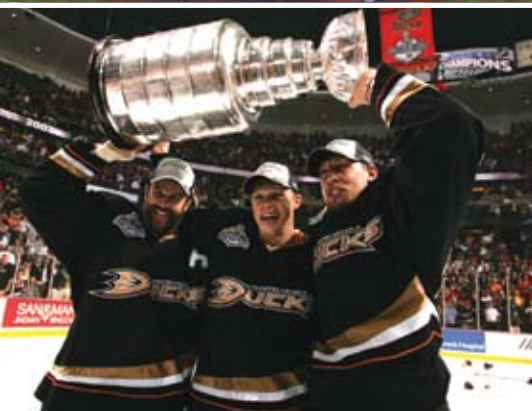




ARTIC

Anaheim Regional Transportation Intermodal Center Transit and Parking Facility Description Report



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INTRODUCTION

The Anaheim Regional Transportation Intermodal Center (ARTIC) is envisioned to be a regional transportation gateway and is being developed in a collaborative effort between the Orange County Transportation Authority (OCTA) and the City of Anaheim (City). ARTIC will be integrated into a joint mixed used development in the City. The proposed site is bounded by Katella Avenue, the Orange Freeway State Route 57 (SR-57), the Santa Ana River, the Los Angeles to San Diego (LOSSAN) rail corridor, and Douglass Road.

On November 14, 2005, the OCTA Board of Directors (Board) authorized the Chief Executive Officer to enter into a Memorandum of Understanding (MOU) with the City for the joint development of ARTIC. Subsequently, OCTA purchased a 13.5 acre parcel from the County of Orange for the development of the ARTIC transit facility. The City owns 2.2 acres adjacent to OCTA property.

Development of ARTIC is necessary in the near future due to increasing rail passenger demand, lack of ability to expand the existing Metrolink station parking, limited access to the existing Metrolink site, and the need for connections enabling travelers to transfer from one mode of transit service to another at a regional hub. ARTIC's development has been an integral element of OCTA's gateway to regional rail, and as of today, is the only Orange County Metrolink station site designated as a destination stop by both the California High-Speed Rail (CHSR) Authority and the Anaheim to Ontario segment of the California-Nevada Super Speed Train (CNSST) Commission.

As regional transportation needs have been increasing, the City has been pursuing plans to encourage transit-friendly housing and supporting commercial and retail functions in an 820-acre area known as The Platinum Triangle, which includes the ARTIC site.

OCTA and the City have been collaborating to define ARTIC goals, transportation facility needs, an implementation plan, and a development strategy. In addition, OCTA staff has identified the operational, engineering and functional constraints, and opportunities of the ARTIC site for transportation purposes. On May 24, 2007 the OCTA Board approved a Project Concept Report (PCR) for ARTIC. The PCR summarized a phased 20-year ARTIC development strategy.

REPORT PURPOSE

Taking the PCR as a basis, the purpose of this ARTIC Transit and Parking Facility Description Report is to provide further definition of the transit needs, facility requirements, preliminary design concepts, and order of magnitude cost estimates. The overall objective is to identify, quantify and qualify the needs of the transit providers and to describe a facility which accommodates those needs while considering phasing, site constraints, and suitability for joint development. This work is a starting point which depicts a transit facility that is feasible and appropriate on the 15+ acre OCTA- and City-owned parcels. To achieve this, it was necessary in some instances to make focused planning, design and/or engineering assumptions and prepare related technical products.

The facility concepts presented herein are just that – concepts. They are presented to illustrate possibilities to public and private decision makers. Beyond that, they should

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stimulate private parties whether experts in financing, development, transportation services, or construction, to think beyond what is described in this report. The main goal of the OCTA and the City is to leverage the planned transit assets in this rail corridor and to maximize the site's development potential. The ultimate design and layout of ARTIC site will reflect the shared vision of, OCTA, the City, and the private partners.

The following sections summarize the information available to date for the ARTIC Transit Facility and its accompanying parking facilities.

TRANSIT PROVIDER NEEDS

NEEDS ASSESSMENT

In order to understand the space needs of the transportation providers, a Needs Assessment process was undertaken to document the operational and passenger service needs of each transportation provider. The needs of each provider were then integrated to include the greater needs of the whole in terms of efficiencies of shared facilities and passenger transfers.

A Needs Assessment Summary document was developed prior to data collection for distribution to OCTA, the City, and transportation providers for validation of the assumptions and became the basis for developing this report.

Available data was collected and analyzed for the following transportation providers:

- Metrolink
- AMTRAK
- OCTA Local, Express, Station Link and Bus Rapid Transit
- A potential City of Anaheim "Go-Local" project
- Anaheim Resort Transit (ART) Shuttles
- Airport Flyaway Bus
- Intercity Bus Operators (Greyhound, Coach USA)

Information was collected through a series of workshops with the service providers, one-on-one meetings with Parsons Brinckerhoff (OCTA's Metrolink consultant) and IBI (Anaheim's Go Local consultant), and review of existing documentation. For providers, ridership information was compiled, and transportation assumptions, needs, and transportation functional requirements were documented. For those providers for which limited or no data was available (CHSR, CNSST and private taxis), transportation passenger activity (ridership) projections, parking and space needs assumptions were developed.

Passenger amenities, operations space and other related elements required by OCTA, the City, and other public and private transportation providers were identified as part of this process.

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RIDERSHIP PROJECTIONS

Ridership projections are important in the design of a facility, as anticipated ridership will influence how large the boarding, waiting and circulation areas will be. The wait time between transfers also influences the amount of retail space that can be planned. To this effect, documentation of projected patronage, passenger transfers, boarding and alighting functions, parking/circulation, and bus requirements was undertaken.

The forecasts of daily riders¹ at ARTIC were either obtained from the various transit providers or estimated based on available data, specifically:

- The larger existing services, such as AMTRAK and Metrolink, have prepared ridership forecasts based on existing ridership and planned service expansions.
- New planned major investments, such as CHSR and the CNSST, have ridership forecasts that are documented in various feasibility studies. Specific forecasts of riders at ARTIC were obtained from the studies or derived from overall projections.
- For other planned services at ARTIC, conceptual level station patronage estimates were developed based on the general characteristics of each service, including anticipated service frequencies, vehicle fleets, and headways.

Using OCTA-approved methodology and taking into account intermodal efficiencies, and passenger transfers, conceptual-level project-specific ridership estimates were developed for the following two phases:

- Phase 1 2007 to 2015 Initial Service
- Phase 2 2016 to 2030 Build Out (Mid-Term and Long-Term)

Projected Daily Station Boardings

In the development of preliminary ridership projections, the following assumptions are worth noting at this time:

- Given the preliminary planning status for many of the services, forecasting ridership and the interplay between and among the various services is a significant challenge. Therefore, preliminary ridership forecasting has been done at a “planning level” for establishing facility parameters and general space requirements needed to accommodate ARTIC facilities and elements proposed to be included therein.

¹ The term “daily riders” refers to the number of daily boardings (patrons) that are forecasted to use a given service at ARTIC. A similar number of alightings could be expected for each service over the course of a day. Originating passengers is defined as the number of daily boarding riders who begin their transit trip at ARTIC (arriving by auto, bicycle, or on foot), as opposed to those who transfer from other services.

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- Ridership modeling will continue to be refined throughout the ARTIC planning process as more information becomes available from individual transportation providers.
- Daily riders at ARTIC are estimated to be 7,300 in the initial service (Phase 1), and are expected to increase to about 44,500 in the long-term future (Phase 2).
- There are significant synergies between the various modes expected to serve ARTIC. Therefore, although some 7,300 daily riders are forecasted in the initial service, not all of these boardings will represent originating passengers. Many boardings will be the result of transfers, where patrons arrive at ARTIC via one transit mode and depart via another.
- The primary contributor to the ridership growth in Phase 2 is the planned CNSST, and to a lesser extent, the CHSR project.
- Additional ridership projection work and refinements will be required prior to beginning detailed design activities.
- Further explanation of ridership forecasting methodology and assumptions are presented in Attachment 1, "Technical Memo: Estimates of Future Patronage Activity and Parking Requirements at ARTIC".

The following table summarizes the preliminary daily boardings estimate for the ARTIC transit facility obtained during the Needs Assessment process.

Table 1 Projected Daily Station Boardings

Service	Phase 1 Initial	Phase 2 Build Out	
		Mid-Term	Long Term
Metrolink/Amtrak	1,800	2,900	4,000
Longer trip OCTA Bus Services	1,400	2,300	2,700
Short-trip Local Transit Services	2,300	5,130	6,350
Airport Fly-Away Bus Connections	1,100	1,000*	1,000*
Private taxis and bus carriers	740	1,860	3,070
Subtotal Daily Boardings – Existing Service	7,340	13,190	17,120
CHSR	N/A	N/A	6,900
CNSST	N/A	10,250	20,500
Total Daily Boardings	7,340	23,440	44,520

* Boardings on the Fly-Away Bus to Ontario Airport are expected to decrease once CNSST service to Ontario Airport commences, as passengers are presumed to take the rail service rather than the bus service when it becomes available.

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FACILITY REQUIREMENTS

The Facility Requirements process defined the building space requirements (function and scale) and parking needs by phase pursuant to data obtained from the transportation providers in the Needs Assessment process.

The ARTIC site and surrounding area has been under study for several years, and consequently a number of technical reports, studies and estimates were already in existence at the onset of the development of this report. Previous work was reviewed for reasonableness and consistency with current objectives as part of the function and scale determination effort.

BASIS OF FACILITY REQUIREMENTS

The Needs Assessment process results were used to estimate the space needs of each transportation provider, including their operational and passenger service needs. In determining the facility requirements, similarly to the Needs Assessment process, the needs of each provider were then integrated to include the greater needs of the whole in terms of efficiencies of shared facilities and passenger transfers. The Needs Assessment was also used to develop functional relationships, stacking of services and a Space Program for the facility serving as a “road map” for development of the facility concept. Attachment 2, “Needs Assessment Summary”, presents a more detailed breakdown of space needs by service provider and functional area, a stacking diagram, and documents the assumptions.

In the original Project Concept Report, phasing of the project had been defined as occurring over three time frames:

- Phase 1 (2007-2015)
- Phase 2 (2015-2020)
- Phase 3 (2020-2030)

The definition of transit provider needs described in the previous section was structured around this phasing. However, based on the recommendations of OCTA and the City, this ARTIC Transit and Parking Facility Description analysis studied two time frames rather than three. Subsequently, Phase 1 (2007 to 2015) is referred to as the “Initial” phase. Phases 2 and 3 (2015 to 2030) were combined and are subsequently referred to as “Build Out” phase.

Ridership analyses and factors for facility circulation, patron amenities, commercial and public space, were used to further identify space requirements (function and scale) for the ARTIC facility by phase. Estimates of parking demand were developed for each phase, consistent with methods used by OCTA.

Site constraints and opportunities were considered as well. There was an assessment of utility relocation possibilities, developed through consultation with the Metrolink Expansion Program and City. The alignment of Douglass Road adjacent to the ARTIC site was studied, and the team considered the feasibility of lowering the roadway to improve accessibility to the transit facility. Conceptual layout and profile drawings were developed for Douglass Road from Katella south to the Angels Stadium of Anaheim parking lot.

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PRELIMINARY TRANSIT AND PARKING REQUIREMENTS

Based on the forecasted passenger demand provided by the service providers, as well as identified and calculated needs for operations and support facilities, requirements for transit building and loading space and associated parking space were developed and are discussed separately below.

Preliminary Transit Facility Space Requirements

The building space within the ARTIC Transit Facility can be categorized in a number of ways. Table 2, summarizes the ARTIC facility space by functional of use for the information provided in Attachment 2.

Table 2 Transit Facility Space Needs by Function

Function	Phase 1 Initial	Phase 2 Build Out	Total (square feet)
Ticketing and waiting areas	13,000	36,000	49,000
Event space and retail*	23,000	19,000	42,000
Baggage	5,000	25,000	30,000
Operations	9,000	6,000	15,000
Bike station	6,000	-	6,000
Total Gross Area (excluding boarding)	56,000	86,000	142,000
Boarding platforms	31,000	91,000	122,000

* Includes Grand Hall

Preliminary Parking Demand

The Phase 1 parking demand is estimated to be approximately 2,200 spaces. The unconstrained parking demand for Phase 2 is 17,700 parking spaces. Parking needs will grow consistent with increases in transportation service enhancements. Parking requirements are presented in further detail in Attachment 1.

In determining the preliminary ARTIC parking demand, the following issues have been considered and/or will need further refinement in subsequent phases:

- The overall goal of ARTIC is to provide a transit facility where people from diverse origins can easily transfer between services to reach diverse destinations. Given ARTIC's fundamental transit-oriented purpose, the provision of unlimited parking is unreasonable. The amount of parking supplied at ARTIC primarily needs to reflect this philosophy.
- Parking demand at ARTIC consists of three elements: passenger activity, on-site employees, and parking for the Honda Center. Passenger activity for parking

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purposes is based on the number of originating passengers at the ARTIC Transit Facility.

- Plans for ARTIC should facilitate air passengers connecting from other transit services, but parking at ARTIC for air passengers is assumed to be minimal.
- There are physical constraints at the ARTIC site. The number of parking spaces is limited to what can be reasonably accommodated in surface and / or structured parking on the ARTIC site. Although the facility design, platform accommodations, pedestrian and traffic circulation, and private development needs are only roughly-defined at this point, future general site planning will need to consider ways to optimize parking within the existing physical constraints.
- Parking facilities are traffic generators and the existing ARTIC site has arterial traffic constraints. The peak hour capacity of these road facilities is a limiting factor for the amount of total parking that can be provided on site at ARTIC.
- The estimated amount of patron activity has a higher degree of certainty for the short-term than the mid- or long-term. Several of the major rail modes, particularly the CNSST, are less certain of the time frame of actual implementation, yet they have the highest estimated ARTIC parking requirements. Estimates of the parking needs for these services will be refined later as plans are further developed.
- There are existing agreements regarding parking at the Honda Center, an arena adjacent to the ARTIC site. The existing lease agreement stipulates that 405 parking spaces must be provided on-site, so these must be accounted for separately.
- As the site progresses through its phases of development, changes in specific parking needs will become apparent. The site design should allow some amount of parking flexibility as future service plans are refined. A “modular” design approach will preclude over-building in the near term while allowing flexibility in the future.

PRELIMINARY DESIGN CONCEPT

BASIS OF PRELIMINARY DESIGN CONCEPT

Using the results of the Needs Assessment and Facilities Requirements, three alternative site concepts were developed. The concepts identified the placement of functions on the site by phase. The purpose of the Preliminary Design Concept step was to develop plans and illustrations of the potential transit and parking facilities. The plans and illustrations convey possibilities of how and where the various modes and services could intersect and/or affect each other and how they could affect access to and within the site. The site and facility plans provide sufficient details to provide an idea of the possibilities for the site and to generate quantities for a rough order of magnitude cost estimate.

The comprehensive ARTIC Transit and Parking Facility Plan is based on the vision and phasing contained in the Project Concept Report, and the Needs Assessment developed.

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The Transit and Parking Facility Plan provides a framework of transportation elements (i.e. conceptual rail alignments, transit-related structured parking, pedestrian connections, station platforms, building envelopes, street rights-of-way, building and structured parking footprints, and potential building massing). Concepts for setbacks, urban design, public open space and plazas and gateway treatments directly related to the transit facility were considered.

DESIGN OVERVIEW

ARTIC is envisioned as a gateway to Orange County; a destination for tourists and those that live and work in the region; a point of origination for local and regional commuters; and a place to transfer between modes of transportation. ARTIC will be a destination in itself with integration of mixed-use development including retail and office with multimodal access. The ultimate build out of ARTIC will create a place where people want to be, rather than merely a place to pass through.

ARTIC is proposed to be built in a phased, 20-year effort with each phase coinciding with the introduction of new transportation service expansion. Development of the ARTIC facility will include joint development and other private sector cost sharing and/or revenue sharing arrangements to minimize taxpayer cost and limit OCTA costs to those necessary to provide transportation facilities and services. ARTIC planning and construction will proceed according to a phasing strategy that favors shared facilities and allocates cost-sharing among participating transportation providers. Project definition of the transportation element of ARTIC has been developed to define the integration of transportation services, determine the facility needs and connect ARTIC to the community and on-site mixed-use development. ARTIC preliminary design concept was initiated through a needs assessment process identifying transportation providers, establishing transportation provider functions, operational requirements and passenger activity. This information was utilized to develop a project program and concept for the facility.

FACILITY CONCEPT

The ARTIC concept plan was developed to accommodate the program and illustrate the desired organization and stacking of the transportation elements of the facility. The conceptual plan is intended to continue to be refined with participation of private sector partners and transportation providers. The following narrative should therefore be read as an example of desired functions and relationships, not a requirement of final design. In addition, Attachments 3 through 9 provide illustrations and renderings of site and facility concepts which meet the requirements defined here, however they are not intended to depict a desired design. Rather, they convey a possible solution that works within the limits of the site.

The transportation element of ARTIC is currently envisioned as a three level facility accommodating passenger arrivals, departures and transfers with supporting retail, restaurants and passenger services. Non-rail access to the facility would be accommodated by a Bus Plaza Transfer/Curbside drop-off area and parking accessed via Douglass Road.

The primary components of ARTIC are detailed in the following sections.

Site Access: The primary access to ARTIC will be via Douglass Road. Douglass is proposed to be expanded from four lanes to six lanes to accommodate both ARTIC and

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future development needs. The profile of Douglass will also be lowered at the existing LOSSAN railroad bridge to accommodate the bridge widening for expanded rail service and extended platform lengths. Access roadways will also be added to provide dedicated access to the ARTIC curbside area which includes bus, shuttle, taxi and drop-off functions. The lowering of Douglass Road which will impact access to the industrial properties and the new access roadways to the bus plaza may require additional right-of-way.

Bus Plaza: The Bus Transfer/Curbside area is envisioned to be located at grade level to provide ease of access and egress by all transportation providers and related taxi/shuttle services. The Bus Transfer/Curbside area would accommodate 10 full size (40-45 foot) buses for OCTA and Fly-Away services; sixteen shuttle (25-35 foot) buses, 9 taxi boarding positions and 150 lineal feet of drop-off space. Layover spaces are also provided for buses with capability for internal recirculation within the curbside area.

Terminal Hall: The Terminal Hall will form the civic entrance to ARTIC and create an inviting gateway to Orange County. The upper Transit Hall will be an open exciting public space providing ticketing, baggage check, baggage claim, waiting areas, security and the portal to the Concourse. The space will also provide a direct connection to the Bus Transfer/Curbside level via through a lower Terminal Hall level accessed by vertical circulation. The lower Terminal Hall also provides a direct pedestrian connection to the Santa Ana River pedestrian/bike trail and accommodates a “Bike Station” providing bicycle storage, showers/lockers and maintenance.

The central feature of the Terminal Hall will be an information center and real time message board displaying schedule information for all modes of transportation. A “Grand Hall” space is integrated into the Terminal Hall recalling the great transit halls of Western Europe and early train stations in the United States. The Grand Hall will provide a place for gala events, civic functions and community meetings.

The Terminal Hall will also provide a venue for retail services. Retail will wrap the perimeter of the hall providing shopping and transit related retail conveniences to the traveler. The Terminal Hall layout provides space for a passenger security screening portal (if needed) through which the passenger passes to gain access to the Concourse.

The spatial form of the hall will be a soaring glass enclosed space flooded with natural north light, opening to an upper level pedestrian plaza forming the connection to the site and adjacent development. The plaza, located above the Bus Transfer/Curbside level, will create an entrance sequence for the terminal and provide a base for mixed-use development surrounding the plaza and fully integrated with the Terminal Hall.

Concourse: The Concourse area will provide direct access to boarding platforms for all rail transit modes. Vertical circulation in the form of escalators and elevators will provide access to the Amtrak/Metrolink platform, future CHSR and Anaheim Transit People Mover below. Access to future CNSST will be provided from the concourse via a mezzanine level to the platforms above. The concourse may include a limited amount of transit related retail to accommodate transferring passengers. The concourse is envisioned to have a second entrance on the south side of the facility providing pedestrian access to Angel Stadium of Anaheim during events. The entrance will also provide a connection to the Santa Ana River pedestrian/bicycle trail and provide an attractive facade from northbound SR-57.

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Platforms: Rail passenger boarding platforms are located at-grade within the existing LOSSAN rail corridor with the exception of CNSST platforms which are proposed to be located at an upper level. Amtrak and Metrolink share a single center platform utilizing the existing northbound track and relocated southbound track. The platform is 28 feet wide by 1000 feet in length accessed by escalator and elevator from the Concourse level above. Baggage conveyance will be provided from the Amtrak ticketing area in the Transit Hall. CHSR service is provided by a center platform 30 feet wide by 1300 feet in length. The platform will be served by two new tracks immediately north of the existing Amtrak/Metrolink tracks. The Anaheim People Mover will provide passenger distribution to area venues via a grade separated automated guideway. The guideway will transition to grade level at ARTIC to meet clearance requirements under the elevated SR57. Separate boarding and alighting platforms are provided with access from the Concourse above. The People mover may also provide a connection to off-site parking for ARTIC.

At the west end of the platforms, access may be provided directly into the parking lot of Angel Stadium of Anaheim, to ease unloading and loading of Metrolink and Amtrak trains during stadium events. Stairs and elevators and/or escalators will be required to move patrons from track level, which would be above grade at this point.

CNSST service will terminate at ARTIC with service arriving from the north along the Santa Ana River corridor. Required grade separation of Katella Boulevard west of the Santa Ana River places the alignment above grade and at an upper level of the facility. Access to the platforms is provided from a mezzanine level above the Concourse. CNSST platforms will consist of a center boarding platform and two alighting platforms to facilitate efficient boarding and alighting. Vertical circulation from the alighting platforms will terminate at the Transit Hall level below adjacent to Baggage Claim. The baggage claim area has been sized to accommodate the arrival of two fully loaded trains arriving at 10 minute intervals. Due to the uncertainty of the phasing for this transportation mode, the terminal facility accommodates phased construction of the CNSST platforms and support functions without disruption to other modes.

Public and Operations Support: Each transportation provider has requirements for support of their passenger operations. Space accommodation of these programmatic needs is distributed throughout the terminal facility based on adjacencies to their respective passenger service and administrative functions.

Common Areas: The efficiency of ARTIC lies in the ability to share ticketing, waiting and service functions. Common areas include these elements and related support functions such as administration, security, public restrooms, mechanical space, and amenities such as retail, a business center and meeting rooms. The “Grand Hall” located in the Terminal Hall is a central feature of the common areas. Operational support areas are located in the Terminal Hall (Level 2) and Level 1 of the facility based on adjacency to transportation provider needs.

Bicycle Station: Bicycles access is considered an important mode of transportation has been accommodated in the facility concept. The Bicycle Station is intended to provide a high level of service to bicycle patrons with provisions for secured bicycle parking, showers and lockers, bicycle rental and repair and accessory retail. The Bicycle Station would be located at grade level at the pedestrian/bicycle plaza immediately adjacent to the Santa Ana River trail.

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Parking: Parking demand is proposed to be met by two structured parking facilities, plus at grade on site parking. The Transit Facility Concept depicted in Attachment 3 includes a facility accommodating approximately 1,750 spaces on two parking levels located below the terminal facility, which comes close to meeting the Phase 1 transportation parking needs. Additional parking of 405 spaces is required to meet parking commitments for Honda Center. These spaces are envisioned to be provided at grade in Phase 1.

Expansion of parking to meet Phase 2 needs could be provided via a multilevel parking structure in the vicinity of the site, with potential access from this facility to the terminal building by pedestrian bridge. The parking structure will accommodate approximate 3,000 spaces providing a total of 4,750 parking structure spaces on site, partially accommodating Phase 2 parking needs. Provisions for parking in excess of the 4,750 spaces that can reasonably be accommodated at the ARTIC site will be the responsibility of future transportation providers.

PHASING

The ARTIC Transit Facility concept described above will be implemented in phases. Phase 1 has been defined to address the short term needs of new facilities for Amtrak and Metrolink with related bus and shuttle services and amenities. Phase 2 of the facility implementation may actually consist of multiple phases based on introduction of new transportation services and the respective schedules of each transportation provider.

The initial phase will provide a new and relocated facility to serve Metrolink and Amtrak and related infrastructure to provide connections for local rubber-tire transit services. Phase 1 will be developed between 2007 and 2015 with investment focused on preparing the infrastructure and building replacement facilities to accommodate passenger services for Metrolink and Amtrak. Initial space requirements will primarily include boarding platforms for Metrolink and Amtrak and required waiting, ticketing, security, and baggage operations for Amtrak. These functions will be supported by bus and shuttle transfer areas and required parking for ARTIC and Honda Center event parking. In Phase 1 Amtrak and Metrolink will be served by side platforms on each side of the existing tracks to prevent track rearrangements. Upon initiation of CHSR service, Amtrak and Metrolink will be relocated to a center platform configuration.

The following describes the components of each phase in greater detail.

Phase 1: 2007 – 2015 (Initial Service)

Some infrastructure improvements will be required early in the development process to accommodate Phase 1 and future phases of ARTIC. In addition, initial infrastructure improvements should consider accommodation of future unidentified modes and provide excellent access to and connections with:

- OCTA bus routes and Go Local programs for community links
- Local shuttles operated by or through Anaheim Resort Transit and/or its affiliates
- Publicly-supported services providing access to Ontario International Airport and John Wayne Airport

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- Connecting service to an offsite terminal for international and intercity bus and taxi

It is also expected that the private sector development will be underway as this phase is implemented. Phase 1 will also require the reconstruction of the Douglass Road railroad bridge to provide passenger platforms in this area and also resulting in the lowering and widening of Douglass Road. Specific items included as part of Phase 1 include:

- Douglass railroad bridge modifications
- Douglass Road modifications
- Utilities construction
- Amtrak service (relocated platform & facilities)
- Expanded Metrolink service (relocated platform)
- OCTA fixed-route bus service
- Anaheim resort transit ("rubber tire" circulator to area venues)
- Anaheim/OCTA Go Local program (to be determined)
- Connection to off-site private intercity buses (Greyhound, Coach USA)
- Private tourism buses
- Airport shuttles (Ontario Airport and JWA Fly-Away service)
- Taxi services
- Curbside drop-off
- Bike station & improved pedestrian/bicycle connections
- Parking for up to 2,200 vehicles
- OCTA new Bus Rapid Transit service

Phase 2: 2016 - 2030 (Additional Services at Build Out):

Phase 2 will see passenger facilities and support services grow to support and enhance growing traveler demand. New services will include the Anaheim to Ontario segment of the CNSST and CHSR, providing regional rail service for connections to much of California. In addition, Amtrak is planning to enhance its service to one train per hour in each direction in this time frame. Additional services will include:

- Additional tracks and station platform for CHSR and new wider bridge over the Santa Ana River
- OCTA Bus Rapid Transit service
- A proposed fixed guideway people mover system acting as a distributor system to Platinum Triangle and Resort Area destinations
- Expanded parking with improved connections to the SR-57; and further commercial development

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Specific items included as part of Phase 2 are listed below.

- OCTA BRT service connection
- CHSR Service
- Anaheim/Ontario segment of CNSST
- Expanded parking to serve CHSR and CNSST
- Expanded CNSST service
- Improved or direct freeway access from SR-57 to parking, bus transfer areas and curbside drop off
- Expanded Amtrak service
- Conversion of Anaheim Transportation Network Connection to fixed guideway
- Private international bus
- Remote airport check-in for John Wayne Airport
- Customer service/information
- Passenger amenities, retail and restaurants
- Baggage handling/claim
- Facility support/administration
- Security monitoring and offices
- Parking for up to 4,750 vehicles

FACILITY SETTING

The following considerations shall be given high priority when making site design decisions:

- Compliance with the city's view corridor requirements
- Integration of transportation services and parking
- Maximizing the use of premium site areas for private development
- Integration of transit facilities with private development
- Preservation of street frontage on Katella with accessible pedestrian connections
- Protection of views from SR-57 into the site
- Impact of physical site conditions on economics and constructability

Development Phase Considerations

The following site conditions will need to be considered in design development, phasing and construction:

- Surface street access to the site is limited due to the Santa Ana River on one side and the LOSSAN corridor on the other. Development is slated for the stadium parking lot area and could be coordinated with ARTIC's development. Site construction staging may be complicated and/or delayed if the construction occurs simultaneous with the stadium development or with intensive use of the stadium itself.
- A long-term option for improved access to the site to and from SR-57 is desirable to provide greater access capacity.
- The design assumes that the existing LOSSAN tracks will be utilized and remain as configured in the existing alignment with some modest adjustments. The

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existing alignment and double-track configuration will be sufficient to provide enhanced Metrolink and Amtrak service,

- Provisions are required for connecting service to a future rubber tire and/or guideway for a Go Local circulator to bring individuals from the Anaheim Resort area and/or The Platinum Triangle.
- Douglass Road is anticipated to continue to function as a primary access point to the stadium property.
- Widening of Douglass Road will be required in Phase 1 to accommodate the additional vehicular traffic generated by the build out of ARTIC, and consequently results in the loss of access to adjacent properties.
- Metrolink and Amtrak platforms will extend across Douglass Road requiring widening of the existing railroad bridge over Douglass in Phase 1.
- The widening of the Douglass bridge to include track and platforms requires lowering of Douglass Road approximately 10 feet to provide adequate clearance for vehicles.
- The existing double-track configuration is sufficient for the expanded Metrolink service and Amtrak service. However, additional tracks and right-of-way are required at station platforms for high-speed rail services. Four tracks will be required to accommodate high-speed rail service presently proposed by the CHSR Authority.
- Technology accommodations will be necessary for any maglev or other alternative technology system such as the CNSST service. It is premature to determine precisely what those accommodations may be.

DESIGN PRINCIPLES

Finally, the design of ARTIC shall be guided by some basic principles that unite the goals of OCTA, the City of Anaheim, the transportation providers, the private partners, and the general public. Through thoughtful design, the facility will be expected to:

- Integrate other public and private development with the terminal facility and site
- Ease travelers' ability to transfer from one mode to another
- Integrate pedestrian linkages to area attractions and development
- Minimize walking distances from one mode to another
- Provide public and personal safety facilities
- Provide shared operations and support facilities
- Provide comfortable and safe waiting environments for persons of all abilities
- Utilize sustainable systems and materials
- Utilize high quality and maintenance materials commensurate with high quality civic facility
- Create a dynamic civic place that exudes a strong sense of identity
- Create an image of a modern yet timeless transportation facility

ARTIC Transit and Parking Facility Description Report

COST ESTIMATES

A rough order of magnitude cost estimate to a level of detail sufficient to begin consideration of financing needs by phase has been developed based on the Preliminary Design Concept.

The cost estimates incorporate costs directly related to development, design and construction of the identified transportation facilities as defined, as well as infrastructure improvements that are specifically required to support the ARTIC facility.

The project costs were organized by element, as defined by OCTA:

- Sitework
- Facility Building
- Trackwork and Platforms
- Parking
- Streets
- Freeways
- Design Construction Oversight

COST ESTIMATING ASSUMPTIONS

- Building facility, platforms and parking unit costs are generally based on comparative unit costs of similar projects in the southern California region, including ongoing airport projects and national trends for transit facilities and cross checked against RS Means cost data by building type.
- Site preparation, civil and street/freeway unit costs are generally based on comparative unit costs of similar projects in the southern California region, in association with source data from publications such as RS Means and Caltrans Cost Data books.
- Generally, contractor overhead/profit and mobilization are included in the unit costs.
- Generally, costs for subsurface items include an allowance for the potentially high groundwater associated with the adjacent Santa Ana River.
- Any temporary roadway, parking, or facility modifications required to accommodate construction activities associated with private development on the site are assumed to be borne by the private developers.
- Construction costs for roadway improvements were adjusted to account for special event work-arounds.
- An allowance for public art was included in the Facility Building, Parking, and Platform categories. The allowance was calculated at 3% of the estimated construction costs, and is consistent with budgets for other publicly-funded transportation projects.
- For each element, 25% of the estimated construction cost was added for design scope and project scope complexities that are unknown at this initial level of

ARTIC Transit and Parking Facility Description Report

project development, such as geotechnical design information and changes to the scope of improvements that evolve with developer coordination.

- For each element, 15% of the estimated construction cost was added to account for additional costs associated with potential unknown site conditions and associated contractor supplemental fees.
- Based on the current planning-level of the ARTIC facility, right of way costs are difficult to ascertain and are therefore excluded from the cost estimate, as are the costs of any long range roadway improvements required to increase access.
- The Phase 1 Parking estimate includes costs for an additional 1000 parking spaces to accommodate future ridership growth prior to the Phase 2 facility build out.

ROUGH ORDER OF MAGNITUDE COST ESTIMATES

The costs presented in Table 4 are at a summary level, and are supported by a more detailed breakdown of items by element in a separate technical report.

Table 4 Rough Order of Magnitude Cost Estimate in 2007\$ (millions):

Cost Element	Phase 1 Initial	Phase 2 Build Out	Total
Sitework	\$ 12	\$ 2	\$ 14
Facility Building	\$ 66	\$ 89	\$ 154
Trackwork & Platforms	\$ 25	\$ 63	\$ 89
Parking	\$ 106	\$ 103	\$ 209
Streets	\$ 23	\$ -	\$ 23
Freeways	\$ -	\$ 224	\$ 224
Design and Construction Oversight	\$ 63	\$ 124	\$ 187
Total	\$ 295	\$ 605	\$ 900

Attachment 1:

Patronage Assessment Technical Memo

dated 7/13/07



Technical Memo: Estimates of Future Patronage Activity and Parking Requirements at ARTIC

Carter & Burgess, Inc.

Introduction

The Anaheim Regional Transportation Intermodal Center (ARTIC) is planned adjacent to the 57 Freeway / Katella interchange in Orange County, CA. The facility is expected to accommodate transportation functions ranging from local shuttle buses through regional AMTRAK and high speed rail service. As part of the preliminary planning process for this facility, the passenger boardings, parking and traffic access needs for each of these modes have been evaluated to aid in the site development process.

The project includes relocation of an existing Metrolink / AMTRAK station (with attendant bus service) to the new site plus the addition of many new services. The project is evaluating three time horizons – the short-term future (2007 to 2015), the mid-term future (2016 to 2020), and the long-term future (2021 to 2030)

This report is broken into three major sections – planned transportation services, patronage activity, and parking estimates. Note that the descriptions included here are not overall descriptions of each system, but simply a description of the elements related to ARTIC.

Brief Description of Planned Transportation Services at ARTIC

Rail Services

The four rail services anticipated to serve ARTIC are described in this section. They include commuter rail, regional rail, high speed rail, and magnetic levitation (maglev) service.

Pacific Surfliner (Amtrak / CalTrans)

The Pacific Surfliner serves the existing Anaheim Station today. It would be relocated to the new ARTIC facility when ARTIC is constructed.

Anaheim / Ontario Super Speed Train

The Super Speed Train (CA/NV SST) is a proposed maglev service that will connect the Los Angeles area to Las Vegas via Ontario Airport and Bakersfield

California High-Speed Rail

The California High Speed Rail (CHSR) is a proposed railroad service that will connect southern California to the Sacramento area in northern California.

MetroLink Commuter Rail

MetroLink is an existing commuter rail service that connects suburban areas in the Los Angeles basin to downtown Los Angeles. Today, MetroLink shares the existing Anaheim station with

AMTRAK, and it is expected that MetroLink service will be relocated to ARTIC when it is constructed.

Bus / Fixed Guideway Services

There are multiple bus and fixed guideway services anticipated to serve ARTIC. They include traditional fixed route services, point-to-point services, bus rapid transit (BRT) service, and a fixed guideway route.

OCTA Local Bus Services

Orange County Transportation Authority (OCTA) operates four bus services (Routes 50, 53, 57, and 430) that feed the existing transit station or its vicinity. These services will be relocated to ARTIC and three additional routes are expected to be placed in service in the future.

OCTA BRT Service

OCTA has plans for three Bus Rapid Transit (BRT) lines in Orange County to be implemented in the next five to eight years. The 28-Mile line is expected to run along State College, and a stop is being considered at ARTIC, and connecting with the other two BRT routes where the lines cross.

OCTA Go-Local

The Go-Local program will provide point-to-point transit service for various local needs such as connecting transit services to major activity centers.

Employer Shuttles

The employer shuttle program provides point-to-point transit service for major employers connecting transit services to major employment centers.

Community Circulators

The community circulator program provides an overlay of local transit service for various community needs.

John Wayne Airport Shuttle

The John Wayne Airport Shuttle will be a short- to long-term system providing a connection between ARTIC and John Wayne International Airport (SNA) to the south.

LA Ontario Airport Shuttle

The LA Ontario Airport Shuttle will be a short-term system providing a connection between ARTIC and LA Ontario Airport (ONT) to the northeast. It is expected to be replaced with the CA/NV SST when that system becomes operational in the mid-term horizon years.

Other Services

There are multiple private bus and taxi services anticipated to serve ARTIC.

Anaheim Resort Transit (ART)

There is an existing system of privately-operated buses that connects various transportation facilities to the resorts in the Anaheim area. These services connect both resort guests and

employees from facilities such as the existing MetroLink station to Disneyland and similar attractions. They are usually reservation-based and do not run on fixed schedules. Existing services are expected to relocate from the current MetroLink / AMTRAK station to ARTIC.

ARTIC Resort Connection (Circulator)

The ARTIC Resort Connection (Circulator) will be a short-term system providing a rubber-tired connection between ARTIC and the Disney resort area to the west. In the mid-term future, it is expected that the circulator will be replaced by a fixed-guideway connection between ARTIC and the resort.

ARTIC Resort Connection (Fixed Guideway)

The ARTIC Resort Connection (Fixed Guideway) will provide a connection between ARTIC and the Disney resort area to the west. It is expected to replace the short-term circulator connection between ARTIC and the resort.

International Bus Connection

Several operators provide motor coach service between the United States and Mexico. These services operate out of the Greyhound facility in Anaheim, and a shuttle bus connection between ARTIC and that facility is planned to allow for improved access.

Intercity Bus Connection

Various operators provide motor coach service between various destinations within the United States, including Greyhound. These services also operate out of the Greyhound facility in Anaheim, and a shuttle bus connection between ARTIC and that facility is planned to allow for improved access.

Tourism Bus Connections

Since the Anaheim area serves a significant tourism industry, it is expected that several tour bus lines may connect to ARTIC. These buses would provide sightseeing trips around the Orange County area. For example, AMTRAK currently provides this type of service in several markets across the US as a package with their rail service.

Taxi Services (multiple carriers)

Most major transit facilities support significant taxi cab services since arriving passengers may not have auto access and departing passengers may not wish to park at the station. ARTIC is expected to follow this trend.

Patronage Activity

As a point of definition, daily riders refers to the number of daily boardings, i.e., patrons that get on a given service at ARTIC. A similar number of alightings could be expected for each service, over the course of a day. Originating passengers is defined as the number of daily boarding riders who begin their transit trip at ARTIC (arriving by driving or walking), as opposed to those who transfer from other services. Note the ridership of a transit service is defined as the total of all boardings at all stations along the entire transit route, and is generally not referenced for planning purposes of ARTIC.

Daily Riders at ARTIC

The forecasts of daily riders at ARTIC were obtained either from the various transit providers or estimated for a general level of magnitude. The larger existing services, such as Amtrak and Metrolink, have prepared ridership forecasts based on existing ridership and planned service expansions. New planned major investments, such as California high-speed rail and the Anaheim/Ontario Super Speed train, have feasibility studies with ridership forecasts. Specific forecasts of riders at ARTIC were obtained or derived directly from these projections. For other planned services at ARTIC, conceptual level station patronage estimates were developed based on the general characteristics of each service.

The table “Needs Assessment, Daily Riders by Mode” lists each planned service at ARTIC and the conceptual number of daily boarding riders for each planning period, as well as the base assumptions for each service’s forecasts. Daily boardings at ARTIC could total 7,400 in the initial timeframe up to 2015, and could increase to over 44,000 by 2030.

Originating Passengers at ARTIC

There are significant synergies between the various modes expected to serve ARTIC. Therefore, although some 7,600 daily riders are forecasted in the short term, not all of these boardings will represent originating transit trips. Many boardings will be the result of trip linking, where patrons arrive at ARTIC via one transit mode and depart via another. For example, a patron may arrive at ARTIC via Metrolink and depart on an employer shuttle in the morning, and then reverse that trip in the evening. Therefore, a conceptual analysis was undertaken to estimate the split between originating passengers and transfer passengers at ARTIC.

This originating passenger analysis relied on the market characteristics of the transit services planned at ARTIC. These were established as low, medium and high based on the following criteria:

- **Low** originating passenger services were defined as those where it is anticipated that a majority of patrons would use public transportation to reach ARTIC to board the service. These patrons would mostly transfer between services at ARTIC. In general, patrons typically transfer from a higher level transit mode to a shorter-distance transit service to get to/from a final destination. This recognizes those already in a car would probably drive to the final nearby destination instead of driving to ARTIC to take transit.
- **Medium** originating passenger services were defined as those where it is anticipated that boardings would be a mix of transfers and origination walk/drive access.
- **High** originating passenger services were defined as those where it is anticipated that a majority of patrons would drive to ARTIC to board the service. In general, these are the longer-distance services.

Based on the low-medium-high categories, a percent of transfers was assigned to the ARTIC station ridership forecast for each service. At the conceptual level of this analysis, the low category was assumed to be 15%, the medium category 50%, and the high category 85% originating passengers.

The table “Needs Assessment, Daily Originating Passengers by Mode” contains the resulting conceptual projections of originating passengers at ARTIC. In sum, the number of originating passengers at ARTIC would be about 1,900 daily in 2007-2015 timeframe, and could grow to 27,600 in the 2030 timeframe.

Parking Projections

Key Considerations

Planning the number of parking spaces requires a system level perspective. Overall, ARTIC will be a facility where people transfer between transit services to reach diverse destinations. Given the fundamental purpose of ARTIC to serve as a focal point for people on alternative modes, the provision of unlimited parking is counter to ARTIC's underlying concept. The number of parking spaces at ARTIC needs to reflect this philosophy as well as several other important considerations:

- A key factor is the number of originating transit trips estimated for the facility. The estimated amount of patron activity has a higher degree of certainty for the near term horizon than the longer term phases. Some major investment rail services are planned to begin in later phases. Ironically, these investments are less certain of actual implementation, yet they have the highest estimated parking requirements of all the ARTIC carriers. It is suggested that estimates of the specific parking needs for these services be refined later as plans progress for these new services.
- The number of on-site employees for transit service functions (ticket sales, baggage handlers, etc), and retail / commercial establishments should be factored in for parking needs. While many employees will commute by transit, some will drive and require parking spaces.
- There are physical constraints to the ARTIC site. The number of parking spaces is limited to what can be reasonably accommodated in surface and parking structures, given the facility design, platform accommodations, pedestrian and traffic circulation, and private development needs.
- The ARTIC site has traffic constraints. Parking facilities are traffic generators. Vehicles will access ARTIC from freeway ramps and the surrounding arterial system. The peak hour capacity of these road facilities is a limiting factor for the amount of total parking that can be provided on site at ARTIC.
- There are shared parking opportunities at event sites adjacent to ARTIC. Some future parking demand at ARTIC should be planned to use these facilities.
- The amount of remote airport parking at ARTIC should recognize some limits. ARTIC should facilitate air passengers connecting from other transit services at ARTIC, but parking by air passengers should be managed so that it largely takes place at other potential remote parking facilities.
- As the site progresses through its three phases of development, changes in specific parking needs will become apparent. The site design will allow some amount of additional parking as future planned services are in final stages of planning and design. This "modularity" of design will preclude over-building in the near term, and allow a degree of flexibility into the future.

The number of parking spaces at ARTIC will need to reflect a balance between these needs.

Parking at Other Intermodal Centers

As a reference for preparing the parking needs at ARTIC, several similar facilities across the nation were evaluated to see how the ARTIC concepts compared to other experiences. Similar facilities were defined as those servicing AMTRAK (the only intercity / regional / high speed rail provider currently operating in the US), at least one other rail mode, and providing parking.

Union Station, Washington DC¹

This 100-year-old facility was renovated in the 1980s and now includes shopping, a food court, and a movie theater in addition to many transit elements. Transit services include AMTRAK, MARC (commuter rail), VRE (commuter rail), several tour companies, the Metro red line (subway), and local bus service. The facility provides 2,194 parking spaces to support both the transit and retail uses.

King Street Station, Seattle, WA²

King Street Station is another 100-year old historic transit facility. Plans for a \$19 million renovation shifted into high gear last year with the purchase (in principle) of the station by the City of Seattle from the BNSF Railway. The station is currently served by AMTRAK (long distance and regional Cascades service), Sounder commuter rail service, and local buses. Although there are no parking facilities on site, several thousand paid spaces are available at two adjacent sites – Qwest Field and King Street Center.

Croton-Harmon Station, Croton-on-Hudson, NY³

Croton-Harmon is primarily a commuter station along the Hudson River north of New York City, New York. However, it provides access to significant transit service, including AMTRAK (both long distance and Empire Service), Metro-North (commuter rail), and several bus lines. It is a terminal for a large portion of Metro-North's Hudson Line service, and supports 1,903 paid parking spaces.

South Station, Boston, MA⁴

South Station is located in downtown Boston and serves as the downtown terminal for more than half of Boston's commuter rail lines. It is currently served by AMTRAK (long distance and regional Northeast Corridor service), MBTA commuter rail and subway service, BRT and local buses. The station also offers a retail area with shops and restaurants. The facility provides 226 parking spaces to support both the transit and retail uses.

A review of these examples shows that the maximum parking availability occurs at King Street Station in Seattle, with several thousand spaces available. The other examples do not exceed 2,200 parking spaces.

Parking Demand

The parking demand at ARTIC consists of three elements: passenger activity, on-site employees, and parking for the Honda Center.

Originating Passenger Trips

The originating passenger activity forecasts developed above are used to estimate parking demand, as parking is not needed for transfer trips that pass through a transit station.

¹ See <http://www.unionstationdc.com/default.asp>

² See <http://www.amtrakcascades.com/Seattle.aspx> and <http://www.wsdot.wa.gov/Projects/Rail/KingStreetStationRenovation/>

³ See http://as0.mta.info/mnr/stations/station_detail.cfm?key=38

⁴ See http://www.mbta.com/schedules_and_maps/rail/lines/stations/?stopId=191&lat=42.352614&lng=-71.055364

Originating passengers would arrive at ARTIC by automobile, walking, and bicycling. An approximate conversion of the number of originating trips to parking spaces assumes a conservative 10% factor to account for walking, bicycling, and auto occupancy⁵. This method was used to develop the demand for parking spaces, except for some providers which have provided direct estimates of parking needs at ARTIC. Specifically, these are Anaheim – Ontario Super Speed train, California High Speed Rail, and Metrolink. The proposed parking spaces from the providers together with the estimates for the other services total about 1,550 spaces (short-term) and 17,000 spaces (long-term). It should be noted that the high demand for parking spaces in the future is due to the high estimates provided by the new rail providers.

On-site Employees

Employees will need parking spaces, but many employees will arrive by transit. ARTIC Support staff consists of two separate groups. For the transportation operations portion of the facility, employees will consist of ticket agents, baggage handlers, janitors, and other staff. Parking for these personnel is usually provided in an area of the transit facility that grants these users easy access to their work areas but keeps these spaces apart from the general public. For this facility, 0.5% of the passenger trip parking demand was assumed to accommodate this staff, or approximately 10 spaces short-term and 80 spaces (long-term). For the commercial / retail uses, assuming approximately 20 employees, the parking demand will be about 10 spaces. This number will not change, since the square footage of retail will not change as transit services to ARTIC increase. The total parking spaces for on-site employees is about 20 short-term, and 100 long-term.

Honda Center

As part of the property acquisition for the ARTIC site, Anaheim has agreed to supply 405 parking spaces for the Honda Center.

Total Parking Demand

The results are tabulated in the table, “Needs Assessment, Parking Spaces”. The sum of the results for originating passengers, on-site employees, and the Honda Center results in a parking demand of 2,000 spaces (short term) and 17,000 spaces (long-term). This represents the number of users that could potentially park at ARTIC based on the projected ridership, and includes the parking projections by some planned providers as described above.

ARTIC Site Parking Constraints

Several conceptual layouts for the ARTIC site have been developed by the project team. These layouts consider site constraints, potential development opportunities adjacent to the ARTIC facility, transit and roadway alignments, and other elements that will be required to design a functional transit facility. After evaluating multiple site concepts, the majority of these concepts allow for between 1,000 and 2,000 spaces in a “main” facility (shared with bus operations and common space) and up to 4,000 spaces in a supplemental parking structure. This results in a conceptual maximum (or supply) of about 6,000 spaces for the ARTIC site.

⁵ It is normal for some people (particularly spouses) to travel in carpools to transit stations if they have the similar schedules.

Traffic Operations Parking Constraints

There is a limited amount of access roadway access to and from the ARTIC site via freeway ramps and the arterial street system. The amount of traffic that will be able to flow in and out of parking facilities is limited by the capacity of these roadway facilities.

The main access to the proposed ARTIC facility will use Douglass Avenue. This connection is currently being evaluated in a separate EIR. However, a cursory traffic review has been performed to provide a frame of reference for parking considerations as well as ongoing ARTIC project development.

The following assumptions were made:

- Each service was evaluated to determine if it is predominantly commuter-based or tourist-based.
- Commuter-based services were assumed to generate 55% of their trips during the peak hour. Other services were assumed to generate 30% of their trips during the peak hour⁶. These factors account for rates of auto occupancy.
- The number of originating passengers for each of the commuter-based and tourist-based services is calculated as described above.

Given these assumptions, the traffic volume on Douglass approaching Katella was calculated to be 1,020 vehicles per direction in the peak hour, in the near term. The Table “Needs Assessment, Peak Hour Vehicle Trip Generation” displays the results. If concentrated at Katella, this would result in about 500 left turns onto Katella (assuming half of the trips are destined to the 57 Freeway or further west on Katella). This would place a heavy load on this intersection, as 600 vehicles is the usual planning threshold for double-left turn lane capacity. This conclusion has been considered by the team preparing the EIR for The Platinum Triangle. For the mid-term and long-term timeframes, the capacity would be exceeded unless the parking supply is maintained at levels similar to the short term. There are options for extending Douglass to increase the capacity of connections to the surrounding street system:

Further detailed traffic analysis is warranted to assess how much additional peak hour volume could be added from the parking facilities, given this potential new capacity.

Overall, there is an indication that the roadway system in and surrounding ARTIC could be at or beyond capacity even in the short-term horizon.

Parking Recommendation

It is recommended that the provision of parking at ARTIC take into account factors of the physical site, traffic constraints, and other considerations, as well as demand. Other intermodal centers around the country have a relatively limited amount of parking, and the parking at ARTIC should be in line with these examples. The intermodal center’s main function will be the facilitation of transfers between transit modes, and an over-supply of parking will undermine this intent. Moreover, the impact on traffic congestion and air quality by accommodating large numbers of parkers will be at odds with the larger goals of Anaheim and Orange County.

⁶ OpCit, “Existing Park-n-Ride Trip Generation Analysis”

The development of parking at the site should be focused on the near term needs, with provisions for some potential parking expansion as future services are introduced at ARTIC. Parking management policies can shift any additional future demand at ARTIC to other locations, such as shared parking opportunities and other remote lots for air passenger traffic.

<div>Anaheim Regional Transportation Intermodal Center</div> <div>ARTIC</div>	Needs Assessment			7/13/2007
	Daily Riders (Boardings) by Mode			
	Planning Horizons			
2007 - 2015	2016 - 2020	2021 - 2030		
Transportation Modes				
Regional Rail				
Amtrak/Caltrans (Pacific Surfliner)	400	700	1,000	Anaheim station patronage per CalTrans (20 June 2007 email), based on California State Rail Plan 205-2006 to 2015-2016 projections
California / Nevada Super Speed Train		10,250	20,500	2025 patronage based on June 2005 CA/NV SST Report, Table 3.3-4 2016 patronage assumes 50% of 2025 patronage
California High-Speed Rail			6,900	Anaheim station boardings per CHSR engineering Criteria January 2004, Table 4.0-1
Commuter Rail				
Metrolink (SCRRA)	1,400	2,200	3,000	Existing Anaheim station boardings per <i>Metrolink Station Passenger Counts</i> document 4/13/2007 = 445. Total Orange Co. Line patronage = 4521 Anaheim Station = 10% of total. Projected Orange Co. Line patronage per <i>SCRRA Strategic Assessment</i> 1/26/2007: 2015 of 13,066 (11%=1,400); 2020 of 17,975 (12% = 2,200); 2030 of 25,356 (12%=3,000); assume increasing Anaheim station share due to ARTIC interconnectivity
Local Bus				
OCTA/Local Bus Service	500	1,200	1,400	Initial Routes 50, 53 57 and 430, @ 15 minute headways peak period. Assume 20 passenger boardings/alighting per route trip = 20(4)(4) = 320 peak hour passengers. Assuming 60% peak hour boardings/alightings = 500 daily riders. Add 3 routes w/ 25 & 30 passenger boardings for 2020 & 2030 respectively
OCTA/BRT Service (Katella Ave.)	900	1,100	1,300	Katella BRT ridership forecasts not yet available. Borrow Harbor Line 2020 ridership: 18,000/21 stations = 857 riders per station. Add intermodal transfer factor of 130% = 1,100 riders; 2015 at 15% = 900; 2030 at 20% more = 1,300
Anaheim Resort Transit (ART)				
Anaheim Transportation Network (ATN))	500	600	700	Assume average 3 buses per hour; 18 hours per day; 36 passenger bus; 25% load factor = 9 passengers. (3)(18)(9)=500 Assume growth of 15% to 2020, and 50% to 2030 from 2015.
Anaheim Transit Projects				
OCTA Go-Local	240	280	360	Assume 30 minute headways; 6 hours per day; 40 passenger bus. 25% load factor = 20 passengers. (2)(6)(20) = 240 Assume growth of 15% to 2020, and 50% to 2030 from 2015.
Employer Shuttles	360	400	540	Assume 20 minute headways; 6 hours per day; 25 passenger shuttle. 80% load factor = 20 passengers. (3)(6)(20) = 360 Assume growth of 15% to 2020, and 50% to 2030 from 2015.
Community Circulators	300	350	450	Assume 30 minute headways; 12 hours per day; 25 passenger bus. 50% load factor = 12.5 passengers. (2)(12)(12.5) = 300 Assume growth of 15% to 2020, and 50% to 2030 from 2015.
ARTIC Resort Connection - Circulator	900			Assume 15 minute headways; 18 hours per day; 25 passenger bus. 50% load factor = 12.5 passengers. (4)(18)(12.5) = 900
ARTIC Resort Connection - Fixed Guideway		3,500	4,300	Assume 15 minute headways; 18 hours per day; 160 passengers per train. 30% load factor = 48 passengers. (4)(18)(48) = 3456 Assume 25% growth to 2030 from 2020.
Private Carriers				
International Bus Connection		450	550	Shuttle to current facilities. Assume 1 hour headways to 3 providers, 18 hours per day. 8 passengers per trip. 3(8)(8) = 432 Add 25% for 2030
Intercity Bus (Greyhound / Coach USA)	450	500	650	Shuttle to current facilities. Assume 1 hour headways to 3 providers, 18 hours per day. 8 passengers per trip. 3 (18)(8) = 432 Assume growth of 15% to 2020, and 50% to 2030 from 2015
Tourism Buses (12 + Carriers)	200	250	300	Assume 8 passengers each carrier. 2 trips daily on 12 carriers 8(12)(2) = 192 Assume growth of 15% to 2020, and 50% to 2030 from 2015
Taxi Companies (Multiple Carriers)	90	660	1,570	Assume 5% of total boardings of rail modes only
Airport Shuttle				
John Wayne Airport	550	1,000	1,000	Based 200K passengers/yr for 2015 and 300K/yr for 2020/2030 per LAWA
LAWA Shuttle Service (ARTIC to LA Ontario)	550			Based 200K passengers/yr for 2015. Displaced by Anaheim/Ontario SST 2015
Total Daily Boardings on All Modes	7,300	23,400	44,500	Note: final numbers will not be accumulative
Peak Hour Boardings (based on 20% peak hour factor)	1,500	4,700	8,900	
Rail Boardings Subtotal	1,800	13,150	31,400	

<div><div>Anaheim Regional Transportation Intermodal Center</div><div>ARTIC</div></div>	Needs Assessment					Daily
	Originating Passengers by Mode					7/13/2007
	Planning Horizons			Amount of Originating Passengers	Justification	
2007 - 2015	2016 - 2020	2021 - 2030				
Transportation Modes						
Regional Rail						
Amtrak/Caltrans (Pacific Surfliner)	200	350	500	Medium	Travel market composed of a mix of originating and connecting commuters/ long distance travelers	
California / Nevada Super Speed Train		7,690	15,380	High	Primary travel market of long distance trips; low transfer rate to/from other modes	
California High-Speed Rail			5,180	High	Primary travel market of long distance trips; low transfer rate to/from other modes	
Commuter Rail						
Metrolink (SCRRA)	700	1,100	1,500	Medium	Commuter travel market composed of a mix of originating and connecting travelers	
Local Bus						
OCTA/Local Bus Service	130	300	350	Low	Primary travel market of local, short distance trips; high transfer rate to/from other modes	
OCTA/BRT Service (Katella Ave.)	230	280	330	Low	Primary travel market of local, short distance trips; high transfer rate to/from other modes	
Anaheim Resort Transit (ART)						
Anaheim Transportation Network (ATN))	130	150	700	Low	Primary travel market of connecting trips to/from other modes	
Anaheim Transit Projects						
OCTA Go-Local	0	0	0	Zero	Travel market is connecting trips to/from other modes	
Employer Shuttles	0	0	0	Zero	Travel market is connecting trips to/from other modes	
Community Circulators	0	0	0	Zero	Travel market is connecting trips to/from other modes	
ARTIC Resort Connection - Circulator	230			Low	Primary travel market of connecting trips to/from other modes	
ARTIC Resort Connection - Fixed Guideway		880	1,080	Low	Primary travel market of connecting trips to/from other modes	
Private Carriers						
International Bus Connection		0	0	Zero	Travel market is connecting trips to/from other modes	
Intercity Bus (Greyhound / Coach USA)	0	0	0	Zero	Travel market is connecting trips to/from other modes	
Tourism Buses (12 + Carriers)	50	60	80	Low	Primary travel market of connecting trips to/from other modes	
Taxi Companies (Multiple Carriers)	0	0	0	Zero	Travel market is connecting trips to/from other modes	
Airport Shuttle						
John Wayne Airport	280	500	500	Medium	Travel market composed of a mix of originating and connecting passengers	
LAWA Shuttle Service (ARTIC to LA Ontario)	280			Medium	Travel market composed of a mix of originating and connecting passengers	
Total Daily Originating Passengers - All Modes	2,200	11,300	25,600			
Peak Hour Originating Passengers (20% pk hr factor)	400	2,300	5,100			

	Assumed Origination Percentage
Zero	0%
Low	25%
Medium	50%
High	75%

<div>Anaheim Regional Transportation Intermodal Center</div> <div>ARTIC</div>	Needs Assessment			7/13/2007
	Parking Spaces			
	Planning Horizons			
	2007 - 2015	2016 - 2020	2021 - 2030	Notes
Transportation Modes				
Regional Rail				
Amtrak/Caltrans (Pacific Surfliner)	170	290	420	Estimated based on number of originating passengers
California / Nevada Super Speed Train		6,000	12,000	Based on CA/NV SST Table 3.3-13, June 2005
California High-Speed Rail			1,900	Based on California High Speed Train Engineering Criteria Table 4.6-2, January 2004
Commuter Rail				
Metrolink (SCRRA)	460	600	740	Based on PB Technical Memo "Metrolink Service Expansion"
Local Bus				
OCTA/Local Bus Service	110	250	290	Estimated based on number of originating passengers
OCTA/BRT Service (Katella Ave.)	190	230	280	Estimated based on number of originating passengers
Anaheim Resort Transit (ART)				
Anaheim Transportation Network (ATN))	110	130	700	Estimated based on number of originating passengers
Anaheim Transit Projects				
OCTA Go-Local	0	0	0	Estimated based on mode as 100% distribution
Employer Shuttles	0	0	0	Estimated based on mode as 100% distribution
Community Circulators	0	0	0	Estimated based on mode as 100% distribution
ARTIC Resort Connection - Circulator	190			Estimated based on number of originating passengers
ARTIC Resort Connection - Fixed Guideway		730	900	Estimated based on number of originating passengers
Private Carriers				
International Bus Connection		0	0	Estimated based on mode as 100% distribution
Intercity Bus (Greyhound / Coach USA)	0	0	0	Estimated based on mode as 100% distribution
Tourism Buses (12 + Carriers)	40	50	70	Estimated based on mode as 100% distribution
Taxi Companies (Multiple Carriers)	0	0	0	Estimated based on mode as 100% distribution
Airport Shuttle				
John Wayne Airport	230	420	420	Estimated based on number of originating passengers
LAWA Shuttle Service (ARTIC to LA Ontario)	230			Estimated based on number of originating passengers
On-site Employees				
On-site Employees	20	40	100	Estimated based on number of employees
Honda Center				
Honda Center	405	405	405	ARTIC site agreement
Total Parking Spaces	2,200	9,200	18,300	
Total Parking w/o Honda Center	1,795	8,795	17,895	Originating Passenger to Parking Spaces Ratio
Total Parking w/o CN/SST & Honda Center	1,795	2,795	5,895	1.20



Needs Assessment					Peak
Hour Vehicle Trip Generation					7/13/2007
Planning Horizons			Notes		
2007 - 2015	2016 - 2020	2021 - 2030			
110	190	280	Commuter		
	2,310	4,610	Tourist		
		2,850	Commuter		
390	610	830	Commuter		
70	170	190	Commuter		
130	150	180	Commuter		
40	50	700	Tourist		
0	0	0	Commuter		
0	0	0	Commuter		
0	0	0	Commuter		
130			Tourist		
	260	320	Tourist		
	0	0	Tourist		
0	0	0	Tourist		
20	20	20	Tourist		
0	0	0	Tourist		
150	280	280	Commuter		
150			Commuter		
1,190	4,040	10,260			

	Assumed Peak Hour Trip Generation Percentage of Daily Trip Origins
Commuter	55%
Tourist	30%

Attachment 2:

Needs Assessment Summary
(ARTIC Space Program), dated 7/16/07



Needs Assessment Summary

Schedule of Program Assumptions

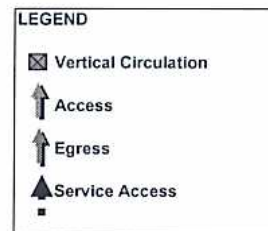
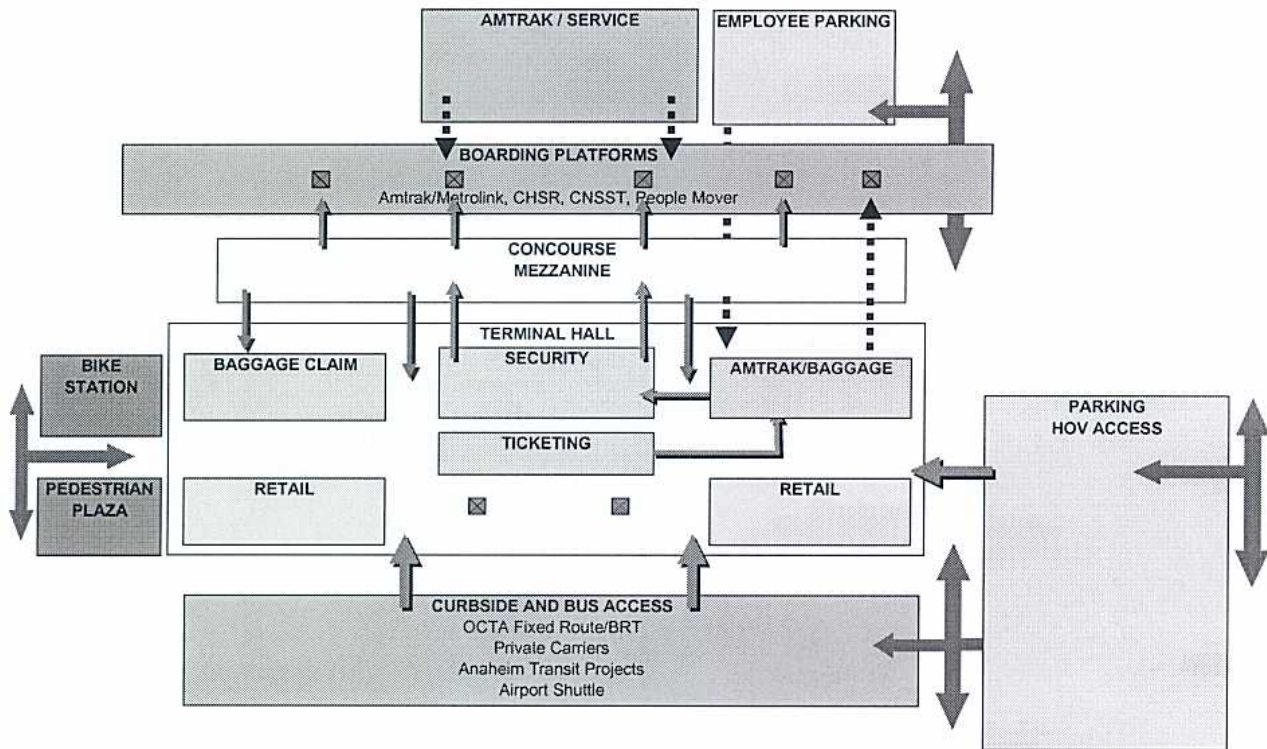
7/16/2007

SPACE PROGRAM SUMMARY

TERMINAL BUILDING

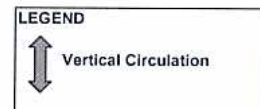
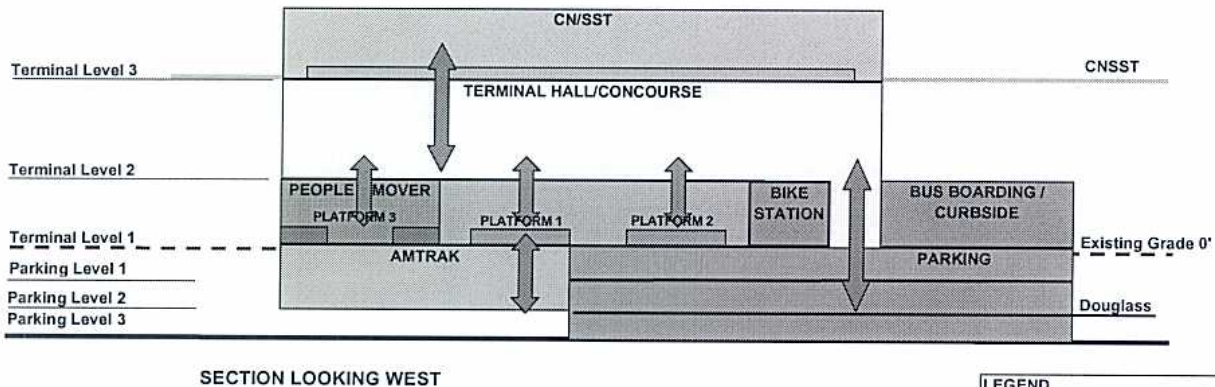
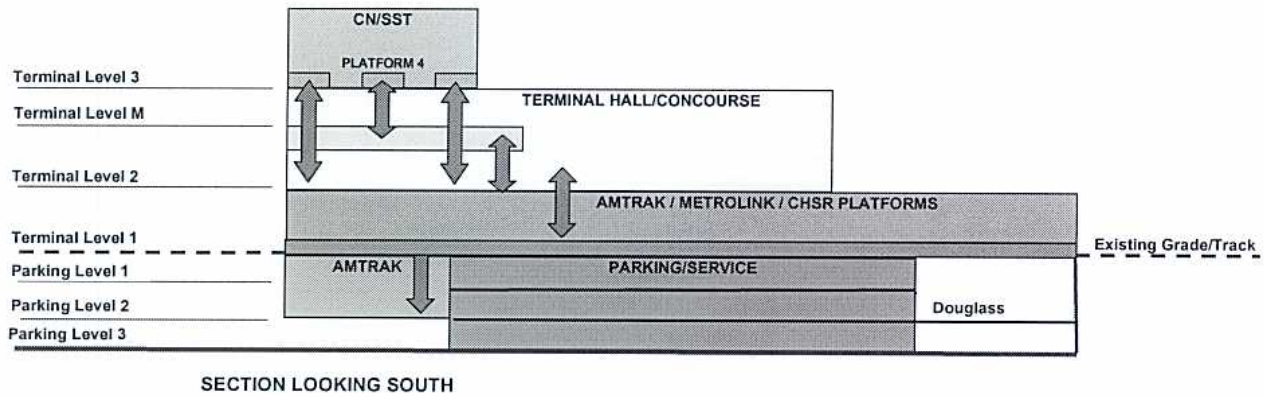
FUNCTIONAL AREA	Phase 1 2007 - 2015	Phase 2 2016 - 2030	TOTAL	Description
OCTA				
Space Type Location				
Public Space Terminal L2	420		420	Ticketing, Office
Operations Support Space Terminal L1	432		432	Crew Room/Restroom, Security
Boarding Area (Covered) Bus Transfer	4,550		4,550	Covered boarding
Metrolink				
Space Type Location				
Public Space Terminal L2	2550		2,550	Ticketing, Office, Waiting
Operations Support Space Terminal L1	234		234	Ancillary Space
Boarding Area Platform 1	0		0	Included with Amtrak
Amtrak				
Space Type Location				
Public Space Terminal L2	2,310		2,310	Ticketing, Waiting
Public Support Space Terminal L2	4,508		4,508	Baggage, Ticket / Baggage Offices
Operations Support Space Terminal L1	2,678		2,678	Maintenance, Employee Facilities
Boarding Area Platform 1	26,000		26,000	At-grade platform 28' x 1000'
CHSR				
Space Type Location				
Public Space Terminal L2		3,390	3,390	Ticketing, Office, Waiting
Operations Support Space Terminal L1		1,541	1,541	Supervisor, Ancillary Space
Boarding Area Platform 2		39,360	39,360	At-grade platform 30' x 1312'
CNSST				
Space Type Location				
Public Space Terminal L2		46,920	46,920	Ticketing, Storage, Waiting
Operations Support Space Terminal M		2,093	2,093	Supervisor, Ancillary Space
Boarding Area Platform 4		45,540	45,540	3 platforms (1) 690' x 26' (2) 690 x 20'
People Mover				
Space Type Location				
Public Space Terminal L2		1,380	1,380	Ticketing, Storage, Waiting
Operations Support Space Terminal L1		858	858	Customer Svce, Supervisor, Ancillary Space
Boarding Area Platform 3		6,400	6,400	2 Platforms 160' x 20' each
Anaheim Transit Projects				
Space Type Location				
Public Space Terminal L2	450	450	900	Ticketing, Storage
Operations Support Space Terminal L1	312		312	Crew Room/Restroom, Security
Airport Shuttle				
Space Type Location				
Public Space Terminal L2	6,540		6,540	Ticketing, Waiting
Operations Support Space Terminal L2	1,599		1,599	Administration, Supervisor,
Intercity Bus				
Space Type Location				
Public Space Terminal L2		990	990	Ticketing, Baggage Check, Waiting
Operations Support Space Terminal L1		455	455	Offices, Storage
Bicycle Station				
Public Support Space Terminal L1	5,484		5,484	Bike Storage/Rental, Showers/Lockers
Common Areas - Phase 1				
Public Support Space Terminal L2	20,700		20,700	Event Hall, Restrooms, Security,
Operation Support Space Terminal L1	2,496		2,496	Administration Staff Facilities
Common Areas - Phase 2				
Public Support Space Terminal L2		17,400	17,400	Retail, Restaurants, Visitor & Business Ctr.
Operation Support Space Terminal L1				Administration Staff Facilities
TOTAL NET AREA W/O BOARDING AREA	50,713	75,477	126,190 sf	
GROSS AREA FACTOR (1.15%)	7,607	11,322	18,929 sf	
TOTAL GROSS AREA	58,320	86,799	145,119 sf	
BOARDING AREA (PLATFORM)	30,550	91,300	121,850 sf	

Adjacency Diagram





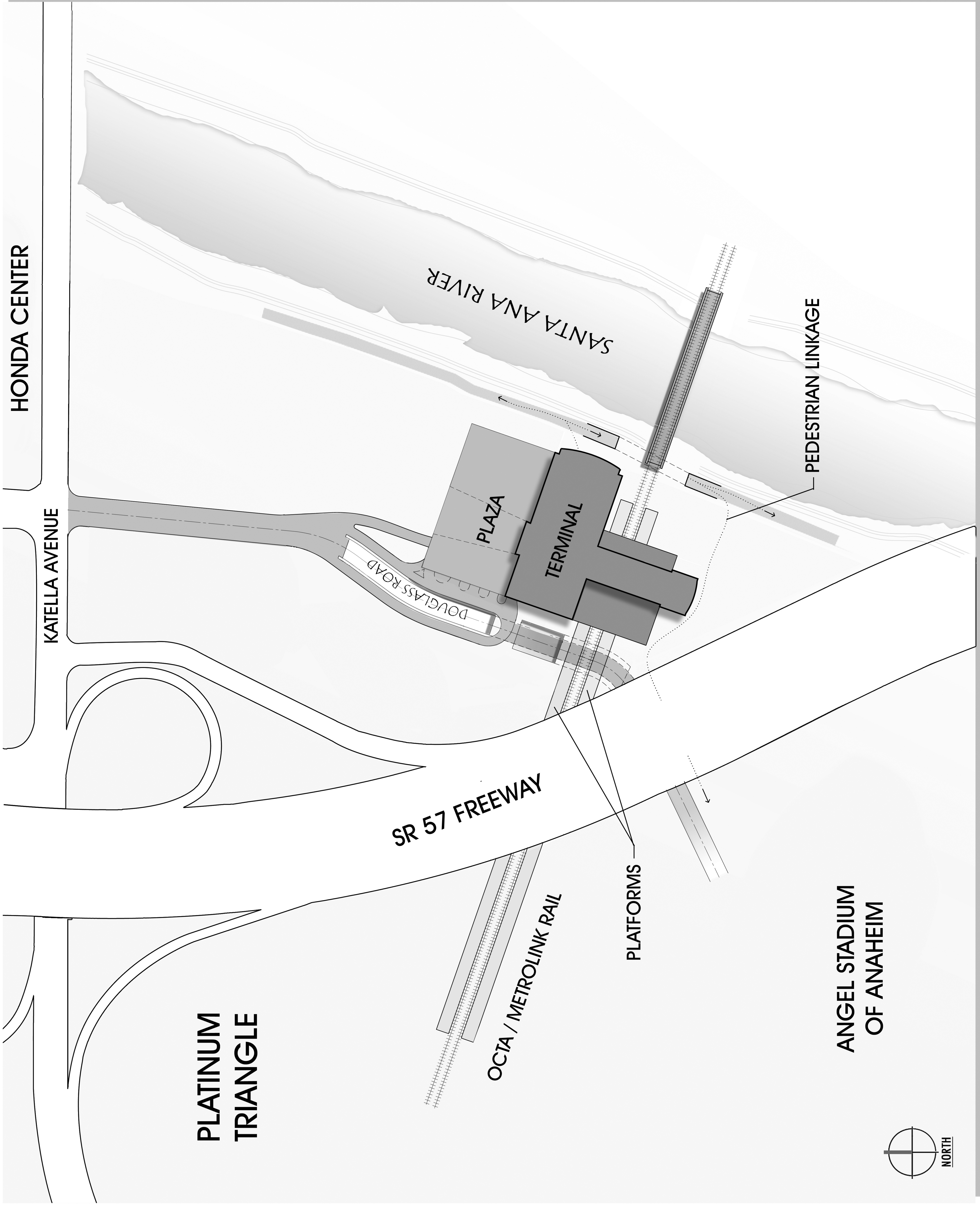
Stacking Diagram



Attachment 3:

ARTIC Site Location: Phase 1

Transit Facility Concept (Initial), October 2007



ARTIC SITE LOCATION: PHASE 1
TRANSIT FACILITY
CONCEPT (INITIAL)

OCTOBER 2007

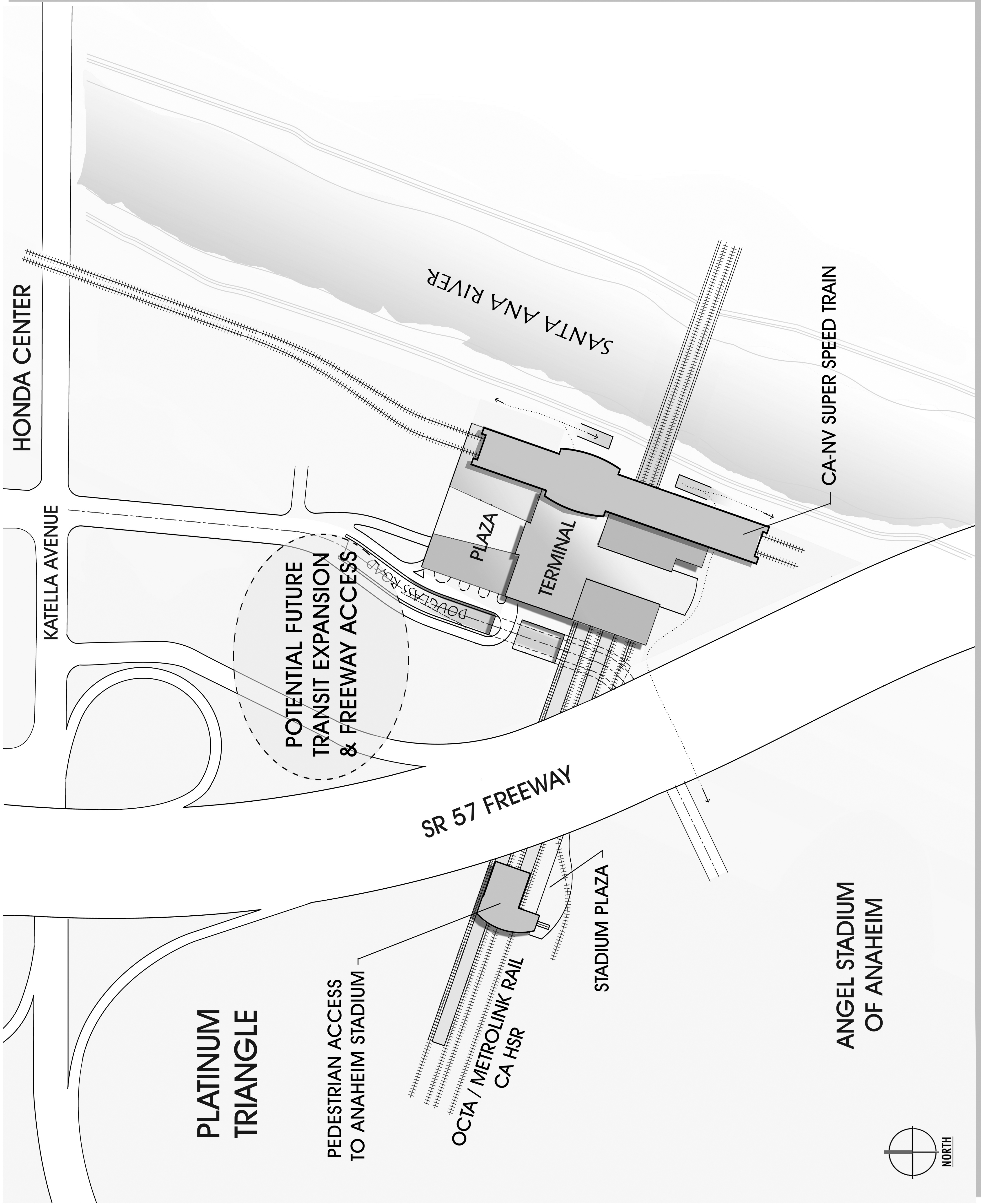
Carter Burgess



Attachment 4:

ARTIC Site Location: Phase 2

Transit Facility Concept (Build Out), October 2007



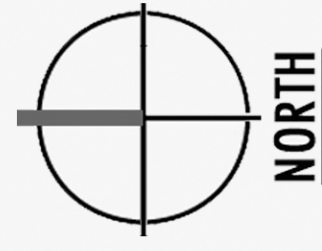
ARTIC SITE LOCATION: PHASE 2
TRANSIT FACILITY
CONCEPT (BUILDOUT)

OCTOBER 2007

Carter Burgess



ANGEL STADIUM
OF ANAHEIM



HONDA CENTER

KATELLA AVENUE

PLATINUM
TRIANGLE

PEDESTRIAN ACCESS
TO ANAHEIM STADIUM

OCTA / METROLINK RAIL
CA HSR

STADIUM PLAZA

SR 57 FREEWAY

PLAZA

TERMINAL

SANTA ANA RIVER

CA-NV SUPER SPEED TRAIN

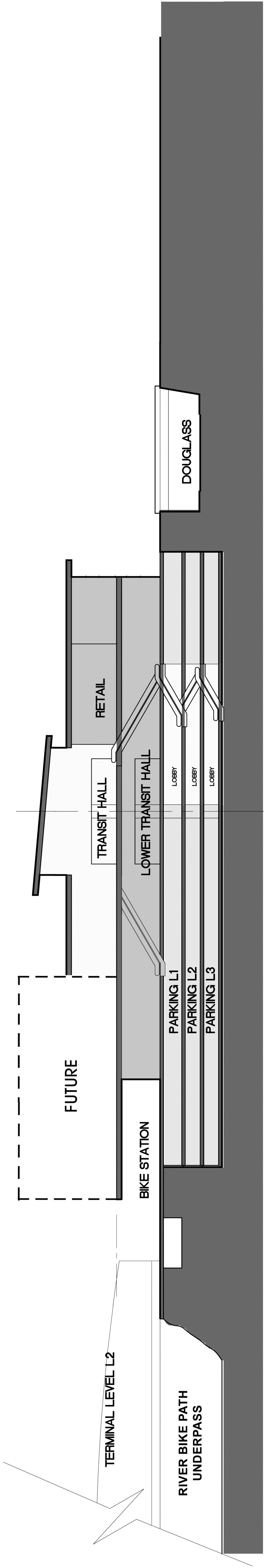
POTENTIAL FUTURE
TRANSIT EXPANSION
& FREEWAY ACCESS

DOUGLASS ROAD

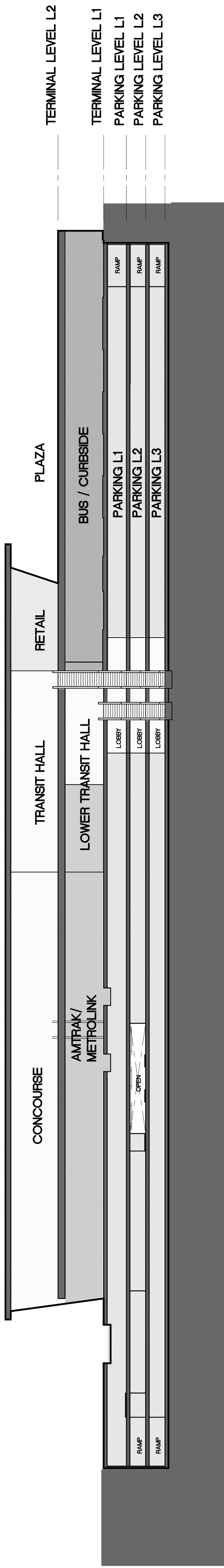
Attachment 5:

Building Sections: Phase 1

Transit Facility Concept (Initial), October 2007



SECTION A



SECTION B

BUILDING SECTIONS: PHASE 1
TRANSIT FACILITY
CONCEPT (INITIAL)



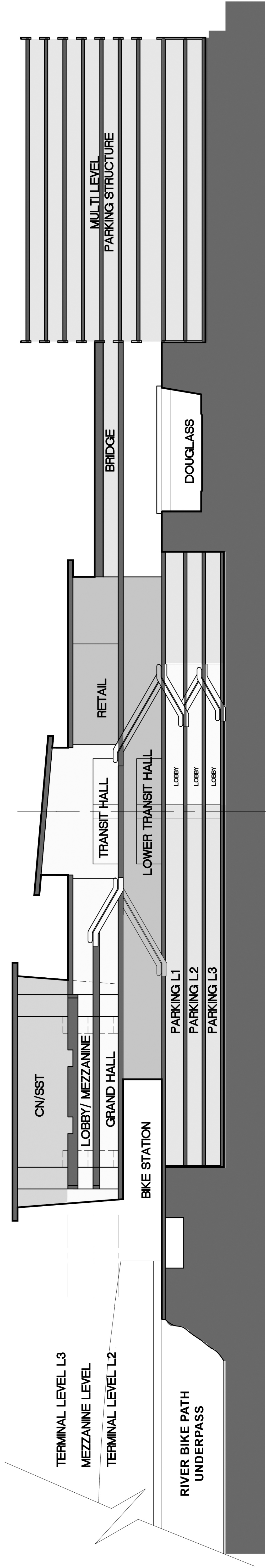
OCTOBER 2007

CarterBurgess

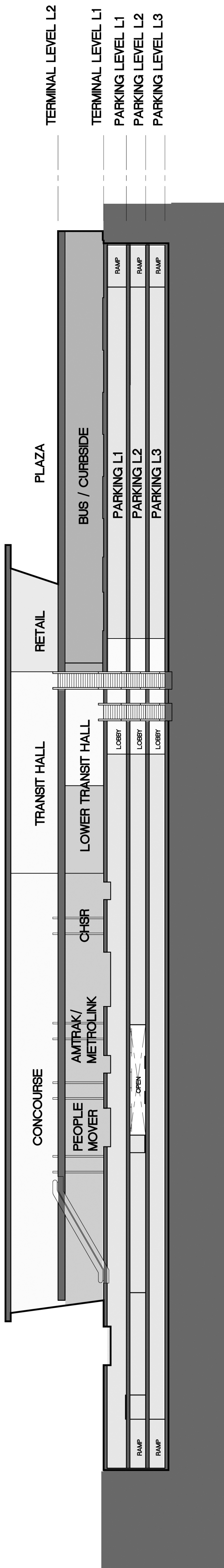
Attachment 6:

Building Sections: Phase 2

Transit Facility Concept (Build Out), October 2007



SECTION A



SECTION B

BUILDING SECTIONS: PHASE 2
TRANSIT FACILITY
CONCEPT (BUILDOUT)

OCTOBER 2007

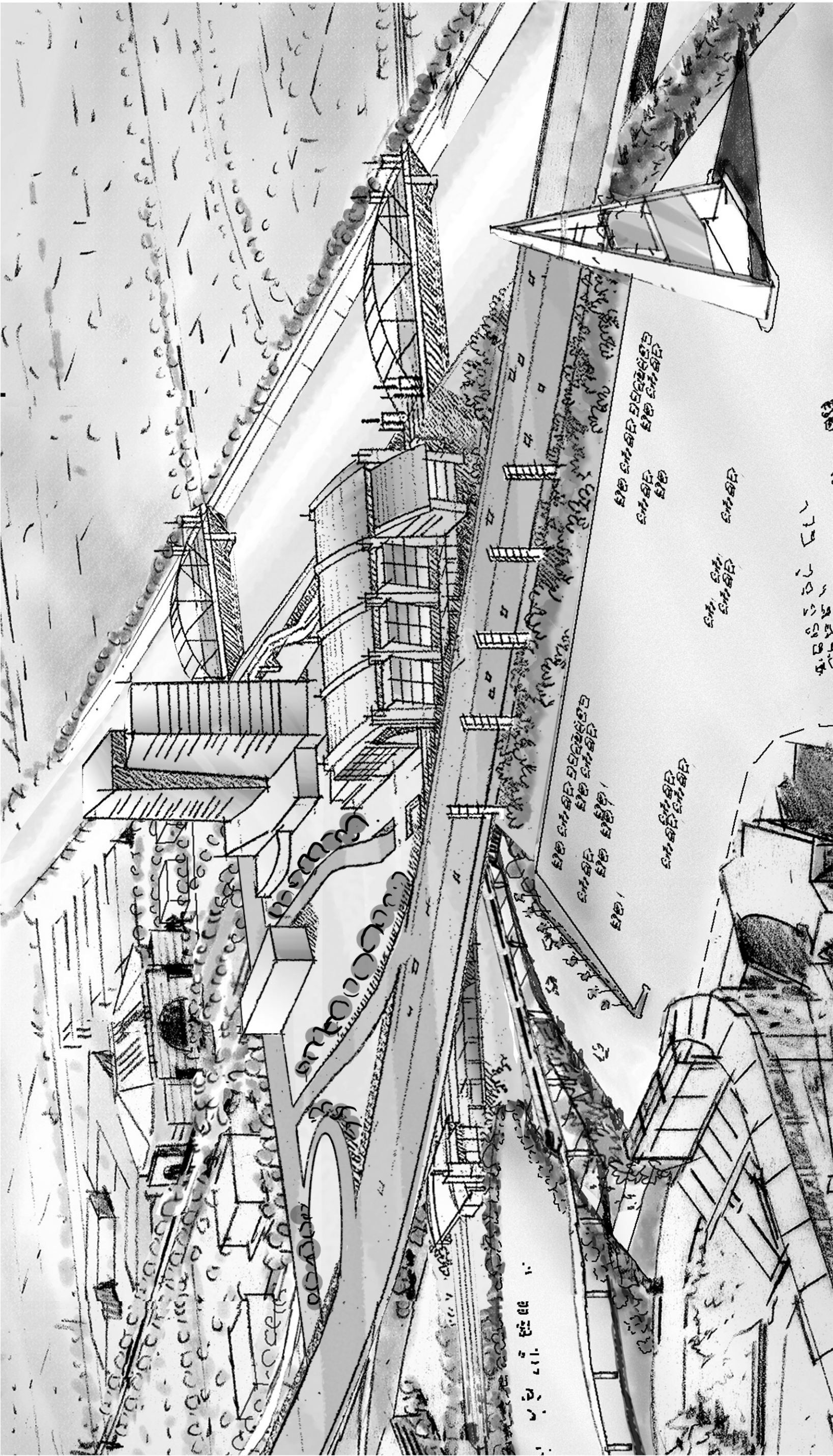
CarterBurgess



Attachment 7:

Rendering

Aerial View Looking North (Phase 2)



Artist Rendering

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AERIAL VIEW - LOOKING NORTH
PHASE 2



Attachment 8:

Rendering

Aerial View Looking South (Phase 2)



Artist Rendering

Carter Burgess

AERIAL VIEW - LOOKING SOUTH
PHASE 2



Attachment 9:

Rendering

Interior Concourse (Phase 2)



Artist Rendering

INTERIOR CONCOURSE

PHASE 2



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