LA STAP RFP
VOL I: TECHNICAL PROPOSAL

February 19, 2021

TRANZITO SMART MOBILITY
VECTOR
DESIGN WORKS A BMW Group Company
SOM
studioneleven
FEHR PEERS
BLACK & VEATCH

Los Angeles is a city unlike any other.... but like the movies that make it famous, things aren't always what they seem. Tourists from all around the world flock here for a taste of Hollywood and endless summers, for Beverly Hills and the Miracle Mile, and for events like the 2026 World Cup and 2028 Olympics. But the real heartbeat of the city is the millions of Angeleno essential workers and the buses that they rely on to keep the city running. In a sense, then, LA is like any other city, a tale of two cities come to life.

TO MILLIONS OF ANGELENOS, BUS STOPS ARE AN ESSENTIAL SERVICE

The Sidewalk and Transit Amenities Program (STAP) should ensure that bus patrons—and the bus itself—are not left behind as Los Angeles establishes leadership in smart city advancements. Rather, the bus should be the backbone of smart city mobility, with stops as the enabler of this revolution. But in order for this to manifest, bus stops themselves need to evolve.

TODAY'S BUS STOPS ARE TOMORROW'S MOBILITY HUBS

Bus stops only serve bus riders; mobility hubs serve all Angelenos—bus riders and everyone else. Mobility is rapidly changing, and mobility hubs ensure that everyone has equal access to its benefits.

Convergence is happening all around us, and how it plays out on Los Angeles' streets over the next decade will determine if the advancements, conveniences, and efficiencies brought about by smart city innovations will improve mobility for all Angelenos or widen the disparities in access. We hope to help STAP put a step in the right direction to Build Back Better.

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DEAR SELECTION COMMITTEE,

Los Angeles is truly a city unlike any other. Just like the movies that make it famous, there's a lot more behind the scenes. The twin ports of Los Angeles and Long Beach rank first and second in the US, powering over $200 billion in annual trade. And its leadership in various industries—from aerospace to fashion rank LA County first in the nation in economic output; at $710 billion GDP it more than doubles New York City. Angelinos get work done, and we look good doing it.

Our team understands the real Los Angeles, because we've helped shape the City's cityscape and transportation for years, working in partnership with public servants to realize their vision for a more sustainable and equitable future.

As transportation planners, operators, builders, and urban designers, we've seen the exciting potential of new mobility—and the ways it has fallen short. Increased mobility options for some have led to congestion, competition for sidewalk and curb space, and reduced transit service for many. But leadership in Los Angeles has taken a stand, and we're emboldened to think big alongside them.

We proudly present our vision-transforming bus stops into mobility hubs to serve smart cities mobility for all Angelinos. Our plan emphasizes Shelter - Shade - Safety - Comfort, but we go further to maximize STAP's potential in both revenues and in achieving broad citywide policies. Our team hopes to do our part to usher in a smart cities future that is both equitable and sustainable, and show the world that we're indeed a city like no other.

Sincerely,

Gene Oh
CEO, Tranzito
gene@tranzito.org
888.659.2291 Ext 2

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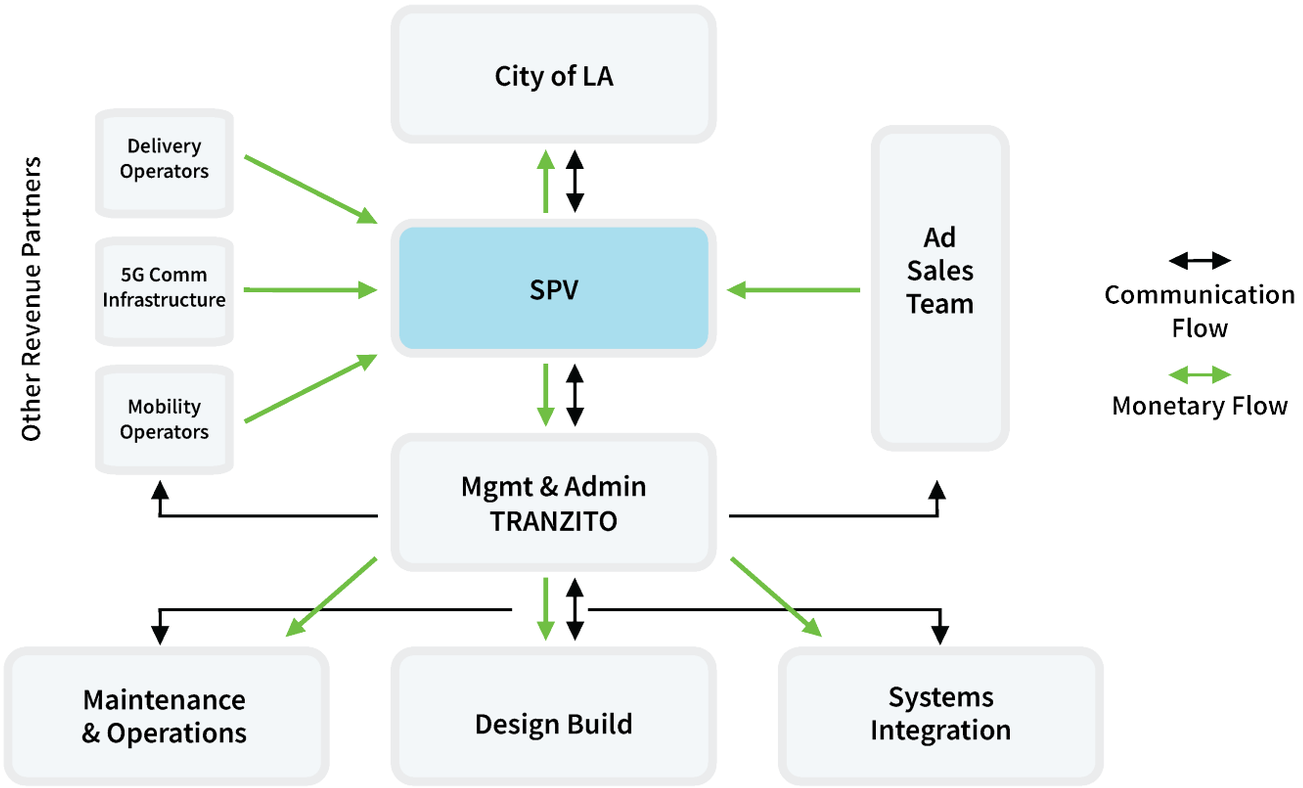
1. COMPANY/ ORGANIZATION INFORMATION

TRANZITO

Tranzito has operated new mobility infrastructure projects for public agencies since 2004. We specialize in helping to shape and execute the vision of our clients; unlike a traditional bus shelter concessionaire relationship, we are not beholden to shareholders but to our client, and ultimately the public we serve.

Cities own their rights-of-way, and the bus stop is a public good that should benefit the City and its people first and foremost. We recommend that STAP form its own corporate entity; this could take several forms but we suggest an infrastructure special purpose vehicle (SPV) with the following elements:

Potential Entity Formation: Infrastructure SPV



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1. The SPV will finance capital expenses (CapEx) and initial startup expenses. Subcontractors will set and be responsible for the vast majority of operating expenses (OpEx) in their respective areas — under the direct supervision of the prime contractor, Tranzito.
2. The advertising revenue partner will send net advertising revenue directly to the SPV and offer a minimum annual guarantee (MAG) to the project of up to $30 million annually.
3. Other revenue partners will help pay for infrastructure and/or send revenue directly to the SPV. These partners can include a communications infrastructure partner, mobility partners, delivery partners, and other emerging smart cities partners.
4. The City will seek a smaller discount-rate (the interest rate on loans for CapEx) than typical. Lower rates should be attainable because of the minimized risk exposure produced by elements 1, 2, and 3. The smaller discount-rate will in turn produce greater revenue for the City.
5. The City will highlight the nature of the project as an infrastructure investment when seeking partners. Infrastructure investors are far more conservative in their tolerance of risk than other venture capitalists. The due diligence exercised by such firms offers an additional layer of security for the City.

We will structure the SPV to suit the City's preference in the risk to revenue scale. An SPV is agile enough to accomodate the City wherever the City desires to be along that scale; with appropriate revenue potentials and responsibilities to match. While final composition and model options will be refined during the due-diligence and scoping phase, these models are illustrative of the range of choices:

- **Model 1 (City-financed):**
  The City pays for capital expenditures. In return, the City receives the vast majority of STAP revenues and more control of the project. This model is more akin to a traditional managed-services contract, with the contractor getting a minor ownership and a major percentage of revenues or profits.

- **Model 2 (Contractor-financed):**
  The Contractor-led team works with a preferred infrastructure financing partner, which collectively owns up to 100% of the SPV, with the City participating in revenues. This model is more akin to a traditional out-of-home (OOH) contract.

- **Model 3 (Jointly-financed):**
  The City and Contractor divide responsibility for financing. Under this model the City may expect a greater share of revenues, influence on STAP composition, and KPI commitments.

MODEL 1 (CITY-FINANCED):

Finance structure: City finances CapEx and retains 100% of SPV ownership (or may elect for a city-led structure per GAO preferences).
City percentage of revenues: TBD; City receives a MAG of $6 million + COLA and greater than 50% of revenues.
Governance: Board positions held by representatives of the City.
City responsibilities: TBD; examples include deep integration with City departments, working groups, and initiatives.

STAP must be deeply integrated with the City's smart-city goals and policies. Departments such as ITA, LADOT (ATSAC, MDS), DWP and policy papers should utilize STAP to achieve the City's policy goals.

This requires true ownership on the part of the City and its departments. This also allows the City to fully maximize STAP's potential, in revenue generation and otherwise.

The contractor retains day-to-day ownership of operations, but it will execute on Board strategy. City departments may hold direct responsibility for deliverables and/or ownership of key resources (e.g. ITA provides a public 5G network for STAP to use).

MODEL 2 (CONTRACTOR-FINANCED):

Finance structure: Contractor finances CapEx and retains 100% of SPV ownership.
City percentage of revenues: TBD; City receives up to 22% of revenues.
Governance: Board positions held by representatives of the Infrastructure Financing team and Tranzito.
City responsibilities: TBD; examples could include commitments like permit process guarantees, participation in working groups.

STAP is a standalone project with specific requirements to ensure alignment with the City's smart-city goals and policies. The RFP provides guidance regarding specifics, and we will work with the City to finalize them prior to project commencement.
This model still requires a collaborative partnership-based approach to ensure a successful outcome, and we will continue to

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seek out opportunities for further collaboration and alignment with City goals.

The contractor may or may not be under Board control, based upon further scoping with the City and the terms and conditions for financing. City participation may be based upon conditional elements in the final contract, and will be encouraged to participate in planning groups as relevant.

MODEL 3 (JOINTLY-FINANCED):

Finance structure: Jointly financed CapEx.
City percentage of revenues: City receives a variable percentage of revenues or profits and may receive a MAG.
Governance: TBD; board positions held by representatives of the Infrastructure Financing team and Tranzito.
City responsibilities: TBD; examples include deep integration with City departments, working groups, and initiatives; commitments to non-monetary contributions, participation in working groups.

STAP is a quasi-public project with both specific requirements and target goals. Starting in Phase 0 (July 2021 - December 2021), partners will seek to build a practical roadmap to achieve target goals.

The contractor retains day-to-day ownership of operations, but it will execute on Board strategy. City departments may hold direct responsibility and/or deliverables (i.e. ITA provides a public 5G network for STAP to use).

NOTE: The City may be able to participate in this model with non-monetary contributions, such as expedited permitting processes, infrastructure improvements, and the like.

COMPANY FORMATION SCHEDULE:

We will work alongside StreetsLA and the City Administrative Officer (CAO) on a Due-diligence and Scoping phase as soon as possible to not delay STAP's existing schedule. Our proposed Finance Schedule may be as such:

1. Early-March, Due-diligence and Scoping: One or more meetings to establish:
   a. City's goals and requirements for STAP.
   b. Financing options the City is amenable to.
   c. Negotiable and non-negotiable aspects of STAP.

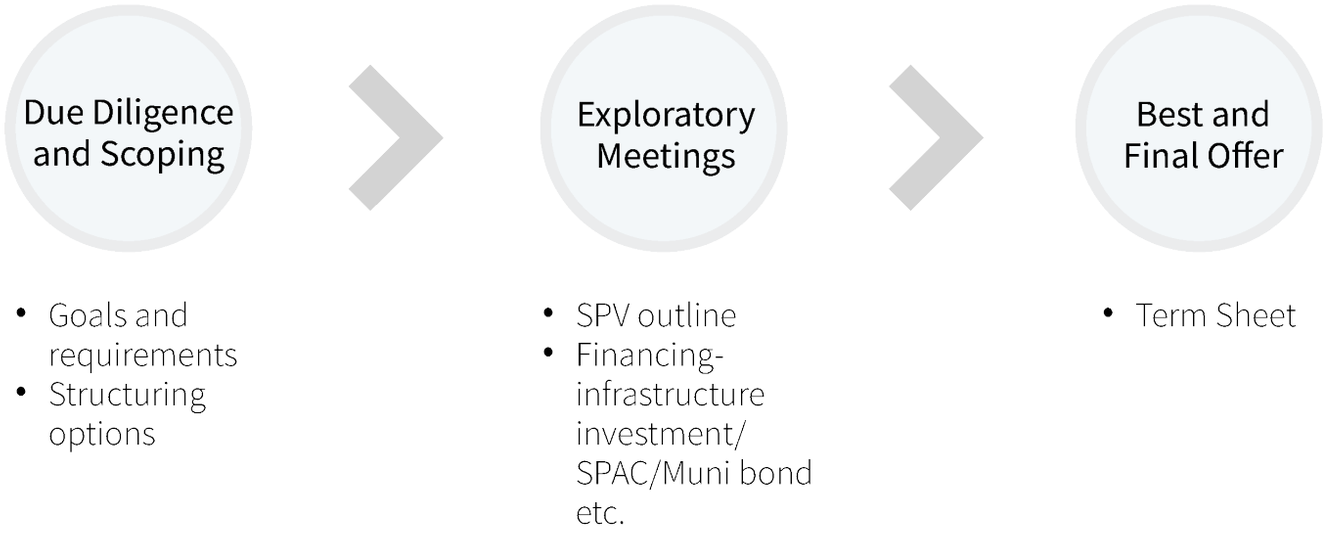
2. Mid-March, Exploratory Meetings: Discussions with multiple financing groups to shape proper models, metrics, and figures.

3. Early-May, Best and Final Offer: Revised RFP Response based upon exploratory meetings

4. Early-May, Prototype Presentations

AUDITED FINANCIAL INFORMATION

*See Vol III: Attachments and Forms



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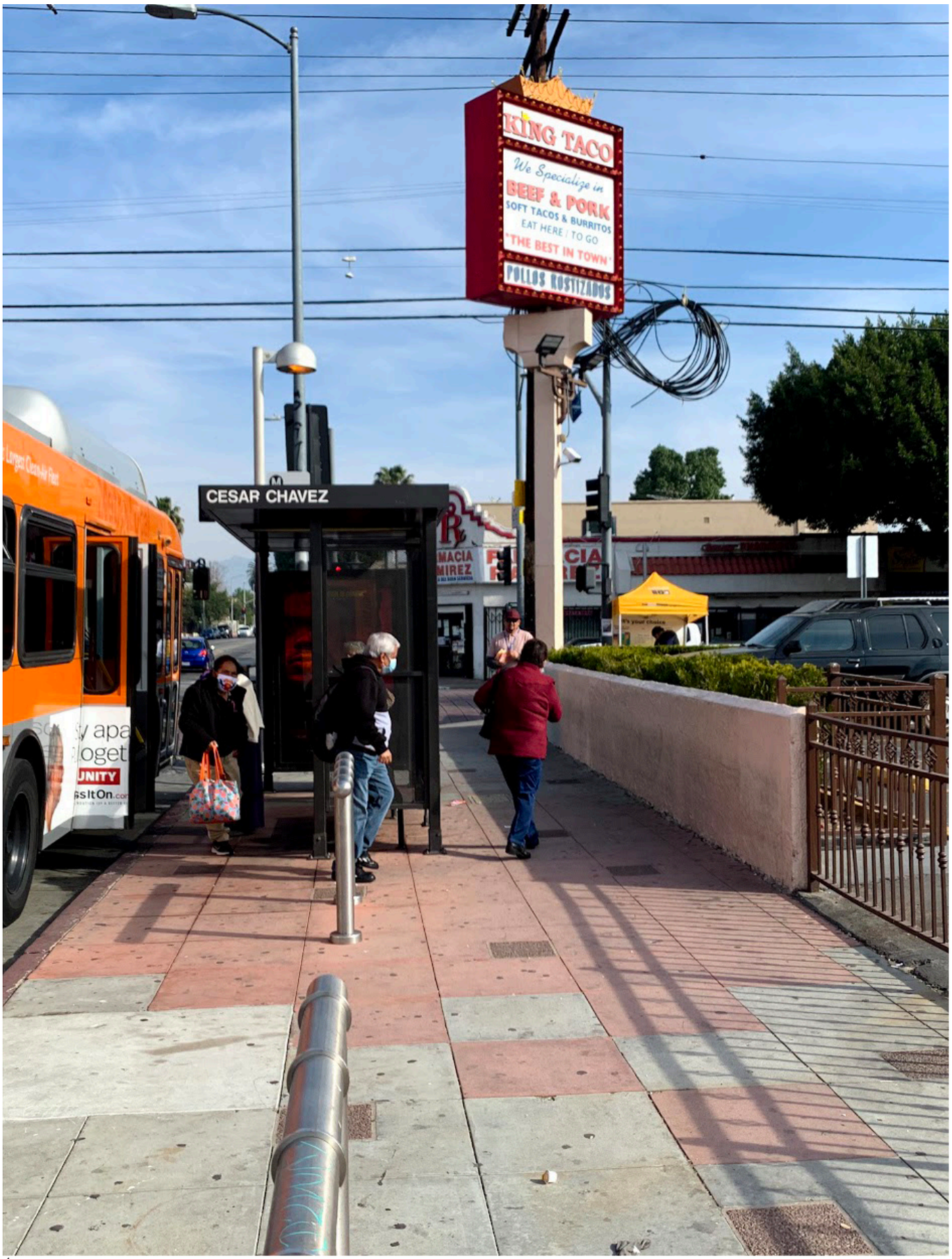

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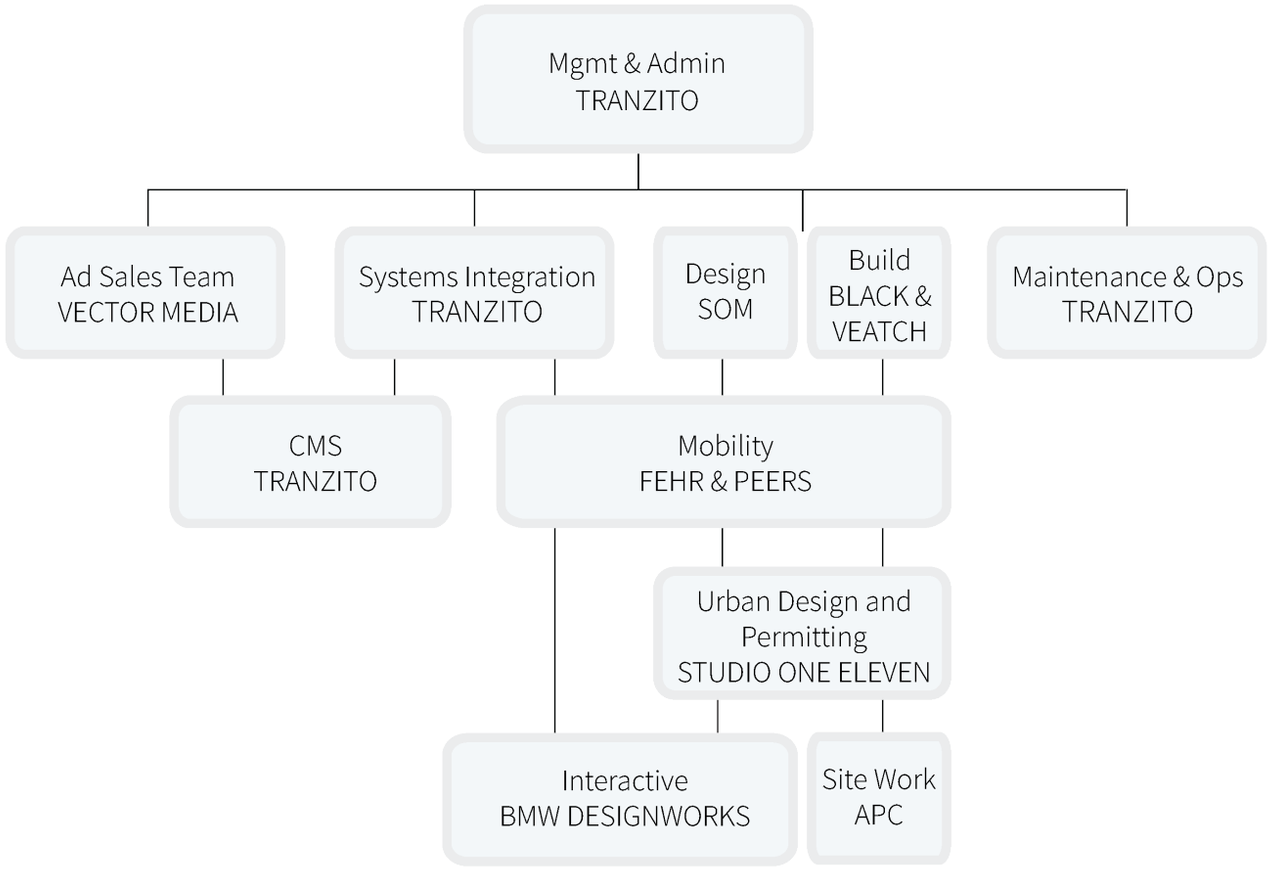
2. QUALIFICATIONS / CASE STUDIES / REFERENCES

PROJECT TEAM MEMBERS

Our team is more than a collection of top firms, but a thoughtful analysis that began with our vision for STAP going beyond maximizing revenues and Shelter - Shade - Safety - Comfort. Today's bus stops are tomorrow's mobility hubs, a network of smart cities infrastructure nodes that help all Angelinos move around the city in a sustainable and equitable manner.

Proper execution of our vision requires expertise in many disciplines; it also requires a true collaborative approach. Our team members have experience working with each other and alongside the many public and private stakeholders of LA streets. We bring our expertise and partnership approach to help maximize the potential of STAP.



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TRANZITO

Prime Consultant
Project Management, Project Administration, Systems Integration, Purchasing, Operations & Maintenance

Tranzito will lead project management, project administration, systems integration, and operations & maintenance. As Managing Director, Tranzito's Gene Oh will lead the project's executive team and liaison directly with all relevant City staff and relevant stakeholders, lead strategy and meetings, and oversee all subcontractors. Tranzito's Seth Herr will oversee the customization of Curb CMS and systems integration of all digital assets—ad panel screens, ePaper City-Transit screens, sensor package, smart city amenities — networks, CMS platforms, and data spec.

Tranzito is an operator and property manager for new mobility infrastructure, specializing in strategy and program management, operations, and systems integration. Tranzito has a reputation for designing successful, cost-efficient new mobility programs and models while providing high-quality, consistent service that its clients demand. Tranzito has consistently designed and recommend models that prioritize wise use of public funds rather than corporate profits. Tranzito always puts the project, and its clients, first. It's not just a motto, it's in our timeline.

Tranzito's clients are some of the nation's largest transit agencies, cities and private companies, and its team interacts with thousands of vehicles daily. Ongoing projects our team operates include: Metro Bike Hub, Metro Bike Share, BART Bike Station, and public-private mobility hubs pilots with Caltrain/ Spin and LADOT/Moovit.

CurbOS is Tranzito's full-stack systems integration platform that combines proprietary hardware and software with third-party APIs to manage its new mobility programs. CurbOS is deeply integrated, combining public-facing resources like program webpages, mobile support, and multi-platform registration, and administrative features like remote access, backup communications, resource monitoring, and support ticketing. CurbOS will be customized for STAP to incorporate the specific requirements of this project, which we call Curb CMS.

VECTOR MEDIA

Subconsultant
Advertising Sales, Experiential Sales, Omnichannel Sales

Vector Media will lead advertising sales through a multi-faceted direct sales effort, which will include national, regional and local sales teams, management of programmatic digital advertising, the creation of experiential marketing opportunities, and additional omnichannel sales.

For 23 years Vector has been one of the nation's leading transit media companies. Vector specializes in and is known for transit innovation and sales leadership, partnering with over 30 municipalities to create unique and diverse revenue streams. Vector's business is almost exclusively focused on transit media, fueling a true evangelist's approach to the area. This has resulted in Vector pioneering new measurement approaches for transit media and introducing new digital and 3-D production technologies to the space.

Vector's portfolio and focus includes municipal transit and bus shelter inventory (digital and static), as well as double decker transit, airport shuttle, and experiential marketing services. The company currently maintains the largest transit media network in the country which includes Big Blue Bus of Santa Monica and Culver City. Additionally, Vector employs national, regional and local account teams in both Los Angeles and San Francisco where it operates additional municipal concessions.

Vector's CEO, Marc Borzykowski sits on the board of directors of both the OAAA and Geopath, the industry's primary trade organizations.

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DESIGN WORKS

A BMW Group Company

BMW DESIGNWORKS

Subconsultant
Interactive and Industrial Design

Designworks will lead the interactive design and industrial design, developing processes to ensure the physical, digital, and emotive experiences all share a consistent theme. Our aim is for all Angelenos to feel a sense of ownership and connection from the beginning to the end of every journey.

Mobility is in BMW Designworks' DNA. For nearly fifty years, Designworks has been focused on constantly rethinking, challenging, and improving ways to move and connect people around the world. Our roots in mobility span across the automotive, rail, aerospace, capital equipment, urban air mobility, and cargo sectors. Today, Designworks operates as a global consultancy, with our headquarters in Newbury Park, CA, and additional studios in Munich and Shanghai.

Designworks is recognized for creating intelligent, beautiful, and human-centered solutions that are as meaningful as they are impactful. Whether it's elevating intimate spaces for Eva Airways 787-9, creating the electric future for BMW's i brand, or designing the concept cabin experience for the very first Virgin Hyperloop One train, we measure our successes through the lens of human experiences. Our work leverages the BMW culture of advanced thinking and cutting edge design towards creating outcomes that elevate comfort, safety, consistency, and connected to future-forward solutions.

SOM

SOM

Subconsultant
Architectural Design

SOM will lead the architectural design of the new mobility hubs, working collaboratively with the entire project team to envision and deliver these great civic elements that will enhance LA citizens' travel experience while expressing a sense of place and enduring quality. SOM will also provide graphic and wayfinding services and work hand-in-hand with HLB Lighting Design to deliver new innovative and flexible urban street lighting that will be holistically integrated into the overall STAP program.

Skidmore, Owings & Merrill (SOM) is a collective of architects, designers, engineers and planners, responsible for some of the world's most technically and environmentally advanced buildings, and significant public spaces. We bring innovative solutions to the complex challenges facing cities around the world and we solve urban and environmental problems in a way that is meaningful and specific to each place and community.

SOM is a part of LA's creative community, applying fresh thinking, an international perspective and trusted expertise locally. Whether designing new structures or reinventing an existing landmark, our aim is to make Southern California an even better place to live with imaginative, highly versatile / spaces that can respond to change and growth.

Technological innovation drives the creation of new types of architecture. Research into new technologies, typologies, and materials is central to SOM's ethos. SOM is actively collaborating with leading manufacturers and industrial designers around the world. From textiles to furniture and hardware design, we constantly seek to innovate with new and highly relevant products such as our recent collaborative partnership with Italian Lighting manufacturer Neri for the Nebula urban lighting collection.

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FEHR & PEERS

Subconsultant
Mobility Design

Fehr & Peers will ensure a future-focused mobility design across the network of bus stops / mobility hubs to ensure that emerging mobility options such as micromobility, autonomous vehicles, delivery drones, and the like are supported. Specific deliverables also include:

1. Development of a permit and usage framework and help StreetsLA and LADOT pilot the provision of the bus stop curb-space for other mobility modes.
2. Identification of appropriate measures of effectiveness (MOEs) and ongoing reporting based on the articulated goals of the project.
3. Mobility movement tracking and reports to assist in both planning and advertising CPM counts.
4. Assist with design and permitting of challenging locations with unique characteristics or competing mobility needs

Fehr & Peers has extensive experience serving StreetsLA and other regional agencies on complex projects, providing state-of-the-practice analytical techniques and design, grounded in practical and personal knowledge of Los Angeles, and the political and cultural dynamics of our City. A hallmark of our approach is listening and responding to the needs of community partners to ensure project success as we navigate increasingly complex tradeoffs and conditions.

We have successfully executed numerous projects working with the City of Los Angeles, demonstrating our expertise in transportation impact analysis for developments, modeling, conceptual design, VMT calculator, Vision Zero analysis and engagement, corridor evaluations and reconfigurations, bike share and car share siting, before/after studies, safe routes to school, qualitative and quantitative evaluation of service quality, and a number of other project types. Specific projects that demonstrate this level of engagement across staff, decision-makers, and other stakeholders include: Mobility Plan 2035, Vision Zero DICE, Measuring the Miles, People St, and Westside Mobility Plan, among others.

STUDIO ONE ELEVEN

Subconsultant
Urban Design, Permits

Studio One Eleven will lead urban design, community outreach, permit strategy, and work alongside structural engineers, electrical engineers, and construction teams to ensure a smooth transition from aspirational architectural design to on-the-ground implementation.

Studio One Eleven is a Long Beach and Los Angeles based design firm of architecture, urban design and landscape architecture focused on the transformation of auto-oriented cities into more livable, walkable, and sustainable urban places. We champion human-centered urban design and work alongside stakeholders on our transportation planning, streetscape, and public realm projects to ensure that we are creating context appropriate solutions for each community.

Our designs have created vibrant, welcoming public spaces that build on existing community assets, creative beloved community amenities, and destinations for people to live, work, and play. Rooted in Southern California for over two decades — we are intimately familiar with Los Angeles' transportation landscape and culturally rich and diverse neighborhoods.

We have worked in a number of Los Angeles' developing diverse communities—specifically related to new mobility—including The Bloc Mobility Hub in downtown Los Angeles and a proposed 190 unit affordable housing project / primary mobility hub site at the Metro Vermont/ Santa Monica station. Studio One Eleven designed the first parklets in Southern California and has since expanded our portfolio across Long Beach and Southern California to a series of parklets with a variety of programmed activities, ranging from food to fitness.

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BLACK & VEATCH

Subconsultant
Construction Design, Construction Management

Black & Veatch (B&V) will lead deployment planning and execution during Phase 0 and Phase 1 Rollout. They will work with each functional team to design workflow processes that will make up a deployment program designed for the installation of 800+ sites per year. B&V will manage the subcontractors and drive the overall schedule to meet program goals. Reporting templates will be developed to provide stakeholders and team members visibility into on-going deployment efforts.

Black & Veatch is a multinational engineering, procurement, and construction (EPC) corporation in the power, water, and telecom sectors. Within its telecom business B&V has successfully delivered large-scale projects for major clients nationwide in:

1. Wireless—8,000+ sites
2. Smart Cities—1,500+ digital kiosks
3. EV Charging—3,100+ charging posts
4. Smart Grid—2,600+ grid modernization assets

Black & Veatch helps communities design and build their infrastructure to efficiently interconnect and integrate with its physical assets, like kiosks, street lights, cameras, utility systems and other street furniture, and related apps. Our insight helps communities get the desired functions and expected value of smart technologies. These solutions help leaders expand connected services, enhance city system efficiency, and heighten quality of life for citizens.

AP CONSTRUCTION

Subconstulant
Construction

AP Construction will serve as general contractor and build teams for each of the 3000+ locations. In-house staff will pull permits and perform traffic control, site work, and trench work. With over 30 years experience managing public agency projects, AP Construction (APC) has ongoing relationships with LA Metro, the U.S. Army Corps of Engineers, Department of Defense, US Air Force, GSA, Department of Veterans Affairs, and National Park Service.

APC led construction efforts alongside Tolar Manufacturing for two major bus shelter projects for LA Metro and the City of Montebello. For the LA Metro Bus Shelter Project, APC installed 90 Metro bus shelters, provided curbside work and excavation, and other patron amenities for LA Metro. This project required that all bus stops remain in operation throughout construction, and included: evaluation and coordination of existing site conditions, utilities and local code requirements, permits, site work, and cleanup. For the City of Montebello, APC designed, fabricated, and installed 56 Bus Line bus shelters, 112 bus stop benches, trash receptacles, signage, and solar powered bus stop poles, and ensured ADA compliance.

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TOLAR MANUFACTURING

Major Supplier
Shelters

Tolar Manufacturing will finalize manufacturing drawings in coordination with the project architects and perform mobility shelter fabrication in coordination with the project's digital, real-time and other electronics contractors.

Founded in 1991, Tolar Manufacturing Company, Inc., located in Corona, CA is North America's leader in the design and fabrication of award-winning street furniture. Tolar Manufacturing counted Los Angeles and San Diego among its first clients; both cities have remained valued Tolar clients for the company's entire 30 year history.

Tolar's products account for 35% of the domestic transit street furniture market. Operating out of a 53,000 square foot facility Tolar employs a diverse multi-disciplined team with nearly 50 design engineers, production team members, administrative support and business development professionals who are collectively passionate about the quality products they build.

VCONN

Major Supplier
Digital Ad Screens

VConn Digital Interactive will be supplying customized digital screen enclosures featuring LG Electronics digital screens. VConn is a trusted manufacturer and digital solution provider of smart interactive kiosks, digital signage, and LED displays, with outdoor deployments across the globe. VConn's kiosks are IP66 rated with patented proprietary thermal management and cooling technology, proven in diverse environmental conditions from Europe to Asia, including at particularly challenging weather conditions of Dubai (UAE), Sweden, Russia, and Las Vegas. VConn serves a wide array of use-cases, such as at the Atlanta Braves Stadium, bus shelters, and toll booths to name a few.

VConn blends decades of technical know-how and engineering expertise, with fabrication to assembly to comprehensive in-depth product testing all performed in-house at its New Jersey facility.

VConn is focused on the next generation of intelligent structures, enhanced with IoT capabilities, sensors, screens, wireless connectivity technology and product design all working together to create a seamlessly connected environment making spaces more efficient, safer, and smarter.

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SMIOTA

Major Supplier
Shared Lockers

Smiota, Inc. provides a shared locker platform to facilitate secure exchange of physical goods across all industries, providing a complete chain of custody, security and convenience with real-time analytics and reporting. These features are available as secure Application Programmers Interface (APIs) for partners and third-party software developers to use with their own custom solutions.

Smiota systems have been deployed in diverse environments in residential, retail, government and corporate verticals with over 8,000 lockers installed handling over 2 million packages annually.

The Smiota platform is designed to provide 24 x 7 management of all deployed systems in Los Angeles. The California based support team has full remote management capabilities for smart lockers deployed city wide. A local support team will be available for on site remediation when required.

SWIFTMILE

Major Supplier
Scooter Charge Docks

Swiftmile is a California-based micromobility infrastructure company providing quick-deploy mobility hubs that charge and organize shared and personally owned light electric vehicles (LEVs), with a primary focus on shared e-scooters.

Swiftmile's sophisticated and proprietary charging electronics are designed to charge any LEV with which the stations can physically connect. Swiftmile is helping cities, micromobility operators, retailers and campuses maximize the benefits of electric micromobility while avoiding clutter and excessive operational emissions. Swiftmile docks are deployed at 200+ locations across Europe and the US, including as part of shared micromobility programs in Berlin, Washington, DC, Miami, Pittsburgh, and Austin. Tactical and modular, Swiftmile is part of a new class of public mobility infrastructure cities can quickly harness to reclaim public space from cars and support a transition to a more equitable and sustainable transport system.

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VERTICAL BRIDGE

Preferred Partner
Communications Infrastructure

Vertical Bridge is the largest private owner and manager of communication infrastructure in the U.S., with more than 307,000 owned and managed sites nationwide, including wireless and broadcast towers, rooftops, land parcels, and billboards. These assets have been assembled through more than 250 acquisitions and 180 real estate transactions, through strong partnerships with some of the largest investors including Colony Capital Inc (NYSE: CLNY), CDPQ, Goldman Sachs Infrastructure Partners, and California State Teachers' Retirement Systems.

Vertical Bridge works with municipalities, carriers, and site acquisition resources across the country, and its team has built thousands of towers for customers in all 50 states. The wireless industry is quickly evolving to keep up with the exponential growth in consumer data usage. This has meant finding new ways to boost network capacity and coverage beyond traditional macro towers, which may not be feasible in urban or suburban areas where they are most often stressed. Vertical Bridge envisions STAP as a means to provide small cell colocation to multiple 5G carriers, in order to help Los Angeles transition into a smart city.
Vertical Bridge was just recently certified as a CarbonNeutral® company and is now 100% carbon neutral.[1]

BODI INFRASTRUCTURE DEVELOPMENT

Preferred Partner
Infrastructure Financing

Bodi is an independent developer and value-add investor focused on the delivery of smart mobility systems and infrastructure through innovative and flexible public-private partnerships. Bodi is advised and managed by a team of infrastructure investors, developers, engineers, and consultants with a track record of involvement in the design, construction, financing, and management of major infrastructure assets globally.

Bodi's leadership team has direct experience managing investments in toll roads, a national fiber infrastructure asset and other digital infrastructure, and advisory roles in government for high speed rail projects in Europe and social infrastructure in the US.

Bodi develops and invests with an investor and co-investor base formed mainly of institutional investors - predominantly public and private pension funds - seeking long-term investments in sustainable infrastructure. As such, Bodi is committed to sustainable infrastructure investment and development. We screen all opportunities against an established ESG framework to ensure compliance with internal policies and ultimately to decline opportunities which do not meet our ESG standards or otherwise align with our sustainability goals.

[1] https://www.verticalbridge.com/vertical-bridge-takes-unprecedented-step-forward-tower-industry-becoming-carbon-neutral-certified

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MOBILITY HUB PILOTS

Caltrain SF Mobility Hub

Timeline:
October 2019 – Present

TEAM MEMBER: TRANZITO

Tranzito partnered with scooter operator Spin, dock company Swiftmile, and bus operator FlixBus to transform the Caltrain SF Bike Station into a multimodal mobility hub. Beyond expanding its employees' scope of services inside the building to include overnight charging and customer service for Spin and FlixBus, Tranzito also manages access to grid power and furniture zone space to install scooter charging docks outside. Staff also provide daily sweeps along public right-of-way and in the train station to ensure scooters are properly parked. More info at - https://tranzito.org/spin-launch-mobility-hub/

ROLES AND RESPONSIBILITIES

Tranzito oversaw all aspects of this project including:

- Worked with Caltrain JPB staff to secure board approval for contract amendment to include public right-of-way.
- Led multi-stakeholder engagement with SFMTA, CBOs and Caltrain to gain unanimous support for the project and vision for long-term
- expansion.
- Drafted, distributed, and and scored a private RFP procurement process to interested private micromobility operators. Negotiated revenue contract with Spin.
- Worked with public utilities, Spin, and
- Swiftmile to design an electrical plan to route interior grid power to public ROW.
- Worked with location staff, Spin, and Flixbus to design a startup plan and operations plan.

PROJECT OUTCOMES

Caltrain SF Mobility Hub is providing ongoing benefits to Caltrain, the City of San Francisco, and the public:

- Caltrain: Additional monthly revenues to offset project funding.
- The City: Daily scooter sweeps ensures cleaner, safer sidewalks.
- The public: Accessible scooters provide key last-mile transportation options at San Francisco's largest transit hub.

REFERENCES

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LYNX TRANSIT FRANCHISE

LYNX

Timeline:
January 2012 – Present

TEAM MEMBER: VECTOR MEDIA

When initially awarded the LYNX transit franchise in Orlando in early 2012, Vector quickly set about identifying key areas for improvement to maximize the revenue generated by existing inventory. Vector determined that emphasis should be placed on creating new high-impact signature displays, such as king kongs and full-wraps, to create national advertiser demand in order to create rate pressure on the local advertising base. The approach led to unprecedented levels of revenue for LYNX. Vector has since introduced full-wraps on LYNX's 60-foot articulated buses, developed a station-domination program at the main transit center and worked with LYNX to design and implement a street-level kiosk program at downtown LYMMO stations. Our single-minded focus on transit advertising continues to pay dividends for LYNX.

ROLES AND RESPONSIBILITIES

Full-scope advertising

PROJECT OUTCOMES

Since being awarded the contract, we have quadrupled media sales from $1.5 million in 2012 to over $6 million in 2019.

REFERENCES

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URBAN AIR MOBILITY POLICY FRAMEWORK

Los Angeles Department of Transportation

Timeline:
January 2020 – Present

TEAM MEMBER: BMW DESIGNWORKS

The City of Los Angeles, including the Los Angeles Department of Transportation (LADOT), is taking a proactive approach to developing policies and procedures to regulate UAM operations in anticipation of greater adoption and in line with a broader vision for safe, equitable, and inclusive mobility choices.

Designworks focused on engaging and educating Angelenos through interviews, visualizations, and sound impact auralizations to develop a comprehensive policy framework to serve as a model for Los Angeles and cities around the world. A council of industry experts and stakeholders was also created to stress test each successive milestone and guarantee a robust, unified framework. The outcome will facilitate further development and regulations in UAM to provide greater access to goods, services, and critical responses in the near future for the city.

ROLES AND RESPONSIBILITIES

Designworks oversaw all aspects of this project including:

- Recruitment of Expert Council
- Creation of stakeholder interview guide and interview moderation
- Persona creation for all stakeholders (residents, developers, employers, city employee)
- Criteria definition and Los Angeles vertiport location scenarios development
- Sound perception studies of new eVTOLs benchmarked against existing helicopter dB levels
- Visual and auditory animations of new eVTOLS in selected Los Angeles Vertiport locations

PROJECT OUTCOMES

Urban Air Mobility Policy Framework which includes Land Use and Permitting topics. Capture of Policy Framework and all work-to-date made useable for public release and internal city stakeholder dialogue.

REFERENCES

Marcel Porras
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THE BLOC MOBILITY HUB

National Real Estate Advisors

Timeline:
2017 – Present

TEAM MEMBER: STUDIO ONE ELEVEN

Studio One Eleven completed a large-scale transformation of The Bloc, a mixed-use project in downtown Los Angeles atop the 7th Street Metro station. Through collaboration with Metro by creating a direct link to the transit station below, The Bloc is positioned to be one of Los Angeles' first Mobility Hubs.

Studio One Eleven led collaboration with LADOT's People Street Program, National Real Estate Advisors, and CD14 on a demonstration project along 7th Street to provide much needed amenities for pedestrians, bicyclists, and transit users. The innovative pilot project repurposed a travel lane into a suite of mobility amenities, which included a protected bike lane, a dedicated curbside rideshare pick-up and drop-off zone for TNC users, the relocation of Metro's Bike Share station, and a 'Street Seats' parklet from LADOT's People St Kit-of-Parts to provide 20 short-term bike parking spaces and a designated waiting space with flexible seating.

ROLES AND RESPONSIBILITIES

- Data Collection (activity mapping, intercept surveys)
- Planning and Programming
- Concept Design and Development
- Prepare Construction Documents
- Process Permit Drawings
- Construction Monitoring

PROJECT OUTCOMES

To track our mobility hub's impact, we conducted The Bloc Public Space Public Life study which provided several insights on usage of the existing public space at The Bloc and additional amenities that could be provided within the Mobility Hub suite. Studio One Eleven is also conducting several public space studies to evaluate the usage of the new Metro connection. Initial results indicate that public transit is a significant travel mode to The Bloc, and that pedestrian activity around the portal has increased continuously since its opening, validating assumptions about the growing importance of transit in downtown Los Angeles.

REFERENCES

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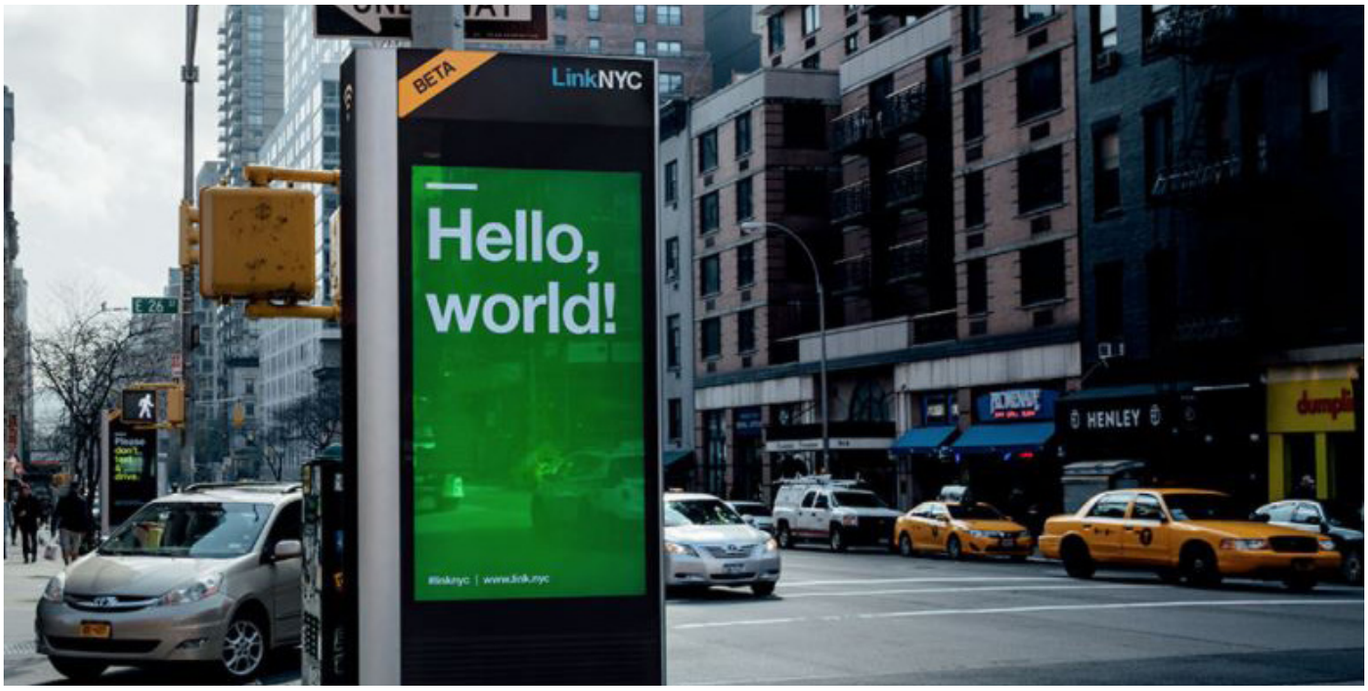
LINKNYC

City Bridge

Timeline:

May 2015 – September 2017



TEAM MEMBER: BLACK & VEATCH

Through a public private partnership between CityBridge and the City of New York, 7,500+ existing public payphones would be replaced with fiber connected digital kiosks across the five boroughs. The kiosks would be purely funded by digital advertising revenue while offering the public free gigabit speed Wi-Fi, as well as basic internet browsing and voice capabilities. This was the largest and most ambitious smart city project in the country, and it required careful planning and execution from various stakeholders and team members. Black & Veatch was brought in at the onset to help build the deployment program from the ground up. The team developed the end-to-end systems and processes to ramp up deployment operations and reduce bottlenecks.

ROLES AND RESPONSIBILITIES

- Program Management
- Site selection and survey/design
- Facilitation of City approvals
- Utility coordination and energization
- Fiber deployment coordination
- Material and warehouse coordination
- Construction Management of multiple
- General Contractors
- Cost Management
- Quality Assurance/Quality Control
- Site Activation

PROJECT OUTCOMES

Two years after the LinkNYC program kickoff, Black & Veatch's efforts accounted for approximately 1,500 total kiosk installations. The team fulfilled its responsibility of building and maintaining a repeatable and cohesive deployment process, resulting in a sustained installation rate of 20-30 kiosks per week. Black & Veatch successfully exited the program having developed a foundation and blueprint for large scale smart city deployments in dense urban environments.

REFERENCES

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L.A. BUS BENCH SHADE PROJECT

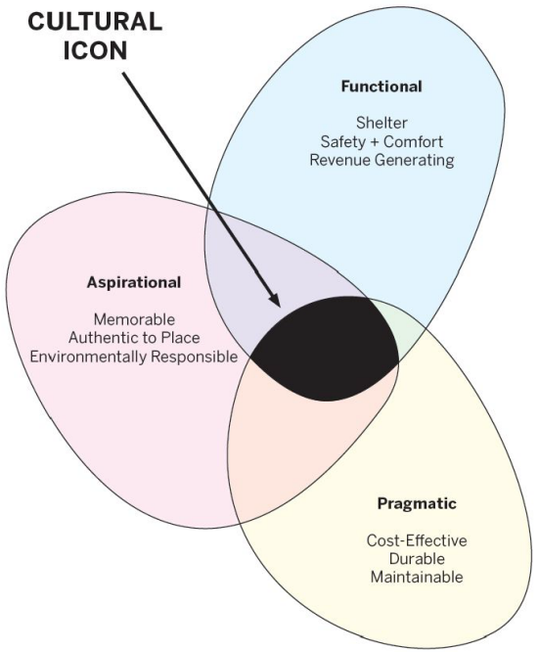
Office of Mayor Eric Garcetti
City of Los Angeles
StreetsLA, InSite Street Media, LLC

Timeline:
February 2020 — Present

TEAM MEMBER: SOM

The Bus Bench Shade Project was done in partnership with the City of Los Angeles, the Office of Mayor Eric Garcetti and StreetsLa, InSite Street Media, LLC. While it was critical for the end-product to be cost effective, code compliant, durable, maintainable, environmentally responsible and authentic to L.A. the ultimate goal was shade equity for all patrons of the L.A., bus system. The design was to aesthetically compliment existing bus benches, be factory assembled, delivered, and mounted directly to the city sidewalk for an approximate cost of $4,000. The anticipated quantity was in the hundreds.

SOM's internal design team included architectural, interior, urban, structural and graphic designers. The design process initiated with an in-depth understanding of the cultural diversity of Los Angeles. The team looked at iconic but utilitarian furniture technologies dating back to the 19th century; modernist art materiality and fabrication; and landscape/vegetation to develop driving principles that would guide the design effort. Five different design ideas were developed and illustrated across three sites selected by the stake-holders. The sites are diverse transit dependent communities in the City of Los Angeles. Two different local fabricators, experts in metal and FRP, were consulted to assist with the designs' feasibility. The final designs proposed a combination of steel, aluminum, FRP, an array of color, vinyl wrap graphics, artist collaborations and an array of visual identification methodologies. They exhibited a simplicity that could be tuned due to site conditions, ridership and / or community and cultural interests. The final design was an implied bent plate structure inspired by Donald Judd, an American minimalist artist. Its vertical structure was steel with an aluminum canopy. It can be easily fabricated, transported and customized through color or vinyl wrap graphics.



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ROLES AND RESPONSIBILITIES

- Architectural Design and Documentation
- Structural Design
- Graphic Design
- Coordination with all Stake-holders and consultants

PROJECT OUTCOMES

The selection committee narrowed the process down to four design teams in which all designs have been shared between all parties involved. High-level pricing was done through two different fabrication entities and issued to the stakeholders. The process is currently on hold.

REFERENCES

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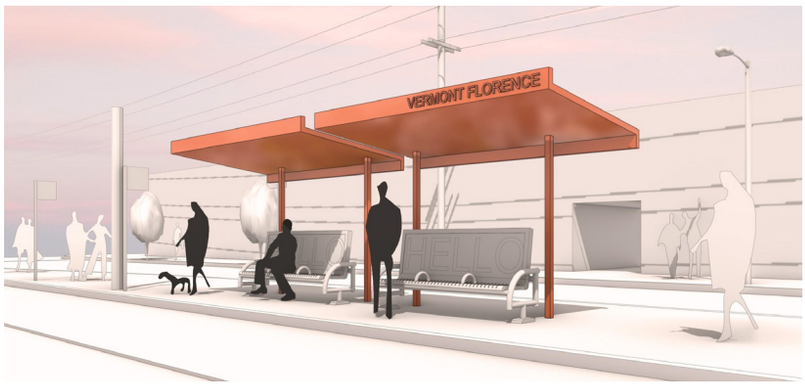

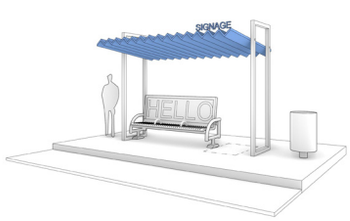

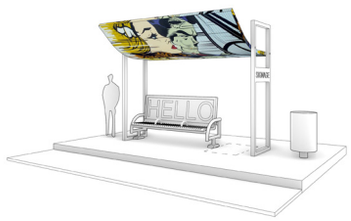

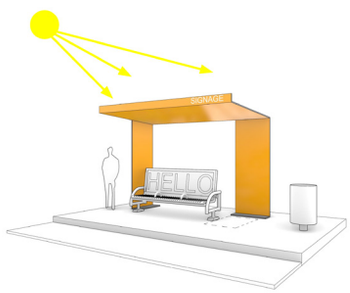

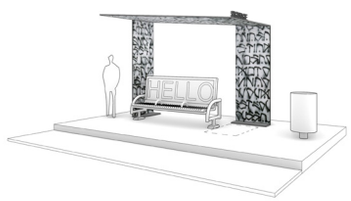

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LA METRO BUS BIKE INTERFACE STUDY

LA Metro

Timeline:
March 2016 – November 2018

TEAM MEMBER: FEHR & PEERS

Fehr & Peers evaluated bus/bike interactions in a variety of settings across Los Angeles County. Policy shifts in Los Angeles County have yielded tremendous expansion in bike and transit infrastructure, increasing the frequency of interactions between bus drivers and bicyclists. With this study, Fehr & Peers developed guidance to help Metro design future facilities to best accommodate these two modes.

Fehr & Peers analyzed 15 corridors in the county that contain varying design solutions to accommodate buses alongside bicycles. Data was collected before and after installation of recent infrastructure, and analyzed to determine the impact that different infrastructure has on safety and comfort of cycling, and speed and reliability of transit service.

The analysis considered corridor-specific factors such as bus volume, cyclist volume, bus operating speed, lane dimensions, and crash frequency to determine common themes across all 15 corridors. The data analysis was bolstered by key findings from interviews and focus groups with municipal planning staff, bus operators, and cyclists.

ROLES AND RESPONSIBILITIES

Fehr & Peers staff managed and executed this study.

PROJECT OUTCOMES

Fehr & Peers folded the conclusions of the project into two deliverables:
1) an update of Metro's Bike/Bus Roadshare: A Guidebook for City Transportation Professionals, the agency's official guidebook on bike/bus infrastructure recommendations used by member municipalities when planning and designing roadways
2) a Study Report that includes training guidance for operators and bicyclists.

REFERENCES

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3. UNDERSTANDING OF STAP

Bus transit is a frequently overlooked part of the Los Angeles mobility ecosystem. Pre-COVID, buses from 26 regional transit agencies provided nearly 500 million trips per year.

A healthy bus system is crucial for the millions of essential workers that keep Los Angeles running. It also supports broad policy goals such as air quality & carbon emission reduction, traffic mitigation, and transit equity. But despite its critical role, countless daily bus riders are left to wait for the bus without basic amenities such as shelter, shade, safety, and comfort.

The bus is the original green transit solution, and still the best. It addresses transit equity, offering reliable, accessible, and affordable movement throughout the County.

STAP is a bold new vision for bus shelter OOH advertising contracts. Taking a cue from TfL of London and other pioneering cities, the City of Los Angeles aims to exercise greater influence during the implementation of the STAP program to improve the quality of mobility and street amenities provided to transit riders and communities in Los Angeles, embrace beneficial digital technologies and ultimately to maximize revenues.

GOALS OF STAP

The City is open to innovative models and concepts to maximize the utility of the STAP program in order to achieve four primary goals:

1. Provide Shelter - Shade - Safety - Comfort
2. Contribute to the City's Vision
3. Improve the Urban Landscape
4. Maximize STAP Revenues

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GOAL NUMBER #1: SHELTER - SHADE - SAFETY - COMFORT

The primary goals of STAP are very clear:

"provide Shelter, Shade, Safety, and Comfort to transit riders, active transportation users and pedestrians, and to improve the quality of life for those who live and work in and visit the City"

This is not a whimsical proclamation, but a clear goal codified with quantifiable targets: 3000 bus shelters to ensure that 75% of each district's transit riders have access to Shade - Shelter - Safety - Comfort.

Shade is particularly important in a city like Los Angeles where days with temperatures of 95 degrees or more are already common, and expected to triple in frequency by 2050. In a warming climate with more hot days expected in the future, providing shade is also an issue of equity. A 2018 Metro survey of bus users found that low-income groups are a majority of transit riders, and the ones often exposed to long wait times in the sun. Ensuring that shade is made a priority system-wide requires a few key strategies:

1. Creating a flexible kit of parts that can adapt to site constraints to provide shade in a variety of urban settings.
2. Finding opportunities to decouple revenue generation from shelter installation so that a greater number of shelters can be installed across the system supported by ad revenues from a shorter list of key locations.
3. Innovating on the permitting process to expedite approvals for site location and construction, to rapidly roll out new shelters that can serve more riders sooner.

The City also sees STAP as an opportunity to achieve much more than basic necessities as patrons wait for the bus:

"the City's vision for the STAP is to expand the use of transit, active transportation, and shared mobility, as well as to improve the design of the public right of way and foster economic growth that helps strengthen neighborhoods."

GOAL NUMBER #2: CONTRIBUTE TO THE CITY'S VISION

> In 2028, our residents and guests will be able to get to every Olympic event on public transportation. From light rail to subway to new bus projects, we are building a comprehensive and integrated transit network. And we will not stop this progress in its tracks: by 2035, half of all trips will happen somewhere other than a single occupancy vehicle.
>
> Sustainability City Plan, pg 70

STAP is literally a once-in-a-generation opportunity to redefine the mobility experience on Los Angeles streets. Not just for bus riders, but for all transit users, and greater still an opportunity to think holistically, into an integrated delivery system that moves both packages and people more efficiently.

This further-reaching vision does not diminish the priority of offering Shelter - Shade - Safety - Comfort to bus riders but rather the opposite. Enhancing bus stops to manage multiple aspects of smart city mobility only increases convenient mobility options for the core bus rider, while a more diverse population using bus shelters diversifies revenue potential and boosts advertising viability.

STAP can simultaneously address goals of multiple Los Angeles initiatives:

1. **Encourage multimodal travel (LA's Mobility Plan 2035):** Provide first/last mile options to solve the biggest problem that riders have in accessing transit. Offer new conveniences through trip amenities (like secure package delivery, inductive phone charging).
2. **Foster progressive pilots:** Establish an open-door policy to utilize STAP as a framework for pilots, working with City-related initiatives and programs, such as Urban Air Mobility, Urban Mobility Lab, and Los Angeles Cleantech Incubator.
3. **Reduce greenhouse gas emissions (LA's Sustainability pLAn):** Ensure reliable loading zones to reduce miles-driven in search of space, which increases pooled rides, encourages non-car travel, and transforms last mile fulfillment.
4. **Calmer, safer streets (LA's Vision Zero):** Reduce double-parking to prevent traffic bottlenecks and pedestrians conflicts. Help drivers

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anticipate the presence of pedestrians and see them better with better bus stop visibility and improved lighting.

5. **Achieve Complete Streets (Safe SidewalksLA, Mobility Plan 2035, Great Streets):** Adopt STAP as an agent for change. Ideally, the Complete Streets Program[2] could use sidewalk or roadway repaving to install fiber.
6. **Cultivate Inclusive Smart City (ITA Strategic Plan 2019-2021):** Support the City as it endeavors to become fully digital and connected to improve the lives of 4 million residents, 48 million tourists, and 503,000 businesses and leverage projects like "One digital city" as a unifying digital ID for residents and businesses for City services.
7. **Move at the Speed of Private Industry (LADOT Technology Action Plan 2020):** Promote a flexible, forward-thinking public service. Transportation is experiencing radical change with the shared mobility model, and integrating emerging drone technology—with autonomous and teleops vehicles to come—must continue. As LADOT asserts its role in managing infrastructure—physical and digital, moving and fixed—bus stops and mobility hubs can play a big part.

GOAL NUMBER #3: IMPROVE THE URBAN LANDSCAPE

STAP bus shelters and other elements will transform the urban landscape for decades to come. With global sporting events such as the 2026 World Cup and 2028 Olympics upcoming, the efficient movement of people and the visual aesthetic of LA's streets and roadways will take center stage. The world will be watching.

Our effective design efforts will balance the needs of conflicting sets of goals:

A unifying design that provides a consistent visual aesthetic ...
... Expressive of local neighborhood architecture, cultures, and preferences.

Future-focused and iconic to express LA as a leader in smart cities ...
... Pragmatic approach to budget and mass production.

Maximize revenue potential of DOOH and other commercial interests ...
... Be respectful of many communities' concerns of visual pollution.

The guiding principles behind the design of the mobility hubs are calming minimalism and thoughtful consolidation. Like most cities, Los Angeles' streets and sidewalks are filled with a wide range of street furnishings, signage and competing visual cues that often have no hierarchy. It is our objective to provide an antidote to cluttered urban spaces by bringing as many elements together as possible in a cohesive and considered tectonic system which has clear visual markers and information. The experience at a mobility hub will be a reprieve from the stress and busyness of the urban landscape.

GOAL NUMBER #4: MAXIMIZE STAP REVENUES

In a post-COVID world, cities and transit agencies need to find additional revenue streams more than ever. The City of Los Angeles has decided to allow its street furniture contract to expire on December 21, 2021 and instead pursue a greater role in STAP, which will allow the City to maximize its revenues from OOH advertising similar to TfL of London:

"London manages to generate the highest amount of revenue from its street furniture program (£100 million annually or $123 million)... TfL is involved in every aspect of its program from the design of the street furniture units to their placement and how the advertising space is sold. Most importantly, TfL procures all the street furniture allowing the agency to command 70% of gross revenues."[3]

[2] https://sidewalks.lacity.org/blog/city-s-launches-complete-streets-program
[3] https://investinginplace.org/wp-content/uploads/2019/11/StreetFurnitureContract103119.pdf

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OUR VISION FOR LA STREETS

> "Great Streets encapsulates our vision for the city's 21st Century transportation system. It is a more inclusive system that provides better multi-modal choice, a system that can be sustained within our means both economically and ecologically, and a system that supports our economy by connecting places and creating public spaces."
>
> LADOT Great Streets for Los Angeles, P7

Four macro trends have emerged in smart-city mobility: rideshare, micromobility, package delivery, on-demand delivery. All four trends have **an infinite demand** for a **finite resource—curbspace**. This supply/demand mismatch presents an opportunity for cities to re-assert leverage and control of its streets. Bus stops are the perfect solution to this issue, as they provide a pre-existing network of well-maintained and ideally-located sites along the intersection of street, bike lane, and sidewalk.

Today's bus stops are tomorrow's mobility hubs.

Mobility hubs serve all Angelenos - bus riders and everyone else. These mobility hubs connect bus riders to mobility options now. And by having bus stops at the core of new mobility integration, citywide initiatives such as encouraging intermodal travel, reducing greenhouse gas emissions and gridlock, and safer streets are simply natural consequences.

On an individual level, besides Shelter - Shade - Security - Comfort, some mobility hubs provide amenities like free public WiFi, inductive phone charging pads, smart buttons, smart-city sensors (LIDAR, Bluetooth Low Energy, NFC) and more as needs and technologies evolve.

Every mobility hub—3000 locations—will be equipped with real-time transit arrivals, programmatic city messages, and ad-hoc information such as emergency notifications.

Additionally, every mobility hub will have interactive connectivity from location to personal mobile devices, and are networked together with a low-data LoRaWAN to provide two-way data feeds. Mobility hubs aren't bus shelters with add-on technology; they are designed and built with the future in mind.

Besides amenities, mobility hubs may have related components such as:

1. Micromobility smart docks
- Swiftmile / Spin dock system (see our
- current pilot with Swiftmile / Spin in SF).
- Bikeep smart bike rack parking system

Both systems provide safe parking and scooter charging (potential revenues on a per-dock basis).

2. Delivery lockers
- Package and on-demand delivery lockers (two columns wide, with considerations for wheeled drones).
- Multi-tenant lockers can be utilized by multiple delivery partners (potential revenues on a per-door basis).

3. On-demand loading zones (long-term vision)
- Dynamically offer bus stops as loading zones for rideshare and delivery vehicles using real-time bus arrival information to prevent conflicts.
- Revenue potential via per-minute and enforcement charges are speculative but remain promising.
- Drastically reduce VMTs spent cruising for parking and congestion from double-parking, improving traffic speeds for all but especially for buses.

4. Technology integration
- A lightweight curb app provides key information—mobility, announcements.
- Mobility info—real-time arrivals, trip planners, transit info—is based upon open-source data feeds to reduce costs and ensure City control.
- Multiple data networks—CBRS, LoRa, Free WiFi—offer varying ways to connect, working in conjunction with ITA's broader strategy.
- Connected sensors—Bluetooth Low Energy (BLE), NFC—provide a means for two-way communication.
- Data security and data lake strategy works to broaden MDS' scope.

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Technology isn't a part of mobility hubs; mobility hubs are a part of LA's technology nervous system.

A network of well-placed and broadly distributed nodes seamlessly integrating public mass transit with new mobility options like micromobility, microtransit, and rideshare. These nodes also act as last-mile distribution points for package and on-demand delivery, as movement of all things—people and packages, public and private—are strategically integrated.

Each mobility hub benefits its local area, but as a network, mobility hubs become smart cities infrastructure nodes.

They work as arms to multiple city programs—StreetsLA, ATSAC, LADOT, ITA, etc.—increasing their reach and ensuring the benefits they offer are more accessible to the street. Smart cities infrastructure is an interconnected body, and mobility hubs are the nodes.

For example, shelter lighting may work in unison to provide visual messaging to pedestrian and vehicular traffic. Screens may activate time-critical information. And data networks may be provided to private mobility fleets in exchange for greater integration.

Mobility hubs will be the backbone of smart city mobility.

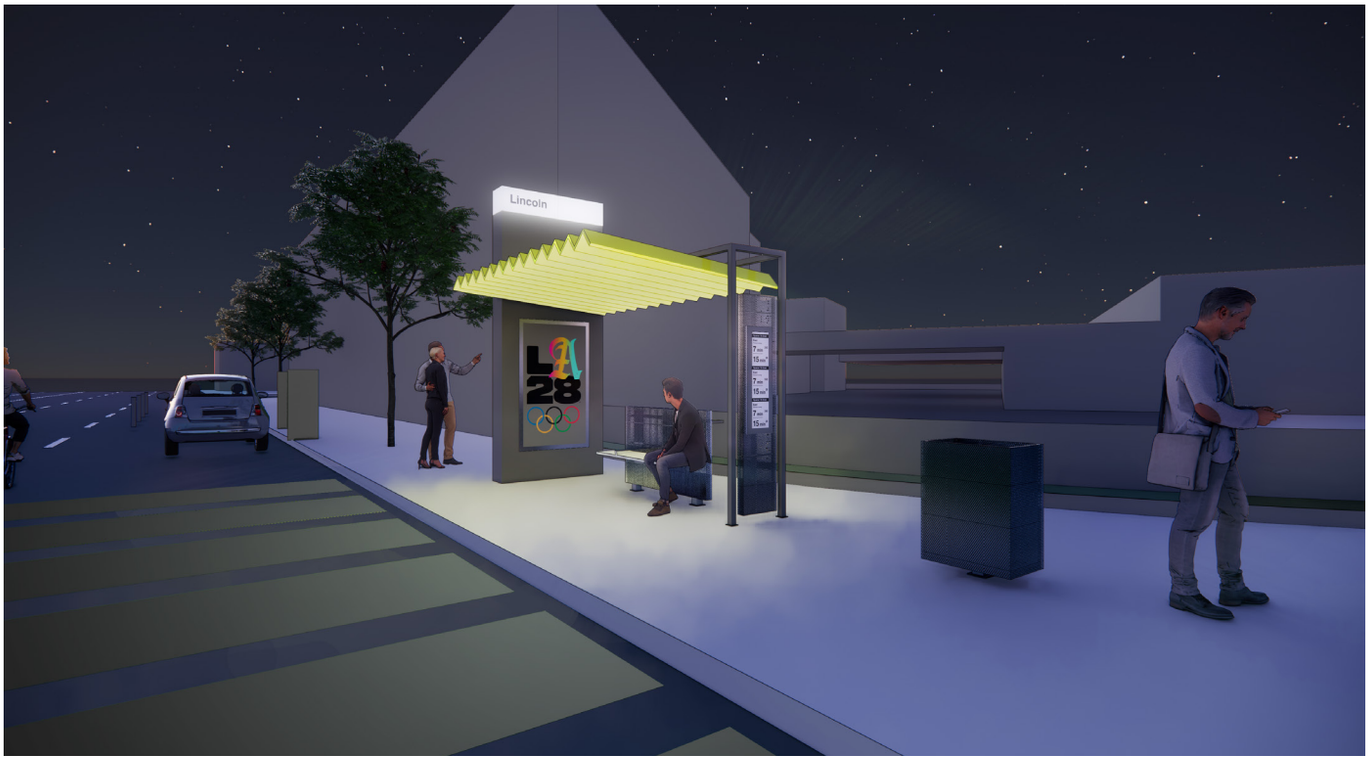
Mobility hubs offer a means to access city resources that it needs to thrive; this allows LA to build an opt-in regulatory framework instead of a compulsory one. Through these partnerships the city derives ***direct benefits*** (potential revenues via rental & intermediary fees, increased data and compliance) and ***indirect benefits*** (more 1st/last mile options for bus riders, reduced traffic and greenhouse gas emissions). In exchange, mobility hubs are a means for private operators to utilize valuable City resources in a co-located and digestible manner—curb space, grid power, fiber connection, and furniture zone space—to improve operations and reduce OpEx.

Future grant funding opportunities and pilot projects with organizations like Urban Air Mobility, Urban Movement Labs, and LACI may yield additional revenues and/or project enhancements.

CRITICAL FACTORS OF SUCCESS:

These four critical factors of success act as the foundation to our strategy:

1. True Partnership
2. Be Aspirational
3. Be Functional
4. Be Pragmatic



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CRITICAL FACTOR #1: TRUE PARTNERSHIP

"We must participate in the digital transportation marketplace as a peer and partner with the private sector or ultimately risk the ability of digital private companies to scale within an analog cityscape and to collectively serve the citizenry with cutting edge solutions."

LADOT Transportation Action Plan, P6

The greatest critical factor is finding a partner that can be trusted—both in upholding its promises and in their ability to execute them—and is aligned with the City's vision for STAP.

Los Angeles is interested in a partner that knows how to work collaboratively and is prepared to present a multitude of options along the many aspects of STAP—sales plan, operations plan, rollout schedule, amenities offered, to name a few—this sort of partnership is only possible with a trusted partner.

Each of our team members have a long-standing reputation serving Los Angeles public agencies with honesty and integrity. Our track records of strong relationships and successful projects speak to our ability to execute STAP. The composition of our team—encompassing all aspects of STAP from a truly holistic view—speaks to our thoughtfully-crafted vision and strategies to execute the City's goals. We are aligned with StreetsLA and can be trusted to uphold our promises and execute on them.

Our entire plan—contained within our Design Concepts, Transition Plan, Business Plan, and Sales Plan—is based around the assumption of mutual trust and a true desire for collaboration. By tying incentives together, both financially and operationally, the team and the City will be mutually accountable and reliant on meeting our goals.

Street furniture contracts are typically viewed as a means to an end—to maximize ad revenues.

We view revenues as a means to elevate street furniture—to build a smart mobility ecosystem.

CRITICAL FACTOR #2: BE ASPIRATIONAL

"LADOT must ensure that our existing project efforts such as Mobility Hubs and Code the Curb integrate seamlessly into this new paradigm."

LADOT Strategic Implementation Plan, pg 6

In a physical sense, the bus stop integrates the street and sidewalk, the built environment and moving transit vehicles. And as Los Angeles confronts gridlock on the streets, sidewalks, and data space with all sorts of connected devices and data layers, we present an integrative approach to bus stops as they evolve into mobility hubs.

Bus stops are a tangle of interrelated components:

1. Concrete and street design (StreetsLA, Safe SidewalksLA, city planning, permits)
2. Technologies (Urban Mobility Lab, DID / payment wallets, Autonomy, Data)
3. Utilities like grid and network (DWP, Southern California Edison, ITA)
4. Transportation network (LADOT, Metro, micromobility)
5. Community (EmpowerLA, BIDs, everyday riders)

Our aspiration is to ensure a smart Los Angeles benefits everyone; this is only achieved when everyone plays a part.

STAP succeeds as an extension of the City of Los Angeles and the communities they serve. As a private concessionaire contract, a natural friction exists between maximizing City & community goals and maximizing profit.

We will partner and engage with stakeholders of the curb to ensure that STAP street furniture benefits all. This starts with In-reach rather than outreach to site and network stakeholders. There are many stakeholders of the curb, both on individual sites and across the network level. Site stakeholders include community groups, business owners, walkers, bikers, and drivers. Network level stakeholders include public agencies and City departments, especially. Complete Streets, the Office of the Mayor, Mayor's Office, Urban Mobility Lab, LADOT, LA Metro, ATSAC, DWP Parking and Permit Divisions, Southern California Edison, EmpowerLA, BIDs, PPPs.
This In-reach maximizes STAP's value by

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aligning complex planning, design, technology, and operations considerations with stakeholder needs and values. Every aspect of our project plan has convergence and integration in mind:

- **Planning:** Bus shelters need to account for the built-environment and integrate with existing on-street projects, not designed as an island along the curb. STAP's implementation should realize the goals of Complete Streets, Mobility Plan 2035, LA Sustainability PLAn, Vision Zero, and Great Streets.
- **Design:** Our design team marries architectural, interactive, urban design, and mobility—to achieve a holistic and unified strategy that reflects Los Angeles' sustainable smart-city future while celebrating its iconic post-modern and minimalist vibe. Its kit-of-parts based approach is modular, economical, and customizable to each neighborhood's cultural expression.
- **Technology:** Smart city mobility integrates physical infrastructure with moving vehicles and digital platforms. New technology concerns—such as data rights, data security, and data sharing—must all be considered in tandem.
- **Operations:** Full-stack curb systems integrations—physical, digital, O&M. Physical provisioning of power and data and real estate. Light illumination that can be controlled and altered in real-time and/or scheduled events. Community placement within ad panels. Transit, city resources, messages on display screens.
- **Outreach:** A radical re-thinking of outreach, simply called ARTREACH. Our job is not to promote STAP to the community, but to promote the community through STAP. Our proposed ARTREACH initiative brings museum art and local artists to the people, through an innovative community arts program come to life through digital screens.

CRITICAL FACTOR #3: BE FUNCTIONAL

Our plan considers each component of this project with great care, analyzing all potential project needs and ways to reduce wasteful time and resources. Every component must serve a purpose, otherwise it is taken out.

> Through effective strategic planning and execution, the ITA focuses its resources on overcoming key challenges to enable the City of Los Angeles to meet its full potential. As described by famed UCLA professor, Richard Rumelt, "Good strategy works by focusing energy and resources on one, or a very few, pivotal objectives whose accomplishment will lead to a cascade of favorable outcomes."
>
> ITA Strategic Plan (2019-2021), pg 1

The Lean Sigma Six approach informs our program management, and we infuse the power of efficient models and data-based analysis with decades of experience understanding that the real world never works as models predict.

CRITICAL FACTOR #4: BE PRAGMATIC

COVID-19 taught us the speed at which sudden and unexpected events can upend the future. Even assuming that vaccinations will allow for a resumption to normalcy, the frequency and impact of other unknown transformational events will only intensify in the years ahead, as the exponential growth of technological advancements reverberates into the mobility and advertising industries.

Change is fast with unexpected outcomes, and as in mobility, the ad industry is experiencing rapid change and creative destruction; with it formerly held truths and business as usual will no longer apply. Expecting the Digital Out-of-Home (DOOH) ad industry to simply be a refresh to static or print Out-of-Home advertising is not consistent with recent history. As is often stated, *history doesn't repeat but it does often rhyme*. Online advertising provides a predictive model for how DOOH Advertising will play out in the next ten years.

Established media players found that their black-box methods and competitive moats were irrelevant to the new digitally-led online advertising model. AdWords launched in October 2000 and relied on programmatic advertising to democratize the ad-buying process, with transparent success metrics like cost-per-impression and cost-per-click. Traditional media companies were slow to adapt, and in less than twenty years Google AdWords now owns almost half of the $130 billion digital ad market.[4]

[4] https://www.wsj.com/articles/why-googles-advertising-dominance-is-drawing-antitrust-scrutiny-11560763800

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The key factor to consider in the above example is that online advertising began in earnest almost two decades earlier than today; DOOH advertising will experience a similar shift to programmatic advertising, only at a much more rapid pace.

An unexpected future should not just be expected, but provisioned for.

Agile design approach is the new catch-phrase in software development and project management, as it allows for nimble decision-making and shrinks older methodologies such as long-cycle design and test phases that ensures outdated releases and financial bloat. This is a HUGE consideration as the speed of technology renders products and processes obsolete in a hurry. And since STAP is inherently a ***technology infrastructure project*** as much as it is an advertising and amenity project, we take an agile approach to all aspects of this project.

An agile approach allows us to successfully alter our strategy to continue meeting STAP goals regardless of unexpected future events—which after COVID-19 should absolutely be expected—that derails or even cripples large PPP infrastructure projects like STAP. All aspects of our strategy is designed to be agile and flexible:

- **Financial:** A flexible financing team that considers multiple financing options and agile-based methodologies to adapt models based upon need.
- **Architectural**: Designed on a modular framework to easily swap components after-the-fact.
- **Technology:** An API-based framework approach allows us to integrate with Citywide strategies in network infrastructure, data provisioning, and existing technologies, based upon partners that embrace open-source principles.
- **Construction:** A methodical approach to maximize stake holder participation and build according to 360 degree analysis of infrastructure projects along the curb.
- **Rollout:** A thoughtful rollout schedule that allows for changes in capital purchases (ie digital vs static ad boxes) based upon sales revenues and cashflow considerations.
- **Product Selection:** Utilizing a low-energy ePaper digital screen for City messaging needs—real-time arrival info, City messaging, ad-hoc announcements—allows for deployment without grid power and high-speed data.
- **Vendor Selection:** Finding partners that are experienced in iterative design and thoughtful customization allows us to alter production schedules and component specifications.

Here is an example of how our agile scenario-based rollout works. In order to ensure sufficient project cashflow, the following year's rollout is determined by the current year's ad revenues.

SCENARIO BASED ROLLOUT

ACTUAL ROLLOUT	TOTALS	2021 YEAR 1	2022 YEAR 2	2023 YEAR 3	2024 YEAR 4	2025 YEAR 5
Revenues ACTUAL		$$$	$$	$	$$	
Mobility Hubs Installed	108	108				
Standard Digital Installed	992	626	366			
Standard Non-Digital Installed	1520		400	400	320	400
Total Bus Sheltered Installed	2620	734	1500	1900	2220	3000
Aggressive Rollout $$$						
Mobility Hub Icon Installed	108	108				
Mobility Hub Lite	1692	626	366	350	350	
Moblity Hub Eco Installed	1200		400	400	400	
Total Bus Sheltered Installed	3000	734	1500	2250	3000	
Optimized Rollout $$						
Mobility Hub Icon Installed	108	108				
Mobility Hub Lite	642	626	16			
Moblity Hub Eco Installed	1550		350	400	400	400
Total Bus Sheltered Installed	2300	734	1100	1500	1900	2300
Delayed Rollout $						
Mobility Hub Icon Installed	108	108				
Mobility Hub Lite	639	626	13			
Moblity Hub Eco Installed	1240		280	320	320	320
Total Bus Sheltered Installed	1987	734	1027	1347	1667	1987

Phase 1, Rollout A (2022) is fixed, all other years' rollouts may vary based upon real-world outcomes

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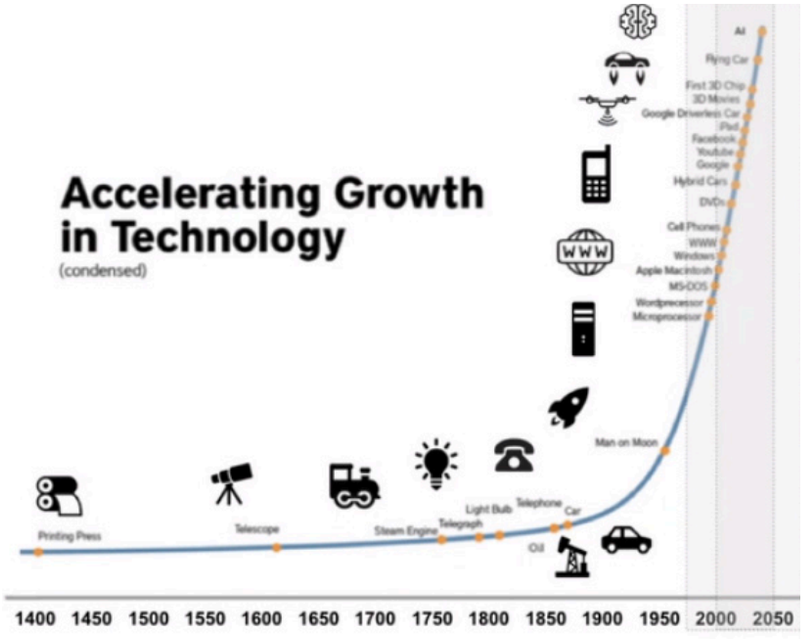
4. TECHNOLOGY PLAN

Cities, such as Los Angeles, have been using technology for over 100 years.. However, the pace of technology advancement over the last 10 years has been unprecedented, thus the digital opportunities to transform and improve Los Angeles as a “Smart City” have exponentially increased.

ITA Strategic Plan 2019-2021, pg 9

THE FUTURE (AS WE SEE IT)

Gordon Moore, cofounder of Intel declared in 1965 the grand treatise of computing—that it would double roughly every two years[5]—and for over 50 years it has generally held true. Even considering this observation on a linear scale is impressive; a tree that grows from 4 feet to 8 feet in two years, for example, is a lot. But with exponential growth a tree after four years is now 16 feet, and by ten it is 128 feet tall... growing 32-times in 10 years. In twenty years, the tree is over a thousand feet tall at a 256-times growth.



[5] https://en.wikipedia.org/wiki/Moore%27s_law

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The mobility industry witnessed first-hand both the promising and destructive consequence of big data and big tech overlaying its exponential growth onto city streets. As with all exponential growth curves, though, the start is rather conventional, and oftentimes dismissed. Nothing seems to be happening.. until it all seems to happen at once.

New mobility started in the United States with Portland Carshare in 1998[6], just over twenty years ago. When Zipcar purchased Flexcar a decade later (Flexcar earlier acquired Portland Carshare), it became the dominant player in the space, with only a combined 5000 cars in 50 markets[7].

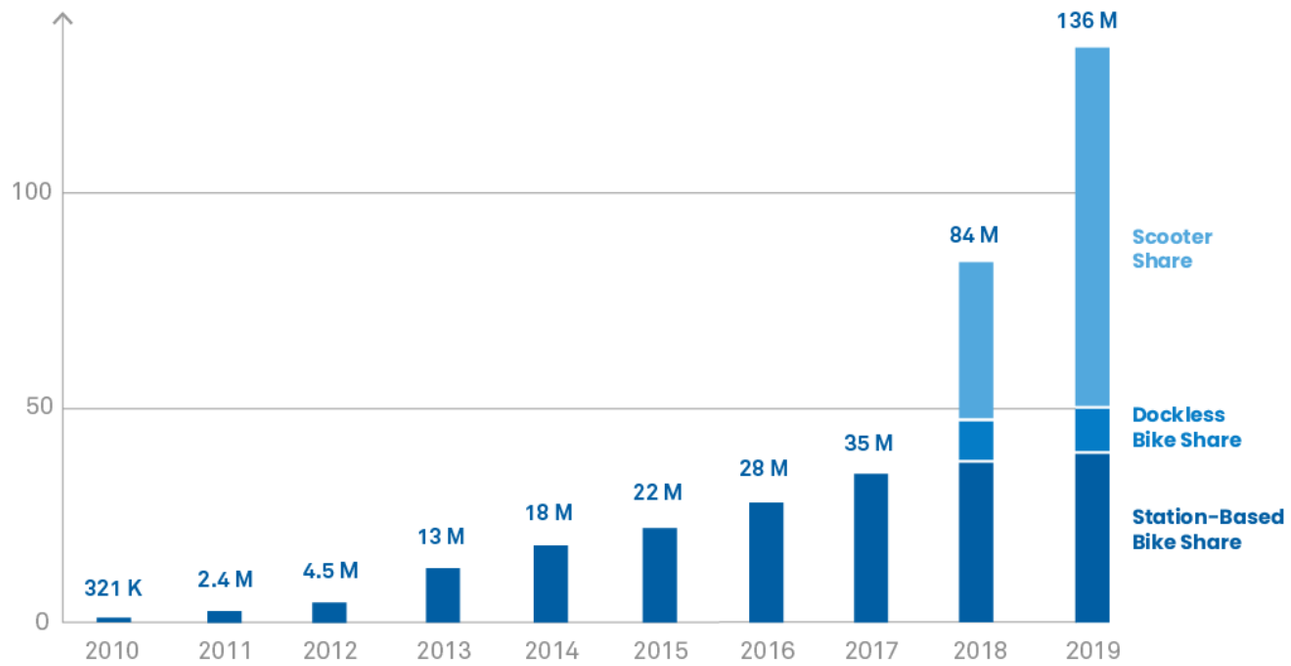
Bikeshare started in the US around this time with SmartBike DC[8]. What started out as an amenity / street furniture advertising vehicle—similar to bus shelters—became the talisman for city planners aspiring to introduce green mobility. By 2017, the number of bike shares bikes in the U.S. more than doubled from 24,500 bikes at the end of 2016 to about 100,000 biked by the end of 2017. The majority of the increase in bikes came from new dockless systems.[9]

With hindsight in 2021, the exponential growth of new mobility becomes evident. Car share began in 1998, bike share in 2008, Uber commercially in 2010[10], venture-funded dockless bike share in 2014[11], and scooters in 2017[12]. In its totality, new mobility vehicles contributed an exponential growth in total trips. And while the profits from venture-backed IPOs went to Wall Street, their cumulative negative effects—to street and pedestrian traffic, to bus passenger counts (down) and trip times (up)—fell upon Main Street. The streets were suddenly inundated with unregulated vehicles, nothing seemed to be happening... until it all seemed to happen at once.

Big data and big tech are now coming for city infrastructure, and the pace will quicken. This will result in immense capital destruction along the curb, as winning and losing companies, technologies, and standards collide for domi-

SHARED MICROMOBILITY RIDERSHIP GROWTH FROM 2010–2019, IN MILLIONS OF TRIPS [13]

Source: NACTO



[6] https://en.wikipedia.org/wiki/Carsharing
[7] https://en.wikipedia.org/wiki/Zipcar
[8] https://en.wikipedia.org/wiki/Capital_Bikeshare
[9] https://nacto.org/bike-share-statistics-2017/#:~:text=In%202017%2C%20the%20number%20of,came%20from%20new%20dockless%20systems.
[10] https://en.wikipedia.org/wiki/Uber
[11] https://en.wikipedia.org/wiki/Ofo_(company)
[12] https://en.wikipedia.org/wiki/Bird_(company)
[13] https://nacto.org/shared-micromobility-2019/

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nance.

Established methods of deployment and forecasting will need to be re-evaluated in real-time. And provisioning for constant and consistent change is prudent. This is especially important given the
immense concerns regarding not just data security and data privacy, but fundamental data rights.

Smart cities infrastructure is both physical and digital. Code is the new concrete; and the City needs to consider how to manage the coming invisible
infrastructure as Los Angeles transitions into a smart city. This project proposes a model to maintain public control.

"During Sidewalk Labs' approximately two-year public consultations, privacy and control over data quickly emerged as flashpoints. A July 2019 survey by The Forum Poll found that while only 38 per cent of Torontonians were familiar with the smart-city project, 60 per cent of those people did not trust

HOW THE CITY MANAGES THE FUTURE

"The underlying principle to construct Transportation 2.0 is to have authority over how autonomous surface and air vehicles route through the network. In other words, the City must set the ground rules for private mobility providers to operate on our streets and serve as the connective tissue that guides the safe movement of goods and people through Los Angeles. Control is a fundamental aspect of today's transportation network and will become even more critical in the future."

LADOT Strategic Implementation Plan, pg 5

Open-source based approach, with active participation of ITA and MDS, can help restore the balance. We are also sensitive to data rights: data security, balancing the utility of non-aggregated data vs protection of PII. We believe a tight coordination with ITA and MDS ensures that the ongoing balance remains in the hands of the City.

Inadequate details regarding data rights was a key failure in Toronto Waterfront[14]

[14] https://archive.curbed.com/2020/5/7/21250678/sidewalk-labs-toronto-smart-city-fail
[15] https://theconversation.com/sidewalk-torontos-master-plan-raises-urgent-concerns-about-data-and-privacy-121025

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ITA Strategic Plan 2019-2021 Priorities

Priority #2
Apply Technology to Directly Improve Public Welfare (Public Engagement) "We intend to build on this objective by establishing a unified customer service measurement across key public services and establishing a unifying digital ID for residents and businesses."

Priority #3
Priority #3 - Build Next Generation IT Infrastructure and Capabilities (NextGen Infrastructure) "We intend to build on this objective by expanding high-speed, pervasive WiFi throughout City facilities, expanding the use of Cloud infrastructure… continuing Internet of Things (IoT) "Smart City" projects, and delivering a reliable 'Citywide Cloud Pipeline' and shared 'Data Analysis Platform' for City departments."

LADOT Technology Action Plan 2020 Six First Principles

1. **Open-Source:** Allow any city or company to take a product developed by Los Angeles and run it as a service within a city free from any royalties or license fees.
2. **Competition:** Foster a competitive market for solicited requests to run, on behalf of cities, reference products as a service differentiated by service level and customer satisfaction.
3. **Data and Privacy:** Cities should earn their own data through the digital services they provide while also adhering to best practices for privacy standards.
4. **Harmony:** Avoid a patchwork of regulation by enabling low cost, homogenous services that span municipality borders.
5. **Sustainability:** Build product that any city can afford with new types of business models to ensure sustainable transportation networks for generations to come.
6. **Modularity:** Create a flexible kit of parts and framework that public agencies may designate to fit their needs.

Our Technology Plan is built around agile and modular principles embodied in an Agile Development and articulated in the State Software Budgeting Handbook's best practices. By building a framework around APIs, we are able to iterate a working ecosystem with respected partners quickly, with flexibility to alter strategies, technologies, and partners as City needs dictate.

LADOT developed the Mobility Data Specification (MDS) in time for private dockless scooters. MDS-compliance was a condition for permits, requirements—real-time and non-aggregated vehicle status and trip history data—offered a natural use-case to test new mobility regulation. With the formation of the non-profit Open Mobility Foundation (OMF), MDS is now a mobility data standard in hundreds of cities.

STAP can bring MDS into other forms of mobility - including new drone mobility. MDS can provide a proper data foundation to ingest and manage the vast avalanche of mobility data that will emerge, and we intend on working alongside LADOT to ensure a proper sync-up.

The following components are currently anticipated in our rollout. However, due to the changing landscape and pre-conditions that come with any partnership opportunity, final networks may change. We will work with the City to consider final technology components to be added with a revised rollout plan.

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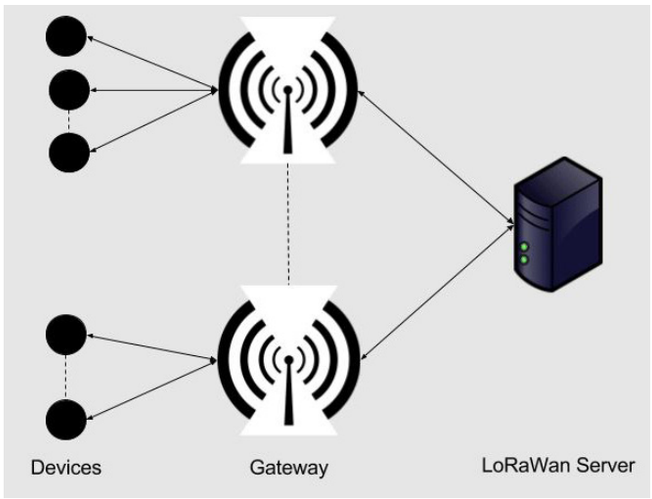
NETWORKS

1. **Backhaul Partner:** We have already established several in-depth plans with various backhaul providers, whether through cable, fiber, and satellite. Additionally, project partner **Vertical Bridge is interested in offering significant capital to fund required infrastructure to distribute backhaul to multiple 5G cellular networks**. This relationship is extremely beneficial to the City, as it builds Los Angeles' smart city infrastructure at no cost, provides STAP with no-cost high-speed internet, and yields revenue potential. We recommend pursuing this strategy in earnest in order to provide secure and high-speed internet access at little to no upfront and recurring costs.

   Our plan is to work alongside Vertical Bridge to deploy a strategically placed network of backhaul endpoints to provide sufficient coverage for most STAP bus shelter locations. Proper placement involves sufficient spacing considerations, surrounding infrastructure to reduce data interference, and available provision of backhaul infrastructure to reduce trenching and other site work.

2. **CBRS:** With a backhaul strategy in place, our plan is to innovate with emerging WAN technologies such as Citizen's Broadcast Radio Service (CBRS). The 3.5GHz CBRS band offers improved wireless broadband access and performance in the LA region, and since it's a new technology the band doesn't suffer from high-traffic issues.



Comprising 150 MHz of 3.5 GHz shared spectrum, the CBRS band has been used by the federal government for radar systems and commercial fixed satellite systems for years; enterprises like STAP can now use the CBRS spectrum for private, secure LTE networks previously dependent on Wi-Fi technology. Private LTE networks can also leverage the CBRS spectrum for IoT connectivity in an optimized, highly reliable, low latency, on-premise solution.

Our plan is to build a private CBRS network on top of our backhaul partner's end-points. This network will provide a secure, high quality, and minimal cost solution to high-speed data. This solution allows us to remain agile in preparation of emerging network innovations such as 5G. Some sites may require supplemental or backup technologies, such as cellular.

3. **LoRa:** The LoRaWAN specification is a Low Power, Wide Area (LPWA) networking protocol designed to wirelessly connect battery operated 'things' to the internet in regional, national or global networks, and targets key Internet of Things (IoT) requirements such as bi-directional communication, end-to-end security, mobility and localization services.

   Benefits to LoRaWAN are its extremely lower power needs, inexpensive deployment and data costs, long-range signal (thus the name **Lo**ng**Ra**nge) and wide adoption among many emerging IoT participants. Data bandwidth is tiny, measured in kilobytes of data per second, so use cases are limited to simple numeric-type data transmission (not pictures or heavy interpretive commands).

   In STAP locations where solar power may be the only viable option, LoRa may be sufficient to provide updates to a (low power) ePaper departures and alerts display, for example. And as a network, an open-source LoRaWAN provides practical utility for private mobility operators. Public agencies could require MDS compliance in exchange for free or minimal cost access.

   An explosion of IoT sensors is emerging on LA streets, and providing an open-source LoRa network for both STAP and other stakeholders' infrastructure and vehicles

[16] https://lora-alliance.org/about-lorawan/

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to utilize will be seen as essential for smart cities, and yet another carrot rather than a stick approach to mobility management.

4. **Public Internet:** Free high-speed internet access is now an expected amenity in any public gathering space. We recommend partnering with a backhaul provider to also setup and maintain free public wifi networks.

   These public wifi networks also provide a direct benefit to our partner, as it establishes additional free hotspots for their customers. Variable wifi speeds and connections may be offered—free for the general public, premium for our partner's customers and offered for a cost to non-customers.

   Data security and personal privacy remains a top concern. We will work alongside the City to find a wifi solution that satisfies all concerns.

   Our aspiration is to begin every free wifi session with a city message: daily survey, citywide message, emergency alert, personalized city service, etc. We also plan on requesting opt-in location and other personal data for the sake of maximizing advertising opportunities, while always upholding industry best practices and rules for data privacy and data rights.

5. **ITA/ ATSAC 3.0:** STAP infrastructure should serve as smart city nodes to a connected smart cities ecosystem. In other words, STAP street furnitures act as interactive body parts to a singular digital nervous system. In a sense then, STAP can be seen as an extension of several City and regional communications networks such as ITA, ATSAC 3.0, and Federation of Internet Alerts (FIA).[17]

   Each STAP bus shelter with grid power will be provisioned with a secure, temperature controlled and weatherproof electronics enclosure. And shelter roofs are designed for sensors and communications equipment. We look forward to further discussions with the City to discuss integration options with ITA, ATSAC 3.0, and other networks.

[17] https://www.internetalerts.org/about

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DATA:

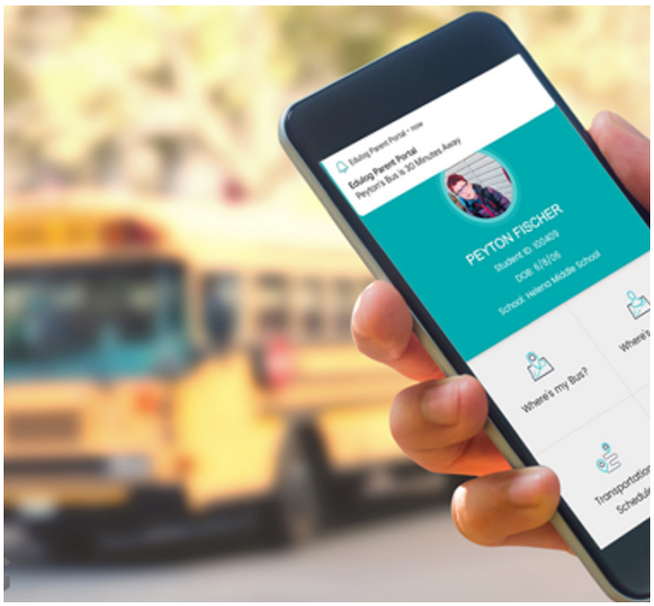
- **Sensors:** Our frameworks-based project approach is flexible and agile by design, to provide functional utility regardless of which technologies, companies, and standards prevail. Each Bus shelter will have Bluetooth Low Energy (BTLE) beacons and Near-Field Communication (NFC) readers, with additional capacity for LIDAR and air quality sensors (AQS).

  These sensor types have seen quick adoption due to their minimal privacy concerns, low energy and bandwidth needs, and multifunction potential. A plethora of sensor options are available, many built on open-source platforms and readily available. We look forward to working with the City on finalizing an initial sensor kit that satisfies the City's ambitions.

- **MDS:** Our team is a strong supporter of MDS, and recommends that all data be compatible with the City of Los Angeles' MDS data lake. MDS has the potential to manage all forms of mobility data, and the STAP program can increase MDS use and compliance by taking a carrot rather than stick approach.

INTERACTION DESIGN:

Interaction Design, led by BMW Designworks, ensures that interactions within (or near) Mobility Hubs will be designed as a holistic ecosystem. This entails creating consistent, digitally-enabled experiences across the multiple touchpoints of a journey. Consistency will come in the way digital information is served (how, where and when), its aesthetic (including consistency with the new physical language of the smart bus shelters), and the user experience (UX). Our goal is to enable interactions where they are best suited, using devices that can be context-aware, in the simplest possible way.



In the world of public digital experiences, large-format touch screens have become increasingly widespread. Seen in use as information kiosks at the mall, as a method of ordering at dining and retail establishments, and increasingly growing applications in other fields, these screens provide an intimate experience for a single user. However, they often fall short of serving the needs of many. This singular interaction necessitates replacing or obscuring the advertising zone on display, creating friction between the City and the public who want to give and receive information, and the advertising partner who wants to maximize revenue potential.

The best—and in the era of a post-COVID world—the safest place for these personal touch-based interactions are our mobile devices. The proliferation of personal mobile devices may seem obvious but the magnitude is noteworthy—a full 70% of Americans in the lowest income bracket own a personal mobile device, with up to 97% of Americans in the highest income bracket. Sufficient data plans remain a challenge in many low-income households - which we will address with free public internet access at most high usse STAP locations. When users aren't able to utilize a phone, City-Transit screens will be a ready source of information, and locations with wired power and data will provide voice- activated text-to-speech information per ADA requirements.

The hub will still have ways to interact with the passenger in more proactive and progressive ways. Utilizing ridership data from the city, inputs from sensors, and metrics from the mobile app, hubs will have the ability to act on valuable insight automatically. The City will now have the ability to cater to riders on a hub-by-hub basis, updating language on digital signage based on shifting demographics, or modifying listed connection points and transit times, to name a few examples.

This shift in interactive strategy opens up many benefits to the program, which we detail below alongside the interactive components to STAP:

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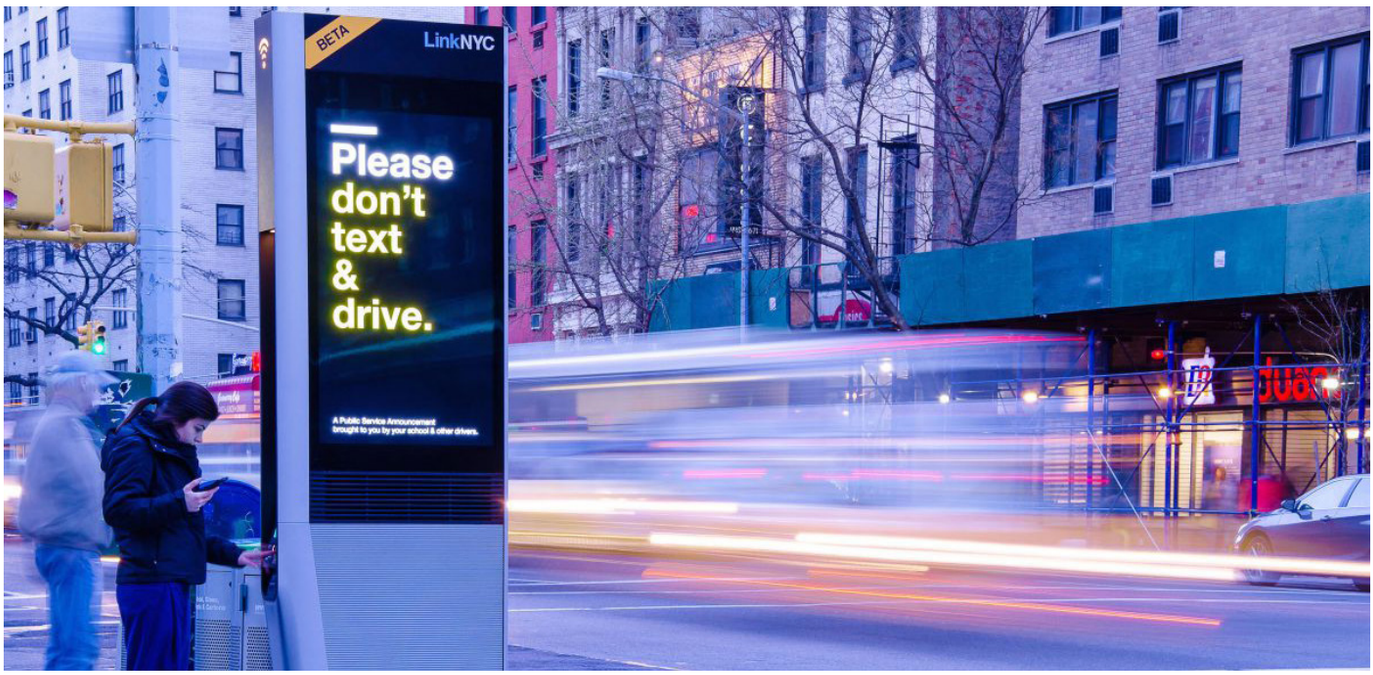

1. **Digital Ad Screen:**
   By utilizing the power of the digital advertising network within the hubs, the city will have the ability to provide flexible and dynamic communication throughout the community. Digital ad screens will apportion 10% of its total system wide space to city messaging. Through the Curb content management system (CMS), it will be possible to populate and schedule content, broadly communicating to the entire network, selectively targeting communities, or narrowing it down to specific routes and hubs. By combining calls-to-action with personalized and follow-up messaging via handheld devices, the city can ensure proper distribution of messaging and engagement at locations, maximizing insight into what drives successful campaigns.

   The screens also will also be used for ARTREACH, featuring rotating art exhibits from local museums and galleries and community-led local artists (read Section 7: Business Plan)

2. **ePaper Transit Screen:**
   High on contrast, low on power consumption, ePaper— the technology behind products such as the Amazon Kindle—has advanced rapidly since its introduction. This combination of features, powered by solar, has made it the perfect medium for delivering real-time transit information and city messaging in a sustainable manner, allowing dynamic digital content, regardless of whether a hub has grid power available.

All 3000 locations will be equipped with ePaper City-Transit Screens, allowing access to real-time content

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regardless of community or utility resources available.

Like the Digital Ad Screens, these will also support messaging powered by the Curb CMS, providing targeted reach to shelter locations never thought possible.

We will continue iterating on a combined technology platform which includes ePaper screens, solar power packs, and LoRaWAN to push their technical boundaries to offer transit equity to all locations.

3. **Curb App**
The Curb App is a downloadable app that acts as a counterpart to bus shelter messaging. With the primary goal of improving the passenger experience, the app will enable more personalization across every journey. Lightweight with a minimal basic framework based on agile design methods, the aspiration is to build a program that can be launched quickly and provide basic yet useful functionality while demanding only minimal maintenance and updates.

The primary architecture of the app will consist of a microservice framework. This architecture will allow the flexibility of adding in additional components in a modular way, removing the burden of maintaining a monolithic codebase, enabling new functions and features to be added as related projects and additional budgets allow.

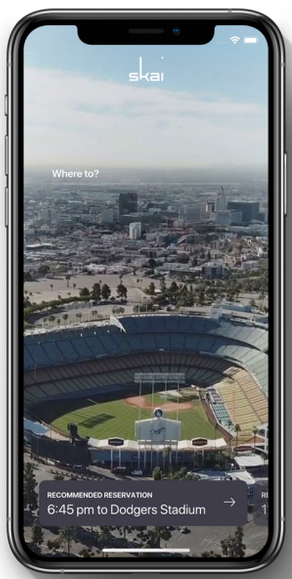
We will actively seek private partnerships while also supporting applications for grant funding to develop additional add-on modules. Add-ons may include language identification, multimodal trip planning, and integrations with city services like EBT balance. The modules can also feedback into the system, providing additional insight into passengers, and helping target relevant content within the hubs.

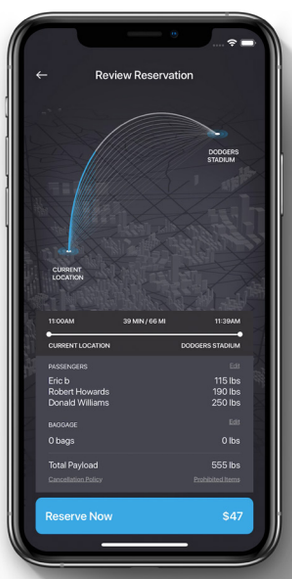
One such add-on of great interest is an ITA-led global Digital ID component. ITA Strategic Plan 2019-2021 states in Priority #2:

"Apply Technology to Directly Improve Public Welfare (Public Engagement) 'We will build on this objective by establishing a unified customer service measurement across key public services and establishing a unifying digital ID for residents and businesses."

With a Digital ID, personalized content—such as pre-registered city services distributed in native languages—is not only possible but well within technical boundaries. Broad policy objectives, such as transit equity and intermodal travel, can be boosted via universal registration onboarding, fare transfers, and low-income discount pricing for new mobility options like ride-hail and shared mobility.

4. **Infrastructure Node:**
Interactivity is more than a personal experience; when seen as part of a network of mobility hubs, the entire structure provides interactivity on the streets to the general public as a whole.





Example of passenger application built by BMW Designworks.

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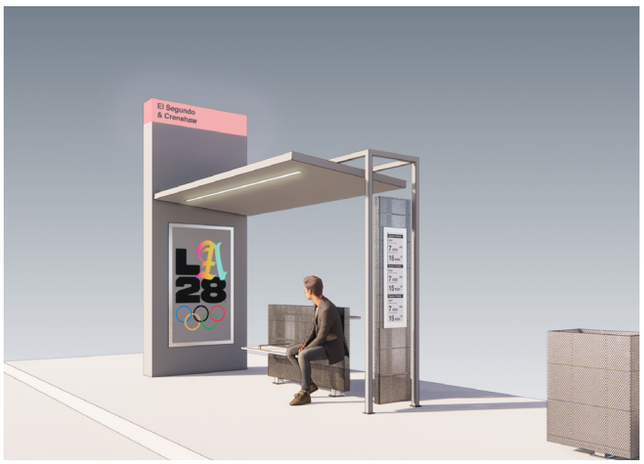
For example, screens could act in unison to provide emergency alerts. Lighting, which has traditionally been purely functional, could communicate real-time messaging or help in wayfinding by changing color or intensity. Sensors embedded in the hub could trigger upon custom thresholds, providing additional information to the city in real-time. These aspects could also be combined, providing a branded take-over for high-value ad campaigns or integrations into large cultural events such as the Olympics.

The possibilities are virtually limitless, but begin with an intentional plan to advance smart cities infrastructure with STAP.



CONTENT MANAGEMENT SYSTEM

> Tomorrow, an innovation program with open data, services, and infrastructure will enable innovators and developers as well as community based organizations .. to explore and co-create new ways for connected transportation systems to benefit individuals, businesses, and governments.
>
> LADOT Strategic Implementation Plan, pg 8

The future is in frameworks.

Building traditional custom programs, such as a custom CMS, can be an expensive endeavor, and recurring expenses from private consultant groups to maintain custom programs are costly. The emerging alternative, Software As A Service (SaaS) model, relies on a robust purpose-built program with optional customizations for a recurring annual fee. These programs are truly robust, but also highly developed and therefore rigid. Customizations are often not much more than design settings (such as logo placement, color palettes, etc) and clunky add-on modules.

We take the opposite approach, and offer the City an open-source API-based framework to plug-in modules as needed.

1. **A network & power distribution module** to allow smart IoT infrastructure and vehicles with a uniform access to grid power and data networks. This access is contingent upon compliance with MDS and other requirements that the City deems important, such as requiring integration with ITA's Digital ID, data security protocols, etc.

2. **A single admin module** to monitor and access all components of STAP with a simplified way to securely communicate with multiple public and private programs. This framework-based approach to the admin module assures that the City remains in control at all times. It can pick and replace vendors, modules, and technologies as its situation dictates.

3. **An integrated reporting & data module** to port multiple parties' data directly into City data lakes, such as MDS. Mobility Data Specification (MDS) is a truly revolutionary project. Built by LADOT upon open-source principles—in full transparency and open communication with the developer community by hosting its development in github—MDS proved extremely capable for the sudden rollout and scale-up of dockless scooters on LA's streets in 2018.[18]

4. **A robust API / SDK map** based upon open-source principles to allow multiple developers—public agencies, private companies and through the developer community—to interact and build upon.

Because of its framework-based approach, MDS was able to be built and iterated on quickly, while its flexible and lightweight architecture

[18] https://www.openmobilityfoundation.org/about-mds/

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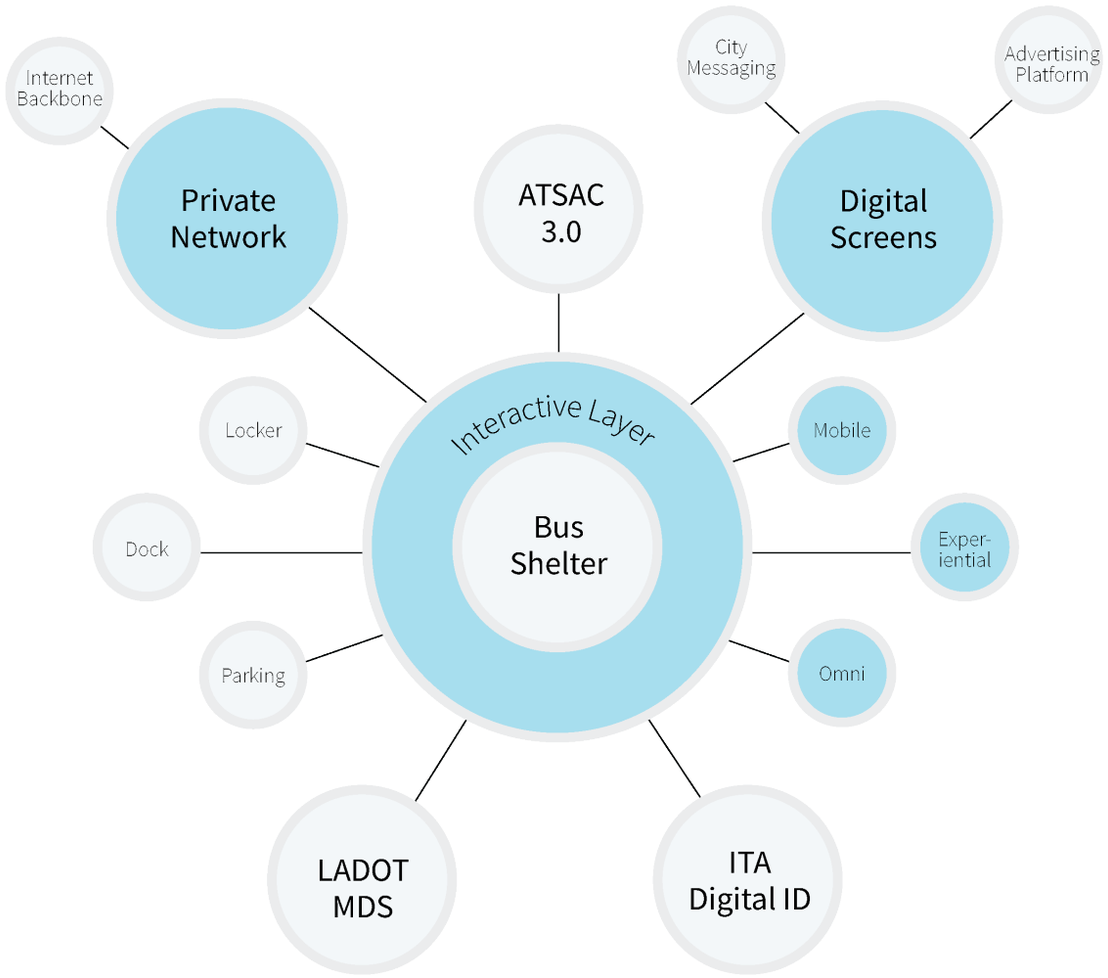

Curb CMS (in blue) helps connect public and private, physical and digital.

also enabled cities, scooter operators, and data visualization companies to build upon and customize it. And its open-source principles allows for its continued growth and evolution through the greater developer community.

We intend on building upon our CurbOS platform to offer the City a customized open-source and open-framework Curb CMS. The Curb CMS will combine several CMS programs into a unified Admin Dashboard module, Data & Reporting module, Physical connections, and API / SDK Connect module.

When taken holistically, Curb CMS can eventually integrate with multiple City and private networks, infrastructure, and data lakes -- with physical and digital infrastructure—to help both sides benefit from a shared public curbside ecosystem. We will work alongside the City to utilize open-source principles to ensure a City-preferred framework.

The Curb CMS will combine multiple API sets into a unified system. The dashboard view will provide an at-a-glance update on the most important aspects of STAP with quick links to the respective CMS admin panels for a more comprehensive view. Data will be unified in the backend to ensure a consistent data distribution and reporting system that complies with City preferences and security requirements. And the API/SDK map will show a live view of current connections. The initial set of integrations will include:

1. **Advertising CMS:** We utilize Broadsign, the world's largest Supply-Side Platform for programmatic advertising. Their Broadsign Control and Publish CMS platforms provide features such as: ad scheduling, proof of play, template-based customized ads (such as for city messaging and Art of the People), restriction on ads that violate the City's advertising policy, and many more.

2. **Hardware diagnostics:** Over a dozen sensors analyze the status of connected

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hardware, such as: internal temperature, health status, current readings and data capture, and more. Real-time preventative alerts auto-generate support tickets to help us better service hardware issues before they shut down.

3. **Resource diagnostics:** Power currents and network speeds of all connected street furnitures are monitored. Real-time preventative alerts auto-generate support tickets to help us better service hardware issues before they shut down.

4. **Movement and Interaction reports:** All user interactions and anonymized pedestrian / vehicle movements are tracked and recorded to provide the City with useful information for planning purposes.

5. **Maintenance tracking:** We utilize Connixt, used by LADOT, LA Metro, Metrolink, and OCTA. Connixt is a mobile-first, cloud-based enterprise suite to digitize and automate asset maintenance, work/crew management, inspections, safety, compliance & inventory. Connixt manages inspections, maintenance, incident management, condition/damage assessment, inventory tracking and more. Tranzito's 24/7 Customer Support team will monitor all infrastructure and digital assets to ensure quick service deployment.

6. **Help desk:** We utilize Groove, a cloud-based help desk to communicate with customers via email, live chat, social media and phone calls. Groove includes ticketing, live chat, knowledge management, reporting tools and customer self-service and is multi-platform (email, text, webchat).

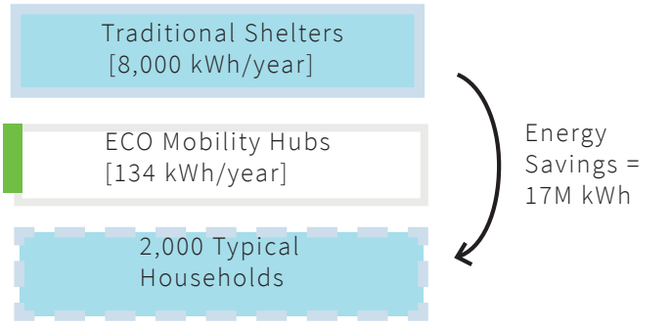
7. **Real-time transit information:** We utilize real-time transit information from LADOT and Metro to offer bus and train departures at LADOT Mobility Hub @Wilshire Grand. We will continue working with LADOT, Metro, other transit agencies, and open-source feeds such as GTFS, GTFS real-time, and GBFS to provide multimodal transit information across all STAP locations.

SMART SYSTEM SUSTAINABILITY

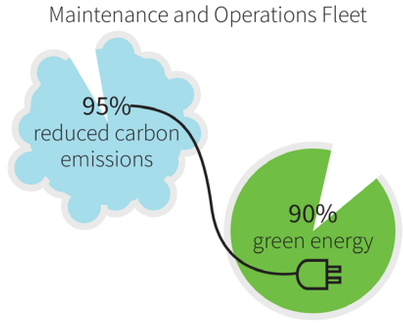
We are modeling STAP to be embedded in and achieve the sustainability goals set forth by City leaders, to usher in a smart city we all want to see. Our entire framework is shaped with sustainability in mind so that our features aren't costly add-ons but cost-savers:

Financing: We commit to supplying 90% of our energy needs from green energy via a virtual power purchase agreement (VPPA).

Deployment: We will utilize over 2000 Mobility Hub Eco shelters. Ecos have the same beautiful look and smart-cities technology as our powered Mobility Hubs, but can operate entirely on solar, thanks to thoughtful use of ePaper City-Transit screens and low-energy LoRa routers and sensors.



Operations: Our experience with Metro Bike Share field maintenance using cargo eBikes confirms that these zero-emission vehicles are more efficient than a four-wheeled counterpart. This involves a radical overhaul in our entire operations plan and widening the employee pool, resulting in a more equitable hiring process.



Partnerships: From infrastructure partner Vertical Bridge (now certified as a CarbonNeutral® company in accordance with The CarbonNeutral Protocol), to Studio One Eleven and SOM leading sustainable architecture practices (LEED and EcoDistricts Certified), to Black & Veatch leading Fortune 50 companies towards sustainable development, our team is committed to ensuring a sustainable and green smart cities future.

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5. STAP DESIGN CONCEPTS

DESIGN OBJECTIVE

Los Angeles' network of bus stops are a vital fabric that connects a city of neighborhoods. From the beach to Downtown to cultural districts to residential neighborhoods, bus stops help transport countless Angelenos, employees and students, from home to work, school and back.

But they are also a part of the larger built environment, the sidewalks and bike lanes and streets that share space with 5000+ bus shelters and bus benches. Collectively, they also contribute to the visual aesthetic of LA's streets. With worldwide events such as the World Cup and World Olympics coming to Los Angeles, bus shelters will be the metaphor for Los Angeles itself—*a leader of smart-city development, providing green and equitable access to innovative amenities, mobility, and communications.*

Defining our Design Objective begins with listing the stakeholders involved in STAP and understanding their differing goals.

The design will be:

A unifying design that provides a consistent visual aesthetic ...

Expressive of local neighborhood architecture, cultures, and preferences...

Pragmatic and flexible to allow for cost effective mass production ...

Reflective of Los Angeles and its diverse fabric...

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The design aspires to be a cultural icon, one that draws a nod to LA's vintage while showcasing its futuristic vision of smart city mobility—innovative, sustainable, safe, inclusive of all—meanwhile highlighting its "city of neighborhoods" identity that gives Los Angeles its eclectic and optimistic culture.

In order to achieve our design objective, we take a full-spectrum approach to design itself to meet the unique placement of the bus shelter, and enlisted world-renowned leaders with intimate knowledge of Los Angeles in four key areas:

1. **Architectural Design:** SOM
2. **Urban Design:** Studio One Eleven
3. **Industrial & User Experience Design:** BMW Designworks
4. **Mobility Design:** Fehr & Peers

Together, we have developed what we believe is a groundbreaking new approach to design and creative collaboration, and it begins with a radical Design Approach: Frameworks

LA's network of bus stops are at the convergence of sidewalk and street, pedestrians and motorists, social equity and revenue source. Design convergence only makes sense.

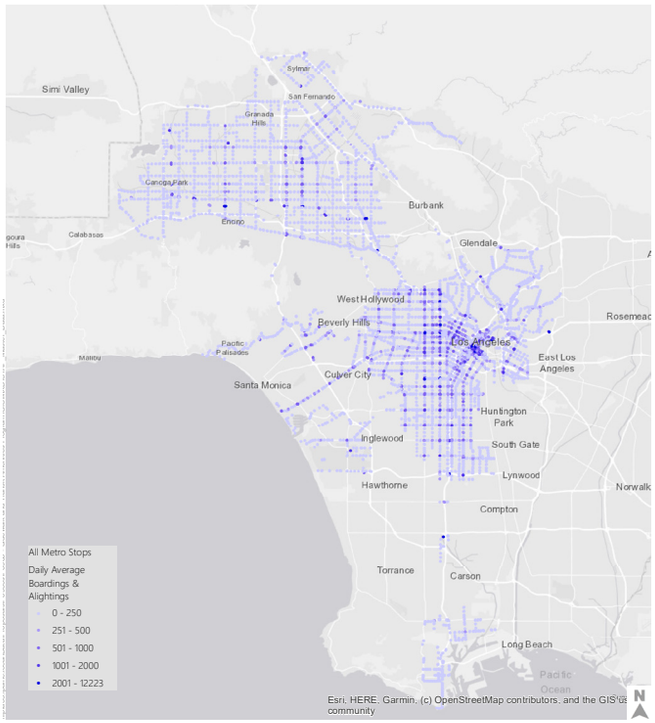
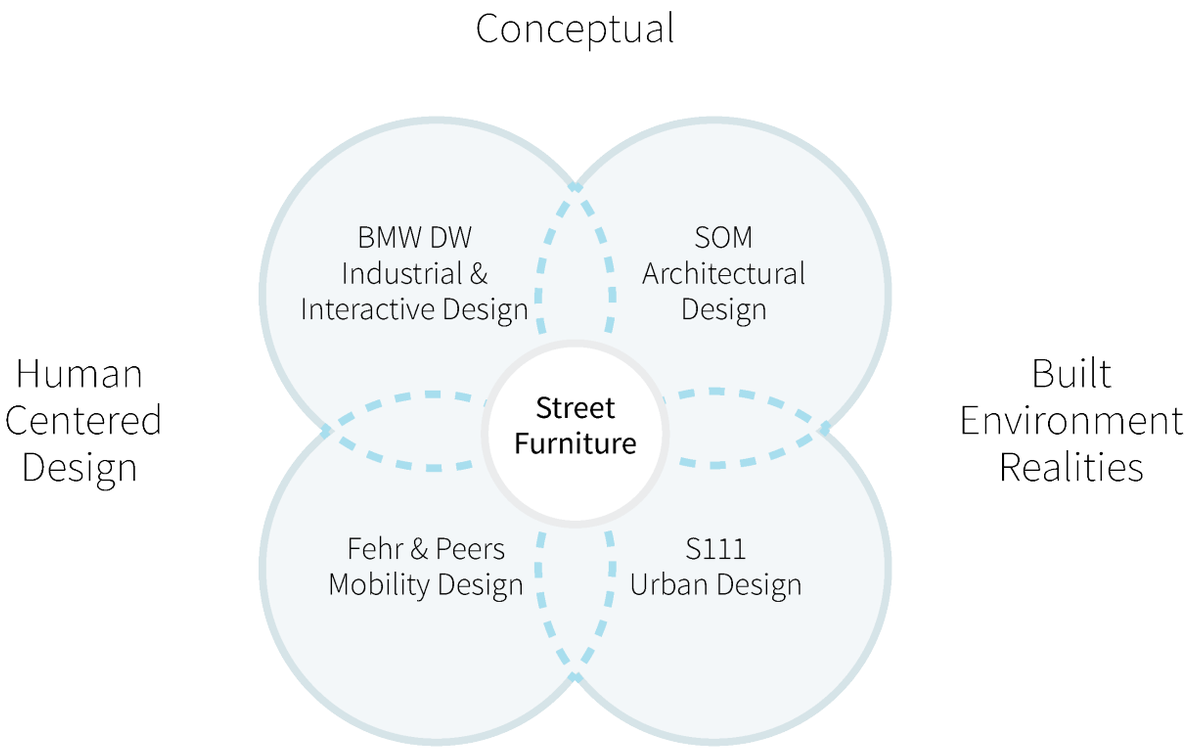


Figure 1

Ridership at All Metro Bus Stops



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BMW:

BMW Designworks leads industrial design and interactive from a human-centered design approach. BMW Designworks considers the interactive elements of both the personal (shelter to person) and infrastructure (city to people) perspective. BMW Designworks will lead the production of a curb app, screen design, and interaction of shelters as infrastructure nodes.

SOM:

SOM leads architectural design from both the iconic and practical lens. A finalist of the StreetsLA Shade project, SOM brings its long history and understanding of Los Angeles, along with its global experience in place making and urban design to guide the design conceptualization and development. SOM organizes the efforts of broader design team around the design vision, ensuring coordination between the architecture, the features / components and the technology to create a holistic experience.

FEHR & PEERS:

Fehr & Peers provides mobility design to ensure that mobility hubs placement is ideally located both on-site and as a network to maximize alternative transportation, intermodal trips, traffic reduction, and more. Fehr & Peers will develop mobility measurement models to help both city planners and advertisers alike. F&P will also build Shared Use Mobility SUM Zone permit model to pilot the conversion of bus stop curbspace as SUM loading zones.

STUDIO ONE ELEVEN:

Studio One Eleven leads the Urban Design process to effectively engage with LA communities to inform the planning and design phases. As seasoned designers and good communicators, Studio One Eleven will support the design team's efforts in creating a holistic mobility hub solution that benefits LA communities and meets the City's vision for the public realm. Studio One Eleven will also coordinate the Permit Planning and streamlining process early in the project to ensure a realistic target and pathway to rollout the implementation of mobility hubs, and lead the production of districtwide permit application packets.

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MOBILITY HUB

Icon (16')	XL Digital Display, 65" Digital Display / Interactive Info Kiosk, (3) City-Transit Screen, 5G/WiFi
Lite (12'):	(2) 65" Digital Display / Interactive Info Kiosk, (3) City-Transit Screen, 5G/WiFi
Eco (12'):	(2) Static Ad Boxes, City-Transit Screen, Photo-Voltaic Panel

All Mobility Hubs Include: Shade Structure, Bench/Lean Bar, Litter / Recycling, I.D, Smart Cities Sensors, LoRa Mobility Network, Smart Cities Lights, Safety Lights

Ad Panel (16'): XL Digital Display, City-Transit Screen, 5G/WiFi

Pillar (12'): City-Transit Screen, 5G / Wi-Fi

Provisional Components

E-Lockers (Smiota)

Scooter Dock (Swiftmile)

Art (ARTREACH)

Optional Components

Vending Kiosk

EV Charging Station

Bollards / Traffic Barrier

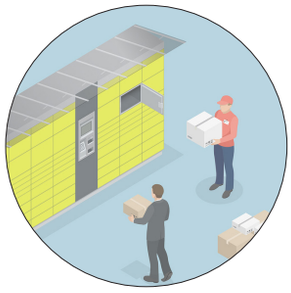
Public Restrooms

Hand Washing / Sanitizing Station

Hydration Station

Cooling Station

Historical / Contextual Marker



E-Locker

Scooter Dock

EV Charger

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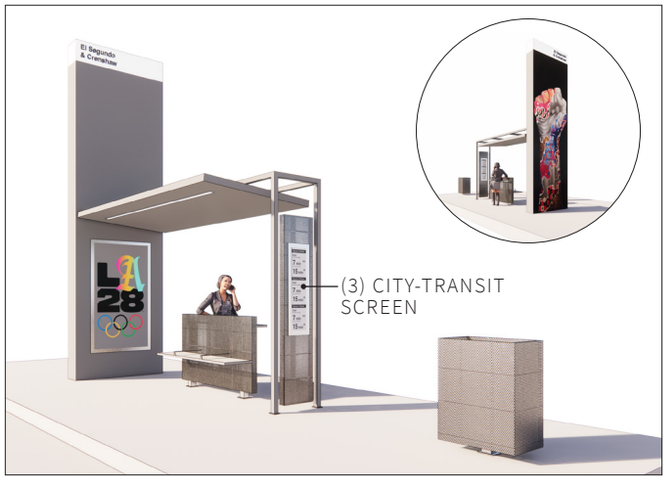
I MOBILITY HUB ICON

Iconic mobility hubs will express the city's leadership in smart cities innovation. These locations are networked with other adjacent street furniture -- kiosks, docks, lockers, vending, all with large-format digital ad screens -- to maximize advertising revenues at high-value locations and promote a smart-cities planning.

These locations are anticipated to be in high-density areas based upon a balance of: advertising maximization, physical constraints, bus passenger and traffic density, and local neighborhoods' preferences. The full assortment of amenities will be offered at all Icon locations: City/Transit screens, public wifi, smart cities sensor package, smart cities lights that may be a part of ATSAC control system, and more.

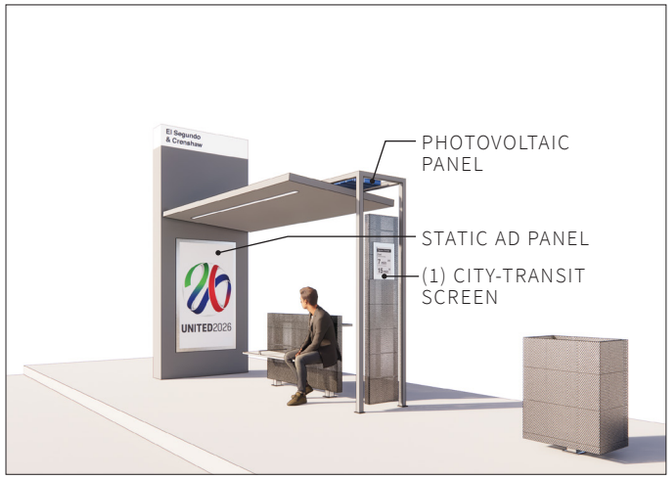


L MOBILITY HUB LITE

Similar to Icons but at a smaller scale. These locations may have little or no adjacent street furniture, all equipped with large-format digital ad screens. Because these locations have existing grid power, most if not all amenities listed above will be featured at Lite locations.

E MOBILITY HUB ECO

Two large-format digital screens are energy-intensive, consuming approximately 8000 kwH on an annual basis. Many of the 3000 total sites do not have accessible grid power, which will then require costly construction work. Furthermore, we are sensitive to communities' concerns that the screens are inconsistent with aesthetic preferences. In response to the real-world concerns above, we introduce the Eco—run entirely on solar power and LoRa network to still provide safety lighting and real-time City-Transit information. Additionally, some components of our smart city sensor package will be incorporated, pending technical capabilities of this low-energy model.



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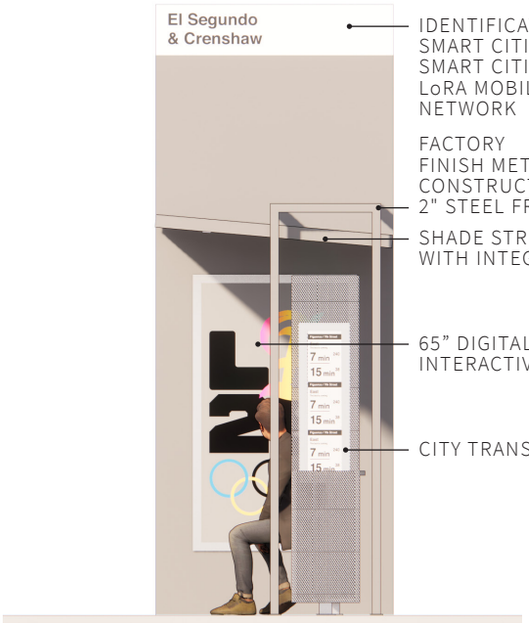
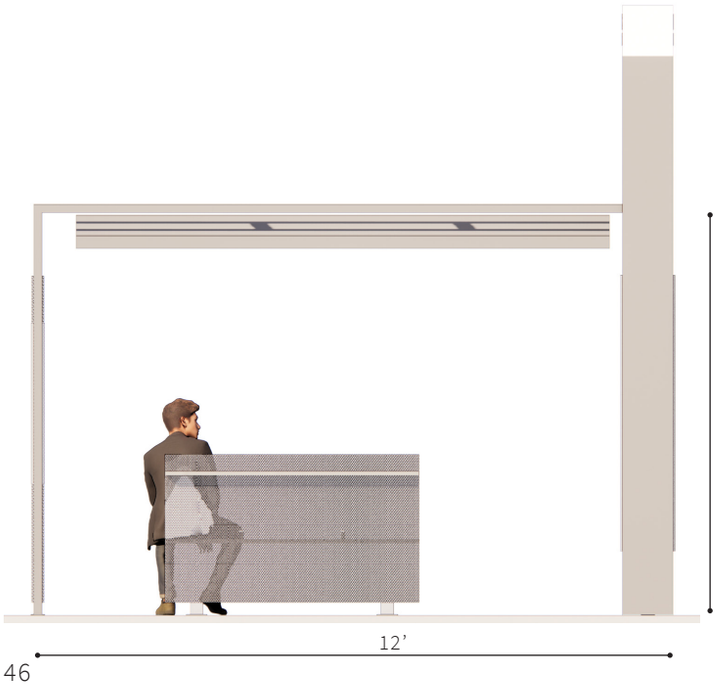
MOBILITY HUB LITE





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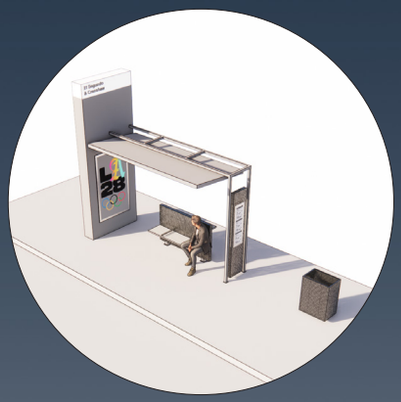
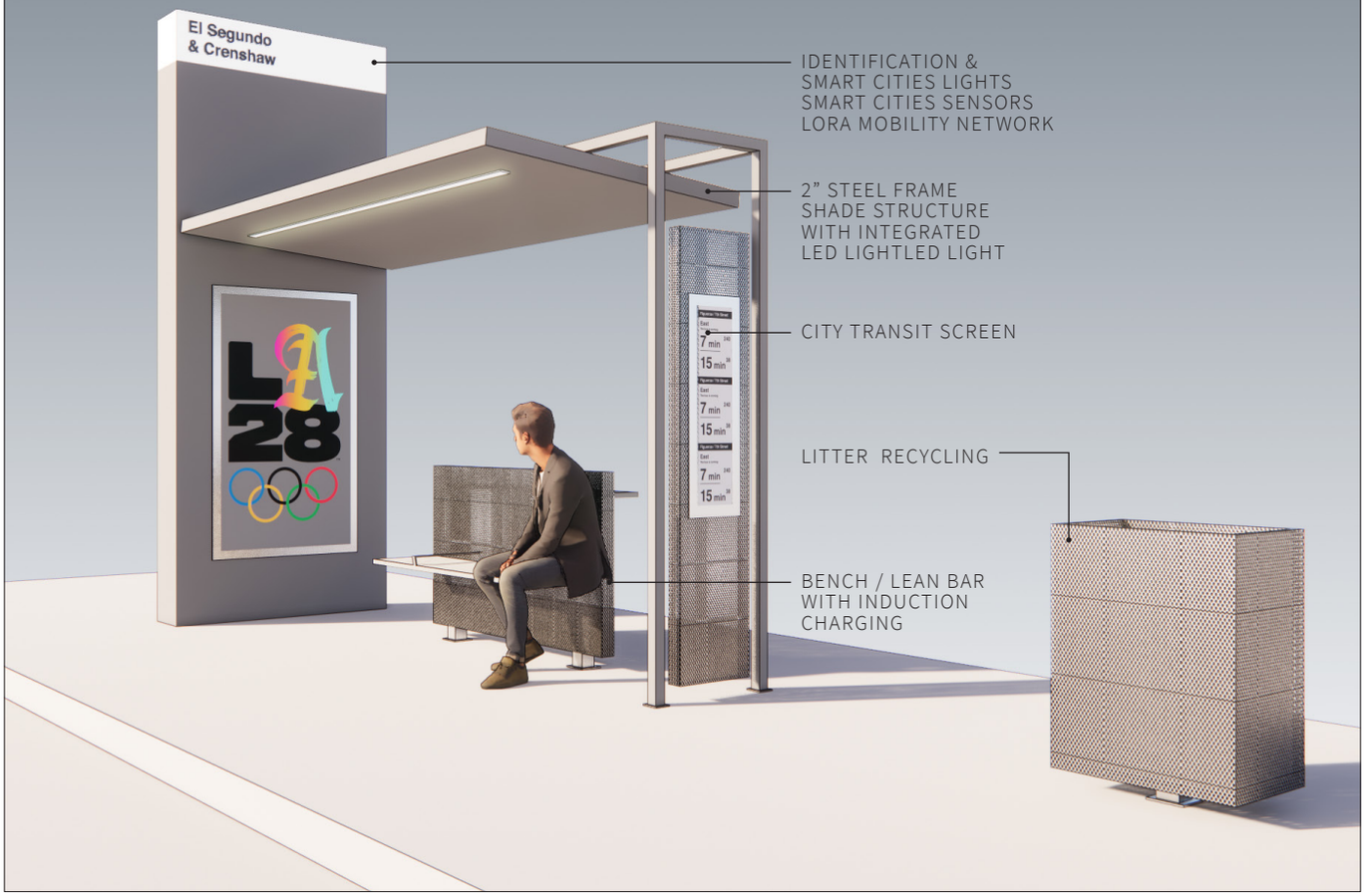


Birds Eye View

View From Back



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VISUAL IDENTITY

The Sidewalk & Transit Amenities Program is a public works project comprised of several thousands of touchpoints distributed across Los Angeles. Every touchpoint of the project will be clearly identified as part of a group with a consistent program identifier.

Simplicity in messaging is the key to providing efficient direction and clear information. We will create a system that allows users to recognize what the satellite mobility hub offers using color, form, and simple communication. The system will communicate where you are, what's available, and how to quickly get to where you need to go. The goal is to ensure that as a rider departs a primary hub, using a satellite hub for the last mile will feel like the obvious completion of their trip.

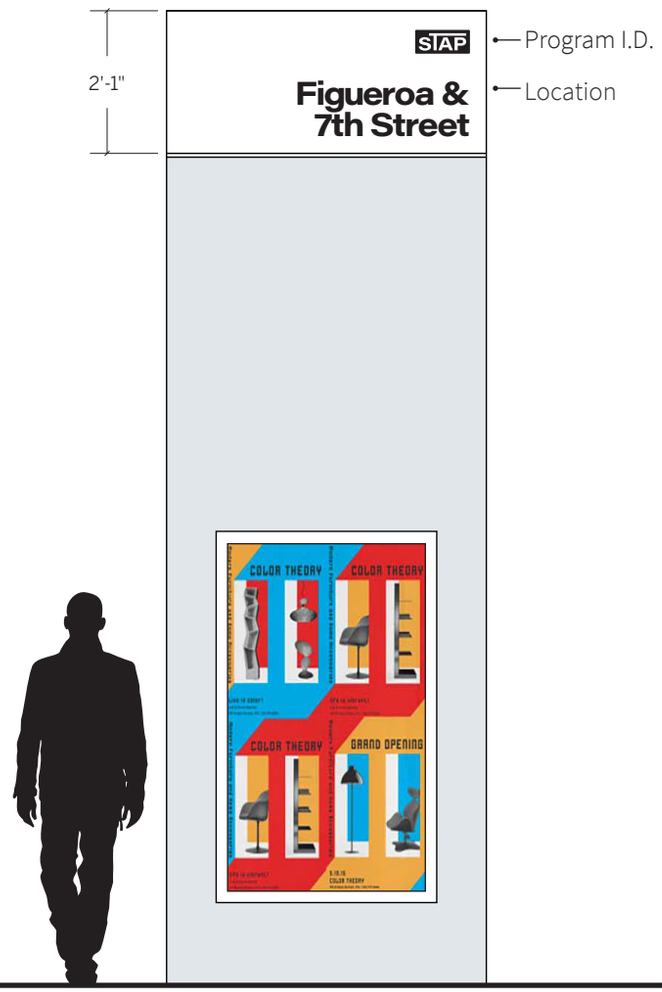
Program Identifier

STAP Sidewalk &Transit Amenities Program

STAP Sidewalk &Transit Amenities Program

This example identifier leverages the memorable acronym of the Program and embraces its similarity to the spoken sound of "bus STOP."

The program identifier emphasizes the idea of shelter through a simple typographic alteration, extending the line of the "T" in transit to form a shelter over the other letters.



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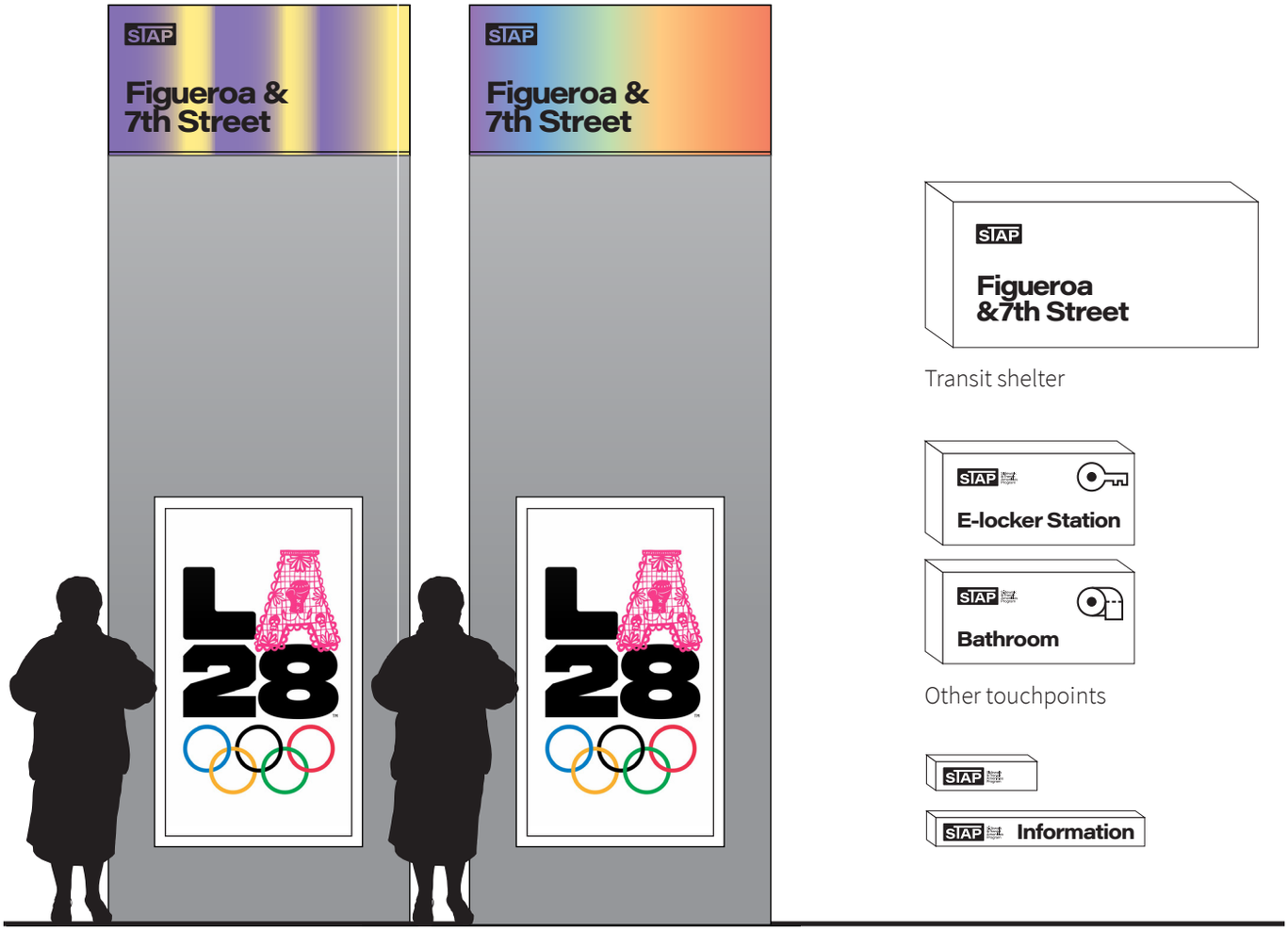
Each STAP location is identified by a signature polychromatic light beacon. Because the system is centrally controlled, the lights can be configured to change across all locations on special occasions. Depending on the context, the system may use one of several sizes of light beacons.

Throughout the brand process, we will consistently review existing branding for the City of Los Angeles and LADOT to ensure cohesion with the greater transportation fabric across the region.

Polychromatic Light Beacons



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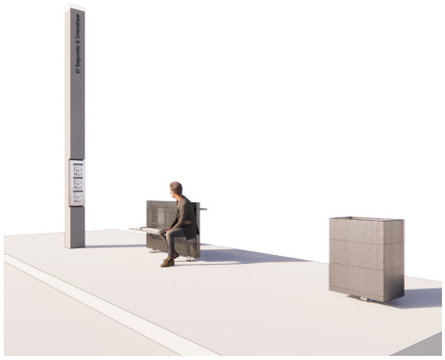
KIT OF PARTS

Based on the Mobility Hub branding and identity style guide, as well as learned knowledge from the site selection process, we will create a “Kit-of-Parts” for both the primary and satellite hubs. The “Kit-of-Parts” will allow for location-specific iteration based on location-specific needs, and pre-existing vs. future planned infrastructure. Each location will have options for customization, including spatial layouts, materials, colors, branding, surface graphic patterns, etc. Our “Kit-of-Parts” will also provide sample layouts based on site configurations (major corridor intersection, minor street, plaza, etc).

We will also create guidelines for integrating mobility hub components into existing and proposed developments. The guidelines will include strategies for locating each element within the development, spatial requirements for each element, material specifications, and products.

Location Marker Variations



Totem with Digital Transit Info

16’ Ad Panel with Digital Transit Info

Detached Location Marker

Side Panel Variations (scale + function)

Trellis with Vegetation (2’)

32” Digital Transit Info (3’)

Information (4’)

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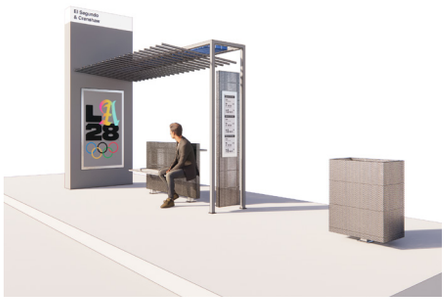
The kit-of-parts is flexible from a quantitative and qualitative perspective. Its scale, composition and character can adjust due to physical site conditions, community needs and cultural interests. The ultimate goal of the LA Mobility Hub is to offer shelter, shade, safety, comfort and convenience with acute sensitivities to health and wellness, social equity and environmental responsibility.

Canopy Variations



Trellis

Color + Texture

Form + Art

Ad Panel Variations

Color + Material (12')

Art or Static Ad (14')

Digital Screen (16')

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6 THEMES

1. Neutral + Architectural

The base scheme is rooted in California Modernism it blurs the lines between nature and artifice, incorporates an unpretentious and simple material palette and is malleable to its surrounding - yielding a strong connection to its context and welcoming appearance. It in itself represents Los Angeles.

2. Shape + Form

The canopy portion of the shelter is independent of the base frame; it can be sculptural, expressive and representative of a spirit, community, genre or culture.

3. Color + Texture

Color and texture can compliment an existing context or, in quantity, define a neighborhood, community or culture. Red is passion, blue is calm and black is elegance.....right?

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4. Graphics + Art

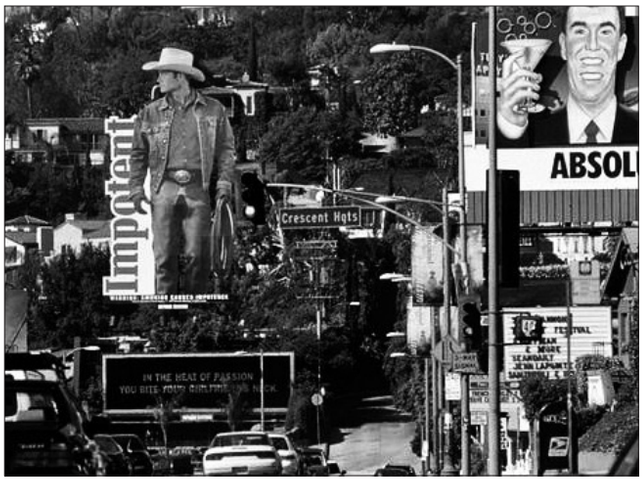
Graphics and art, above all, can clearly represent a community, culture or movement - 2D or 3D.

5. Information + Message

More so now than ever is it important to disperse accurate and critical information in regard to health and wellness, social equity and environmental responsibility. These mobility hubs can and will be essential to inform the general public of pertinent information.

6. Icon + Scale

The bigger the better some say. Los Angeles is known for its billboard culture. Image and graphic at an excessive scale in any setting is impactful and hopefully artful.



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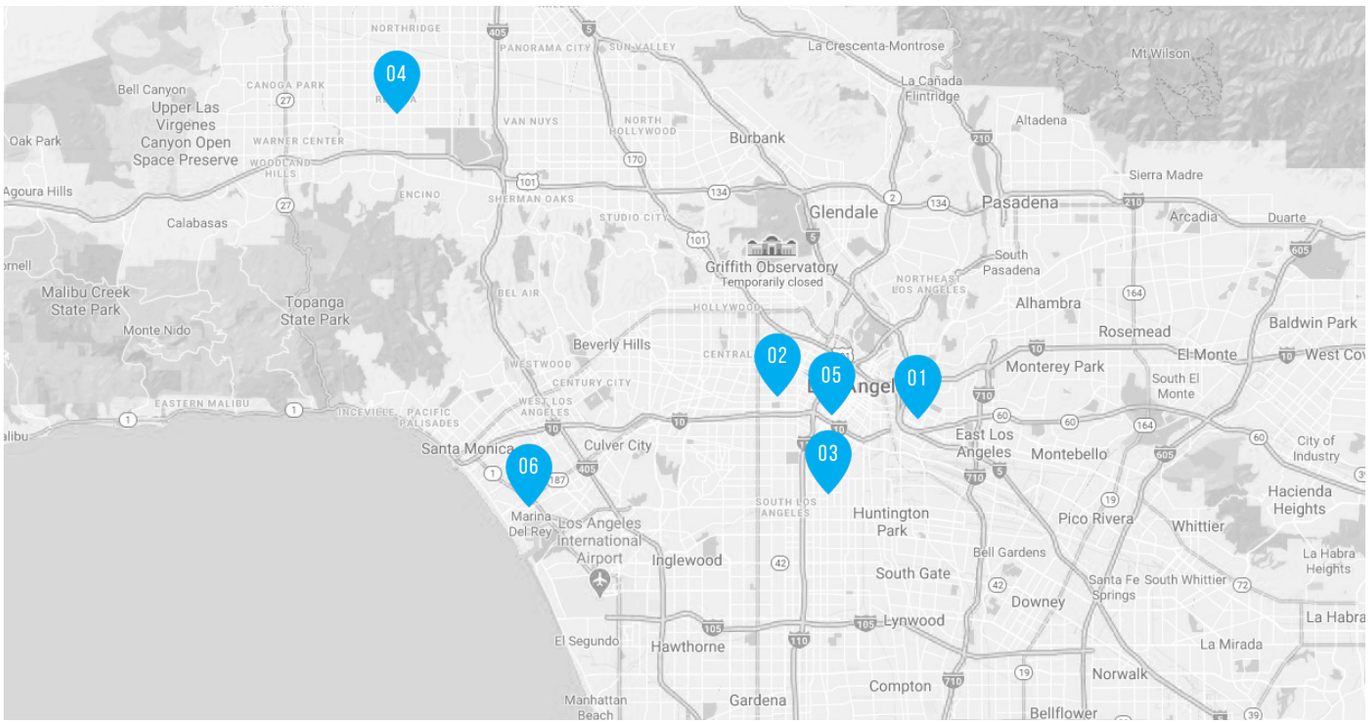
6 HYPOTHETICAL SITES

The metrics we have assembled for each site shows the diversity in context across the City of LA. We aim to show how each neighborhood and even each specific bus stop has unique characteristics and needs, each of which can benefit from the package of Program Elements shown in the concepts that follow.

Metro Average Weekday Ridership reflects boardings and alightings at each stop for April 2019
PM Peak Period Volume reflects the most recent available peak period counts for vehicles passing the bus stop in the same direction of travel (E.G.: westbound traffic passing a WB bus stop)
Advertising Net Reach reflects the weekly impressions at the site, as reported by GeoPath
Population Density reflects the average number of people per acre living in the census tracts closest to the bus stop
Employment Density reflects the average number of people per acre working in the census tracts closest to the bus stop
Daytime MODIS Hotspot reflects the Priority for Green Infrastructure based on the analysis conducted by the Trust for Public Land's Climate Smart Cities' program in 2018
CalEnviroScreen (CES) 3.0 Percentile reflects the percentile of the bus stop's CES score based on the census tract it is in, compared to all census tracts across California
SB 535 Disadvantaged Community reflects whether the community around the bus stop is a designated Disadvantaged Community as defined by SB 535
Pollution Burden Percentile reflects the just the pollution burden component of the CES Score for the bus stop's census tract, compared to all census tracts across California



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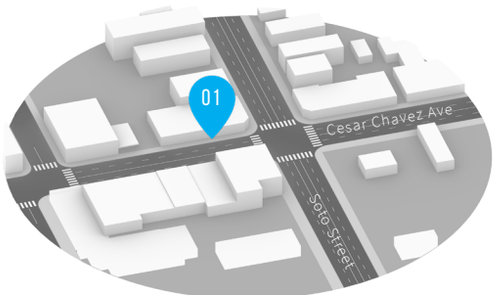
01- SB Soto Street & FS Cesar Chavez Avenue

Metro Avg. Weekday Ridership	1,630
PM Peak Period	642
Advertising Net	27,131
Population Density	39
Employment Density	40
Daytime MODIS Hotspot	High
CalEnviroScreen 3.0 Percentile	94
SB 535 Disadvantaged Community	Yes
Pollution Burden Percentile	87

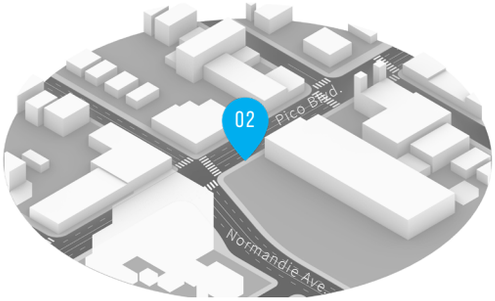


Site Facts + Location N

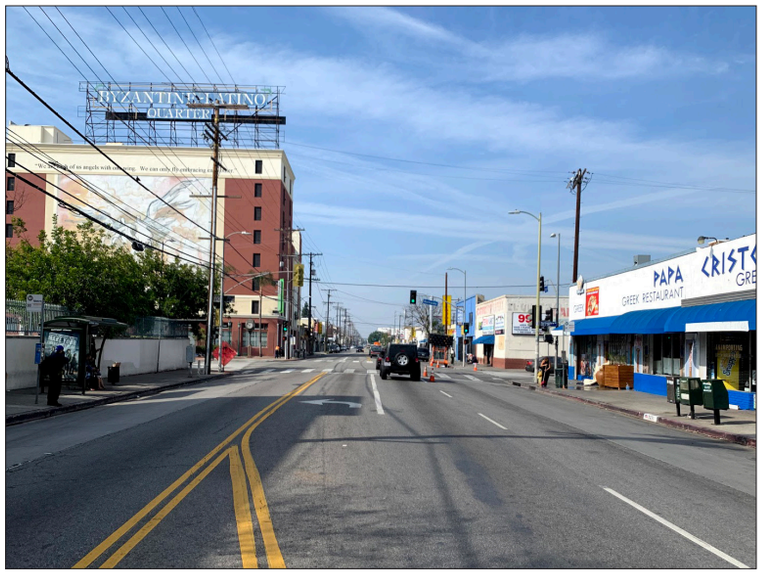
Site Character

02- EB Pico Boulevard & FS Normandie Avenue

Metro Avg. Weekday Ridership	679
PM Peak Period	749
Advertising Net	69,278
Population Density	45
Employment Density	8
Daytime MODIS Hotspot	High
CalEnviroScreen 3.0 Percentile	88
SB 535 Disadvantaged Community	Yes
Pollution Burden Percentile	76



Site Facts + Location N



Site Character

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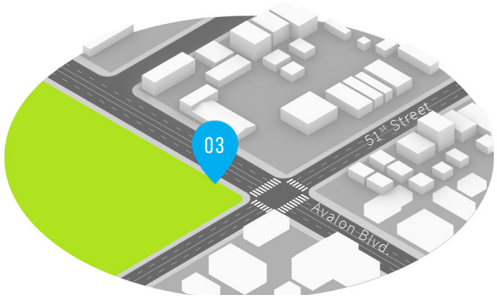
03- NB Avalon Boulevard & FS 51st Street

Metro Avg. Weekday Ridership	420
PM Peak Period	1,076
Advertising Net	NA
Population Density	40
Employment Density	1
Daytime MODIS Hotspot	High
CalEnviroScreen 3.0 Percentile	96
SB 535 Disadvantaged Community	Yes
Pollution Burden Percentile	90



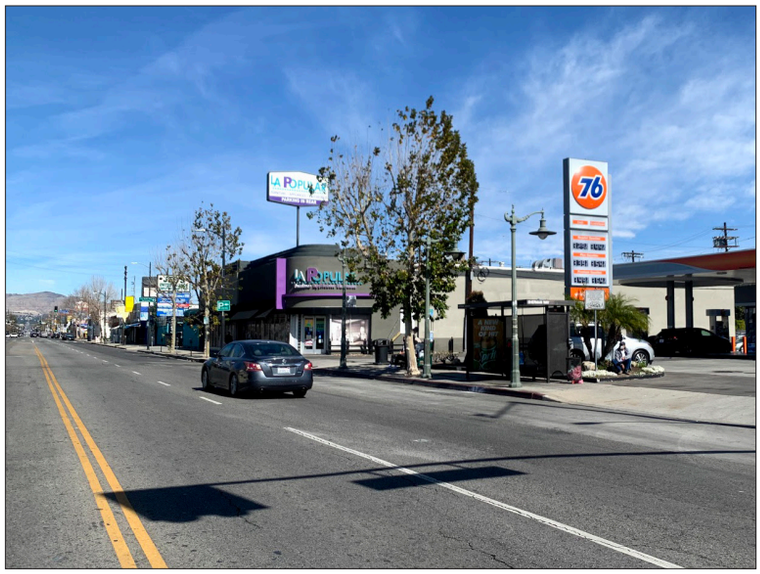
Site Facts + Location N

Site Character

04- NB Reseda Boulevard & FS Sherman Way

Metro Avg. Weekday Ridership	621
PM Peak Period	1,062
Advertising Net	132,026
Population Density	16
Employment Density	7
Daytime MODIS Hotspot	Very High
CalEnviroScreen 3.0 Percentile	74
SB 535 Disadvantaged Community	No
Pollution Burden Percentile	48

Site Facts + Location N



Site Character

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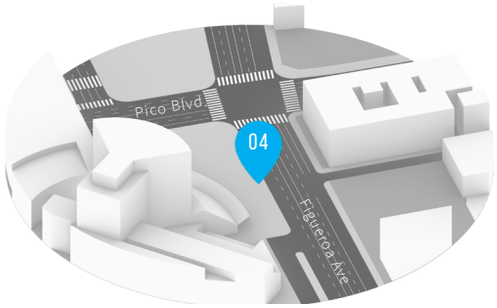
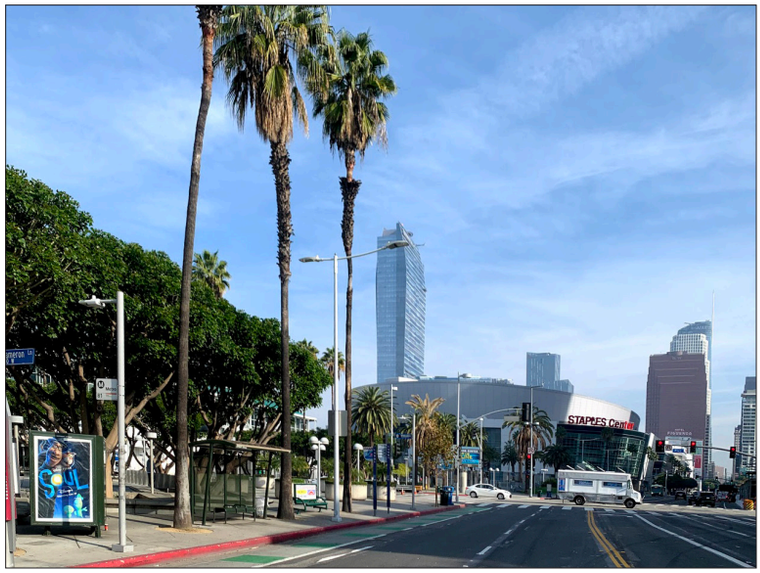
05- SB Figueroa Avenue & FS Pico Boulevard

Metro Avg. Weekday Ridership	165
PM Peak Period	783
Advertising Net	68,270
Population Density	12
Employment Density	10
Daytime MODIS Hotspot	High
CalEnviroScreen 3.0 Percentile	97
SB 535 Disadvantaged Community	Yes
Pollution Burden Percentile	94



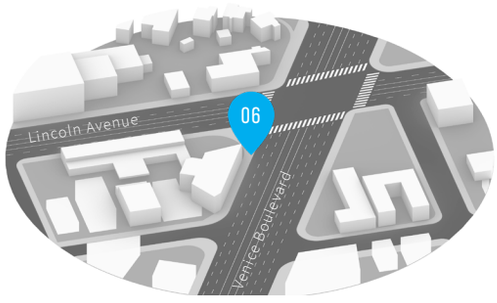
Site Facts + Location N



Site Character

06 - WB Venice Boulevard & FS Lincoln Avenue

Metro Avg. Weekday Ridership	592
PM Peak Period	1,105
Advertising Net	109,184
Population Density	17
Employment Density	17
Daytime MODIS Hotspot	Low
CalEnviroScreen 3.0 Percentile	38
SB 535 Disadvantaged Community	No
Pollution Burden Percentile	84



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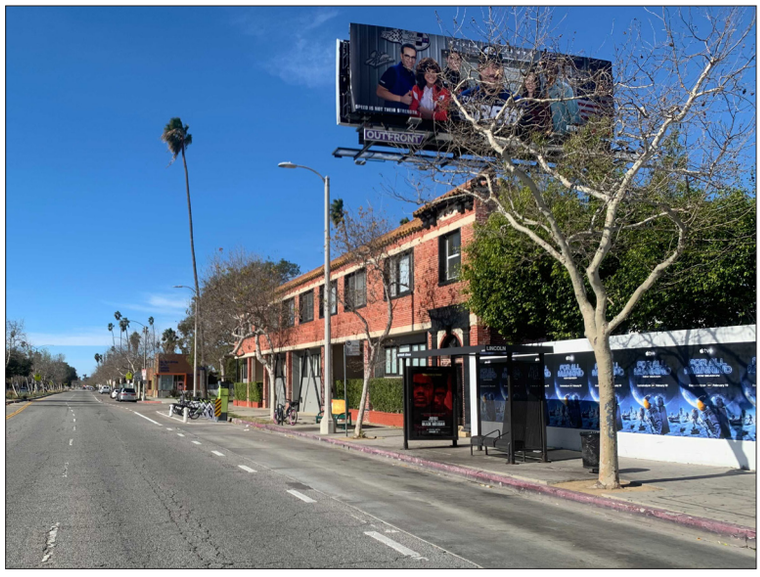

Site Character

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CASE STUDY 01
SB SOTO STREET & FS CESAR CHAVEZ AVENUE
proposed theme - Color + Texture

This stop is located in the South LA neighborhood adjacent to South Park Recreation Center, a recently-renovated community landmark that is one of the oldest parks in Los Angeles. South Los Angeles is a dynamic community that reflects the great diversity in Los Angeles, but remains one of the most challenged areas within the city, in large part due to historic underinvestment. A shortage of neighborhood services and amenities along the commercial corridors have long affected quality of life in South Los Angeles.

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The mobility hub can compliment an existing context and let landmarks be the foreground.

LA STAP Feb 18.indd 59 2/18/2021 11:04:03 AM

CASE STUDY 02
EB PICO BOULEVARD & FS NORMANDIE AVENUE

proposed theme - Information + Message

This stop is located in the Byzantine-Latino Quarter, near modern and historic cultural landmarks including St. Thomas the Apostle Roman Catholic Church, built in 1904 and Papa Christo's Restaurant, established in 1948. Today, the Byzantine-Latino Quarter represents one of the more diverse and historic districts within the Los Angeles area.

LA STAP Feb 18.indd 60 2/18/2021 11:04:03 AM

Celebrating and acknowledging a community and its heritage instills pride.

LA STAP Feb 18.indd 61 2/18/2021 11:04:04 AM

CASE STUDY 03
NB AVALON BOULEVARD & FS 51ST STREET
proposed theme - Graphics + Art

This stop is located in the South LA neighborhood adjacent to South Park Recreation Center, a recently-renovated community landmark that is one of the oldest parks in Los Angeles. South Los Angeles is a dynamic community that reflects the great diversity in Los Angeles, but remains one of the most challenged areas within the city, in large part due to historic underinvestment. A shortage of neighborhood services and amenities along the commercial corridors have long affected quality of life in South Los Angeles.

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Graphics and art can beautify an urban landscape and represent a community at large.

LA STAP Feb 18.indd 63 2/18/2021 11:04:05 AM

CASE STUDY 04
NB RESEDA BOULEVARD & FS SHERMAN WAY

proposed theme - Neutral + Architectural

This stop is located within the Reseda neighborhood in the West San Fernando Valley. The neighborhood is a highly diverse community with historic roots as ranch land and thriving post-war housing development. This stop is south of Cal State University - Northridge, along the Reseda Boulevard corridor which is currently undergoing a redesign through the Vision Zero/Complete Streets program.

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A neutral and timeless object compliments and beautifies an envirnonment and stands the test of time.

LA STAP Feb 18.indd 65 2/18/2021 11:04:06 AM

CASE STUDY 05
SB FIGUEROA AVENUE & FS PICO BOULEVARD

proposed theme - Icon + Scale

This stop is located in the South Park neighborhood of Downtown LA, immediately adjacent to the LA Convention Center. This site is slated to be one of the key venues during the upcoming 2028 Olympics. The South Park neighborhood is also changing rapidly, with dozens of new high-rise buildings increasing the residential population in the area, along with new hotels, office space, and retail uses.

LA STAP Feb 18.indd 66 2/18/2021 11:04:07 AM

Added amenities and services support high density sporting, cultural and commercial events.

LA STAP Feb 18.indd 67 2/18/2021 11:04:08 AM

CASE STUDY 06
WB VENICE BOULEVARD & FS LINCOLN AVENUE
proposed theme - Shape + Form

This stop is located along the high-ridership Venice Boulevard corridor, connecting Westside neighborhoods to the beach. The neighborhood is primarily residential, with commercial corridors that provide local retail opportunities. This site is located adjacent to the Venice Japanese American Memorial Monument, marking the spot where about 1,000 persons of Japanese ancestry from Venice, Santa Monica, and Malibu lined up to be transported to Manzanar internment camp in 1942.

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Responding to a specific community promotes and builds its culture.

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EXECUTIVE SUMMARY

SET ROLLOUT OF PHASE 1
with an agile rollout beyond Phase 1 based upon actual results of Phase 0 and Phase 1.

PHASE 0: PLANNING A,
Q3 2021-Q4 2022
Five concurrent working groups - Transition, Planning, Technology, Design, Launch - to rapidly plan for efficient Phase 1.

PHASE 1: ROLLOUT A,
Q1 2022 - Q4 2022
Methodical twelve-month rollout of all 770 high-value locations and hundreds of refurb shelters.

PHASE 2: PLANNING B,
Q1 2022 - Q2 2023Finalize STAP working plans and begin smart cities initiatives, including SUM Zone permitting plans.

6. PROGRAM TRANSITION PLAN

A core component in project planning is the ability to predict the future; and for the past several decades data has allowed us to do just that. Core data sets like CPI, demographics, GDP, and the like are combined and analyzed to reliably predict future trends. But then COVID happened, breaking scores of sophisticated assumptions. No one modelled for COVID—retail revenues down 70%, transit ridership down 80%, unemployment up 600%.

IN TYPICAL DOWNTURNS, THE QUESTION ASKED IS,
"WHEN WILL THINGS RETURN TO NORMAL?"
NOW IT'S, "IS *THIS* A NEW NORMAL?"

While COVID-19 will someday be in our rearview, it is only prudent to plan and provision for future unforeseen events, ironic and difficult though it is. Our Transition Plan is designed with uncertainty in mind; we take an agile approach to long-term rollout based upon macro variables that may not be under our control, such as sudden declines in OOH advertising revenue, technological advancements in automatic vehicles and communications, and sudden new players and vehicles emerging along the curb.

Our deployment plan is set for Phase 1, with an agile Scenario-Based Rollout based upon actual results of Phase 0 and 1. This helps ensure success in an uncertain future.

CRITICAL FACTORS:

- **CF #2: Be Aspirational**
  Where and when can related City projects converge on locations? Coordinating location improvement projects saves immense cost and time.

- **CF #3: Be Functional**
  Develop key metrics to guide our rollout schedule decision-matrix. Set realistic outcomes based upon fixed time, money, establishments available.

- **CF #4: Be Pragmatic**
  Focus on critical paths, first year rollout, and rapid monitoring to launch the optimal next phase. Build if/then rollout forks at milestones.

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ROLLOUT SCHEDULE

Task	Phase	Start Date	Due Date	Months
Transition Working Group	0	7/1/2021	9/1/2021	2
Planning Working Group	0	7/1/2021	9/30/2021	3
Technology Working Group	0	7/1/2021	9/30/2021	3
Design Working Group	0	8/1/2021	12/31/2021	5
Launch Working Group	0	7/1/2021	12/31/2021	6
P1:RA Permits	0	7/1/2021	12/31/2021	6
Phase 0: Planning A Complete		**12/31/2021**	**12/31/2021**	0
Q1 Rollout: 110 shelters, 33 refurbs, 45 misc	1	1/1/2022	3/31/2022	3
Q2 Rollout: 184 shelters, 55 refurbs, 75 misc	1	4/1/2022	6/30/2022	3
Q3 Rollout: 220 shelters, 66 refurbs, 90 misc	1	7/1/2022	9/30/2022	3
Q4 Rollout: 220 shelters, 66 refurbs, 90 misc	1	10/1/2022	12/31/2022	3
Phase 1: Rollout A Complete		**12/31/2022**	**12/31/2022**	0
SUM Zone Permit Playbook	2	1/1/2022	12/31/2022	12
P3: RB Permits	2	1/1/2022	6/30/2023	18
Site standalone Mobility Hubs w/SUM Zones	2	7/1/2022	6/30/2023	12
City Integration Playbook	2	1/1/2022	6/30/2023	18
Phase 2: Planning B Complete		**6/30/2023**	**6/30/2023**	0
Q1 Rollout: 91 shelters, 27 refurbs, 36 panels	3	1/1/2023	3/31/2023	3
Q2 Rollout: 91 shelters, 27 refurbs, 36 panels	3	4/1/2023	6/30/2023	3
Q3 Rollout: 92 shelters, 28 refurbs, 36 panels	3	7/1/2023	9/30/2023	3
Q4 Rollout: 92 shelters, 28 refurbs, 36 panels	3	10/1/2023	12/31/2023	3
Phase 3: Rollout B Complete		**12/31/2023**	**12/31/2023**	0
Coordination with World Cup and Olympics	3	7/1/2023	12/31/2023	6
Goal Alignment w/public planning docs	3	7/1/2023	12/31/2023	6
Plan coordinated grant funding opps	3	7/1/2023	12/31/2023	6
Plan deployment of mobility data network	3	1/1/2024	12/31/2024	12
Integration with ITA, LADOT, ATSAC 3.0, etc	4	1/1/2024	12/31/2024	12
Phase 4: Planning C Complete		**12/31/2024**	**12/31/2024**	0
Q1 Rollout: 100 shelters, 30 refurbs, 16 panels	5	1/1/2024	3/31/2024	3
Q2 Rollout: 100 shelters, 30 refurbs, 16 panels	5	4/1/2024	6/30/2024	3
Q3 Rollout: 100 shelters, 30 refurbs, 16 panels	5	7/1/2024	9/30/2024	3
Q4 Rollout: 100 shelters, 30 refurbs, 16 panels	5	10/1/2024	12/31/2024	3
Phase 5: Rollout C Complete		**12/31/2024**	**12/31/2024**	0

Our Transition Plan is focused on the first eighteen months of project inception—July 2021 to December 2022. It's during this time where the base of the STAP project is built. It's both the most important and easiest to predict. We split these eighteen months into three Phases:

Phase 0: Planning A (July '21 - Dec '21)
Five concurrent working groups—Transition, Planning, Technology, Design, Launch—to rapidly plan for an efficient Phase 1. The main components include: coalition building, information gathering, goals alignment, permit strategy, setup, initial orders, and provision of resources.

An additional working group to define the Finance Plan is also a part of Phase 0, but will be detailed in Section 7: Business Plan.

Phase 1: Rollout A (Jan '22 - Dec '22)
Methodical twelve-month rollout of all 770 high-value locations and hundreds of refurb shelters. Besides the 770 installed street furniture, other main components include:

1. Network setup with one or more backbone providers and WAN.
2. Launch Curb CMS beta dashboard
3. Launch data lake protocols — preferably with MDS.

Phase 2: Planning B (Jan '22 - June '23)
Concurrent start with Phase 1; finalize STAP working plans and begin smart cities initiatives, including SUM Zone permitting plans. Other main components include:

1. Integration planning with ITA, LADOT, Complete Streets, MDS, and ATSAC 3.0
2. Strategic meetings with various City, Metro planning documents - Complete Streets,

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Mobility Plan 2035, LA Sustainability pLAn, Vision Zero, Great Streets, ITA Strategic Plan 2019-2021, LADOT Technology Action Plan 2020

PHASE 0: PLANNING A (SIX MONTHS, Q3 2021 - Q4 2021)

Phase 0 is all about coalition building in order to get broad consensus on project vision and goals, and set the framework for how continual communication and collaboration takes place.

We will begin by confirming our initial stakeholder analysis to ensure all relevant stakeholders are considered and formal communications and contacts are established. At least two executives will attend and help facilitate all five concurrent working groups. This will ensure the working groups achieve their goals within the compressed timeline for rollout while maximizing cross-communication and learning:

1. **Transition Group:** Led by Tranzito with Vector Media, current Coordinated Street Furniture Program (CSFP) operator, City Administrator, StreetsLA CSFP project manager and administrator
2. **Planning Group**: Led by Fehr & Peers with Tranzito, Studio One Eleven, Complete Streets, LADOT, ATSAC, various City Departments, utilities providers, the Mayor's Office, and Pilot partners.
3. **Technology Group:** Led by BMW Designworks with Tranzito, Complete Streets, ITS, ITA, MDS, ATSAC 3.0, DWP/BSL, utility providers, and CBOs.
4. **Design Group:** Led by SOM with BMW Designworks, Studio One Eleven, Fehr & Peers, Tolar Manufacturing, EmpowerLA, and relevant Planning Group and community groups.
5. **Launch Group**: Led by Studio One Eleven with Black & Veatch, Fehr & Peers, Vertical Bridge, DWP/BSL, Permits department, and EmpowerLA.

TRANSITION GROUP

Goal: Transition planning from CSFP to STAP in order to maintain continuity of advertisers, administration, maintenance, and refurbishment.

1. **Institutional Knowledge:** Transfer all required project documents, products, intellectual property, data and metrics, reports and meeting notes, and other pertinent information in an expedient manner.
2. **Operations:** Negotiate an equitable transfer of legacy bus shelter parts, tools, supplies, etc—pending mutual cooperation, otherwise taking inventory of existing shelters and working with Tolar to replenish inventory of parts and tooling as needed.
3. **Advertising:** Offer rare incentives to current and recent CSFP advertising clients. Explore creative models to incentive existing CSFP operator to assist in client retention.

Leaders: **Tranzito**, with support from Vector Media, current CSFP operator and StreetsLA project manager and administrator.

Relevant stakeholders:

1. Current CSFP operator
2. City Administrator Officer
3. StreetsLA CSFP project manager and administrator

Vector Media's advertising and operations divisions will concurrently work with relevant stakeholders to aid in a smooth transition for the City and bus passengers. The aspiration is for a rapid and efficient process, perhaps with two to three in-depth 2-hour meetings set on a weekly or bi-weekly basis, with expectations of communication and deliverables in-between.

The expectation is to ingest all project files, relevant knowledge, and lessons learned to benchmark and further optimize operations. We will then seek a cooperative relationship with the CSFP operator to ascertain mutually beneficial outcomes. These may include purchases of CSFP street furniture parts, program tools and assets, even staff augmentation and other partnership opportunities.

Our Sales Retention plan with existing advertisers begins by elevating the perceived value of STAP's of out-of-home advertising inventory. Vector Media will build a branding and marketing campaign for STAP, focusing on our program's attention-grabbing visual design, technology-enabled experiential and omni-channel opportunities, and long-term campaigns revolving around the 2026 World Cup and 2028 Olympics. In the 2020s, Los Angeles will be where it's at.

Our multi-faceted sales strategy will look to local businesses to build a foundation through the creation of attractive long-term offerings.

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This base of business serves to keep occupancy high enabling our national, regional and client direct teams to focus on shorter-term premium opportunities. We have employed this strategy in over 30 markets in order to generate consistent reliable revenue while also creating urgency around the product. Keeping a portion of the inventory full, Vector is able to increase rates and demand for any unsold inventory, thus maximizing revenue to STAP. In many ways, our sales operation operates as airlines do, continually balancing occupancy and revenue through dynamic pricing shifts and a multi-pronged sales effort.

Our national sales effort is spearheaded by our Chief Revenue Officer, Gary Greenstein, a 25-year veteran of and one of the most respected sales leaders in the out-of-home industry. We expect that local efforts in Los Angeles will be significantly enhanced by contributions from our national market and brand teams. This approach keeps our occupancy rates high, allowing us to increase both national and local rates.

We will then devise attractive enticements to maximize retention of existing clients, based upon a tiered system: Tier 1 are top advertising clients, Tier 2 are current regular advertising clients, Tier 3 are clients from 2019-present, and Tier 4 are all past clients. Both large national clients and local & regional clients will get equal access based upon the tiered structure:

- First-rights to large-format ad panels—rare and strategically located digital panels will ensure a premium based upon intentional supply/demand mismatch.
- First-rights to roadblock campaigns -- includes experiential, omni-channel, mobile.
- Guaranteed screen time for World Cup and Olympics based on maintaining minimum average spend on an annual basis.
- Bonus screen share time (since fill rates will be below long-term 80% goal as programmatic is in its infancy).

Deliverables

CSFP to STAP Transition Plan, composed of:

1. Handoff Checklist with action items, deliverables, and list of transfer items from CSFP to STAP.
2. Institutional Knowledge transfer database leading up to a DRAFT STAP Deployment Plan.
3. Maintenance Continuity Plan
4. CSFP street furniture Refurbishment and Removal Plan
5. Inventory List of existing CSFP inventory to refurbish.
6. Outreach Plan to existing and past clients.

PLANNING GROUP

Goal: Coalition building with 360 degree stakeholder analysis, alignment of project timelines and goals with related City and utilities projects. Inventory, score, and rank locations based upon various stakeholder goals for the purposes of identifying locations that will receive refurbished and/or new amenities. Establish streamlined permitting process.

Leaders: **Fehr & Peers**, with support from Tranzito, Studio One Eleven, and StreetsLA and LADOT stakeholders

Relevant stakeholders:

1. Complete Streets
2. LADOT
3. ATSAC
4. City Departments: ITA, DWP, Parking, Permits, ADA-compliance
5. Utilities providers: Southern California Edison, data providers
6. Mayor's Office
7. Pilot partners: Urban Movement Labs, LACI, bench partners

Format:

1. Meet bi-weekly in hybrid board meeting / working group format. Given the pace of the first year roll-out, these bi-weekly meetings will help the Planning Group and key city

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stakeholders stay on track to meet the goals of Phase 0: Planning A

2. Each Planning Group member acts as a representative for their respective group, and is expected to hold a senior position of at least third-degree to the organization's key decision maker.
3. First meeting(s) will look to establish two factors: fact finding and governance rules.
4. As the Planning Group begins to tackle specific topics that emerge throughout the first year, some stakeholders may not be required to attend every meeting, but all Planning Group members are encouraged to remain active and engaged for the entire duration of Phase 0: Planning A and Phase 1: Planning B (or 18 months from Q3 2021-Q4 2022.
5. STAP project manager will record minutes and email assignments, follow-up mid-month to gauge progress, and generate meeting agendas.

Deliverable:

1. Finalize sites strategy and set Rollout Plan for Phase 1: Rollout A
2. Finalize permit playbook and action plan
3. Reporting and Asset Management Framework

The Planning Group consultant leads will aim to leverage existing working groups as much as possible to align with other City initiatives and streamline the planning process for all. We recommend StreetsLA consider members of the Complete Streets division for STAP Planning Group.

The Planning Group will share concurrent projects along Los Angeles with the hopes of aligning timelines and projects. This may yield opportunities for mutually beneficial results, particularly in regards to major capital spends and infrastructure projects. Potential programs / initiatives include:

1. ITA Implementation of Guest Wi-Fi services and Digital ID programs
2. LADOT ATSAC 3.0 and MDS
3. LADWP Fiber Optic Network and Cellular Router implementation and 10Gbps Internet pipes and Wireless infrastructure Upgrade
4. StreetsLA & Mayor's Office Complete Streets program

Fehr and Peers will lead a metrics-based approach to scoring locations based upon a multitude of factors, some of which have been included in the STAP RFP:

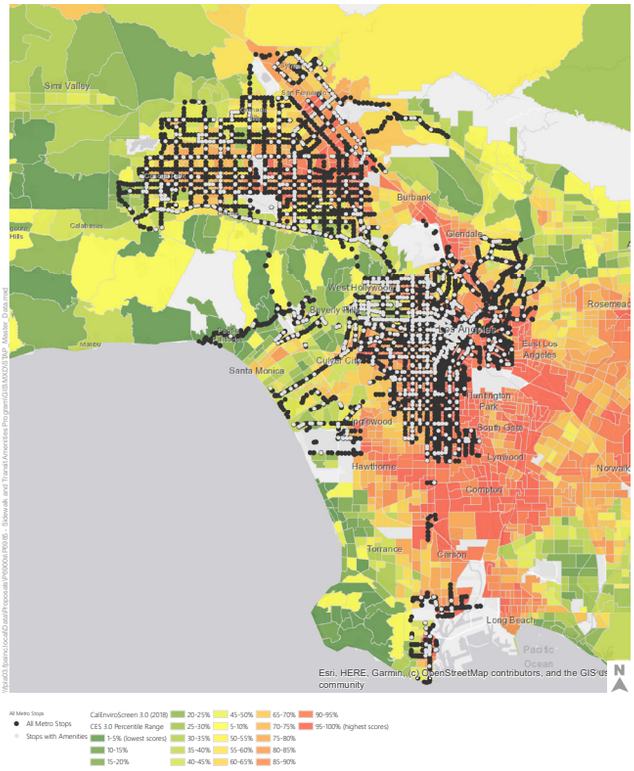

Figure 3

Distribution of Bus Stop Amenities Relative to CalEnviroScreen 3.0 Percentiles

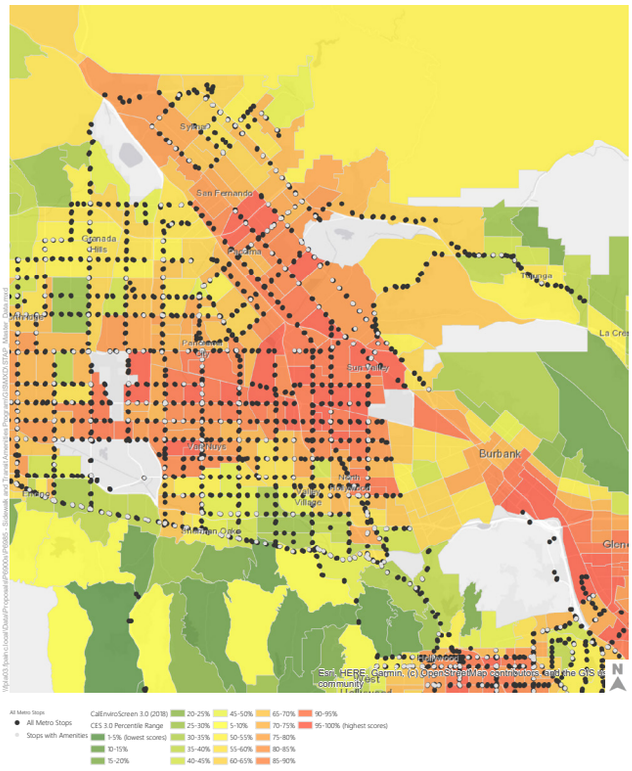

Figure 4

Distribution of Bus Stop Amenities Relative to CalEnviroScreen 3.0 Percentiles (Northeast San Fernando Valley Zoom)

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1. Total transit boardings and alightings
2. Existing site conditions, including an assessment of current availability of shelter, shade, safety, and a comfortable environment
3. OOH Advertising Revenue Viability (based on historical financial data)
4. Population density by day, night, and weekend/event
5. Average daily traffic or peak period volumes adjacent to the location
6. Equity Score - using metrics such as CalEnviroScreen 3.0, SB 535 Disadvantaged Communities, or Metro's Equity Focus Communities
7. Proximity to key destinations

Each location will be inventoried, then analyzed to set a final priority list based upon STAP project factors such as ensuring equal distribution of shelters at all districts and other realities. Fehr & Peers will also analyze locations ideal for refurbished shelters.

Studio One Eleven will participate in site walks with Fehr & Peers and community representatives to identify a location for each of the mobility hubs. The site assessment would be informed by the spatial requirements of components that are aligned within each block combined with the community's mobility needs and additional programming elements desired by the community.

Given many location-specific uncertainties which will only be answered during the planning process, all locations will be classified as a single project, with final location scoping and list of deliverables being finalized as additional details receive clarity.

TECHNOLOGY GROUP

Goal: Coalition building with local technology infrastructure partners and technology departments within the City of Los Angeles, alignment of technologies, processes, goals, and vendors where advantageous to the City.

Leaders: BMW Designworks with support from Tranzito and LADOT and ITS.

Relevant stakeholders:

1. Key Stakeholders: Complete Streets, ITA, MDS, ATSAC 3.0,
2. Utility providers: DWP/ BSL, Southern California Edison
3. Community: Accessibility groups, EmpowerLA, Business Improvement Districts (BIDs)

Format:

UX Interactive Plan: A core set of UX deliverables will be created and shared across the following touchpoints for STAP stakeholders:

4. Kick-Off Meeting between Infrastructure and Interaction stakeholder groups to set all key meetings and schedule for development of all interactive UX deliverables.
5. Interactive Stakeholder Interviews/ Technology Exploration: Designworks and key partners will interview stakeholders over the course of the first 4-6 weeks either virtually or in person to engage in technology and strategy exploration, feasibility, and identification of constraints between physical and digital components, technology, and City owned systems.
6. Network / Data Stakeholders Interviews/ Technology Exploration: Similar to above, with Tranzito as the lead.
7. UX Interactive Workshop: A full day workshop will be conducted at a location in Los Angeles or at Designworks headquarters in Newbury Park, CA to align and prioritize on process, timelines, and deliverables for Interaction UX.
8. Weekly/Monthly Meetings: After completion of workshop, key stakeholders will be identified that are required to enable the deliverables outlined below, including approvals and/or enabling access to required components (API's, transit schedules, ADA requirements, local/emergency communications feeds, etc.) for testing.
9. Design Development Reviews: Over the course of 3-6 months after the workshop Designworks and technology partners will develop physical and/or digital concepts and ultimately final designs that will be reviewed and approved by City Stakeholders.
10. Refinement Review: Final review of interaction UX designs that will go live.
11. All decisions will be captured after meetings and distributed to relevant stakeholder group by project team.

Deliverable:

1. Interactive UX Plan: Interactive UX designs will be developed inline with overall design aesthetics for key STAP components across the following user touchpoints:

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- Integrated UX Strategy for Smart City Nodes: UX Design team will develop an overall strategic approach to the ecosystem of STAP digital UX components (noted below) including the definition of visual language and interactions.
- Ad Screen: Community messaging, emergency and public service information.
- ePaper Transit Screen: All transit information including real-time updates.
- Mobile Ecosystem: Design of app, web, and wifi portal experience.
- Physical to Digital Experience Design: Extension of UX interactive design to potentially include lighting, occupancy detection, open/closed status, and way finding depending on approved sensors and privacy/data permissions or challenges.
- Ongoing UX Asset Creation: Interaction Design will include an ongoing bucket of design hours to enable City to add up to a specified level of additional content creation over the course of the first twelve months as launch assets and interaction playbook is being built.

2. Data Privacy Plan
3. Network Design Plan

DESIGN GROUP

Goal: Plan and complete detailed design for optimized shelter production and installation process.

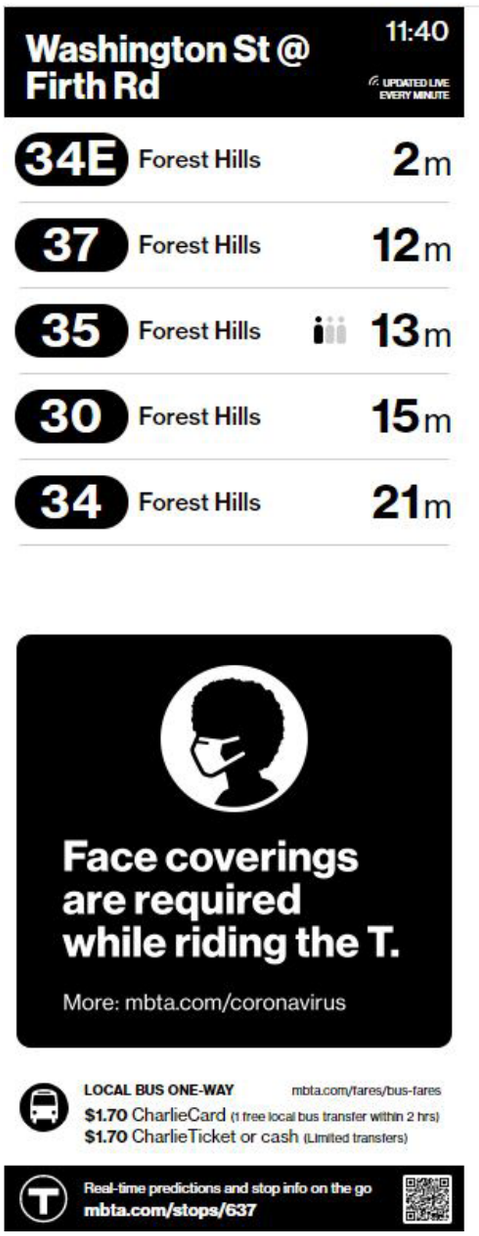
Leaders: SOM with support from Studio One Eleven, BMW Designworks, Fehr & Peers, and EmpowerLA.

Relevant stakeholders:

1. Planning Group (above)
2. EmpowerLA neighborhood coalitions
3. Business Improvement Districts (BIDs)
4. Councilmember's Office
5. General public outreach

Format:

1. Weekly internal design workshops with STAP Design Group Leaders. The group then sets meeting goals and jumps into a creative working group session utilizing a shared software tool. The working group session ends with clear assignments for members with the expectation for action reports the following meeting.
2. Participation in public engagement charrettes led by Studio One Eleven and coordinated by Empower LA and/or agency stakeholders. The format for these would typically be a design presentation by the Design Group, followed by Q&A and discussion.
3. STAP project design manager will record minutes and generate meeting agendas.
4. Each Design Group member acts as a representative for their respective organization, empowered as an officer of that organization or other role to make decisions during the meetings.



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Deliverable:

1. Detailed design drawings
2. Finalize urban design plan, including Revitalization of refurbished shelters
3. Design direction for Phase 1: Rollout A

Our tight collaboration will ensure the aesthetic character guidelines developed and led by SOM in collaboration with Studio One Eleven and BMW Designworks are maintained throughout the design process. The aesthetic character guidelines and detailed documentation aim to ensure all future digital and physical expressions of mobility hubs are consistent, recognizable, and complement the existing built environment. We will maintain lighting, typeface, tone, and graphics for clear experience within both physical and digital planes.

SOM and BMW Designworks will work closely with Tolar Manufacturing and other third party product suppliers to prepare construction drawings and specifications for the Kit-of-Parts meeting all relevant code and accessibility requirements within Phase 1. These permit documents will include the architecture, industrial design and engineering for Kit-of-Parts without reference to specific site location. Permitting the Kit-of-Parts as a stand alone system, will streamline the approval process for the site specific deployment to follow.

LAUNCH GROUP

Goal: Permit planning to maximize early communication and establishment of parameters for a streamlined and expedited permit process.

Leaders: **Studio One Eleven** with support from Fehr & Peers, Black & Veatch, AP Construction, Vertical Bridge, DWP/BSL, and Permits department.

Relevant stakeholders:

1. StreetsLA STAP project manager and administrator
2. Planning Group (above)
3. Council District Office staff/representatives
4. Utilities providers
5. EmpowerLA

Format:

1. Training and orientation session of program tools.
2. Permit planning agenda item on bi-weekly Planning Working Group meeting.
3. As-needed and ad-hoc meetings with relevant City departments, Council District Office staff or other stakeholders.

Deliverable:

1. Studio One Eleven, Permit Plan
   - Permitting Plan including Expedited Site Approvals process and District-Wide Permit Process including timelines for approval.
   - Permit Application Packets for Phase 1, Rollout A
2. Black & Veatch, STAP Deployment Plan 1.0
   - Reporting and Asset Management Plan
   - Construction Best Practices and Scenario-Analysis document
   - Program Design
   - Program Rollout Schedule
   - Revitalization Plan
   - Install, Maintenance, and Replacement Plan

The primary purpose is to identify a rollout target that is realistic and achievable, get multi-stakeholder buy-in on that target, and streamline the permitting process.

The 2012 Audit of the City's Street Furniture Contract with CBS Decaux, LLC observed that the average permit took 129 days resulting in the City losing approximately $15 million in potential revenue through 2011 due to permit delays alone.

The first twelve months of operation are crucial, given the initial capital outflows for capital and startup costs without any revenues flowing in. This point is magnified given that the first 770 locations are the City's defined "High Value Locations" from an advertising perspective. Rapid rollout of STAP street furniture starting January 1, 2022 is crucial.

Innovation in the permitting process plays a disproportionate role in dictating STAP's success.

We recommend two innovations in the permitting process:

1. **Expedited Site Approvals Process:** The site approvals process alone took an average of 102 days based on the sample data from the 2012 audit. Reducing the amount of time involved in identifying and approving the locations for new street furniture, while providing sufficient opportunities for community feedback and input will greatly streamline the permitting process for the installation of new STAP elements. We propose to include a Permitting Plan agenda item in the early Planning Working Group meetings to formulate and vet a process for approval of sites with relevant stakeholders. The process will incorporate the metrics-based

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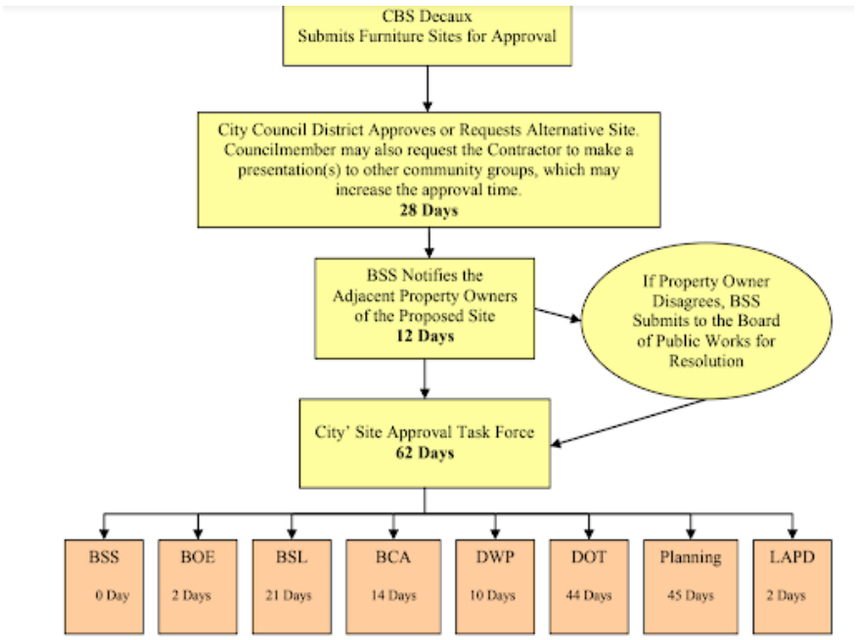


2012 Audit observed an average 129 days to approve bus shelter permits.

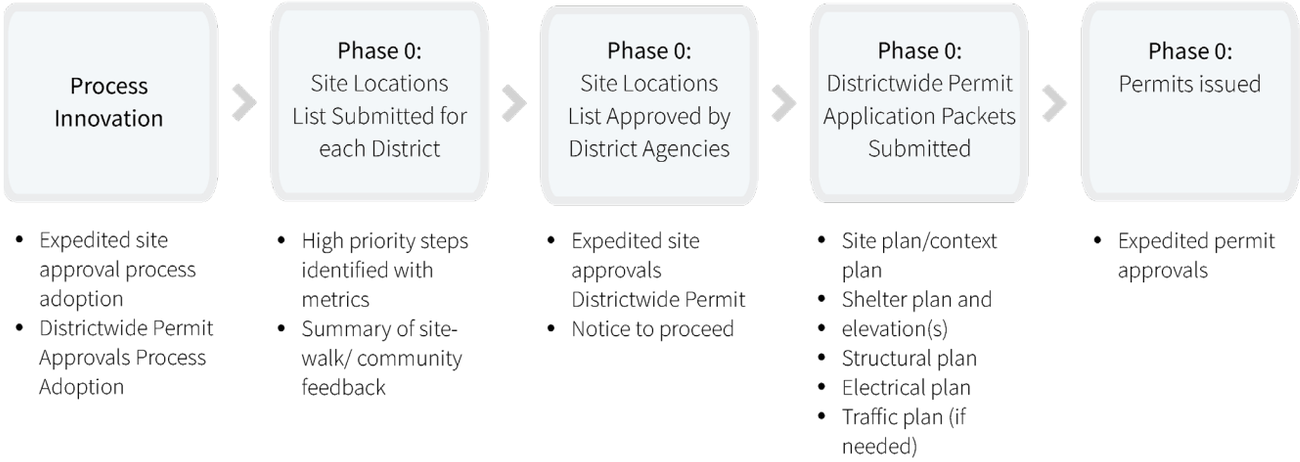
approach for site selection created by Fehr & Peers, as well as community input and site walks, and create a schedule of activities and response times for submission and approval of proposed district-wide sites to Council District Offices as well as City Departments. We propose conducting this activity early in the Planning phase to get the Site Approvals Process buy-in from all relevant stakeholders prior to rolling out the list of sites for Rollout A.

2. **District-wide Permit Approvals Process and Permit Application Template:** A permit application template allows our design team to efficiently produce site plans of highest quality at a rapid pace that this project dictates. Given the modular, kit of parts framework for the bus shelters, the final on-the-ground shelters will retain the defined measurements and engineering calculations from the sum of its parts. We recommend working alongside all pertinent City permit departments in a workshop format amongst decision-level members to build a template for conditional permit approvals that can be provided at a district-wide scale for each area as part of each rollout.

This step is time-sensitive, as it is one of two critical path tasks in Phase 0. With the Permit Approval Template defined, our design team can proceed with final architectural and industrial designs in preparation of districtwide permit applications.

The STAP permit application packet is composed of:

- Site audits composed of pictures,



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measurements, notes.
- Curb digitization using CurbLR or similar open-source standard.
- Engineer-stamped permit drawings.
- Global traffic plan with detailed traffic plan for high-impact sites.

Our aspiration is to have the following 6-month deployment of shelters be approved at least 6-months prior (for example, Q1-Q2 2023 rollout is approved by June 30, 2022). This sort of predictability allows our team to better forecast both revenues and expenses, and offer more time and input from EmpowerLA and the greater community.

PHASE 1: ROLLOUT A (TWELVE MONTHS, Q1 2022 - Q4 2022)

Plan and schedule for the development and replacement of 770 items of street furniture and the first round of refurbished shelters.

Relevant stakeholders:

1. Planning Group
2. EmpowerLA neighborhood coalitions
3. Business Improvement Districts (BIDs)

Format:

1. Meet monthly in hybrid board meeting / working group format. Each meeting starts with minutes and action reports from the previous meeting. The group then sets meeting goals and jumps into a creative working group session utilizing a shared software tool. The working group session ends with clear assignments for members with the expectation for action reports the following meeting.
2. STAP project manager will record minutes and email assignments, follow-up mid-month to gauge progress, and generate meeting agendas.
3. Each Planning Group member acts as a representative for their respective group, and members from Phase 0 may pass representation to another representative from their organization.

Deliverable:

1. 734 shelters, 211 kiosks, 24 lockers, 48 docks
2. 300 refurbished shelters (assuming 30% salvage rate)
3. Deployment of 207 backhaul endpoints
4. Deployment of LoRa network & 734 LoRa routers
5. Deployment of CBRS network and/or Cellular
6. Deployment of up to 207 public wifi hotspots
7. Deployment of Curb CMS beta

Phase 1 is intended to be a quick per-site deployment effort to quickly rollout High Value locations in an efficient manner. Our plan is to build upon existing CSFP locations that have existing grid power (we assume that 1800 sites have either existing grid power connections or stub outs):

1. **770 High Value Locations:** 734 Mobility hubs and 300 other street furnitures within these high value locations. All locations will have digital ad screens, ePaper City-

STREET FURNITURE

YEAR-END TOTALS	YEAR 1: PHASE 1, ROLLOUT A				
	Q1'22	Q2'22	Q3'22	Q4'22	TOTAL
Mobility Hub Icon Installed	5	9	11	11	36
Mobility Hub Lite	105	175	209	209	698
Moblity Hub Eco Installed					
Total Mobility Hubs Installed	110	184	220	220	734
Refurb Shelters Installed	33	55	66	66	220
Kiosks	32	53	63	63	211
Lockers	6	11	13	13	42
Docks	7	12	14	14	48
Panels					
Total Other Furnitures Installed	45	75	90	90	300
Legacy Shelters OTG	206	343	411	411	1,370
Mobility Hubs OTG	110	184	220	220	734
New Kiosks OTG	32	53	63	63	211
Lockers OTG	6	11	13	13	24
Docks OTG	7	12	14	14	48
Panels OTG					
Total Other Furnitures Installed	354	589	707	707	2,357

[19] Based on avg. dwell time of 12 seconds and an average bus every 15 minutes https://pdfs.semanticscholar.org/1e4c/86f2506f39646a6654e27f8a4a2a6d7d3af0.pdf

[20] https://www.ladotparking.org/parking-meters/valet-zone/

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Transit screens, smart-city sensor package, networks and public wifi, and other amenities.

2. **220 Refurbishment Locations:** We assigned a realistic 30% salvage rate of the 734 CSFP bus shelter locations to be replaced with new mobility hubs. All locations will have printed and semi-permanent ARTREACH displayed to reinforce and advertising the campaign that will rollout to the digital screen inventory.

Trench work of any kind will be minimized to the lowest extent possible.

PHASE 2: PLANNING B (EIGHTEEN MONTHS, Q1 2022 - Q2 2023)

Generate lessons learned from Deployment Stage A, revenue actuals vs. projections, and continuing changes in the landscape to set up ongoing rollout strategy and SUM Zone permitting process.

Relevant stakeholders:

1. Planning Group
2. EmpowerLA neighborhood coalitions
3. Business Improvement Districts (BIDs)

Format: Monthly to Quarterly meetings

Deliverable:

STAP Deployment Plan 2.0

1. Revisions to 1.0
2. SUM Zone Permit playbook
3. City Integration playbook (ITA Digital ID, ATSAC 3.0, LADOT MDS, City Messaging, others)

Bus stops present the future "holy-grail" of colocated SUM Zones. They are sufficient in quantity to build out a network of locations, already have existing infrastructure and amenities, and offer significant curb space with a utilization rate of less than 2% even on "high frequency" routes.[19] They also make multimodal travel an easy and logical option, while reducing travel time by eliminating walking between modes. Colocation next to bus stops also boosts program awareness for our target audience (see Section II.5).

While mature technologies do not yet exist to make this long-term goal feasible today, we recommend continued meetings to consider this potential. For example, maximizing efficiency of bus stops could eventually be a part of our SUM Zone Permit process (described earlier) based on the LADOT Valet Zone Permit process. In the interim, we recommend launching 85 SUM Zones by repurposing 2-3 concurrent on-street parking spaces in conjunction with the LADOT Integrated Mobility Hubs Pilot Program.

We envision the fundamental spatial unit of a mobility hub to be a block face (or set of block faces). After this quick scan, we will begin identifying appropriate sites (block face combinations) based on various characteristics including, but not limited to:

1. Highly visible for maximized awareness and advertising value
2. Physical locations that have the space to grow
3. Optimized locations for pooled pickup / drop-off activity
4. Optimized locations for delivery services
5. Local stakeholder input and preferences

In practical terms, these locations will be in high density areas where combined demand for the services provided in a SUM Zone would justify the effort to repurpose the curb-adjacent right-of-way. Based on the scope of this project and the future vision for mobility hubs, we recommend that the City of LA and project partners establish a formal Shared Use Mobility (SUM) Zone permitting process. The SUM Zone permit will be modeled conceptually on the City of LA's existing Valet Zone permit[20] (one of the original dynamic curb management innovations).

Developing this process early on will streamline implementation of this project and establish a process for its future evolution and expansion. For example, the SUM Zone permitting process should set parameters for the maintenance of baseline levels of access for all appropriate activities at each location while enhancing safe and efficient access to mobility services.

PHASES 3 - 5 (2023 - 2024)

Our Scenario-Based Rollout continues to iterate on an annual basis. In the example presented, the current year's rollout schedule is based upon the previous year's revenues. The actual rollout schedule will be formulated in conjunction with the City, and include many other variables such as: city permit readiness, ability to align with other infrastructure projects, etc.

These phases submitted below are based upon our best guess of various unknowable outcomes such as a sudden drop in advertising revenues, City-support with access to fiber and 5G, cashflow concerns, and the like. We recommend additional scoping with the City to help define and fill-in certain open-ended questions during Phase 0; after which we can present a final preliminary rollout schedule.

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Phase 3: Rollout B (Jan '23 - Dec '23)
Prioritize locations with high passenger counts and high need of Shelter-Shade-Safety-Comfort. Other main components may include pilot programs either internally such as SUM Zones and alongside organizations such as Urban Movements Lab and LACI.

We will also rollout our ad panels, and utilize them as physical markers for 85 standalone mobility hubs as new mobility transit stops for rideshare and delivery vehicles.

Actual site locations and composition of sites will vary based upon various factors, including: public and private stakeholder preferences, advertising recovery post-COVID, infrastructure realities, etc. But during this Phase we plan on installing our featured ad panels with extra-large digital screens to maximize advertising revenues and flip to a positive cash flow project.

Phase 4: Planning C (July '23 - Dec '24)
Long-term smart cities initiatives rollout plan, with agreed-upon deliverables set to welcome the 2026 World Cup and 2028 Olympics.

1. Align goals with various City, Metro planning documents—Complete Streets, Mobility Plan 2035, LA Sustainability PLAn, Vision Zero, Great Streets, ITA Strategic Plan 2019-2021, LADOT Technology Action Plan 2020.
2. Plan coordinated grant funding opportunities and pilot programs, through clean air and electrification agencies such as California Air Resource Board (CARB), Strategic Growth Council, and Federal programs.
3. Plan for deployment of open-source mobility data network, ranging from ultra-low bandwidth networks like LoRaWAN to high-bandwidth wireless options like 5G, pending future partnerships.
4. Set integration goals and deliverables list with ITA, LADOT, Complete Streets, MDS, and ATSAC 3.0

Phase 5: Rollout C (Jan '24 - Dec '24)
Intentional coordinated rollout of smart cities infrastructure with various public and private partners. Other main components may include:

1. Launch coordinated rollout with Complete Streets, other City-led infrastructure improvement projects, and/or regulated private rollouts such as 5G.
2. Pilot deep integrations with ITA, LADOT, MDS, and ATSAC 3.0.
3. Pilot programs either internally—such as SUM Zone permitting—or alongside organizations such as Urban Movements Lab and LACI.

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CRITICAL FACTORS

CF #2: BE ASPIRATIONAL
Partnership-based project design with multiple public agencies and their respective projects, departments, and policy plans.

CF #3: BE FUNCTIONAL
Executive staff augmentation and contracting of subject-matter experts to maximize quality while minimizing fixed expenses.

CF #4: BE PRAGMATIC
Agile approach to all business plan itesm. Unexpected events will happen, our plans need to change accordingly.

7. BUSINESS PLAN

MANAGEMENT & ADMINISTRATION
Project Management & Administration is composed of:

1. **Stakeholder Management:** Manage City and private industry stakeholders including leading meetings and facilitating long-term planning
2. **Project Management:** Oversee subcontractors and ensure good resource management and adherence to budgets, schedules and deliverables.
3. **Project Administration:**Manage project legal, compliance, accounting, and reporting functions.

Stakeholder Management will be fulfilled by the Managing Director Gene Oh. Gene has over 16 years of experience leading public and private stakeholders in construction management, program design, operations, and compliance. Buy-in is everything; without it execution remains undefined and slow, and generally ends in subpar results. Our overarching strategic lens for stakeholder management begins broadly with the goal of crystalizing shared visions and goals into defined tasks:

1. **Stakeholder audit:** Begin with a broad informal and formal research of all stakeholders of STAP—both on an individual site level and citywide network level. Compile a stakeholder database and initiate stakeholder contacts.
2. **Stakeholder aspirations:** Explore stakeholder ambitions. Initial meetings are generally aspirational in nature. We do take care to list specific issues and perspectives, but the main goal is to explore their visions, strategies, and goals on a topical level.
3. **Goal analysis:** Start to clarify objectives. This portion takes a critical look at the stakeholder missions meetings; we analyze feasibility, streamline / merge goals, combine goals into groups, set timelines and dependencies, etc.
4. **Goal setting:** Conduct follow-up meetings—either individually or in group settings—to align goals, set priorities, and define time-based deliverables to achieve goals and metrics to measure success.
5. **Task formation:** Break out actionable specifics. Aspirations become Goals, which get split into defined Deliverables. These deliverables are further split into defined Tasks, each with their own sub-group, dependencies, assignment summary, and due-date.

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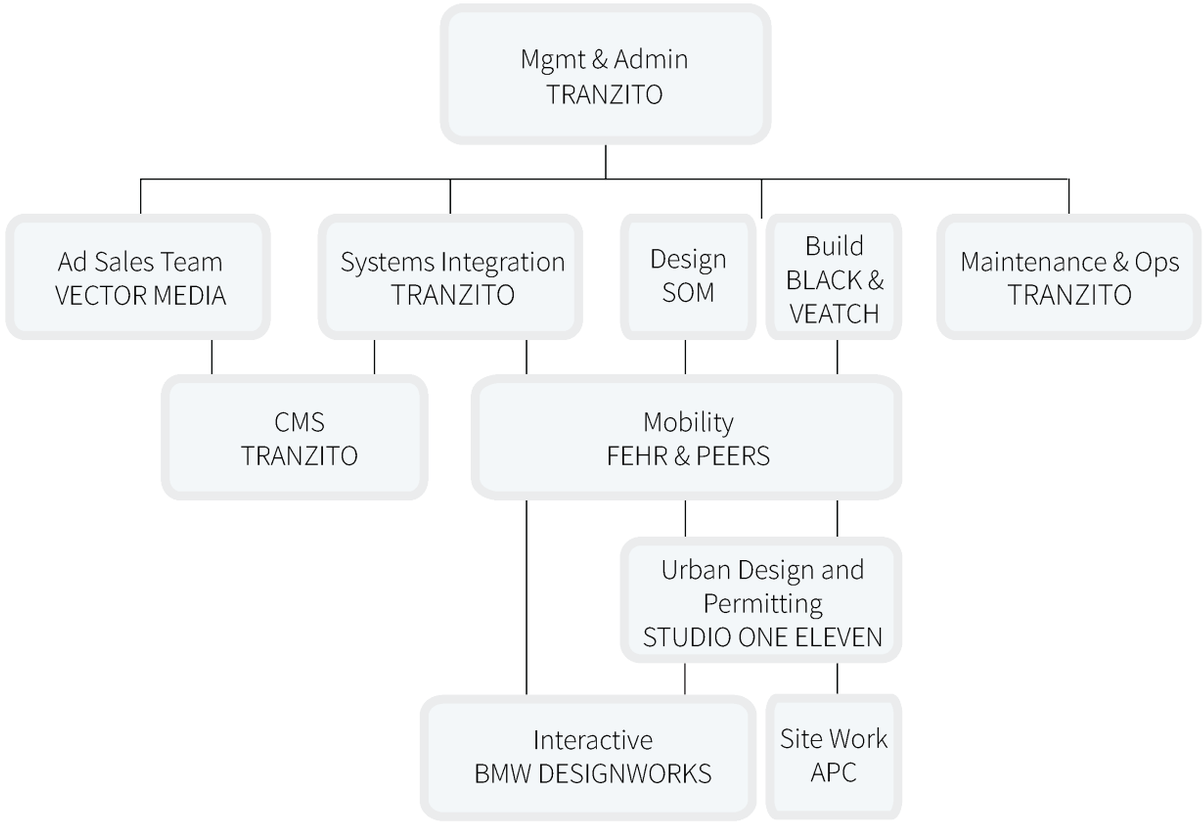
PROJECT COMPONENTS



While our methodology above is fluid with every project, in a broad sense Goals and Deliverables are generally established during working groups and board meetings, whereas Tasks are generally established and executed on a staff meeting level. Below are the regular stakeholder meetings that we recommend:

- **Internal meetings:** Daily standup meetings consisting of quick 5-10 minute check-ins on time-sensitive tasks. Weekly progress meetings consisting of 60 minute task review and strategy sessions.
- **STAP Staff meetings:** Weekly progress reports for the first twelve months, TBD thereafter. The first weekly meeting following month-end will incorporate monthly reports; this meeting will review automated reports and touch upon monthly billing and upcoming deliverables for the month and upcoming quarter.
- **STAP Board meetings:** Monthly for the first twelve months, quarterly thereafter. Board meetings are where broad strategic direction is decided upon. These meetings will be split into two sections—Overview and Strategy.
  - The Overview section follows a traditional board meeting format, such as Procedural, Approval of Minutes, Agenda items, review past metrics, activities, and deliverables; review previous Board deliverables with the goal of assigning tasks as needed.
  - The Strategy section will likewise be split into two subsections—Alignment and Brainstorm. The Alignment section will review the previous Strategy session notes as applicable, current status, and setting of future goals, deliverables . This ensures that everyone is aligned in regards to priorities, deliverables, and overall vision. The Brainstorm section will consist of 20 minute modules on 1 specific topic.

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- **Planning Group meetings:** Planning groups are scheduled for Phase 0 (first 6 months) and Phase 2 (following 12 months). The meeting formats will be decided within each group, as they are composed of public employees and officials with decision-making authority (or in direct contact with a decision maker) and will revolve around the respective members' schedules. Furthermore, the nature of these working groups are fluid by design, and the frequency of meetings will likely be dictated by the time-sensitive needs at the time.
- **Community meetings:** These include ad-hoc meetings, either regular or one-time, such as attending city council meetings, district or neighborhood meetings, local CBO sync-up meetings, etc. We find that the vast majority of community meetings take place during pre-construction and construction phases; our Planning Group meetings—including CBOs such as EmpowerLA—will address and potentially preempt many concerns and questions to reduce ad-hoc meetings to the extent possible.

Project Administration will be fulfilled via staff augmentation via Tranzito's administration team. This ensures a quick ramp-up and flexible staffing capacity as the project dictates. Our team is experienced in public procurement contracts, particularly with LADOT and Metro. All Legal, Compliance, and Accounting practices are performed to established standards and requirements. We will work alongside StreetsLA to establish the proper protocols, documentation, and templates to ensure a consistent and efficient process.

Reports and data transfers will be compiled and automated via the Curb CMS. While the format and frequency is customizable, we recommend monthly and quarterly reports (for the first 18 months, annual reports thereafter); customized on-demand reports will always be available. The following reports will be compiled monthly:

1. Progress report
2. Sales and Expenses reports
3. Infrastructure and Resource reports
4. Mobility and Passenger Data reports
5. Progress reports (working groups, rollout, incidents)
6. Construction-related reports
7. Maintenance-related reports
8. Customer service reports

SCENARIO BASED ROLLOUT

ACTUAL ROLLOUT	TOTALS	2021 YEAR 1	2022 YEAR 2	2023 YEAR 3	2024 YEAR 4	2025 YEAR 5
Revenues ACTUAL		$$$	$$	$	$$	
Mobility Hubs Installed	108	108				
Standard Digital Installed	992	626	366			
Standard Non-Digital Installed	1520		400	400	320	400
Total Bus Sheltered Installed	2620	734	1500	1900	2220	3000
Aggressive Rollout $$$						
Mobility Hub Icon Installed	108	108				
Mobility Hub Lite	1692	626	366	350	350	
Moblity Hub Eco Installed	1200		400	400	400	
Total Bus Sheltered Installed	3000	734	1500	2250	3000	
Optimized Rollout $$						
Mobility Hub Icon Installed	108	108				
Mobility Hub Lite	642	626	16			
Moblity Hub Eco Installed	1550		350	400	400	400
Total Bus Sheltered Installed	2300	734	1100	1500	1900	2300
Delayed Rollout $						
Mobility Hub Icon Installed	108	108				
Mobility Hub Lite	639	626	13			
Moblity Hub Eco Installed	1240		280	320	320	320
Total Bus Sheltered Installed	1987	734	1027	1347	1667	1987

This iterative process ensures that project rollouts are always in-sync with project cash flow and financial goals, and that problems that often-times plague large public-private infrastructure projects do not manifest in STAP.

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CONSTRUCTION

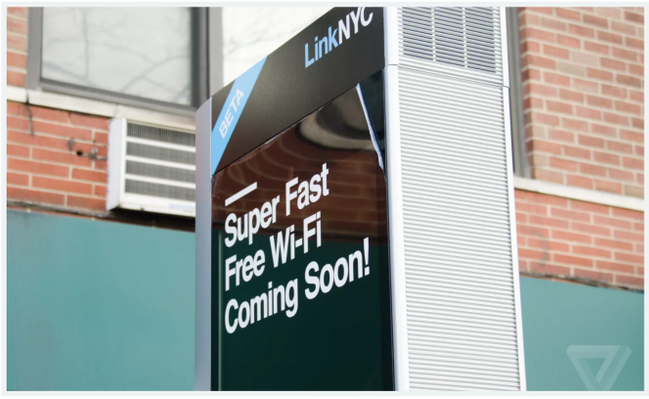
An intensive permit planning process and a scalable and sustainable construction plan. This means City partnership is vital and heavy construction projects involving trenching and building custom structures are a non-starter. Additionally, with the unpredictable changes afoot in technology and mobility, we believe construction projects that require decades to pay off are a risky endeavor.

Take high-speed internet as an example. For many areas along public rights-of-way, bringing in fiber optics would require expensive and time-intensive research into underground infrastructure, trenching, permitting, and installation of conduits and equipment. But the advent of bridge technologies between 4G and 5G—called 4.5G or 4.9G—provides sufficient high-speed communications speeds now using existing 4G infrastructure, and speeds will only improve as 5G matures.

Instead, our plan utilizes an infrastructure-lite approach with the anticipation of 5G and other innovations that will preclude the need for large construction projects. We've also designed our plan based upon existing CSFP locations to take advantage of pre-installed power connections (we assume 1800 locations with grid power); the remaining locations are built around solar-power with City-Transit Screens to provide real-time information that passengers and the City desires.

In order to further maximize the number of connected mobility hubs, we propose a synergistic construction plan piggybacking on existing pipeline infrastructure improvements, such as projects involving dedicated bike lanes, bus rapid transit (BRT) lanes, corner bulb-outs, future bike share deployments, utility relocations and upgrades, and modifications to curbside regulations (signing & striping). With proper coordination, we aspire to bring in grid power and/or high-data connections to mobility hubs at highly reduced construction costs to STAP.

Year 1 Rollout (Phase 1: Rollout A) is fixed; from there various real-life factors will determine the number of locations, assortment and quantity of street furniture, and type of non-required amenities to offer on the upcoming rollouts. We offer an example where current ad revenues determine the next year's rollout.



LinkNYC remains in dispute over tens of millions of dollars

LinkNYC provides us with a cautionary tale about inflexible planning in related services. "After several years, fewer than half of their promised kiosks have been installed and they owe the City of New York "tens of millions of dollars" according to officials. Red tape and issues around fiber installation have been listed as a large contributing factor to the thousands of missing kiosks, but with multiple other ways to link devices to the internet available and the challenges of coordinating projects on the scale of a city well known, it's hard to avoid the conclusion that a more flexible design and agile rollout plan were necessary. The result is that, according to City Councilmember Robert Holden, "New Yorkers are being shortchanged." [21]

Phase 1 Construction will be led by Black and Veatch, recognized as the world's leading large-scale construction engineering firm, brings valuable lessssons learned from elading the initial launch of LinkNYC. Black and Veatch will lead all aspects of construction project management throughout the initial rollout launches, with an anticipated minimum involvement from project inception to the first two rollouts (July 2021 - December 2023).

Black and Veatch will provide leadership in the following categories:

1. Design Construction Project Plan
2. Manage Schedule: Look-ahead schedules and coordination with subs.
3. Manage traffic control plan
4. Manage document control: Asset tracking, Activity tracking, QC reports
5. Provides web-based tool for real-time insights

[20] https://www.amny.com/new-york/city-hall-may-pull-plug-on-linknyc-owner-over-missing-kiosks-and-75m-owed/

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MAINTENANCE

Tranzito is an expert in maintenance and operations, with direct experience performing daily field support on LA streets. Tranzito's team of over forty full-time mechanics, field technicians, and service technicians has helped maintain the Metro Bike Share program since 2016 and Metro Bike Hub program since 2015. From strategic design that balances quality with cost-optimization, facilities from setup to daily upkeep, to performance tracking and reports, Tranzito is a full-stack maintenance partner.

Our maintenance plan is based upon reducing inefficiencies by relying on sensor-based technologies, preventative maintenance, and route optimization. Unplanned emergency on-site calls are expensive, due to loss in revenues (as ads may be unable to be played) and increase in expenses (emergency on-site trip fees are in the hundreds of dollars). We rely on almost a dozen sensors to constantly monitor and alert in real-time various diagnostic conditions, such as: internal cabinet temperature, health status of components and screens, proof-of-play monitoring, network speeds and status, etc. These sensors are integrated into alert and respond settings and internal SOP protocols to ensure that most incidents are responded to before outages occur.

Route optimization is paramount to reduce costs and carbon emissions. Since reducing carbon footprint is a highly touted benefit to bike share, our team has paid special attention to ensuring daily field operations follows suit. Unlike with bike share, STAP inventory is fixed, which greatly simplifies route optimization; we'll lean on analytics and lessons learned to apply the following principles:

1. **Vehicle fleet diversity:** The vast majority of maintenance tasks require a simple assortment of tools and supplies; we will utilize a fleet of electric cargo bikes for daily preventative and regular maintenance activities for downtown STAP locations. Besides containing a large percentage of total inventory, the vast majority of "hot spot" locations are also downtown locations. Our experience has validated the benefits of relying on cargo electric bikes; they get around more quickly, have no carbon emissions, and increase staff morale. A true win-win-win.

   We will supplement our fleet with electric vans. Electric vehicles are not only consistent with LA's Sustainability PLAn and the responsible thing to do, they also result in a net savings throughout the duration of STAP. Current federal and state tax credits provide additional financial incentives to make this decision a net positive from a financial standpoint. We will also purchase two speciality trucks for STAP inventory installations and removal. These speciality trucks will contain appropriate components like lifts and cranes and be diesel-powered.

2. **Operational time of day:** Maintenance is a 24/7 operation, and the disbursement of staff hours is both art and science. Simply stated, field maintenance is dramatically quicker from 9pm - 5am, but the ability to attract and retain qualified personnel to staff these shifts are challenging. We will rely on our experience to balance these conflicting realities and devise a staffing plan to maximize these optimal hours. One such method is to deploy three overlapping shifts (for example, 10am - 6:30pm, 6pm - 2:30am, 2am - 10:30am), each with a different assortment of specialty staff to maximize efficiency throughout the day:
   - **Day shift** (10am - 6:30pm): The first half of the day avoids downtown rush hour traffic; we'll utilize this time for preventive and routine maintenance. The second half of the day will be utilized for on-site maintenance tasks to maximize productivity and avoid traffic and potential accidents.
   - **Evening shift** (6pm - 2:30am): The vast majority of hours on this shift experience light traffic; as such the majority of preventive and routine maintenance tasks will take place at this time. This shift is actually relatively easy to fill, as it attracts high-quality personnel working multiple jobs.
   - **Morning shift** (2am - 10:30am): Reserved for more intensive on-site work where larger and/or more complex tasks must be performed and when vehicular traffic is at its lightest, such as pressure washing and shelter transport. This shift will be extremely thin given the realities in hiring and retaining qualified staff.

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3. **Central dispatch:** The central dispatch team is responsible for cross-coordination with field personnel, helping to redirect staff as needed based upon real-time traffic, staff interruptions and fluctuations, and other considerations. Central dispatch can also quickly respond to emergencies and ad-hoc requests.

   We will utilize a central dispatcher during the day and evening shifts. The Maintenance Supervisor is the direct lead for our maintenance operations; this person will also be one of the two central dispatchers along with a shift supervisor.

4. **Cross-trained staff:** We believe in cross-trained staff to ensure operational continuity. Operations is a tough business, and unexpected staff turnover and absences are a reality. While most personnel end up performing consistent tasks to realize the benefits of specialization, we also provide consistent cross-training opportunities to ensure redundant skillsets are developed. Cross-training also boosts staff morale and encourages internal promotions and lateral movements.

5. **Mobile-based record keeping:** Mobile-based maintenance apps produce the most accurate and comprehensive record keeping. Every personnel will be provided either a company-issued smartphone or monthly stipend to use their personal devices to record both on-site and off-site activities.

[22] https://www.sciencedirect.com/science/article/pii/S0965856417316117

The administrative dashboard allows for multiple customized settings, such as activity list (by frequency, dependencies, resources required, etc), resource list (such as vehicles, supplies, and personnel), historical activity lists and predictive schedules. These schedules are then displayed on device apps, wherein personnel record actual actions. All activities are then placed in the cloud; our Curb CMS will display results in the shared dashboard and report modules.

Our maintenance schedule will mirror the schedule articulated in the RFP, and real-time digital based record keeping will ensure an accurate digital trial of all maintenance tasks, such as:

1. Routine and hotspot maintenance, including non-routine activities performed such as removing vandalism and etchings.
2. Trash pickup in and around the perimeter of each location.
3. Posting of static ads.
4. Repairs and replacements of physical and digital components.
5. Pressure-wash and other intense cleaning measurements.
6. Street furniture installations, replacements, transfers, and removals.

6. **Facilities considerations:** Our main warehouse / office will be centrally located nearby the majority of STAP inventory, particularly those that are designated as “hot spots”. This reduces the total travel time and allows us to maximize a cargo electric bike fleet.

   This breaks tradition of locating the warehouse along the outskirts of Los Angeles in order to take advantage of lower rental rates. We believe that this is a narrowly-focused approach to cost savings, as it does not take into account expenses associated with vehicle maintenance, warehousing, insurance, and fueling expenses, let alone the environmental impacts of relying on a traditional vehicle fleet model.

   A warehouse that is centrally-located allows us to diversity our vehicle fleet to cargo electric bikes, which drastically reduces travel time between locations and warehouse space requirements.

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ARTREACH

Los Angeles is the entertainment capital of the world. The streets are full of talent, and STAP will provide the distribution to inspire and showcase art to and from the masses. We will partner with local artists, art galleries, museums, cultural institutions, and community arts organizations to showcase specific neighborhoods and rotate digital exhibitions to celebrate holidays, honor heritage months, promote art events and highlight invited artists.

All artforms will be considered and artworks will be presented as a digital slideshow including paintings, illustrations, and photography showcasing sculpture, fashion and dance as well as written compositions such as poetry.

By engaging the community and involving them in the curation of the artworks, they will develop a vested interest in maintaining these spaces. Art has the power and preservation of place and can optimize outreach.

The program will be curated and administered by Nic Cha Kim, co-founder of the creative district Gallery Row in Downtown Los Angeles. Inspired by the transformative power of art to improve challenged communities, Gallery Row grew from 3 art galleries to over 30 in a few years and is home to the Downtown LA Art Walk. Nic was also gallery director of Niche.LA Video Art where he curated digital and video art shows. Now a 3-time Emmy winning arts and culture reporter and LA Press Club "Television Journalist of the Year," Nic has covered the art scene all over Los Angeles.

Programming will be updated bi-monthly to reflect on-going local art events. By partnering with museums and arts organizations, kiosks can promote current exhibitions embedded with QR codes so commuters can easily access event and travel information. A continuous open-call will seek themed artworks by local artists to highlight specific communities. And coordinated outreach events at schools will seek artworks from students and young artists. A community collaboration designed to engage every commuter, the artworks will transform kiosks from information centers to cultural hubs.

CMS & Design & Sales

1. CMS: See Section 4. Technology Plan
2. Design: See Section 5. Design Process
3. Sales: See Section 8. Sales Plan.

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PROJECT LEADS

Gene Oh:
Managing Director

Tasks:
Supervise STAP program. Convey program strategy and lead communications with key stakeholders.

Hours: 20 hr/wk

Qualifications:
Gene has led multiple active transportation projects for public agencies since 2004, and has been designing strategy, marketing, and operations models for the largest municipally-run new mobility fleet and infrastructure programs in the nation.

Gene has pioneered new mobility infrastructure, and in 2004 he helped launch the BART Bike Station program, nationally recognized as the most comprehensive secure bike parking program in the United States. Gene also led the launch of Metro Bike Hub's operations strategy and membership program with CurbOS, a full-stack systems integration platform that combines proprietary hardware and software with third-party APIs to manage secure bike parking management. A year later, Gene also helped build out the Metro Bike Share program from pilot to program expansion throughout Los Angeles County.

In 2020, Gene led two mobility hubs pilots in San Francisco and Los Angeles—from ideation to strategy to implementation—working alongside property owners, public agencies, and private new mobility operators. These pilots are integrating public mass transit with private micromobility and Mobility-as-a-Service, paving the way for future mobility hub iterations.

Gene will act as the program's Managing Director and Board Member, reporting directly to the company's Board of Directors and City supervisors. He will lead strategy formation and execution, oversee working group meetings, and directly lead executive-level meetings with relevant stakeholders public and private. Direct reports include the General Manager, Advertising Director, CTO, and COO.

Marc Borzykowski:
Advertising Director

Tasks:
Supervise Advertising sales team and strategy

Hours: 20 hr/wk

Qualifications:
Marc has led partnership opportunities for Vector for 15 years, the last four of which he has served as the company's Chief Executive Officer. Marc is responsible for overseeing all aspects of the company's media portfolio, growth, and management.

In his time as CEO Marc has spearheaded revenue growth of over 80%, including the execution, through bids and acquisition, of over 40 new municipal partnerships. Marc has built his career on the creation and prioritization of inventory partnerships and relationships. It is this partner-first mentality that has separated Vector in the out-of-home industry and has earned Vector an unparalleled reputation amongst municipal operators.

Marc will be responsible for shaping the overall strategy for STAP and ensuring that both revenue and operational expectations are met.

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Carlos Madrid III: Lead Architectural Designer

Tasks:
Responsible for guiding the architecture development and delivery, including organizing the broader design team.

Hours: 32 hr/wk

Qualifications:
Carlos Madrid III is an Associate Director in SOM's Los Angeles studio with more than two decades of designing buildings, spaces and objects. His work is driven by "Human Experience" through the lens of health and wellness, social equity and environmental responsibility. With an aptitude for innovation, Carlos' design contributions have been consistently recognized for their rational yet provocative approach.

Carlos' work is diverse in scale, scope and location. His recent accomplishments include the 100-million-dollar upgrades to LAX's central terminal area, a multitude of developer driven adaptive reuse projects and creative workplace projects for media and entertainment leaders, including Awesomeness, Disney and NBCUniversal.

Currently he is working on the second phase of a 150,000-square foot office for tech giant The Trade Desk in New York City, multiple projects for Loyola Marymount University, including a ground-up academic building for the School of Film and Television and an outdoor theater for the School of Performing Arts; and phase two of the Nebula outdoor lighting collection done in collaboration with Italian lighting manufacturer Neri.

Tasks: As Lead Architectural Designer, Carlos will be responsible for guiding the architecture conceptualization, design development and detailed coordination through its final documentation and delivery. Throughout the process he will organize the efforts of external design consultants to ensure harmonious synthesis of all systems and disciplines in the final product.

Charles Druesco: Interactive Creative Director

Tasks:
Development of assets and experiences for messaging on advertising and transit screens.

Hours: 20 hr/wk

Qualifications:
Charles' extensive history with digital design encompasses every touchpoint – from interfaces and websites, to native mobile apps, way finding and new experiences. Having also worked for Continuum, HUGE, and R/GA, Charles award-winning portfolio includes notable clients such as Wells Fargo, DirecTV, Walt Disney World Parks and Resorts, Columbia Sportswear, Microsoft, and HBO. He and his teams are currently building new mobility experiences that including new electric product interfaces, new dashboards experiences for vehicles, and the expression of intelligent personal assistant companions for mobility brands.

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Shruti Shankar:
Urban Designer

Tasks:
Lead Launch Group and community engagement efforts for the design team, coordinate permit streamlining process and produce districtwide permit application packets for approvals.

Hours: 16 hr/wk (averaged over five years, with more effort during early phases of work)

Qualifications:
Shruti Shankar is a Senior Urban Designer at Studio One Eleven, with eight years of urban design, planning and sustainability experience focused on the design of the public realm. Her work is grounded in integrating community engagement in design, and includes a variety of project types, from streetscape and public space design, to placemaking initiatives, testing improvements for the public realm using tactical methods and formulating planning and urban design strategies for short- to long-term development of districts and neighborhoods. She has worked in diverse LA communities and is experienced in integrating community outreach and engagement in a variety of creative and effective formats, to inform the design and planning process.

Shruti's project experience includes design and agency coordination for the Bloc Mobility Hub and the 7th Street Demonstration project in Downtown Los Angeles. She is leading design and community engagement for public realm improvements along Venice Boulevard in Mar Vista, and design efforts on streetscape improvements for Sherman Way in Reseda and the Glendale Arts and Entertainment District on Artsakh Avenue in Glendale, CA. She has worked in and with several LA communities including on efforts for design peer review for the Metro Joint Development sites at the Metro Regional Connector station in Little Tokyo, along the A line in the Watts neighborhood, and the Vermont/Santa Monica mobility hub.

Chelsea Richer:
Mobility Designer

Tasks:
Produce prioritization strategy for relocation of refurbished amenities and implementation at new stops. Support development of permitting streamlining process for bus stops and SUM Zones.

Hours: 16 hr/wk (averaged over five years, with more effort during early phases of work)

Qualifications:
Chelsea Richer has 10 years of experience in transportation planning, focusing on first/last mile planning, active transportation planning, multi-modal safety, and transportation demand management (TDM). With experience working in diverse communities in Los Angeles, Chelsea excels on projects that center transportation equity, data analysis, project evaluation, and community engagement as the tools to inform better decision-making and better outcomes. She is proficient in ArcGIS, Adobe InDesign, Adobe Illustrator and SPSS. Her technical practice areas are underpinned by strong communication skills, attention to detail, and experience managing complex planning projects with interdisciplinary teams.

Chelsea has supported the City of Los Angeles in several high profile initiatives, including analysis, conceptual design, and community engagement for the City's Vision Zero initiative; implementation of the initial tasks identified in Urban Mobility in a Digital Age; and analysis and policy support as the City transitions from Level of Service to VMT for project development review under new SB 743 guidelines.

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Michael Lacanlale
Program Manager

Tasks:
Manage and coordinate the program build out of STAP elements through all stages of deployment

Hours: 30 hr/wk

Qualifications:
Michael leads the execution and financial management of large-scale smart city projects for Black & Veatch's Telecom business. He has over 17 years of experience working on complex infrastructure projects in major metropolitan markets nationwide. Throughout his career, Michael has served in a variety of roles, initially as an engineer designing roadways and underground facilities for the City of New York, then managing O&M projects for a major telecom provider and other public utilities.

He joined Black & Veatch in 2016 to become one of the early core members of the LinkNYC deployment team. Working alongside both Black & Veatch and CityBridge professionals, Michael spearheaded several of the initial efforts to develop and streamline processes that would eventually result in:

- Improved and systematic route planning for annual deployment targets of 1,000+ sites
- Standardized and repeatable site survey/design process
- Improved synchronization between underground fiber and kiosk deployments to reduce time between site installation and activation
- Controlled and predictable flow of sites through various stages of the deployment pipeline

For the STAP program build out, Michael would lead cross functional teams to develop and implement a deployment plan designed to meet the program's annual goals and oversee construction operations and will hold a key role in project planning and resource management. He will manage project document submittals: including site plans and provisioning, close out documentation, and as-built.

Seth Herr:
CTO and IT Specialist

Tasks:
Supervise Curb CMS and partnership integrations.

Hours: 20 hr/wk

Qualifications:
Seth is an industry expert in software, telematics, app development, database management, and global registration.

Seth was Lead Backend Developer for Spin until its acquisition by Ford. Seth also founded and operates Bike Index, a 501c3 non-profit that is the world's largest bike registry. He also recently led a development team for globaliD, which is building a secure, blockchain-based digital identity.

Since joining Tranzito as its CTO, Seth has led a major redevelopment of the CurbOS platform, redesigning the kiosk, registration, database and payment stack and leading the integration strategy with Bike Index and third-party ID-verification platforms.

Tasks: Seth will lead the development and integration strategy of the Curb CMS, and directly manage internal and external teams to ensure a harmonious software stack. Seth will also work with ITA and OMF to build the Curb CMS API Library Catalog and software development kit (SDK) to allow future third-party operator integrations. Seth will also serve as the program IT Specialist, directly managing the Operations Supervisor and contract maintenance and repair teams as needed.

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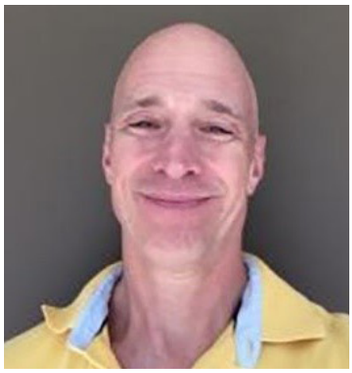
Wade Sarver:
Network Designer



Tasks:
Network Designer and Network Implementation Engineer

Hours: As Needed

Qualifications:
Wade Sarver is considered an industry expert on wireless system solutions. His 35+ years of experience in the wireless industry has helped him gain perspective on multiple solutions. Currently creating solutions as a consultant for multiple companies. Experience working for and with companies like BIG Wireless, Qualcomm, Alcatel-Lucent, Nokia, Blackrock, Rohde & Schwarz, Airspan, and SAC Wireless have helped in the creation of two companies, TechFecta and Wade4Wireless.com to provide real world solutions.

Wade's experience includes extensive work with Sprint, Verizon, T-Mobile, Private LTE projects—on a wide array of technologies from legacy to 5G. Wade is adept at agile solutions based upon client-specific needs and project realities. Wade builds upon his knowledge of existing solutions to create innovative hybrid networks that combine wireless and fiber to meet today's network and coverage demands, and always looks to find IOT solutions that benefit the user and builds a lasting model for cost savings and profitability.

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8. SALES PLAN

CRITICAL FACTORS

CF #2: BE ASPIRATIONAL
Make Los Angeles into the number one advertising destination by raising its profile, innovating with emerging technologies and programs, and focusing on digital metrics.

CF #3: BE FUNCTIONAL
Current strategy revolves around direct sales; programmatic sales are initially used to fill-in gaps in occupancy and optimize platform-based direct sales opportunities.

CF #4: BE PRAGMATIC
Agile sales team with mix of static & digital inventory planned for step-down as direct buys decline and step-up with digital screens for greater programmatic, experiential, and omni-channel.

Our Sales Vision over the course of the decade is to elevate Los Angeles to the number one advertising market in the country. In order to achieve this vision, we will focus on expanding the advertiser base and growing demand for STAP products, and even more importantly, on leading the US in incorporating new digital innovations and programmatic while layering in immersive and diverse advertising alternatives.

Vector's strategy for creating and maximizing revenue in Los Angeles will be to expand and diversify the local client base, grow the national client base, and drive focus and creativity to STAP assets. While this strategy is fairly straightforward, execution is key. And when it comes to executing against transit media, Vector has repeatedly demonstrated that we do this better than anyone else.

EXPANDING ADVERTISER BASE AND GROWING DEMAND
To construct the ideal advertising sales engine, Vector will focus on driving revenue into STAP products from all advertising types, including local, regional, national and international brands. However, an effort of this magnitude begins with the

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local client base and sales team. As we expect local sales to generate 50-60% of total contract revenue for STAP, a large amount of focus will be dedicated to building a highly productive local sales engine. Growing a local client base requires a dedicated effort, driven by leaders with significant experience and expertise. Upon award of the contract, we will immediately begin outreach to existing clients, to ascertain where needs could be better met. In parallel with this effort, Vector's public transit sales management will begin building a robust and experienced sales team to support the local advertiser base. We take pride in finding and developing true local talent with a deep understanding of the market and ties to the community. For this role, Vector will focus its hiring on dedicated transit sales personnel who reside in and have intimate knowledge of the LA market. As creative thinkers, our local sales team have been responsible for much of the innovation that has occurred for our transit partners. We plan to empower our SoCal team to make similar contributions for STAP.

It is vitally important to the vibrancy of the Los Angeles economy to support local and small business—they represent almost two-thirds of new job growth and over 40% of GDP. But with advancements in place-based marketing and hyper-targeted marketing, a local business may actually derive more value from an adjacent digital screen than national advertisers. Traditionally, however, DOOH sellers concentrate on national and regional clients due to their familiarity with digital platforms and a return on investment of ad sellers' time and effort. Put more simply, working with local businesses takes more effort and requires

a local presence. Vector has a strong local presence in the Los Angeles area with the Big Blue Bus and others, with an existing local sales team to provide the training and tools necessary to ensure local and small businesses can take advantage of both static and digital opportunities.

While Vector Media has an extensive track record building strong local advertiser programs, Vector's reputation was built on its unique ability to develop regional, national and international advertiser interest in products where its predecessors had come up short. This effort begins with building the brand of the transit product itself in the minds of advertisers.

Besides being the second largest US metro advertising market, Los Angeles is one of the most iconic cities in the world, making aspirational brands with large advertising campaigns a natural fit. But it's also extremely diverse in terms of populations and regions, and high on the technology adoption scale, making it a perfect market for hyper-targeted advertising.

And much like traditional Hollywood studio release schedules—where major "tentpole" movies helped raise awareness of all subsequent releases—Los Angeles has two world-anticipated tentpole events in the 2026 World Cup and the 2028 Olympics. We intend on leveraging these two events to develop multi-year ad campaign strategies with long-term ad partners. This will create an additional base-level demand for STAP inventory, which will help improve occupancy rates and ensure that ad rates remain elevated.

Further, large brands love opportunities to stand out and gain exclusive access to highly-desired media products. Part of our effort to take advantage of this tendency is to establish exclusive pre-buy access to iconic assets and time periods and to build multi-year media campaigns with major ad-spenders based around tentpole events. Besides helping to retain existing clients and smooth out the seasonal nature of OOH advertising, multi-year campaigns build a strong base level of inventory demand, resulting in higher occupancy feeding the perception of limited supply.

To further maximize value for large brands, we will ensure placement of digital screens at the most highly sought locations in the city. Digital advertising screens allow for more clients access to the most desired locations. Besides providing a higher concentration of eyeballs—counted in cost

[22] https://www.thoughtco.com/how-small-business-drives-economy-3321945

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per thousand impressions (CPM)—concentrating digital screens at high-value locations provides opportunities for "roadblock" campaigns. These ad-hoc campaigns offer ad buyers an opportunity to blitz their messaging for a specific duration of time, which can yield many multiples of standard ad rates.

To us, "high value locations" go beyond the obvious locations like Downtown, Hollywood, the Miracle Mile, etc. We also designate busy arterial streets with dense vehicular traffic—located throughout the City across many districts—as high value. We will work with respective districts that desire digital ad screens to provide an opportunity to access them.

We also recommend supplementing the standard bus shelter ad box size with a limited number of ad panels—with extra-large format digital screens on side and two or more City-Transit screens on the other—at the most-dense urban areas. These screens yield an immense revenue opportunity and will be used as the driver to entice multi-year campaigns. And since the City will have access to these screens, they also function as highly-effective city messaging.

Beyond the standard OOH advertising channels, Vector has identified a ripe pool of advertising revenue with experiential campaigns, public relations and branding campaigns, digital omnichannel budgets, and street team events which are all open to innovation and unique branding opportunities. Event marketing is a specialty of Vector Media and we believe the demand for this type of activation, as a component of the outdoor advertising market, will continue to grow rapidly in the coming decade. Los Angeles has an even greater opportunity to maximize experiential marketing due to the movie and film industry and Vector has been delivering such theatrical executions for years within Los Angeles.

We envision utilizing our breadth of experience with Public Relations, Experiential and Sampling clients and, in conjunction with our vehicular clients like the Big Blue Bus, to activate broad multi-location experiential and omnichannel campaigns. These campaigns yield significant revenue potential, especially when combined with our analytics-based measurement tools to track path-to-purchase, conversion rates, and other sophisticated digital tracking tools. Additionally, Augmented Reality and Virtual Reality will soon come to the forefront, well in time to take advantage of the 2026 World Cup and 2028 Olympics, yielding even more exciting possibilities.

NEW INNOVATIONS AND PROGRAMS

We take a pragmatic approach to the speed of digital innovations in OOH. Our approach is to lead the nation in DOOH and programmatic sales, omni-channel and experiential campaigns, and targeted advertising. But we will be careful not to let that leadership distract from present revenue opportunities either. We are wary of what happened online—platforms like AdWords, Facebook, and YouTube now dominate online advertising to the point where they exert control over the websites that use them. We see LA as a truly unique marketplace, and our vision is to ensure that LA's advertising value never becomes commoditized.

Static advertising is not dead; rather, in many (or even the majority of) Los Angeles neighborhoods digital ad screens simply do not make financial sense. There are four costs to consider: construction costs to access power and data, capital costs to purchase digital screens and hardware, recurring costs such as licensing fees and energy costs, and political capital to change minds in neighborhoods that simply do not want them.

This does not mean that we are abandoning a large swath of locations for consideration of digital, but merely delaying a potential switchover to a more advantageous time. We will continue to find strategic opportunities to piggyback off of other construction projects to reduce the initial capital outlay, and since digital screen life is finite (approximately 5 years) and display costs continue to decrease while quality increases, time is indeed on our side. We also believe that public perceptions of digital screens will shift in a positive direction as their benefits become evident.

Our recommendation is to launch digital screens aggressively at high-value locations, and maximize the number of digital screens at these sites. Ad revenues are much greater at high-value locations, and local stakeholders may actually desire their presence for a plethora of reasons—increased sense of vibrancy, safety, and opportunities for local

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merchants. And the cost to acquire power and data are generally much lower in these areas, due to more accessible underground and wireless options. Beyond the standard innovation for advertising opportunities, there are also many non-advertising opportunities that we can leverage for additional value. As the demand for curb space escalates from private mobility operators, delivery operators, and other connected IoT devices and infrastructure, the finite supply of curb space—and connections to utilities like grid power and high-speed data—will grow in value. STAP infrastructure will be ideally situated to exploit this supply/demand mismatch.

Some of these opportunities will come in the form of revenues, while others will be non-monetary offers that allow STAP to increase its project scope and/or reduce costs. Moreover, these opportunities result in achieving broad policy goals. We will continue to explore some or all of these potential opportunities alongside the City:

- **Curb usage fees**: Based on our SUM Zone framework, vehicles may pay for on-demand loading zone usage, as well as increased pooled rides and reduced double-parking and cruising for parking spaces.
- **Micromobility dock fees:** Third-party shared micromobility operators may pay to park and charge their vehicles, as well as offering more accessible intermodal and sustainable transit options while reducing pedestrian obstructions.
- **Locker usage fees:** A huge opportunity. The advent of on-demand food delivery coupled with the shit in last-mile package delivery to micro fulfillment will make curbside shared lockers a vital smart city infrastructure. Benefits include per-usage fees and reduction in carbon emissions.
- **Co-tenancy fees:** Vertical Bridge specializes in shared communications infrastructure, paying upfront construction costs to set up the system and collecting monthly co-tenancy fees. For STAP, Vertical Bridge's will benefit the City in three ways: their investment will accelerate 5G buildout throughout LA, they will help connect STAP with backhaul partners and free WIFI, and they will potentially offer revenue share with the City.

Problem	Solution
Cost to get power/ data is high	Piggyback off planned dig projects
Cost of screens are expensive with only a 5-year life, and recurring costs are expensive.	Wait, unit economics timpoces as capital costs go down and ad revenues go up.
Many communities see digital screens as nuisance or gentrifying.	Focus on high-value location proliferate the quantity of screens. Revenues go up, changing public perception along the way.

SPECIFIC RESPONSES

City Messaging: Our vision for STAP offers four distinct areas of city messaging.

1. All 3000 bus shelter mobility hubs will have ePaper City-Transit screens providing programmed city messaging, ad-hoc messaging like emergency information, and transit arrival and alerts.
2. The network of digital ad screens will collectively provide 10% of all available screen time for city uses. We recommend that a large portion of this time be allocated for our in-house marketing/outreach program, ARTREACH.
3. The Curb App will provide direct access to passengers, with the potential for deeper integrations such as ITA's Digital ID program and personalized city service offerings.
4. The street furnitures themselves have the potential to be networked with city programs like ATSAC 3.0 to control lighting and screens, transforming them into smart city infrastructure nodes.

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AD Policies:

1. **Barter:** Generally, Vector Media only participates in barter arrangements at the explicit instruction of our inventory partners, namely the applicable transit authority or other government entity
2. **Over-posting:** Vector Media's policy is that we typically do not over post. The limited instances of over-posting would generally relate to accommodating an advertiser's campaign that was delayed due to the late delivery of advertising creative, or instances where there is an important community -related initiative, such as a campaign to promote COVID testing awareness.
3. **Bonusing:** Vector Media does from time-to-time offer incentives to advertising customers that would include addition-al bonus units or display time. Whenever possible, we couch these opportunities as "space-available" to ensure that we are not reserving valuable space for bonus advertising. Also, we generally only offer bonus incentives to customers who have established a consistent record of advertising with us and on the relevant inventory.
4. **Contract Negotiations:** All of Vector Media's advertising contract negotiations take place with an eye toward cultivating long-term relationships with our clients. We typically begin our negotiations by presenting an annual messaging campaign to the client demonstrating how such long-term campaigns strategically solidify the advertiser's brand in the market. From that jumping off point we may expand or contract the offering based on feedback we receive from the customer relating to their goals and budgets. Additionally, as part of our standard customer service, we consistently support the client 's advertis-ing efforts with photos and videos of their campaigns.
5. **Internal Controls:** Our internal processes regarding billings and rate cards are incorporated into our Salesforce CRM tools that allow for management of rate integrity and stability within each of our markets and products. Each month, as applicable, we provide our inventory partners with a billing report from the prior month reflecting details on all advertising billings during the relevant time period.
6. **Removal Procedures:** Our standard policy relating to removal of dated materials is to first remove all time-sensitive copy per client requests. Generally, this is completed within 24-72 hours depending on the number of posters. However, with the intention of both avoiding environmental waste and ensuring that the product maintains its image of desirability, Vector tries to avoid unnecessarily replacing advertising copy that is in good form with filler copy. Further, Vector produces bus shelters on biodegradable PETG film using water-based, latex inks. When feasible, we always reuse posters. Upon end of use, any recyclable materials are disposed of following local guidelines. We also work with our printers to identify any products and options that are sustainable and environmentally friendly.
7. **Data Collection:** Vector Media does not retain data in connection with our digital products. Certain of our CMS providers, Broadsign and StreetMetrics, may retain such data or logs relating to when adver-tisements are played and where; however, this data is maintained by our providers and secured via internal controls to protect the data and prevent its loss, alteration or misuse. Vector does not sell any third-party data, and we do not collect any personal or personally identifiable information.
8. **Other LA OOH Inventory:** In the Los Angeles metropolitan area, Vector currently represents Big Blue Bus in Santa Monica and Culver City as well as all of the local double decker tour operators as the exclusive media sales partner.

SAMPLE ADVERTISING CONTRACT AND BILLING REPORTS

See Vol III: Attachments, Forms & Quotes

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9. PROPRIETARY INFORMATION ASSUMPTIONS

PROPRIETARY INFORMATION

- Given the unique partnership-first and agile strategic approach (defined as “Process IP”) presented herein—composed of process trade secrets or information for which disclosure would result in substantial injury to our competitive position. We request that all of Sections 4 and 6 be marked “Confidential”.

ASSUMPTIONS

- Power is provisioned and up to code at 1800 CSFP shelter locations.

REQUESTS

1. Experiential is allowable and day-use permit fees for experiential campaigns are waived throughout the duration of the contract period.
2. Permit process as articulated in Section 6: Phase 0.
3. Contractor retains the right to utilize subsurface and surface-level real estate to provide co-tenant revenue opportunities.
4. The quantity of digital screens / street furniture at High Value locations are allowable to maximize financial viability, with a specific request for up to 250 extra-large digital ad panels.
5. Add a stipulation for recovery of expected revenues in case the City exercises its Termination for Convenience clause.
6. 6 months planning should be added to the 10-year contract.
7. A contractor-financed model retains a contractor option for an additional 10 years; a jointly-financed model retains a contractor option for an additional 5 years.

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THANK YOU

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