

HISTORIC AND DESIGN REVIEW COMMISSION

March 21, 2018

HDRC CASE NO: 2018-093
COMMON NAME: IKE Smart City Kiosks - Multiple Locations
ADDRESS: 114 W COMMERCE ST
LEGAL DESCRIPTION: NCB 123 BLK LOT E 119.34 & W 84.58 OF TR-1
ZONING: D, HS
CITY COUNCIL DIST.: 1
DISTRICT: Main/Military Plaza Historic District
LANDMARK: Frost Bank Building
APPLICANT: Steve Jaffe/IKE Smart City
OWNER: City of San Antonio
TYPE OF WORK: Installation of Smart City Kiosks
APPLICATION RECEIVED: February 16, 2018
60-DAY REVIEW: April 17, 2018
REQUEST:

The applicant is requesting conceptual approval to install interactive kiosks in multiple locations throughout the City of San Antonio. The applicant has proposed 25 total locations throughout the city limits including locations at San Antonio International Airport, at public parks, near Mission Concepcion and Mission San Jose and various locations downtown.

APPLICABLE CITATIONS:

Sec. 35-640. - Public Property and Rights-of-Way.

- (a) Public Property. Generally, the historic and design review commission will consider applications for actions affecting the exterior of public properties except in the case of building interiors that are the sites of major public assemblies or public lobbies. The historic and design review commission will also consider applications for actions affecting public properties such as city parks, open spaces, plazas, parking lots, signs and appurtenances.
- (b) Public Rights-of-Way. Generally, the historic and design review commission will consider applications for actions affecting public rights-of-way whose construction or reconstruction exceeds in quality of design or materials standards of the design manual of the public works department.

Sec. 35-641. - Design Considerations for Historic and Design Review Commission Recommendations.

In reviewing an application, the historic and design review commission shall be aware of the importance of attempting to find a way to meet the current needs of the City of San Antonio, lessee or licensee of public property. The historic and design review commission shall also recognize the importance of recommending approval of plans that will be reasonable to implement. The best urban design standards possible can and should be employed with public property including buildings and facilities, parks and open spaces, and the public right-of-way. Design and construction on public property should employ such standards because the use of public monies for design and construction is a public trust. Public commitment to quality design should encourage better design by the private sector. Finally, using such design standards for public property improves the identity and the quality of life of the surrounding neighborhoods.

Sec. 35-642. - New Construction of Buildings and Facilities.

In considering whether to recommend approval or disapproval of a certificate, the historic and design review commission shall be guided by the following design considerations. These are not intended to restrict imagination, innovation or variety, but rather to assist in focusing on design principles, which can result in creative solutions that will enhance the city and its neighborhoods. Good and original design solutions that meet the individual requirements of a specific site or neighborhood are encouraged and welcomed.

- (a) Site and Setting.

(1) Building sites should be planned to take into consideration existing natural climatic and topographical features. The intrusive leveling of the site should be avoided. Climatic factors such as sun, wind, and temperature should become an integral part of the design to encourage design of site-specific facilities which reinforces the individual identity of a neighborhood and promotes energy efficient facilities.

(2) Special consideration should be given to maintain existing urban design characteristics, such as setbacks, building heights, streetscapes, pedestrian movement, and traffic flow. Building placement should enhance or create focal points and views. Continuity of scale and orientation shall be emphasized.

(3) Accessibility from streets should be designed to accommodate safe pedestrian movement as well as vehicular traffic. Where possible, parking areas should be screened from view from the public right-of-way by attractive fences, berms, plantings or other means.

(4) Historically significant aspects of the site shall be identified and if possible incorporated into the site design. Historic relationships between buildings, such as plazas or open spaces, boulevards or axial relationships should be maintained.

(b) Building Design.

(1) Buildings for the public should maintain the highest quality standards of design integrity. They should elicit a pride of ownership for all citizens. Public buildings should reflect the unique and diverse character of San Antonio and should be responsive to the time and place in which they were constructed.

(2) Buildings shall be in scale with their adjoining surroundings and shall be in harmonious conformance to the identifying quality and characteristics of the neighborhood. They shall be compatible in design, style and materials. Reproductions of styles and designs from a different time period are not encouraged, consistent with the secretary of the interior's standards. Major horizontal and vertical elements in adjoining sites should be respected.

(3) Materials shall be suitable to the type of building and design in which they are used. They shall be durable and easily maintained. Materials and designs at pedestrian level shall be at human scale, that is they shall be designed to be understood and appreciated by someone on foot. Materials should be selected that respect the historic character of the surrounding area in texture, size and color.

(4) Building components such as doors, windows, overhangs, awnings, roof shapes and decorative elements shall all be designed to contribute to the proportions and scale of their surrounding context. Established mass/void relationships shall be maintained. Patterns and rhythms in the streetscape shall be continued.

(5) Colors shall be harmonious with the surrounding environment, but should not be dull. Choice of color should reflect the local and regional character. Nearby historic colors shall be respected.

(6) Mechanical equipment or other utility hardware should be screened from public view with materials compatible with the building design. Where possible, rooftop mechanical equipment should be screened, even from above. Where feasible, overhead utilities should also be underground or attractively screened. Exterior lighting shall be an integral part of the design. Interior lighting shall be controlled so that the spillover lighting onto public walkways is not annoying to pedestrians.

(7) Signs which are out of keeping with the character of the environment in question should not be used. Excessive size and inappropriate placement on buildings results in visual clutter. Signs should be designed to relate harmoniously to exterior building materials and colors. Signs should express a simple clear message with wording kept to a minimum.

(8) Auxiliary design. The site should take into account the compatibility of landscaping, parking facilities, utility and service areas, walkways and appurtenances. These should be designed with the overall environment in mind and should be in visual keeping with related buildings, structures and places.

(c) Multiple Facades. In making recommendations affecting new buildings or structures which will have more than one

(1) important facade, such as those which will face two (2) streets or a street and the San Antonio River, the historic and design review commission shall consider the above visual compatibility standards with respect to each important facade.

FINDINGS:

- a. The applicant is requesting conceptual approval to install interactive kiosks in multiple locations throughout the City of San Antonio. The applicant has proposed 25 total locations throughout the city limits including locations at San Antonio International Airport at public parks, near Mission Concepcion and Mission San Jose and various locations downtown. Specific installation locations and details have not yet been developed and will be provided for consideration a future date.
- b. DESIGN REVIEW COMMITTEE – This request was reviewed by the Design Review Committee on March 13, 2018. At that meeting, committee members noted that the proposed scale was note a concerns, that face branding

was preferred over spine branding and asked questions regarding final design.

- c. **DESIGN** – The applicant has proposed three design variants; A, B, and C. Design variants A and B are to contain various detailing in both maroon and black colors. Design variant C is to feature stone cladding. The proposed kiosks are to feature COSA department logos, street names, IKE Smart City branding and a digital display board to feature various information and graphics including advertising. Of the materials provided for consideration, staff finds the use of stone cladding should be avoided for the downtown installations.
- d. **HEIGHT AND SCALE** – The proposed kiosks are to feature an overall height of approximately eight to ten feet, a width of approximately four feet and a thickness of approximately 16 inches. Staff finds that the proposed height is a departure from the height of typical furnishings found in the public right of way downtown. Staff finds that the overall height should be reduced to a scale that relates more to pedestrians.
- e. **DOWNTOWN LOCATIONS** – The proposed kiosks will be located within the public right of way at various locations including various downtown locations. Proposed downtown locations include Houston at N St Mary's, Houston at N Presa, Houston at the Riverwalk, Houston at Alamo, Losoya at Commerce, Commerce at the Riverwalk, Commerce at Main Plaza, Commerce at the Spanish Governor's Palace, Commerce at San Pedro Creek, Commerce at San Rosa, Commerce at Frio and Frio at Buena Vista. Kiosks will also be located at the Henry B Gonzales Convention Center.
- f. **MISSION LOCATIONS** – Kiosks have been proposed to be located at both Mission Concepcion and Mission San Jose. Staff finds that kiosks should not be located in a manner which are not seen immediately from the front of the Missions.
- g. **AIRPORT & PARK LOCATIONS** – Kiosks located at public parks are to be located and designed in a manner that does not impede on existing park uses or access.
- h. **ARCHAEOLOGY**- The development project shall comply with all federal, state, and local laws, rules, and regulations regarding archaeology.

RECOMMENDATION:

In general, staff recommends that the locations of the proposed kiosks balance the goals of this innovative program with maintaining the historic character and ambiance of Downtown Streets. In particular, visual impacts on Houston Street and other sensitive areas should be minimized. With approval of the kiosk design and preliminary locations by HDRC, staff will review each individual installation for impacts to historic resources.

Staff recommends that kiosk #5 be reconsidered to avoid impacts to nearby historic resources on Houston Street, that kiosk #8 be relocated away from the Houston Street Bridge, and that kiosk #9 be relocated outside of Alamo Plaza.

Staff also recommends that the following conditions apply to all installations:

- i. That every effort be made to minimize visual impacts from the River Walk or river right-of-way.
- ii. That no individual installation damage or obscure historic fabric such as bridges, unique sidewalk features, or architectural elements.
- iii. That no individual installation detract from the primary entrance of view to a significant historic building or resource.
- iv. That a clear pedestrian path of 72" be maintained around each installation. Instances where this cannot be met should be coordinated with the Disability Access Office.
- v. That the use of stone be eliminated from the proposed kiosks and that their height be reduced to no more than seven feet.
- vi. **ARCHAEOLOGY**- The development project shall comply with all federal, state, and local laws, rules, and regulations regarding archaeology.
- vii. That all locations make every attempt to group closely with existing street amenities and furnishings such as B Cycle stations.

Staff will also incorporate any additional stipulations or recommendation by the HDRC in these reviews.

CASE MANAGER:

Edward Hall



CITY OF SAN ANTONIO
**OFFICE OF HISTORIC
PRESERVATION**

**Historic and Design Review Commission
Design Review Committee
Report & Recommendation**

DATE: 3-13-2018 HDRC Case# 2018 - 093

ADDRESS: IKE SMART CITY KIOSKS (25) Meeting Location: TORIN ROOM

APPLICANT: HANNAH SANTIAGO (IKE) Steve Jaffe (IKE) Stefanie Dexter (IKE)
CRAT6 HOPKINS (CIO)

DRC Members present: FISH, GARZA, GUARINO

Staff present: HUY PHAM

Others present: _____

REQUEST: INSTALL MULTIPLE INTERACTIVE KIOSKS THROUGHOUT
THE CITY OF SAN ANTONIO.

COMMENTS/CONCERNS: APPLICANT PRESENTED (2) DESIGN OPTIONS
AND THE SOURCE OF THEIR SMART-CITY INSPIRATIONS

- CONCEPTUAL BETWEEN OPTION 1 or 2. (information accessibility)

- FISH: SCALE IS NOT CONCERN, WHAT IS THE EXTENT OF
"VARIABILITY?", FINALIZED LOCATIONS IN FINAL APPROVAL
- PREFERS OPTION 1, HOW DOES IT MEET GROUND?
12-inch deep concrete footing, ADA - "protruding object"

- GARZA - IMPARTIAL TO 1 or 2, RED COLOR TO BE REVISIT

COMMITTEE RECOMMENDATION: ☐ APPROVE ☐ DISAPPROVE ☐
APPROVE WITH COMMENTS/STIPULATIONS:

Committee Chair Signature (or representative)

3/13/18

Date

FISH - BOTTOM-HALF BRANDING CAN LOOK LIKE THRESHOLD

GUARIMO - PREFERENCES FACE BRANDING OVER SPINE

FISH - NARROW OPTIONS BY MEETING
(JUST 1)



CITY OF SAN ANTONIO - Office of Innovation
HDRC APPLICATION – Support Materials

February 16, 2018



Table of Contents

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- II. IKE Applications, Features & Functionality
- III. Custom Design Variables & Current Design Renderings (Options A – C)
- IV. Specifications of Materials Used
- V. Signage Mock-Up
- VI. Current Site Nodes (in lieu of detailed site plan)
- VII. Kiosk Design Cut Sheets with Foundation & Paint Finish Detail

IKE Smart City - Overview

IKE (Interactive Kiosk Experience), is a seamless, best-in-class hardware and software communication system that connects cities with people through interactive, vivid touchscreens, an ever-expanding suite of applications, and a dynamically engaging interface.

IKE's open platform, customizable software, and multi-tenant content management system will provide maximum flexibility to the City of San Antonio, serving as one integrated informational hub for city services and communications now and in the future.

IKE will support the City of San Antonio's economic development and placemaking goals by encouraging exploration and discovery of local businesses, while improving mobility with multi-modal wayfinding and real-time public transit schedules.

Additionally, IKE serves the needs of all communities equally by improving connectivity and accessibility in under-served areas through free Wi-Fi, increased cellular coverage, as well as access to valuable social services such as homeless shelter availabilities, food support, and job opportunities.

The Interactive Smart City Kiosk

Applications

EAT & DRINK

Drives traffic to area businesses with detailed listings of restaurants and other dining establishments

SHOP

Encourages a thriving economy with detailed listings of area retail shops and centers

PLAY

Creates a vibrant and energetic city with detailed listings of activities and attractions

STAY

Makes it easy to visit by providing detailed listings of hotels, motels, and other lodging

GET AROUND

Provides wayfinding and real time schedules for multi-modal transportation options

SOCIAL SERVICES

Supports the underserved with detailed listings of tools and resources

CIVIC RESOURCES

Makes it easy to get important things done with detailed listings of city, state and federal resources

EVENTS

Highlights things to do and opportunities to be a part of the community

POSTERS

Communicates, promotes and displays customized City content

PHOTO BOOTH

Allows pedestrians to pose for customized photo postcards

ARCADE

Engages pedestrians with an easy to use gaming experience

Features & Functionality

ESSENTIAL & EMERGENCY COMMUNICATIONS

Deploys emergency messages and critical updates from governmental authorities

INCREASED WI-FI & CELLULAR FUNCTIONALITY

Encourages a thriving economy with detailed listings of area retail shops and centers

CUSTOMIZABLE HARDWARE DESIGN

Complements the unique aesthetic and surrounding landscape of the City

CONTENT INTEGRATION & LIVE UPDATES

Uses existing CMS and APIs to integrate with IoT feeds

CUSTOMIZABLE CONTENT

Accepts new and customized content and applications

MOBILE & WEB EXTENSIONS

Extends the IKE experience to Web and social platforms

DATA & ANALYTICS

Provides valuable IKE usage data through a readily available Analytics Dashboard

SURVEY SAYS

Allows the public to share opinions with city leadership

PEDESTRIAN COUNTER

Captures traffic counts and patterns

AIR QUALITY MONITOR

Monitors pollution and make the air safer to breathe

ADA COMPLIANT

Provides access to all with the touch of a button

MULTI-LINGUAL

Communicates with a diverse population easily and effectively



Design Goals

All IKE's will be designed and produced in accordance with the unique requirements of City of San Antonio Historic Design and Review Commission standards.

Ultimately, the IKE platform is a kit of parts containing the best in class hardware and software, but the design and architecture of the kiosks can be customized to meet the design goals of HRDC.

Materials, colors and lighting can all be modified to maintain a cohesive appearance.

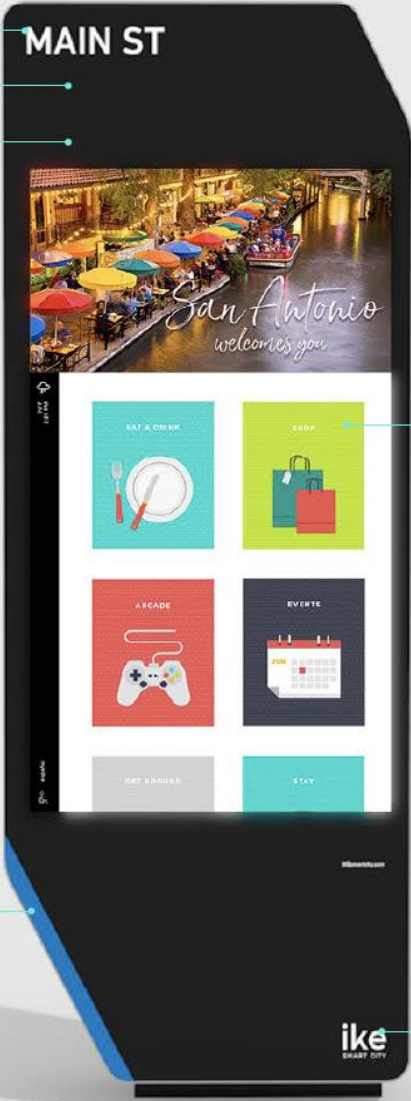
Following will demonstrate the various elements of customization along with three design paths currently under exploration with City of San Antonio Office of Innovation. Our goal is to deliver an aesthetic that enhances the beautiful streetscapes of the City of San Antonio and works in accord with HRDC standards.

Design Customization Variables

Street name and font

Exterior color

Material and finish



Two options for interface design

Kinetic lighting color

Size, color, and location of IKE and City branding elements

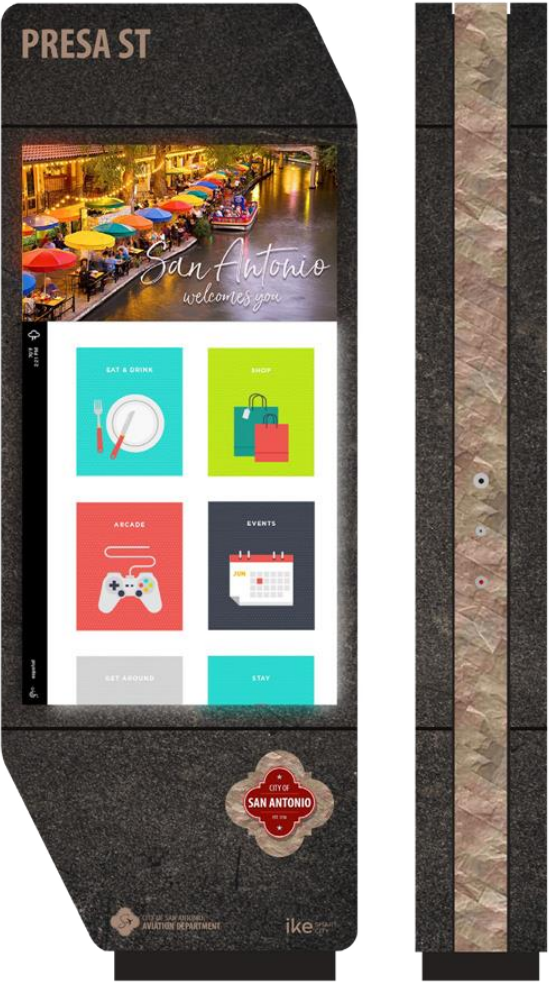


Exterior spine color

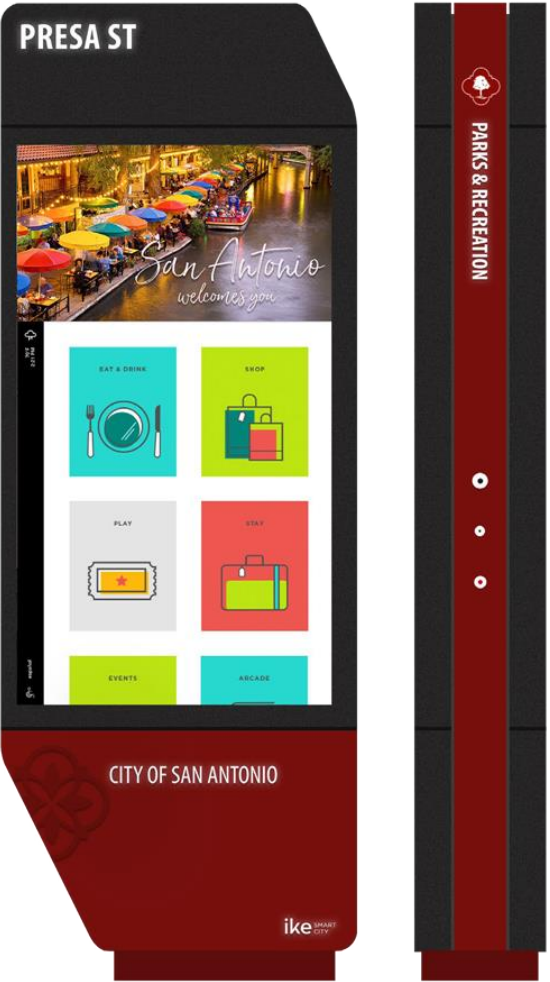
Exterior spine material and finish

Optional Emergency Call button

Design Options – Group A



A1

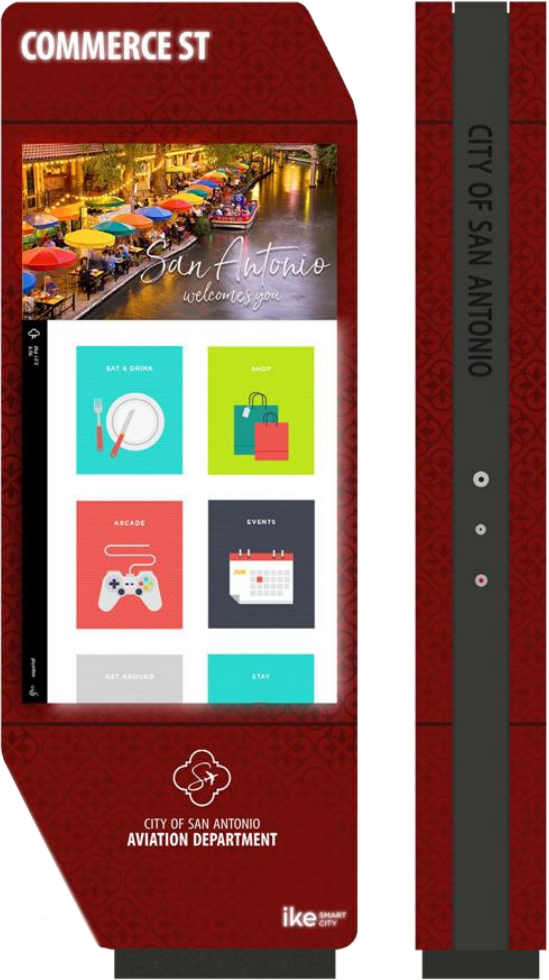


A2

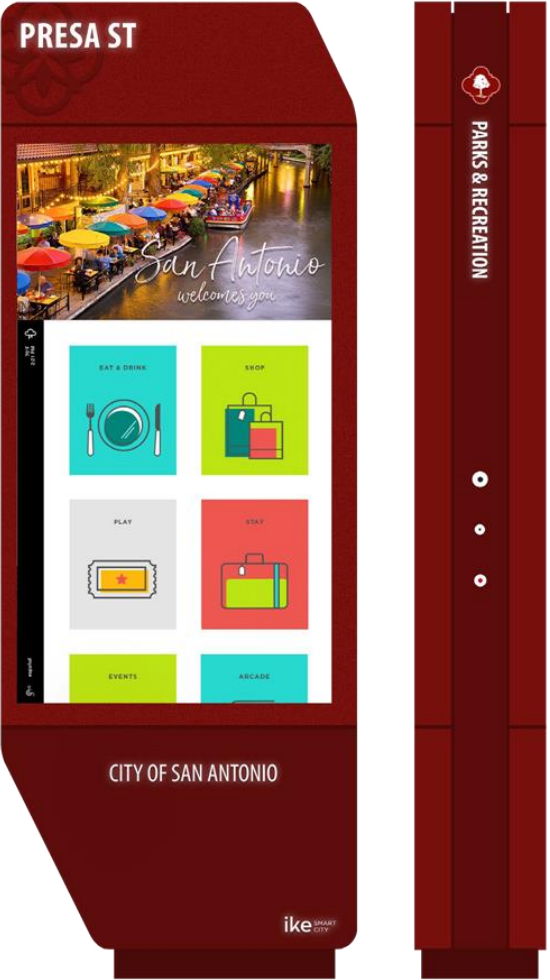


A3

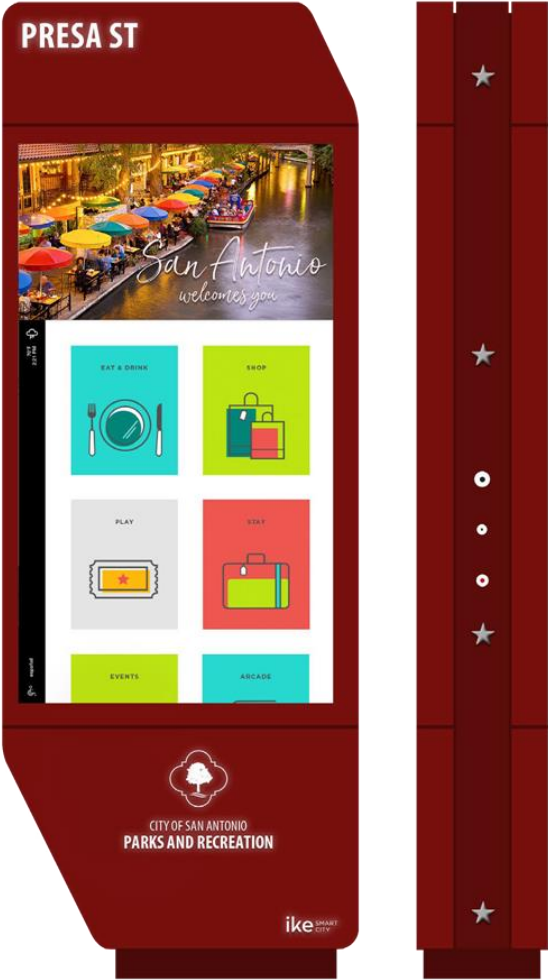
Design Options – Group B



B1

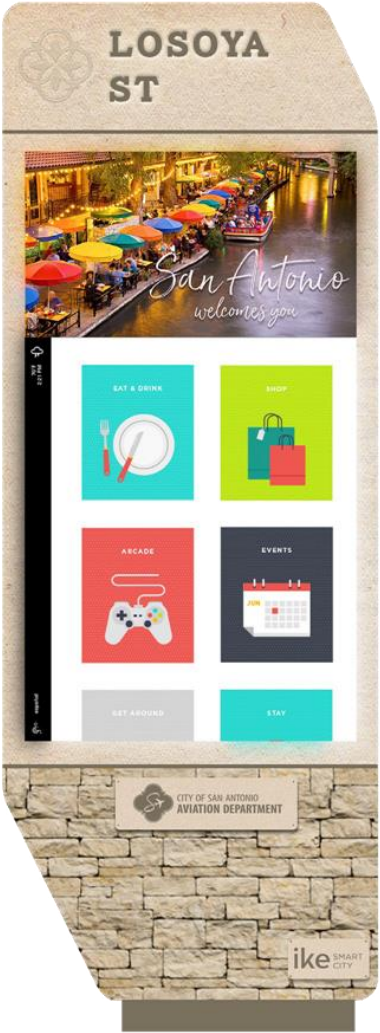


B2

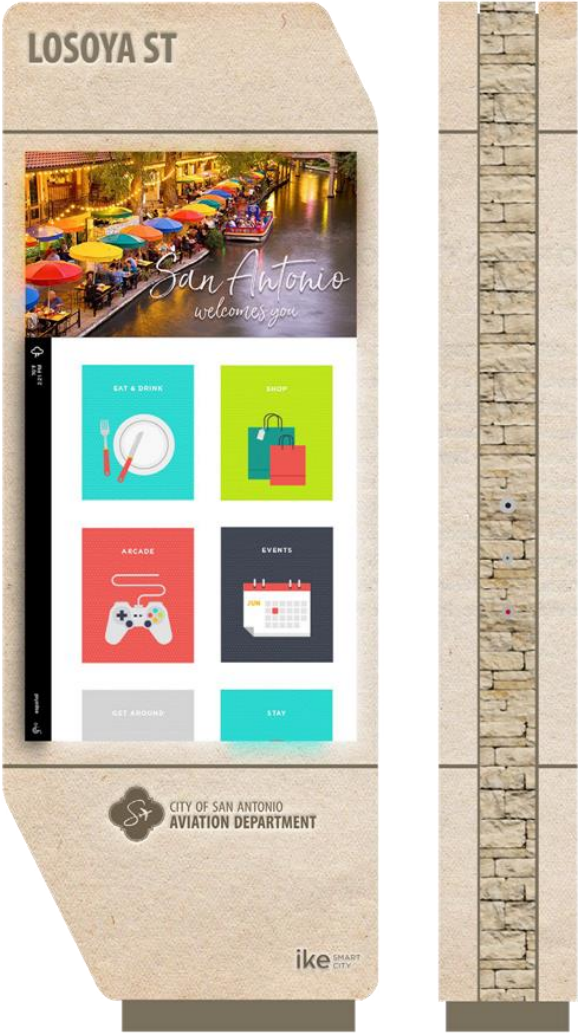


B3

Design Options – Group C



C1



C2



C3

IKE Smart City – Specifications of Materials Used

All IKE hardware is resilient for the duration of the contract and under warranty. Should any equipment or parts require service, maintenance or repair there will be no expense to the City of San Antonio.

Recycled Content & Materials

Approximately 25% aluminum pre-consumer, 1-5% post-consumer grade dependent. Approximately 34% copper tubing and wire post-consumer. Materials include aluminum, copper, glass and plastic.

Energy Consumption During Production

Approximately 20% of all energy used in the manufacturing process and 10% of all energy during use of the product come from renewable sources.

Energy Efficiency

25% of efficiency for all similar products as designated by the U.S. Department of Energy's Federal Energy Management Program (note, no standard exists for this specific product). All efforts have been made to reduce energy consumption in all manufacturing and use applications.

Low VOCs

All coatings used in the production process are a low to zero VOC paint.

Reduced Packaging

98% of all packaging will be reused during and after delivery of product.

End of Life Management

IKE Smart City LLC will accept the product back at the end-of-life including removal and transportation.



IKE Smart City – Signage

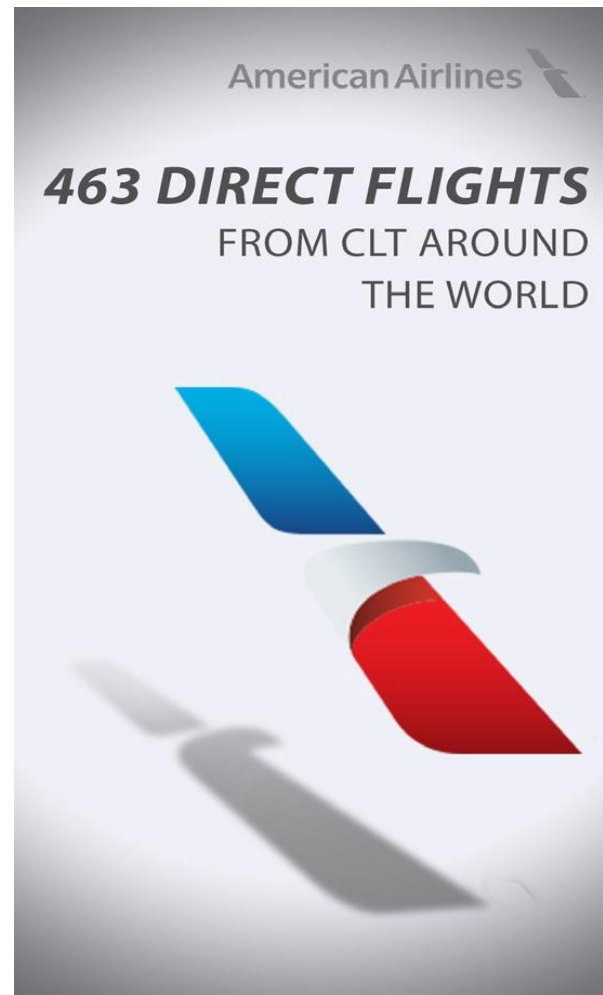
Modes of Operation

IKE has two modes of operation, allowing for an engaging mix of both interactive and commercial content.

PASSIVE MODE (ATTRACT LOOP)

This is the default mode when a pedestrian has not engaged IKE's interactive features. During the Attract Loop, the entire screen is occupied by a 9:16 (portrait) layout showing an "ad loop" that features a combination of city, community, arts, and commercial messaging.

Once a pedestrian engages IKE by touching the screen, it shifts to Engaged Mode and the ad loop is resized to a 16:9 landscape layout at the top of the screen.



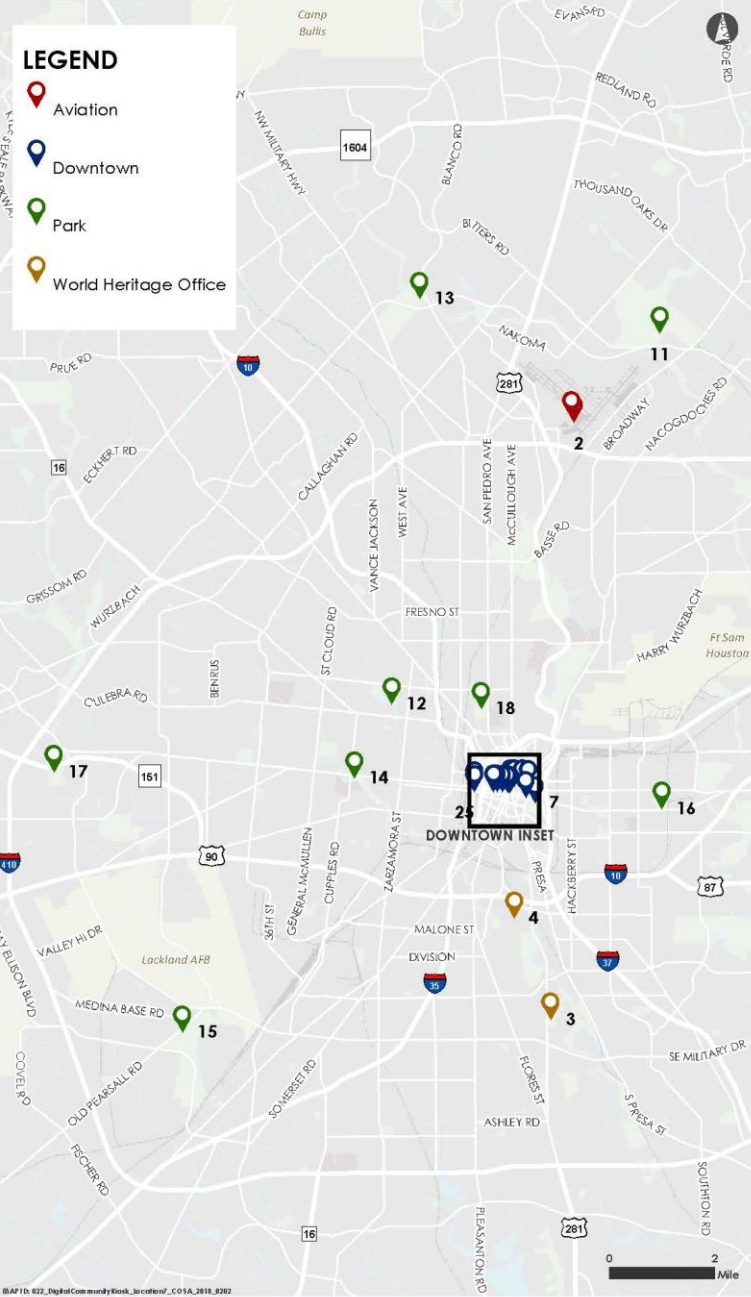
ENGAGED MODE (DASHBOARD)

When the interactive user experience is launched, IKE shifts to Engaged Mode and the application dashboard home screen that begins every interactive IKE experience is displayed on the bottom two-thirds of the screen.

When IKE is engaged, a user can scroll through the applications with swiping gestures immediately familiar to any user of a smartphone. A simple touch to any of the dashboard tiles launches relevant content and provides additional interactivity within the selected application.

DIGITAL COMMUNITY KIOSKS - CITY OF SAN ANTONIO ONLY

Potential Kiosk Nodes
Version 7



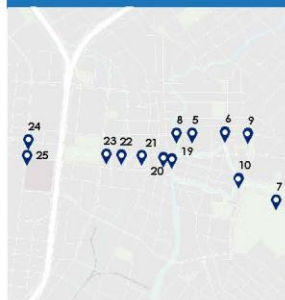
COSA Locations

1. San Antonio International Airport
2. San Antonio International Airport
3. Mission San Jose
4. Mission Concepción
5. Houston St. & N. St. Mary's St.
6. Houston St. & N. Presa St.
7. Henry B. Gonzalez Convention Ctr.
8. Houston Street & Riverwalk
9. Houston Street & Alamo Street
10. Losoya St. & Commerce St.
11. McAllister Park
12. Woodlawn Lake Park
13. Phil Hardberger Park
14. Elmendorf Park
15. Pearsall Park
16. Lincoln Park
17. Tom Slick Park
18. San Pedro Springs Park

COSA Street Projects

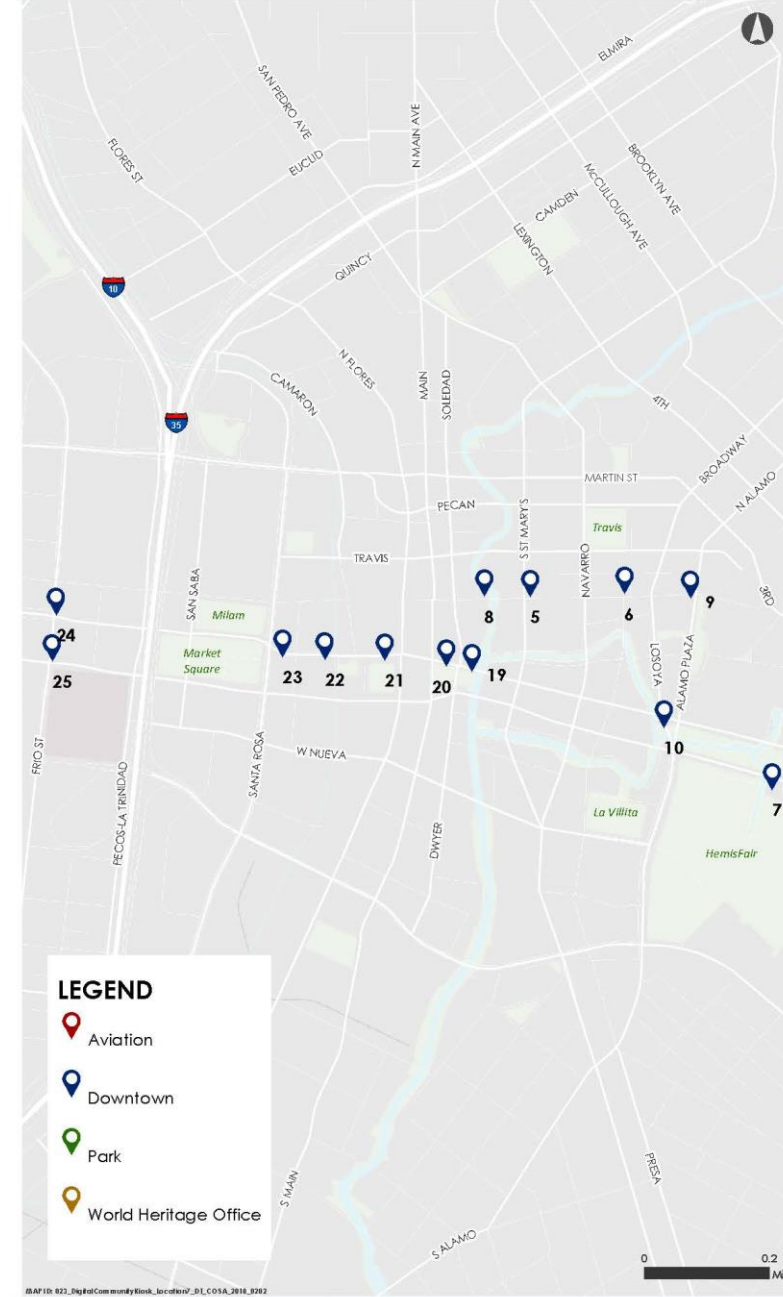
19. Commerce St. & San Antonio River
20. Commerce St. & Main Plaza
21. Commerce St. & Spanish Governor's Palace
22. Commerce St. & San Pedro Creek
23. Commerce St. & Santa Rosa
24. Frio St. & W. Commerce St.
25. Frio St. & Buena Vista St.

DOWNTOWN DETAIL



DIGITAL COMMUNITY KIOSKS - CITY OF SAN ANTONIO ONLY

Downtown Detail
Potential Kiosk Nodes
Version 7



COSA Locations

1. San Antonio International Airport
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24. Frio St. & W. Commerce St.
25. Frio St. & Buena Vista St.

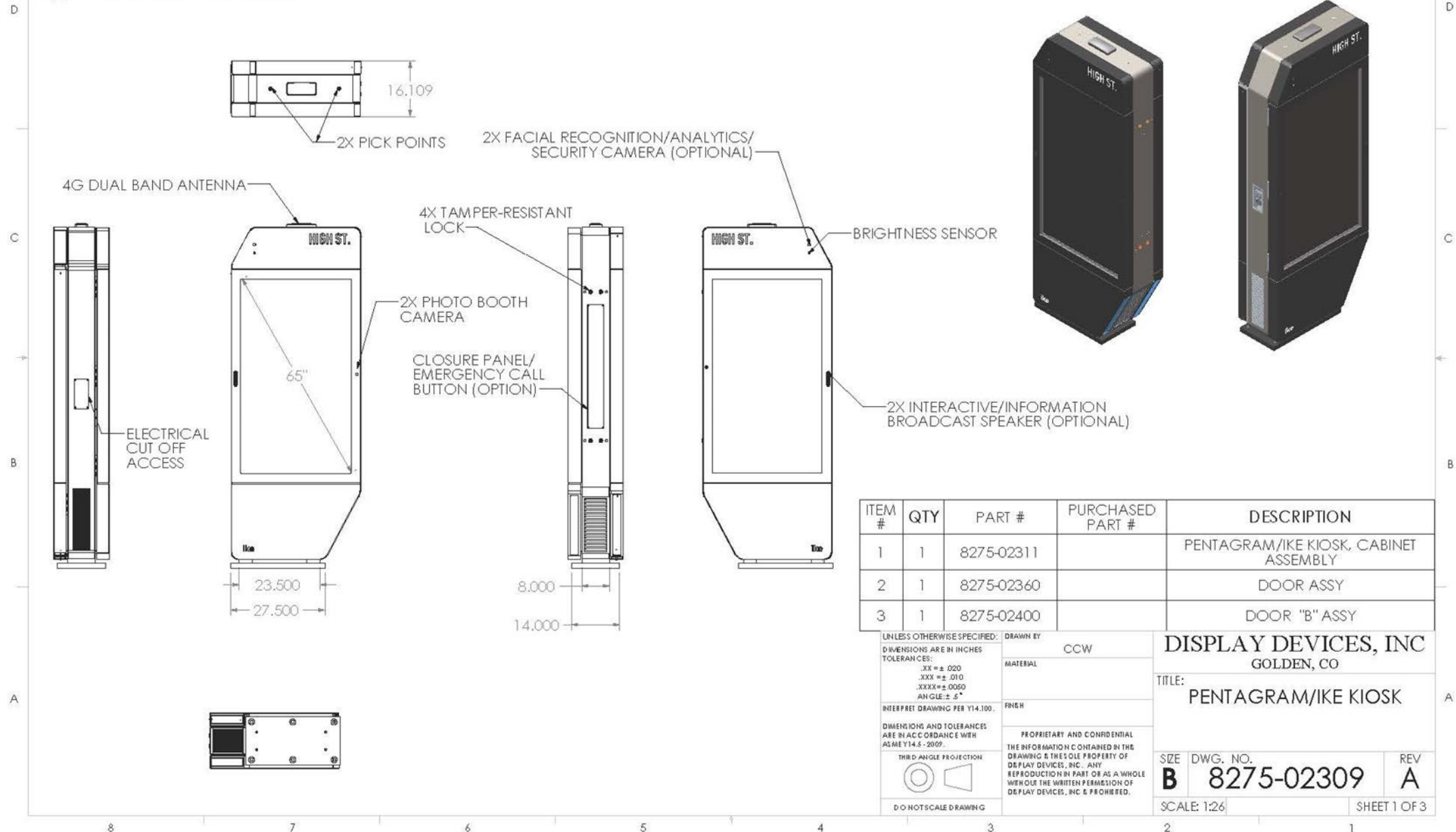
OVERVIEW MAP




NOTES:

1. DEBUR ALL SHARP EDGES.
2. ALL THREADS TO BE FREE OF POWDER COAT AND, OR PAINT.
3. Δ INDICATES CHANGE AT LAST REVISION

REVISIONS			
REV.	DESCRIPTION	DRAWN BY	DATE
A	INITIAL RELEASE	CCW	12/26/2017



ITEM #	QTY	PART #	PURCHASED PART #	DESCRIPTION
1	1	8275-02311		PENTAGRAM/IKE KIOSK, CABINET ASSEMBLY
2	1	8275-02360		DOOR ASSY
3	1	8275-02400		DOOR "B" ASSY

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: .XX = ± .020 .XXX = ± .010 .XXXX = ± .0050 ANGLE ± .5° INTERPRET DRAWING PER Y14.100. DIMENSIONS AND TOLERANCES ARE IN ACCORDANCE WITH ASME Y14.5 - 2009.		DRAWN BY CCW	
THIRD ANGLE PROJECTION 		MATERIAL	
DOWNSCALE DRAWING		FINISH	
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF DISPLAY DEVICES, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF DISPLAY DEVICES, INC. IS PROHIBITED.			

DISPLAY DEVICES, INC
GOLDEN, CO

TITLE:
PENTAGRAM/IKE KIOSK

SIZE	DWG. NO.	REV
B	8275-02309	A
SCALE: 1:26		SHEET 1 OF 3

8

7

6

5

4

3

2

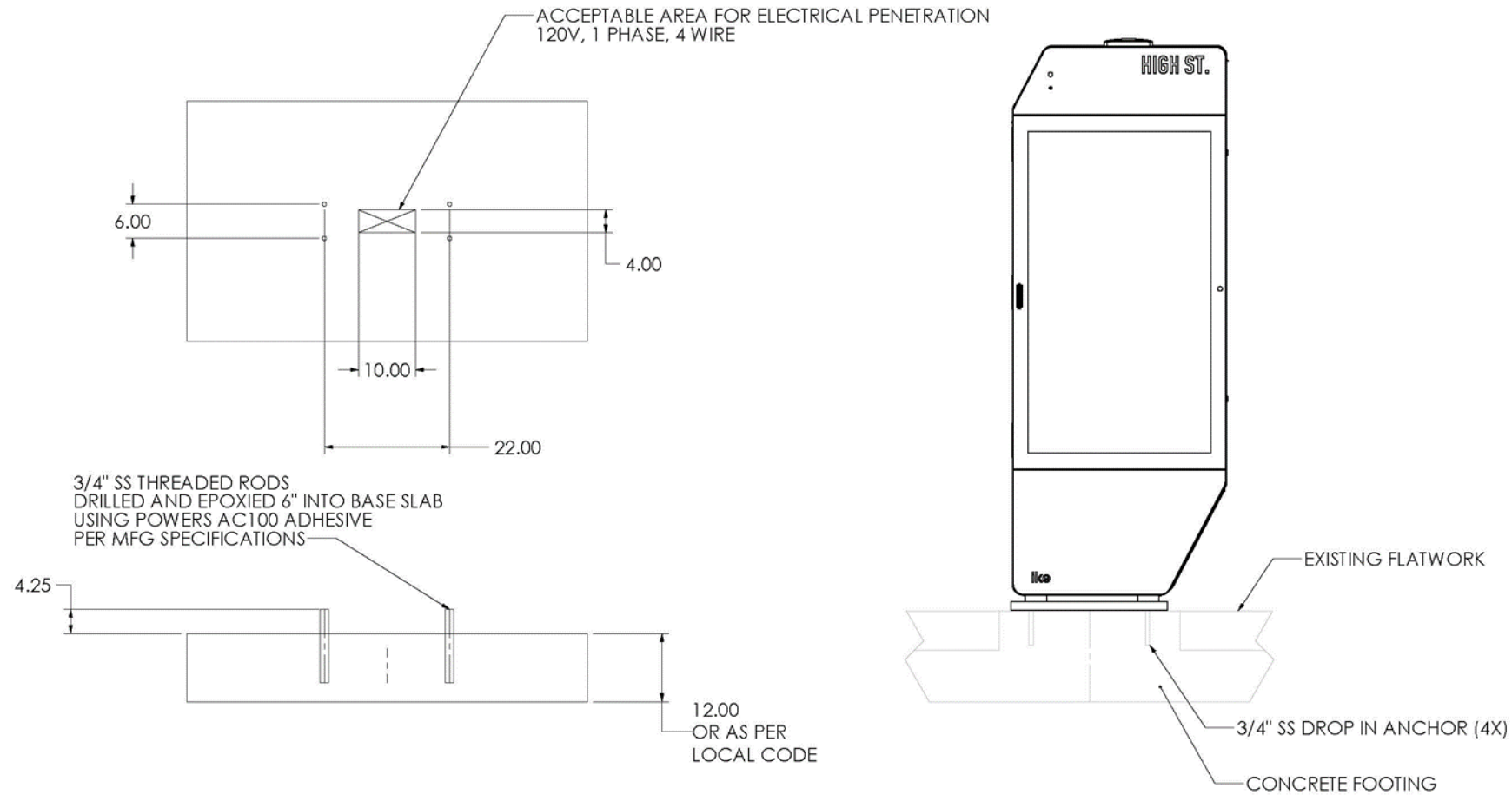
1

D

C

B

A



FOUNDATION DETAIL

NOTE:
THIS DRAWING WAS PREPARED FOR PRELIMINARY ESTIMATING AND CONCEPTUAL PURPOSES ONLY.
ALL INFORMATION IS BELIEVED TO BE TRUE AND ACCURATE; HOWEVER, DDI ASSUMES NO RESPONSIBILITY
FOR THE USE OF THIS DESIGN FOR ACTUAL CONSTRUCTION. DETERMINATION OF THE SUITABILITY OF THE
DESIGN IS THE SOLE RESPONSIBILITY OF THE INSTALLER. FINAL DESIGNS FOR CONSTRUCTION PURPOSES
MUST BE PERFORMED BY A LICENSED PROFESSIONAL ENGINEER, USING THE ACTUAL CONDITIONS OF THE SITE.

SIZE	DWG. NO.	REV
B	8275-02309	A
SCALE: 1:20	SHEET 2 OF 3	

8

7

6

5

4

3

2

1



**SHERWIN
WILLIAMS.**

Product Finishes

CC-D31

POLANE® 8890 Polyurethane Enamel

High Gloss White Base.....F63W100
Low Gloss White Base.....F63W102
High Gloss Jet Black.....F63B104

High Gloss Clear Base.....F63C101
Low Gloss Clear Base.....F63T103
Low Gloss Black.....F63B105

High Gloss Custom Blend.....F63ZX Series
Low Gloss Custom Blend.....F63LG Series
Catalyst.....V66V55

DESCRIPTION	CHARACTERISTICS	APPLICATION <small>Typical Setups</small>
<p>POLANE® 8890 Polyurethane Enamel is a two component, aliphatic acrylic topcoat with fast dry and flexible application characteristics.</p> <p>Advantages:</p> <ul style="list-style-type: none">• Available in a full gloss range• Available in a broad range of colors• Quick tack free time• High abrasion resistance• Chemically resistant• Less than 3.5 VOC* as applied• Good performance over multiple substrates including steel, aluminum, ABS, PC-ABS, PVC and Polycarbonate• Compatible with a wide range of primers including E61AC133 E61A280 and E61A510 <p>Air Quality Data (Theoretical):</p> <ul style="list-style-type: none">• Non-photochemically reactive• Volatile Organic Compounds (VOC) as packaged, maximum, less exempt solvents 3.5 lb/gal, 420 g/L• Catalyzed and reduced as listed: 3.5 lb/gal, 420 g/L <p>An Environmental Data Sheet is available from your local Sherwin-Williams facility or at www.paintdocs.com.</p> <p>*VOC compliance limits vary from state to state; please consult local Air Quality rules and regulations.</p>	<p>Gloss: 15-90 units (60°)</p> <p>Volume Solids: 52 ± 2%</p> <p>Viscosity: Catalyzed and reduced, varies by color High Gloss 12 - 16 sec #3 Zahn Low Gloss 25 - 40 sec #3 Zahn</p> <p>Recommended film thickness: Mils Wet 2.9 - 3.8 Mils Dry 1.5 - 2.0</p> <p>Mixing Ratio (High Gloss) F63ZX: 5 parts Polane® 8890 1 part Catalyst V66V55 0.25 Parts (max) V6V768 Accelerator (7 oz max per gal) 0.6 parts recommended reducer</p> <p>Mixing Ratio (Low Gloss) F63LG: 6 parts Polane® 8890 1 part Catalyst V66V55 0.15 Parts (max) V6V768 Accelerator (3.5 oz max per gal) 0.7 parts recommended reducer</p> <p>Pot Life: 2 hours (mixed as listed)</p> <p>Spreading Rate (no application loss) 830-850 sq ft/gal @ 1.0 mils DFT</p> <p>Drying (1.5 mils DFT 77°F, 50% RH): To Touch: 20 minutes Tack Free: 2 hours Dry to Handle: 4-8 hours To recoat: No critical recoat Force Dry: 30 minutes at 180°F <small>Dry times shown are with the listed mix ratios</small></p> <p>Flash Point: 85 - 92°F Pensky-Mar tens Closed Cup</p> <p>Package Life: Polane® 8890 2 years, unopened V66V55 1 year unopened</p>	<p>Reduction: Reduce as listed below. Maximum total reduction is 10% by volume to maintain 3.5 lb/gal VOC.**</p> <p>Airless Spray: Pressure..... 1200-2600 psi Tip011 - .013" Reduction Rate..... 5-10% R2K5 or R6K30</p> <p>Air Assisted Airless Spray: Atomizing Air 25 psi Fluid Pressure..... 1800 psi Tip011 - .013" Reduction Rate..... 5-10% R2K5 or R6K30</p> <p>Conventional Spray: Air Pressure 50-60 psi Fluid Pressure 5-10 psi Reduction Rate... 5-10% R6K18 or R6K30</p> <p>HVLP: Air Pressure at the cap 7-10 psi Fluid Pressure 7-10 psi Reduction Rate... 5-10% R6K18 or R6K30</p> <p>**Polane® reducers may also be used.</p> <p>Cleanup: Clean tools/equipment immediately after use with R6K18 (Butyl Acetate), R6K30 (MAK) or Polane® Reducers</p> <p>Follow manufacturer's safety recommendations when using any solvent.</p>

SPECIFICATIONS	SPECIFICATIONS	CAUTIONS
<p>General: Substrate should be free of grease, oil, dirt, fingerprints, drawing compounds, any contamination, and surface passivation treatments to ensure optimum adhesion and coating performance properties. Consult Metal Preparation Brochure CC-T1 for additional details.</p> <p>Steel: Remove rust, mill scale, and oxidation products. For best results, treat the surface with a proprietary surface chemical treatment of zinc or iron phosphate.</p> <p>Aluminum (untreated): Prime with Industrial Wash Primer, P60G2, RoHS Compliant Wash Primer, P60G10, or Kem Aqua® Wash Primer, E61G522.</p> <p>Galvanized Steel (untreated): Prime with Industrial Wash Primer, P60G2, RoHS Compliant Wash Primer, P60G10, or Kem Aqua® Wash Primer, E61G522.</p> <p>Plastic: Due to the diverse nature of plastic substrates, a coating or coating system must be tested for acceptable adhesion to the substrate prior to use in production. Reground and recycled plastics along with various fire retardants, flowing agents, mold release agents, and foaming/blowing agents will affect coating adhesion. A filler or primer/barrier coat may be required. Please consult your Sherwin-Williams Product Finishes Sales Representative for system recommendations.</p> <p>Testing: The information, data, and recommendations set forth in this Product Data Sheet are based upon test results believed to be reliable. However, due to the wide variety of substrates, substrate properties, surface preparation methods, equipment and tools, application methods, and environments, the customer should test the complete system for adhesion, compatibility and performance prior to full scale application.</p> <p>All trademarks are the property of their respective owners</p>	<p>Product Limitations:</p> <ul style="list-style-type: none"> • Polane® 8890 coatings must be catalyzed. Do not vary catalyst ratio. The catalyst ratio has been established for optimum hardness, flexibility, gloss, chemical and solvent resistance. Slight over or under catalyzation will not seriously affect performance. • V66VC232 catalyst may be used in place of V66V55. The mixing ratios must be strictly maintained as 3.7:1 for high gloss and 4.5:1 for low gloss. Both have a 5% solvent reduction. • Do not blend with any other polyurethane. No other catalysts or reducers are recommended because foreign materials such as alcohols and glycols destroy performance properties. Lacquer thinners and alcohol containing solvent blends should not be used with Polane® enamels. • Polane® coatings are not recommended for exterior use on wood. • Do not spray hot, heat shortens pot life. Do not pump catalyzed material from drums into circulating systems. Friction heat developed by pumps and circulation will shorten potlife. • Protect Polane® enamels, catalyst and reducer from moisture as water affects pot life and properties. Store indoors. • Do not package Polane® coated products in airtight plastic bags unless completely cured. Since Polane® Enamels continue to cure for several weeks, the buildup of organic solvents and reaction by-product could cause improper cure and adhesion failure in use. • Blend with Phoenix® Colorants only. Do not exceed the maximum tint load of 24 ounces per gallon for Clear or 14 ounces per gallon for White • Do not exceed the recommended amount of V6V768 per sprayable gallon of paint • Clean application equipment thoroughly before and after use <p>Performance Tests</p> <p>Bonderite® 1000 steel panels, F63W100 catalyzed 5:1 with V66V55, Reduced 10% with R6K18, 1.5 mils DFT, 14 days air cured</p> <p>Impact Resistance, Direct.....60 in lb Impact Resistance, Indirect.....40 in lb Pencil Hardness.....F-2H* <small>*Pencil Hardness may vary depending on dry film thickness, substrate and tester</small></p> <p>Taber abrasion.....less than 100mg 1000g, 1000 cy, CS-17</p> <p>Conical Mandrel.....Pass Water Immersion.....24 hours Adhesion.....5B QUV-A.....1000 hours Salt spray.....(on Bonderite®).....300 hours Salt spray.....(on Bonderite® and primed).....1200 hours Heat resistance, Dry.....300°</p>	<p>FOR INDUSTRIAL SHOP APPLICATION ONLY</p> <p>Thoroughly review product label and Safety Data Sheet (SDS) for safety information and cautions prior to using this product.</p> <p>To obtain the most current version of the Environmental Data Sheet (EDS), Product Data Sheet (PDS), or Safety Data Sheet (SDS) please visit your local Sherwin-Williams facility or www.paintdocs.com.</p> <p>Please direct any questions or comments to your local Sherwin-Williams facility.</p> <p>Note: All purchases of products from Sherwin-Williams are exclusively subject to Sherwin-Williams' terms and conditions of sale which can be found at www.sherwin.com. Please review these terms and conditions prior to the purchase of the products.</p> <p>Sherwin-Williams warrants the product to be free of manufacturing defect in accordance with Sherwin-Williams' quality control procedures. Except for the preceding sentence, due to factors that are outside of Sherwin-Williams' control, including substrate selection, and customer handling, preparation, and application, Sherwin-Williams cannot make any other warranties related to the product or the performance of the product.</p> <p>SHERWIN-WILLIAMS DISCLAIMS ALL WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY, THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.</p> <p>Liability for products proven to be defectively manufactured will be limited solely to replacement of the defective product or the refund of the purchase price paid for the defective product, as determined by Sherwin-Williams. 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Thank You



Steve Jaffe
Community Manager
C: 702-499-7082
E: sjaffe@IkeSmartCity.com