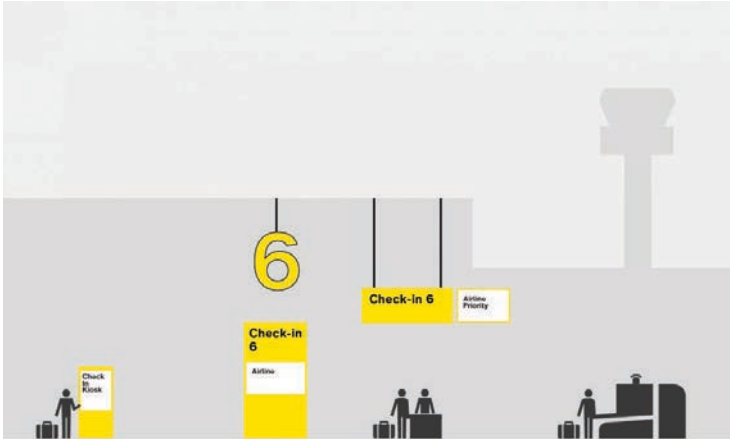
Consideration
Sense of arrival is crucial, regardless of mode of transport. It harnesses passengers' excitement for travel, instead of reinforcing it as a stressful process.



6.Departures Hall

Wayfinding Consideration
Passengers have different needs; services at this step should be organized by level of engagement. Long sight lines make it easy for all passengers to scan the area and find the right check-in service.

- **Low engagement:** Checked in online, no baggage to drop
- **Medium engagement:** Checked in online, need to drop baggage and/or get boarding pass
- **High engagement:** Have additional requests and/or need documents reviewed

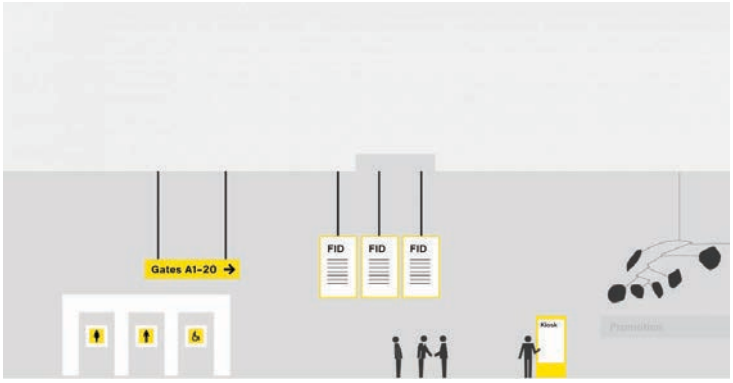


7.Check-in

Wayfinding Consideration
Whether behind a counter or roaming at kiosks, check-in should have staff available to assist passengers. With new technologies, like biometric and facial scanning, passengers can check-in and drop baggage themselves.

8.Security

Wayfinding Consideration
Providing real-time wait times (not just at the terminal) for security queues ensures passengers can arrive at the airport and get in line with enough time to get to their gate.



9.Post-security

Wayfinding Consideration
Passengers' first question: *Where's my gate?* To answer, provide clear directionals. Second question: *Is my flight on time?* For this, include walking times on FIDs in dwell areas after security so passengers can budget their time.

A combination of digital and physical tools allows passengers to curate their own leisure time and discover what's around them.

10.Concourse

Wayfinding Consideration
At this point, passengers know where they are going, so wayfinding plays a secondary role. Take this opportunity to highlight sense of place or commercial opportunities.

Provide tools to learn what's nearby and choose what to do—whether reading at the seating area, drinking coffee at a cafe, using the restroom, or buying souvenirs at a gift shop. Digital tools can be tailored to user preferences (including languages and legibility) to ensure optimal communication.

11.Boarding

Wayfinding Consideration

In the gate area, passengers expect flight status information. In waiting periods, they can also be engaged with dynamic entertainment and advertising. When boarding time is imminent, dynamic screens should display flight and boarding status information.

2.2.3 The Arriving Journey

The arriving journey begins at the gate. International passengers get passports checked, collect luggage, and clear customs. At this point, they may need information on their destination before finding ground transportation and leaving the airport. Domestic passengers have a simpler journey, but there still are several touchpoints requiring clarity, including baggage claim, ground transportation, and parking.

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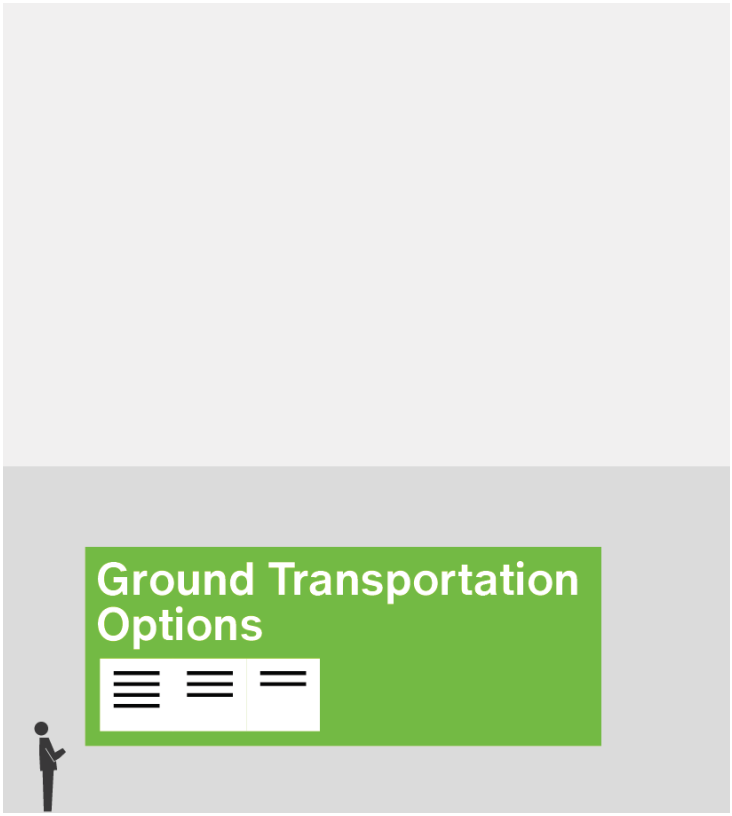
1.Arrival

Consideration
Provide a warm welcome to the airport with a clear welcome message or enjoyable physical experience. Passengers can be groggy or tired or confused from the flight. Their first interaction with the airport should improve their mood and provide a sense of arrival to the region.

2.Baggage Claim

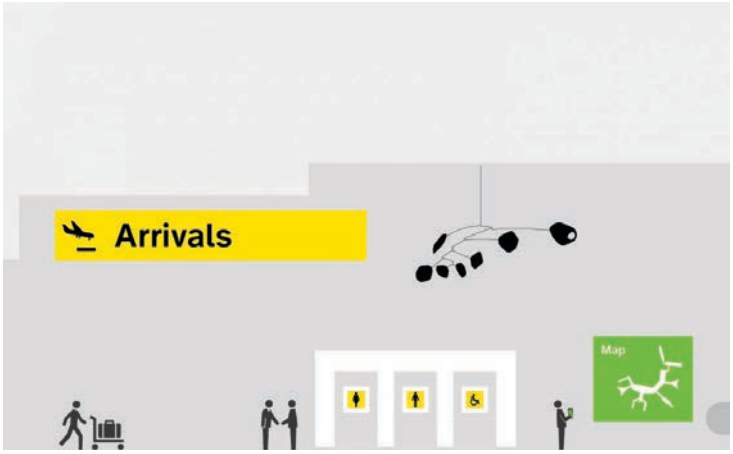
Consideration
Passengers are already planning their exit from the airport, potentially looking up rideshare information, AirTrain schedules, or taxi wait times.

The ideal baggage experience requires no waiting, with digital tracking throughout. Provide relevant information and wait-time estimates to give confidence and streamline future steps.



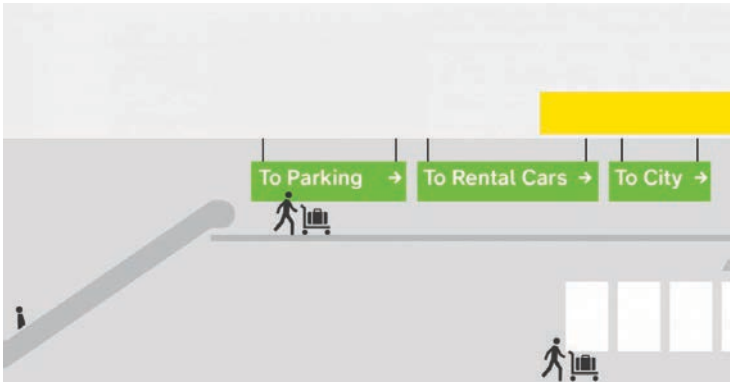
3.Transportation Options

Consideration
Present a clear and impartial list of options with enough information to choose a preferred mode.



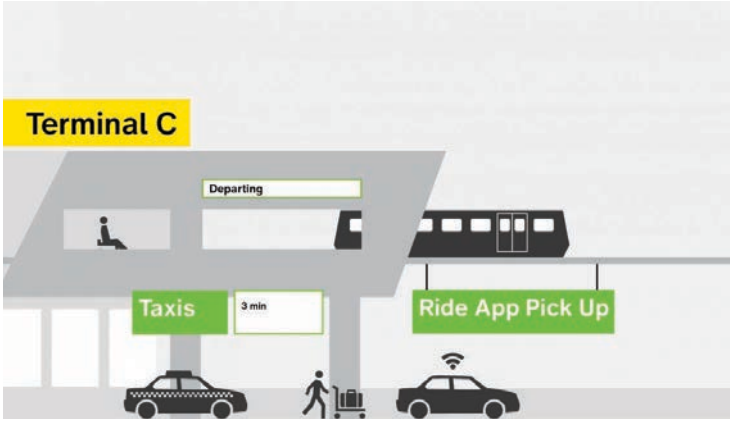
4.Arrivals Hall

Consideration
Passengers exiting to ground transportation may need assistance to make the right decision. For example, taxis may seem the most prominent, but may not be the best option for everyone. Information about options can ensure passengers feel empowered they are making the right choice, setting a great first impression of the region.



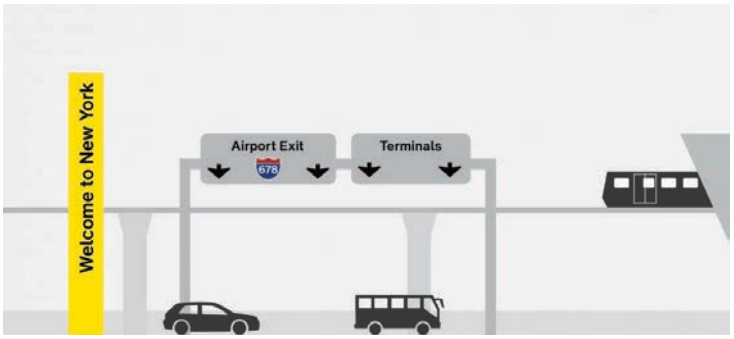
5.Connection to AirTrain

Consideration
Directions should focus on the destinations reached, not the process to get to them. No one comes to New York to visit the AirTrain. They use it to get to where they want to go. Therefore, prioritize destinations and paired with secondary AirTrain information.



6.Connection to Ground Transportation

Consideration
Knowing where to go is as important as choosing a transportation option. Clearly marked zones for each type of pick up reduce stress, as does real-time information on taxi wait times.



7.Roadway Exit

Consideration
Passengers pass an identifying marker that confirms they have arrived in New York City. This identifier can be a sculpture, installation, message, or a combination.

8.Connections to Transit

Consideration
A clear welcome message confirms passengers have left the airport and have arrived in New York City. This identifier can be a sculpture, installation, message, or a combination.

Ease of use can be enhanced by a strengthened connection between public transportation, ground transportation, and the airport. This can be done through consistent naming and terminology, accurate transit information, and fees built into the cost of a transit ticket —or even free usage.

2.2.4 The Connecting Journey

The connecting journey is similar to arriving and departing, as the transfer process involves both. Transfer passengers need to be informed about their next flight, potentially seek a transfer desk, and find their new gate. International passengers need to claim and re-check bags, as well as clear customs.

Please note: The following graphics are for illustrative purposes only. They are not actual sign designs. For actual sign designs, see Sign System.

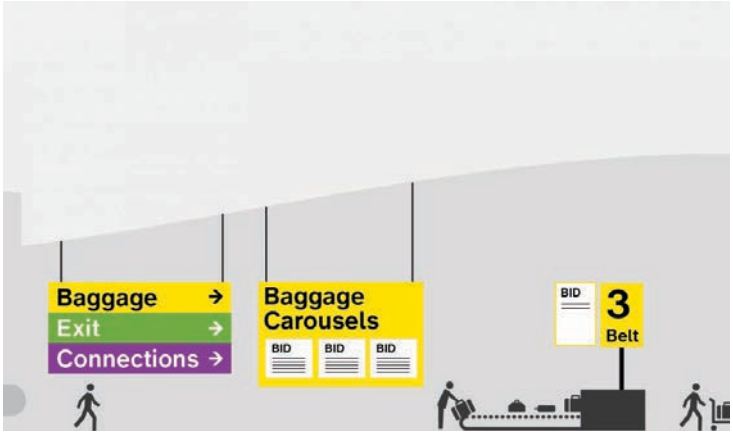
1.Arrival

Wayfinding Consideration
Provide a warm welcome to the airport with a clear welcome message or enjoyable physical experience. Passengers are groggy or tired or confused from the flight. Their first interaction with the airport should improve their mood and provide a sense of arrival to the region.

Passengers are presented relevant connecting flight data as soon as they deplane. The distance to their next gate is clearly conveyed through the wayfinding strategy and terminal map, providing confidence in planning activities.

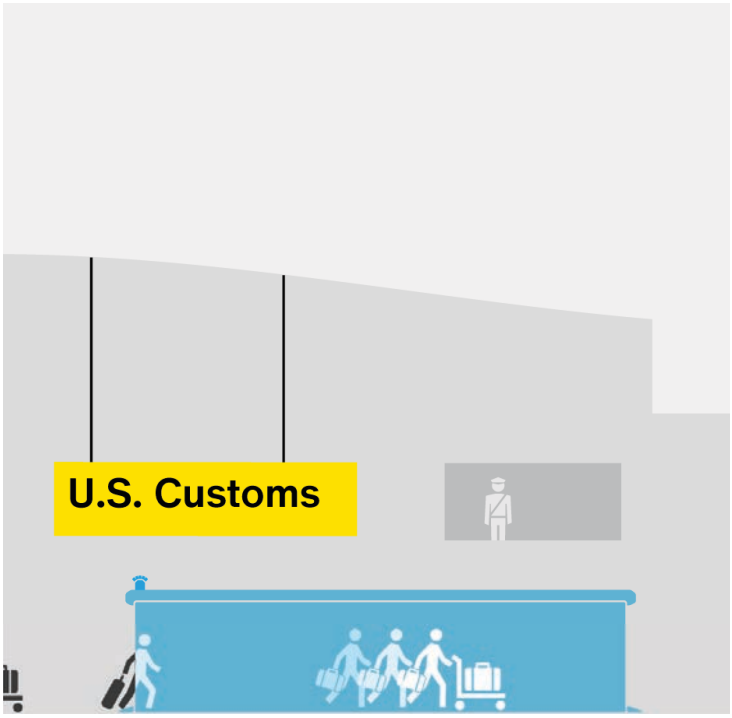
2.Passport Control

Wayfinding Consideration
While this may fall outside the purview of the terminal operator, flows can be optimized and delineated to ensure passengers pass through this area efficiently. Elevate the passenger experience along the walk to CBP facilities with art and sense-of-place elements to confirm they've arrived in New York.



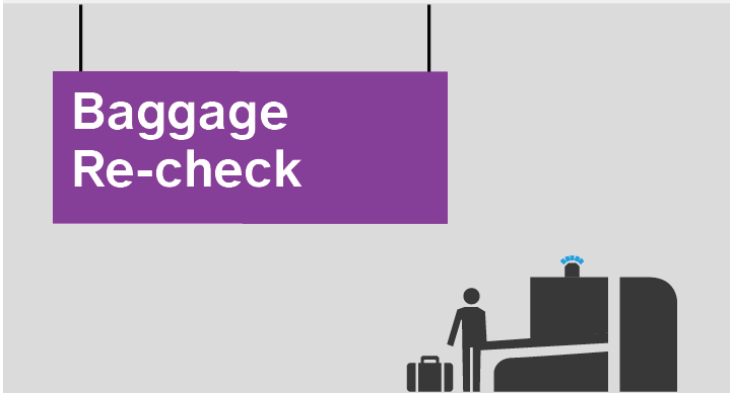
3.Baggage Claim

Wayfinding Consideration
The ideal baggage experience involves no waiting, with digital tracking throughout. Provide relevant information and wait-time estimates to give confidence and streamline future steps.



4.Customs

Wayfinding Consideration
While the ease of traveling through is getting faster with technology, the physical environment is often quite sterile and uncomfortable. Consider ways to make this step warm and unobtrusive.

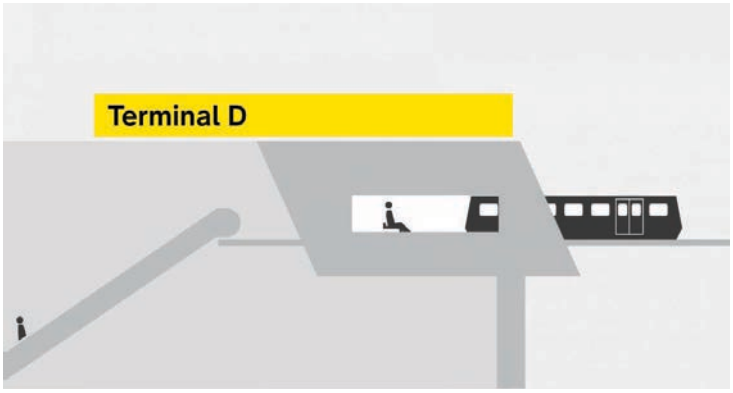


5.Baggage Re-check

Wayfinding Consideration
This can be an unfamiliar step. Passengers need to understand where along the journey they need to re-check their bag and make their connection. The process must be clearly communicated to mitigate misunderstandings.

6.Connecting Flights

Wayfinding Consideration
Passengers are presented once more with relevant connecting flight data. Their next flight's terminal and gate, as well as distance to it, is clearly conveyed through the wayfinding strategy and terminal map, providing confidence in planning activities.



7.AirTrain to Terminals

Wayfinding Consideration
At this point, a connecting passenger becomes a departing passenger, having been armed with the relevant information to reach their next flight.

2.3

Inclusive design is not just about making services accessible to people with disabilities. It's about making services accessible to everyone by taking a proactive, diversity-aware approach to design.

Inclusive design ensures the needs of all users are accounted for—especially those who may be excluded from a traditional design process. Users of varying needs and abilities are identified and solutions are designed to support them and make everyone feel welcome.

As airports become larger and more complex, all travelers can benefit from providing information in multiple formats and through multiple pathways. This manual provides guidelines to help design the wayfinding experience for users with a range of needs based on different levels of ability, understanding, and circumstance.

2.3.1 User Groups

It's important to understand the varying conditions and backgrounds that affect user journeys. Individual users have different needs and requirements when traveling to, from, and through the airport. Additionally, the amount of information and knowledge that they have access to will vary.

Airport user groups include:

Foreign Passengers

Limited English and differing cultural backgrounds

Family Passengers

Traveling with children

Assisted Passengers

Accompanied by families, caretakers, or skycaps or porters

Senior Passengers

With a range of abilities

Leisure Passengers

Traveling on vacation

Business Passengers

Very familiar with airport environments

Premium Passengers

Seeking luxury experiences

Connecting Passengers

Transferring to another flight

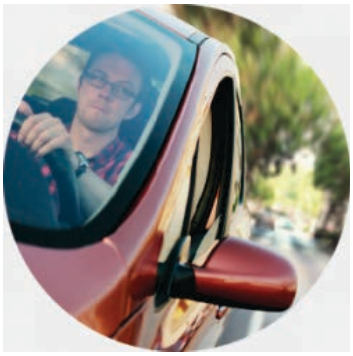
Meeters & Greeters

Collecting arriving passengers

Well Wishers

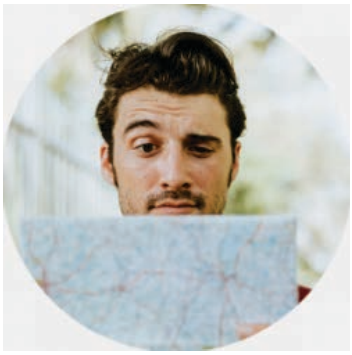
Seeing off loved ones

Drivers



Picking up arriving passengers (incl. loved ones and customers of app-based rides)

Airport Visitors



Interested in their local airport facilities and amenities

Employees

Including airline crew and airport staff (to be coordinated with Branding Guidelines)

These user groups are broad categorizations. In reality, users may belong to multiple groups. For example, leisure passengers and families, may have overlapping needs. Passengers in any of these user groups can have additional needs and requirements due to varying physical, visual, auditory, and cognitive abilities.

2.3.2 Abilities

Airports are public spaces. World-class passenger experiences embrace everyone regardless of physical and cognitive abilities. It's important to consider how people perceive space and how differing abilities may impact their wayfinding experiences.

Abilities to consider include:

Visual

For individuals with visual impairments

- Maximize legibility of words, colors, and pictograms

Auditory

For individuals with hearing loss

- Consider assistive technology

Physical / Ambulatory / Dexterity

For individuals challenged by walking or performing physical tasks

- Position wayfinding elements so they are visible and accessible to people in wheelchairs.
- Vertical transit modes (e.g. elevators, stairs, escalators) should be adjacent to each other, so users are not diverted from the main route.

Cognitive / Stress

For individuals with varying ability to learn, remember, perceive, and problem solve

- Consider mnemonic devices, consistency of visual and textual information, and supplemental communications, such as pamphlets, online trip planning, and pre-flight information.

Language

For foreign-language speakers and individuals with low literacy

- Use pictograms that are clear and universally recognizable
- Use dynamic information to provide targeted translations based on passengers' destination or arrival country.

2.4

Natural wayfinding is based on quick perception and direct interpretation of a space, without consciously thinking about it. Natural wayfinding reduces the need for signage, using it in a limited way to confirm users' intuition.

This section explains how lighting, architectural, and interior design enhance spatial legibility and provide navigation and orientation cues.

Natural wayfinding has many benefits.

- **It is more inclusive**, relying on human intuition rather than understanding of text and symbols. It also requires lower cognitive processing so passengers can concentrate on other tasks, like check-in, passport control, or leisure activities.
- **It reduces the need for signage**. This helps present an orderly, uncluttered environment, allowing more opportunity for other media, such as branding, advertising, and art. Fewer signs also require less funding for purchase, installation, and ongoing maintenance.
- **It gives users confidence** in navigating, creating a smoother and more enjoyable experience.

A large, centrally-located, well-lit entrance needs no sign to identify itself as the main entrance. © Murat German

2.4.1 General Guidelines

A clearly structured environment contributes to natural wayfinding and sense of comfort. These guidelines help create a legible environment in both legacy and new terminals.

Maximize views and sightlines
Open spaces with unobstructed sight lines help passengers to understand their position/orientation and the layout of the overall space. This allows them to see where they are, and literally see their way to a destination–an especially reassuring and low-effort way to navigate an airport.

If sight lines are clear, and identification elements are appropriately placed and sized to be readable, a space could require no directional signage at all!

Wide perspective allows passengers to identify their destination without directional signs for a clean, uncluttered space.

Create obvious flow areas
The flow area is where the main passenger movement takes place. People naturally move towards them, knowing they will connect to central locations with directions and information. Create recognizable flow areas to make it easy to follow the correct route, so fewer confirmation signs are needed.

There are many ways to delineate and emphasize flow areas, including:

- differences in lighting intensity/temperature, as well as light fixture shape and arrangment
- contrasting materials and colors on the floors, walls, and ceilings
- the presence/absence, arrangement, and orientation of furniture and fixtures in space
- use of shapes and patterns (e.g. lines or subliminal arrows pointing with flow)

Ceiling height, repetition of structural elements, and lighting design clearly define the passenger flow area.

Use light to steer movement
People are naturally attracted to light, making it a very powerful and intuitive wayfinding cue. Light (especially sunlight) can be used as a beacon to pull passengers into or through a space.

Generally, do not obstruct windows to maximize natural light and views. Maximizing daylight improves visibility and enhances cognitive performance and mood. Views of the with airfield, skyline, and natural environment help to orient passengers.

Use artificial lighting to subtly support spatial understanding. Differences in intensity, temperature, diffusion, and direction can mark different areas. For example, bright, cool, lighting fits spaces characterized by movement, alertness, and decision-making; dimmer, warmer lights create a more relaxed and private atmosphere in dwell zones.

The shape and arrangment of light fixtures can also be used to direct people. For example, lights arranged in a line might convey a clear direction and path for people to look down and follow. Clusters of lights or a dramatic luminaire might indicate an important decision point, landmark, or destination.

Bright, open spaces draw people toward them; once they've arrived, the spaciousness encourages them to slow down and relax. Here, linear lights and large side curtain walls also entice guests to spread outwards from the flow path. Photo courtesy LaGuardia Gateway Partners.

Place landmarks as reference points
Unique landmarks, such as prominent architectural features or art installations, become memorable reference points for orientation and navigation. They help build a mental map of a space.

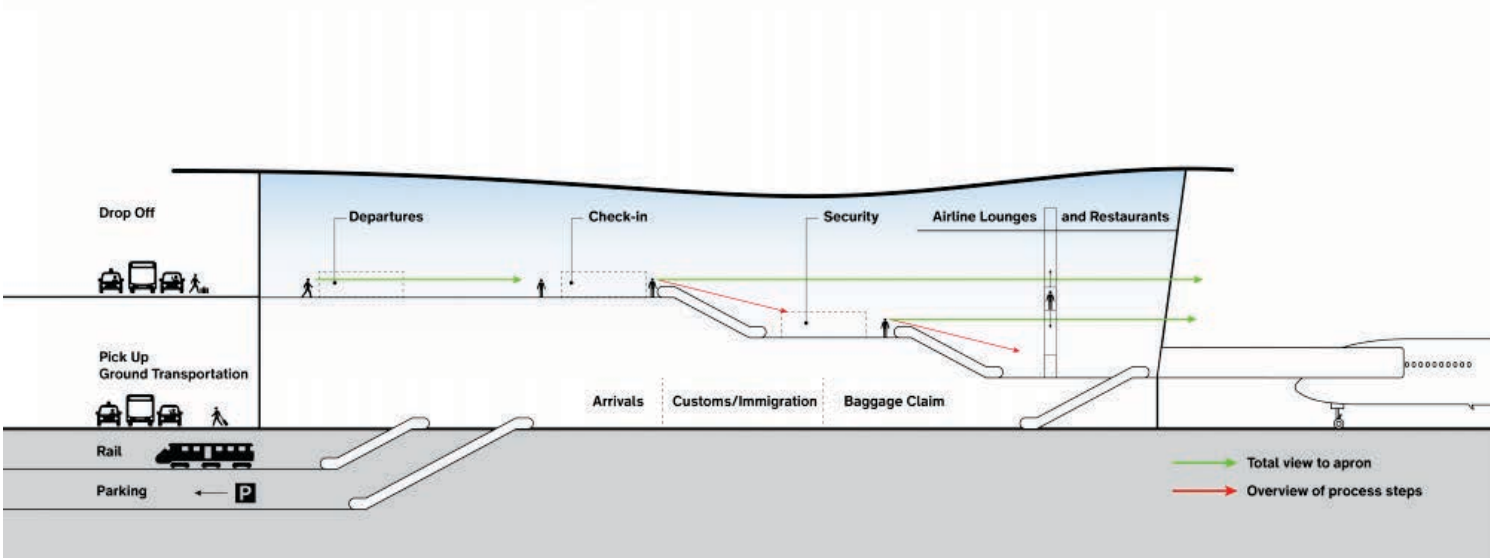
Place landmarks at prominent locations, like major intersections, significant process steps, central dwell or commercial areas, and meeting places. Landmarks at decision points make navigation decisions more memorable–”we turned right at this sculpture.” To avoid confusing returning passengers, do not relocate landmarks unless absolutely necessary.

Landmarks should be easily describable, so they can be referenced in verbal or written directions. Visualize landmarks on maps to help clarify the connection between the environment and its graphic representation.

Art installations or remarkable objects are easy to remember and make good meeting points. They act as navigational landmarks and add to the sense of place.

2.4.2 Natural Wayfinding in New Terminals

New (or significantly renovated) terminals provide an outsized opportunity to embed natural wayfinding from the earliest stages. Wayfinding can be fully integrated with the architecture as a complementary system, rather than supplementary layer.



The ideal airport layout illustrates key natural wayfinding concepts: views of the entire departing journey, a clear overview of steps in the process, and a sense of progression.

When planning a new terminal, start with the core General Guidelines above in addition to the new-building-specific guidelines below. For best results, include a wayfinding expert on the design team from the outset.

Focus space planning and design around flows

Facilitating passenger Flows through an intuitive building is the foundation of good wayfinding. It is critical that spaces and functions are organized and laid out in accord with airport processes, to make the passenger experience as simple and predictable as possible.

Concurrent steps in a journey (e.g. Check-in and Security Checkpoint) should be planned in close proximity with each other. Secondary services (e.g. lounges, restrooms) should be adjacent to corresponding steps.

Keep distinct flows (e.g. arrivals or departures) separate from each other–ideally, on different levels or in different halls. Minimizing cross-overs leads to fewer decision points, and therefore a more straightforward passenger journey. In particular, queuing areas should be organized to prevent other flows from crossing them.

A clear, well-organized layout means areas and levels are related, taking into account passenger processes and experience. This avoids complex, difficult-to-navigate spaces.

Use architectural form to encourage flows

Building design has the greatest influence on ease of wayfinding; signage comes after. The simpler a building's layout and shape, the more predictable it is to navigate. For example, a linear concourse is more intuitive to navigate than one with many angles and forks.

The shape, scale, and proportion of spaces subliminally provide direction. For instance, a rectangle automatically implies a direction that a square does not. Employ shapes with a dominant axis, like rectangles and ellipses.

Ensure that passengers can see spatial organization and connections

Thoughtful building design and space planning only go so far; passengers must also be able to see and recognize a building's areas and structures in order to comprehend their journey through a space. Manifest the following elements clearly:

Levels

Views to different levels (mezzanines, bridges, etc.) help people understand the vertical composition of a building.

Entrances and exits

Conspicuous entrances and exits help define boundaries and transitions between spaces, as well as steps in the journey.

Ascent and descent points

People are naturally inclined to stay on the same level. If their journey requires them to go to a different level, make this as clear and obvious as possible. Stairs, escalators, and elevators must be visible and located near each other. It makes alternate modes self-explanatory, so additional directional signs are not required.

Facades

Transparent facades link passengers with the outside environment. This aids orientation and sense of place. Natural light also improves passengers' moods to create a comfortable atmosphere. Keep glass facades free of media and avoid elements that block views to the exterior.

Structural elements

Structural elements in the architecture, like columns, beams, and thresholds help define spaces. Repetition of these elements creates predictable rhythm and familiarity.

Avoid long corridors

Avoid long, monotonous corridors, because they reinforce an unpleasant impression of long distance. If a long corridor is unavoidable, provide pleasant distraction and sense of place to make interesting experiences and convey a sense of progress. Consider transparent facades, media installations, or architectural details.

Undulation of the ceiling panels encourages movement. Asymmetry of the corridor helps give a sense of direction.

Choose calming colors and materials

Use soft, natural colors to provide a neutral background for interior design elements, landmarks, art, media, and wayfinding. Avoid glossy surfaces and contrast lighting, which negatively impact legibility. Use materials with good acoustic properties to reduce noise and ease communication. The interplay of scale, natural light, color, materials, greenery, and sound can reinforce each airport's distinctiveness.

Clean, neutral interior design and restrained use of accents can lend much-needed calm to often-hectic airport environments. © Yuri Molodkovets

2.5

With numerous airports, terminals, and AirTrain stations across the region, Port Authority Aviation facilities represent a range of styles and experiences. Our wayfinding system unifies the customer experience and acts as a recognizable identifier.

While wayfinding is our main priority, the system has also been developed to promote Port Authority Aviation facilities as ambassadors of the city, region, and country. Taking inspiration from vernacular forms and regional icons, the look and feel of the wayfinding system reflects the boldness, energy, and strength of the region.

It all helps create a ‘sense of place’ at Port Authority Aviation facilities.

Inspiration for the design system

Our unique look and feel also helps distinguish wayfinding from competing communications. It enables quick, subconscious recognition. The design is neutral and authoritative, so users can easily understand and trust wayfinding information.

2.5.1 Color

Colors have been chosen to bring vitality to the airport experience and to serve as beacons from sign to sign, helping connect people to their destinations. In addition, the colors unify all elements of wayfinding, from signs and printed materials to websites and handheld devices.

For wayfinding signs, the four color codes are illuminated targets that will stand out to passengers. In conjunction with the illuminated white-on-black text that is high contrast and legible at a distance, the color beacons attract the eye and are clearly distinguishable in the environment.

Yellow
Flights & Operations

Purple
Connecting Flights

Green
Exit & Ground Transportation

Blue
Services & Amenities

2.5.2 Typography

Helvetica is the typographic voice of the International Style and mid-century Modernism—a period that was also the golden age of flight. Helvetica has also become the typographic vernacular of wayfinding in the city—from riding the subway to walking down the street or taking a ferry. It is a natural choice to convey the bold and confident personality of the New York/New Jersey region at our airports.

A custom version of Helvetica Now, *Helvetica Now for PANYNJ*, is optimized for wayfinding at Port Authority airports.

2.5.3 Form

The system employs a distinctive color beacon, the design of which is unlike any other major airport in the world. The illuminated color on the front face of the sign wraps around the sides, top, and bottom of the sign. This makes the information recognizable from broader angles than just perpendicular.

3

3.1

In a complex environment like an international airport, multiple parties communicate different messages through various media. To prevent elements from competing for space, effect, and attention, it is important they are organized spatially.

The guidelines in this section allow all of these elements to coexist optimally. Organizing information by type allows users to scan an environment and receive different messaging. Consistently placing similar information in predictable locations helps build an understanding of the airport environment, allowing users to more easily perceive the space and find information.

The goals of spatial zoning are:

- Assign the most effective location for different types of information and media
- Ensure the location of information is expected and predictable
- Create clear lines of sight on the main path and wayfinding elements
- Ensure all media enhance the overall airport experience
- Guarantee visibility by preventing different types of media from interfering with each other

Spatial zoning guidelines apply to:

Wayfinding

e.g.

- Directional signage
- Identification signage

Information

e.g.

- FIDs, GIDs, BIDs, TIDs
- Airport indexes and maps
- Information kiosks
- Welcome centers

Instructions, Rules & Regulations

e.g.

- Security and enforcement messaging (e.g. TSA, CBP)
- Instructions

Art & Events

e.g.

- Exhibitions and installations
- Immersive experiences
- Performances
- Landmarks

Branded Media

e.g.

- Port Authority branding, PSAs
- Airport & AirTrain branding, PSAs
- Terminal branding
- Airline branding
- Services branding (e.g. CLEAR, Global Entry)

Commercial Media

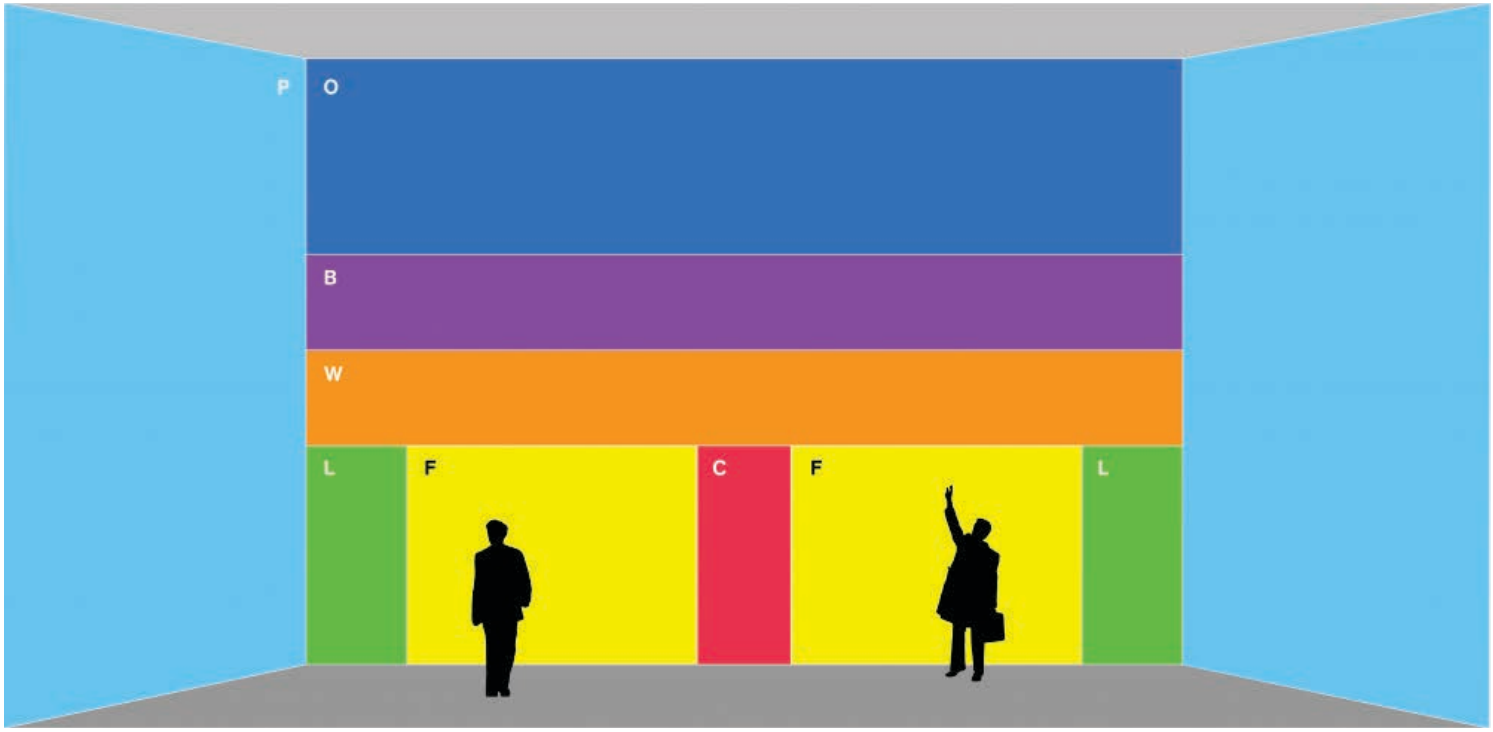
e.g.

- Advertising (e.g. immersive, dynamic, static ads)
- Retail (e.g. restaurant branding, store identifications)
- Promotional displays

3.1.1 Spatial Zones

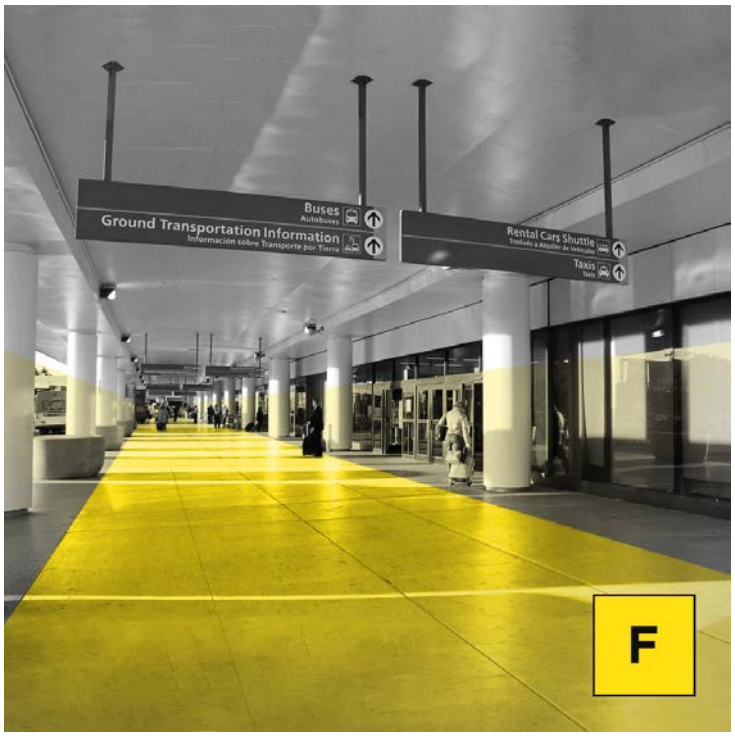
The process of spatial zoning divides all areas of a building into 3D zones. Different types of information and media are then designated to reside in each zone.

The spatial zones defined here should be standardized as much as possible throughout an airport, though some customization may be necessary to fit them to the architecture.



Graphical example of the various zones that are used in spatial zoning

Each of the zones designated for information and media are described below.



Flow Zone

Where people move
The **flow zone** is made up of “corridors” where main passenger movements take place. It should always be kept free of visual and physical obstructions.

Wayfinding Zone

Directly above flow to maximize visibility
The **wayfinding zone** is placed within users’ natural field of vision at a consistent height. It is reserved for overhead **wayfinding** elements, such as directional signage and identification signage perpendicular to the flow. No other media is allowed in this zone.

The wayfinding zone spans from 8′-0″ to 12′-0″ above the ground.

Buffer Zone

Separation between wayfinding and media zones
A **buffer zone** is free of visual or physical obstructions. It ensures users can easily distinguish the **wayfinding zone** from **overhead media** elements. A secondary buffer zone also applies around **information** and **instructions, rules & regulations** placed in **lateral** and **central zones**. This zone is important because it provides a visual resting point and helps maintain visual harmony.

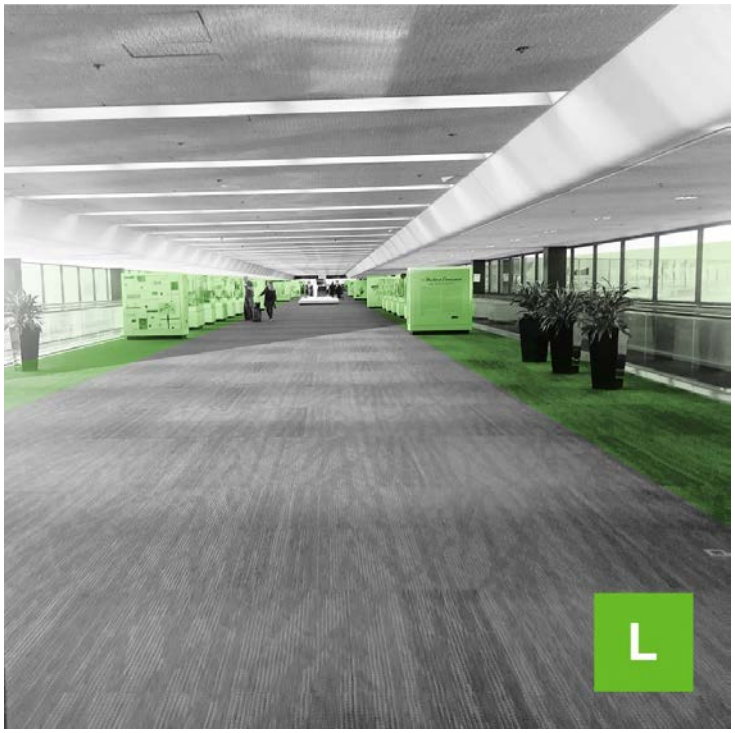
The buffer zone is typically 2′-0″ in height, and a minimum of 1′-0″ in constrained spaces.

Overhead Media Zone

Flexible space high above wayfinding
If the ceiling is high enough, an **overhead media zone** can be defined above the wayfinding zone (and separated from it by a **buffer zone**). This zone is reserved for overhead **branded media**, **commercial media**, and **art**. It is located high above the flow, so it will be in users' natural field of vision from a far distance, making it ideal for big statements. For best visibility, media in this zone should be oriented perpendicular to the flow.

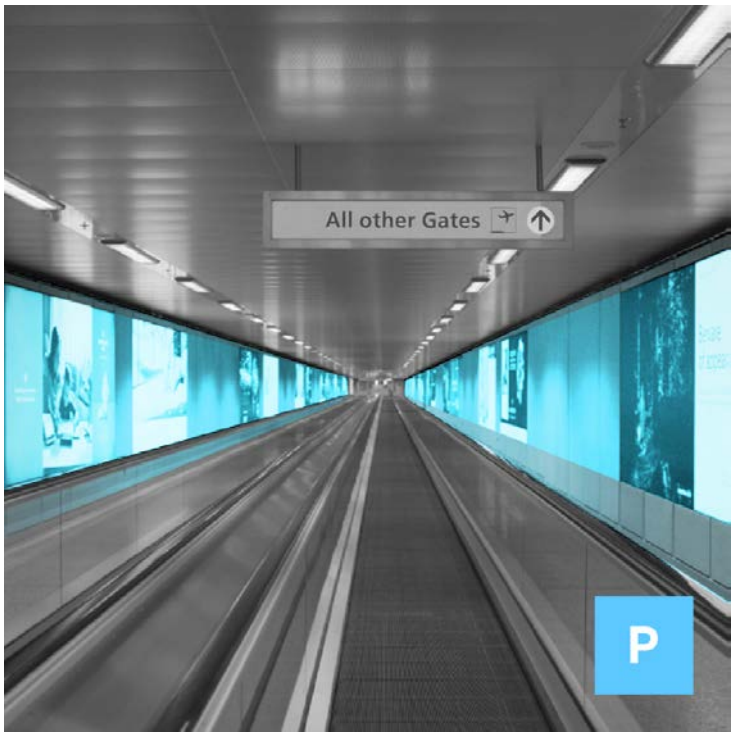
Central Zone

Median between distinct flows
A **central zone** can be defined, if the space is wide enough and if there are distinct flows on the left and the right side. **Information** and **instructions, rules & regulations** have priority here over **branded media**, **commercial media**, and **art**. Do not use other messages or media here. Elements can be placed both parallel and perpendicular to the flow.



Lateral Zone

On the sides of a wide flow area
If the space is wide enough, a **lateral zone** can be defined to one or both sides of the main flow area. **Information** and **instructions, rules & regulations** have priority here over **branded media**, **commercial media**, and **art**. No other messages or media should be used here. Elements can be placed both parallel and perpendicular to the flow.



Parallel Media Zone

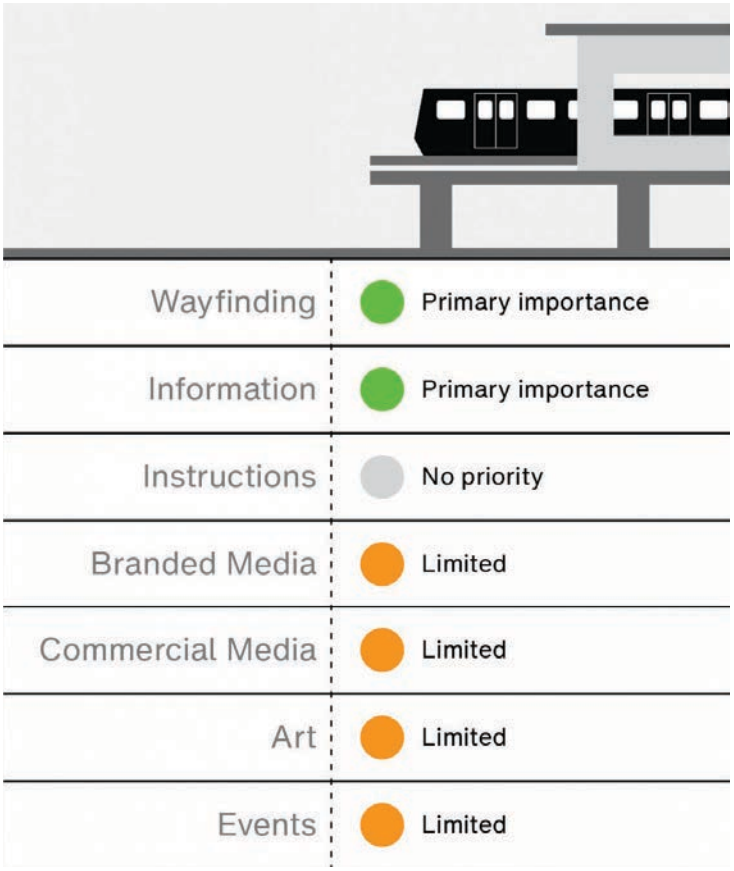
Content on the side walls of a flow area
A **parallel media zone** is reserved for **branded media**, **commercial media**, and **art**, all oriented parallel to the flow. It is ideal for narrow corridors where there is no space to define **lateral** or **central zones**.

3.1.2 Media Reception Along the Journey

Airport users go through different areas and steps throughout their journey. Information needs, mental state, and attention levels vary along the way. Receptiveness to environmental stimuli, like **commercial media**, varies as well.

Certain points in the journey offer the best opportunities for **commercial media**, **art**, **events**, and navigational landmarks. Areas where less attention is required—such as long corridors or waiting areas—are suitable for **branded media** or **commercial media**. Commercial messaging will be better received and have more impact here.

At other points in the journey, such stimuli should be avoided, as users are likely to take little notice or even get stressed by it. This mainly concerns points where passengers must make decisions or focus on the process, e.g. main decision points or security checkpoints. Prioritize **wayfinding** elements here.



AirTrain platforms

Departing from the platform

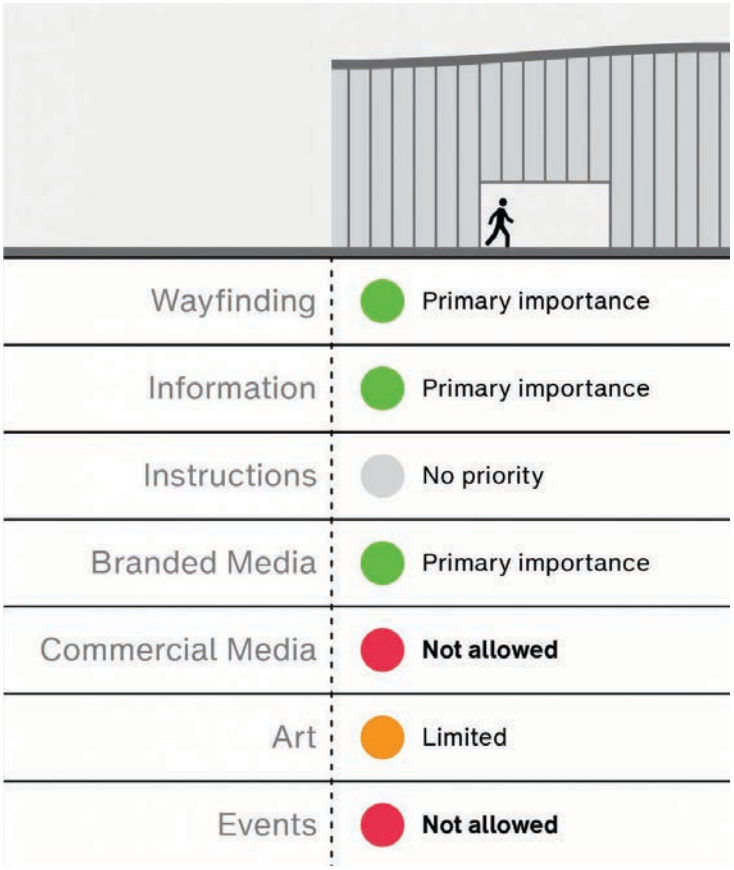
- User focused on process and time (i.e. getting on the right AirTrain)

Arriving at the platform

- User focused on confirming they've arrived at the right station
- Focused on next step (e.g. enter terminal, transfer to other transport mode, find hotel shuttles)

Guidelines

- **Wayfinding** and **information** are of primary importance.
- Very limited **art & events**, **branded media**, and **commercial media** are allowed (in the media zones) to improve ambiance and provide distraction and sense of place. It should be subdued to avoid causing stress or information overload.



Terminal facade and entrances

Departing Passengers

- Users are excited about starting their journey
- Focused on getting through the process
- Possibly stressed by unfamiliar airport or time pressure

Arriving Passengers

- Users are excited about arriving in NY/NJ
- Focused on next step (connecting flight or ground transportation)
- Possibly tired after flight

Well-Wishers

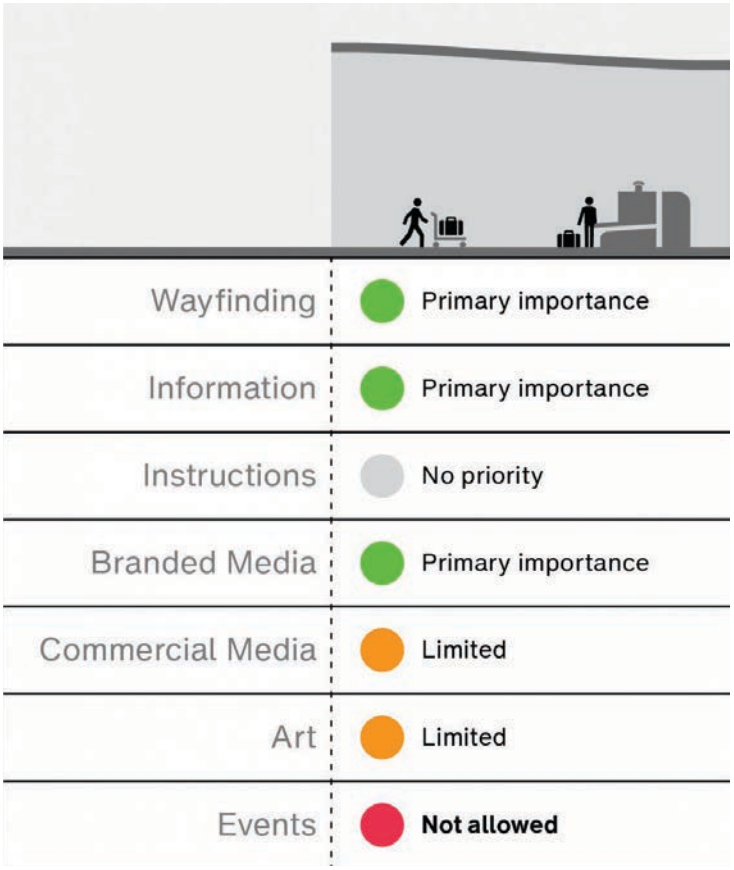
- Users are focused on finding drop-off location
- Possibly stressed by unfamiliar airport or time pressure

Meeters & Greeters

- Users are focused on finding family and friends
- Possibly stressed by unfamiliar airport or time pressure

Guidelines

- **Airport branding** is of primary importance. It provides a sense of place and adds to the excitement. It reduces stress by confirming arrival at the right terminal. Size and placement are based on architectural scale, viewing direction and reading distance.
- **Airline branding** on wayfinding elements (curbside identification signs) is of primary importance, if different entrances are associated with different airlines.
- **Wayfinding** and **information** are of primary importance, directing to and identifying ground transportation.
- Very limited **art** is allowed (in the media zones) to improve ambiance and provide sense of place.
- **Commercial media** and **events** are not allowed.



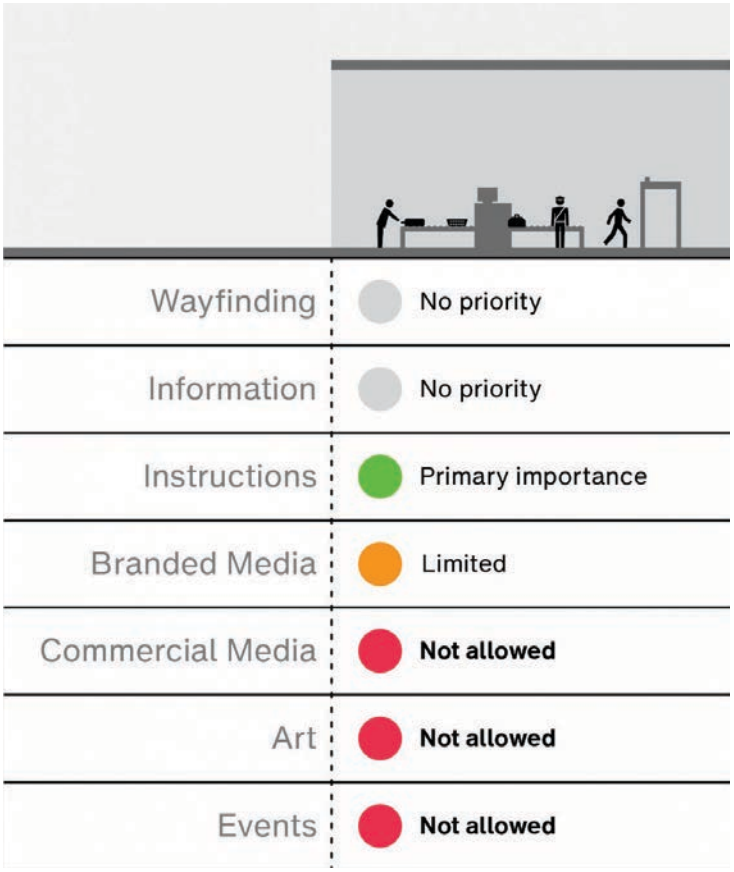
Departures hall

Departing Passengers

- Users are possibly stressed by unfamiliar airport or time pressure
- Focused on checking in or proceeding towards airside

Guidelines

- **Airline branding** is of primary importance for passengers to find and identify the correct check-in desks.
- **Wayfinding** and **information** are of primary importance, including FIDs, directional signs, and identification.
- Limited **art** and **commercial media** are allowed (outside the buffer zone) around & above check-in desks.
- **Events** are not allowed.



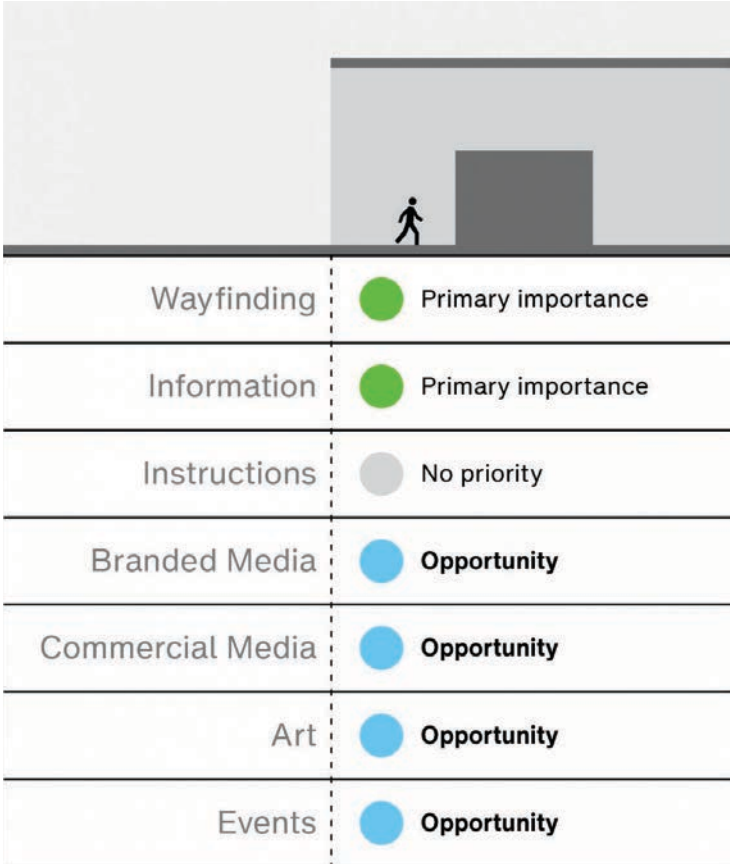
Security checkpoint

Departing Passengers

- Users are often stressed by unfamiliar airport or time pressure
- Anxious about process
- Focused on rules and procedures

Guidelines

- **Instructions, rules & regulations** are of primary importance.
- Limited **branded media** is allowed for services (such as CLEAR and TSA Pre✓) and airport or Port Authority PSAs, especially regarding security.
- **Commercial media**, **art, and events** are not allowed.



Concourse

Departing Passengers

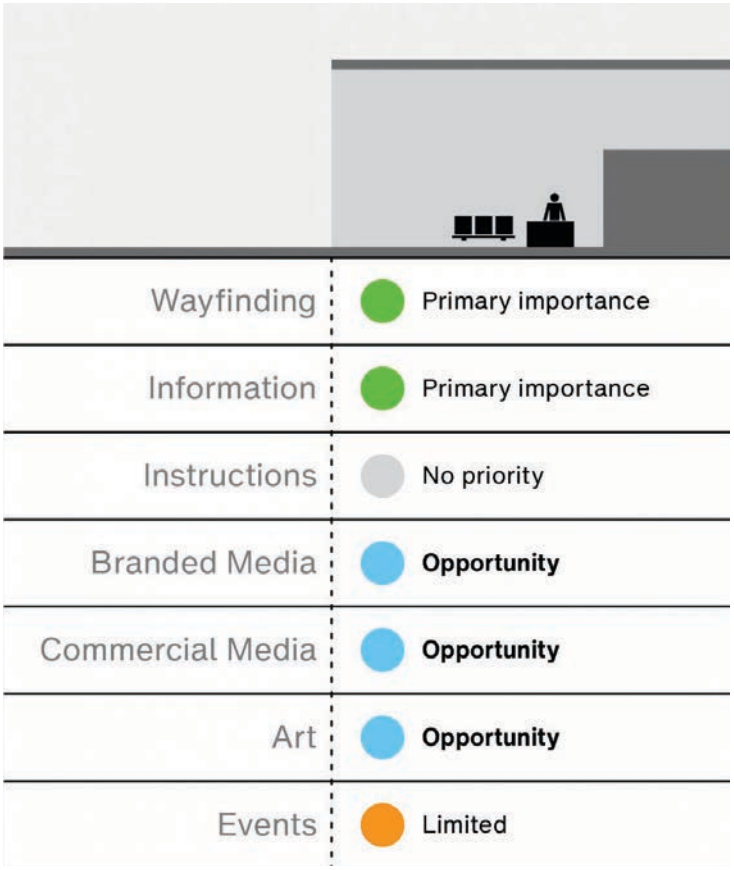
- Users are more relaxed, having passed security and getting close to the departure gate (depending on time pressure)
- Focused on keeping track of time and getting to gate
- Open to exploring what the terminal has to offer, including shopping, eating, drinking, art, events (if time allows)

Arriving/Connecting Passengers

- Users are possibly tired after flight
- Excited about arriving in NY/NJ
- Often seeking restrooms
- Focused on next step

Guidelines

- **Wayfinding** and **information** are of primary importance, especially FIDs, directional signs, and restroom identification.
- Excellent opportunity for experiential **art & events** and immersive installations to improve passenger experience. These are allowed and encouraged, provided the main flow and lines of sight are not impeded.
- Excellent opportunity for **branded** and **commercial media** (outside the buffer zone) to promote concourse retail and restaurants, airport services, and engaging advertising.



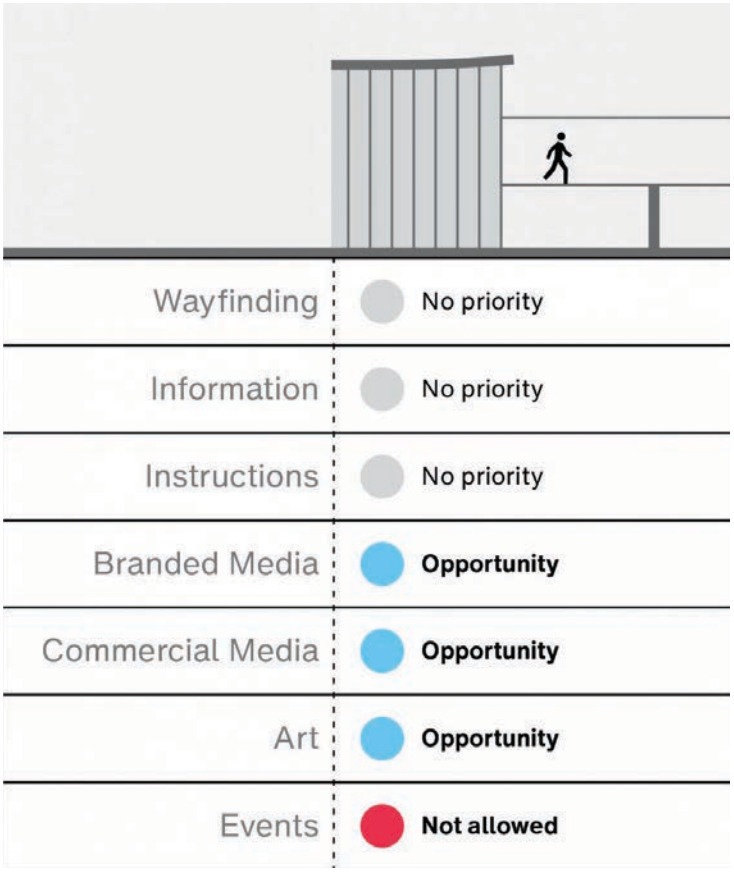
Gate Area

Departing Passengers

- Users are more relaxed, having reached the gate on time
- Focused on the next step (boarding)
- Open to diversion while waiting

Guidelines

- **Wayfinding** (gate identification) and flight **information** are of primary importance.
- Opportunities for **art**, **branded media**, and **commercial media** until one hour before boarding starts; at that time, real-time boarding **information** should be of primary importance.
- Leave a lasting impression. Waiting time is an excellent opportunity to engage passengers in an immersive, dynamic experience that connects with the NY/NJ region (to leave a final impression) or with their destination (to build excitement).
- Limited **events** are allowed to entertain waiting passengers.



Jet Bridge

Departing Passengers

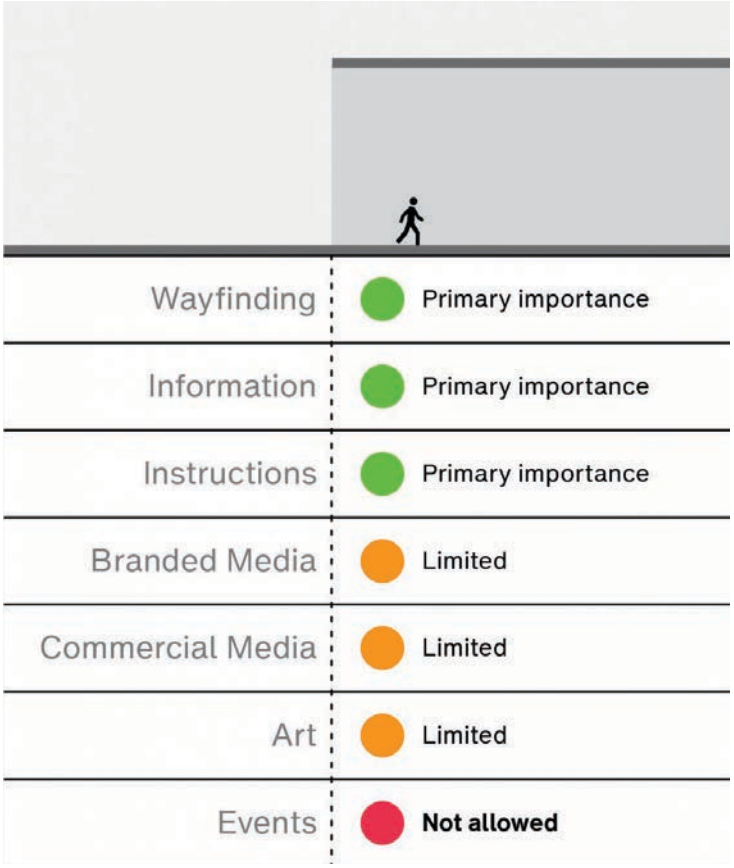
- Users are excited about getting on board
- Relaxed, they've made it on time

Arriving/Connecting Passengers

- Users are possibly tired after flight
- Excited about arriving in NY/NJ

Guidelines

- The jet bridge environment is limited. Still, there are opportunities for **art**, **branded media**, and **commercial media** (in the media zones) to make first or last NY/NJ impression, improve ambiance, and provide distraction and sense of place.
- **Events** are not allowed.



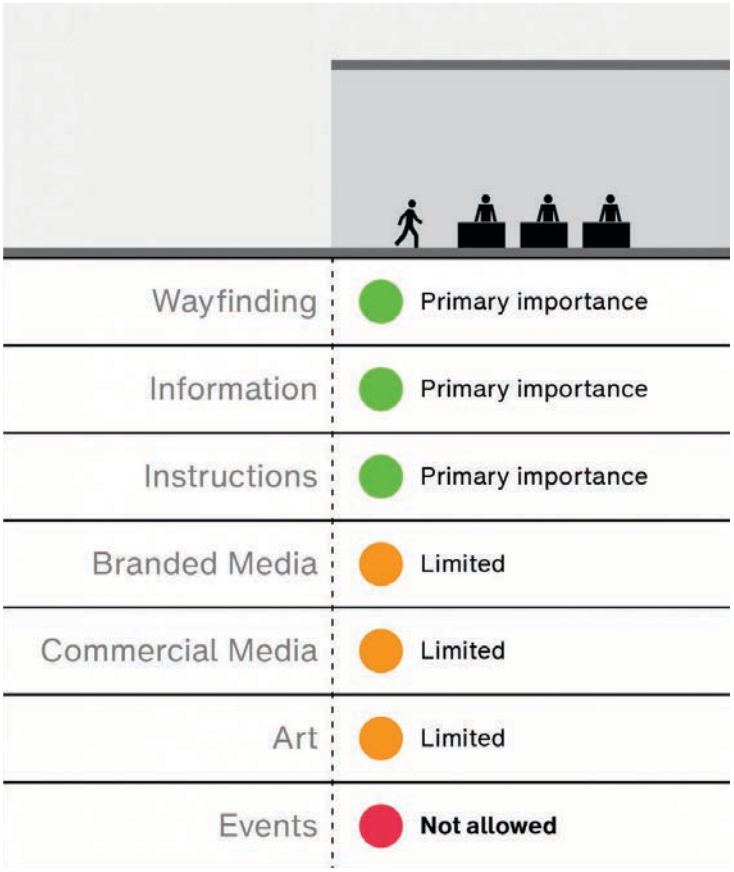
Sterile Corridor

Arriving/Connecting Passengers

- Users are possibly tired after flight
- Excited about arriving in NY/NJ
- Often seeking restrooms
- Focused on next step

Guidelines

- **Wayfinding**, **information**, and **instructions** are of primary importance, especially FIDs (for connecting passengers), directional signs, and restroom identification.
- Limited **art**, **branded media**, and **commercial media** are allowed (in the media zones) to improve ambiance and provide distraction and sense of arrival to the region.
- **Events** are not allowed.



Passport Control

Arriving Passengers

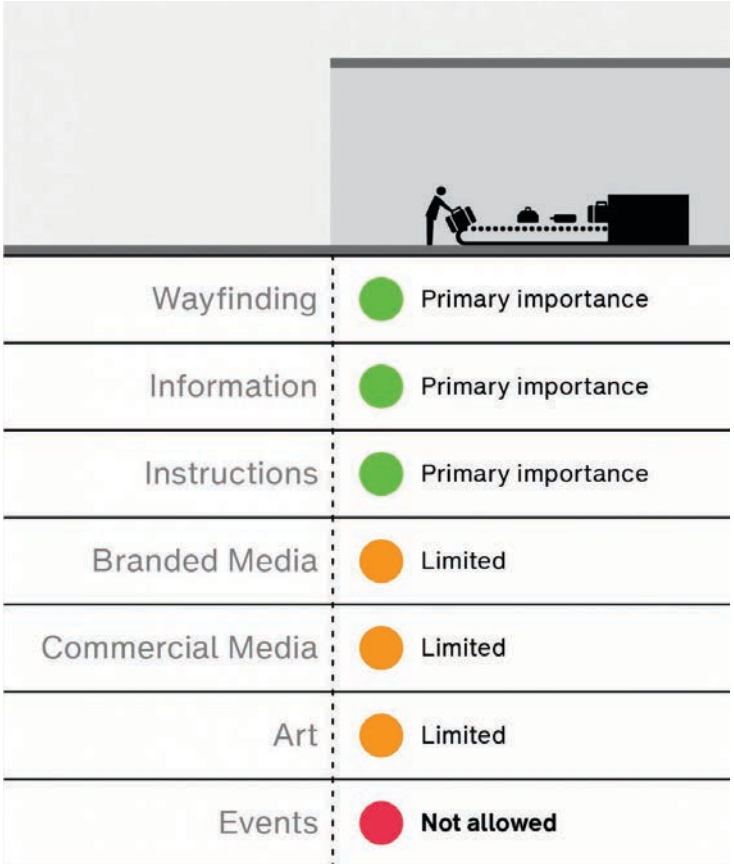
- Users are possibly tired after flight
- Excited about arriving in NY/NJ
- Possibly nervous about immigration procedure
- Focused on next step

Connecting Passengers

- Users are possibly tired after flight
- Possibly stressed about connection, depending on timing and familiarity with process/airport
- Possibly stressed about process
- Focused on next step

Guidelines

- **Wayfinding**, **information**, and **instructions, rules & regulations** are of primary importance.
- Very limited **art**, **branded media**, and **commercial media** are allowed (in the media zones) to improve ambiance and provide distraction and sense of place. These should be subdued, so they do not cause stress or information overload.
- **Events** are not allowed.



Baggage Claim

Arriving Passengers

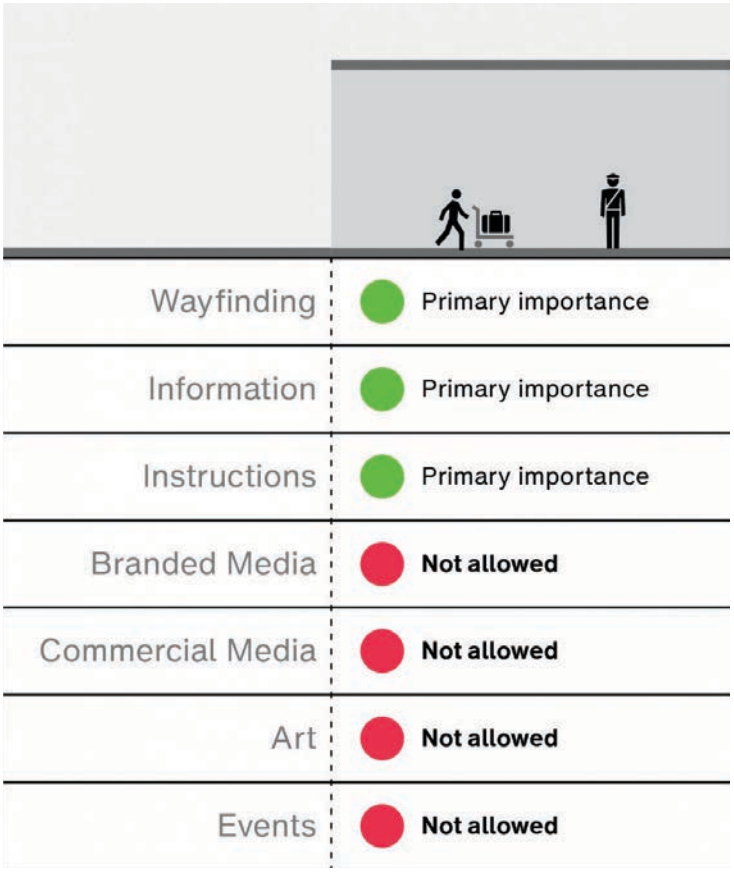
- Users are possibly tired after flight
- Excited about arriving in NY/NJ
- Focused on next step

Connecting Passengers

- Users are possibly tired after flight
- Possibly stressed about connection, depending on timing and familiarity with process/airport
- Possibly stressed about process
- Focused on next step

Guidelines

- **Wayfinding**, **information**, and **instructions, rules & regulations** are of primary importance. Information on next steps, such as transportation options, is especially valuable while passengers await their baggage.
- **Art**, **branded media**, and **commercial media** are allowed (in the media zones) to provide distraction and entertainment.
- **Events** are not allowed.



Customs

Arriving Passengers

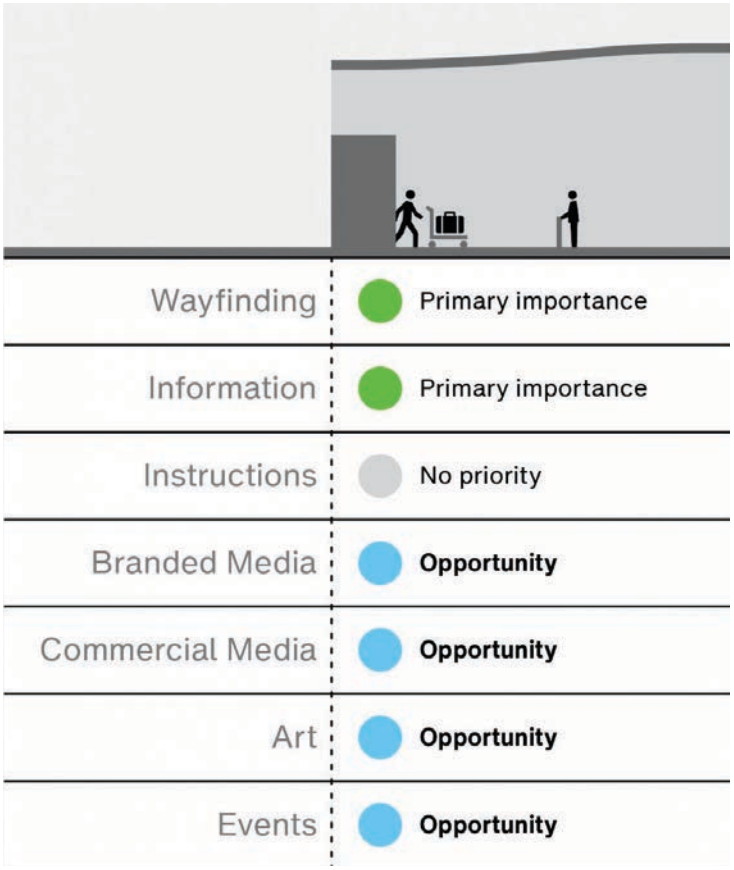
- Users are possibly tired after flight
- Excited about arriving in NY/NJ
- Looking for exit

Connecting Passengers

- Possibly tired after flight
- Possibly stressed about connection, depending on timing and familiarity with process/airport
- Possibly stressed about process
- Focused on next step

Guidelines

- **Wayfinding**, **information**, and **instructions, rules & regulations** are of primary importance.
- **Art & events**, **branded media**, and **commercial media** are not allowed.



Arrivals Hall

Arriving Passengers

- Users are possibly tired after flight
- Excited about arriving in NY/NJ
- Focused on next step

Meeters & Greeters

- Users are excited to see family and friends soon
- Possibly anxious about the process
- Interested in pleasant ways to kill time, e.g. restaurants, shopping, art

Guidelines

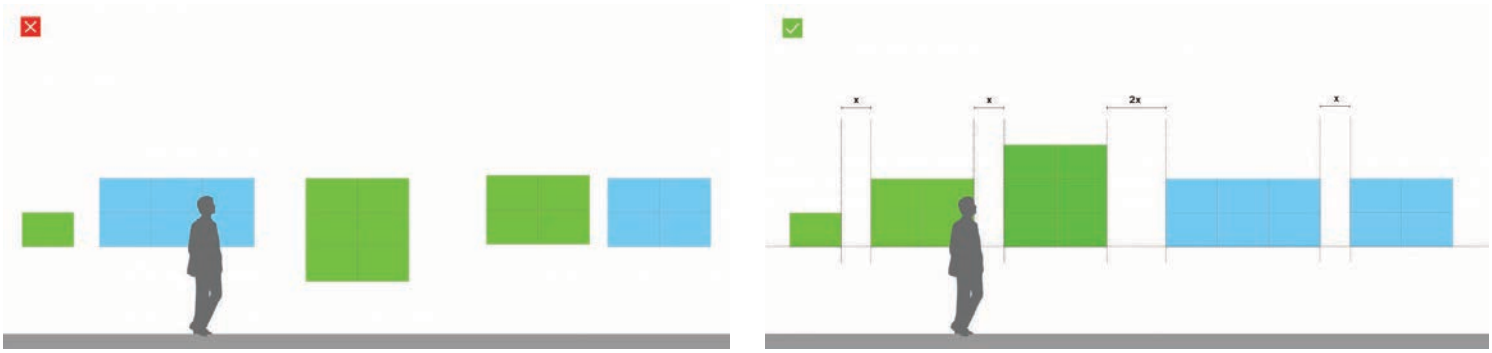
- **Wayfinding** and **information** are of primary importance.
- **Art & events**, **branded media**, and **commercial media** are encouraged (in the media zones) to improve ambiance and provide users with a warm, exciting local arrival.

3.1.3 Media Design & Content Guidelines

Within each zone, information and media should be well organized and visually appealing. A pleasant and engaging media environment maximizes opportunities for revenue without overwhelming or confusing. The following guidelines pertain to media planning and placement.

Distinguish Between Media Types
Passengers should be able to find the information they need quickly and easily. It's important to very clearly distinguish wayfinding and information from commercial media.

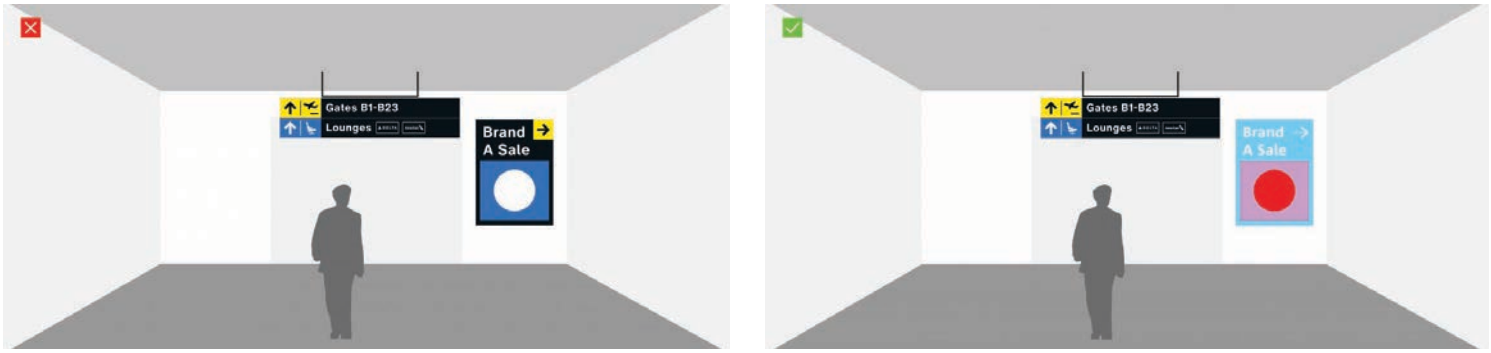
Physical Location
By giving each media type its own space and creating a buffer zone next to it, a physical distinction can be easily achieved.



Consistency in buffer space and clear alignment between media types makes the media elements more conspicuous.

Color
Color is one fundamental way of making this distinction. It is critical that prominent colors in commercial elements are different from our wayfinding color coding. Avoid the use of red as a dominant color; red is reserved for emergency messaging.

Visual Style
Wayfinding information should never appear in another entity's branding. Users expect it in the system style. Using a different visual style can cause confusion. If wayfinding information needs to be added, the stakeholder should follow the sign application process rather than adding it independently.



Commercial messages should differ as much from the regular wayfinding system as possible.

Quality in Design
All Port Authority Aviation facilities should be of world-class quality in architecture, concessions, information, and

media. It is important to safeguard the quality of experience down to the furniture, shops and restaurants, signage, and instructions.

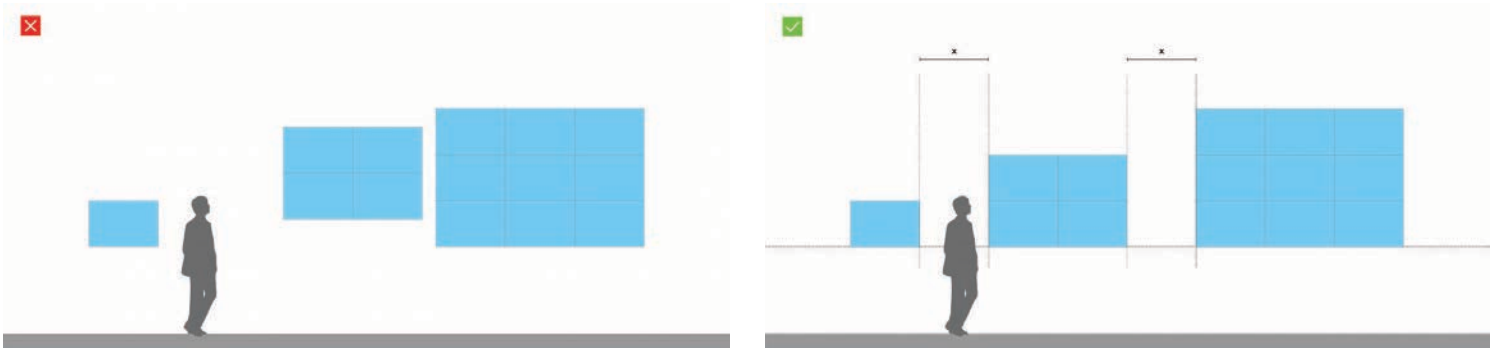
Technology
When adding to the existing program, we encourage use of technology, such as dynamic displays. It contributes to visibility, flexibility, and the perception of quality.

Quality in Ideas
Offer innovative options to advertisers. Displays, exhibits, experiential activations, and immersive installations attract attention, add to ambiance, and contribute to the success of advertising. Unique offerings can also be newsworthy and encourage positive social media engagement.

Quality Brands
Provide opportunities for brands to “take over” certain areas, if the scale of the space allows. This contributes to visual harmony, attractiveness, and effectiveness for advertisers.

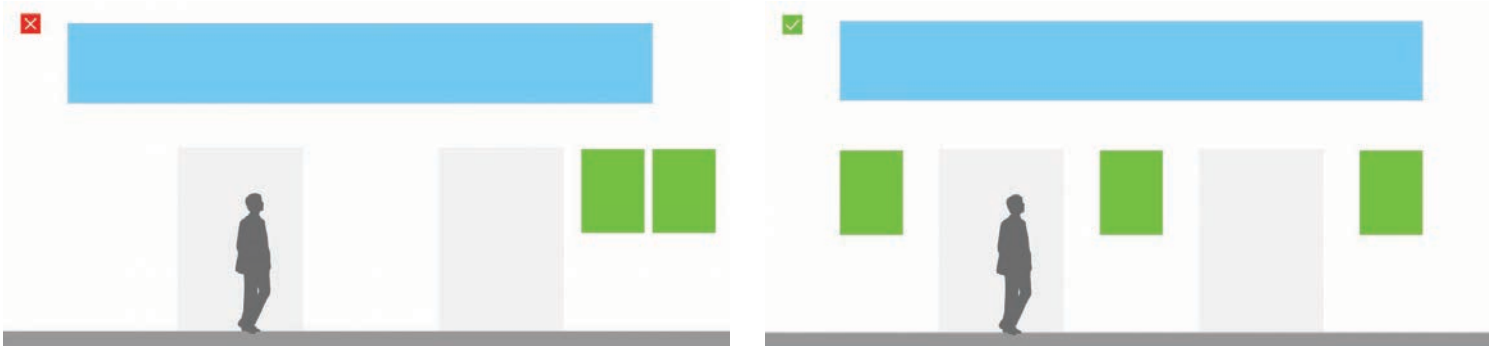
Positioning Standards
Horizontal Alignment
Define one (or two) standard baseline(s) where all elements should be positioned. It achieves both horizontal alignment and visual harmony. When determining the horizontal baseline(s), be sure to consider surrounding media and architectural elements.

Vertical Buffer & Alignment
In addition to the prescribed horizontal buffer zone, reserve vertical buffer space between different media elements. The proper space between two elements is relative to the sizes of the objects themselves and the architectural scale. Within one area, choose one standard vertical buffer size. Vertical alignment also contributes to visual harmony and quality of the environment.



Aligned media appear ordered and are appealing to the eye.

Relate to Architecture
The size and rhythm of the architecture is the starting point in defining the size and rhythm of media placement. In large spaces, media elements or artwork of the same scale creates landmarks. The relationship between media and architecture can create impressive, memorable environments.



Align media elements with the architecture to strengthen the rhythm of the space.

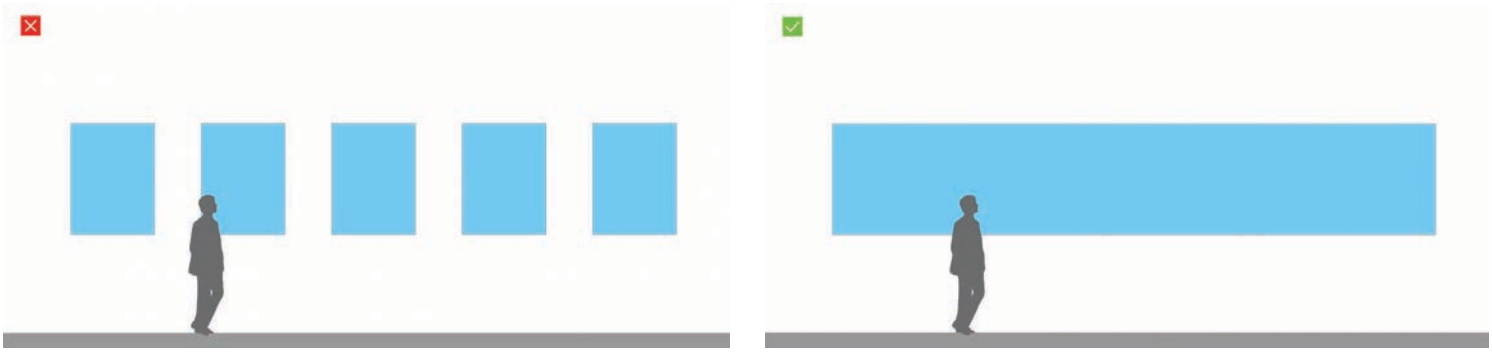
Think Big

Visual Harmony

Visual harmony and impact can be increased by large media elements, where applicable. Art and commercial media become more than just decoration when they responsively integrate with the space.

Takeovers

By using one large element, advertisers can “take over” a space without interfering with wayfinding or usability. This contributes to the overall attractiveness of the environment, increases revenue opportunities, and allows innovative concepts to showcase memorable advertising.

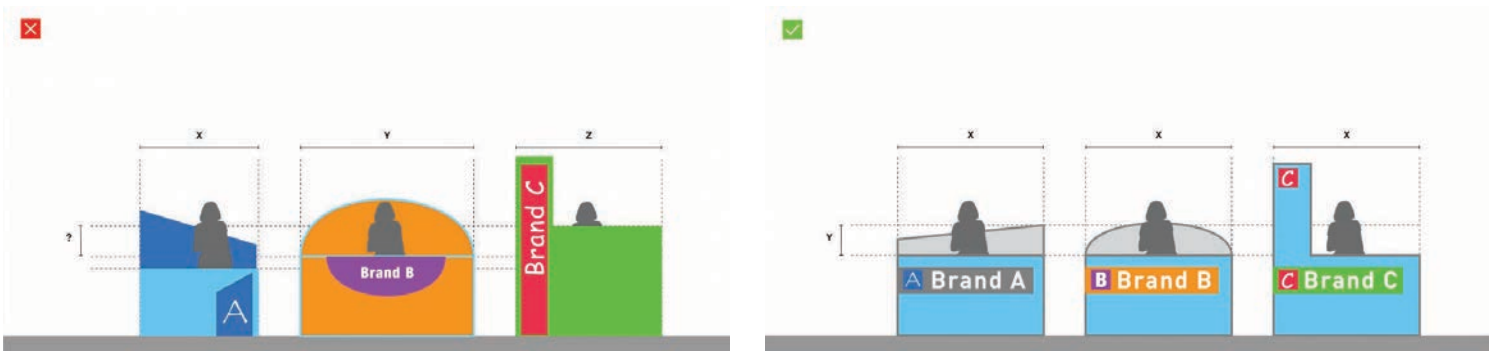


Think big! One large statement creates visual harmony and makes more of an impact.

Media Structures

A cohesive design family for media structures (including advertising light boxes and frames) aids visual consistency. Create and offer a standard set of elements with corresponding sizes, forms, colors, and materials.

Exceptions are allowed in cases where innovative new media or technology would improve the experience of the airport, increase revenue opportunities, and improve the efficacy of advertising.

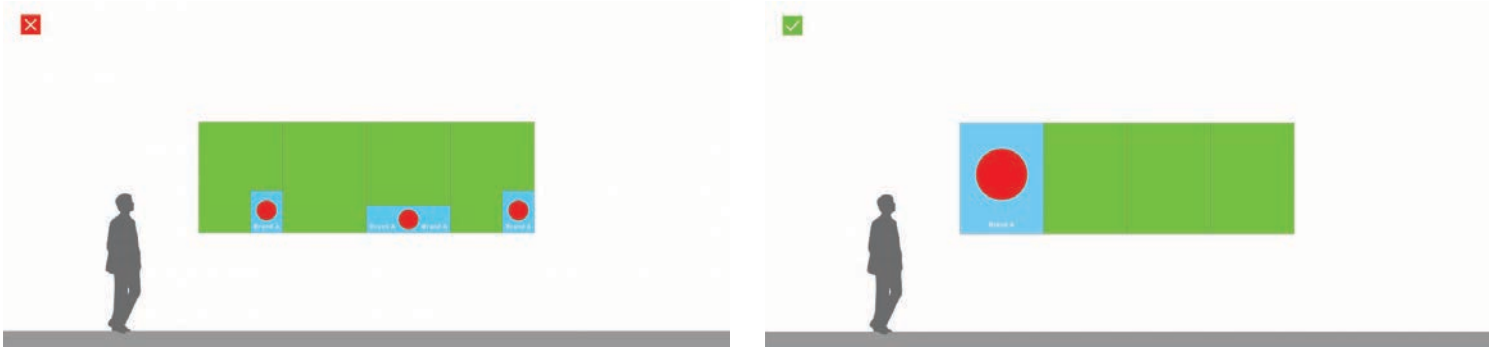


Standardization in size, form, color and materials creates visual consistency.

Mixed Digital Content

Digital displays often mix different types of content (e.g. departure information, process information, and advertisements). Advertising breaks spatial zoning rules, but can be a way to recoup investment (if the information is non-essential). When informational and promotional messages share the same display:

- Never separate different types of messages by time. That means do not alternate content between travel information and advertisements. People classify a display as information or advertising at first glance. They will not look again for content they do not expect.
- Separate different types of messages spatially. Make this difference consistent across situations. For example, always show an ad on the bottom of the screen, or on the same screens on every kiosk.



Separate different types of media spatially to create a clear and legible system.

Dynamic Digital Content

Two main factors make dynamic media more distracting than static media.

Brightness of digital screens makes it hard to see the environment and other messages nearby, especially at night when ambient light is low.

- Brightness control should be automatic and react to ambient light.
- Brightness can also be used as an asset. Large displays can lighten up the entire space, lowering the need for ambient lighting.
- Content effects brightness. Dark messages on a light background are much brighter than light messages on a dark background. Use a dark background, where possible.

Movement distracts people. The more dynamic the screen content, the greater the distraction.

- Dynamic screens with static images (shown for at least 10 minutes) can be placed according to spatial zoning guidelines. No additional rules apply.
- Dynamic screens with frequently changing content (animation, live video, advertising) should only be placed in zones that can accommodate large-scale advertising (mainly large overhead zones and walls outside the main passenger flow).

Static media and moderate illumination are suited along main flow areas.

3.2

Terminology should be clear, simple, and intelligible to the largest possible number of people. It should be consistent on signage and in related applications, such as third-party websites, mapping apps, marketing materials, airline messaging, voice announcements, tourism information, and all other communications to passengers, visitors, and employees.

To ensure consistency, this manual contains a list of airport terminology. All wayfinding information must be in compliance. Airline, Port Authority, and third-party communications should conform, too.

Using consistent terminology across this breadth of touchpoints helps maintain continuity and provide an exceptional customer experience well beyond the bounds of the airport.

3.2.1 Language

All wayfinding information is provided in English, in line with international best practices. The use of additional languages is not allowed unless authorized by the Port Authority.

The wayfinding system seeks to provide universal information through the use of pictograms. The sign program also features high contrast in its design, which can easily interpreted by visual translation technologies such as Google Translate. Lastly, consider staffing or operational solutions to provide language services to a wide swath of passengers.

3.2.2 Grammar

Capitalization
All text on signs should be written in lowercase letters with an initial capital, i.e. sentence case.

Capitalize the first letter of the first word of a sentence.

Thank you for visiting our airport!
~~*Thank You for Visiting our Airport!*~~

Capitalize the first letter of standard airport terminology.

- *Departures*
- *Restrooms*

Capitalize the first letter of each word of compound airport terminology.

- *Connecting Flights*
- *Baggage Claim*

Capitalize the first letter of each word of a proper name.

- *Newark Liberty International Airport*
- *American Airlines*

Capitalize alphanumeric names of sections, rows, areas, etc.

- *Gates A, B, C*
- *Gate A12*
- *Terminal A*

Write acronyms in all capital letters. Do not use periods or any other characters for separation.

- *JFK*
- *LGA*
- *EWR*
- *ATM*
- *KLM*

If a hyphen is used, typically the second word has no initial capital.

Prepositions, conjunctions, and definite articles (such as “the”) are not capitalized unless they begin a sentence. The following words are uncapitalized except where specifically noted: and, for, in, of, the, to.

Raised type for ADA components of ADA-compliant signage must be all capitals. This is according to ADA requirements and supersedes all other capitalization rules.

Abbreviations
In general, abbreviations are to be avoided. They are often misunderstood by international users and make reading harder.

Some exceptions can be made for widely known abbreviations to solve space limitations (e.g. Blvd for Boulevard). Such exceptions are added accordingly in the Terminology List. There are no periods in abbreviations unless specified in the standard airport terminology.

Hyphens
Hyphens are sometimes used to bind a preposition to a specific noun or verb.

- *Check-in*
- *Off-airport Parking*

As there are no specific rules for the use of hyphens in compound words, consult a dictionary before adding to the approved terminology.

Note that the following terminology should not be hyphenated:

- *Pick Up (not Pick-up)*
- *Drop Off (not Drop-off)*

Punctuation
Ampersands (&) are sometimes used to indicate two combined, related services, especially when space is constrained.

- *Shops & Restaurants*

For a continuous series of three or more numbers, use a hyphen. While this is contrary to typical grammatical rules, it is used in the wayfinding system to optimize space and visual harmony on signs.

- *Gates A1-A20*

If two destinations are combined or for enumerations, use a comma.

- *Gates A, B*
- *Check-in 1, 6, 12*

In all other cases “and” should be used.

- *Lost and Found*

Use of dashes (–) and slashes (/) is permitted only in rare cases for specific applications where sign size is restricted. There is no space before or after the dash or slash.

- *Meeter/Greeter Area*

Branding
At certain moments of the journey, branding and commercial information are important as wayfinding cues. For example, passengers typically seek the correct check-in area based on their airline. However, commercial information, such as company names, logos, and branding, is otherwise not allowed on wayfinding elements.

To determine what commercial information is allowed in wayfinding, reference the guidelines on integrating branding with wayfinding. This ensures that the elements can be perceived as wayfinding foremost. It will ensure standardization, continuity and will minimize any distractions.

Terminals & Gates
A single terminal or gate listed on a sign is shown as the word, followed by its letter and number designation.

- *Terminal B*
- *Gate A12*

A collection of gates belonging to a single concourse building is shown with the term “Gates” followed by the letter. This is contrary to grammatical rules in American English, but is commonplace at other international airports.

- *Gates A, B, C*
- *Walk to Gates A*

The total collection of multiple terminal or gate area letters or numbers are shown as the word followed by the letters in alphabetical series. When written as text, use commas between terminal letters. When included on signage, use the

graphic treatment outlined in the guidelines in composing signs.

- *Terminals A, B, C*

3.2.3 Terminology List

Term	Pictogram	Category	Location			Sign Type				Notes
			Airside	Landside	Frontage	Directional	ID	Info	Regulatory	
Accessible			●	●			●	●	●	Can be used with additional words, such as “Accessible Restroom”
Agricultural Inspection			●			●	●	●		
Airline Directory			●	●			●	●		
Airport Directory			●	●			●	●		
All Gates			●	●		●				Right-facing and left-facing versions
All Gender			●	●		●	●	●		
Arrivals			●	●	●	●	●	●		Do not use “Arrivals Hall” or “Arriving Flights” Right-facing and left-facing versions
ATM			●	●		●	●	●		
Automated Passport Control			●					●		
Baby Changing Area			●	●			●	●		
Baggage Carts			●	●			●	●		
Baggage Claim			●	●		●	●	●		
Baggage Drop				●		●	●	●		
Baggage Information			●	●			●	●		Used on Baggage Information Displays (BIDs)
Baggage Inspection			●			●	●			

Baggage Re-check			●	●		●	●	●		
Baggage Services			●	●		●	●	●		
Baggage Storage				●		●	●	●		
Bar(s)			●	●		●		●		
Bars & Restaurants						●		●		
Bus(es)				●		●	●	●		
Business Center			●	●		●	●	●		
Cafe						●		●		
Cashier			●	●		●	●			
CDC Quarantine Station			●				●			
Chapel			●	●		●	●	●		
Charging Point			●	●			●	●		
Check-in				●		●	●	●		
Connecting Flights			●	●		●	●	●		Right-facing and left-facing versions
Crew			●	●		●				
Crosswalk				●			●			Right-facing and left-facing versions
Curbside Check-in				●		●	●			
Currency Exchange			●	●		●	●	●		
Defibrillator			●	●			●			
Dentist			●	●		●	●	●		

Department of Homeland Security Customs and Border Protection			●				●	●		
Department of Homeland Security Transportation Security Administration			●				●	●		
Departures			●	●	●	●	●	●		Do not use “Departures Hall” or “Departing Flights” Right-facing and left-facing versions
Domestic Arrivals				●		●	●	●		Right-facing and left-facing versions
Door				●			●	●		Door 1, Door 2, etc.
Drinking Water			●	●			●	●		
Duty Free			●			●		●		
Elevator			●	●		●	●	●		
Escalator			●	●		●	●	●		
Exit			●	●		●	●			Right-facing and left-facing versions
Exit Only			●	●	●				●	
Express Buses (to ...)				●		●	●	●		
Family Restroom			●	●		●	●	●		
Fire Extinguisher			●	●					●	
Fire Hose			●	●					●	
First Aid			●	●					●	
Food Court			●	●		●		●		

Gate (A1; B1; C2; etc.)			●			●	●	●		Right-facing and left-facing versions
Gates (A, B, C; A1–A9, B10–B19, etc.)			●			●	●	●		Right-facing and left-facing versions
Global Entry			●			●				
Ground Transportation				●		●		●		
Ground Transportation Information				●		●	●	●		
Help Phone			●	●			●	●		
Hotel			●	●		●		●		
Hotel Information				●		●	●	●		Includes reservations and hotel shuttle information
Hotel Shuttles				●		●	●	●		Right-facing and left-facing versions
Information			●	●		●	●	●		
International Arrivals				●		●	●	●		Right-facing and left-facing versions
Level (1, 2, 3, 4, etc.)			●	●			●	●		
Long-term Parking				●	●	●	●	●		
Lost and Found				●		●	●	●		
Lounge(s)			●			●		●		
Medical Office			●	●		●	●	●		
Meditation Room			●	●		●	●	●		
Meeting Point				●		●	●	●		
Men			●	●		●	●	●		

Mobile Passport Control			●				●			
Mosque			●	●		●	●	●		
Moving Walkway			●	●			●			Use the term “End of Moving Walkway” when cautioning passengers.
No Carts			●	●					●	
No Entry			●	●	●				●	
No Pets			●	●						
No Phones			●						●	For use in CBP area
No Photos			●						●	For use in CBP area
No Smoking			●	●					●	
Nursing Room			●	●		●	●	●		
Off-airport Parking				●	●	●		●		
Off-airport Parking Shuttles				●		●	●	●		Right-facing and left-facing versions
Office(s)			●	●		●	●	●		
Oversize Baggage			●	●		●	●	●		
Parking				●	●	●	●	●		e.g. Terminal A Parking, Terminal B Parking
Parking Shuttles				●		●	●	●		Right-facing and left-facing versions
Passenger Drop Off				●	●		●	●		Do not use “Drop-off” or “Dropoff”
Passenger Pick Up				●	●	●	●	●		Do not use “Pick-up” or “Pickup”
Passport Control			●					●		Do not use “Immigration”

Pet Relief Area		●	●	●		●	●	●		Right-facing and left-facing versions
Play Area		●	●	●		●	●	●		
Police		●		●			●	●		
Porter Service		●		●			●	●		
Post Office		●		●		●	●	●		
Prayer Room(s)		●	●	●		●	●	●		Use for individual prayer rooms or a group of multiple prayer facilities, such as Chapel, Synagogue, or Mosque.
Rental Car Information		●		●		●	●	●		
Rental Car Shuttles		●		●		●	●	●		Right-facing and left-facing versions
Rental Cars		●		●		●	●	●		
Restaurants		●	●	●		●		●		
Restrooms		●	●	●		●	●	●		
Ride App Pick Up		●		●		●	●	●		Do not use “Pick-up” or “Pickup”
Security Checkpoint		●		●				●		
Self Check-in		●				●	●	●		
Shoe Shine		●	●	●		●	●	●		
Shops		●	●	●		●		●		
Shops & Restaurants		●	●	●		●		●		
Short-term Parking		●		●	●	●	●	●		
Shuttle		●	●	●		●	●	●		

Smoking Area			●	●		●	●	●		
Staff Only			●	●					●	
Stairs			●	●		●	●	●		
Subway				●		●		●		
Synagogue			●	●		●	●	●		
Taxis				●		●	●	●		
Telephones							●	●		
Terminal (A; B; C; etc.)				●	●	●	●	●		
Terminals (A, B, C; etc.)						●				
Ticketing				●		●	●	●		
Trains				●		●		●		
Transit to City				●		●				New Jersey and New York versions
US Citizens, Permanent Residents and Diplomats			●	●		●				
via AirTrain				●		●		●		Use as secondary messaging after flight-related destinations.
via AirTrain				●		●		●		Use as secondary messaging after ground transportation-related destinations.
Waiting Area			●	●		●	●	●		
Welcome to xxx Airport				●	●		●			
WiFi			●	●				●		

Women			●	●		●	●	●		

3.3

Naming and numbering play an important role in wayfinding throughout the passenger journey. During their trip, passengers need to remember and process many pieces of information—from *What time is my flight?* to *Where did I park my car?* It is important to make each piece of information as logical, simple, and concise as possible.

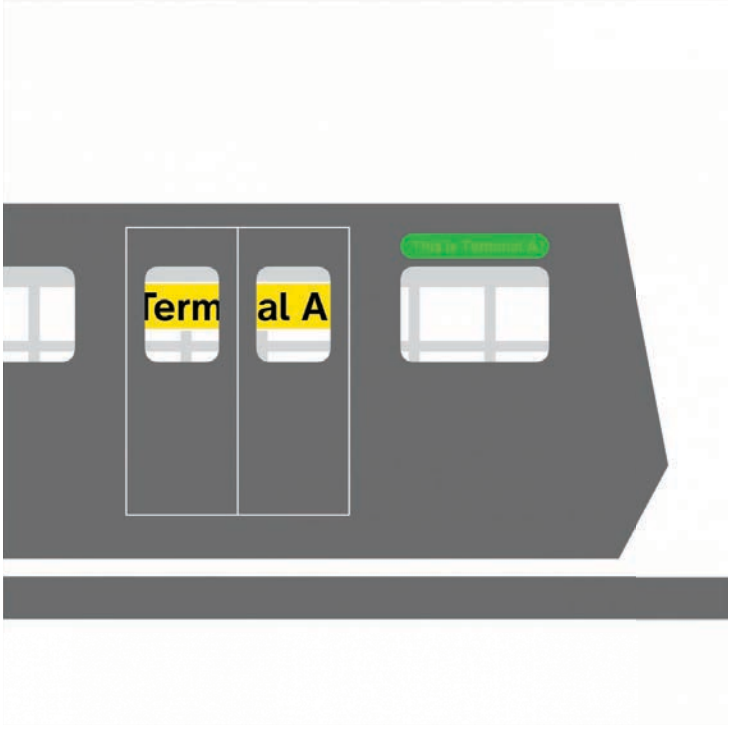
A harmonized, airport-wide numbering system serves as a positioning tool for all users—especially connecting passengers—to understand and navigate the entire airport campus. Terminals and gates must follow a logical, sequential numbering strategy. An integrated terminal-gate numbering system is the foundation. Other elements in the system (e.g. AirTrain stations, parking garages, check-in rows, baggage claims) complement the experience.

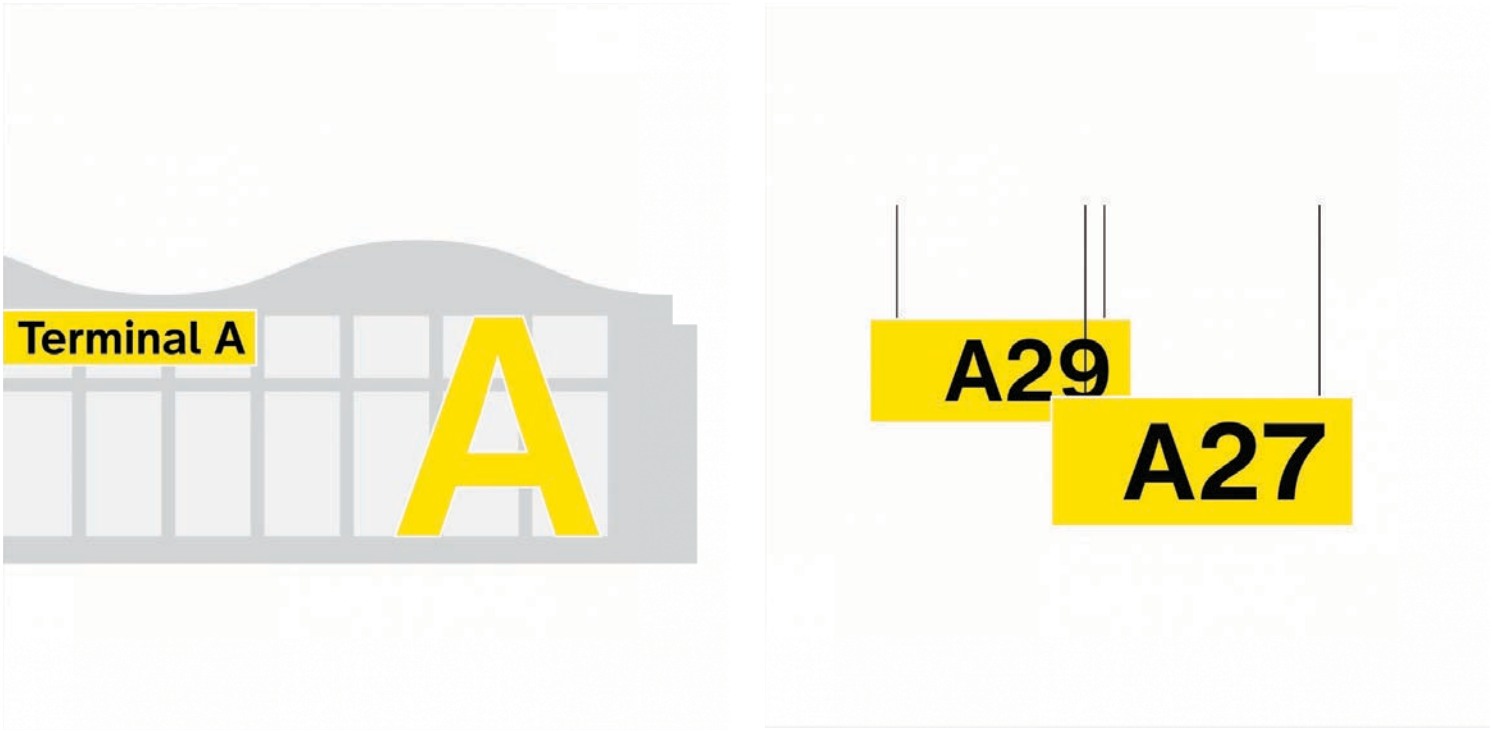
There are numerous ways to integrate terminals into gate identification. Numeric and alphanumeric are the primary methods. The alphanumeric approach keeps numbers to a manageable range.

3.3.1 Touchpoints

Passenger touchpoints that may require numbering include:

- Transit Station
- AirTrain Station
- Terminal
- Check-in Area
- Security Checkpoint
- Concourse
- Gate
- Baggage Claim
- Parking Structure
- Parking Spot (level, row)



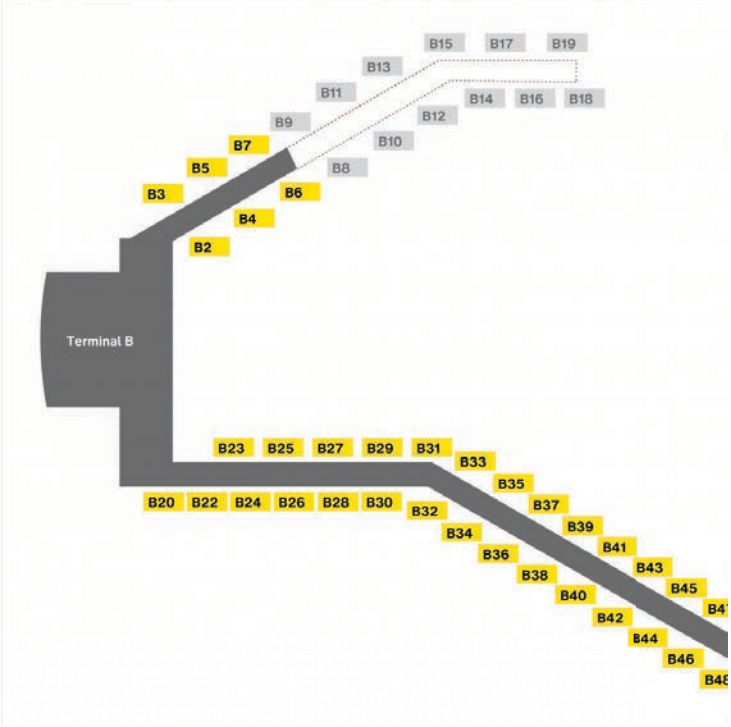


Examples of numbering touchpoints (For illustrative purposes only—not actual sign designs)

3.3.2 Principles

Numbering systems should be easily understandable by all user groups.

- Make sure numbering starts at a logical place. Determine this using flow analyses—not birds-eye perspective maps—to ensure the numbers make sense based on the way users encounter them.
  - **For terminal numbering**, consider the sequence in which users of different modes of transport and connecting passengers will encounter the terminal buildings.
  - **For interior numbering systems**, start numbering near the building entrances. On other levels, start numbering from elevator cores or primary vertical circulation points. Increase the numbering from entrance or elevator core to the periphery.
- Divide long numbers into distinct alphabetical and numerical parts (e.g. B24 instead of 2.24).
- Base numbering systems on architectural structure and user flows, not on building or section functions, as these might change.
- Allow for the possibility of future expansion by adding breaks in sequences at natural points. (e.g. If in a “Terminal B” there were 6 gates in one concourse and 33 in another, number them B2–B7 and B20–B53. This allows room for the addition of 12 gates in the first concourse.)



Breaks in sequences will allow for future expansion (For illustrative purposes only—not actual sign designs)

- Avoid using letters that may be confused with numbers (O, I, Q) or with functions (P for parking).
- Test the understandability of numbering of below-ground levels with users, as there is not a clear international standard.
- Be consistent in numbering system and layout across the entire airport campus, including all buildings, locations, and floors.

3.4

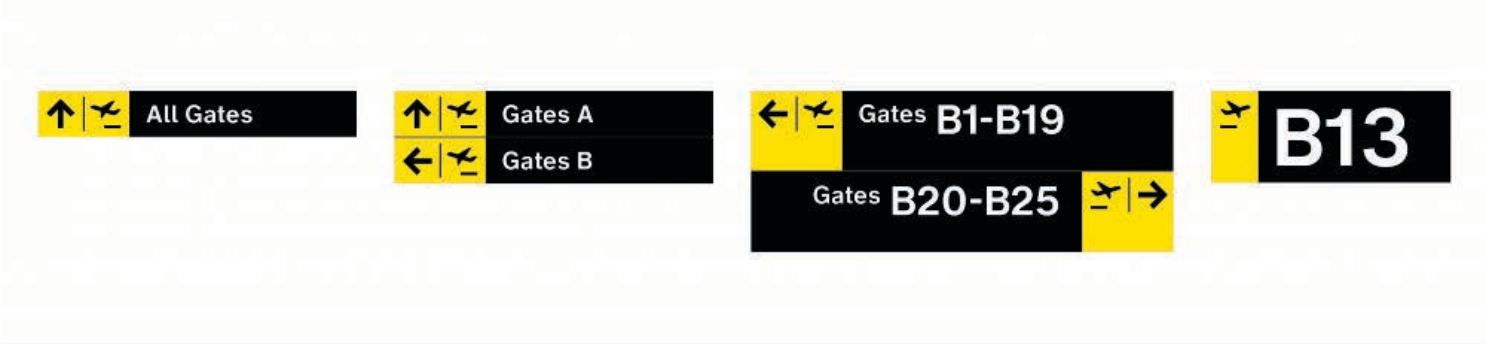
Passengers seek different information at key steps along their journey through the airport. It is important to anticipate these needs and provide the right information at the right time.

The overarching information strategy for wayfinding in the facility must be considered holistically. This section outlines the principles that govern design, placement, and programming of information in the wayfinding system.

3.4.1 General to Specific

Passengers seek information to proceed in the correct direction for their destination. They scan directional signs for the information necessary to continue. Too much information is almost as bad as too little. Surplus information adds visual clutter and will be ignored by passengers.

To ensure information on directional signs is complete but as concise as possible, present it progressively with increasing specificity. For example, use general terms like “Ground Transportation” if passengers seeking various types of transportation all proceed in one direction.



Progression of signs: All Gates > Gates A, Gates B > Gates B1–19, Gates B 20–25> Gate B13

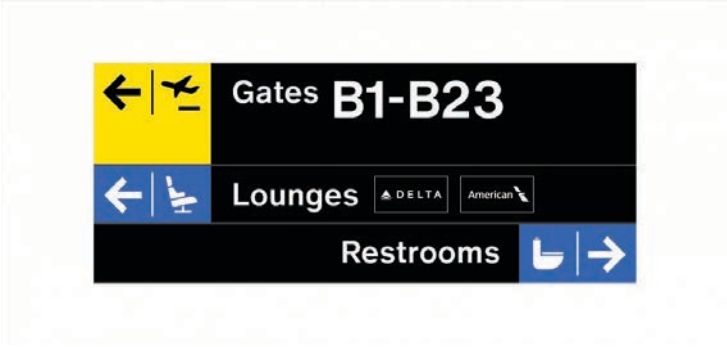
Further along, more specific information is introduced. For example, at a decision point where the route to various destinations diverges, more detail is added.

The final level of specificity is at the destination itself, where an identification sign signals completion of the journey.

3.4.2 Direct and Confirm

Signage and other wayfinding cues inform and direct passengers at decision points (i.e. locations where a choice between different possible directions must be made).

All destinations that are part of the destination list will be included on **directional** and **identification** elements.



Directionals provide directions on which way to go

Directional Elements
A directional element is the combination of text, pictogram, and arrow. At decision points, they tell people which way to go to reach a certain destination. Relevant destinations that are not directly visible need to be indicated by directional elements. In some cases, such as lengthy corridors and concourses, directional elements should be repeated simply for confirmation purposes. Once a specific destination is mentioned on a directional element, it must be included on all consecutive directional elements up to the destination.

Identification signs are used to identify the final destination

Identification Elements
Identification elements show passengers where a particular destination is located. All destinations included on directional elements must be identified to confirm upon arrival. This also applies to destinations which are not clearly delineated areas, such as the arrivals area.

Identification elements can do more than just confirm arrival. When visible and legible from decision points, they serve the same purpose as directional elements, i.e. providing information on which way to go. Therefore, choosing a large enough scale and clearly visible placement may mean that fewer directional signs are necessary.

3.4.3 Categorize Information

At main decision points, directional elements include many different destinations. To help passengers find what they're looking for, destinations are divided into four categories:

- **Flights & Operations** include Check-in, Gates, and Baggage Claim
- **Connecting Flights** for passengers arriving on international flights, used only from arrival to Baggage Re-check
- **Exit & Ground Transportation** include Exit, Parking, and Ground Transportation
- **Services & Amenities** include Restrooms, Shops, and Lounges

In order to clearly distinguish between categories on all signage and information, each category is coded with a different Color. All destinations are assigned a category in the Terminology List.

Flights & Operations
Yellow

Connecting Flights
Purple

Exit & Ground Transportation
Green

Services & Amenities
Blue

Color coding helps passengers scan signage and find the destination they're looking for. For instance, when hurrying towards their gate, passengers quickly learn to ignore information that is color coded green or blue, focusing solely on directions coded in yellow.

For color coding to work effectively, a maximum of four colors may be used.

Process-based vs. Location-based Color Coding
People quickly learn to use a color-coded signage system, when different colors are used to distinguish between process-based categories. Color coding to distinguish between different locations has proven to be much less effective.

For instance, using colors to distinguish between different building levels does not work well. This type of color coding requires conscious attention and information processing. Users need to be aware that the color is meaningful and must remember in order to find their destination.

3.4.4 Focus on Destinations

Passengers focus on finding destinations rather than a particular mode or means to get there.

For instance, once landside, connecting passengers will look for the gate and/or terminal of their next flight, and arriving passengers will look for cues to get to the city. Directional information referring to “Terminals” and “City” destinations will better match their expectations than signage directing only to “AirTrain” — a term not universally understood. So all signage and wayfinding cues direct to the destinations themselves, instead of mode of transport (which is included as secondary information).

Similarly, international arriving passengers have no choice but to pass through Passport Control and Customs as they find their way out of the airport. Therefore, Passport Control and Customs need not be included on directional signage; simply “Exit” is included.

For more examples of how this strategy is applied, see Information Diagram guidance.

The only exception to this is Connecting Flights.

Prioritize destinations over the process

3.4.5 Connecting Flights

One important exception to Focus on Destinations is Connecting Flights. Though not a specific destination, “Connecting Flights” has its own color-coded category. This is because the process required (claiming and re-checking baggage before proceeding to a connecting flight) is unlike other international standards and is, therefore, unexpected.

Dedicated treatment brings attention and prominence to the unusually complex steps of the process, easing passenger experience at a time of potentially increased stress.

This treatment is only applied to the most unique and complex steps of the connecting process. The Connecting Flights “destination” and color treatment is only included in the international arriving journey: from arrival until the Baggage Re-check step. After Baggage Re-check, the color is no longer used. Connecting passengers join the departing flow, following yellow-coded destinations to navigate to their next flight.

For examples on how the Connecting Flights treatment appears throughout the international arriving journey, see Information Diagram guidance.

4

4.1

Successful navigation is about receiving the right information at the right time. It is the foundation for an exceptional airport experience, ensuring customers don’t have to worry about finding their way.

To meet customer needs, wayfinding information must be clearly visible, located where customers expect it, and convey the information they are looking for. This requires an understanding of both their needs and the environment. Along the way, user needs are tied to processes, decisions they must make, and conditions of the environment. This information serves as tools and cues to guide users to their destination.

Programming is the process of determining the content and general location of each wayfinding element. Placement strategy pinpoints the physical location of each element. These processes are highly dependent on the facility. They must be coordinated between developers, architects, operators, designers, and fabricators.

4.1.1 Overview of Elements

The overview is arranged by type of sign and possible alternatives. It includes standard sizes and mounting options to accommodate a variety of architectural conditions.

Signs are categorized by:

- **Type**: Top-level description.
- **Function**: Purpose(s) of the sign. Some have multiple functions, e.g. Gate identification signs indicate flight status and destination, so they are both Identification and Information.
- **Location**: Where the sign is typically found.
- **Graphic**: How the information is presented.
- **Structure**: Mounting, fabrication and placement.
- **Size**: describes the measurement of a sign, typically the size of the graphic face. Sizes will differ amongst sign types. Note: Standard dimensions are not available for all sign types.
- **Lines**: On some signs, height can be expressed by how many lines of messaging it contains.

This overview is intended as a general guideline.

Type	Function				Location			Graphic						Mounting												Size						Line				
	Identification	Directional	Information	Regulation	Interior	Exterior	Interior AirTrain (platform)	Static	Dynamic	Display only/ display included	Illuminated (internal)	Non-illuminated	ADA compliance	Wall	Suspended	Ceiling	Cantilever	Post	Podium (e.g. on carousel)	Freestanding (totem)	Movable	Architectural integration	Vinyl (e.g. on glass)	Wall plaque	Special	X-Large	Large	Medium	Small	Wall Plaque	1-Line	2-Line	3-Line	4-Line	Variable/other
Terminal ID	•					•		•			•			•								•			•	•					•				
Station ID	•					•	•	•			•			•	•	•						•			•	•	•				•				
Door ID	•					•		•			•			•								•	•				•	•			•				
Curb ID	•					•		•	•		•				•	•		•										•	•		•				
Check-in ID	•				•			•		•	•			•	•	•	•					•						•	•		•				
Gate ID	•				•			•	•		•			•	•	•	•					•						•			•				
Facility	•				•			•			•			•	•	•	•					•						•	•	•	•				
Bag Claim ID	•				•			•		•	•				•	•			•			•						•	•		•				
Room ID	•				•		•	•				•	•	•										•						•					•
Directional		•			•	•	•	•	•	•	•			•	•	•	•	•		•		•	•			•	•	•	•		•	•	•	•	
Trailblazer		•			•	•	•	•		•	•							•		•									•						•
Directory			•		•		•	•	•		•	•		•	•							•				•	•								•
Hours			•			•		•				•											•					•	•	•						•
VMS			•		•	•	•		•	•				•	•	•						•				•	•	•	•		•	•	•	•	
Interactive Kiosk			•		•		•			•			•	•						•		•				•	•	•							•
FIDs			•		•		•			•				•	•	•		•	•	•		•				•	•	•	•						•
BIDs			•		•					•				•	•	•			•	•		•				•	•	•	•						•
GIDs			•		•					•				•	•	•		•		•		•				•	•	•	•						•
Elevator directory			•		•		•	•					•											•		•	•								•
Maps			•		•	•	•	•			•	•	•	•						•		•		•		•	•	•	•						•
Regulatory curb (vehicular)				•		•		•				•			•			•											•	•						•
Regulatory				•	•	•	•	•	•		•	•		•				•			•	•	•	•					•							•

Overview of signs in the wayfinding system

4.2

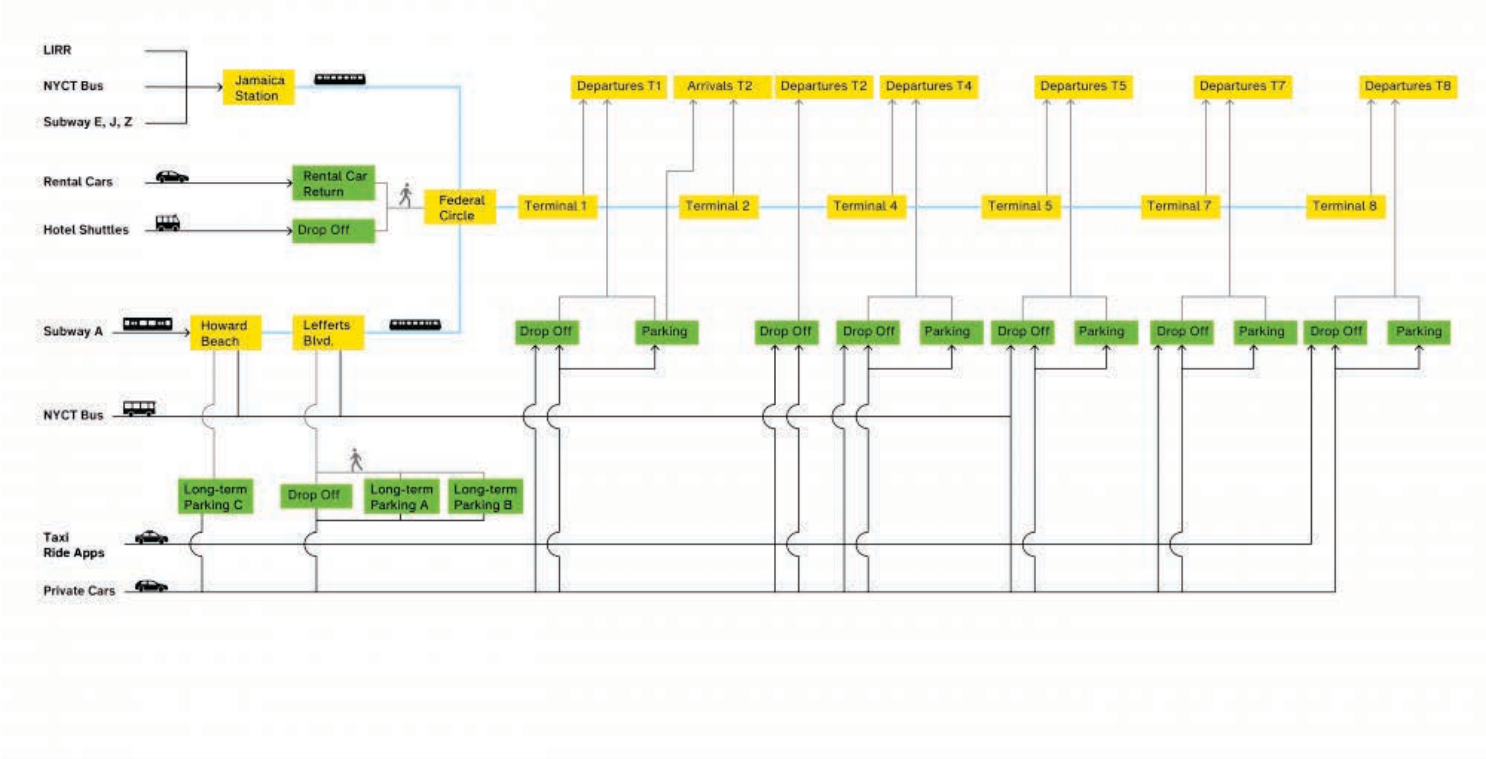
Programming is the first step of every sign project to assess and identify needs. Programming determines what information is needed and the sign types, locations, and messaging to convey it. It is a critical part of establishing a new wayfinding program, and is useful in the future for adding, replacing, or removing signs as needs change.

The **Process Diagram** is the starting point, providing a high-level understanding of general user needs along the steps of their journey. Then the **Information Diagram** adds details of information needed at key points. The **Flow Plan** maps user routes through a space. Finally, all this information comes together and is precisely mapped to the facility environment on the **Sign Plan**.

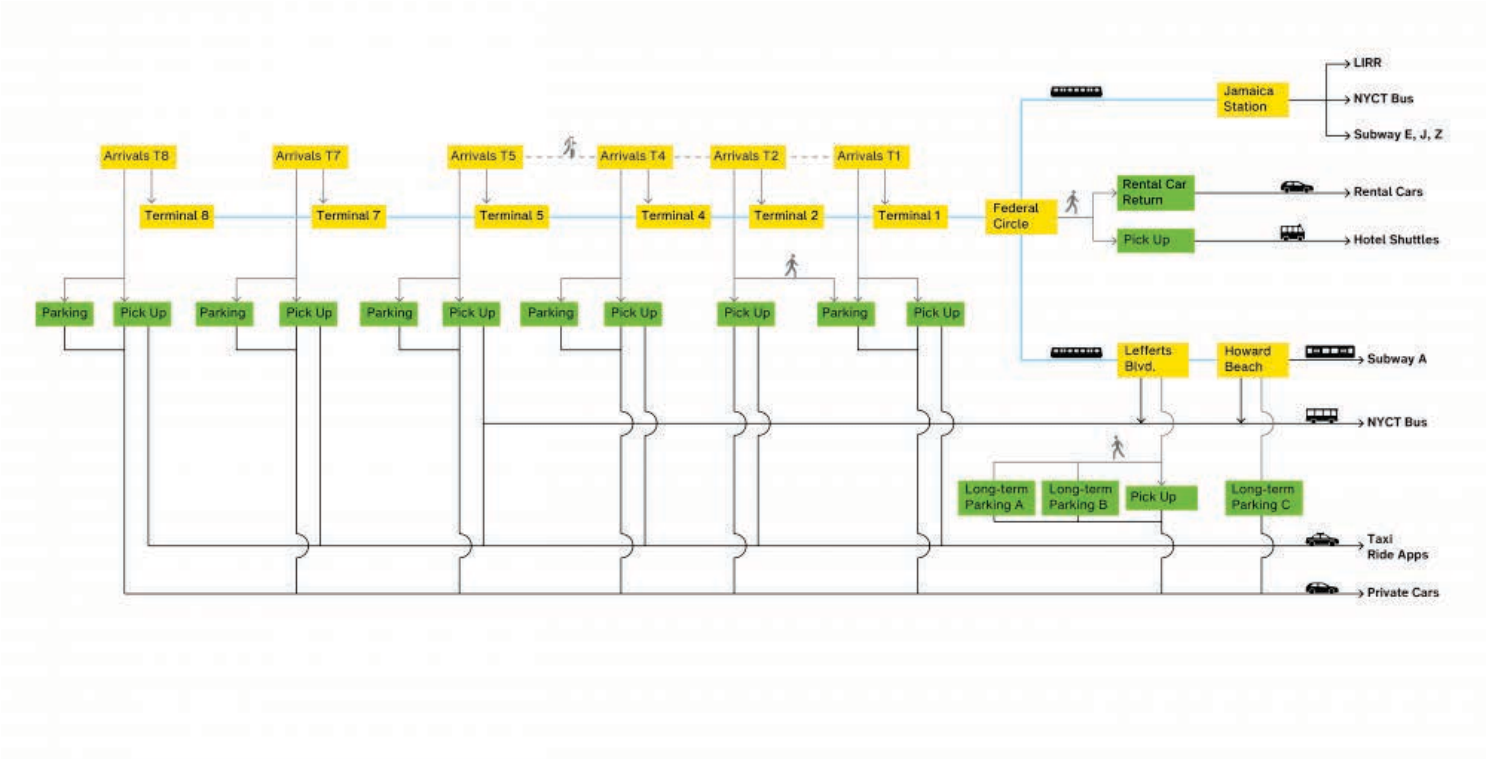
4.2.1 Process Diagram

The Process Diagram is an abstract representation of the user journey. Each process step is identified, indicating a destination or decision point and options available at each step.

A typical Process Diagram for arriving passengers shows the steps from gate to ground transportation.



An example of a JFK-specific process diagram, showing the passenger departure process



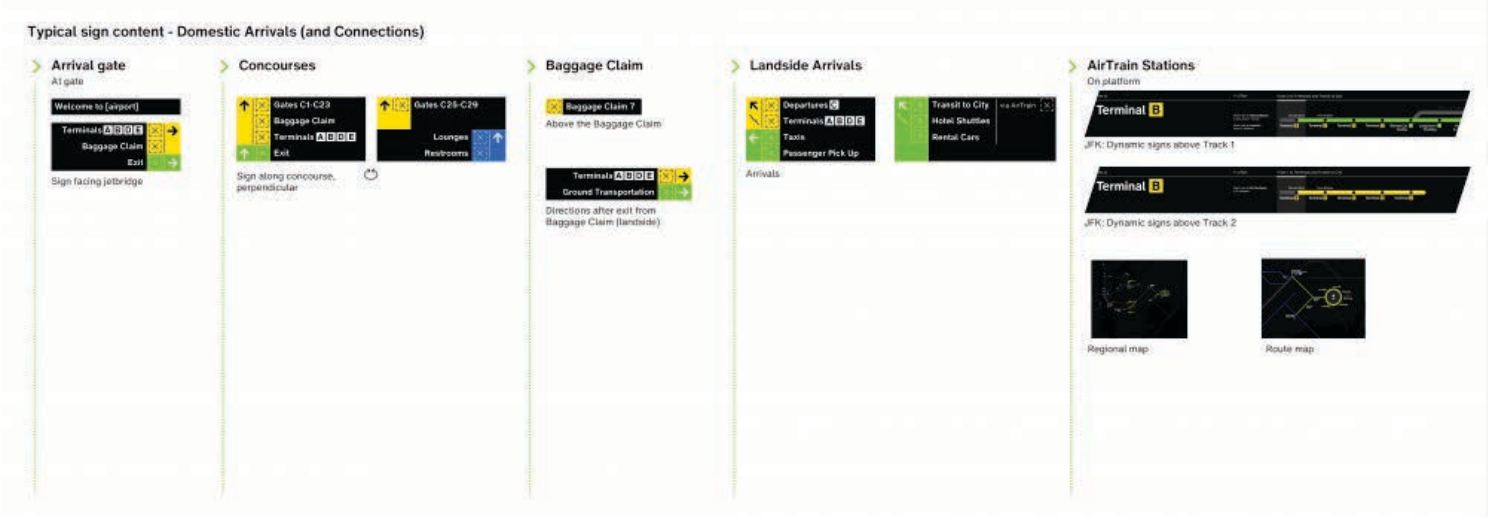
An example of a JFK-specific process diagram, showing the passenger arrival process

An example of a JFK-specific process diagram, showing the connections process

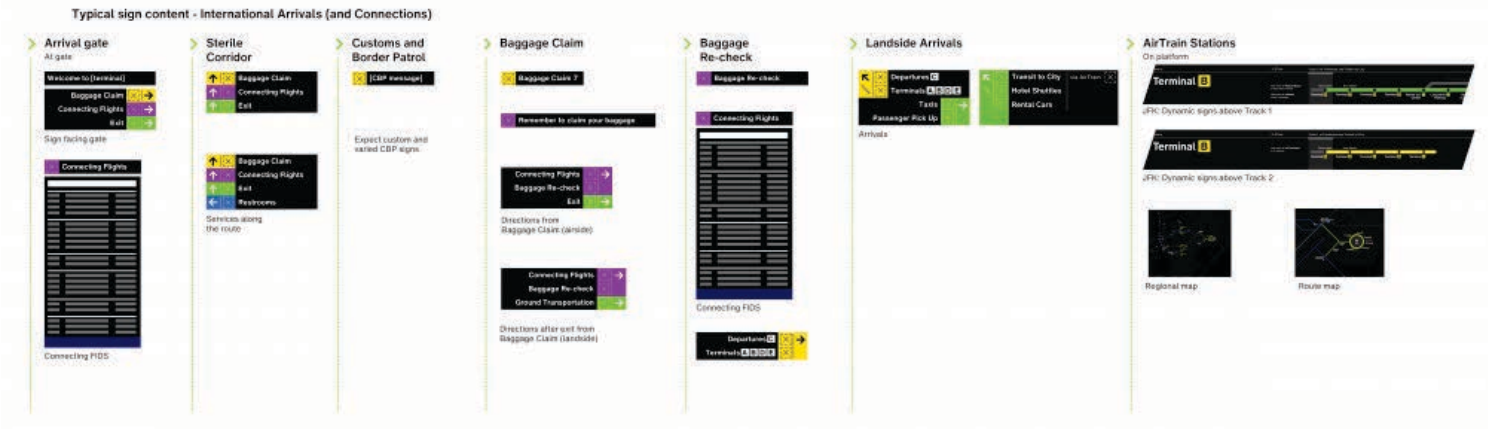
4.2.2 Information Diagram

Building upon the Process Diagram, the Information Diagram is developed to understand the information needed at each point. It takes into account the Information Strategy, specifying the information conveyed and where it is provided.

Information Diagram showing the Departure flows.



Information Diagram showing the Domestic Arrivals (and Connection) flows



Information Diagram showing the International Arrivals (and Connection) flows

4.2.3 Flows

A *flow* is the path a user takes between two destinations. **Main flows** are primary routes. **Alternate flows** and **special flows** are secondary, such as detours through commercial areas, priority lanes, and paths that a minority of passengers use. To ensure a smooth and comfortable process, information should be provided according to flows.

Overhead signage allows passengers to view wayfinding information while continuing along a main flow. Placing signage and wayfinding elements in a structured, predictable way, according to Spatial Zoning guidelines, helps passengers find information where they expect it.

Mapping Flows
To determine position, orientation, and content of wayfinding signs, the first step is to determine the passenger flow.

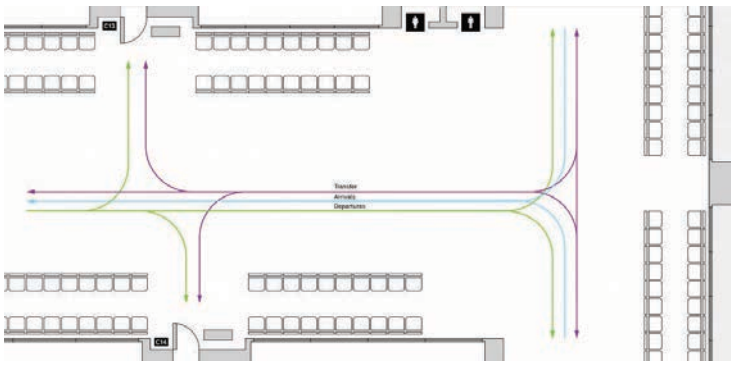
Passenger flows are drawn on terminal plans to show the movement of people through space. These are known as Flow Plans. Flows are shown as lines with directional arrows. Flows are colored to differentiate between user types, e.g. Arriving, Departing, and Connecting Passengers. Subsets of these users can also be identified, e.g. Arriving Passengers picking up baggage or Departing Passengers with carry-on baggage only.

Ensure all relevant flows are included.

- **Main flows**
  Primary routes from one destination to another, e.g. check-in to departure gate, arrival gate to baggage claim
- **Alternative flows**
  Secondary routes, e.g. shortcuts, detours through commercial areas
- **Special flows**
  Secondary routes used by some, e.g. accessible routes for wheelchairs, priority security checkpoints
- **Facility flows**
  From main flows to facilities, e.g. restrooms, lounges, pet relief areas

Flows that are not followed by passengers are typically omitted.

- Routes that are not part of any passenger's process, e.g. to 'Special assistance' or 'Tour operators'
- Routes for employees and crew, e.g. to crew gates, airport offices

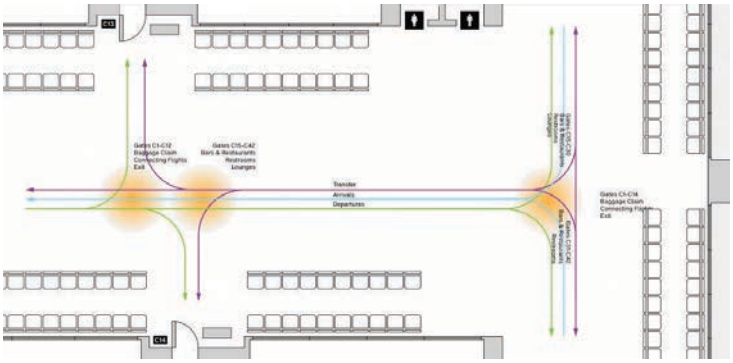


Flows are shown color coded on the plan and identified by user type.

4.2.4 Decision Points

Passengers encounter points where they must make a decision on which direction to go to reach their destination. These are known as *decision points*. There should always be a directional sign, so passengers are quickly able to proceed. The only exception is for destinations that are clearly visible from the decision point, which helps keep the environment uncluttered by unnecessary information.

Using the flows, identify decision points by circling each one on the flow line and identify the destinations that are reachable.



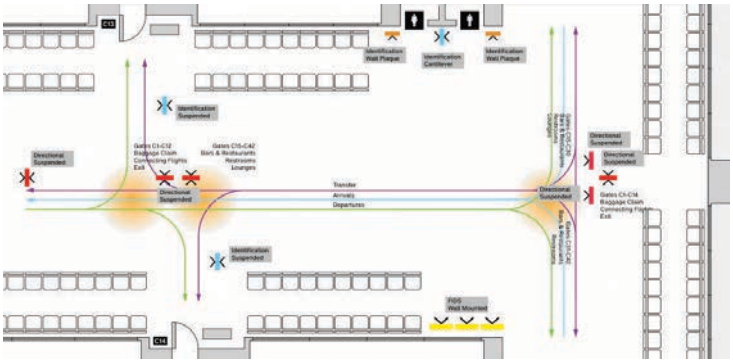
Decisions points are shown on the plan, where a passenger has to confirm or change course. The destinations that can be reached are shown at each decision point.

4.2.5 Sign Plan

The Sign Plan details every sign needed in a specific space, where they should be located, and what their content should be.

Using Flow Plans with identified decision points, determine the exact location and content of each sign. Typically there is a directional sign at every decision point, oriented perpendicular to the passenger flow direction. Signs are placed just in advance of physical points, such as doors or gateways, where a choice must be made.

At each decision point, the wayfinding sign or element needs to communicate available destinations. Use Flow Plans to understand user routes and destinations in an area. Note the flows that cross each decision point and list the destinations reached by those flows on the plan. Determine the correct sign content for each sign using the approved Terminology List.



Signs are shown at each decision point to display the information that is required.

Not every destination accessible at a decision point must be listed on the sign. Passengers only seek information needed at that point. Destinations reached by primary flows should always be prioritized, with secondary destinations included wherever possible.

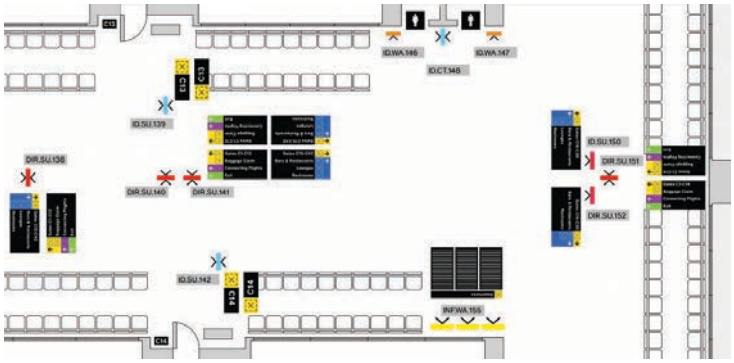
When there is a high volume of destinations at a decision point, consider:

- Destinations to a later stage of the route can be skipped on signs, if logical to the passenger journey, but they must be picked up again on later signs.
- Providing signs later in the path, within sight of the decision point if room for multiple signs does not allow, and in such a way that they reinforce the direction of travel, and do not cause backtracking or confusion.
- Do not omit destinations in the middle or the end of a route. Once a destination has been signed to along a flow, it must be signed for the remainder of the route- though the do not have to be on each sign.

With the content of each sign determined, preliminary sizes and quantities can also be determined.

Depending on the architectural conditions and limitations of the space, it may not be possible to locate enough signs to accommodate all required destinations. Alternate placement of signs or specially designed signs may be considered. Programming is an iterative process that balances the needs, quantity, and location of signs to best inform the user.

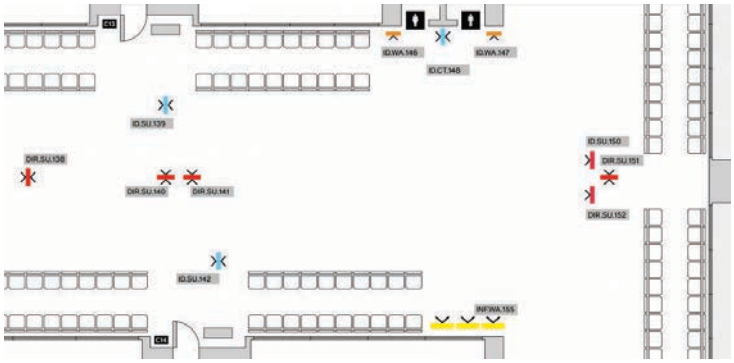
Visual Sign Plan
To prepare the document for review, include prototypical sign layouts on the plans. This provides a comprehensive document and enables easier understanding and review of the sign which are programmed. Use preliminary or final layouts featuring the appropriate terminology, pictograms, and arrows to illustrate the signage program.



Preliminary layouts shown in location on a plan for content verification

Final Sign Plan

Once all sign types, messages, and locations have been determined, final sign codes can be assigned. (Placeholder codes can be assigned during the process, as it may be more efficient to wait for final agreement before assigning sign codes, as the addition or removal of signs may necessitate renumbering.)



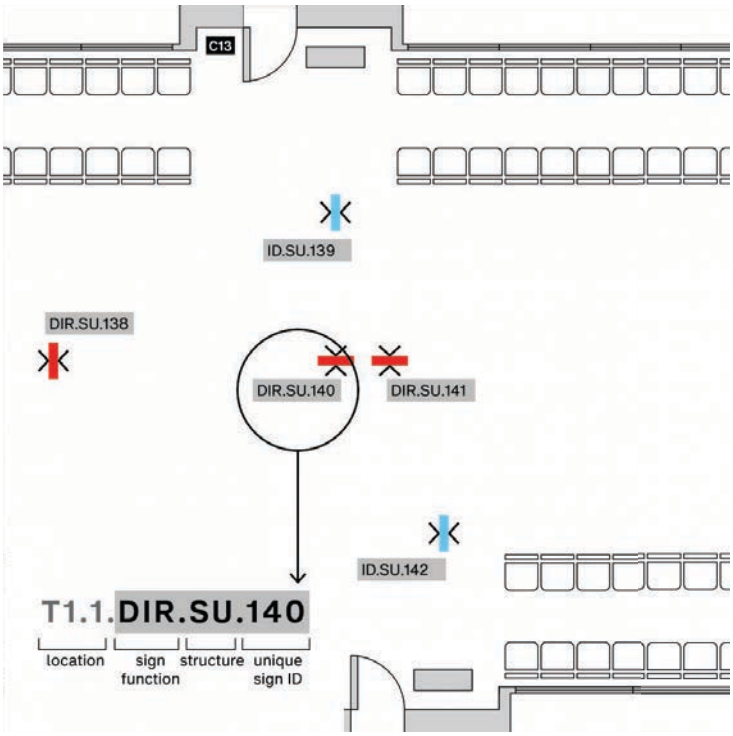
Sign plan showing the sign locations

4.2.6 Using Sign Codes

Sign codes give shorthand information on the purpose of a sign. It is also used to identify the sign for tracking purposes. The code is used for cataloguing signs in an inventory and database, as well as noting them on a sign plan.

Each sign code is made up of four elements:

- Sign function
- Structure
- Location and level
- Unique ID



Sign codes use shorthands that indicate the purpose of a sign.

Sign Code Numbering Guidelines

- Use first digit number to indicate a level.
- Assign a consistent number of digits to account for the estimated number of signs per level. For example, if you anticipate more than 99 signs, use three digits, i.e. 001 to 999.
- If a level is very large, consider subdividing the numbering. Group areas of the building and provide a key.
- Number the signs in a continuous pattern (e.g. clockwise), so that signs are easier to find on the Sign Location Plan.
- Leave gaps in numbering to allow for the addition of future signs. This allows more intuitive groupings to direct to, e.g. 101, 102, 103, 104 (101–104); 110, 111, 112, 113, 114, 115, 116, 117 (110–117); 120, 121, 122 (120–122)

4.3

Location strategy is the process by which a wayfinding element is located in space.

4.3.1 Location

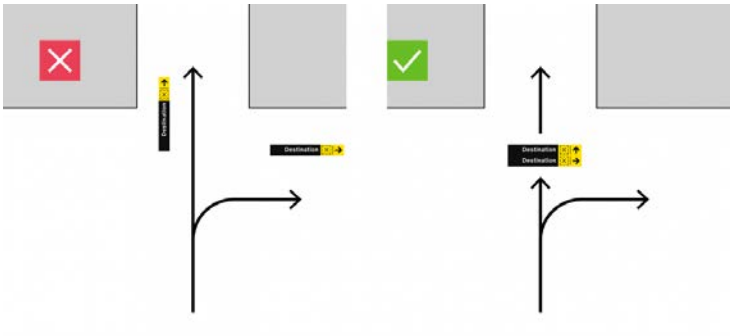
Three types of information must be considered when determining the location of a sign:

- **Decision points:** where do people need information?
- **Field of view:** where will it be visible and legible?
- **Architecture**: are there structures or constraints (such as ceiling heights) that restrict viewing?

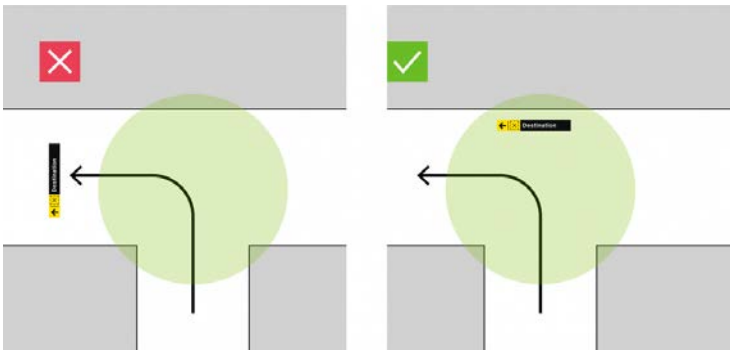
Using this information, identify specific locations for each sign on the map, indicating the orientation (noted by symbol orientation) and unique sign number.

4.3.2 Intersections and Elevation Changes

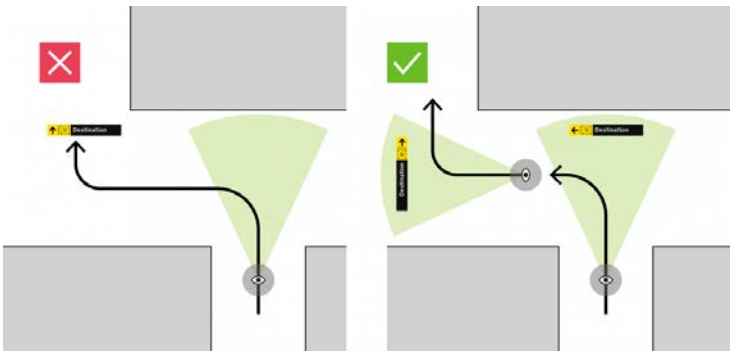
Special consideration is required for visibility of wayfinding elements when user flows turn corners or change levels.



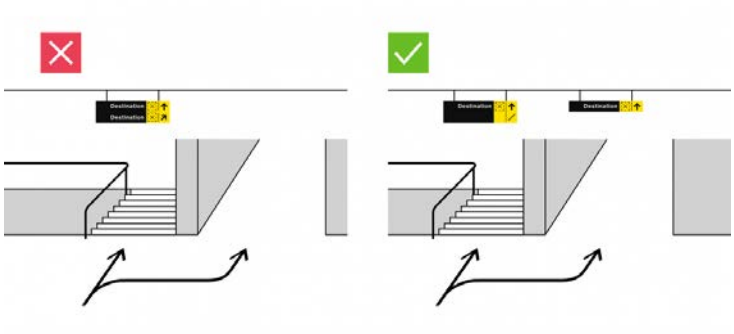
Signs should be perpendicular to the passenger flow.



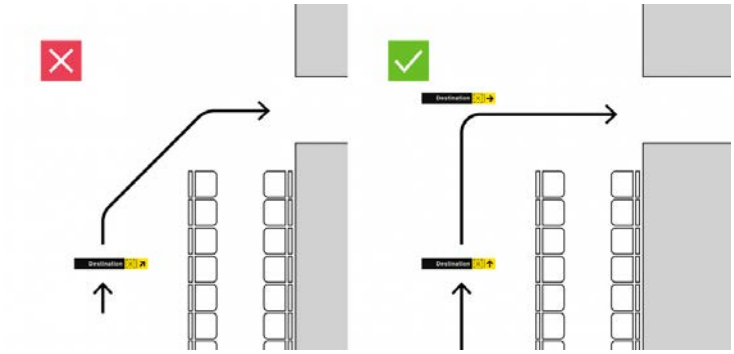
Signs should be visible when entering a decision area



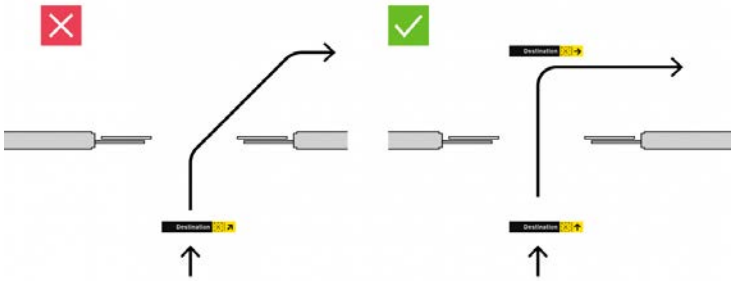
Use directional signs for destinations that are not within the visual field.



Because slanted arrows mean 'keep going left(right),' they can easily be confused with 'going up' (to the next level). This type of arrow should be avoided, unless absolutely necessary/

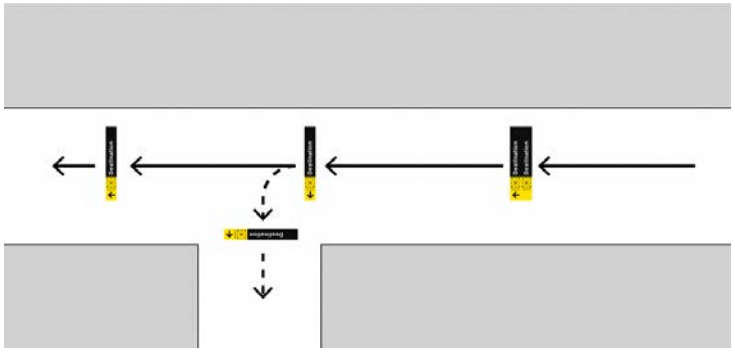


Never combine two steps of routing information on one sign by using a slanted arrow (45˚) to communicate 'go straight for a short distance, then turn.' In this case, two signs should be used, to indicate 'go straight' and the next at the decision point to turn.



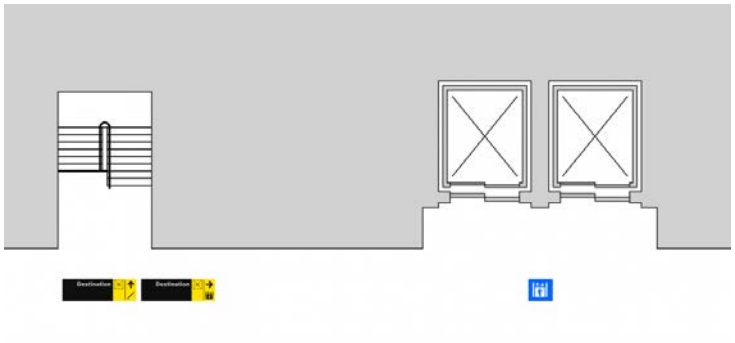
A similar situation occurs when a directional sign is at an exit, but directs users to a destination that is beyond the actual exit.

Corridors: if there are no decision points on long paths such as corridors, directional signs should be repeated for confirmation. Confirmation signs should occur approximately every 150 feet, if conditions allow and the destination is not clearly visible.



Confirmation is needed along a long corridor.

Vertical movement: signs should be positioned at all points that offer vertical movement (elevator, escalator, or stairs) with directional signs and directories confirming the destinations accessible by the vertical mode.



Always identify vertical circulation options.

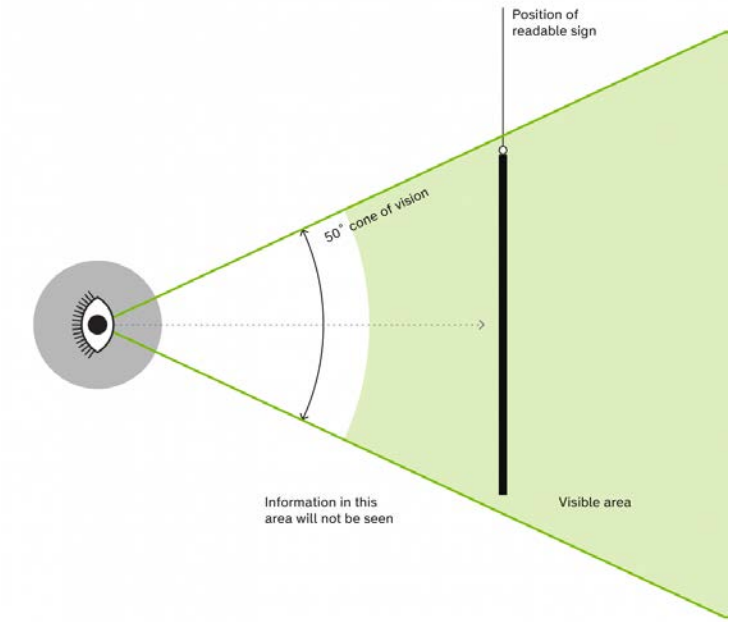
Central locations: information nodes should be provided in central areas where a variety of information is needed. These nodes may include FIDs, airport maps, and information kiosks, depending on information needs.

Destinations: an identification sign should confirm arrival at a destination.

4.3.3 Field of View

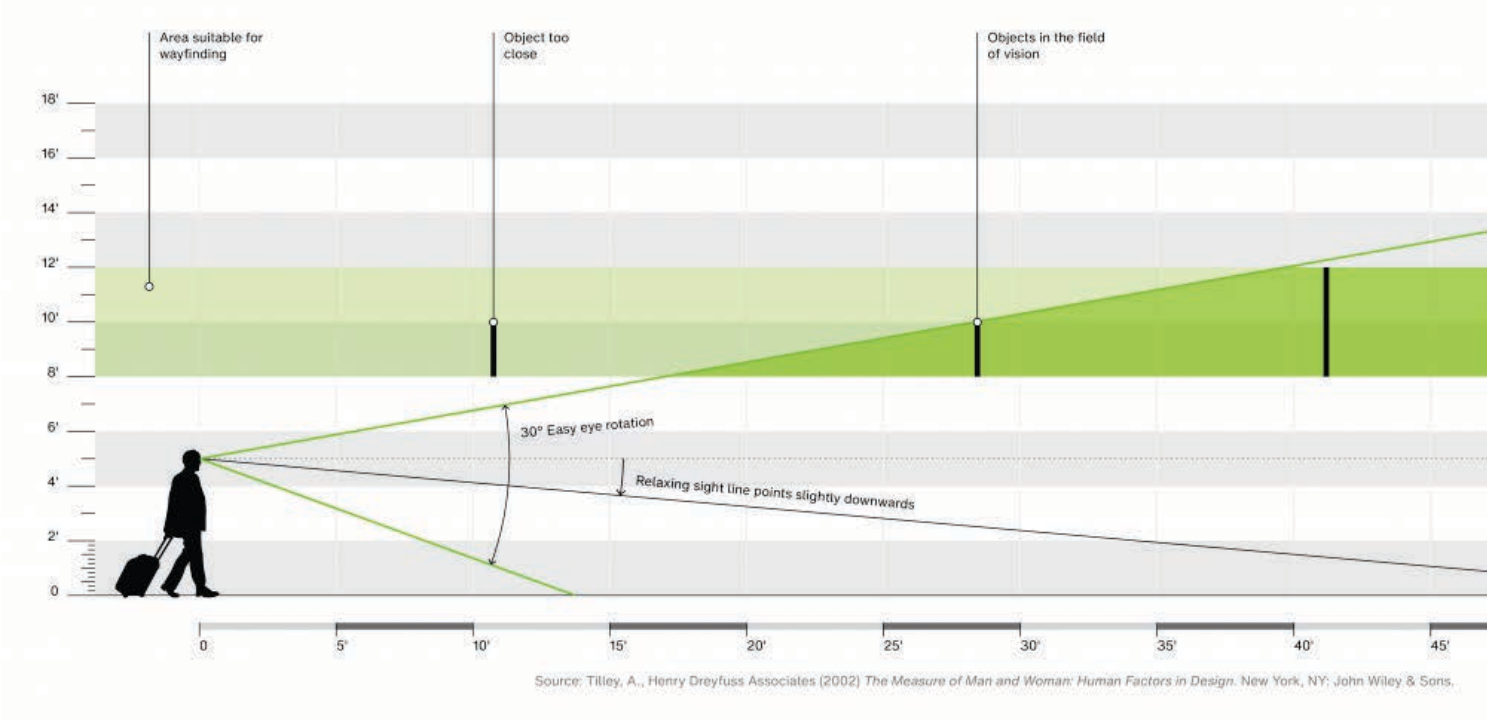
People tend not to turn their heads and regularly miss information that is close by, but outside their field of vision. The field of view (or visual field) is the area in which objects can be easily seen by the average person. This explains why people often stumble over low objects like curbs. Signs that are installed very high can also be missed even when they fit into one's field of vision.

Horizontal Field of View
When looking straight ahead, people only see 25° to the left and 25° to the right. Anything that falls outside this 50° spread will not be seen.



The horizontal field of vision is measured left and right from the perspective of the viewer. It covers 50˚ in front of the viewer. Anything outside the field will not be seen.

Vertical Field of View
The average eye level of a person standing is about 60" (43"–51" for passengers in wheelchairs. From this height, the visual field is a cone extending vertically 10° up from the horizon and 20° down. (The cone has a larger area downward because the center of the gaze tends to point 5° down.) Any objects placed outside this vertical visual field can easily be overlooked—or "underlooked," in the case of overhead signs.

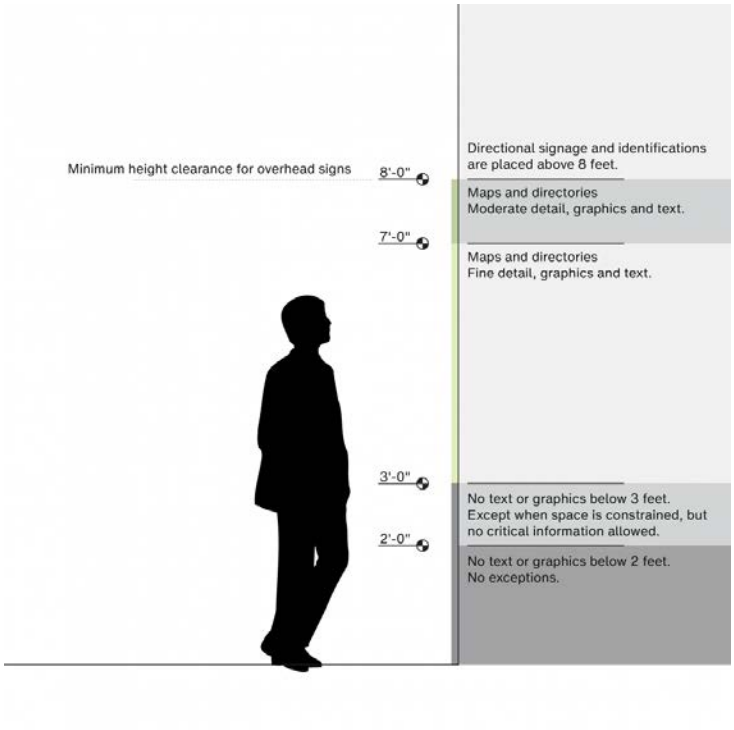


Horizontal field of vision is angled above and below users' comfortable sightline. Any elements out of view are not seen.

Height

Place all information so it is easily seen by all passengers, including those in wheelchairs and those with visual impairments.

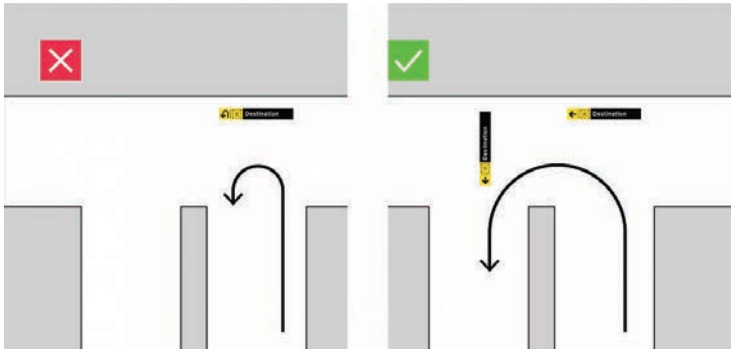
- **8’-0” and higher**
  Large format graphics and text (e.g. directional signage, identification signage, branding)
- **7’-0” to 8’-0”**
  Graphics and text with moderate details or shorter text (e.g. directories, instructions, headers)
- **3’-0” to 7’-0”**
  Graphics and text with fine details or longer text, such as maps, indexes, and rules and regulations
- **2’-0” to 3’-0”**
  Non-critical information, only when space is constricted
- **2-0” and below**
  No information is allowed in this zone.



Vertical zones allow information to be seen at a comfortabale height

Other Considerations

- Signs that instruct users to make a U-turn for a destination are difficult to understand. Use them only if no other options are available.



Do not use u-turn arrows

- Locate signs to avoid glare. Bright overhead light sources too close to the face of a sign will create a “hot spot,” making the rest of the sign dark by comparison.
- Place signs so they are accessible for maintenance. Placement should be avoided in areas where they can not be easily maintained, such as over moving walkways or escalators.
- Wayfinding elements should not block each other. Allow enough distance between them to avoid clipping information on signs behind.
- Do not obscure other pertinent information, such as emergency signs or exits.

4.4

Placement takes into account three-dimensional space, considering vertical placement to ensure proper visibility and a common baseline for the placement of wayfinding information. Below are a few scenarios showing how the combination and placement of these elements create clarity for the user.

Sample wayfinding elements for placement

Vertical placement
All suspended and cantilevered signage will be placed such that the bottom elevation is 8′-0″ above finished floor. At this height signs are easy to identify – higher placed signs can be overlooked, or 'underlooked' in the case with signs located to high. At this height, signs will also be outside of reach of most passengers, limiting those who can touch them. By lining up all signage at one bottom elevation a continuous plenum or signage zone will be created, and the wayfinding signs will also be visually separated from commercial messages.

Identifications signs that are placed on totems, such as gate identification, will also have to main identifying element located at 8′-0″ above finished floor. This will further strengthen the wayfinding zone.

In large spaces, where long viewing lines can be guaranteed, the bottom elevation may be increased to 10′-0″ above finished floor. Please note that this does mean that all signage in that area will have to bottom align at 10′-0″, this may not be limited to individual signs or sign types.

Monitors
Ceiling mounted Gate IDs and monitors should also be placed at 8′-0″ above finished floor. When monitors are wall mounted, they can placed a bit lower to increase legibility. Do not placer any monitor below 6′-0″ above finished floor, to prevent passengers blocking the view for other passengers.

ID signs above doors
Wall mounted identification signs, such as elevator identification or the identification of an exit door, need to be center mounted above the door or opening.

When multiple elevators, entrances or doors are present, then the sign will be centered between the doors. This will be a common occurrence with restrooms that have adjacent entrances for men and women.

Floor mounted signs
Freestanding post mounted signs should be placed outside the flow area, so to avoid passengers running into them or hitting them with carts or luggage as much as possible.

Likewise, totems must be placed outside the main flow, and perpendicular to the path of travel. When using totems for Gate IDs, this means that these will be placed inside the bounds of the hold room area, outside the main concourse walking area.

Information signs
Information signs, such as directories or maps, which are intended for passengers to interact with or walk up to, should be mounted at a comfortable height. The area for this information is between 3'-0" and 7'-0" above finished floor, though there are some exceptions as noted in Field of View.

Super graphics
Super graphics should be mounted as high as possible, but may not extend beyond 8′-0″ above finished floor, to prevent them disturbing the wayfinding zone.

Landside curbs
Landside curb signs should take vehicle traffic into account. This means that signage in this area must either be placed outside the area where cars, and other tall vehicles such as vans and shuttles, will be present, or must be placed at such a height that vehicles can move underneath.

Since drivers are more likely to miss signs that are placed too high – because looking high up is dangerous while driving a vehicle – it is best to place landside signs outside the car flow. Signs may be placed higher if there is sufficient distance to look at a sign from, such as long roadways.

ADA room identification
In compliance with the Americans with Disabilities Act (ADA), all room identification signs are to be placed 60 inches from the floor to the top of the sign, so that the tactile information is within the proper area. Additional information regarding the ADA is provided in Resources.

Signs at elevators
Egress maps indicating fire evacuation routes are mounted above elevator call buttons.

5

5.1

Wayfinding information must stand out in a busy environment. Along with illumination, color is one of the strongest tools to achieve this. The color palette has been chosen to ensure wayfinding elements are conspicuous, provide optimal contrast for legibility, and bring a sense of place to the airport environment.

Color is also an organizing tool to categorize destinations for easier scanning of information. Text is always accompanied by a color field based on the category of the text. The color field complements an otherwise neutral palette of white text on a black background for maximum contrast.

Primary color specifications are defined by application and category:

Yellow
Flights & Operations

RGB 255 225 0
HEX #FFE100
CMYK 2 1 99 0
PMS 108C
3M 3630-15

Purple
Connecting Flights

RGB 160 0 209
HEX #A000D1
CMYK 65 94 0 0
PMS 266C
3M 3630-158

Green
Exit & Ground Transportation

RGB 119 173 0
HEX #77AD00
CMYK 57 0 100 0
PMS 368C
3M 3630-106

Blue
Services & Amenities

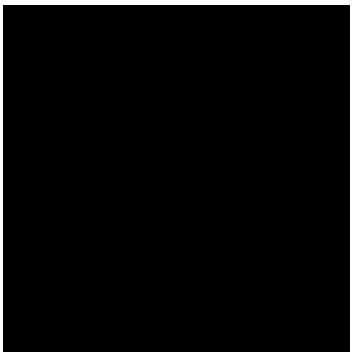
RGB 0 102 245
HEX #0066F5
CMYK 88 48 0 0
PMS 300C
3M 3630-97

For secondary messaging found on emergency and regulatory signage, the color specifications are as follows:

Red
Emergency & Regulatory

RGB 238 22 21
HEX #F03013
CMYK 0 93 100 0
PMS 032C
3M 3630-43

The system is accompanied by tertiary colors used for background, text, and dividers:



Black
Background

RGB 0 0 0
HEX #000000
CMYK 0 0 0 100
PMS Neutral Black
3M 3630-22

White
Messaging

RGB 255 255 255
HEX #FFFFFF
CMYK 0 0 0 0
PMS -
3M n/a

Dark Gray
Separator

RGB 113 114 115
HEX #717273
CMYK 0 0 0 65
PMS Cool Gray 9
3M 3630-61

Download Adobe CC Swatch Library (.ai and .ase)

The color-coded category of each destination can be found in the Terminology List. Each destination belongs to only one category.

To achieve the same appearance across multiple applications—such as illuminated signs, non-illuminated directories, and digital screens—the color palette is defined in multiple color specifications for illuminated, non-illuminated, print, and digital applications. Make sure to use the correct format for the application.

5.2

5.2.1 Typeface

The wayfinding system at Port Authority airports exclusively uses *Helvetica Now for PANYNJ*, which is available in two weights, Semibold and Regular. No other typefaces or weights may be used for wayfinding applications

Helvetica Now for PANYNJ Semibold
The dominant and default weight used in all wayfinding and identification signage. The semibold weight is optimized for legibility.

Helvetica Now for PANYNJ Regular
A companion to Semibold for clarification or to indicate a break in the message structure. It used for all secondary text as well as ADA-compliant room Identification signage.

Some of the more distinctive characteristics of Helvetica Now PA

Helvetica Now for PANYNJ Bold
A weight to be used in a supporting role only, in limited, text-heavy wayfinding elements, such as Rules & Regulations, Digital displays, etc.

In particular, do not use any commercially available versions of Helvetica or Helvetica Now. These fonts have not been optimized for wayfinding use.

The optimization balances the boldness and definition needed for white-on-black illuminated text. It also features more open counters in characters like C, c, e, and 3, which makes each character more distinct and improves legibility from a distance.

Helvetica Now for PANYNJ

ABCDEFG HIJKLMNO

PQRSTUV
WXYZ
abcdefghij
klmnopqrs
tuvwxyz
12345678

90
&-,.

Sizes for illustrative purposes only

Download Fontset

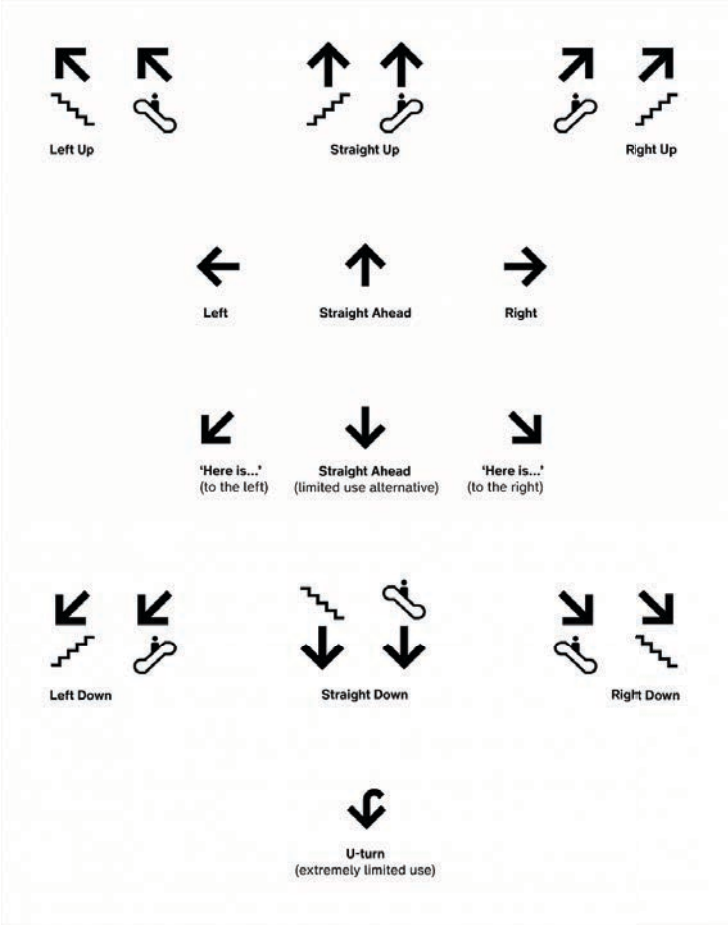
5.2.2 Type Size

For simplicity of execution and coherence of the system, standard type sizes have been defined to correlate with standard messaging and sign types.

These sizes are always measured from the height of the cap-height (the cap-height is the height of a capital letter, such as B or E), in inches.

5.3

The standard arrow is used in most instances, which guarantees a consistent size, design, placement, and orientation across all wayfinding applications. The standard arrow can be oriented in one of four directions: up, down, left, and right.



Arrow family

Diagonal Arrows
The diagonal arrow is used in very limited circumstances. To direct up or down levels, accompanied by the stair or escalator pictogram and to direct to a destination immediately adjacent to the sign (signaling “Here is...” instead of “To...”). Always use diagonal arrows pointing down for this purpose. Never use diagonal arrows pointing up, on their own.

The diagonal arrows Left Up and Left Right may only be used for level changes, i.e. when directing through stairs or an escalator.

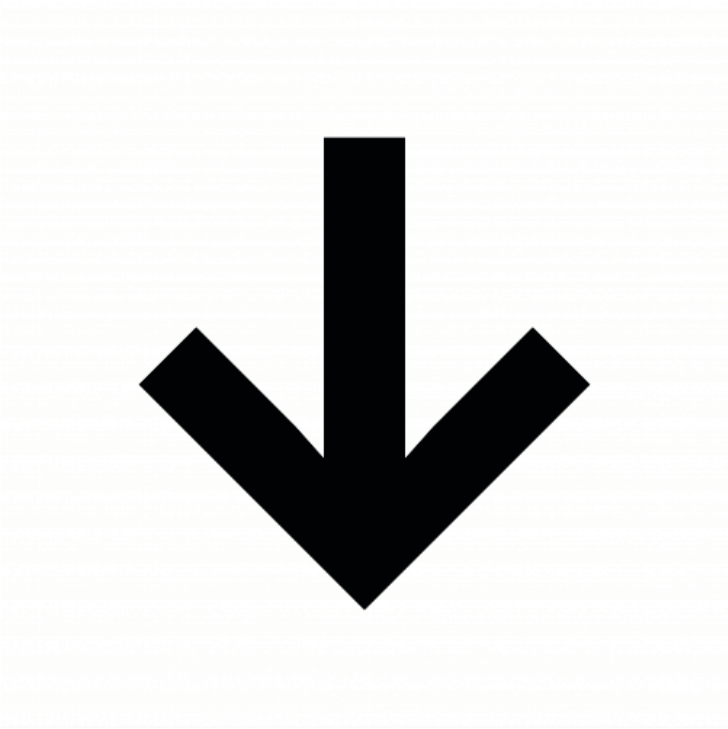
The diagonal arrows Left Down and Right Down can be used for level changes, in which case they will accompanied by a pictogram of an escalator or stairs. In limited circumstances, these arrows can be used without an accompanying pictogram to identify a location that is nearby but just out of sight, such as an ATM machine in an alcove.

U-turn Arrows
Signs that instruct users to make a U-turn for a destination are difficult to understand. U-turn arrows should never be used, except in extremely limited circumstances. Use them only if no other options are available.

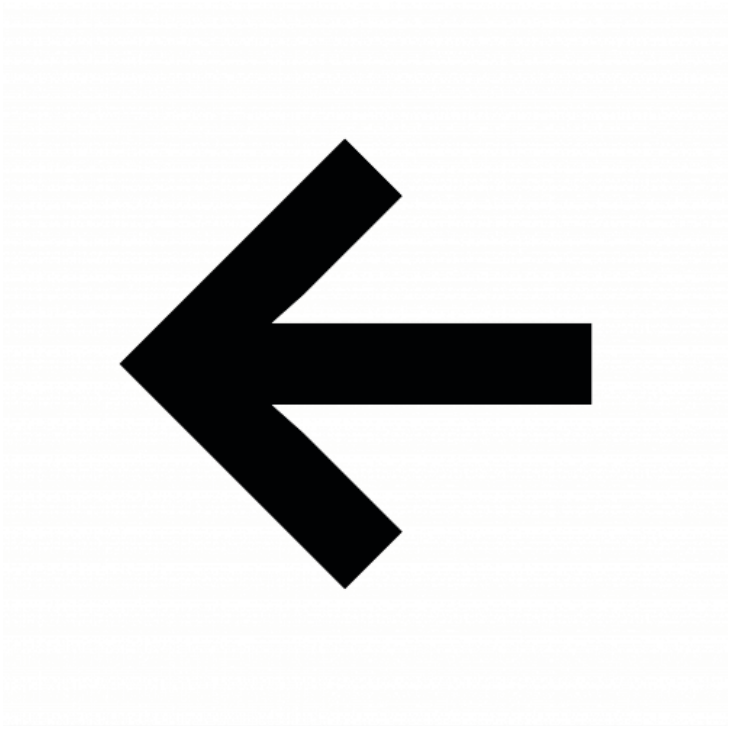
In these cases, use the left-facing U-turn arrow when left aligned and the right-facing version when right aligned.

For more guidance on where and how to use which arrow, please refer to Sign System – Directional.

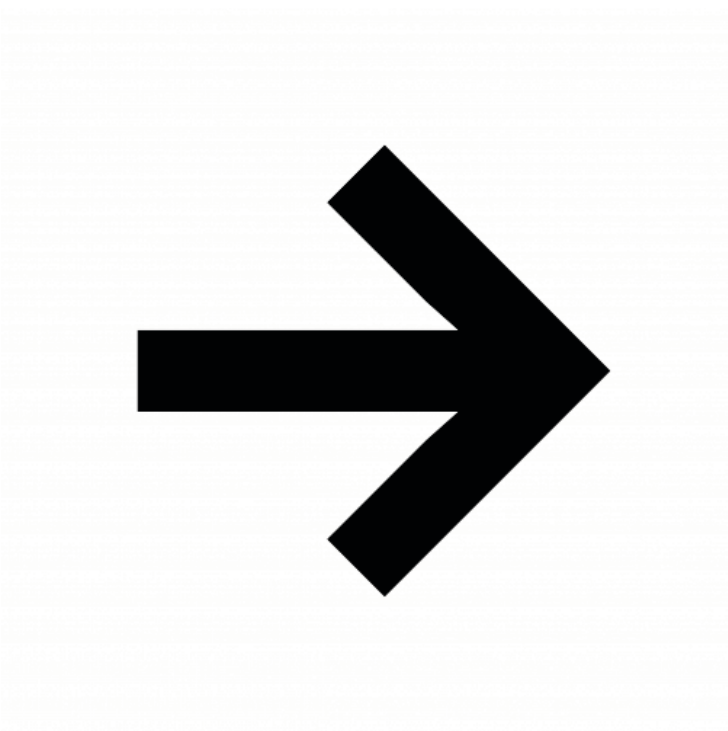
Directional



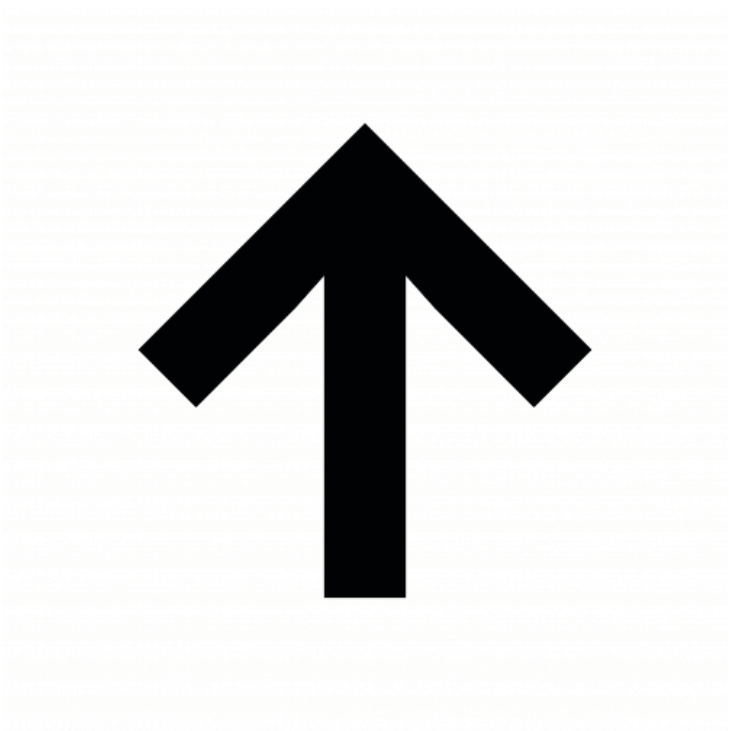
Down
Arrow



Left
Arrow

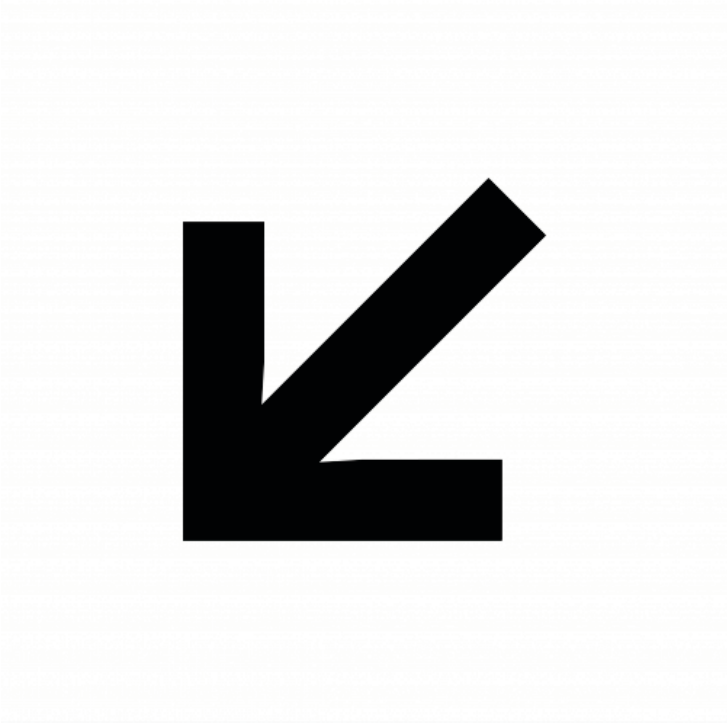


Right
Arrow

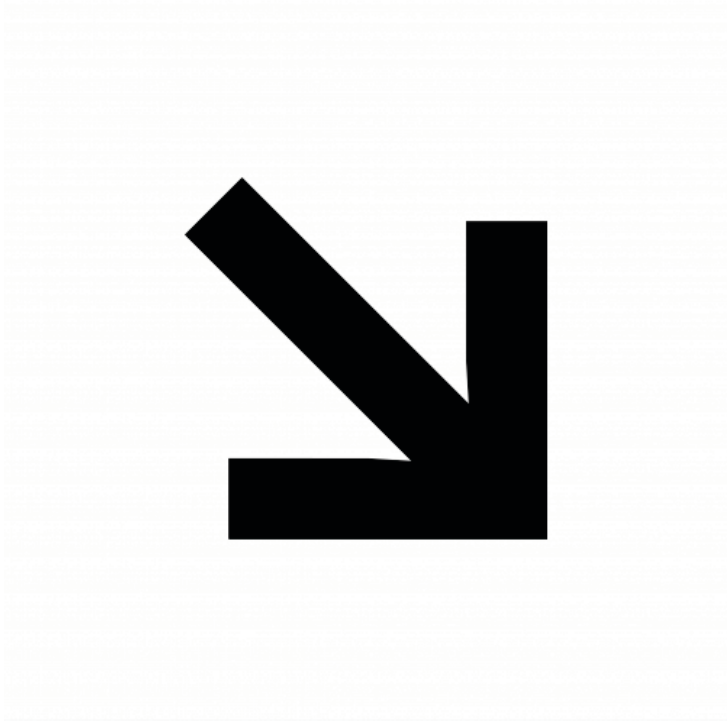


Up
Arrow

Identification

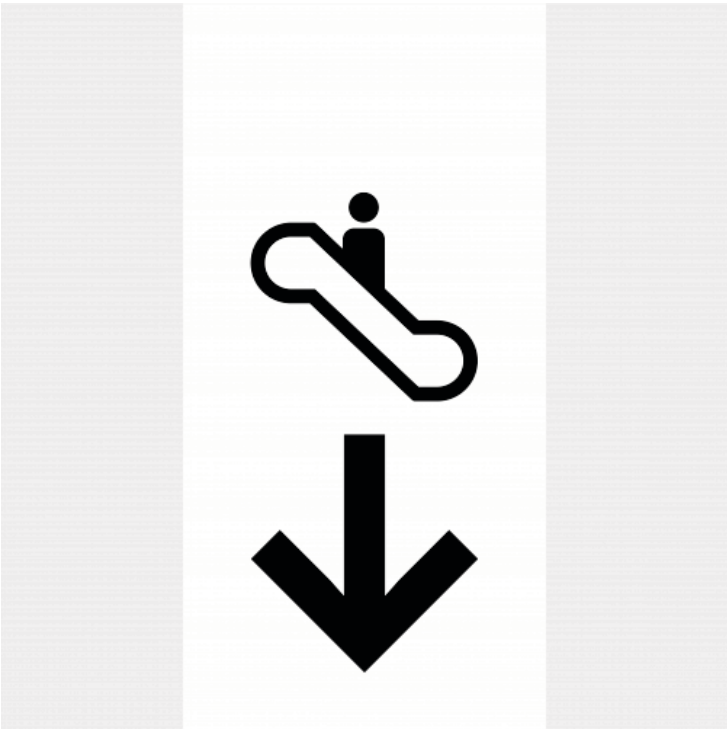


Here to the Left
Arrow

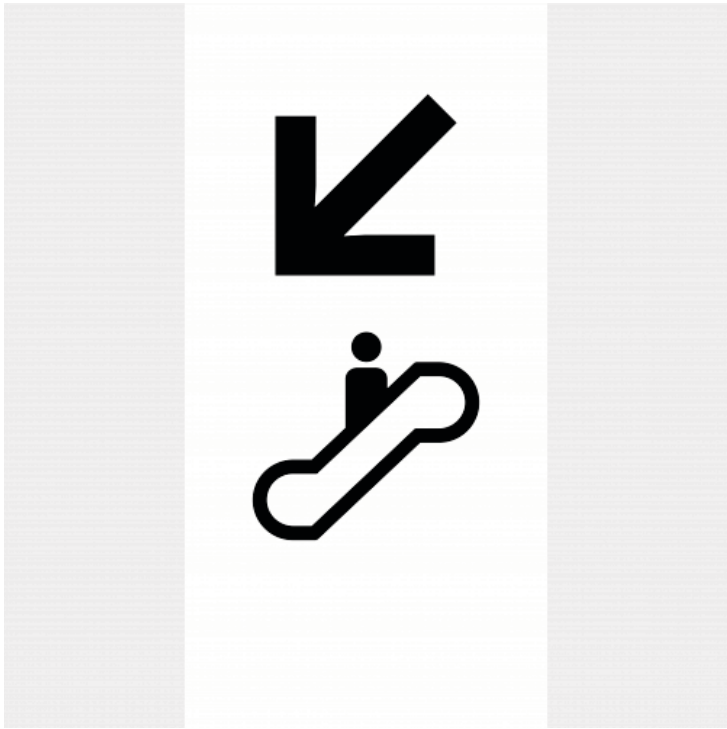


Here to the Right
Arrow

Vertical Circulation

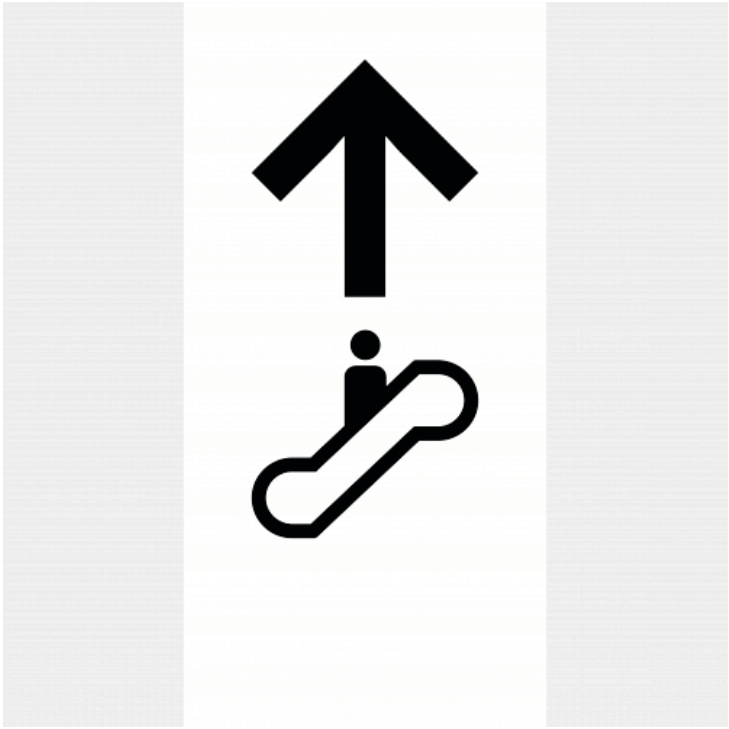


Escalator Down
Arrow

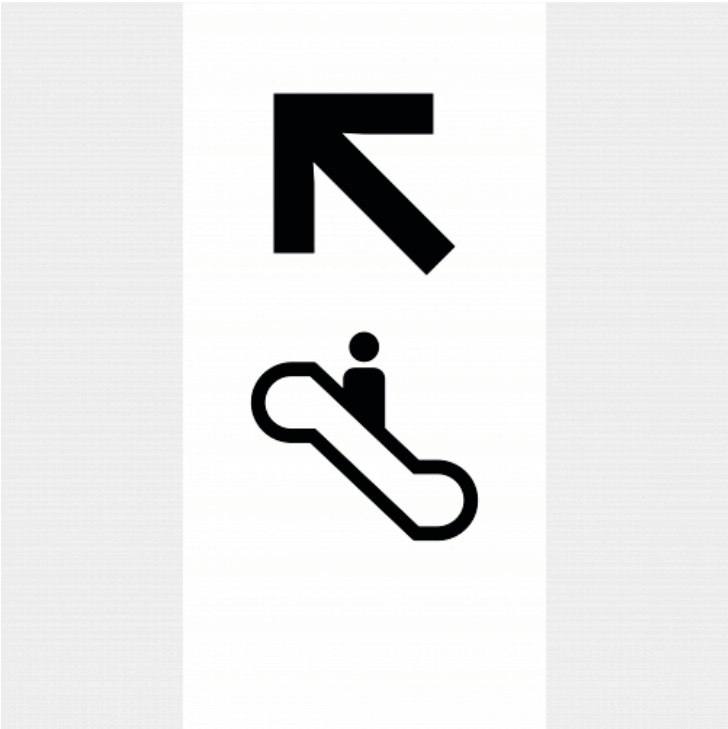


Escalator Down Left
Arrow

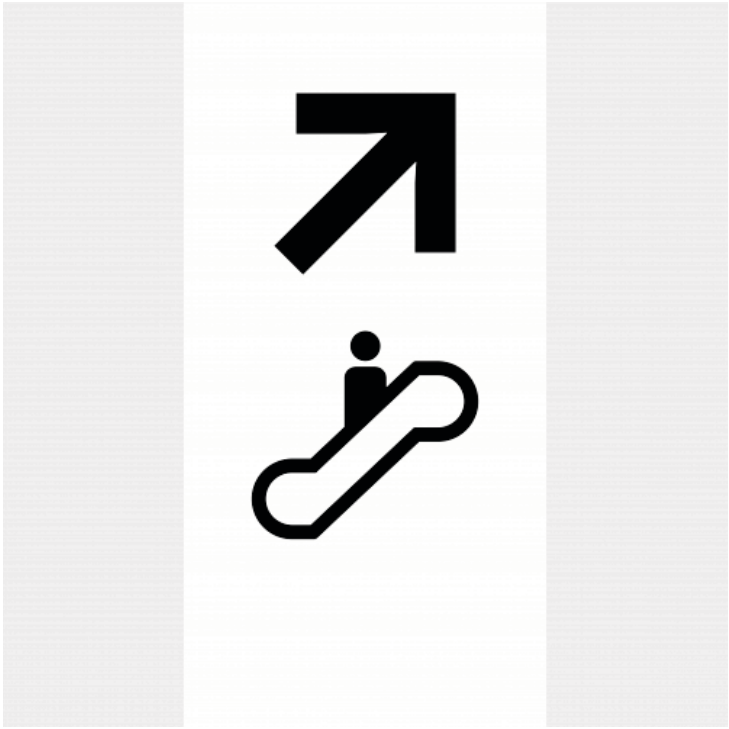
Escalator Down Right
Arrow



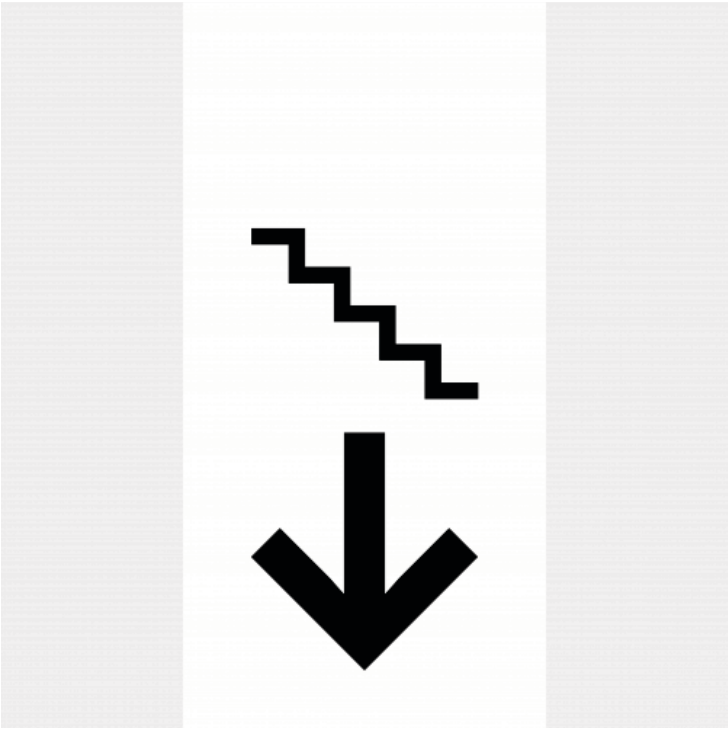
Escalator Up



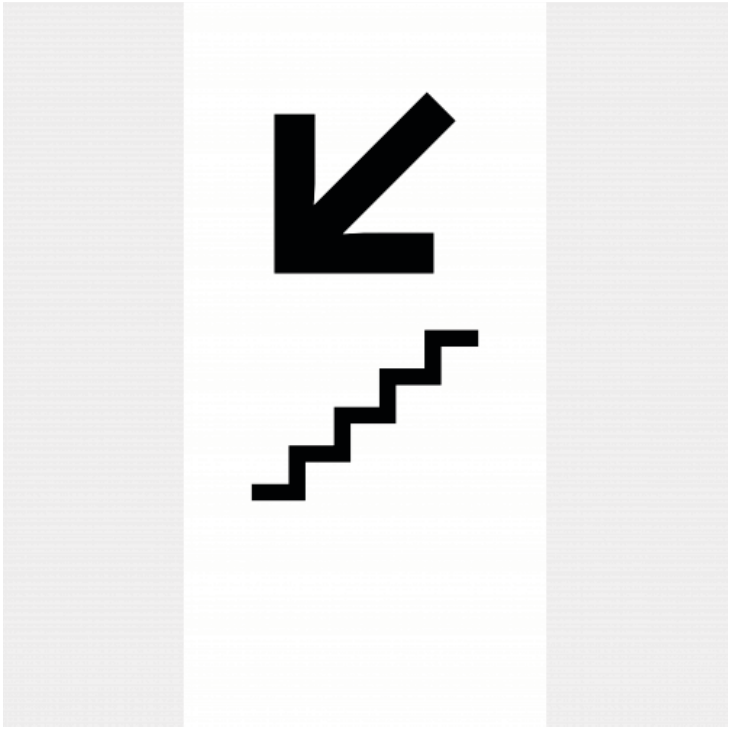
Escalator Up Left
Arrow



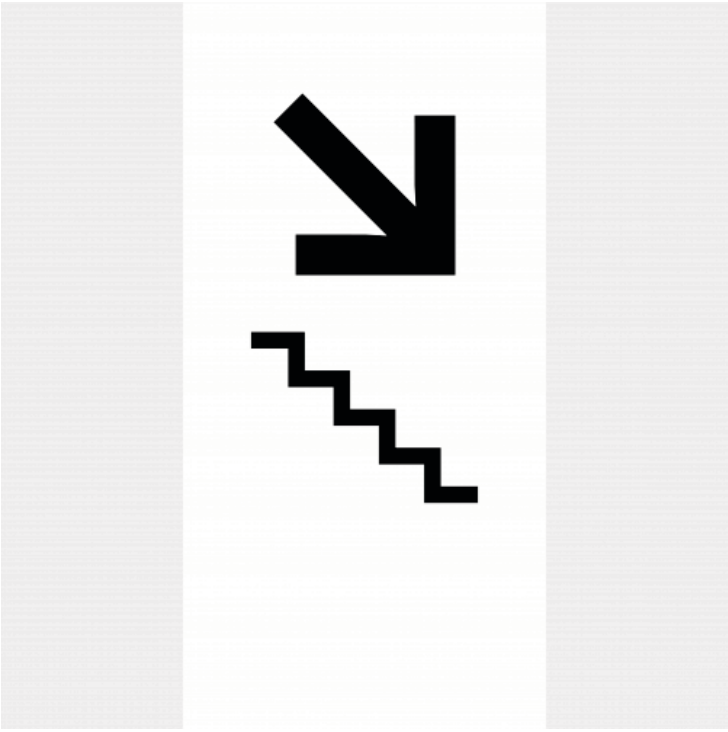
Escalator Up Right
Arrow



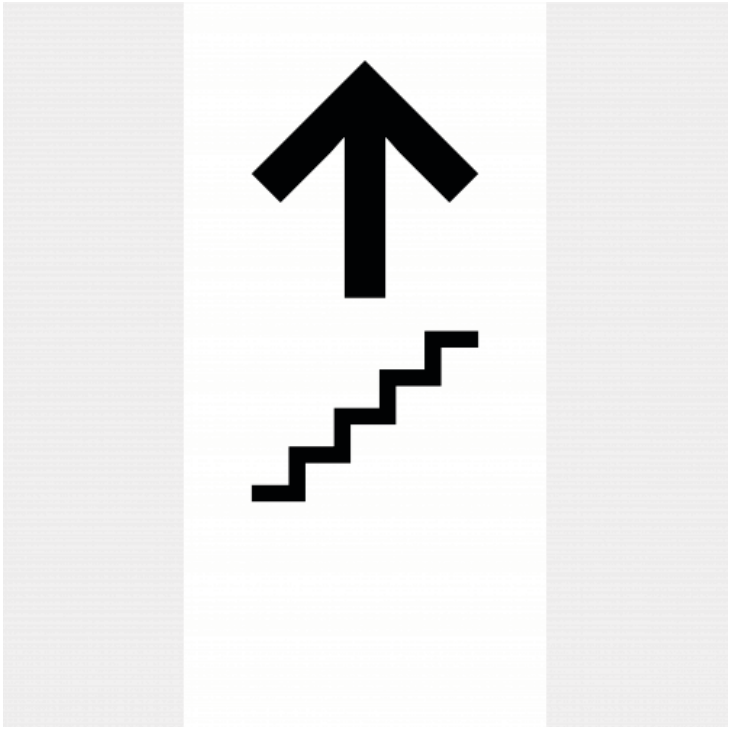
Stairs Down
Arrow



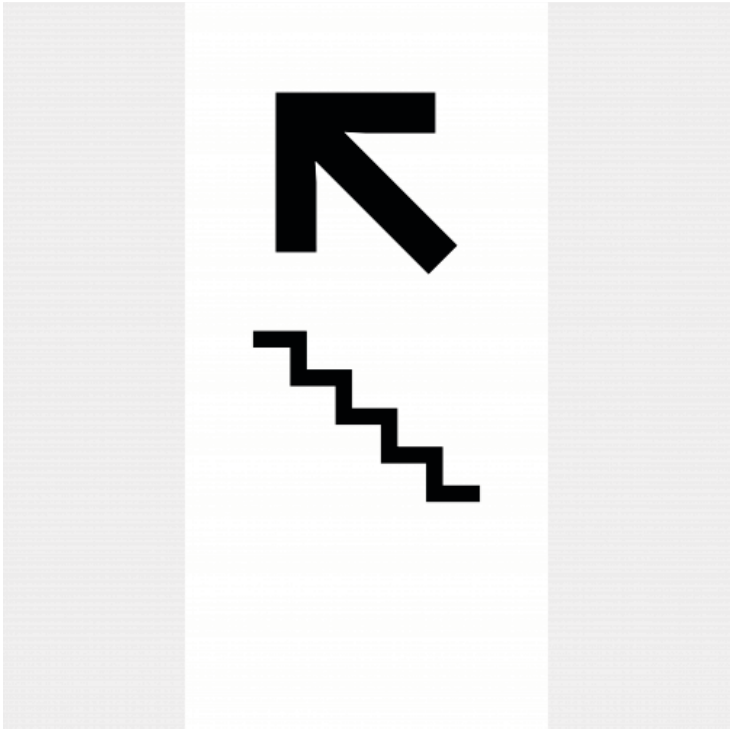
Stairs Down Left
Arrow



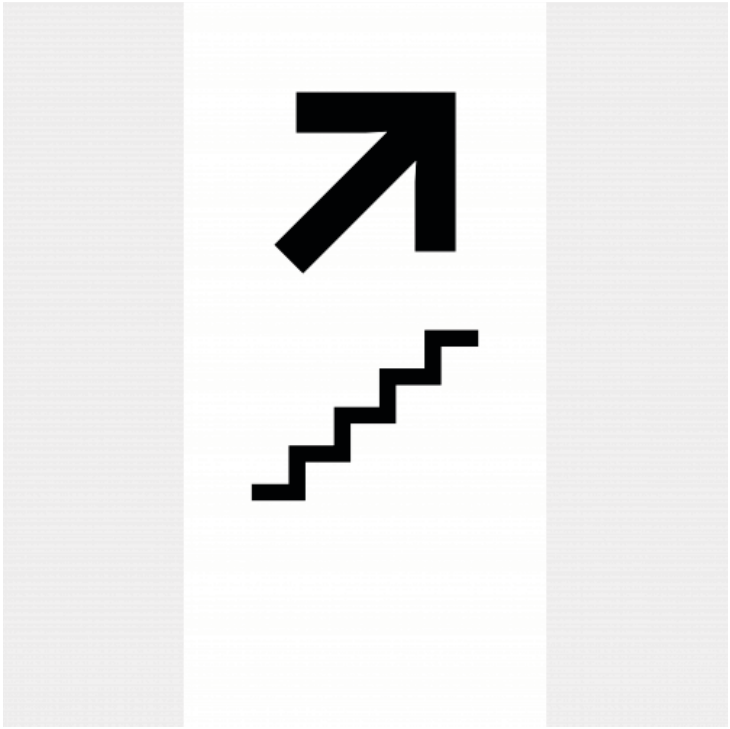
Stairs Down Right
Arrow



Stairs Up
Arrow

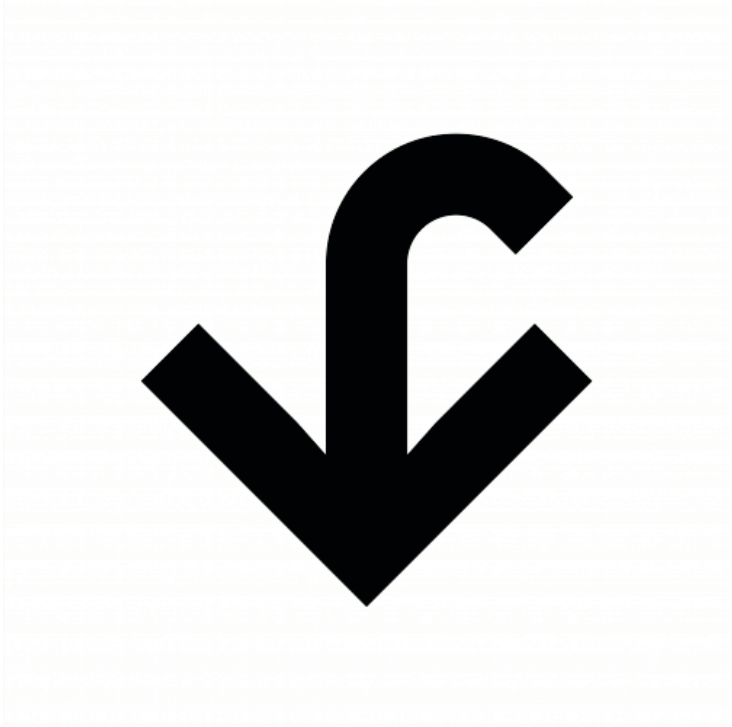


Stairs Up Left
Arrow

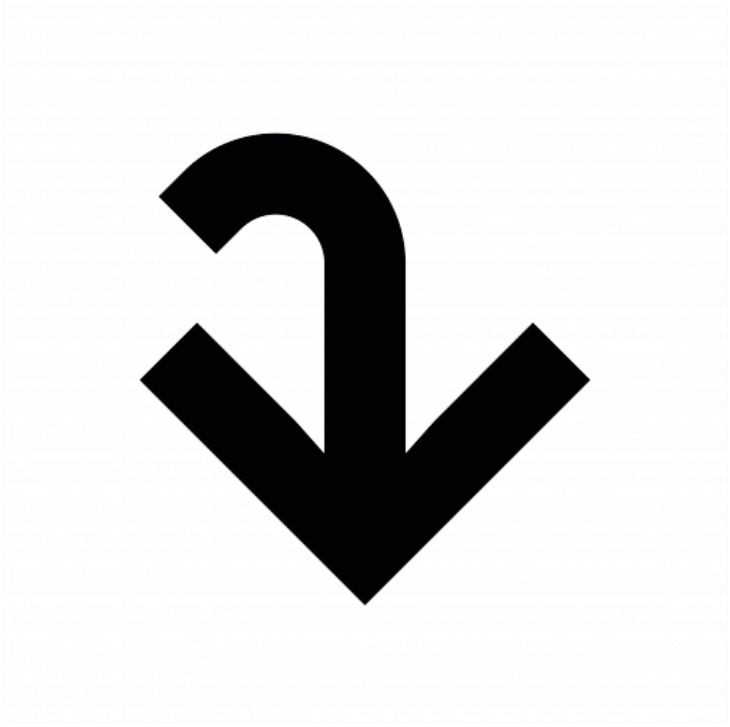


Stairs Up Right
Arrow

Directional (Limited Use Only)



U-turn Left
Arrow



U-turn Right
Arrow

Download Arrow Set

5.4

The wayfinding system uses text accompanied by pictograms. Pictograms are a strong visual tool to reinforce information: they are easy to recognize, require no literacy, and enable quick scanning of directional signs and directories.

The pictogram set has been developed in accordance with national and international best practices, while also featuring styling enhancements that result in a cohesive, customized language. Taking cues from the *Helvetica Now for PANYNJ* typeface, the pictograms exhibit geometric forms, such as perfect circles and sharp, 90° corners, paired with humanist elements that bring warmth to the set.

Pictograms for destinations are included in the Terminology List.

Some pictograms have strong directionality, such as those for Departures, Shuttles, and Exit. These pictograms have left-facing and right-facing versions. The right-facing version should be used in all cases except directional signs. For directional signs, use the left-facing version when paired with a left arrow or left-aligned straight ahead arrow. Use the right-facing version when paired with a right arrow or right-aligned straight ahead arrow.

Terminal identifiers (A, B, C, D, E) should not be used on the color field. On directional and identification signs with a color field, use the white terminal identifier following 'Terminal', 'Terminals' and 'Departures' destination messages. On identification and informational signs with no color field, use the yellow terminal identifier. Yellow identifiers can be used following 'Terminal' destination message, or on their own for identification purposes.

Flights & Operations

Agricultural Inspection

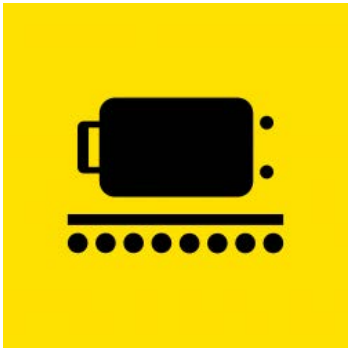
Airline Directory

Airport Directory

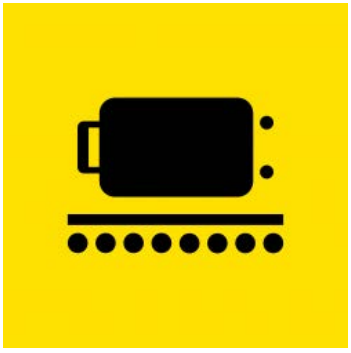
All Gates

Arrivals

Baggage Carts

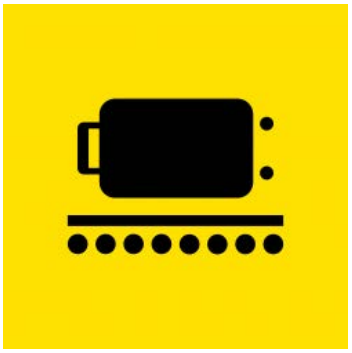


Baggage Claim



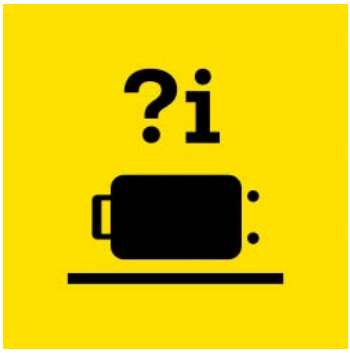
Baggage Claim

Baggage Drop



Baggage Information

Baggage Inspection



Baggage Services

Check-in

Curbside Check-in

Departures

Domestic Arrivals

Door

Gate (A1; B1; C2; etc.)

Gates (A, B, C; A1–A9, B10–B19, etc.)

Meeting Point

Oversize Baggage

Passport Control

Porter Service

Security Checkpoint

Self Check-in

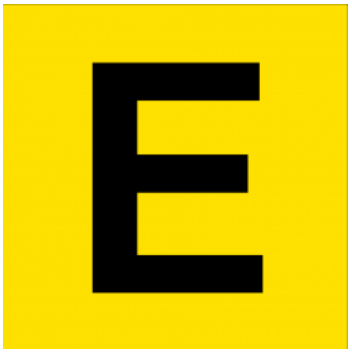
Terminal (A; B; C; etc.)

Terminal A

Terminal B

Terminal C

Terminal D



Terminal E

Terminals (A, B, C; etc.)

Ticketing

Connecting Flights

Baggage Re-check

Connecting Flights

Exit & Ground Transportation

Bus(es)

Crosswalk

Exit

Ground Transportation

Ground Transportation Information

Hotel Shuttles

Long-term Parking

Off-airport Parking

Off-airport Parking Shuttles

Parking

Parking Shuttles

Passenger Drop Off

Passenger Pick Up

Rental Car Information

Rental Car Shuttles

Rental Cars

Ride App Pick Up

Short-term Parking

Shuttle

Subway

Taxis

Trains

Transit to City

Services & Amenities

Accessible

All Gender

ATM

Baby Changing Area

Baggage Storage

Bar(s)

Bars & Restaurants

Business Center

Cafe

Cashier

Chapel

Charging Point

Currency Exchange

Dentist

Drinking Water

Duty Free

Elevator

Escalator

Family Restroom

Food Court

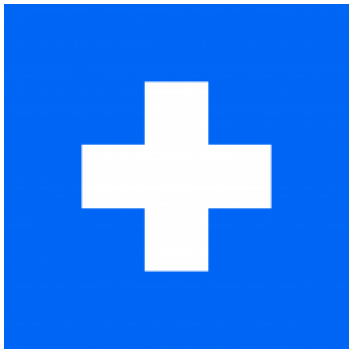
Help Phone

Hotel

Hotel Information

Lost and Found

Lounge(s)



Medical Office

Meditation Room

Men

Mosque

Moving Walkway

Nursing Room

Office(s)

Pet Relief Area

Play Area

Post Office

Prayer Room(s)

Restaurants

Restrooms

Shoe Shine

Shops

Shops & Restaurants

Smoking Area

Stairs

Synagogue

Telephones

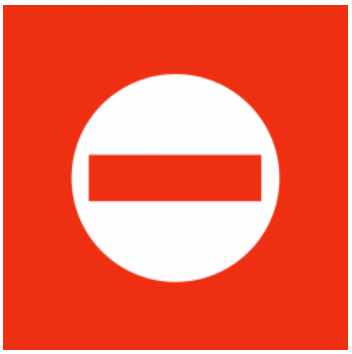
Waiting Area

WiFi

Women

Emergency & Regulatory

Defibrillator



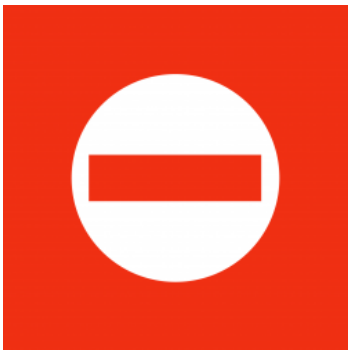
Exit Only

Fire Extinguisher

Fire Hose

First Aid

No Carts



No Entry

No Pets

No Phones

No Photos

No Smoking

Download Pictogram Set

5.5

Commercial entities—such as airlines, lounges, rental cars, and hotels—will have a branded presence throughout the airports. The visual manifestations of brand identities vary greatly, in terms of color, use of logo, wordmark. They play a useful part in the passenger journey, often serving as a destination or filter for a given activity. To ensure clarity and reduce the visual clutter in the airport environment, these guidelines aim to establish consistency on their manifestation, based on application.

Some of these instances occur on wayfinding elements, such as a lounge logo on a directional sign. When integrated in the wayfinding system, branding must be clearly organized and consistently implemented. Simultaneously, wayfinding (with or without branding) lives alongside advertising coordinated by spatial zoning guidelines.

Wayfinding elements that integrate branding include:

- Curbside Signage: Ideally digital, and may include airline sub-brands (e.g. World Club, Sky Priority, Polaris)
- Airline Directory
- Check-in Desk
- FIDS, GIDS, and BIDS
- Directional Signage: To high-level destinations including Lounges, Hotels, etc.
- Gate Area: Airlines in dedicated terminals may have branded graphics that conform with spatial zoning guidelines
- Baggage Re-Check: Airport maps/kiosks/directoriesBranded elements without wayfinding information, such as retail storefronts and lounge signage, should not follow the wayfinding design guidelines. However, their placement should abide by spatial zoning guidelines.

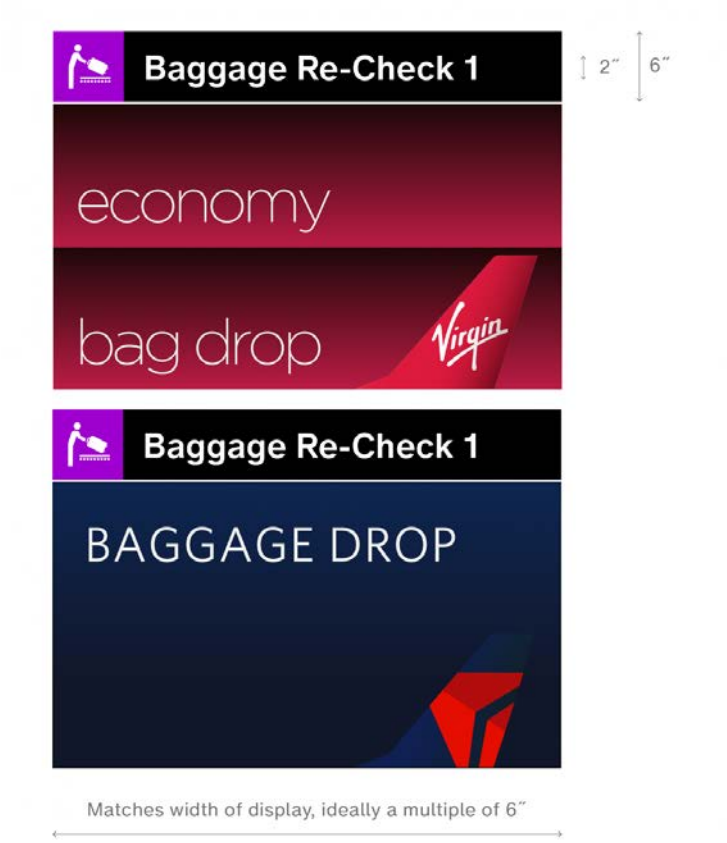
5.5.1 Brand Treatments

Three brand treatments are acceptable for use in conjunction with wayfinding information. Which treatment is used will depend on the sign type used.

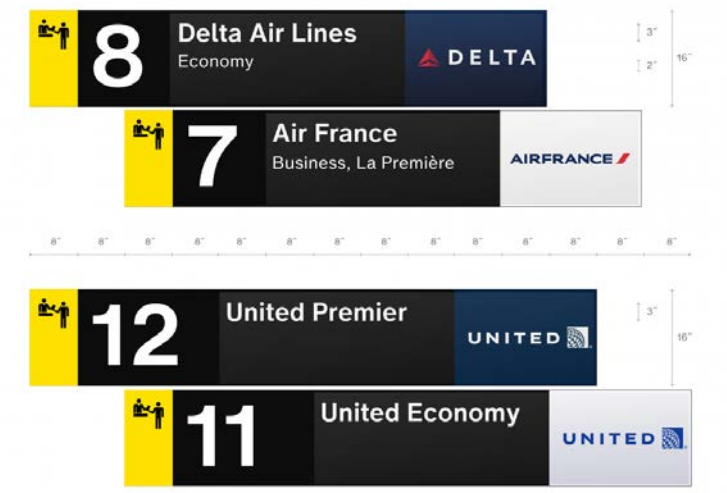
The three main treatments: Full-Color Logos, White Logo, and Tail Fin

Full-Color Logos
Full-color logos are graphically complex and do not reduce well. They can be used when they are dominant on the sign and can appear at a large size.

e.g. Curbside ID, Check-in Desk, Baggage Re-Check



Sample treatments of using full-color logos

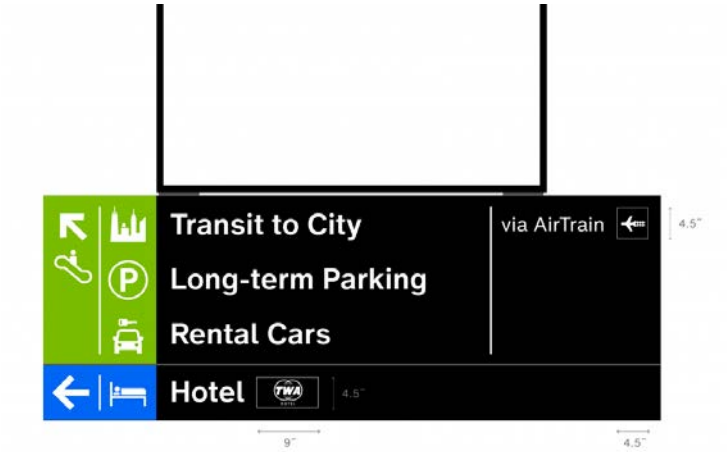


Sample treatments of using full-color logos

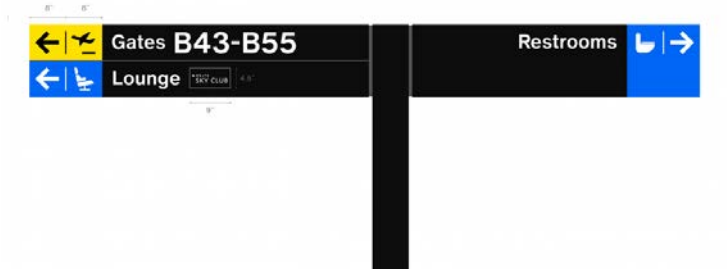
White Logos

White logos are used in directional signage and other contexts where color would distract from the primary wayfinding information, especially color coding.

e.g. Directional to Lounges, Hotels, destinations via AirTrain



Sample white logo treatments on directional signage

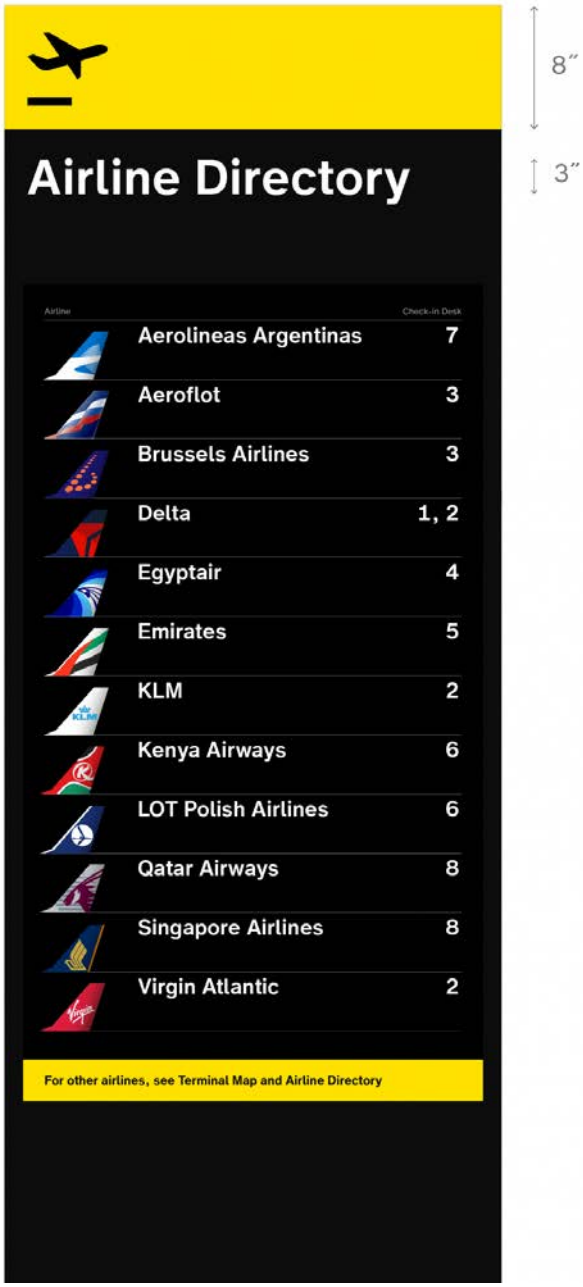


Sample white logo treatments on directional signage

Tail Fin

Used as an element to convey flight information, the tail fin connects passengers with their ultimate destination: the plane. It is a consistent visual cue used in digital contexts, providing a streamlined yet flexible outlet to include airline branding. The common treatment across all digital touchpoints adapts to many screen sizes, ratios, and quantities of elements.

e.g. Check-in Hall Directory; FIDs, GIDs, and BIDs



Examples of tail fin branding, typically digital.

Examples of tail fin branding, typically digital.

Examples of tail fin branding, typically digital.

5.5.2 Airport and Port Authority Branding

In most cases, airport and Port Authority branding will exist in the form of posters, PSAs, and other touchpoints. For these applications, follow the spatial zoning guidelines for branded media.

There are limited instances where airport and Port Authority branding can integrate with wayfinding elements, such as on an unused FID or BID screen during a period of less need.

Other applications of branding will be best incorporated into wayfinding elements when it:

- complements, not distracts from, information
- is clearly separated from wayfinding information for clarity
- integrates well and naturally into the object

Because directional signage contains complex levels of information, airport and Port Authority branding should be avoided in this application.

6

6.1

The hierarchy of graphic elements on a sign determines how easily passengers can find the information they need. Reference the Graphic Layouts to support the composition process.

6.1.1 Sign Type Family

In order to present a visually coherent system, a flexible and comprehensive family of sign types has been created. With the correct elements installed at the right moments, they contribute to a seamless customer experience throughout the Wayfinding Journey.

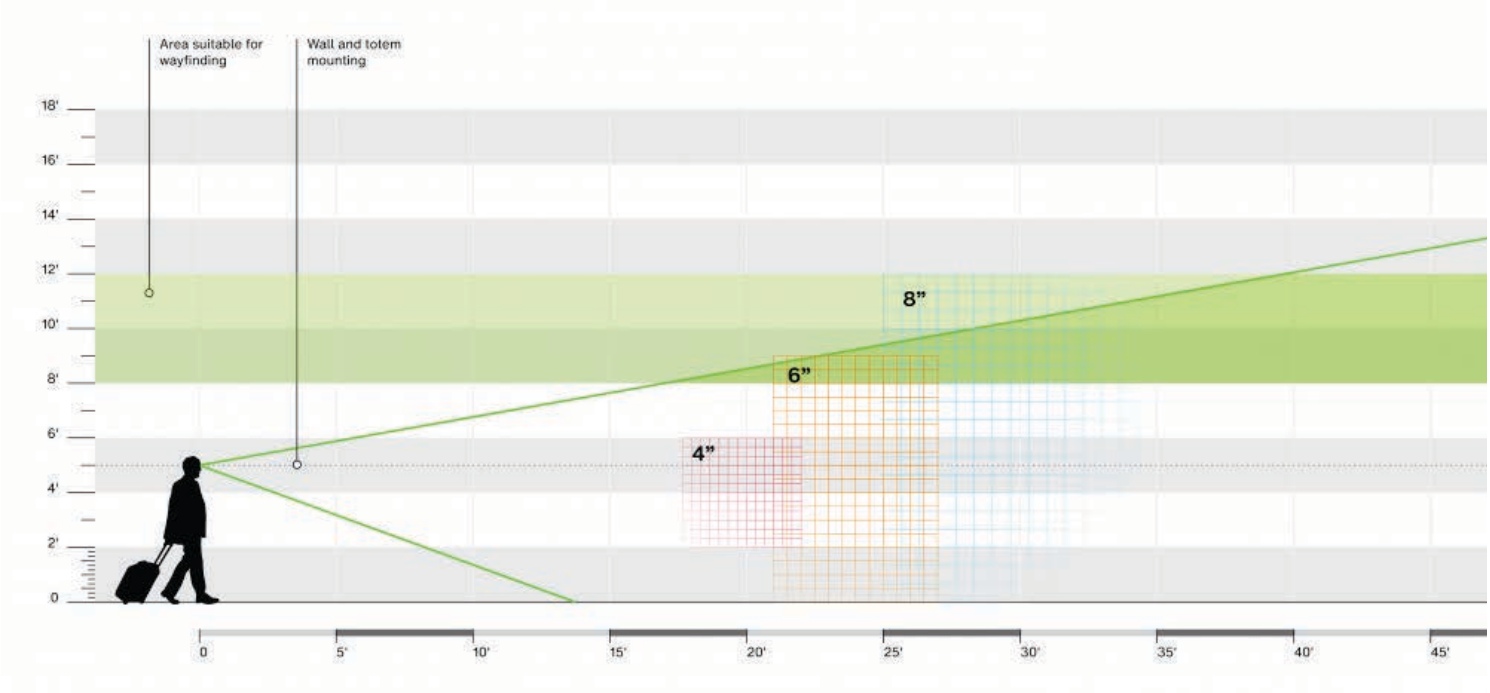
An overview of the sign type family

6.1.2 Grid Units

A grid provides a compositional tool to consistently position, size, and align all graphic elements. It also brings coherence to disparate objects and is therefore essential to a system of this scale. Beyond the sizing of elements, the grid also informs the size of typography, the size and construction of wayfinding elements, and the relative distance and spacing between elements, when relevant.

While the grid is the foundation upon which all elements are built, it is never made visible.

The three grid unit sizes (4-, 6-, and 8-inch) are used based on their vertical proximity to the user. A 4-inch notice may be within reach of the passenger, while a 6-in identification may be above it, all under an 8-inch unit grid directional sign.



4-, 6-, and 8-inch grid extends ver use based on height and placement

8″ – Typical identification and directional *12 feet and under, mostly above 8 feet high*
The standard grid is built on 8″ square elements, and can be comprised of multiples thereof. It applies to all elements within the Wayfinding Zone, including all directional signage, but can also extend below in the case of freestanding wayfinding structures.

Large IDs: some contexts call for larger identification signage, for instance gate numbers or Passenger Pick Up stations. Those will use multiples of 8″, typically 16″, but otherwise use the same grid system.

Alternative square grids of 4″ and 6″ apply to smaller elements, mostly identification signage that, either given the scale of the environment or the proximity to the user, would appear out of proportion if fitting with the standard 8″ grid.

6″ – ADA-compliant Signage *9 feet and under*
Used in ADA-compliant room identification as well as smaller scale signage.

4″– Regulatory Signage *6 feet high and under*
Used in all notices, regulatory and signage that is generally within the physical reach of the passenger.

6.2

Directional signs contain the most variables and are the most complex to compose. They combine arrows, text, and pictograms. Content determines the scale and structure of each sign.

Signs should not exceed four destinations. Five or more destinations become unwieldy and are harder to scan. When there are five or more destinations, split messages across additional signs.

6.2.1 General Principles

Align text, arrow, and pictogram based on the direction of the destination.

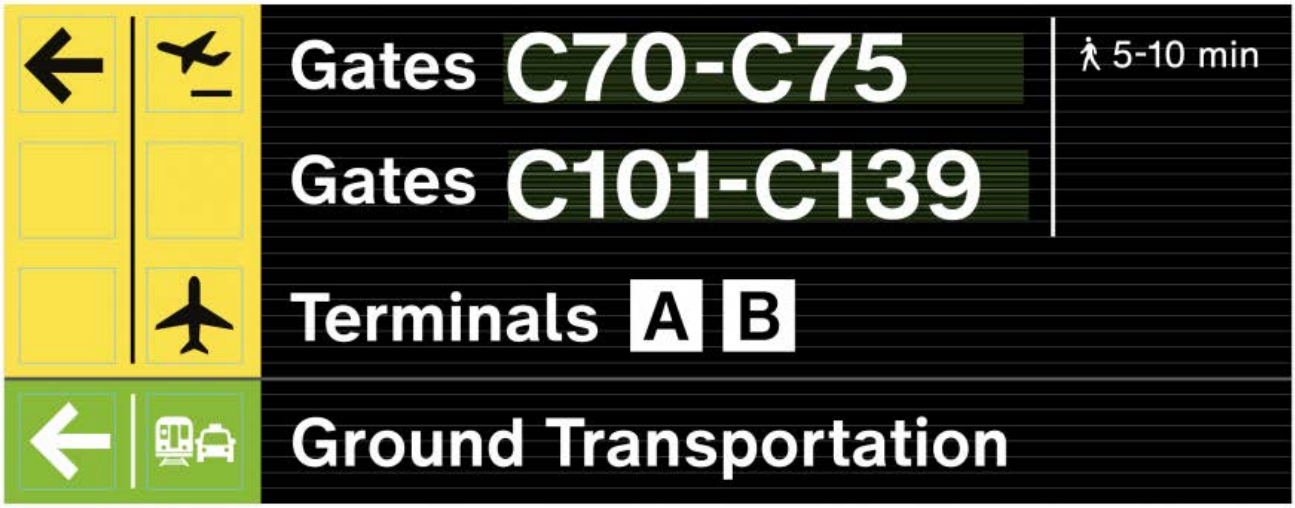
Text
Text is always aligned with the arrow and pictogram based on the direction of the destination: left-aligned for destinations to the left and right-aligned for destinations to the right. Center-aligned text is never used.

Compact and Expanded Gate number signage.

Gate Text
Passengers tend to be most stressed when trying to find their gate, making gates some of the most important wayfinding information. In our system, gates are prioritized on directional signage due to this importance. In addition to always being listed first in the Information Strategy, they are also given greater prominence through larger type size. Gate numbers can appear in two sizes:

1. 5.5-inch characters, aligned with the top of the standard 3-inch message. This treatment should be used whenever possible, especially at key decision points.
2. 4.5-inch characters are the alternative for more compact signs. In this case, gate numbers are vertically centered with standard message line.

Gate messaging is the only instance where larger type is allowed on directional signs. No other use cases are allowed.



Directional Sign – Compact Form – Unidirectional

Compact Directionals can expand and adjust to a larger canvas

Secondary Text

Secondary text is used in limited circumstances to provide supplementary information, such as the mode or process to reach a destination (e.g. walking times, “via AirTrain”).

Secondary text is delineated from the main text with a vertical divider. This divider creates a visual connection between the main text and corresponding secondary text. The height of the vertical divider is determined by the height of the text: it is as tall as the main destination text(s) or the secondary text, whichever is higher. Reference Graphic Layouts for exact line heights.

Secondary text is always set in 2-inch cap-height text, in Regular weight.

The vertical line between primary and secondary text is as tall as the main destination text to which it refers. If the secondary text is higher, then the line height is based on the secondary text.

Pictograms
The size of pictograms on overhead directional signs is 8×8″. They fill exactly one 8″ line vertically, and half of the 16″ color field horizontally.

Some pictograms have strong directionality, such as those for Departures, Shuttles, and Exit. These pictograms have left-facing and right-facing versions. For directional signs, use the left-facing version when paired with a left arrow or left-aligned straight ahead arrow. Use the right-facing version when paired with a right arrow or right-aligned straight ahead arrow.

How to apply left- and right-facing pictograms

Only use approved pictograms from this manual. A full set of pictogram assets, including left- and right-facing versions, is available for download.

Arrows
Arrows are always placed at the outermost edge of the color field based on the direction of the destination. Destinations straight ahead use a left-aligned up arrow.

Arrows directing straight ahead are typically aligned left.

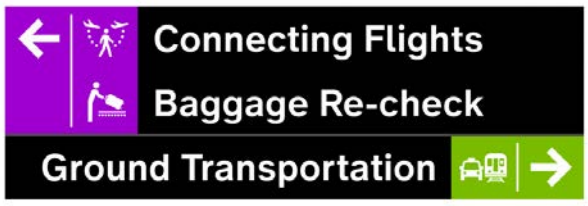
Exceptions when straight-ahead destinations can be right aligned:

- To create a clearer distinction between destinations to the left and straight ahead
- To encourage passenger flow to keep right, e.g. in a narrow corridor with counter flow

Exceptions when the straight ahead arrow can be right aligned

Vertical Divider
A vertical line creates a clear visual connection between the arrow(s) and pictogram(s) in a color field.

The size of the vertical line depends on the height of the adjacent arrow and pictogram fields. The line extends from the top to the bottom of the arrow and pictogram.



A vertical line delineates the arrows and pictograms in each color field.

Multiple Directions

Directional signs often direct to more than one destination. To reduce visual complexity, group destinations in the same category and direction with a single arrow aligned with the topmost destination.

A single arrow used for two destinations in the same category and destination

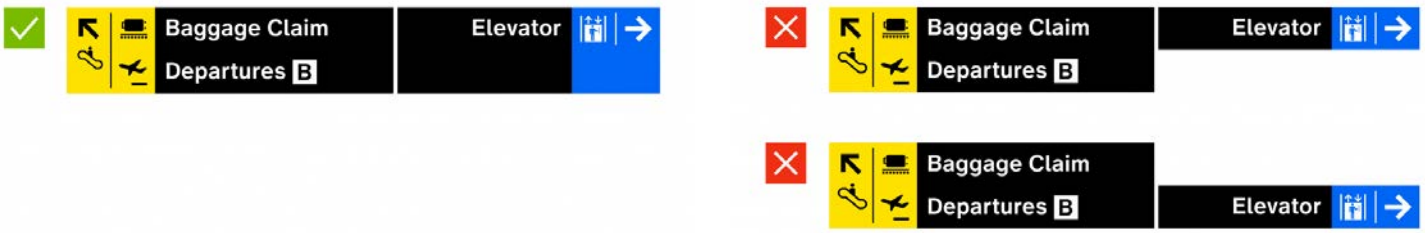
Ideally, each direction has its own sign to maximize distinction between directions. If space is limited, combine multiple directions on one sign.

When combining straight ahead and left directions on one sign, consider right aligning the straight ahead destinations to create a clearer visual distinction.

Separate signs maximize distinction between directions, but destinations can be combined on one sign if space is limited.

If there is more than one directional sign at a single point, they must match each other to maintain visual consistency.

- All signs must be bottom aligned.
- All signs must be of equal height.
- The minimum horizontal space between signs is 16″.



Multiple directional signs placed at one decision point must maintain visual consistency.

The color field(s) should always fill the entire height of a directional sign. If a sign contains more lines than destinations, group the empty lines at the bottom and extend the color field to the bottom of the sign.

If a sign contains empty lines, position them at the bottom and extend the color field to the bottom of the sign.

When one side of a double-sided sign has fewer messages than the other, extend the color field of the most important message based on the moment of the journey.

Arrivals is a more important message than Elevator, and therefore this message is extended to fill the height of the sign

6.2.2 Information Hierarchy

Information is organized according to a hierarchy. This allows users to find the highest priority destinations first and provides a consistent structure. Consistent placement and ordering of information on directional signs allows users to scan quickly.

The listing of destinations is determined in the following order:

Color Category

1. Flights & Operations (Yellow)
2. Connecting Flights (Purple)
3. Exit & Ground Transportation (Green)
4. Services & Amenities (Blue)

If there are multiple destinations within a single category, take arrow direction into account.

Direction

1. Straight ahead (arrow pointing up)
2. Left (arrow pointing left)
3. Right (arrow pointing right)

If there are multiple destinations within a single category and direction, take name into consideration.

Name

1. Alphabetical

Exceptions: Gates always appear at the top of the yellow category; “Transit to City” always appears first of destinations reached by AirTrain, followed by the rest alphabetically.

Destinations are sorted first by color.

Within a color category, destinations are sorted by arrow direction.

Within a group of destinations, lines are sorted alphabetically (with the exception of gates, which always come first).

6.2.3 Vertical Circulation

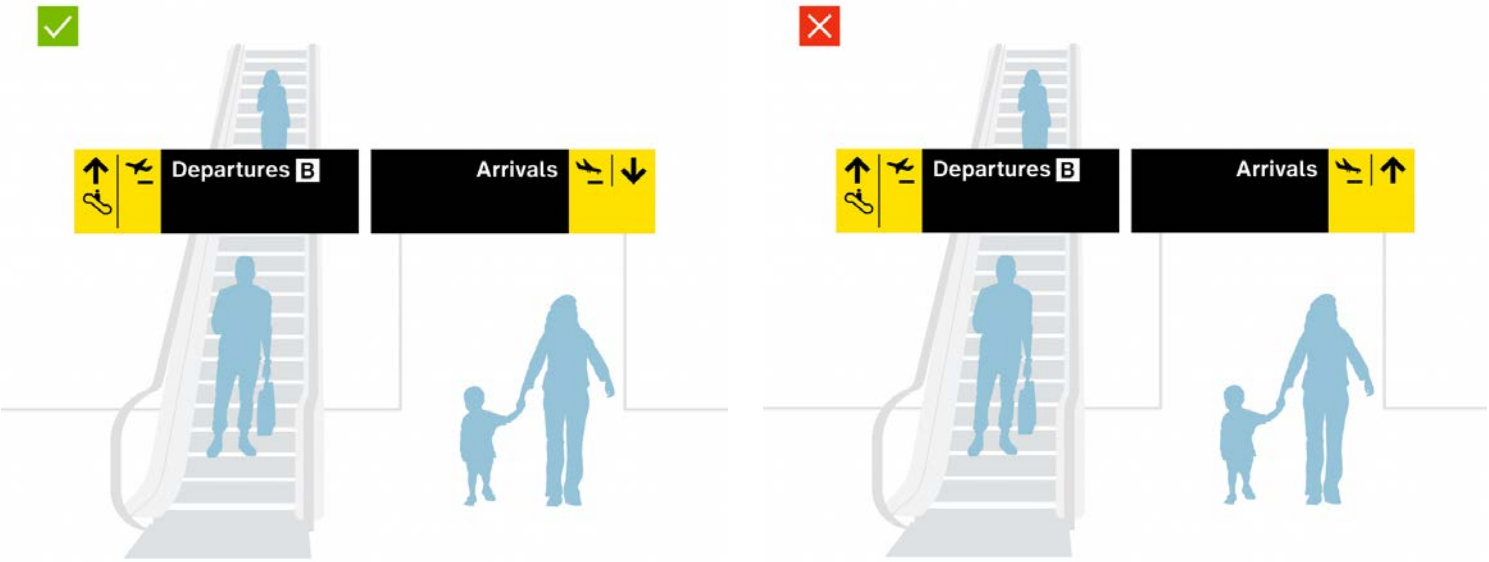
If an immediate level change is needed to reach a destination, the arrow is complemented by a pictogram depicting the means of vertical circulation (elevator, stairs or escalators). The pictogram must match the actual direction of the stairs or escalators. For example, a right arrow pointing to stairs must be accompanied by a stairs pictogram that descends to the right.

At level changes, the arrow must be accompanied by a pictogram of the means of vertical transport.

If the destination is the means of vertical circulation itself—for example, when directing to an elevator as an alternative to the default route—the pictogram is placed in the pictogram field, not the arrow field.

Vertical circulation can be a destination in its own right. In this case, the pictogram is placed according to standard placement in the pictogram field.

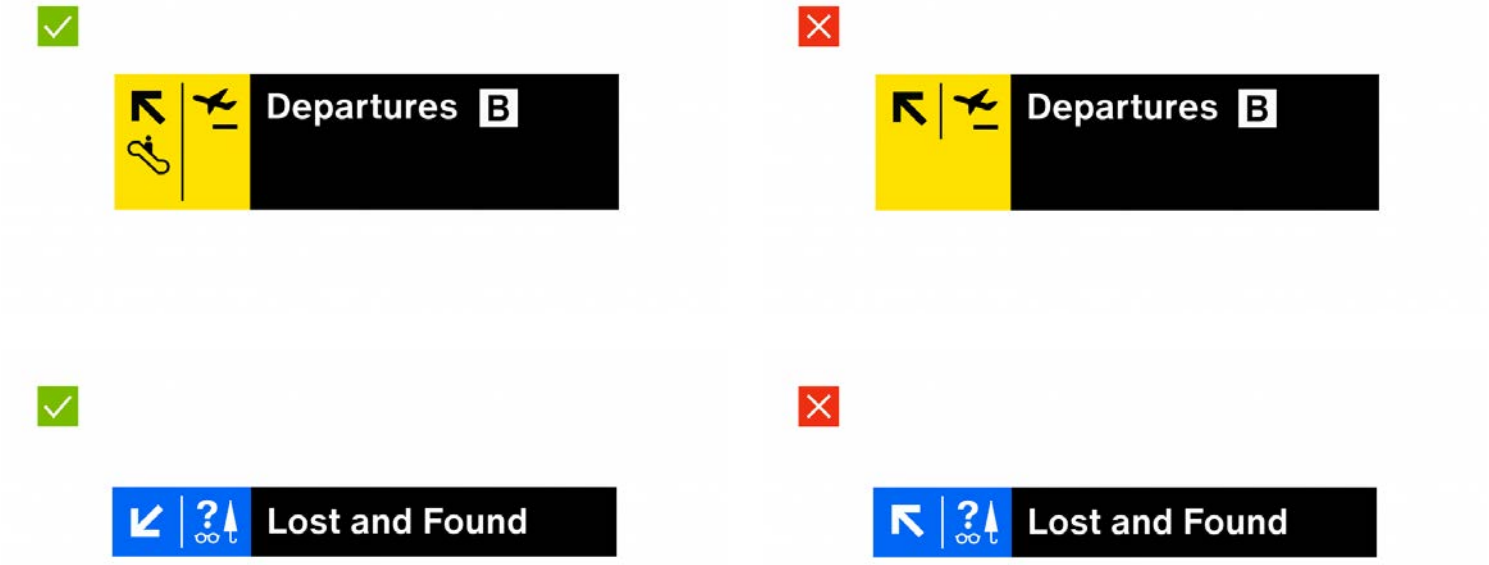
Vertical Circulation + Straight Ahead
In certain conditions, users may misinterpret the up arrow as direction to change levels rather than continue straight ahead. This typically happens when stairs or escalators are located near a flow that also continues straight ahead. In this situation, a down arrow can be used for straight ahead destinations to distinguish the directions.



If stairs or escalators are located near a flow that continues straight ahead, the down arrow can be used.

Diagonal Arrows
Diagonal arrows are used in limited circumstances.

- To direct up or down levels, accompanied by the stairs or escalator pictogram.
- To point to a destination immediately adjacent to the sign (signaling “Here is...” instead of “To...”) when the destination is especially difficult to see. For this instance, always use diagonal arrows pointing down, never pointing up.



Diagonal arrows are only used in limited circumstances: to indicate level changes or point to a hard-to-find destination adjacent to the sign.

6.2.4 Dividers

Horizontal dividers make groups of destinations combined on a single sign distinct from each other. The divider helps distinguish multiple directions or multiple colors.

A gray horizontal line separates groups of directions.

The horizontal divider is a 0.25″ gray horizontal line, and always extend the full width of the sign.

The horizontal dividers separates different colors...

6.2.5 AirTrain Destinations

Following the information strategy to Focus on Destinations, destinations reached by AirTrain are listed on directional signs with “via AirTrain” as secondary information, which reinforces the mode.

Include “via AirTrain” as secondary text on the same line directly following the destination name. The AirTrain logo follows “via AirTrain” in a 4.5″ square bounding box.

When listing destinations reached by AirTrain, list “Transit to City” first, followed by the rest alphabetically.

Never use the AirTrain logo as an arrow.

6.2.6 Walking Times

Walking times are reassuring for passengers so they can understand how long they have to reach their destination gate. Armed with this information, they can be more at ease and inclined to explore the shops, restaurants, and other amenities at the airport.

Walking times are calculated using a comfortable walking speed of 3mph (265ft/min) to consider passengers that may be carrying baggage, or with children or seniors.

Walking times should not be included on every directional sign, which would introduce too much complexity to the environment. Walking times should only be added to signage at major decision points. For example, walking times would be present on the first signs visible after the Security Checkpoint, and again where concourses connect to leisure areas.

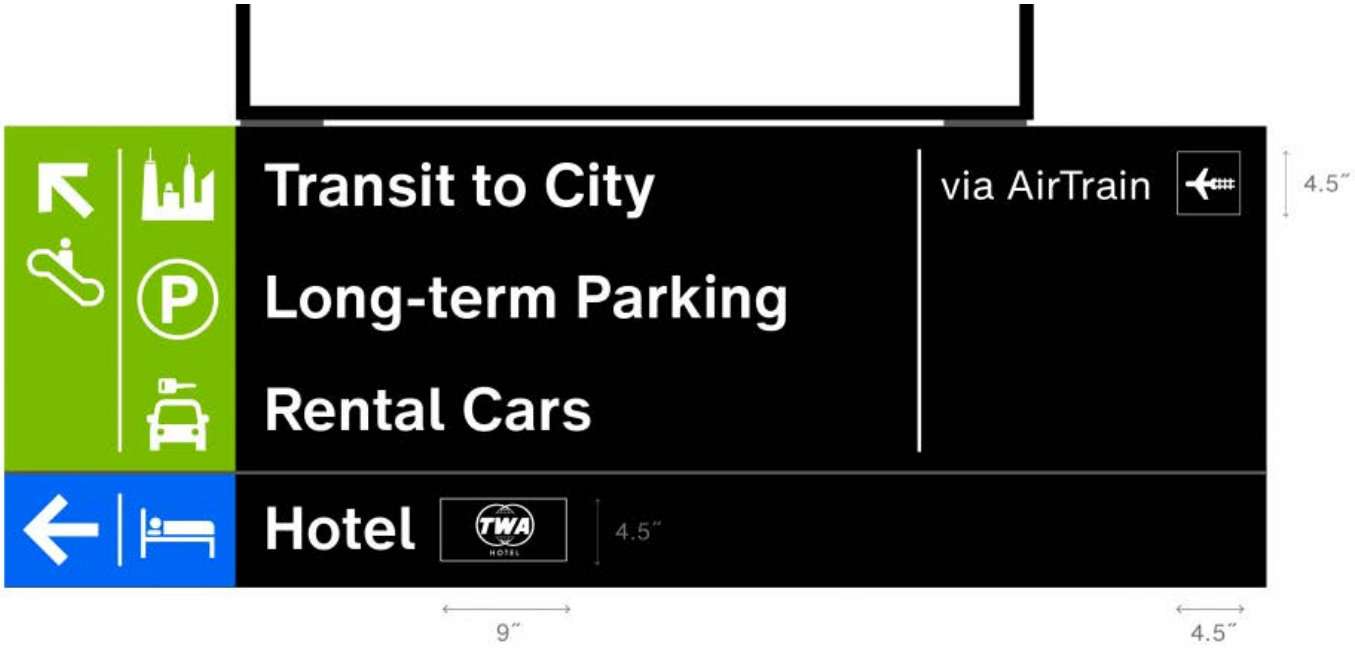
Walking times added to the Gates range on a sign at the start of a concourses

6.2.7 Branding

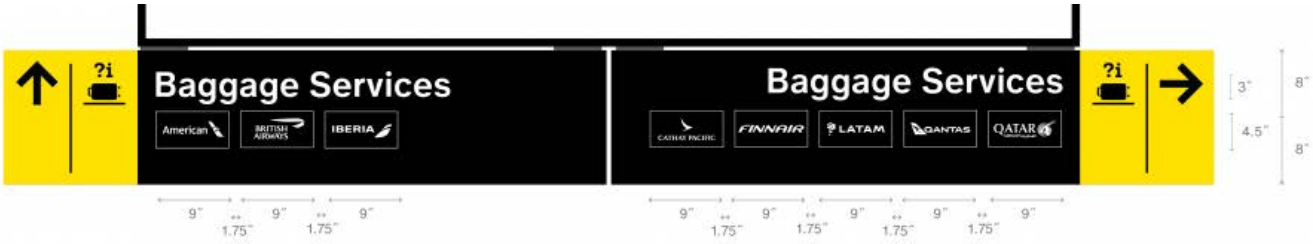
White monochrome logo treatments are used in directional signage and other contexts where color would distract from the primary wayfinding information, its color coding in particular.

The logos are placed in an outlined box following the relevant destination. This ensures the information does not distract from functional color coding, but is still clearly found. Logos should be provided by the commercial entity.

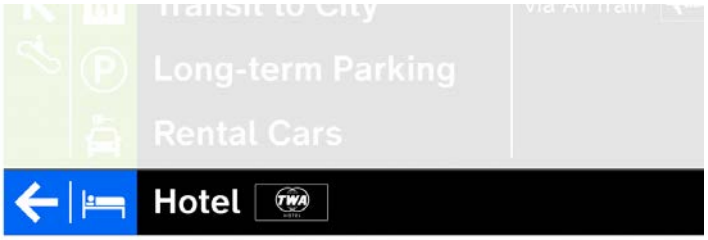
All brand element treatments are discussed in Brands.



Sample white logo treatments on directional signage



When multiple logos must be used, they can flow onto next line in the same fashion as flowing text, depending on the width of the sign.



A single destination may often have multiple sub-destinations. When space allows, fully describing these destinations may be useful for passengers.

Don't: use a brand treatment without a message; enlarge the white logo beyond standard 9×4.5″ rectangle; use a full-color logo on directional signage; combine branded destination text with a logo; use a logo only as a pictogram; use a branded name as destination message

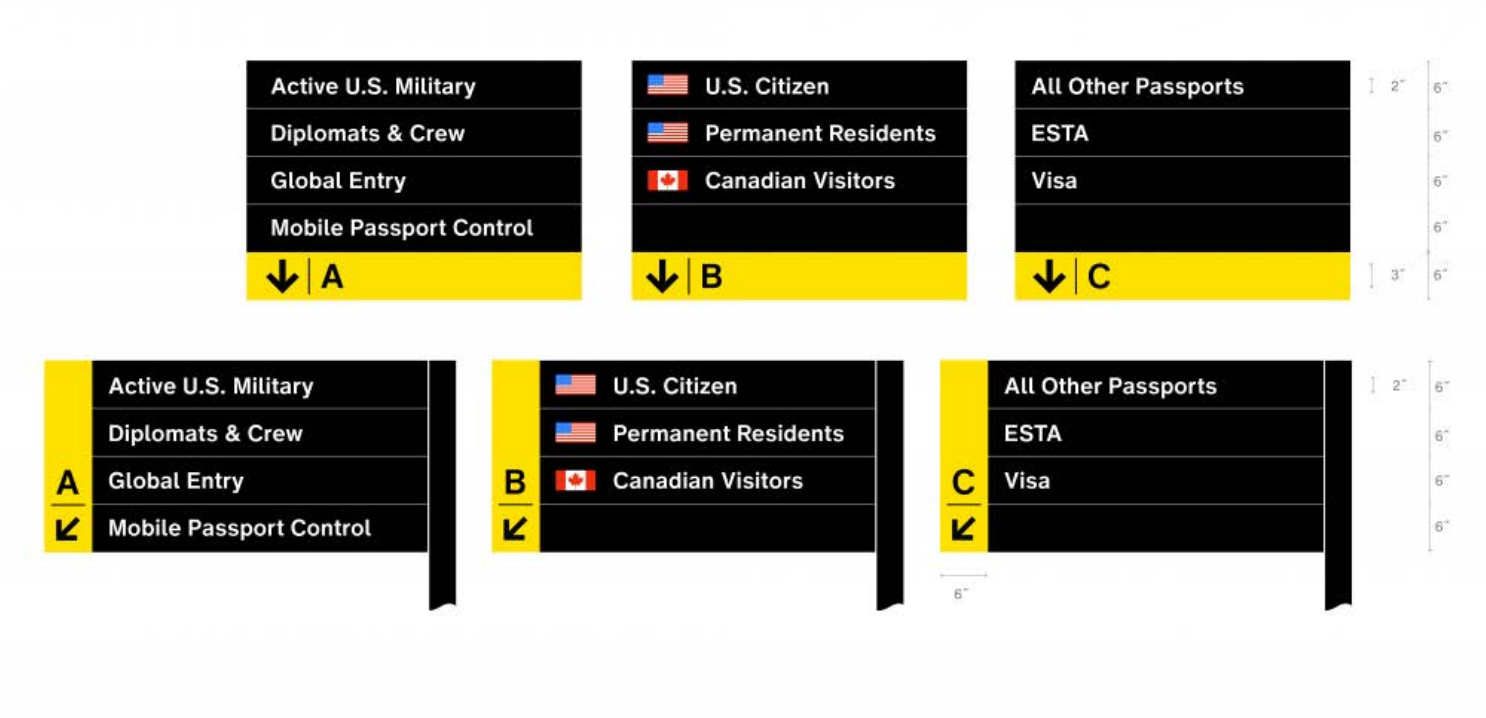
6.2.8 Lane Sorting

Lane sorting is essential where passengers must be divided into distinct groups, such as at the Security Checkpoint and Passport Control. Lane sorting signage operates similarly to directional signage, though it typically indicates a more immediate destination. Signs that support lane sorting may be analog or digital, and the logic herein applies to both.

Arrow placement will vary based on the composition of messages, but should always be consistent within an array. If all messages within a lane use the same pictogram, then the pictogram should be used alongside the arrow, left aligned with corresponding messages above. When one lane contains multiple messages that use different pictograms, the arrow should be centered with the lane with no pictogram.

Lane sorting signs follow the convention of the color field with arrow. However, they use a more compact layout (on a 6″ scale grid) to fit more content in a smaller sign area.

For signs that appear directly above a lane, the color field appears at the bottom of the sign. For pole-mounted signs adjacent to a lane, the yellow band appears at the side of the sign, directed away from the pole.



Lane sorting signage (pole-mounted and wall-mounted, on a 6″ grid)

When lanes are not numbered or lettered, the arrow should stand centered above the walk path

If lanes are numbered or lettered, they should lead to a numbered or lettered destination. The destination should be clearly identified through either a large totem or a suspended sign, depending on what the architecture of the space allows.

Lane sorting signs for Passport Control areas (overhead and totem, both on an 8″ grid)

Standalone lane identification signs, also called totems, are useful to organize a large space and can more clearly serve as landmarks around which stanchions will be organized. They need enough space between them to be seen at a distance on approach (i.e. not block one other), and could be staggered for that purpose.

If not enough space is available, then suspended signage should be considered, if ceiling height sufficient.

6.3

Identification signs confirm a destination. They act as a visual title or heading in their environment. They can be placed on a facade, a canopy, or near a portal or door. For large spaces such as Check-in or Baggage Claim, the dimension of the identification sign should match the scale of the space.

6.3.1 General Principles

All identification signage is anchored with a pictogram at its top left corner, or, in the case of reverse sides of double-sided signs, top right corner.

The pictogram area is placed in a color field, which can take three forms:

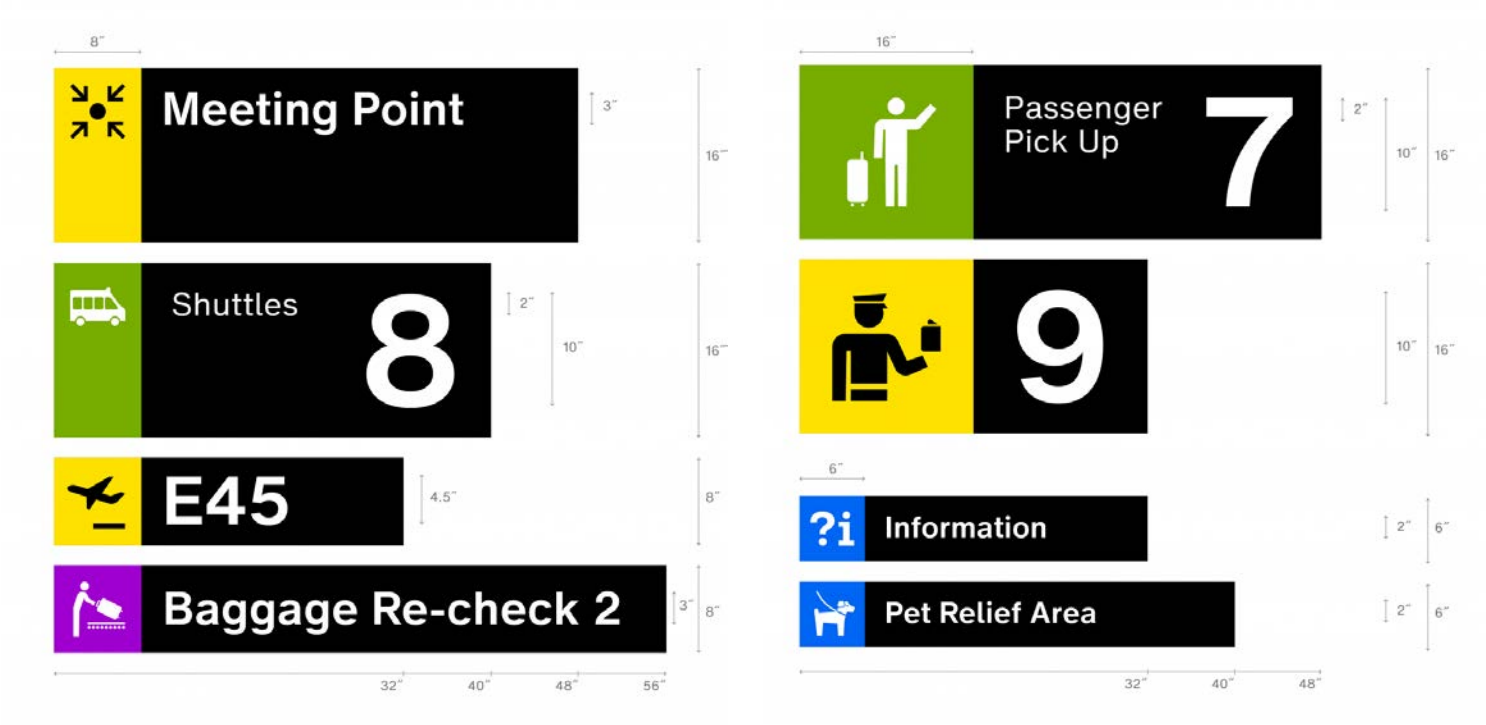
1. A simple square, for signs that are long and have a simple message
2. Vertical band, for signs that are wall- or ceiling-mounted and have the color band facing the main passenger flow
3. Horizontal band along the top, for signs that are bottom-mounted (to the floor or to an object, e.g. baggage claim identification)

The design and layout of identification signage will depend on its anchoring and position.

Basic principles of identification signage

6.3.2 Suspended and Wall-mounted

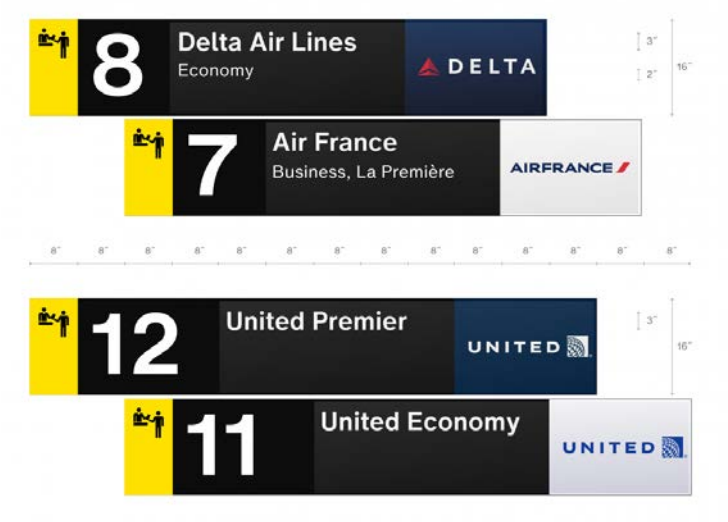
For suspended and wall-mounted signage, the band faces the main passenger flow. To make it stand out in the environment, the color band extends the height of the sign. It wraps around the edge, consistent with the Design Language, serving as a beacon.



Various suspended or wall-mounted signs in both 8- and 6-inch scales

The pictogram area is typically 8 inches wide, but depending on the environment, it may be as wide as 16 inches or as narrow as 6 inches.

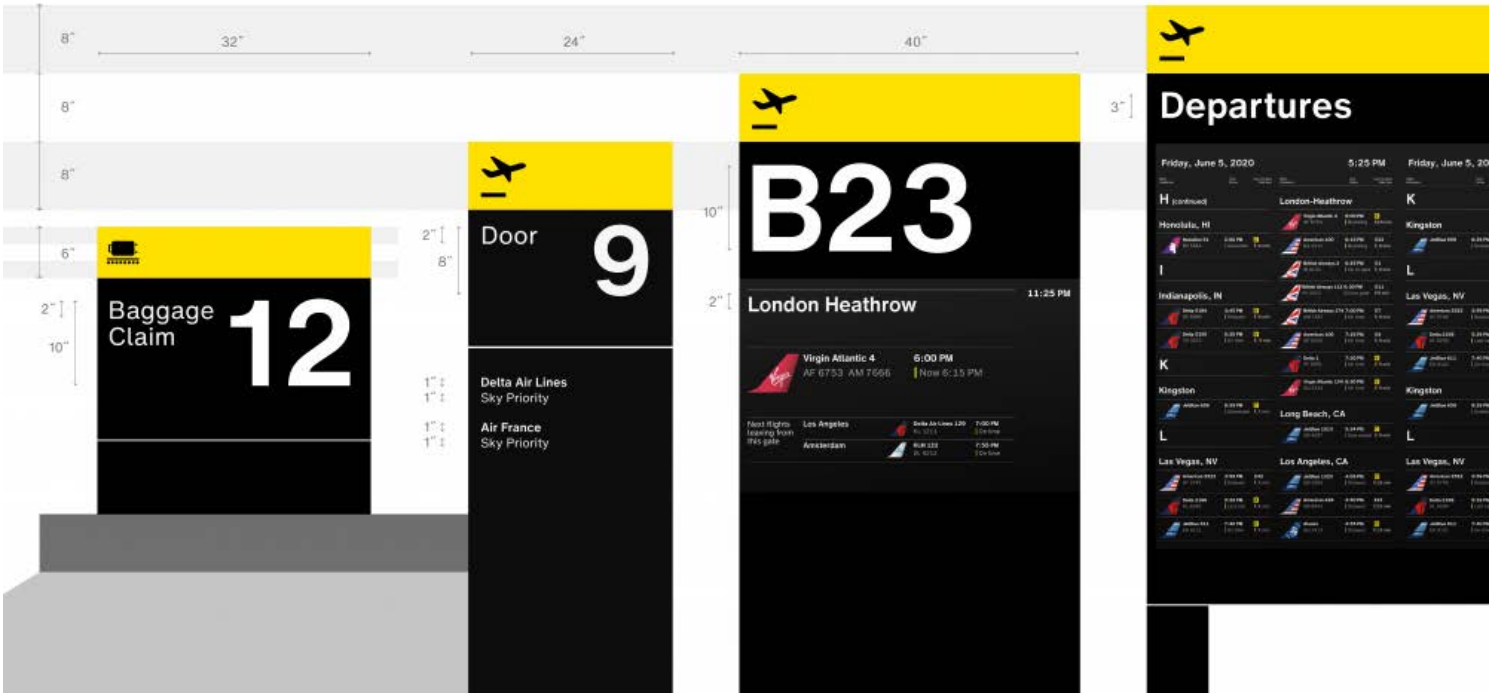
Branding
Some suspended and wall-mounted signs, such as curbside identification signs, feature airline branding. Full-color logos are used in these contexts to maximize recognizability with passengers. Full-color logos can appear on these elements since they are at a large size; otherwise, full-color logos are graphically complex and do not reduce well, so other Brand Treatments must be used.



The three branding treatments

6.3.3 Freestanding Signs

Freestanding signage is used for large statement objects, such as totems or groups of FIDs. To further emphasize these objects, the color band extends the full width of the object.



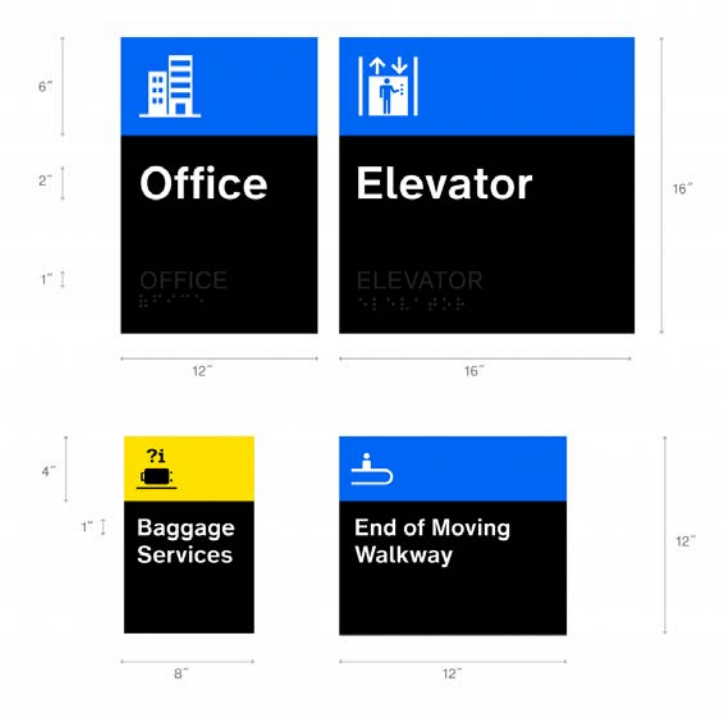
Examples of freestanding signage: baggage claim ID, curbside door ID totem, combination GID and gate ID totem, and FID array

6.3.4 Room and Amenity Identification

Room and amenity identification signs use a similar layout to bottom-mounted signs. They use 6- and 4-inch sizes.

6-inch band: ADA-compliant room identification
This sign complies with the Americans with Disabilities Act (ADA) for identifying permanent rooms and stairs. It features a six inch color band, visual high-contrast room name, braille, and raised text (same color as background). For additional information on ADA compliant signs, see References.

4-inch band
This smaller sign size is for most other uses where they can easily be read up close. These are not intended for room identification as set forth in the ADA Guidelines, but as secondary identification. These signs only have a visual high-contrast identification name.



Sample room and amenity identification signage

6.3.5 Supergraphics

Throughout the passenger experience, opportunities will arise to take advantage of the architectural context and augment a wayfinding function through a “supergraphic”. A supergraphic is any use of oversize graphic elements (pictogram, arrow, text, etc.).

These are most likely to be called upon for identification purposes, for example:

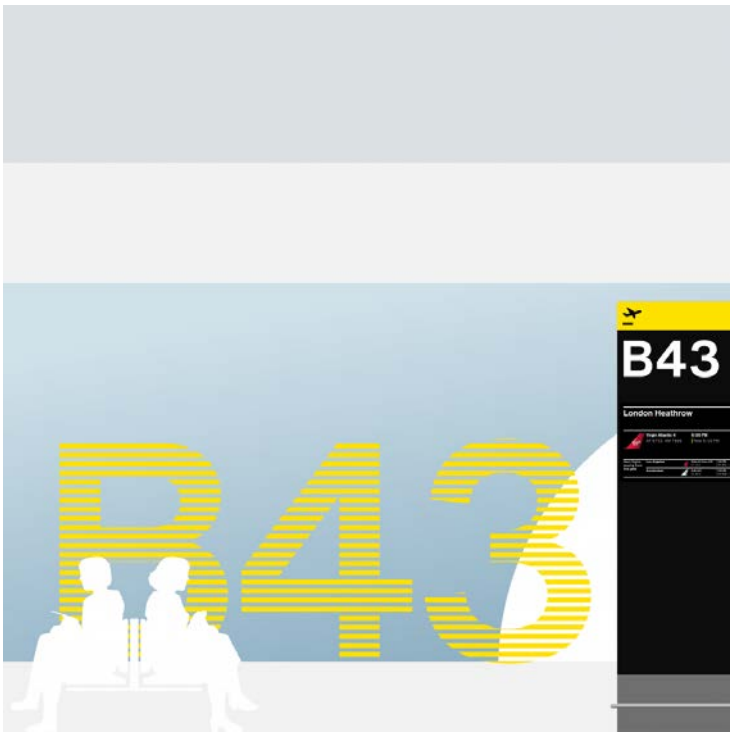
- in gate areas (gate number),
- restrooms gendered pictograms for distinction),
- terminal arrival and departure (terminal and door numbers), and
- elevator (floor numbers).

Since these serve wayfinding functions and are always used in addition to the standard wayfinding signage, they must align with the wayfinding standards in terms of color and typography.

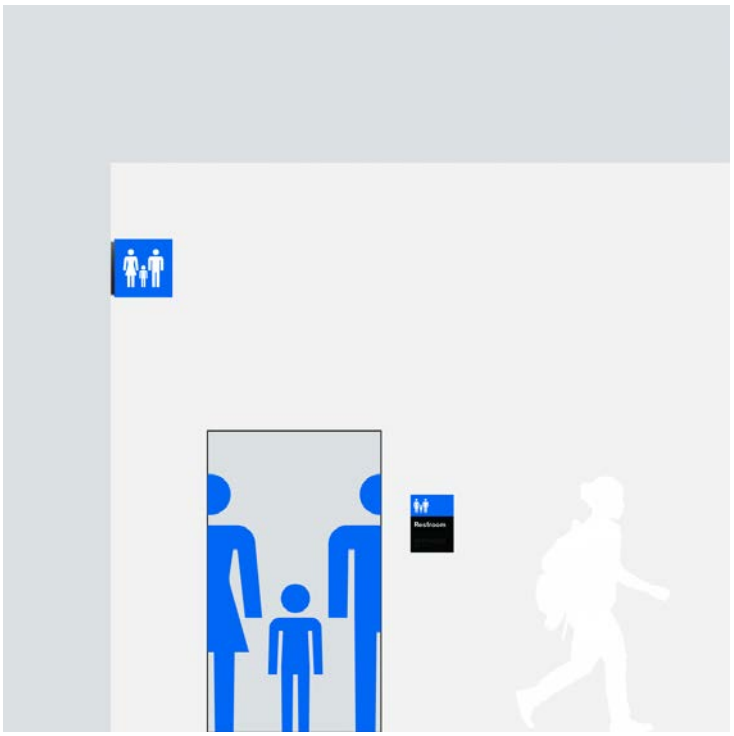
They may also serve as a bridge between the architecture of the terminal and wayfinding, and therefore offer more flexibility in use of materials and textures that for an improved architectural alignment and an opportunity for more creative treatments. For example, a gate number (set in Helvetica Now for PANYNJ) cut out of a slatted wood wall cladding or using perforated metal to create the floor number near an elevator.

Maximize available real estate to create a pleasant use of scale. Do not use supergraphic when space is insufficient, or where existing conditions are already visually busy.

A sample of possible supergraphic treatments


B43
London Heathrow
B43


Arrivals
Arrivals


Restroom


Exit
Ground Transporation

6.4

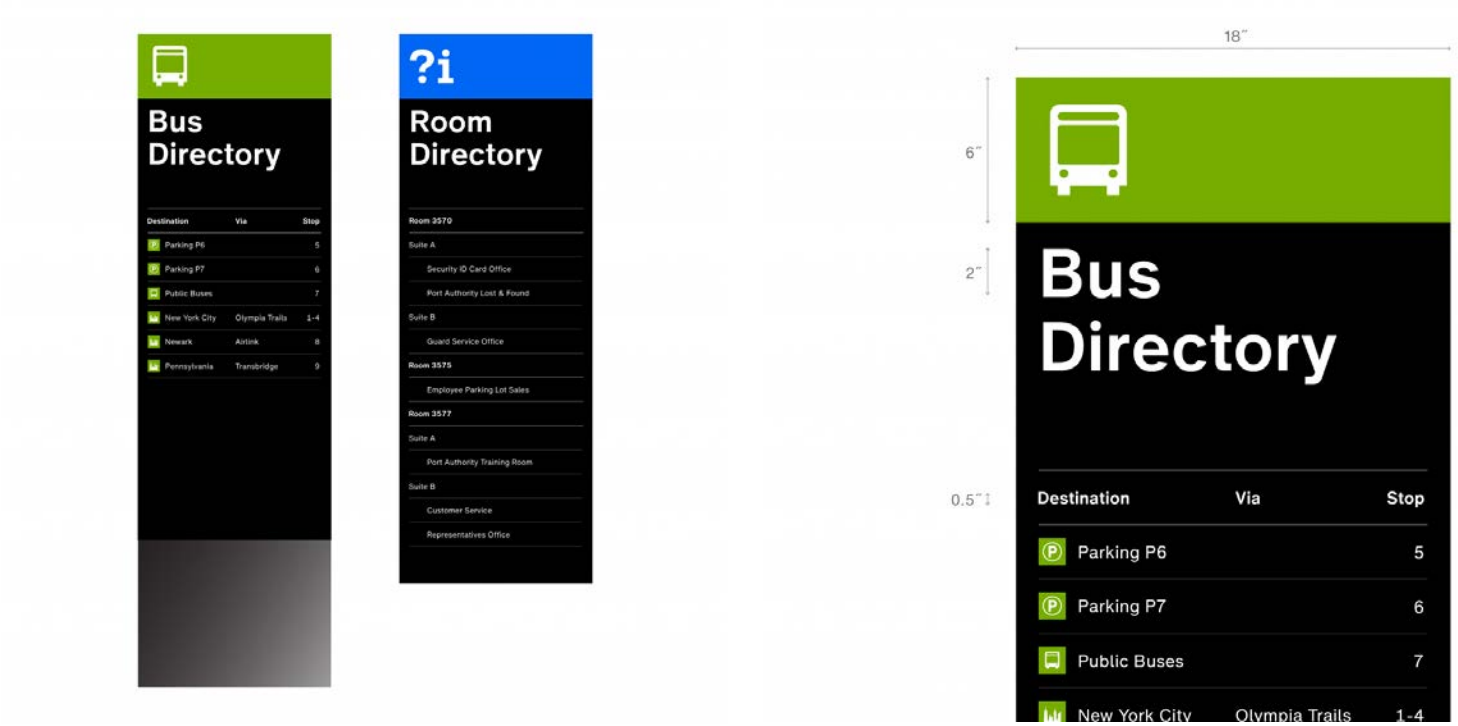
Information delivery is critical to maintaining the passenger's confidence from point to point. While some passengers may be increasingly reliant on their personal devices, principles of Inclusive Design call for the airport to still be able to distribute critical information at key moments.

6.4.1 Directories

Directories are used to provide an overview of destinations at major decision points, e.g., which airline can be found at specific check-in and ticketing counters, gates, etc.

General Directories
Directories are placed at entrances to buildings or areas to show what can be found there. They can be used, for example, in terminals, concourses, and food courts.

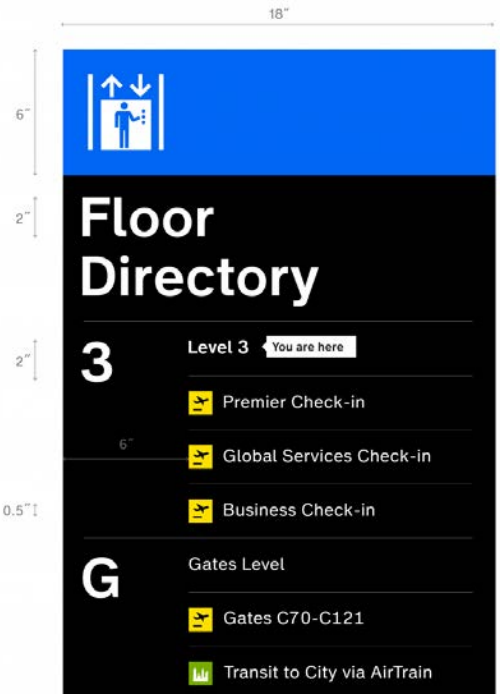
A generic template is available that can be adapted to the needs of the specific application. For instance, when more destinations need to be displayed, the sign size can be increased to accommodate additional lines.



Sample general directories

Elevator Directories
Elevator directories are placed next to all elevators accessible to the public. They list the main destinations that can be reached on every level.

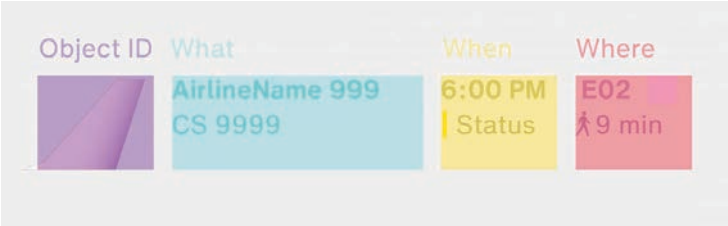
Since the number of levels and destinations can vary considerably, this template may be adapted. However, text size cannot be decreased as it will impede legibility.



Sample Floor Directory

6.4.2 FIDs, GIDs, and BIDs

Information displays play a key function in the airport environment by providing up-to-the-minute updates on flight information (FIDs), gate information (GIDs) and baggage information (BIDs). A modular, responsive content block unifies these varied elements, regardless of screen size or technology.



Modular content blocks are responsive to the screen size, format, and resolution.

Tail Fin
The tail fin provides a simpler canvas than a full logo, while still providing a recognizable cue for passengers and a flexible branded space for airlines. Artwork should be provided by each airline (within the bounds of the asset), and should always include the airline's name.

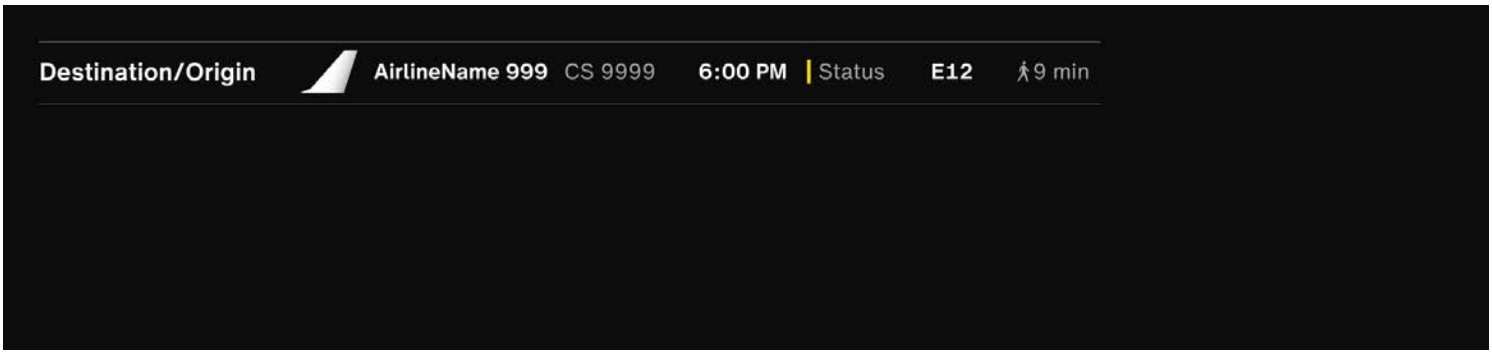
As the initial marker of the content block, the tail fin is a common treatment across all digital touchpoints that can adapt to many screen sizes, ratios, and quantities of elements.

Flight Information
The full name of the airline followed by the flight number complements the Object ID/tail fin to define the destination. Flight information is always shown and cannot alternate with other information. Codeshare flight information (using the codeshare airline's two-character code and flight number) is included as secondary information on the second line in gray. This can alternate between multiple codeshares.

Time and Status
The current departure or arrival time is shown with one of the following statuses and corresponding color marker.

FIDs and GIDs:
- Scheduled
- On time
- Delayed
- Now 0:00 AM
- Canceled
- Go to gate
- Boarding
- Last call (pulsating text)
- Door closed
- Departed

BIDs:
- Awaiting baggage
- Baggage delivering
- Complete
- See Baggage Services

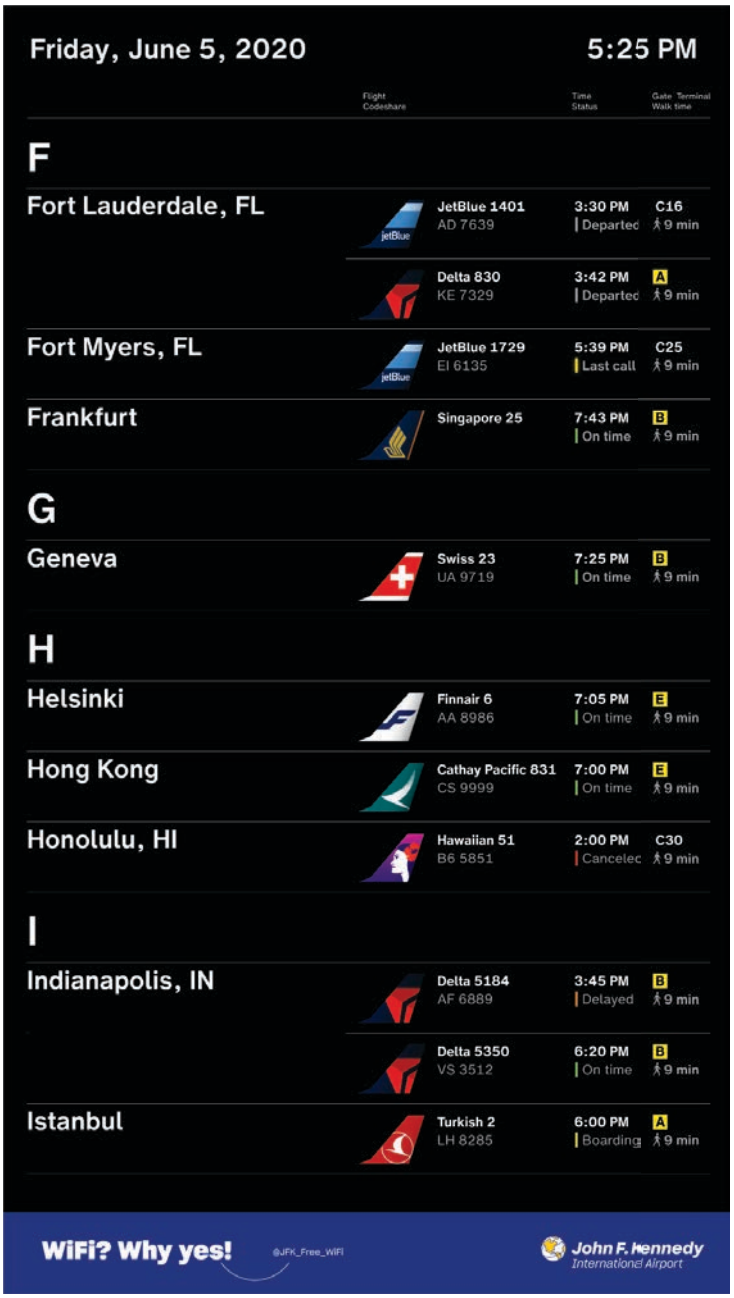


FIDs elements in most compact form

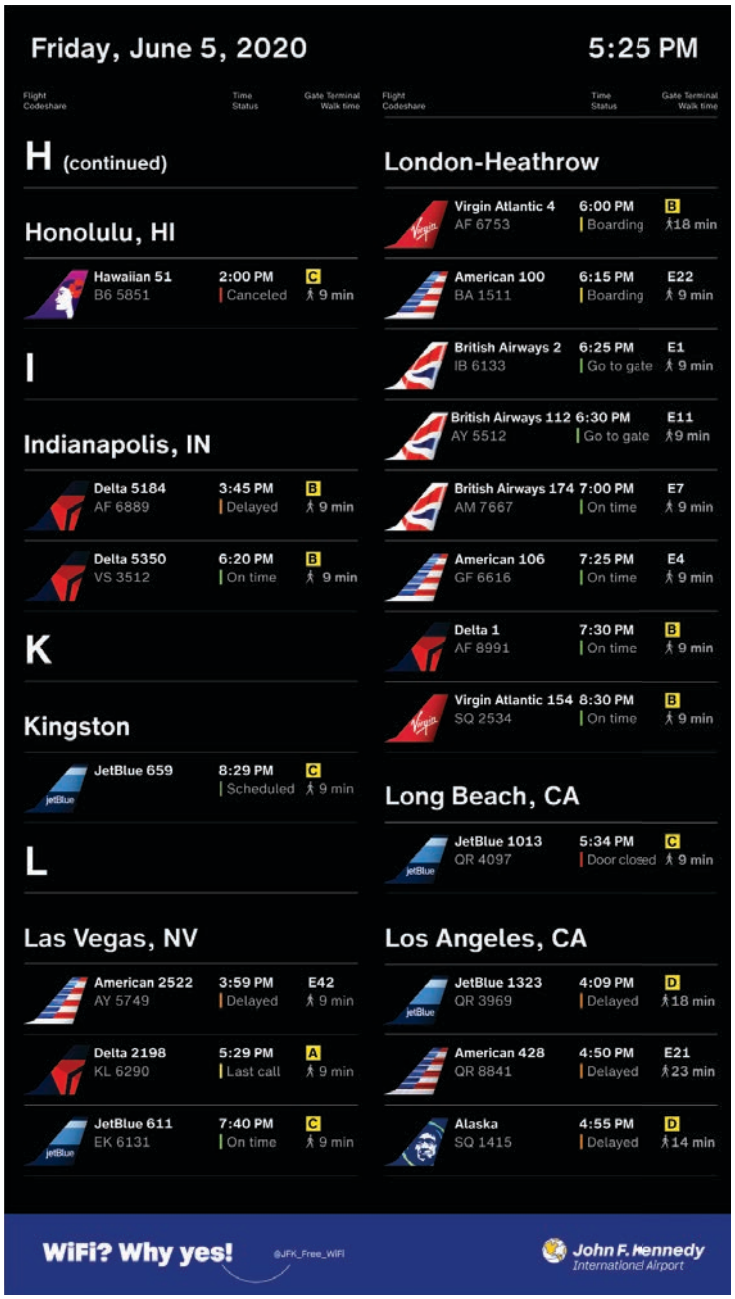
Location
FIDs also include information on how to reach the proper gate, which is especially critical for passengers with a connecting flight. Gate information includes:

- Gate Number prioritized with a highlighted black-on-yellow treatment
- Terminal depicted in the standard square treatment, like directional signs
- Walk time based on standard walking time from the location of the FID

By employing a consistent treatment of information, FIDs, GIDs, and BIDs can adapt to various formats based on the format, distance, resolution and type of device they are displayed on.

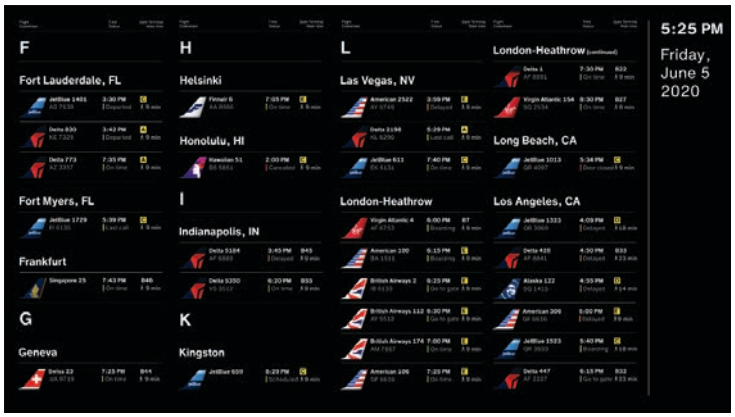

Friday, June 5, 2020
5:25 PM
Flight
Codeshare
Time
Status
Gate Terminal
Walk time
F
Fort Lauderdale, FL
JetBlue 1401
AD 7639
3:30 PM
Departed
C16
9 min
Delta 830
KE 7329
3:42 PM
Departed
A
9 min
Fort Myers, FL
JetBlue 1729
EI 6135
5:39 PM
Last call
C25
9 min
Frankfurt
Singapore 25
7:43 PM
On time
B
9 min
G
Geneva
Swiss 23
UA 9719
7:25 PM
On time
B
9 min
H
Helsinki
Finnair 6
AA 8986
7:05 PM
On time
E
9 min
Hong Kong
Cathay Pacific 831
CS 9999
7:00 PM
On time
E
9 min
Honolulu, HI
Hawaiian 51
B6 5851
2:00 PM
Cancelec
C30
9 min
I
Indianapolis, IN
Delta 5184
AF 6889
3:45 PM
Delayed
B
9 min
Delta 5350
VS 3512
6:20 PM
On time
B
9 min
Istanbul
Turkish 2
LH 8285
6:00 PM
Boarding
A
9 min
WiFi? Why yes!
@JFK_Free_WIFI
John F. Kennedy
International Airport

1-column



2-columns

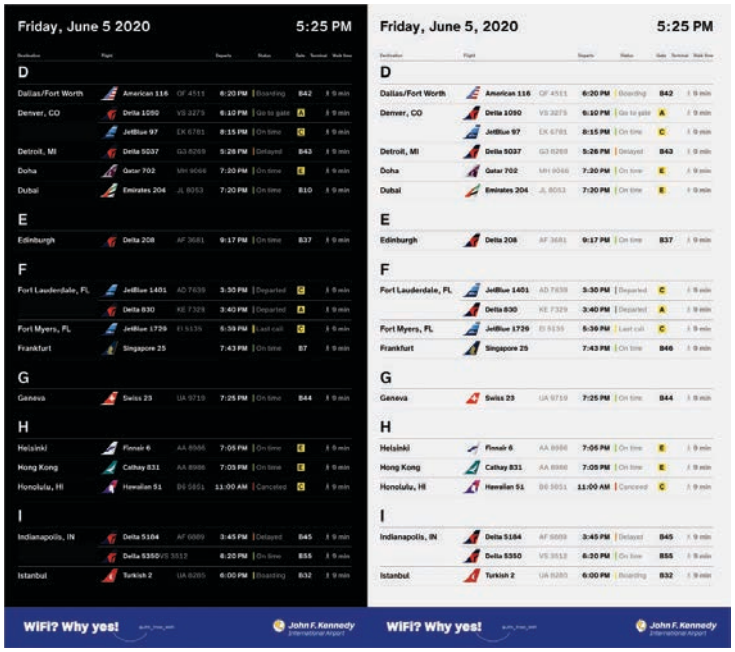
3-columns



4-columns

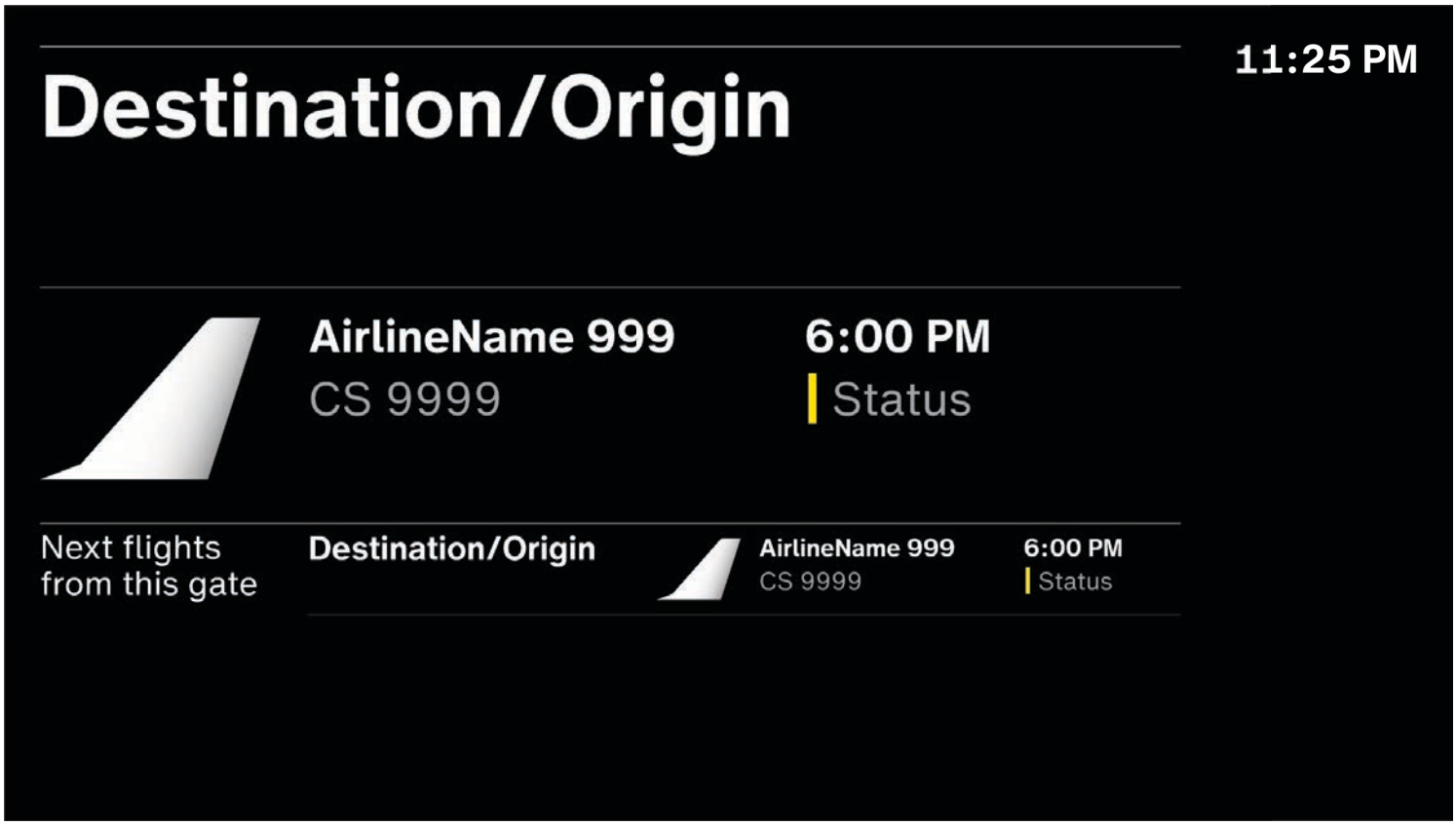
The format is meant to be flexible and responsive to its environment, but keep consistent elements throughout.

While in most contexts a black background will work best, especially in situations where OLED screens are used (See Performance Specification), some situations may call for a light background version, in which case all the same conventions and rules should apply.

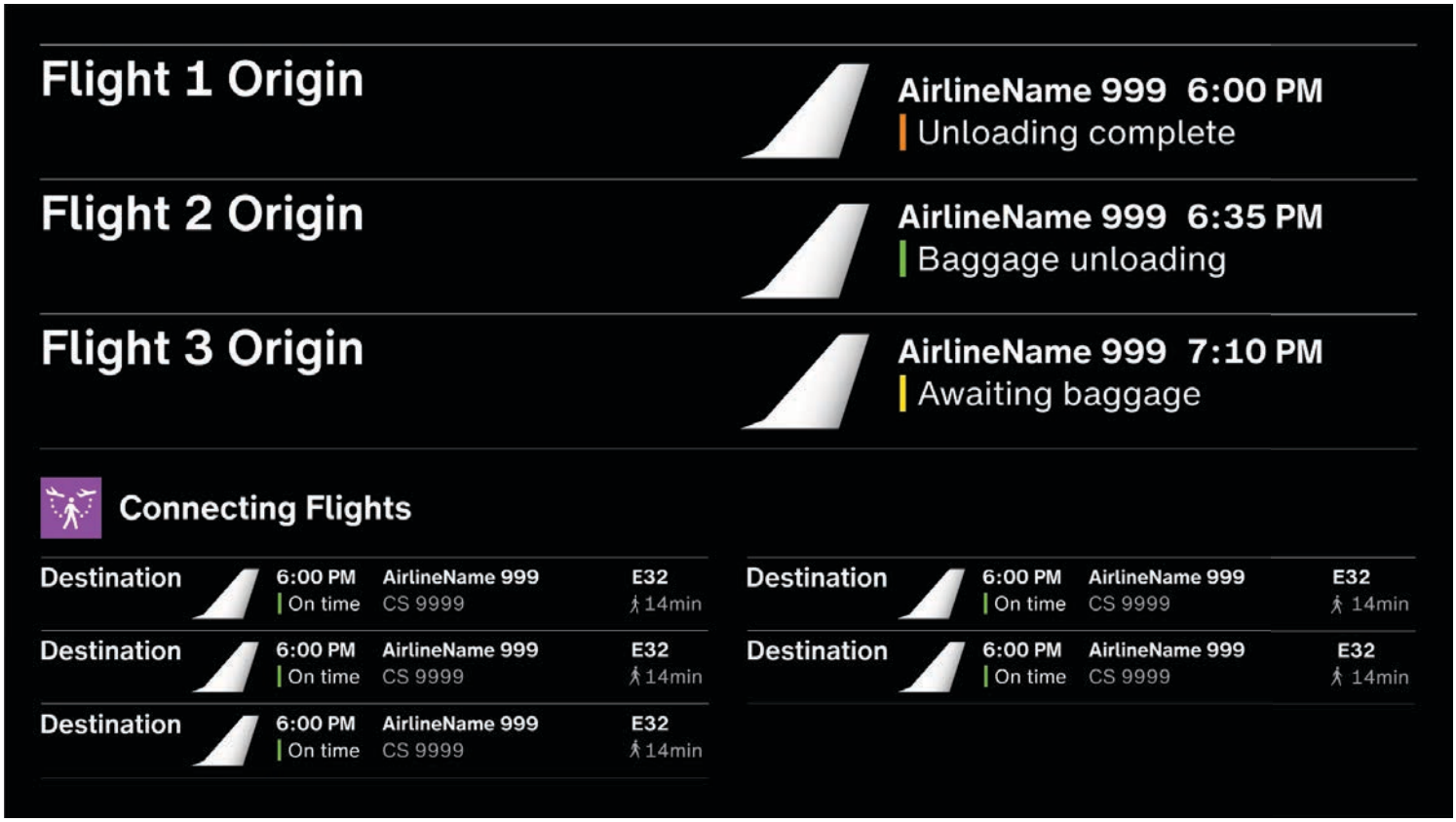


FIDs can be used with a light mode, depending on the environment

Standard GIDs and BIDs follow the same format.



GID with standard elements rearranged for the needs of the Gatehold area



BID with standard elements rearranged for the needs of the baggage claim area

6.4.3 Maps

Maps are an essential tool to help passengers locate themselves in an environment and inform their decisions. Maps should include only enough information to allow a user to make the required decision.

Two map scales are available:

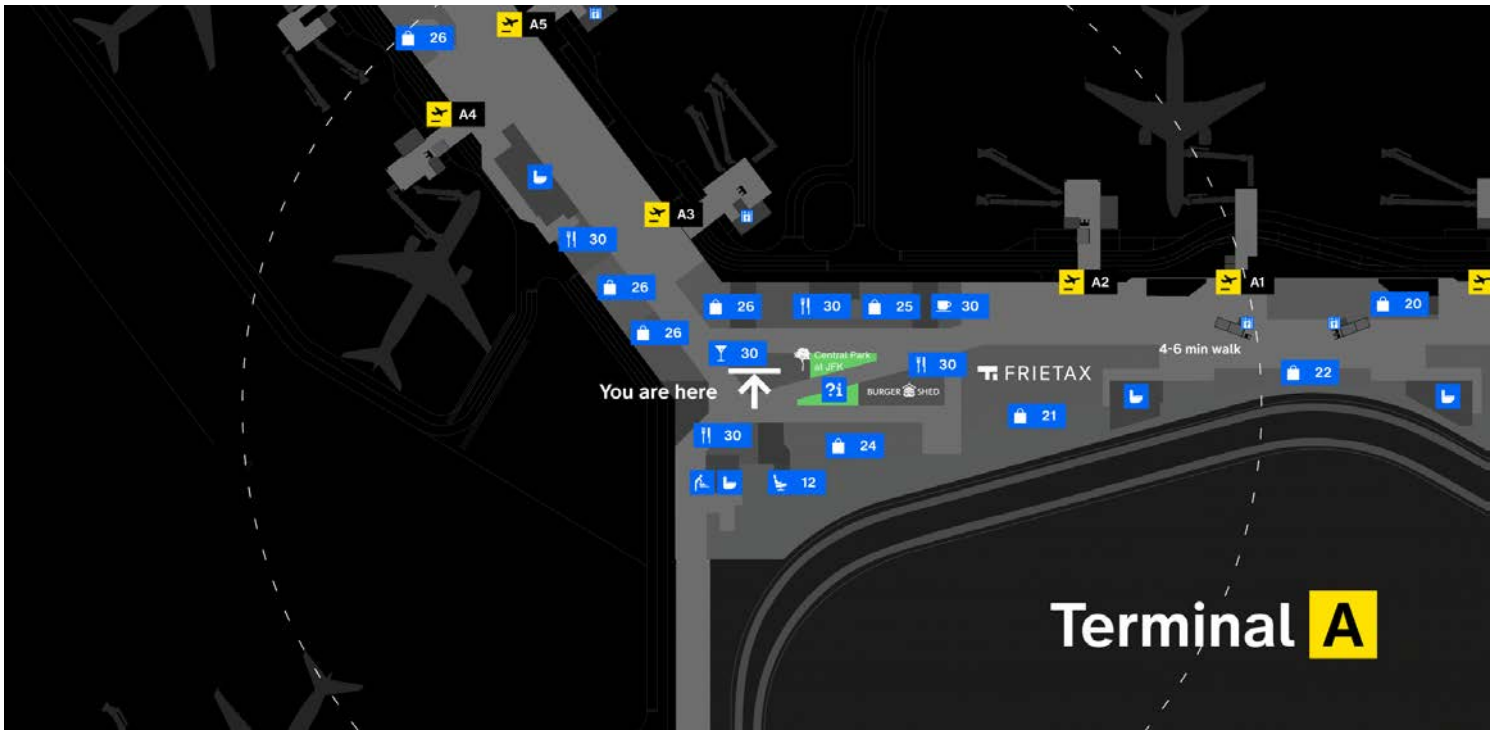
Terminal map

- How do I reach a specific destination in the airport?
- Where can I eat/drink/etc.?
- How long will it take to get there?

Regional map

- How do I reach my final destination?
- What is the optimal transit route to get me there?
- How long will it take and how much will it cost?

Both maps include an overview of the airport campus map, creating a visual link between the two.



Terminal view

Terminal Map
Graphic Style

Set on a dark background, it is optimized to let the main outline of the building and the shops that passengers are navigating stand out. Destinations are highlighted in the relevant color code and a directory is included for reference. For stores that have highly recognizable brands and sufficient square footage, the store logo can be used directly on the map in lieu of the markers.

Positioning
The map should be angled so that the positioning of the element aligns with what the viewer sees in a heads-up

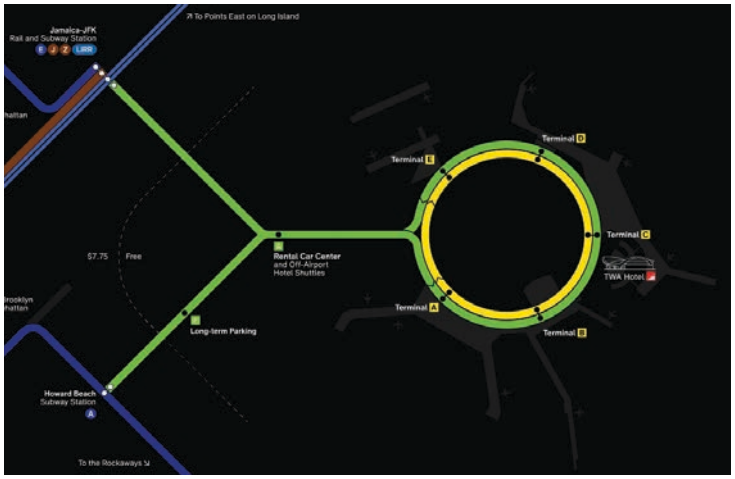
configuration. This means that two maps being installed on opposing faces of a structure would show their maps flipped to reflect their respective viewer's position.

Directory

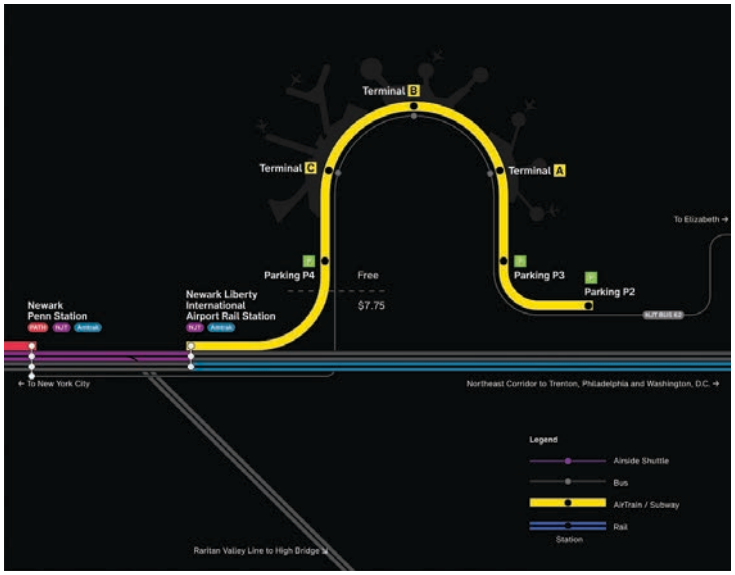
The treatment of the directory aims for consistency among types of information. Logos and brands should be in a monochrome white-on-black treatment with a thin border positioned to the right of the marker. For food and beverage offerings, a square photograph of the main offering will help foreign travelers get a sense of the fare offered at those locations.

Campus Map

The campus map gives an overview of the campus, including terminals, landmarks, services and transit connections. It also highlights which destinations may require payment on AirTrain.



JFK AirTrain Map



EWR AirTrain Map

LGA Shuttles Map

LGA Access Map

All maps leverage the same graphic language for each type of service.

Sample legend showing a range of transportation options, with the respective treatments

Regional Map

Graphic Style

Also set on a dark background to allow transit lines to stand out, this map makes it easy to consult the available connections. Transit lines highlighted in colors are those with direct connections to the airport. Subsequent

connections are shown grayed out, allowing the user to understand the general density of the transportation network and possible connections. All lines follow a simplified, geometric pattern, which simplifies the information density of the map. Text labels highlight key stations where connections are available.

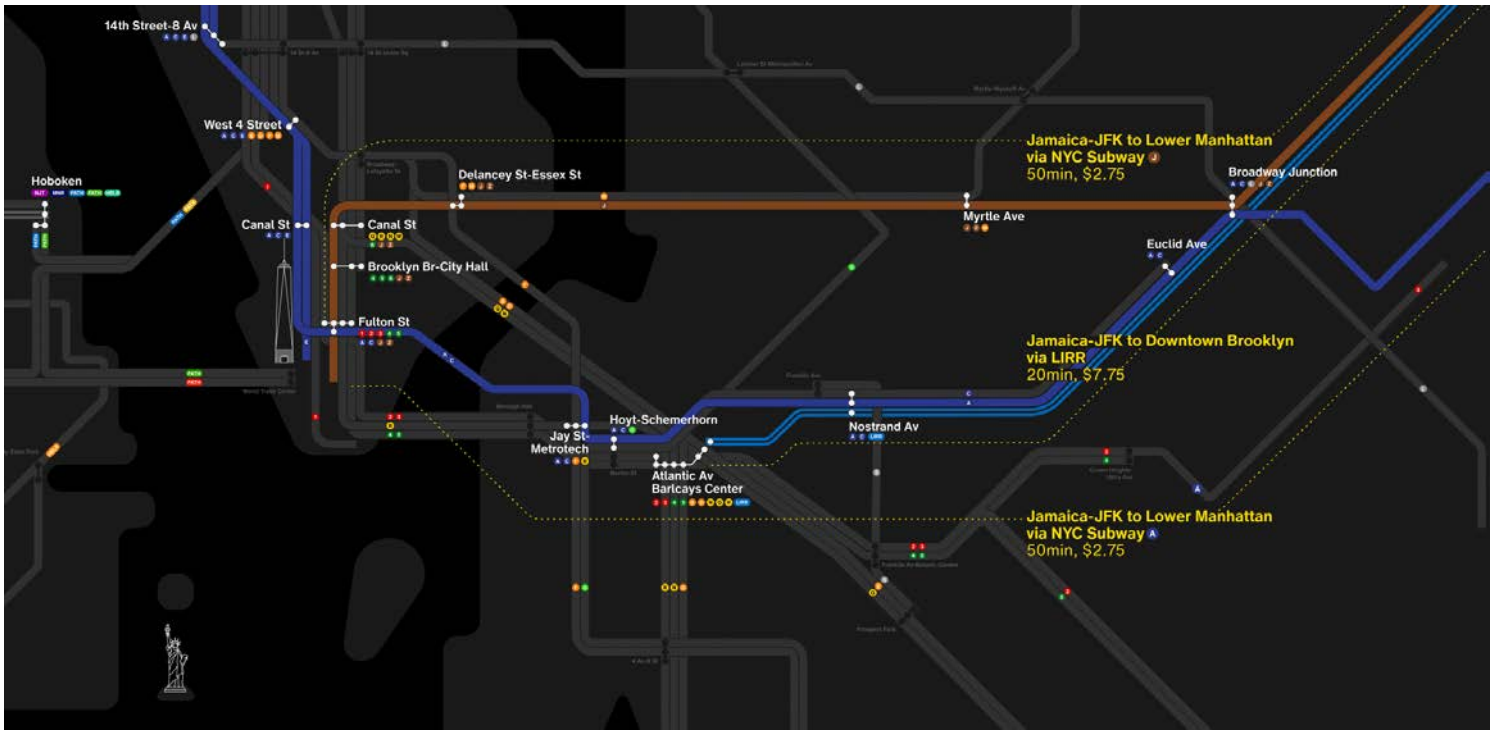
Regional Overview

Positioning

The geography is simplified and the angle adjusted to create a more symmetric arrangement with Manhattan, the region's economic core, positioned vertically. The map of each airport campus is superimposed on the map to give context.

Guidance

Since this map is about conveying the various options to reach destinations beyond the airport campus, a legend is added highlighting distances to key transit hubs via various lines, with time and pricing information. This allows users to choose the route best suited to them.



Detail of main transit journey options from JFK to Queens, Brooklyn, and Manhattan

Regional Overview Transit Map

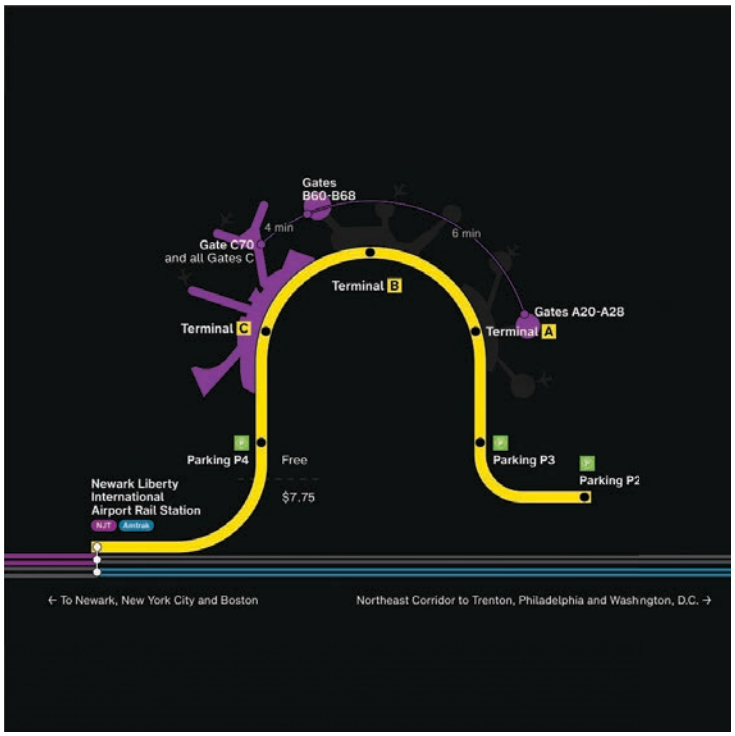
JFK Transit Connections Map

Airside Shuttle Buses

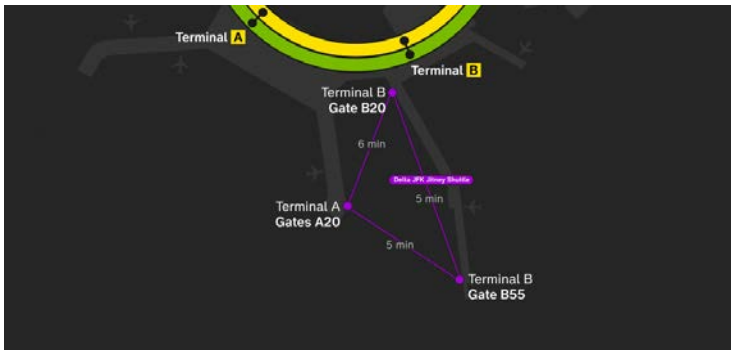
Some terminals offer airside shuttle bus services to ease inter-terminal connections. Since these airside shuttles are extensions of the connection journey, they use the purple connections color.

Some shuttle services will connect specific gates within the same terminal, so they are indicated as the main destinations. Note the contrast between bus (thin line) and AirTrain service (thick).

Due to the layout of the respective terminals, some services allow access to the entire terminal and some allow access to only a subset of gates. This distinction can be conveyed by using the purple color as the background color to the accessible zones.



Map showing connections possible from the various terminals at EWR



Airside shuttle bus service at JFK

EWR Transit Connections Map

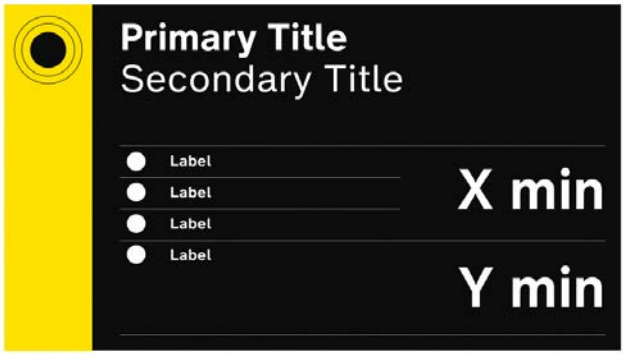
6.4.4 Wait Time Indicators

Along the passenger journey, some queuing and wait time is inevitable. Setting expectations for that wait time provides users with confidence and peace of mind. A flexible visual framework allows this information to be presented consistently with all other wayfinding.

Example of a simple, three-line wait time indicator for a Security Checkpoint

Example of a simple, three-line wait time indicator for a Security Checkpoint

Example of a more complex wait time indicator, where multiple options are merged into a single line



Example of a more complex wait time indicator, where multiple options are merged into a single line

6.5

Appropriate communication through regulatory and emergency signs is a vital component of a sign program, whether the signs are permanent or temporary.

6.5.1 Regulatory

Regulatory sign types include all signage that provides information for rules and regulations applicable to a facility.

Throughout all facilities, especially construction areas, regulatory signs are also used to warn visitors and employees of dangers, restricted areas, or other possible hazardous conditions.

It is important that regulatory signage follows the same graphic language as other signage in the facility. Following the same layout principles makes them easier to comprehend, as passengers are used to them. This also lends authority, making it clear that regulatory signage is official messaging to be followed.

Regulatory signage that prohibits certain acts—such as No Entry or No Smoking—use a red color field, and white text on a black background.

Sample regulatory signage at 16-, 8-, 6-, and 4-inch scale, respectively.

6.5.2 Emergency

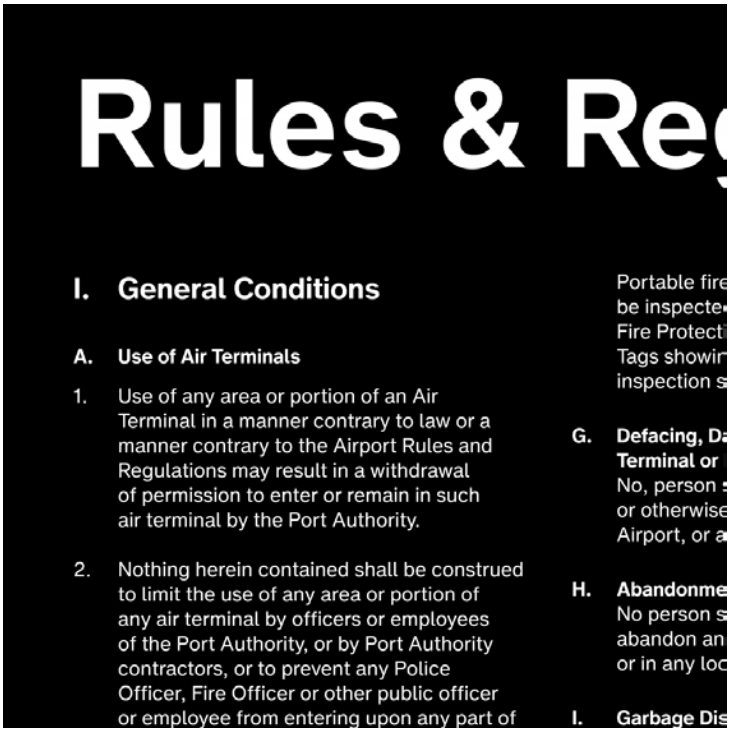
Emergency signs are used to alert users to services that are vital in emergencies. These include defibrillators, fire extinguishers and hoses, and emergency exits. Please note that these elements do not supersede and must complement any elements required by fire and safety codes.

Emergency signage uses white text on an entirely red color field to attract more attention. This treatment is strictly reserved for emergency signage.

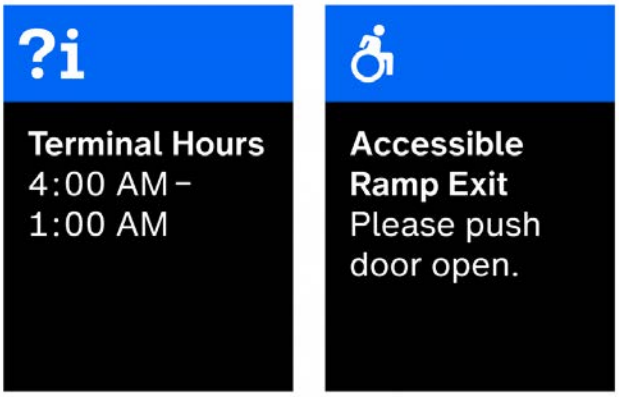
Sample emergency signage at 16-, 8-, 6-, and 4-inch scale, respectively.

6.5.3 Notices

Other information must, by law or regulation, be delivered. The same standards will apply to these applications as well.



Rules and Regulations are an example of a text-heavy application requiring the use of the bold weight of Helvetica Now for PANYNJ



Other notices following the 4-inch grid

6.6

Digital signs are based on the same wayfinding strategy as their static counterparts. They share the same graphic design use of Typography, Color, Pictograms, and Arrows. This shared design language is important to visually distinguish from other types of messaging (e.g. Port Authority branding and PSAs, advertising, and airline branding). It ensures consistent and trustworthy wayfinding messaging across all mediums.

As technology has evolved in recent years, it's now possible to have digital signage virtually indistinguishable from analog signage in terms of text resolution, color range, contrast and even form.

6.6.1 Dynamic Information

Digital signage displays information that changes based on time of day, condition, or context. Dynamic information is managed from a content delivery system.

The quality differential between digital and static signage is diminishing thanks to ongoing innovation in screen technology, including resolution, color fidelity, and size. So dynamic screens can more closely reflect the design principles of their static counterparts. This allows for a more unified and consistent wayfinding program. Nonetheless, there remain reasons to use static signage technology in most contexts. Clarity of text, especially at a distance, is still superior with static technology.

6.6.2 Using Digital Signs

To ensure consistency and quality of experience across terminals and airports, we aim to streamline and centralize digital touchpoints that relate to wayfinding or flight-related information. This includes, but is not limited to: flight information displays (FIDs), baggage information displays (BIDs), and gate information displays (GIDs).

For graphic layouts, see Information Displays.

A general overview of digital signtypes and configurations

Use a digital signage solution if:

- Information fluctuates or is presented temporarily
- Information changes based on the needs of the user

Use digital signage for these wayfinding purposes:

- Messaging (visual paging, general communication, marketing and PSAs)
- Flight-related information (FIDs, GIDs, BIDs)
- Airline-related information (check-in counter and baggage)
- Directories (for description of amenities, orientation at check-in, interactive kiosks)
- Decisionmaking (walk/wait times to influence journey)
- Navigation (contextual directions, information about changing routes)
- Transit information (train status, schedules)

Digital signage should not be used in situations where the information being presented does not or should not change. This is common along routes and destinations. Along the route, the directionals provide users the information and reassurance that the route they are using will reach their intended destination. The identification signage at destination points serve as the final confirmation that the user has successfully reached their destination. In both of those situations, consistency is critical to dispel any doubt.

If a digital screen has been implemented for a directional sign or an identification sign, the primary wayfinding messaging displayed on the screen must not change. The screen should not be repurposed for non-wayfinding related content, such as welcome, advertising or promotional messages. (Content may only change in times of emergency or evacuation.) The screen should not display any content or messaging not approved by the Port Authority, including ornamentation and animation.

Third-party Technology
Terminal operators and airlines have invested in the development of tools and applications to provide passengers a better airport experience. The Port Authority actively encourages continued use and development of those third-party applications and tools.

To help enable that development, the Port Authority has put significant resources towards the development of a robust wi-fi network across its terminals. The free service makes it easier for passengers to use data-intensive applications without worrying about a data plan.

To better ensure accuracy in the information provided, the Port Authority has been developing numerous datasets that can also be utilized in third-party applications.

The sign program utilizes high contrast design that can easily be read and interpreted by object recognition tools, such as Google Translate. Translation services can provide passengers that have language, visual, or auditory impairments the tools to better understand wayfinding messaging.

6.6.3 Architecture

Advances in screen technology allow for a variety of sizes and forms. So screens can be specified to complement the architecture of the terminal. Where possible, screens should be integrated into walls and contour to the forms of the environment. This ensures a cleaner look minimizing visual distractions. It also decreases the need for freestanding structures that potentially impede passenger flow. However, in situations where screens cannot be integrated into the wall, or a freestanding or suspended sign is more ideal, refer to the guidelines for Mounting.

Example of an integrated screen in the architectural environment (Munich)

6.6.4 Programming and Placement

Digital signs are to be placed at decision points along corridors, dwell areas, and near destinations. A digital signage program must take into consideration passenger types and usage, and recognize the reliance on personal mobile technologies. This offsets the number of screens needed at dwell areas or along corridors.

To prevent excessive screen installation, spatial zoning guidelines define areas in the terminal suitable for displaying dynamic data, and also those for advertising media. See Spatial Zoning for more information.

6.6.5 Datasets

Accurate information helps passengers set realistic expectations and guides their behaviors. The mitigation of inaccurate, duplicative, or inconsistent data is essential to reduce the risk of disappointment and negative impression of the airport.

The best way to accomplish this is through a centralized repository of datasets owned and managed by the Port Authority. This ensures airlines and terminal operators can access every non-critical dataset, such as terminal maps, locations, travel times, flight data, baggage data, etc.

Standardization and uniformity of data ensures passengers access the same accurate and timely information, regardless of airport, terminal, or concourse.

Datasets accessible to terminal operators are:

- Security and customs wait times
- Walking times
- AirTrain status
- Flight status
- Taxi wait times
- Parking availability
- More to come

To request access to these datasets, contact the Wayfinding Manager.

6.6.6 Performance Specifications

Minimum technical requirements must be considered to achieve a best-in-class digital system. Architects, designers, and developers responsible for construction of airport facilities must review these performance specifications as a baseline when establishing or revising the wayfinding system at Port Authority Aviation facilities.

The purpose of these specifications is to ensure a close visual relationship with the physical wayfinding standards.

Orientation

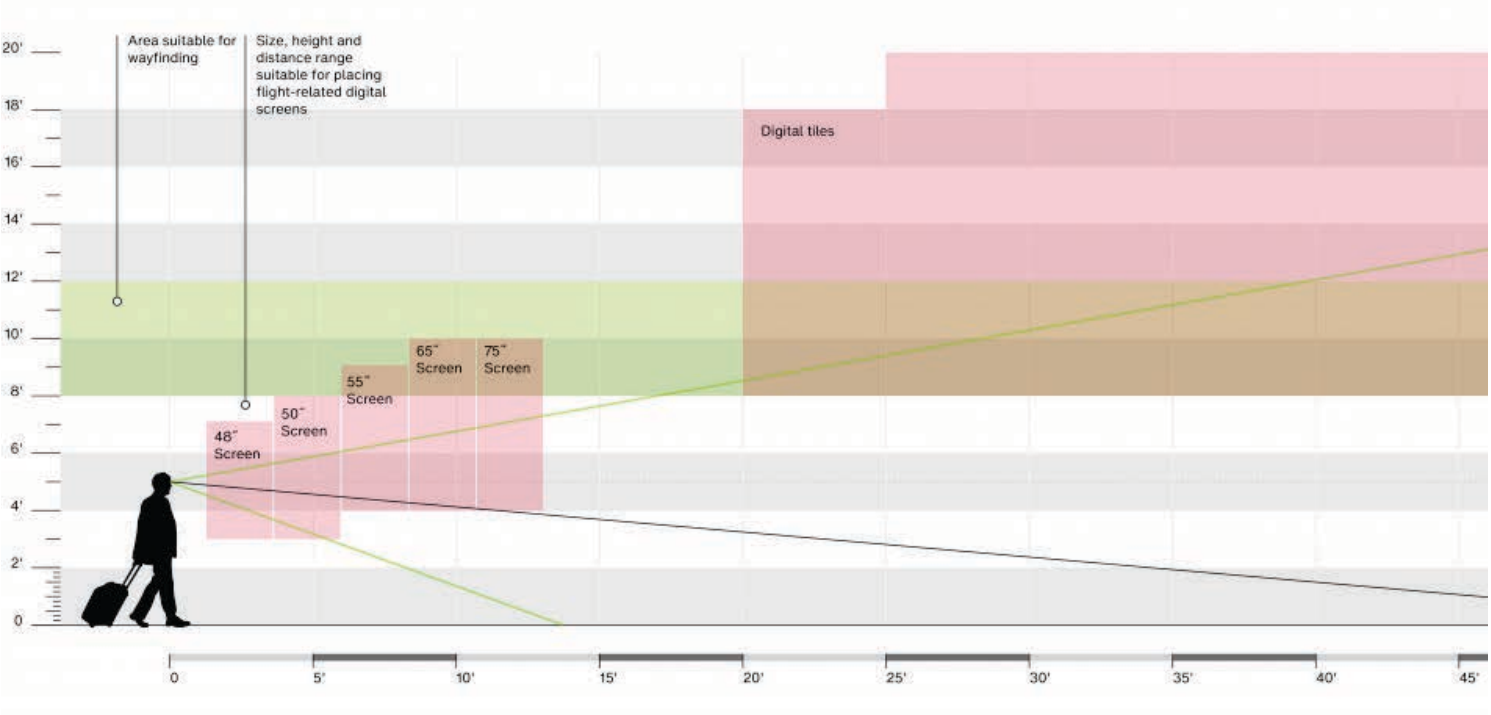
- **Flight-related information**: Portrait
- **Baggage-related information**: Landscape
- **Check-in desk ID**: Landscape
- **Gate ID**: Landscape

Orientation is dictated by the type and amount of information being displayed. F

Resolution & Size

- **Minimum 4K resolution** to ensure clarity and legibility of graphic information
- **OLED (organic light-emitting diode) display panels** (if possible) for energy efficiency, color fidelity, and contrast
- **Matte finish screen** to reduce glare
- **Consistent screen sizes** per grouping and function
- **Brightness** optimized to minimize text halation
- **Colors** optimized and calibrated to match static signage program
- **Screen size** based on the distance at which it will be viewed

Exact screen size is determined based on the architectural environment. General guidelines are:



Screens should not be smaller than 48″ to avoid crowding and ensure visibility. Beyond 75″, use digital screen tiles to create billboard displays.

Note: Viewing distances may increase or decrease depending on messaging and complexity of information. Digital screen tiles are LED modules (typically 12″ x 12″) that can be assembled to create any size necessary. Tiles are best used when crafting a unique shape or creating oversized displays.

Type Size

For digital applications, letter height is based on screen size, mounting height, and viewing distance. General guidelines:

Maximum Distance	Minimum Typesize
4 feet	24 pixels
6 feet	32 pixels
8 feet	40 pixels
10 feet	48 pixels
12 feet	56 pixels
16 feet	72 pixels

Accessibility

- Freestanding signage is minimum 27″ and maximum 80″ off the ground.
- Enclosures housing a touchscreen display are maximum 48″ off the ground within 10″ of arm's reach. Screens should be angled 15-20° for ease of use.
- Wall-mounted screens do not protrude more than 4″ from the wall. (Ideally, they should be flush with the wall.)

Construction

- Power systems (e.g. electrical wiring, transformers) must be hidden from view.
- Cables, power, and ventilation should be hidden by the enclosure or mounting surface.
- Screens should occupy minimal footprint and utilize architecture for mounting and integration,(i.e. wall-mounted screens should be flush where possible).
- Screens and enclosures should have minimal bezel to minimize footprint and separation between multiple screens.

Management & Maintenance

- Screens are networked (hard-wired or cloud) for data and management.
- Access panels (to network ports and on-board hardware) must be easily accessible.
- Management software should support location mapping to easily monitor operational status.
- Management software should allow real-time updates, content delivery, and targeting to specific displays.

Progressive Enhancements

- Screens should be replaced every five years, or as needed based on burn-in or technology evolution.

6.7

AirTrain is an integral aspect of the passenger experience for departing, connecting, and arriving passengers alike. AirTrain wayfinding should align seamlessly with the rest of the airport wayfinding to ensure a consistent and cohesive passenger experience throughout the entire journey.

To advance this goal, improvements to the AirTrain system should be implemented and regularly revisited, such as: renaming stations names to reflect their functions, upgrading technologies, and reducing visual clutter in stations.

AirTrain platforms are interim environments that help passengers reach their final destination, whether that's ultimately their gate or their hotel. AirTrain platform signage plays a critical role in getting passengers to the next step of their journey with confidence. Given the unique complexities of the AirTrain system, the goal of this signage is to help passengers choose the correct route and direction for their intended destination.

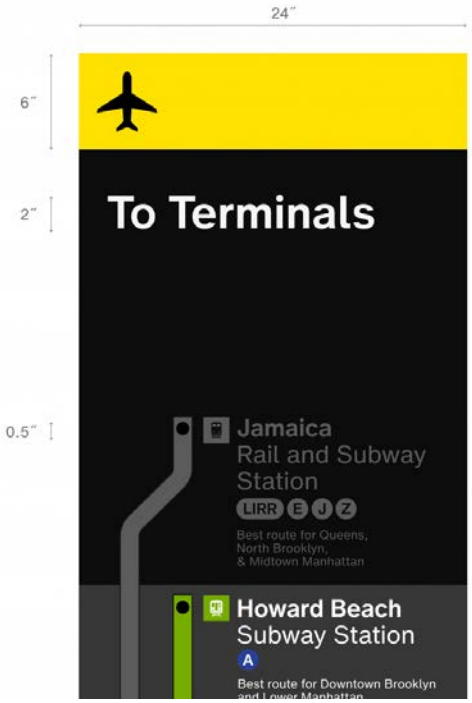
Overview of AirTrain wayfinding elements

Site-specific signage customized for the AirTrain platform environment includes Route Fork Signs, Station Identification Signs, Digital Ribbons, and Maps. Standard wayfinding elements, such as Directional, Identification, and Regulatory signs, are also present in the environment.

6.7.1 Route Fork Signs

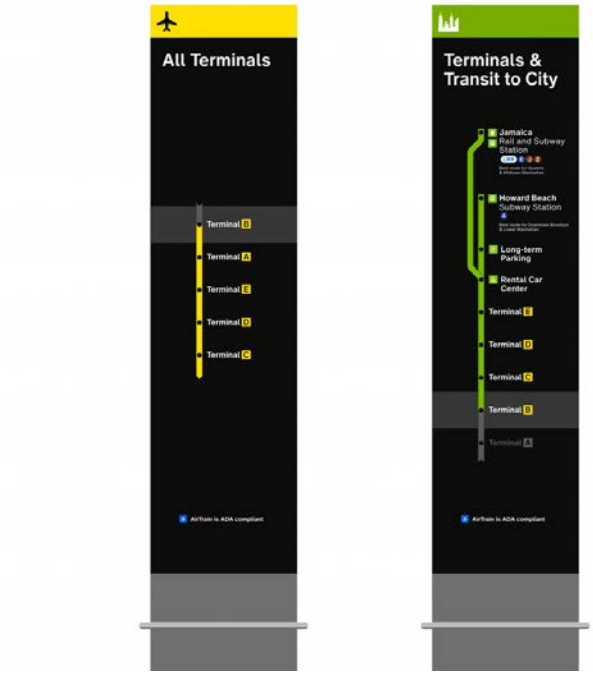
Route fork signs communicate every destination reachable from each platform. It is located at the threshold to the platform to help inform passengers of the available options, especially regarding which route to take. These signs are the only ones that show the full line route.

Fork Sign at Howard Beach Subway Station



Detail of Fork Sign with measurements

Fork Sign at Rental Car Center Station



Fork Sign at Terminal B Station

Header
Sign headers confirm the two main journey types aboard AirTrain: Access to Terminals (Yellow) and to Transit to City (Green).

The fork sign can be affixed to the wall or be a standalone structure based on the architectural environment of the platform approach.

Supporting Captions

Supporting captions are added for major transit stations. These captions help explain why one route may be preferable to another to a passenger. In the case of JFK, they can help distinguish the two transit stations.

6.7.2 Station Identification Signs

Clear station identification helps passengers within a station orient themselves, and also helps passengers in AirTrain cars identify where to disembark.

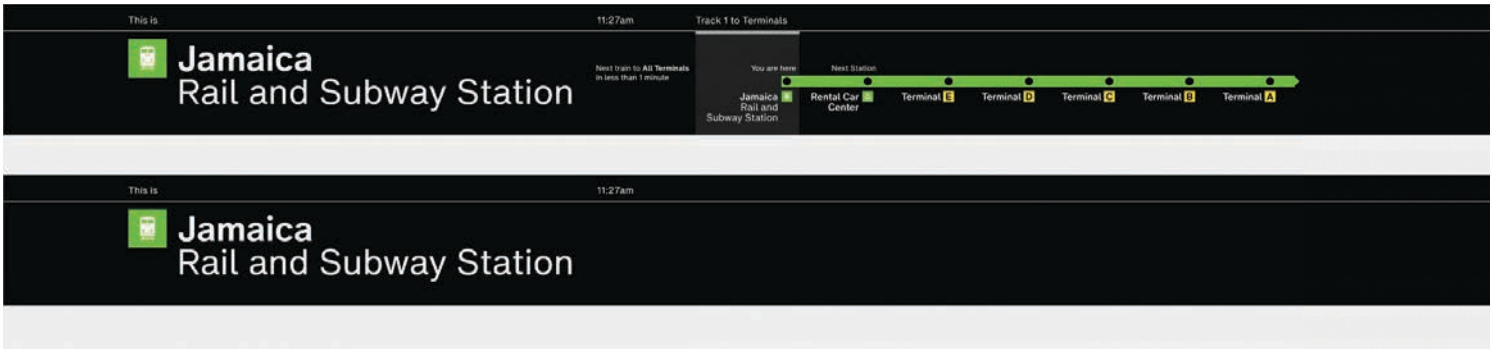
Multiple station identification sign types are included at AirTrain platforms to support different vantages:

- Suspended station identification sign (visible from the platform)
- Decals (visible from AirTrain cars)

Various station ID treatments

6.7.3 Platform Digital Ribbons

Digital ribbons are positioned above platform doors to convey real-time AirTrain information. The digital ribbons should be embedded into the architecture of the station, which reduces visual clutter elsewhere on the platform, and positioned within the wayfinding zone.



Digital Ribbon at Jamaica Rail and Subway Station – only one platform in use

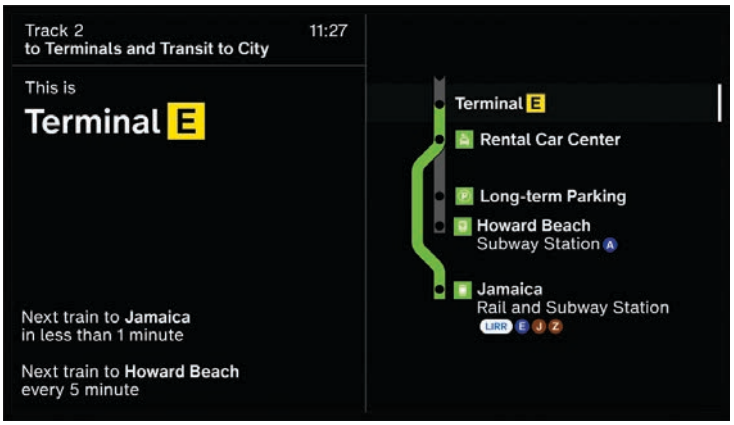
Station ID
The digital ribbons also serve as station identification to confirm the user's current location.

Route Map
Ribbons show all upcoming stops. In the case of forked routes, where trains with different destinations stop at the same platform, the route highlights the current location and future destinations. The route map is always aligned with the arriving train's direction.

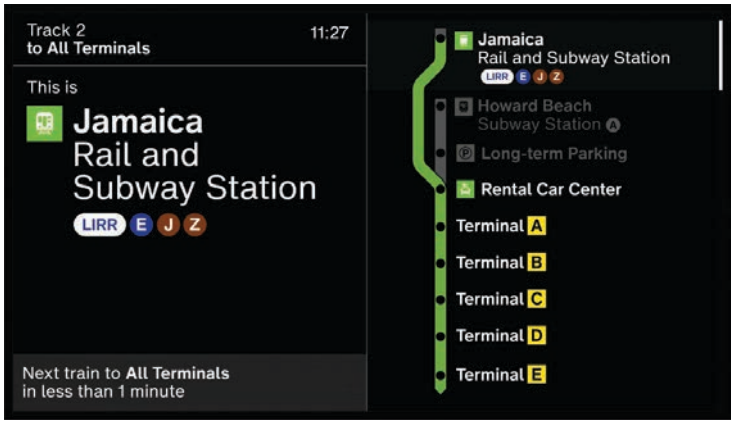
Platform Digital Screens (Legacy)
For stations where using LCD screens is more practical, the linear diagram is presented vertically.

LCD screens and ribbons are not meant to be used together at the same station, and ideally not within the same AirTrain network outside of a phased implementation.

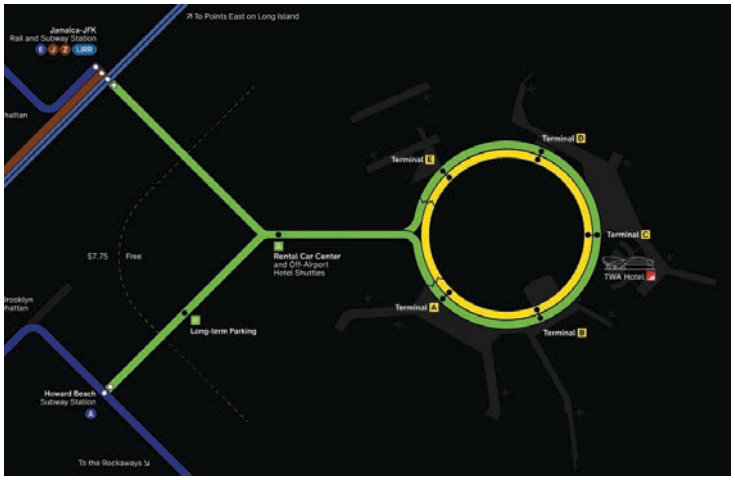
LCD screens are positioned perpendicular to the arriving train's direction, above doorways, double sided and angled 15 degrees towards the flow. The diagram aligns with upcoming stations as the fork signs do.



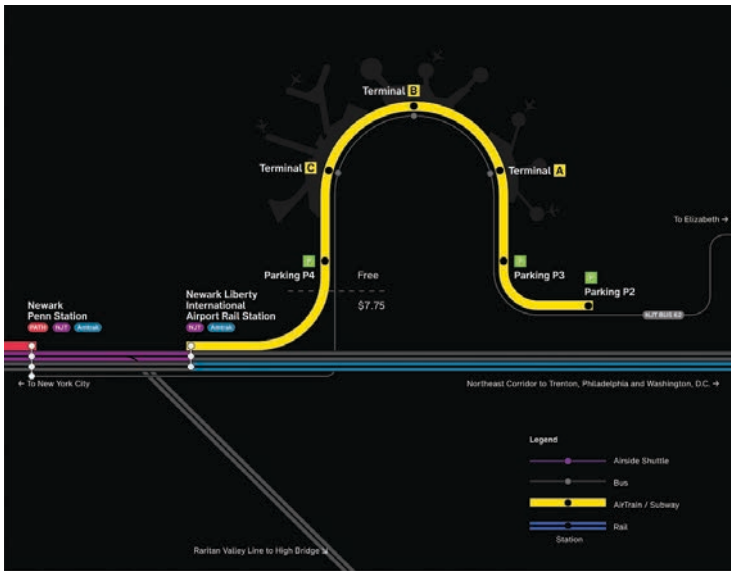

Track 1
to All Terminals
11:27
This is
Terminal E
Terminal E
Terminal D
Terminal C
Terminal B
Terminal A
Next train in less than 1 minute


Track 2
to All Terminals
11:27
This is
Jamaica
Rail and
Subway Station
LIRR E J Z
Next train to All Terminals
in less than 1 minute
Jamaica
Rail and Subway Station
LIRR E J Z
Howard Beach
Subway Station A
Long-term Parking
Rental Car Center
Terminal A
Terminal B
Terminal C
Terminal D
Terminal E

6.7.4 Maps



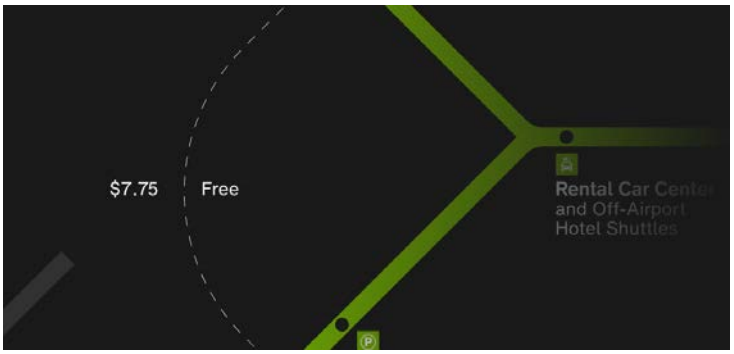
JFK AirTrain Map



EWR AirTrain Map

The maps have been designed to be visually consistent with each other, the overall wayfinding system, and complementary to regional transit systems, providing a recognizable, familiar experience from gate to city street.

Fare Structure
Fare payment is unfamiliar aspect of the AirTrain system, especially for new users. To clarify this, a dashed line on the map indicates which destinations can be accessed via AirTrain for free and which require payment.



Detail of fare structure treatment, with a dashed line and the fare price

Platform identification (Platform 1, 2, A, B, etc.) is a vestige of wayfinding systems that were unable to dynamically offer dynamic and relevant information where the user may look for it. As such, existing signage referring to tracks, door numbers, etc. should be deprecated as it only adds clutter to the experience.

6.8

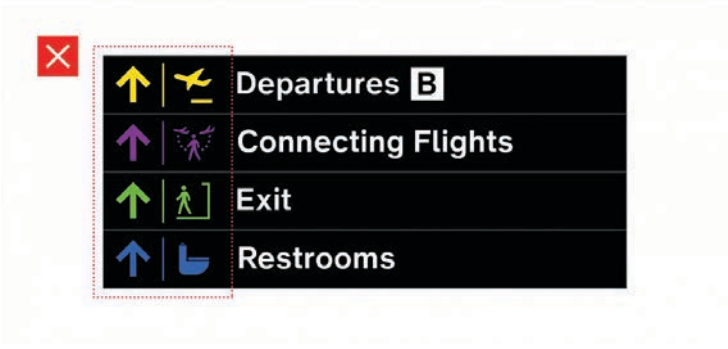
The wayfinding system has been designed with flexibility to accommodate a wide range of situations. The design of wayfinding elements should always be done in accordance with the specifications set forth in this manual. Incorrect usage of the color, typography, pictograms, arrows, brand treatments, and layouts will weaken the consistency and strength of the system, ultimately eroding passenger trust.

The guidance in this section outlines common treatments to avoid when composing signs. For additional usage guidance specific to each sign type, reference the guidelines for
Directional, Identification, Informational, Regulatory, Digital, and AirTrain sign types.

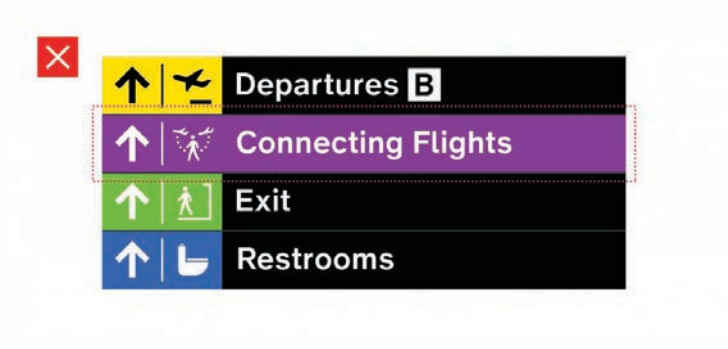
For further technical guidance, the Graphic Layouts provide a variety of approved layouts and elements to support the composition process.

6.8.1 Use of Color

Do not change the order of elements against the Information Hierarchy guidelines

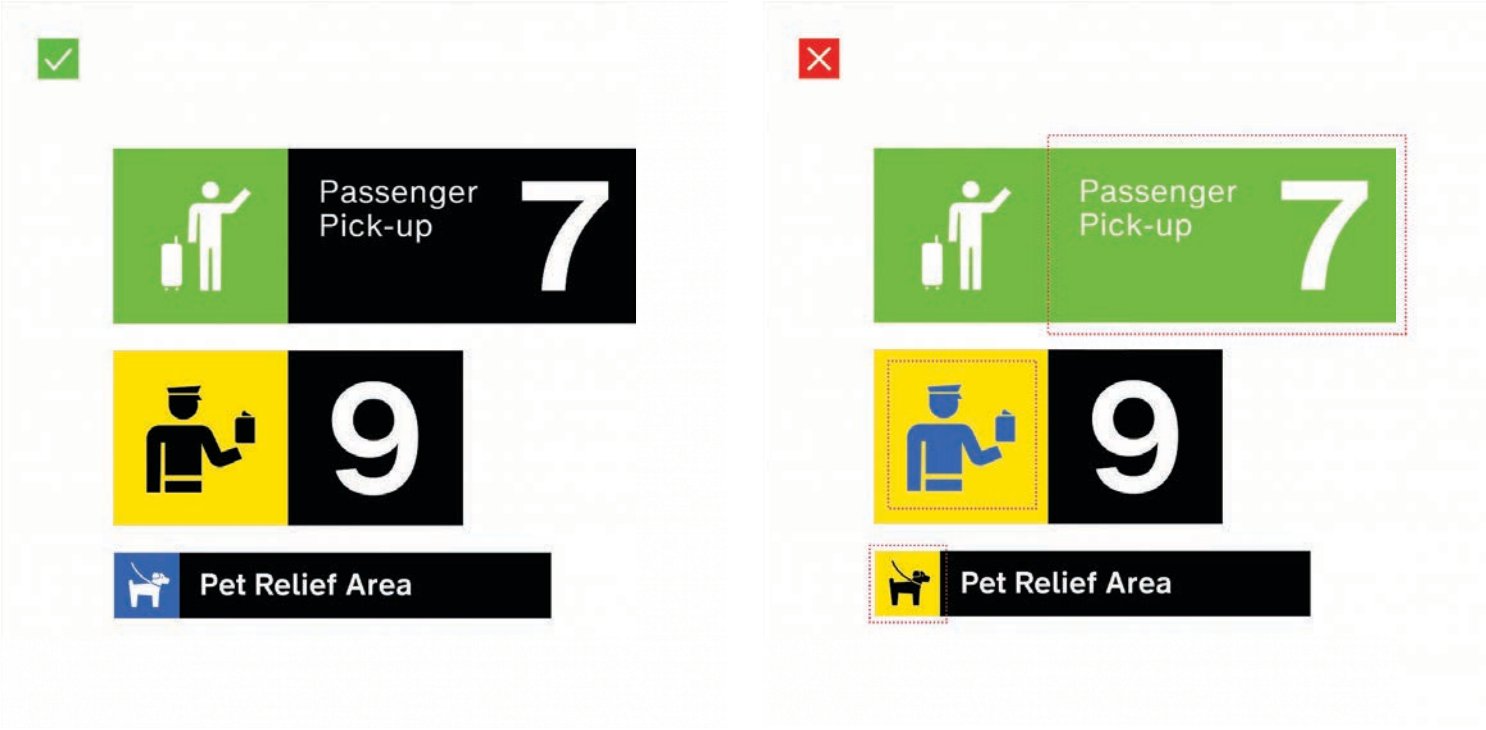


Do not use pictograms without a color field



Do not extend the color field across the message

Do not change the color of elements from the approved categories



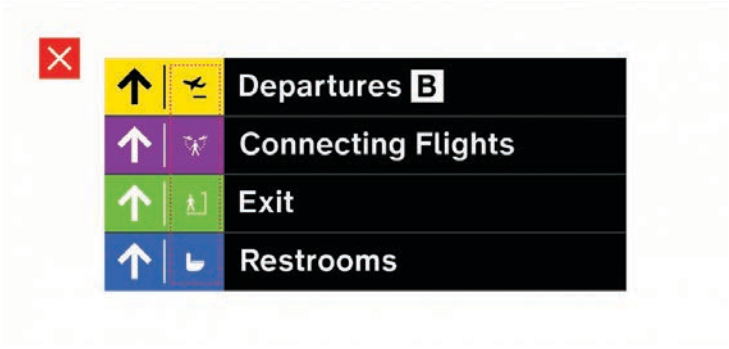
Do not change the color of elements

Do not apply different colors to terminal identifiers

Do not apply different colors to terminal identifiers

Do not apply colors as backgrounds or other statements outside of the approved applications

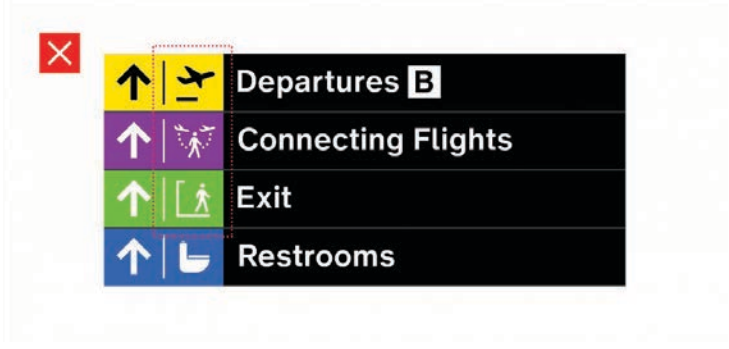
6.8.2 Use of Pictograms



Do not change the scale of the pictograms

Do not use incorrect or unsanctioned pictograms

Do not use terminal identifiers in the pictogram field



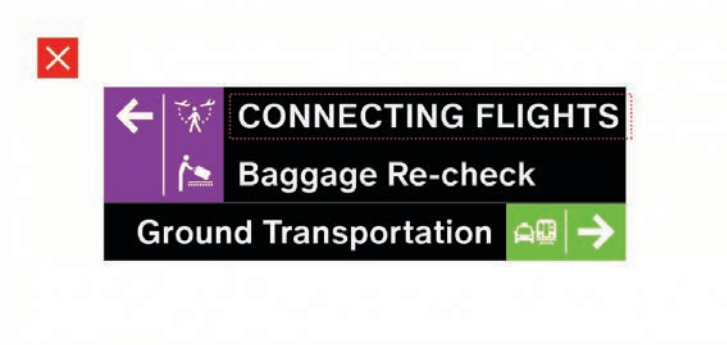
Pictograms noted with strong directional qualities should be oriented to reinforce the direction

6.8.3 Use of Typography

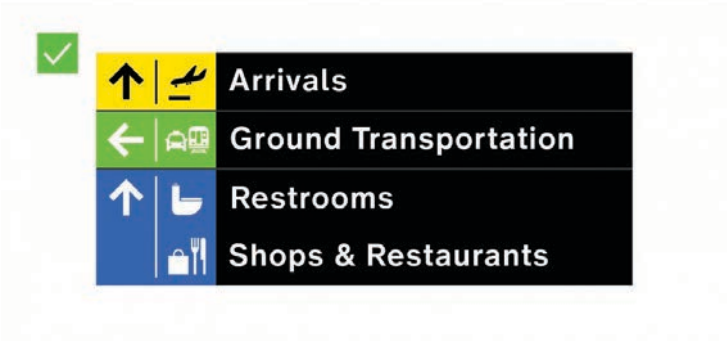
Do not increase the tracking (letter spacing) of messages

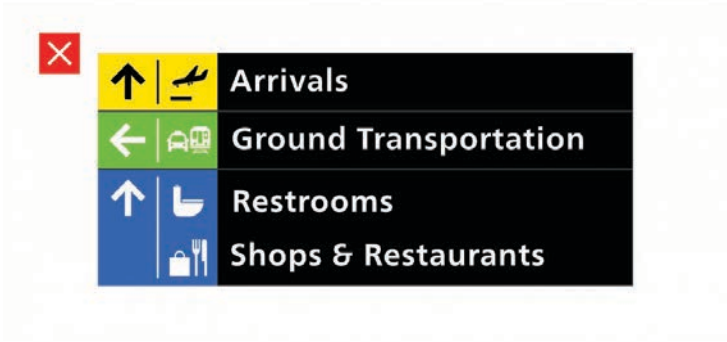
Do not decrease the tracking (letter spacing) of messages

Do not change the size of elements

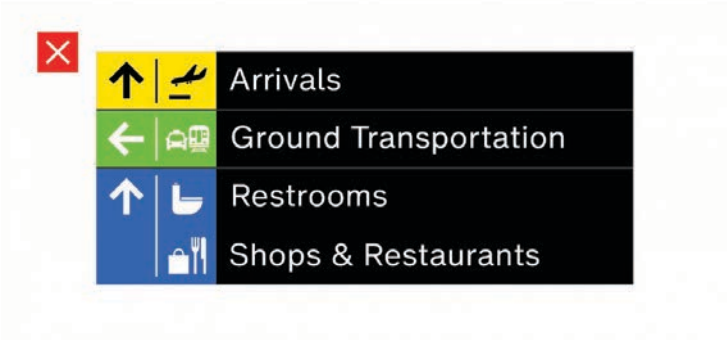


Do not change the case of messages



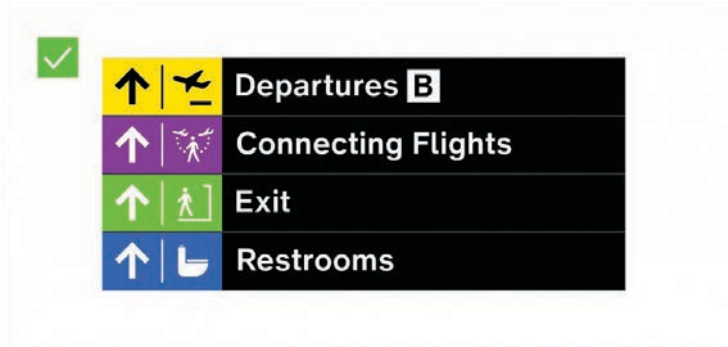


Do not use any typeface other than Helvetica Now for PANYNJ

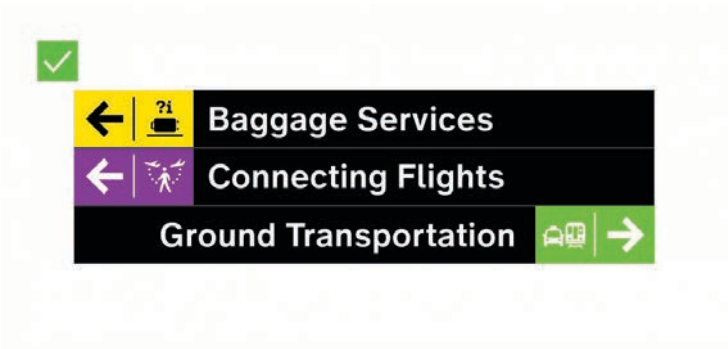


Do not use any weight other than Semibold for primary messages

6.8.4 Use of Messaging

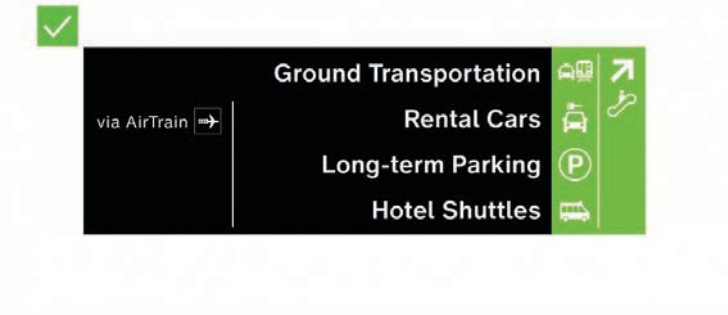


Do not use unapproved nomenclature



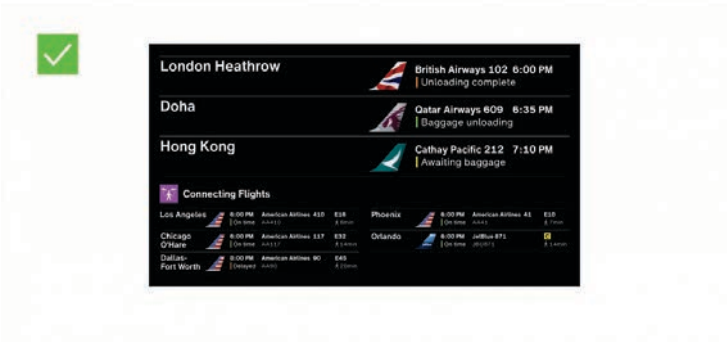
Do not use brand names in directional labels

Do not change the position of secondary messages

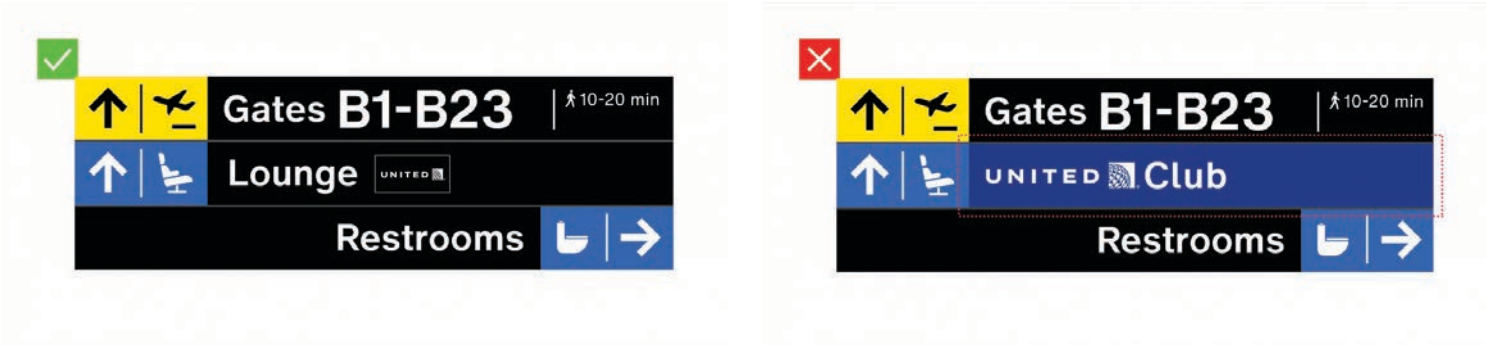


Do not squeeze secondary languages within the lines. Secondary languages should seldom be used.

6.8.5 Use of Brands



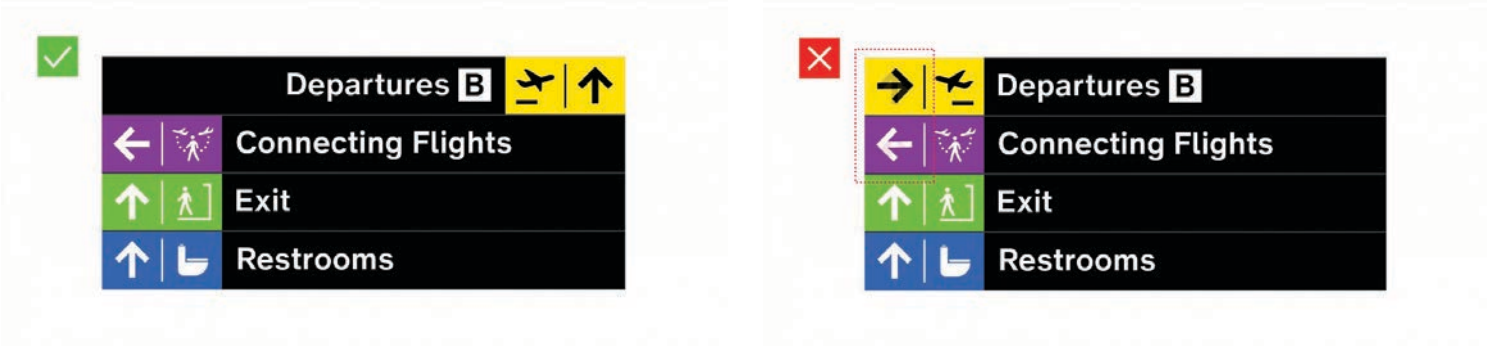
Do not use incorrect brand treatments, especially in digital applications



Do not use logos in directional messages. Do not use brand colors as message backgrounds.

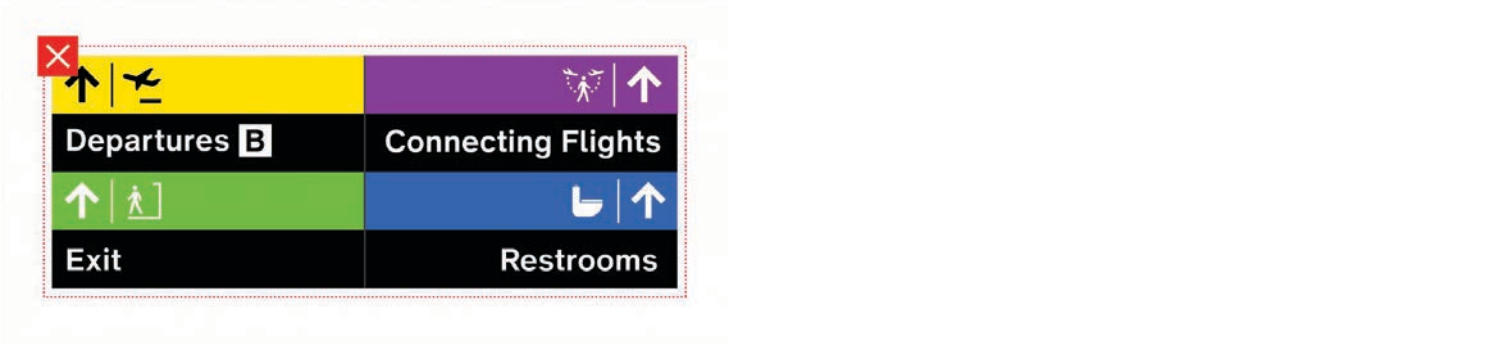
Do not change the color of elements to match branding

6.8.6 Use of Graphic Layout

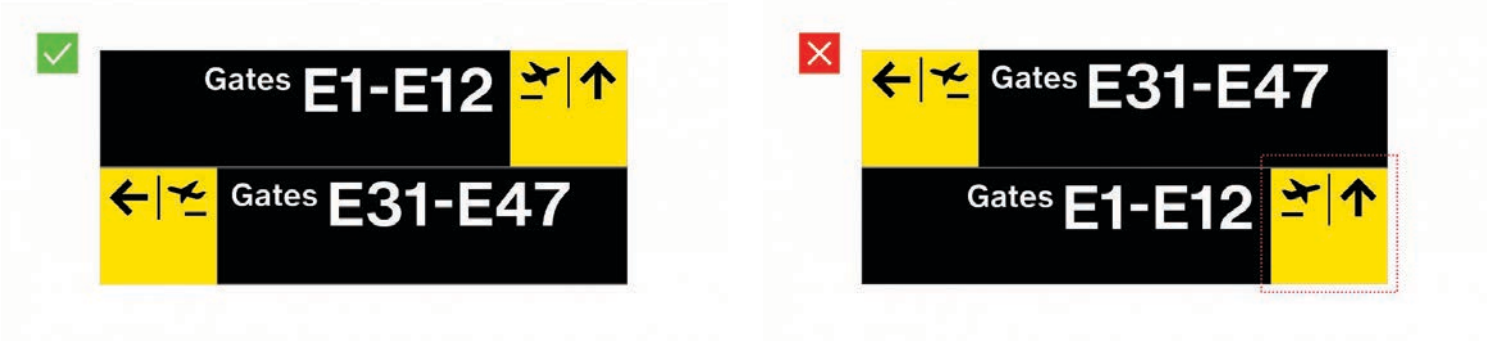


Do not apply selective changes to the signs in a way where the previous message is still visible

Do not break the color field

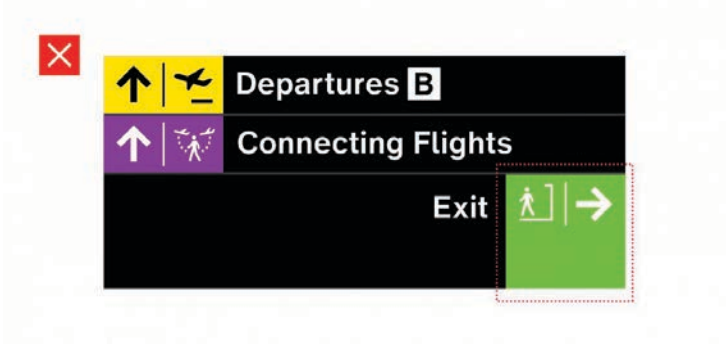


Do not change the layout of signs

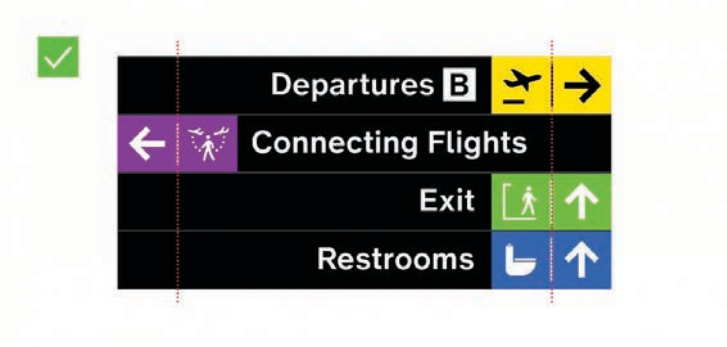


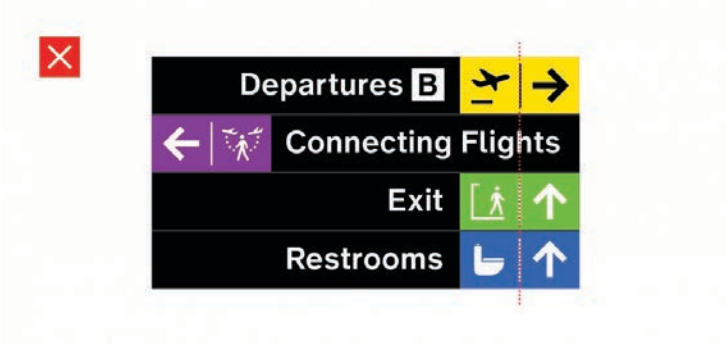
Do not change the ordering of messages. Follow the information hierarchy.

Left and right directionals should always be placed on the respective side of the sign

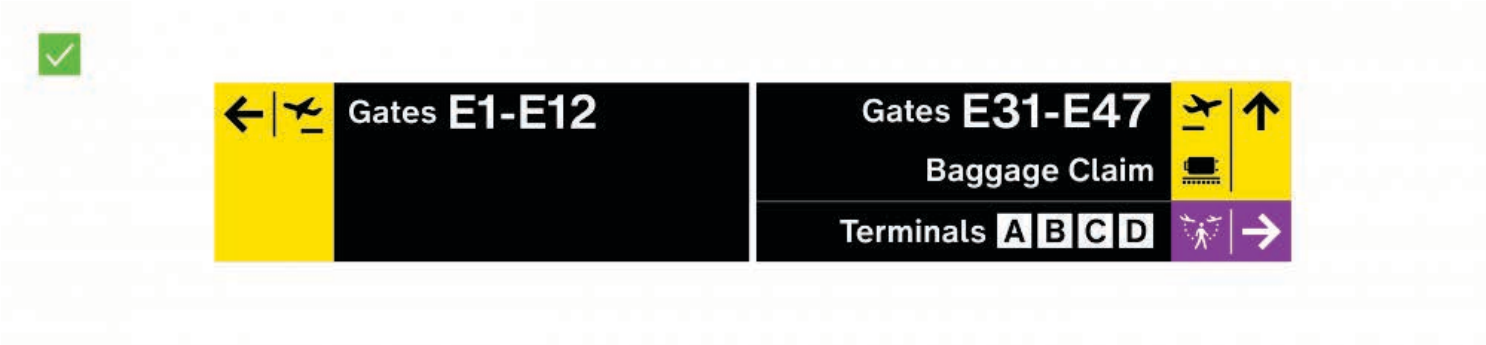


When one side of a double-sided sign has fewer messages than the other, extend the color field of the most important message based on the moment of the journey.





A minimum of 8" padding should be applied to all primary directional messages. The only exception to this rule is when a secondary message is included, such as "via AirTrain."



Complex sign configurations should be spilt onto two signs where possible.

Signs with numerous messages and directions can reduce the clarity of the message. Complex sign configurations should be spilt onto two signs.

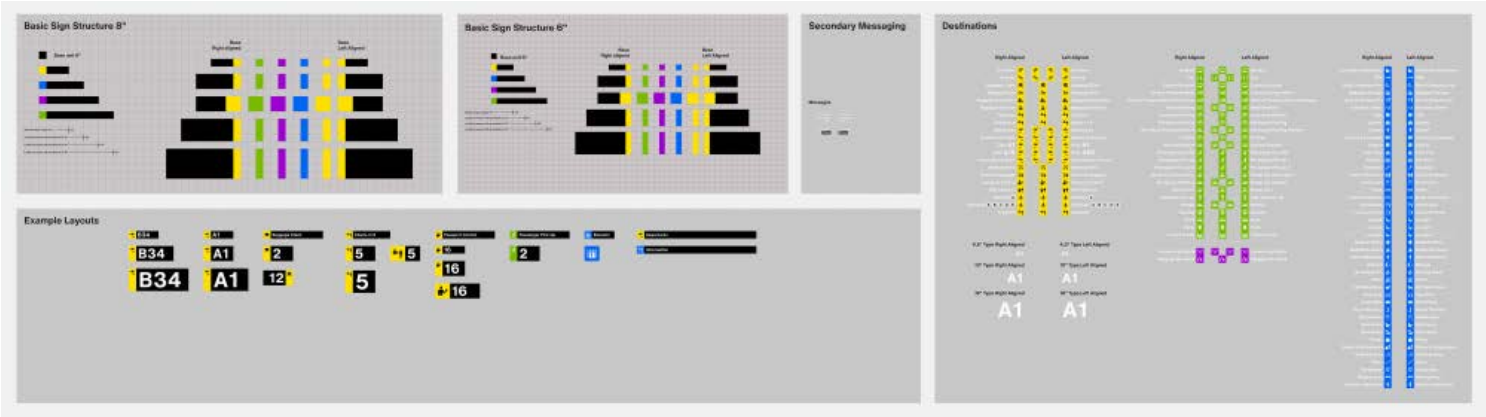
6.9

The following is a preview of the toolkit to help designers develop graphic layouts for the sign program. The toolkit provides all the necessary components to assemble sign types with the relevant messaging.

The final toolkit working files will be available for download and use pending testing of final prototype.

6.9.1 Directionals

6.9.2 Identification



6.9.3 Lane Sorting

6.9.4 Measurement Cheat Sheet

Download Signage Dimensions Cheat Sheet

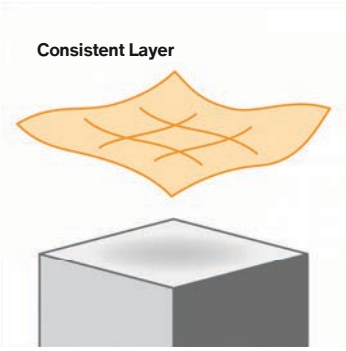
7

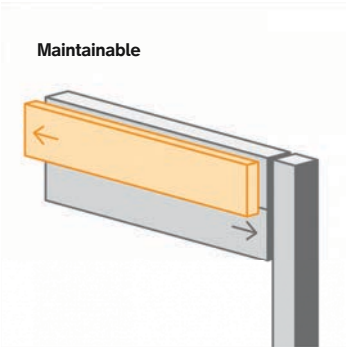
7.1

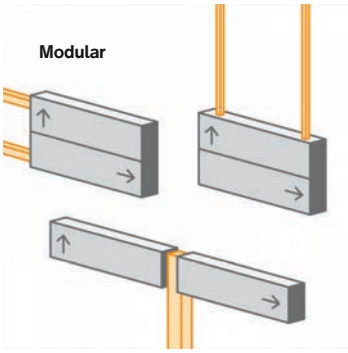
Structure design concerns the physical design of wayfinding elements. This includes construction, materiality, finishes, mounting types, and overall performance. This chapter presents the design intent and guidelines to execute it across all sign types in the system.

Objects should be designed and considered as part of the architectural environment. They should be coordinated and integrated into their surroundings as much as possible.

7.1.1 Design Principles







Design Principles

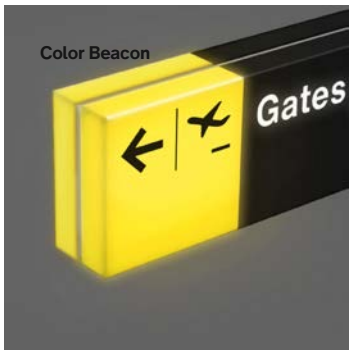
Consistent Layer
An airport is a diverse architectural environment with a range of volumes, materials, finishes, lighting conditions, and colors. Wayfinding is a consistent layer present throughout. To maintain consistency, wayfinding must be highly flexible and neutral, i.e. able to adapt to a variety of conditions.

Maintainable
Signage elements can last for decades, but information changes. Allow for easy maintenance and modification. Objects are designed so that a sign face can be changed without replacing the entire structure.

Modular
The range of architectural environments and building layouts demands different mounting options. For example, when a ceiling is too high to suspend a sign, a free-standing sign can be used instead. Modularity ensures wayfinding

Visible and Recognizable
All directional signs are internally illuminated and many signs contain digital displays. Color is a fundamental aspect of a functional and recognizable wayfinding system, so the consistent appearance of colors is critical. The design of illuminated or digital signs should account for wiring and connections for data and electricity. These should be included in an inconspicuous way for a uniform, professional appearance.

7.1.2 Design Language



Design Language

Color Beacon
The design of our color beacon is unlike any other airport in the world. An illuminated color on the front face wraps around the sides, top, and bottom of the sign. This makes the information recognizable from broader angles.

Reveal
The reveal is a physical divider that breaks up the elements of the sign unit. It appears between the front and the back of a sign box, as well as between the sign box and the mounting or main body. This allows for modularity, emphasizes the illuminated color beacon, and slims the appearance of the object.

Soft Rectilinear Geometry
Rectilinear shapes are made with rounded edges, which softens the strong, monolithic forms. This allows the color beacon to be even more striking against a sober backdrop.

Compelling Materials
The illuminated information area features bright translucent colors and a subtle glowing black. Non-illuminated elements—such as mounting features and object bodies—are made of robust materials with a matte texture. The reveal is medium-dark gray to contrast with the matte black.


Baggage Claim
Exit
Connecting Flights
Restrooms

7.1.3 Architectural Considerations

An ideal wayfinding system is architecturally integrated, while also having elements that make it conspicuous and visible. Much like interior furnishings and finishes, how wayfinding elements work within an environment is critical to creating a comfortable and welcoming experience. Wayfinding should appear intentional in the environment, rather than an afterthought.

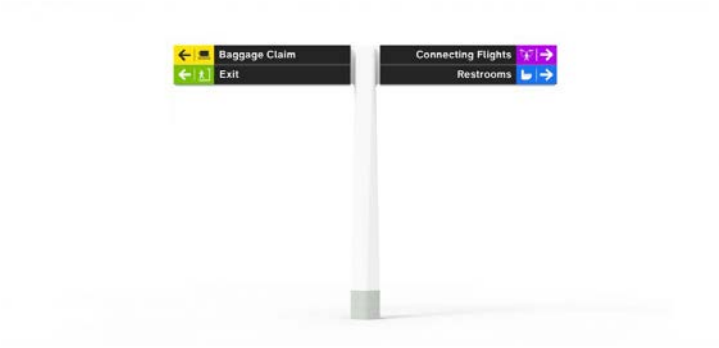
Wayfinding elements require consistency and uniformity so they can be recognized. However, there are some opportunities to aesthetically align with architecture.

Opportunities in new facilities are different than those in legacy facilities. The ability to architecturally integrate is easier with new construction and can dovetail with natural wayfinding. Legacy facilities may be hindered by space constraints or complex passenger flows, resulting in less freedom to customize wayfinding elements. In these cases, standard structure design is typically called for.

Integration with architecture is discouraged if:

- It detracts from the visibility of a wayfinding element.
- It requires a wayfinding element to be placed in a suboptimal location, such as too high or obscured by other architectural elements.
- It alters the materials or finishes prescribed in this manual.

Materials
This manual stipulates materials and methods for the construction of wayfinding elements. In limited cases, some flexibility in mounting materials is allowed, if it improves architectural integration. This requires approval from the Port Authority.



The sign box must conform to guidelines. Custom mounting may be allowed to improve architectural integration.

Mounting
Mounting options vary to best integrate with different architectural conditions.

Visibility
Wayfinding elements should always have clear sightlines and be conspicuous in the environment. Placement and treatment should maximize visibility.

Approvals
The Port Authority will require lessees, airlines, operators to present designs for approval. Those designs which depart from the standards presented in the Port Authority Wayfinding Guidelines Manual, will require additional approval prior to implementation

7.2

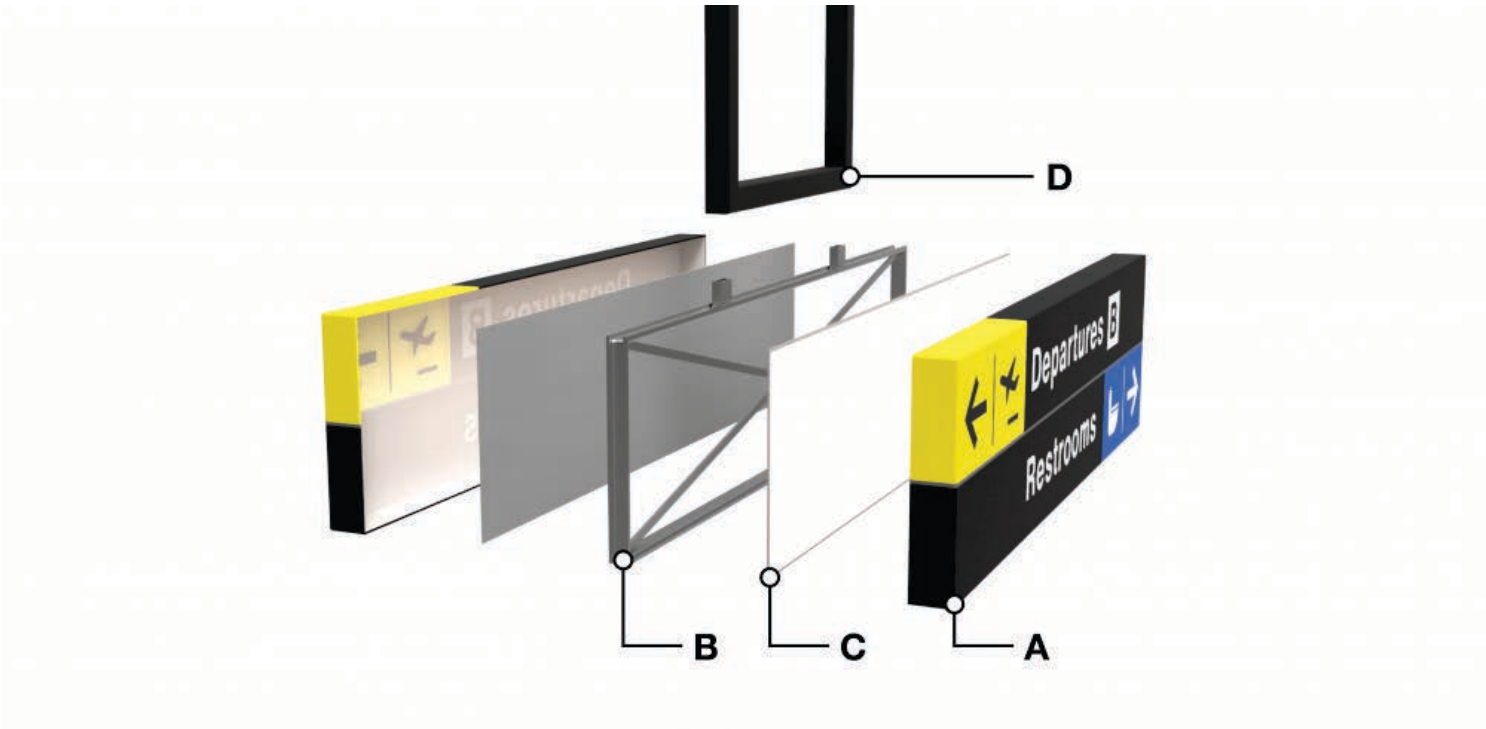
Guidelines for construction of elements are included at a design intent level. Fabricators should review and adhere to these guidelines when constructing signs to ensure a high level of quality.

Specifications include internal and external sign components, mounting options per sign type, dimensions, and performance specifications. Together, these guidelines ensure a consistent look and feel of all elements across the wayfinding system.

These guidelines are intended to be the foundation upon which fabrication is fully detailed. The detailed fabrication design, together with structural and lighting engineering, enables the production of signs.

7.2.1 Suspended Sign Box

Suspended signs are typically attached to a ceiling or other overhead structure. They have common components with cantilever structures.



Anatomy of a suspended sign

A. Sign Face

The sign face is a substrate with information graphics applied to its outer surface. The base material is a milky white, translucent acrylic. Thickness is determined by fabrication requirements according to strength and size. Adhesive vinyl sheets are applied for color, messaging, and graphics.

B. Frame & External Reveal

The frame brings the front and rear faces together, provides structural rigidity, and acts as a visual reveal. It carries the internal components (e.g. lighting) and attaches to the mounting. Vent or weep holes should be provided, if necessary for heat dissipation.

C. Lighting

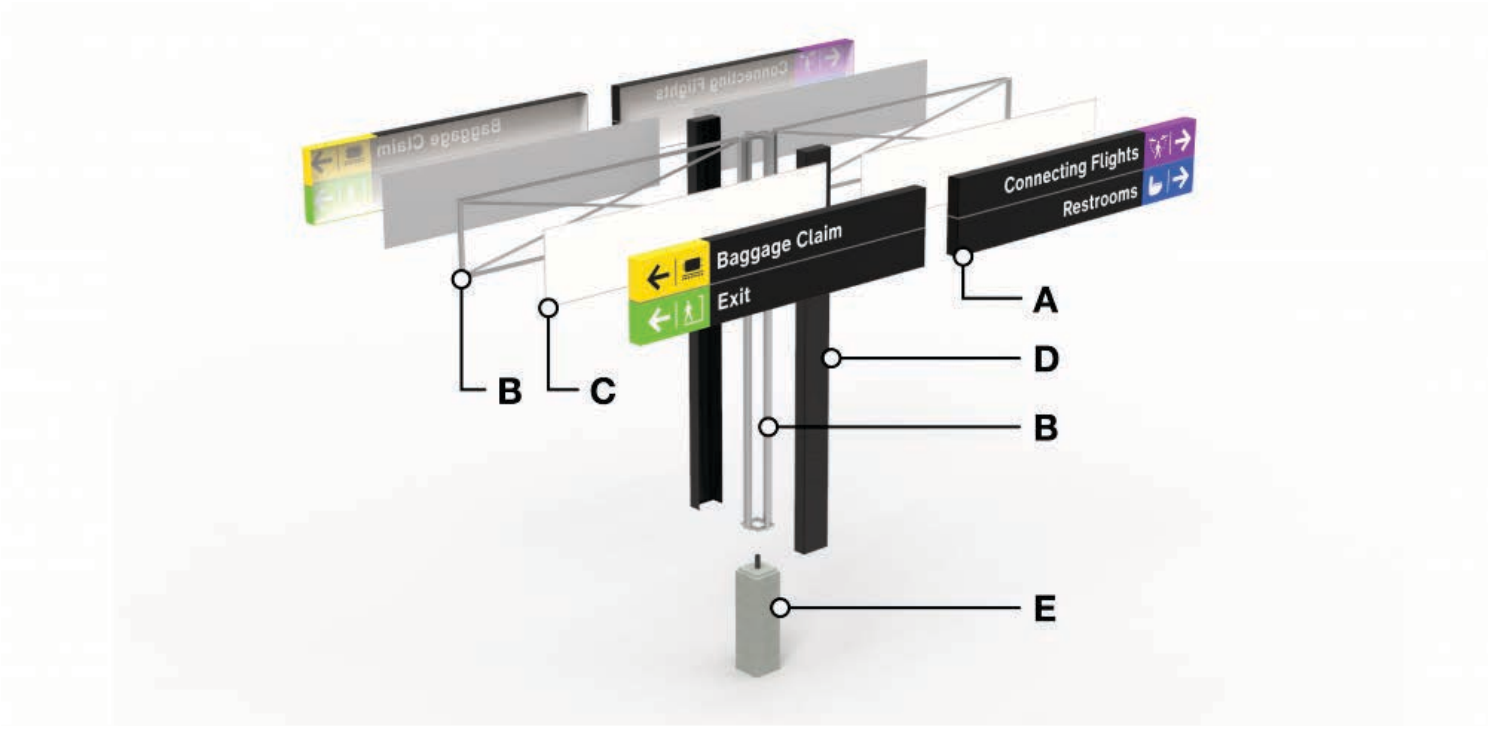
The sign box is internally illuminated using LEDs. They can be applied as an array or luminous sheet to achieve uniformity and brightness, and avoid internal shadows,. LEDs require an on-board driver or transformer (depending on the power supply) housed in the sign box.

D. Mounting

The mounting allows for placement of the information in space. It must allow for electrical wiring to reach internal components without being visible. For suspended signs, mounting elements are made of square tubular metal pipe.

7.2.2 Post-Mounted Sign Box

Post-mounted signs are located where overhead ceilings are too high to suspend a sign. Post-mount signs can have one or two posts.



Anatomy of a post mounted sign

A. Sign Face

The sign face is a substrate with information graphics applied to its outer surface. The base material is a milky white, translucent acrylic. Thickness is determined by fabrication requirements according to strength and size. Adhesive vinyl sheets are applied for color, messaging, and graphics.

B. Frame & External Reveal

The frame brings the front and rear faces together, provides structural rigidity, and acts as a visual reveal. It carries the internal components (e.g. lighting) and attaches to the mounting. Vent or weep holes should be provided, if necessary for heat dissipation.

For the floor post, the reveal is also where the vertical, structural support cladding is attached.

C. Lighting

The sign box is internally illuminated using LEDs. They can be applied as an array or luminous sheet to achieve uniformity and brightness, and avoid internal shadows. LEDs require an on-board driver or transformer (depending on the power supply) housed in the sign box.

D. Mounting

Mounting options should allow for electrical wiring to reach internal components without being visible. For post-mounted signs, a bent steel shape is attached to the frame. A matte, powder-coated finish provides protection and durability.

E. Base

A base attaches a sign to the floor. The base must be able to withstand high impact and provide a rigid connection with the ground. To protect against damage, the base must be stainless steel.

7.2.3 Totem

Totem signs are used for identification. Totems can be used as digital display enclosures.

Anatomy of a floor mounted totem - please note that totem is still under development

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A. Sign Face, illuminated

The sign face is a substrate with information graphics applied to its outer surface. The base material is a milky white, translucent acrylic. Thickness is determined by fabrication requirements according to strength and size. Adhesive vinyl sheets are applied for color, messaging, and graphics.

B. Lower Face, non-illuminated

The lower portion of the totem is fabricated as a bent steel shape and attached to the frame. A matte, powder-coated finish provides protection and durability.

C. Frame & External Reveal

The frame brings the front and rear faces together, provides structural rigidity, and acts as a visual reveal. It carries the internal components (e.g. lighting) and attaches to the mounting. Vent or weep holes should be provided, if necessary for heat dissipation.

D. Lighting

The top of the totem is internally illuminated using LEDs. They can be applied as an array or luminous sheet to achieve uniformity and brightness, and avoid internal shadows. LEDs require an on-board driver or transformer (depending on the power supply) housed in the sign box.

E. Base

A base attaches a sign to the floor. The base must be able to withstand high impact and provide a rigid connection with the ground. To protect against damage, the base must be stainless steel.

F. Display

OLEDs should be used for digital displays. They provide good contrast, deep blacks, and less energy consumption. Integration is required to ensure a flush and seamless appearance. Access for maintenance and replacement is also required.

7.2.4 General Dimensions

Sign Boxes
Face dimensions are determined by the Graphic Design guidelines. The depth of each box face is 3″ with a 1″ reveal frame — resulting in an overall sign cabinet depth of approximately 7″.

Sign box showing typical dimensions.

Sign Post
The sign post is also 7″ deep to match the overall depth of the sign cabinet. The width is variable depending on design and engineering needs.

Sign post showing typical dimensions.

Totem
Face dimensions of the totem and possible integrated display are determined by the Graphic Design guidelines. The depth of the totem is conforming to the measurements of the sign box, two sides of 3″ and a reveal of 1″. However, the depth can increase if internal components or construction requirements demand so.

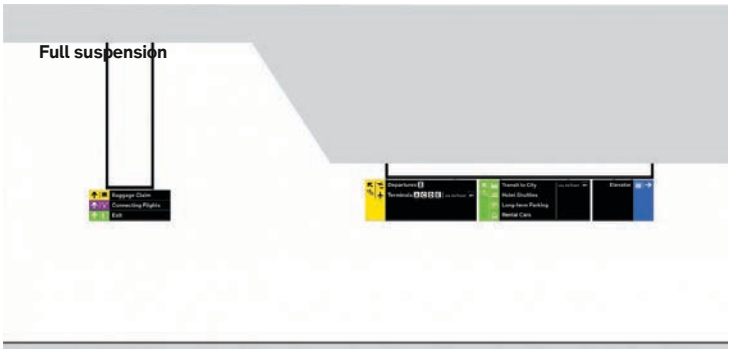
7.2.5 Back Side of Signs

There are situations where a double-sided sign has information on only one side, so the back panel appears empty. This back panel covers up the unused side of the sign but can be replaced by a panel with messaging if ever needed. Since the back panel is not supporting any routing or color wrap it has less depth and is fully opaque so no light leakage occurs. The panel on the back has the same color and appearance as the black part of the front panel.

7.3

7.3.1 Directional

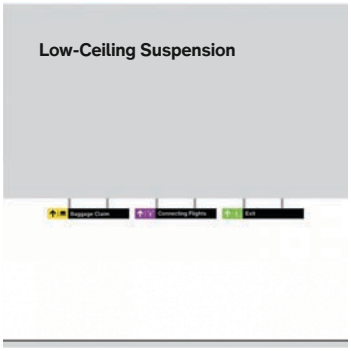
Directional signs guide users to a destination. Mounting method depends on the situation.

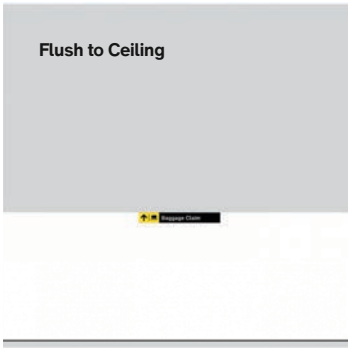


Suspended

Full Suspension

Overhead armature hangs the sign from the overhead structure. This requires adequate overhead height.





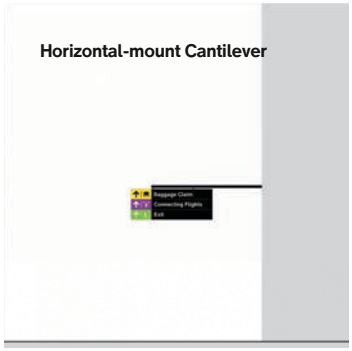
Low-Ceiling Suspension
This forgoes the full suspension armature and uses only vertical supports. It is used if there is room to hang the sign box, but Full Suspension would place it below the 8′-0″ minimum height.

Flush to Ceiling
If the ceiling is too low for either type of suspension, a sign box can be directly attached to the ceiling or overhead structure.

Wall-mounted

Surface
A single-sided sign box can be attached to a wall. Power and fastening are hidden behind the sign.

Recessed
Sign boxes can be integrated into the architecture, walls, or other structures. Signs can be fully or partially recessed into the architecture to achieve a visually integrated environment. This opportunity is especially relevant in new construction or renovations.



Cantilevered

Flush-mount Cantilever

This allows information to be presented above the passenger flow without extending far into the environment.

Horizontal-mount Cantilever

A horizontal mount connects to the top of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

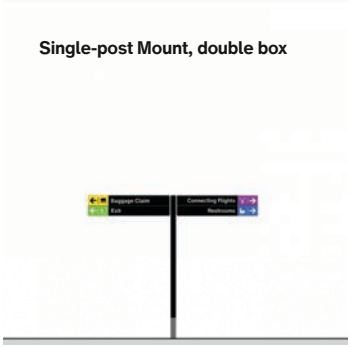
Flag-mount Cantilever
A flag mount connects to the side of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

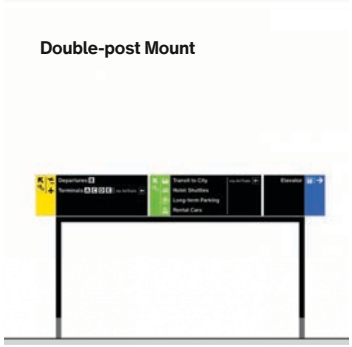
Dropdown-mount Cantilever
A drop-down mount can be used if a sign can only be mounted from a horizontal surface that would result in the sign being too high. The structure provides a height change, and the sign is placed away from the wall.

Freestanding

Single-post Mount (single or double box)
One or two sign boxes can be mounted as arms of the post. Single posts require less floor space. Depending on the engineering requirements, single post or double post mounted signs should be considered.

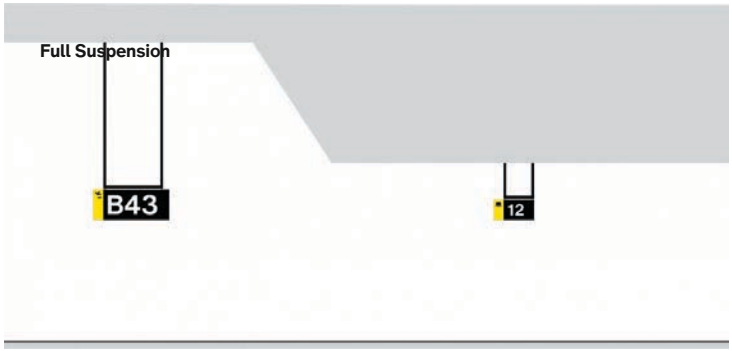
Double-post Mount
Recommended for multiple sign boxes that cannot be suspended or post mounted.

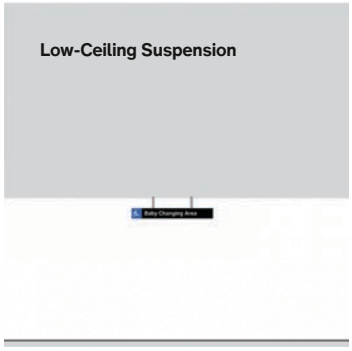




7.3.2 Identification

Identification signs confirm a destination. They are intended to be read from a distance and are typically mounted in the overhead wayfinding zone.



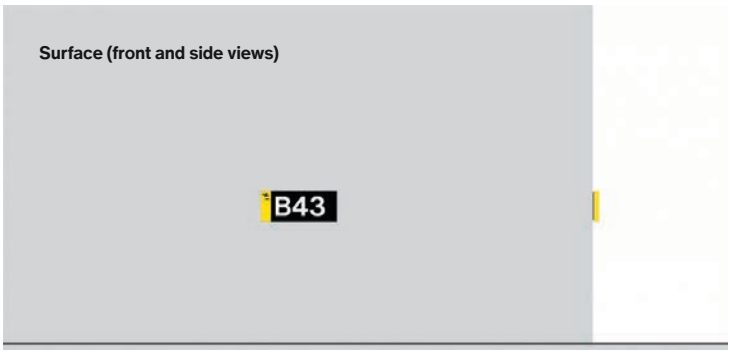


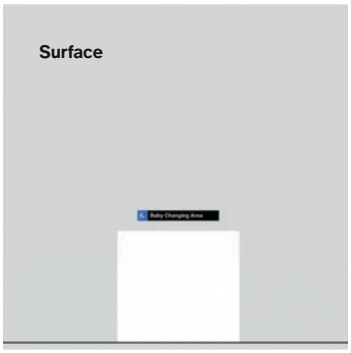
Suspended

Full
Overhead armature hangs the sign from the overhead structure. This requires adequate overhead height.

Low-Ceiling
This forgoes the full suspension armature and uses only vertical supports. It is used if there is room to hang the sign box, but Full Suspension would place it below the 8′-0″ minimum height.

Flush to Ceiling
If the ceiling is too low for either type of suspension, a sign box can be directly attached to the ceiling or overhead structure.

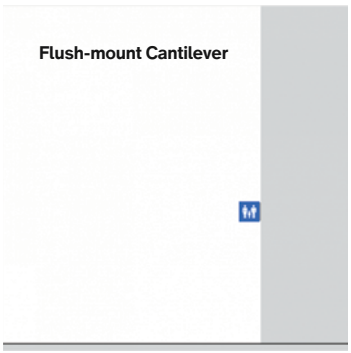


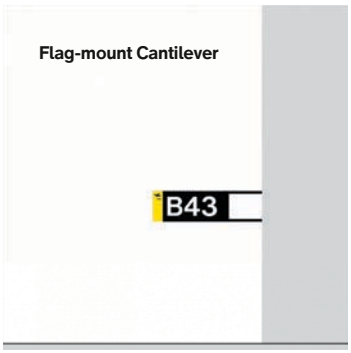


Wall-mounted

Surface
A single-sided sign box can be attached to a wall. Power and fastening are hidden behind the sign.

Recessed
Sign boxes can be integrated into the architecture, walls, or other structures. Signs can be fully or partially recessed into the architecture to achieve a visually integrated environment. This opportunity is especially relevant in new construction or renovations.





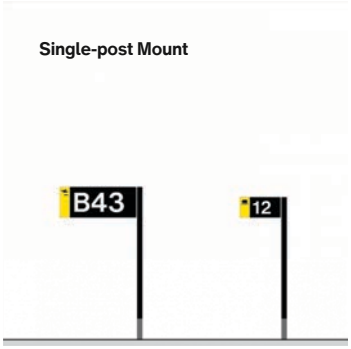
Cantilever

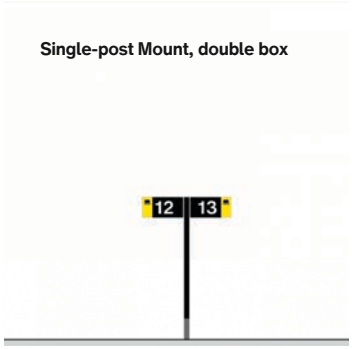
Flush-mount
This allows information to be presented above the passenger flow without extending far into the environment.

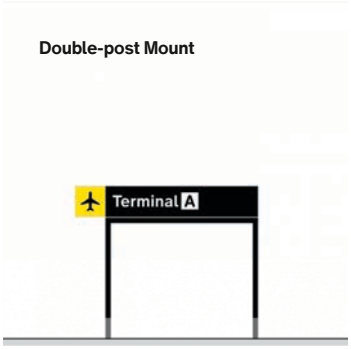
Horizontal-mount
A horizontal mount connects to the top of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

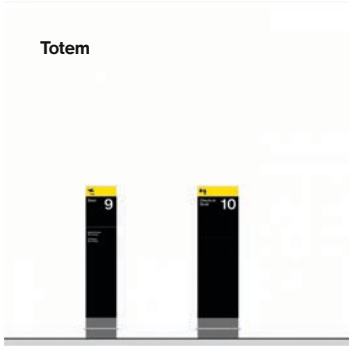
Flag-mount
A flag mount connects to the side of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

Dropdown-mount
A drop-down mount can be used if a sign can only be mounted from a horizontal surface that would result in the sign being too high. The structure provides a height change, and the sign is placed away from the wall.





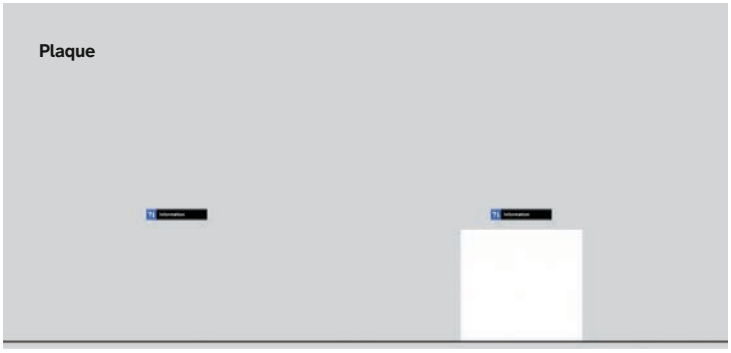


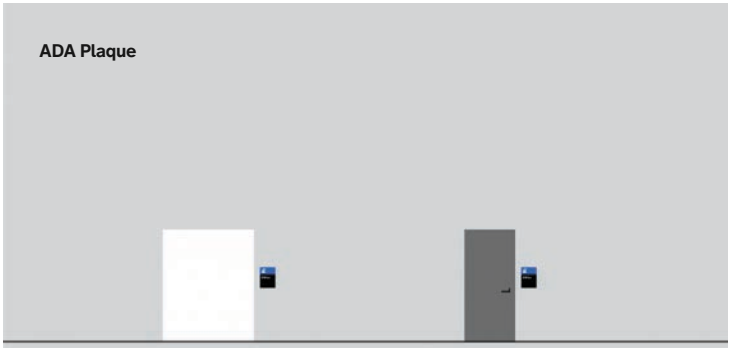


Freestanding

Single-post
One or two sign boxes can be mounted as arms of the post. Single posts require less floor space. Depending on the engineering requirements, single post or double post mounted signs should be considered.

Double-post
Recommended for multiple sign boxes that cannot be suspended or post mounted.





Plaque

Plaque
Wall plaques are fabricated of a rigid polycarbonate material with silkscreen graphics. They are non-illuminated and secured with VHB tape and silicone. Larger panels should be stud mounted.

ADA Plaque
ADA wall plaques are non-illuminated signs, fabricated of a rigid polycarbonate material with silkscreen graphics. Dimensional graphics for ADA compliance are thermoformed to minimize vandalism. Braille should be (recessed) bead braille. Plaques are secured with VHB tape and silicone. Larger panels should be stud mounted.

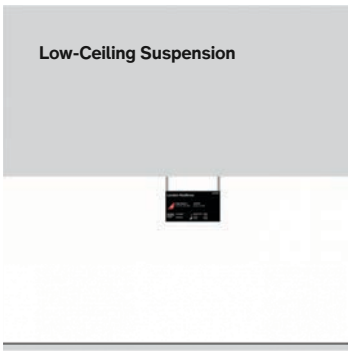
7.3.3 Information

Signs which give instruction or convey information to passengers or other users.

Suspended

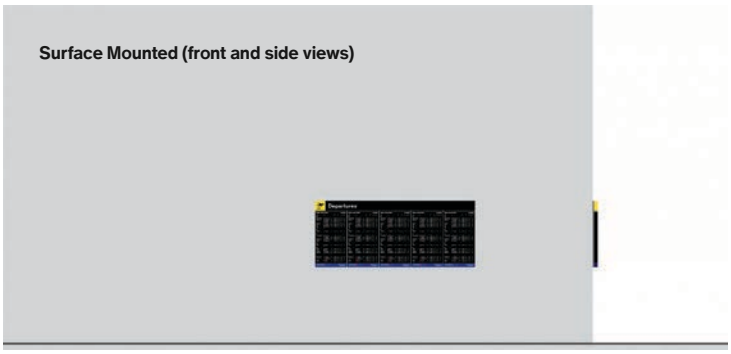
Full Suspension

Overhead armature hangs the sign from the overhead structure. This requires adequate overhead height.



Low-Ceiling Suspension
This forgoes the full suspension armature and uses only vertical supports. It is used if there is room to hang the sign box, but Full Suspension would place it below the 8′-0″ minimum height.

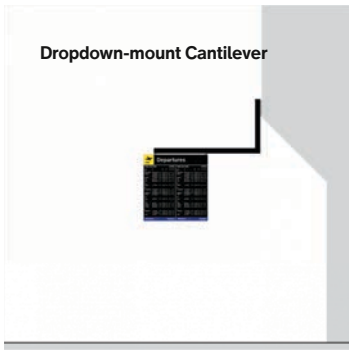
Flush to Ceiling
If the ceiling is too low for either type of suspension, a sign box can be directly attached to the ceiling or overhead structure.



Wall-mounted

Surface
A single-sided sign box can be attached to a wall. Power and fastening are hidden behind the sign.

Recessed
Sign boxes can be integrated into the architecture, walls, or other structures. Signs can be fully or partially recessed into the architecture to achieve a visually integrated environment. This opportunity is especially relevant in new construction or renovations.



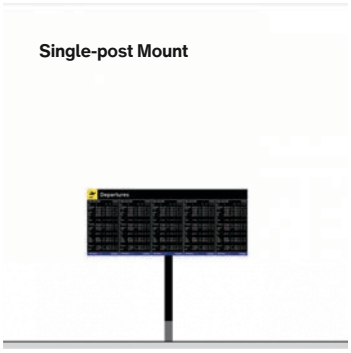
Cantilevered

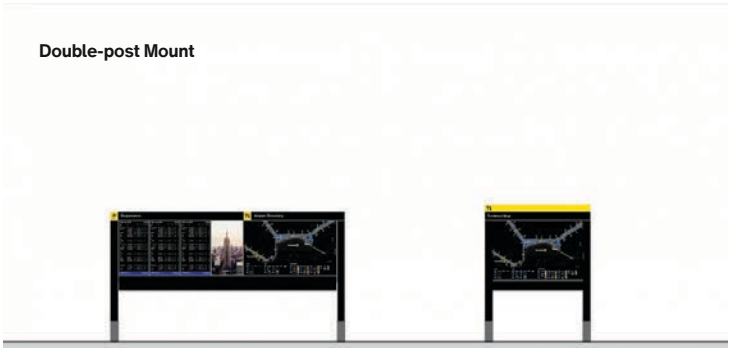
Flush-mount
This allows information to be presented above the passenger flow without extending far into the environment.

Horizontal-mount
A horizontal mount connects to the top of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

Flag-mount
A flag mount connects to the side of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

Dropdown-mount
A drop-down mount can be used if a sign can only be mounted from a horizontal surface that would result in the sign being too high. The structure provides a height change, and the sign is placed away from the wall.

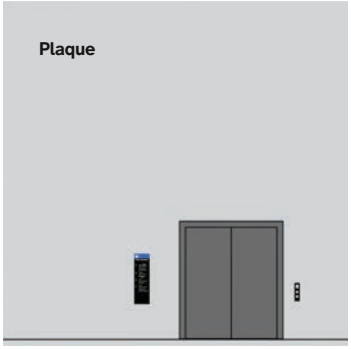




Freestanding

Single-post
One or two sign boxes can be mounted as arms of the post. Single posts require less floor space. Depending on the engineering requirements, single post or double post mounted signs should be considered.

Double-post
Recommended for multiple sign boxes that cannot be suspended or post mounted.



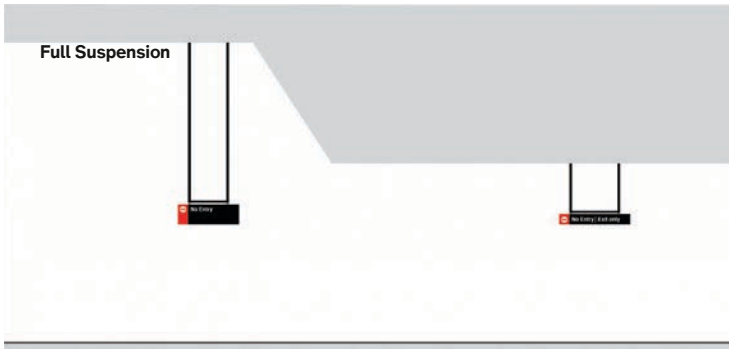
Plaque

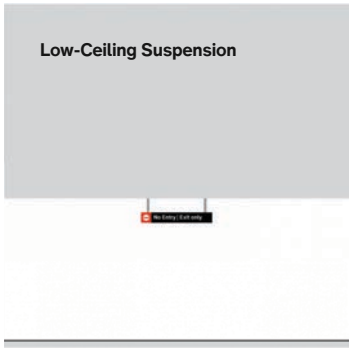
Plaque

Wall plaques are fabricated of a rigid polycarbonate material with silkscreen graphics. They are non-illuminated and secured with VHB tape and silicone. Larger panels should be stud mounted.

7.3.4 Regulatory

Signs which provide rules and regulations.





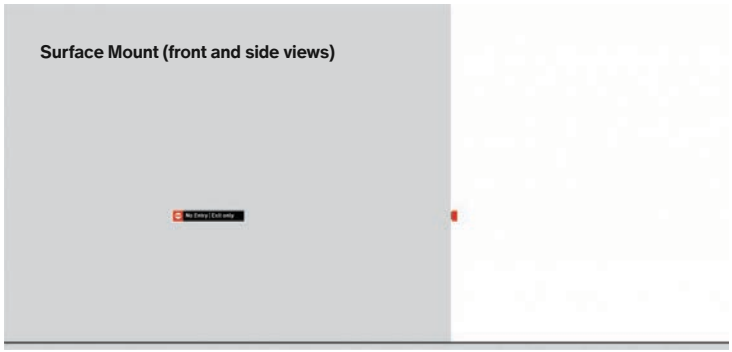
Suspended

Full

Overhead armature hangs the sign from the overhead structure. This requires adequate overhead height.

Low-Ceiling
This forgoes the full suspension armature and uses only vertical supports. It is used if there is room to hang the sign box, but Full Suspension would place it below the 8′-0″ minimum height.

Flush to Ceiling
If the ceiling is too low for either type of suspension, a sign box can be directly attached to the ceiling or overhead structure.

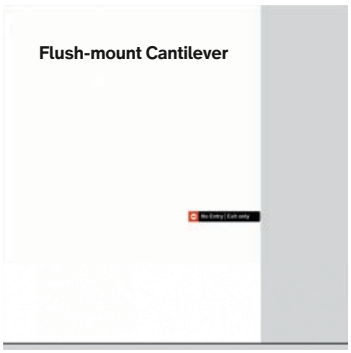


Wall-mounted

Surface

A single-sided sign box can be attached to a wall. Power and fastening are hidden behind the sign.

Recessed
Sign boxes can be integrated into the architecture, walls, or other structures. Signs can be fully or partially recessed into the architecture to achieve a visually integrated environment. This opportunity is especially relevant in new construction or renovations.



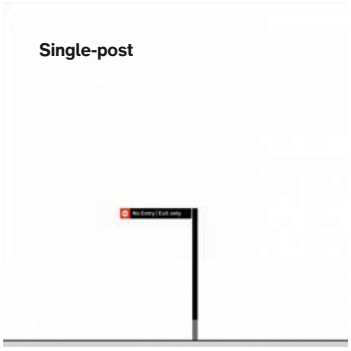
Cantilevered

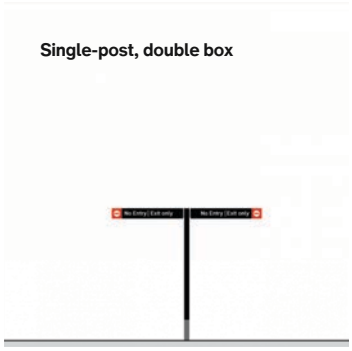
Flush-mount
This allows information to be presented above the passenger flow without extending far into the environment.

Horizontal-mount
A horizontal mount connects to the top of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

Flag-mount
A flag mount connects to the side of the sign box. Distance from the vertical element allows information to be presented above the passenger flow.

Dropdown-mount
A drop-down mount can be used if a sign can only be mounted from a horizontal surface that would result in the sign being too high. The structure provides a height change, and the sign is placed away from the wall.



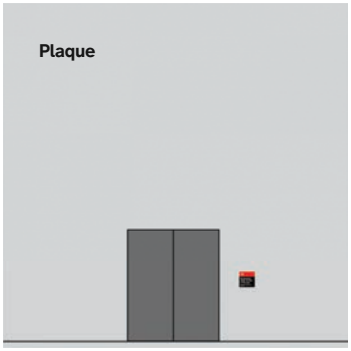


Freestanding

Single-post

One or two sign boxes can be mounted as arms of the post. Single posts require less floor space. Depending on the engineering requirements, single post or double post mounted signs should be considered.

Double-post
Recommended for multiple sign boxes that cannot be suspended or post mounted.



Plaque

Plaque

Wall plaques are fabricated of a rigid polycarbonate material with silkscreen graphics. They are non-illuminated and secured with VHB tape and silicone. Larger panels should be stud mounted.

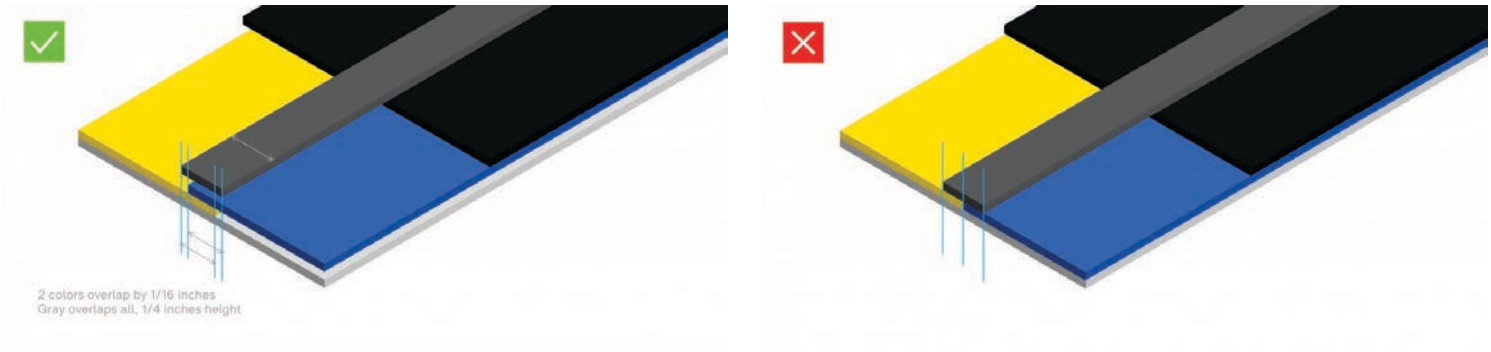
Mounting options

7.4

7.4.1 Performance Specifications

Performance specifications set minimum requirements for materials, manufacturing, and installation of signs and wayfinding elements. They ensure uniformity and help create a world-class wayfinding system. Architects, designers, and developers must review and adhere to these performance specifications when establishing or revising the wayfinding system at Port Authority Aviation facilities.

If not specified, methods of manufacturing, assembly, and placement are to be determined by the manufacturer or contractor. It is imperative that the design is in accordance with this manual. All signage elements must comply with city, state, and legal regulations and standards that govern any built element in an airport facility.



The application of the color vinyl should overlap to ensure no gap of light can come across the gray line separator.

Color

- Colors should be consistent throughout all terminals and stations.
- Colors should be reproducible. Use stock manufacturer formulas.
- Different applications require specific color formulas. Formulas are provided for vinyl, paint, print and digital. Do not translate them to other applications.
- Colors should be stable and color-fast over time.

Finish

- Surfaces should be matte, not gloss.
- Surfaces should be clean, unmarked, and undamaged.
- Surfaces should not fade due to UV radiation.

Construction

- Sign faces should be flat.
- Signs should be resistant to humidity.
- Signs should be adjustable to ensure horizontal (level) and vertical (plumb) alignment.
- Power systems (e.g. electrical wiring, transformers, UL labels) must be hidden from view.
- Fasteners should be hidden from view, as much as possible.
- Provide adequate ventilation to allow for passive cooling of signs (air flow).
- Provide weep holes for drainage, if signs may be exposed to wet conditions.
- Signs should have a factory finish. On-site painting is permitted only for touch ups.
- Internal illumination elements must be easily replaceable, in whole or in part.
- All electronics should be contained inside the sign cabinet, or mounted in an easily accessible location nearby.

Maintenance

- Operational status of elements must be easy to verify and monitor.
- Provide on/off switches as prescribed by local building or electrical code(s) for maintenance of signs.

- Sign faces must be easily removed and replaced on site with minimal tools, minimizing the need for fasteners.
- Avoid edges, lips or other horizontal surfaces where dirt can accumulate.
- Signs must be easy to clean without disassembly or removal.

Illumination

- Internal illumination should be even, with no hot spots.
- No internal shadows (due to internal supports or fabrication) should be noticeable on sign faces.
- Illuminated signs should have a luminance of 500 lumens (TBC)
- Signs should be dimmable, either at installation or using a remote dimming system.
- The temperature of color in illuminated signs should be 5,000K (TBC).

Sustainability

- Energy consumption of wayfinding elements should be as low as possible.
- Use of harmful materials should be avoided.
- Recyclable materials should be used as much as possible.

8

8.1

After determining whether new or replacement signs are necessary, the sign manager is responsible for the request process.

Type of Project	Read Manual	Consultation with Wayfinding Program Manager	Minor Works Application (MWA)	Tenant Construction and Alteration Process (TCAP)
Simple	●	●		
Minor	●	●	●	
Complex	●	●	●	●

For **simple projects**, installation is allowed without a Minor Works Application (MWA) or Tenant Construction and Alteration Process (TCAP). However, consultation with the Port Authority Program Manager of Wayfinding and Connections Solutions (Wayfinding Program Manager) is encouraged. Projects in this category include the addition of signage that has already been designed and approved according to these standards, like a new restroom identification sign, replacing an existing sign with an identical sign, or replacing outdated messaging.

For **minor projects**, follow the Minor Works Application process (for instructions, reference the TCAP Manual). Consultation with the Wayfinding Program Manager is also strongly encouraged to support the process. Projects in this category include the addition of signage that requires messaging review, in response to a changed flow or route or new signs placed at decision points.

For **complex projects**, follow the TCAP process. Consultation with the Wayfinding Program Manager is also strongly encouraged to support the process. Projects in this category include those that require engineering review, like wayfinding for an entirely new concourse or the addition of FIDs.

Once approval has been received, have the new or replacement signs designed according to these standards. This can be done by architects, graphic design companies, or wayfinding consultants.

Before fabrication and installation, the sign package (including graphics of the old and new signs) must be sent to the Wayfinding Program Manager for review. The Wayfinding Program Manager may also coordinate with Port Authority Redevelopment and/or Traffic Engineering departments to provide feedback and comments to move the project forward as quickly as possible.

For **all projects**, regardless of type, adherence to this Wayfinding Manual is required per lease agreements.

8.2

Temporary signage reflects the overall quality of the airport and should not be overlooked. Remember, a temporary sign isn't temporary from the perspective of a visitor who won't be back again.

Temporary signage ensures correct information is always available when there is a temporary alteration to the passenger flow, such as during periods of construction work. The most appropriate temporary sign type should be determined based on the circumstances.

A single, temporary alteration of a physical space may have ripple effects along an entire passenger flow. It may be necessary to assess the entire length of multiple passenger flows when implementing temporary signage.

8.2.1 Temporary Sign Design

Temporary signage should look as close to the permanent system as possible. This maintains users' trust in the wayfinding system, which is especially important during temporary disruptions.

Temporary signs should adhere to all graphic design, compositional, and programming & placement guidelines in order to maximize consistency with the permanent system. However, temporary signs may use alternative material and/or fabrication techniques, for example temporary signs are not expected to be internally illuminated. This helps minimize the time and cost needed to produce and implement them. Temporary signage must be removed as soon permanent solutions are implemented.

Options for temporary signs are:

- Overheads
- Wall vinyls
- Door vinyls

9

9.1

This manual has been written to facilitate a clear understanding of Port Authority wayfinding standards. All wayfinding signage and elements must comply with the standards.

Questions? Contact the Port Authority Program Manager of Wayfinding and Connections Solutions (Wayfinding Program Manager) regarding development, implementation, and maintenance of the wayfinding system.

Tenants are ultimately responsible for compliance with these standards as well as all Port Authority requirements, including but not limited to those outlined in the RPW, lease agreements, and Port Authority manuals.

9.1.1 Port Authority

The Port Authority Customer Experience team is responsible for overseeing and managing the wayfinding program across all Port Authority Aviation facilities. They are the first point of contact for wayfinding implementation questions. Operators should consult with the Wayfinding Program Manager for any forthcoming changes that may affect flows or communication of information to visitors at their respective facilities.

The Customer Experience team oversees the entirety of the wayfinding system by approving content, messaging, and execution in accordance with this manual. The Port Authority Wayfinding Program Manager also has the purview to remove unauthorized signs, including advertising or other visual items that conflict with the spatial zoning guidelines.

This team is also responsible for updating the manual and its implementation in order to respond to new situations.

Additional Port Authority departments are also involved in wayfinding implementation and maintenance. For example, the Advertising, Engineering, and Planning departments should all be familiar with and adhere to this manual.

9.1.2 Operators

Terminal operators are responsible for ensuring the wayfinding system is properly implemented and maintained. An individual dedicated to wayfinding should be appointed at each facility. They will maintain a sign plan for the facility, prepare sign applications, act as point person for all maintenance issues, and liaise with the Port Authority team as necessary.

9.2

The Wayfinding Program Manager and Customer Experience team are also responsible for enforcement of wayfinding standards. They are supported by other Port Authority departments, such as Planning and Properties, to help support adherence.

PA Role	Mechanism	PA Party
Consult	Inquiries from operators	Wayfinding Program Manager; Customer Experience
Review Applications	MWA; TCAP	Wayfinding Program Manager; Tenant Liaison Office; Planning Department
Review in Situ	Walkthroughs; Quarterly facility inspections	Customer Experience; Facilities/Maintenance
Communicate	Written notification of non-compliance	Properties
Correction	Replacement of non-compliant e lement	Facilities/Maintenance

9.3

As with any system, maintenance is critical for ongoing functionality and success. Operators should conduct regular reviews of lighting, sightlines, and structural integrity of wayfinding elements to document and address maintenance issues.

Operators should establish and document processes for requesting maintenance. This may include: new signs, alteration or removal of existing signs, cleaning, and removal of other elements that impede flows or wayfinding.

Communicate the maintenance request process to facility and airline employees in the event of a maintenance need or wayfinding concern. Streamlining information and decluttering is critical to maintaining a successful wayfinding system.

If the maintenance request includes a new sign or alteration, consult with the Port Authority Wayfinding Program Manager and follow the sign application process.

9.3.1 Maintenance Process

A sign plan is a fundamental resource that allows sign managers to assess, implement, and maintain a successful wayfinding system.

After developing an initial sign plan through the Programming process, a facility's sign manager should refer to it as needs change. It is the tool to assess if signs must be added, replaced, or removed.

To assess the wayfinding system for maintenance :

1. Audit the inventory of existing signs.
2. Analyze sign requirements, i.e. sign code, sign type, content, location (which may include drawings), measurements, notes (including power requirements), and a photo (optional).
3. Evaluate the inventory in the environment:
   - Are any signs missing?
   - Are signs in good condition?
   - Are signs in compliance with standards?
   - Are any signs no longer necessary/appropriate?
   - Are signs in the proper place?
   - Are signs accurate in messaging?
4. Determine if new signs are required and/or if signs need to be removed, repaired, or replaced.
5. For any additional signs, follow the sign application process.

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The wayfinding guidelines in this manual do not supersede any applicable policies or requirements set forth by the Port Authority, the States of New York and New Jersey, or the City of New York.

A number of resources to ease compliance with applicable policies and requirements are included below. However, it is ultimately incumbent upon the operators and designers to be aware of the latest applicable requirements for each project.

10.0.1 ADA Compliance

The Americans with Disabilities Act (ADA) Standards for Accessible Design were adhered to in developing the room plaque design. Guidelines for such items were followed, including size, typeface proportioning, braille, and spacing.

ADA Standards must be adhered to. The latest version can be found here.

Specific sections that should be referenced include, but are not limited to:
Section 216: Signs
Section 703: Signs

10.0.2 Port Authority Policies & Procedures

The guidelines set forth in this manual should be implemented in accordance with existing Port Authority policies and procedures including, but not limited to:

Tenant Construction and Alteration Process Manual
Airport Planning Standards
Airport Customer Care Manual
Airport Roadway Sign Design Manual

10.0.3 Department of Homeland Security Compliance

Reference the Department of Homeland Security's intellectual property policy when using any of their intellectual property including, but not limited to: logos, wordmarks, and seals for the Transportation Security Administration (TSA), U.S. Customs and Border Protection (CBP), Global Entry, and TSA Pre✓.