

TRAIL SIGNAGE GUIDELINES

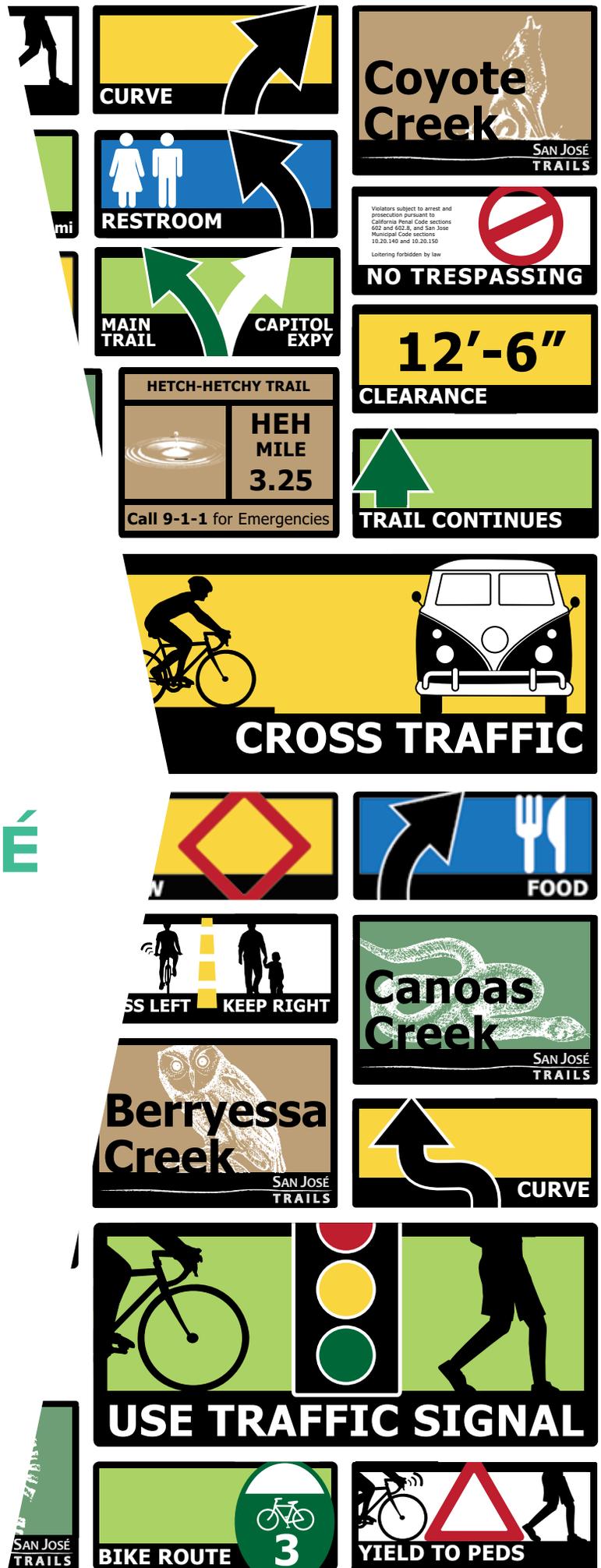
CITY OF SAN JOSÉ TRAIL PROGRAM

Revised
December 22, 2017

SAN JOSE
PARKS, RECREATION &
NEIGHBORHOOD SERVICES



in collaboration with
CALLANDER ASSOCIATES



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Under the direction of:
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I. Introduction

The purpose of this document is to provide the required tools for trail planners, designers, and contractors to deploy a cohesive trail signage program throughout the City of San José's Trail Network.

The City seeks to develop a 100-mile Trail Network across 40 trail systems. At this time, 60 miles are developed and 85% are paved.

Throughout the development of the Trail Network, the City has consistently used best practices to support safer usage. Supporting this effort is the development of a comprehensive trail signage library with signs for common needs: regulatory, guidance, warning and custom messages such as wayfinding or points of interest. In addition, mileage markers track distances traveled and provide 911 operators the ability to quickly locate and dispatch assistance to trail users. A unique and consistent design approach will reinforce that the trails are within San José.

Appendices offer background on the project's development.



Definitions

Before moving forward, it is important to understand the differences between trail signage and milestone markers. Together these form the trail signage program but each is unique in purpose.

Trail Signs

A collection of signs are generally categorized as guidance, regulatory, or warning. **Guidance signs** identify the trail by name, provide wayfinding or directional information, and identify locations of destinations and amenities. **Regulatory signs** provide the rules and regulations as well as good behavior direction. **Warning signs** are very similar to traffic signs in that they alert users to changes in the trail such as curves, narrowing, cross traffic, steep grades, and areas of potential high water. This document provides a framework and the standards for customization of signs to fit site specific requirements. All signage developed for San José was influenced by existing guidelines, such as the California Highway Design Manual and the MUTCD (Manual of Uniform Traffic Control Devices). The document permits and guides development of custom signs for unforeseen needs.

Milestone Markers

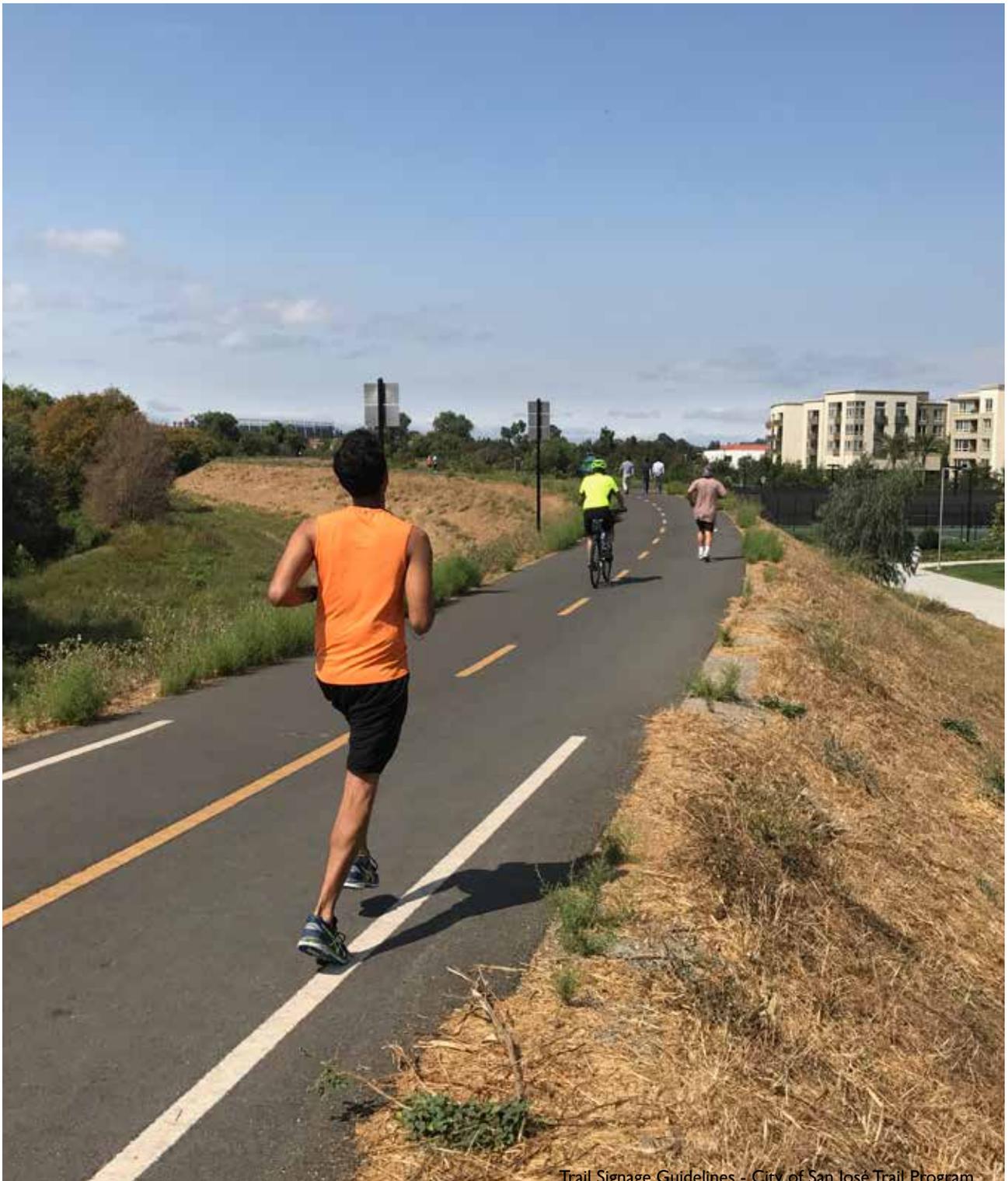
Milestone markers are special signs with locational information that provide recreation benefits and enhance safety. Recreationally, users can utilize the sequentially-numbered signs to track distances traveled on their run, walk, bike or horseback ride. For safety, that same numbering system is utilized by the 911 Call Center to better locate trail users in need of assistance and to provide details on access routes to the emergency responders. This information will improve response time because the precise location of the markers will be available to the 911 call center.



How to Use This Document

For ease of use, this guideline has been separated into three distinct chapters:

1. **Trail Signs**
2. **Milestone Markers**
3. **Appendices**



2. Trail Signs

Introduction

At full build-out, San José will have 40 unique and interconnected trail systems forming one of the nation's largest Trail Networks.

The family of signs presented by the guidelines offer a related and unified graphic appearance and help convey data clearly. Development of the signs focused on clarity with simple graphics. Sign messages convey only one direction or instruction for readability and comprehension. And when appropriate, signs include humor or whimsy to engage trail users and reinforce the fun aspects of trails and the Department's tag line, "Building Community Through Fun".

The Department of Parks, Recreation and Neighborhood Services (PRNS Trail Manager) has digital files for all signage to support new or replacement installation.

Chapter At-A-Glance

- Trail Sign Index

- Trail Sign Details

- Individual Trail Name Signs

- Matrix of Trail Systems, Icons, and Colors

- Trail Name Sign Details



Trail Sign Index

This index lists each standard trail sign with its alphanumeric sign code, a description of where and why it should be used, and a thumbnail image of the sign. It provides a quick reference tool to easily identify sign types, uses, and general locations.

Sign Name	Sign Code	Site-Specific Customization Required	Where to Install	Thumbnail
Guidance Signs				
Trail System Name	CSJ-TG1	X	At all trailheads	
Jurisdictional Logos	CSJ-TG2	X	At all trailheads that involve a partnership with other agencies or carry a special designation	
Intersection Street Names	CSJ-TG3	X	At approach to road intersection or upon bridge structure at undercrossing	
Bike Route Number	CSJ-TG4	X	At trailhead that is part of, or intersects, an officially designated bike route (refer to adopted bike plan)	
Directional Arrow - Straight	CSJ-TG5.1	X	At trail intersections or splits; to identify single points of interest, neighborhoods, parks, transit connections, etc. "Destination" will be replaced with proper name.	
Directional Arrow - Right	CSJ-TG5.2	X		
Directional Arrow - Left	CSJ-TG5.3	X		
Trail Continues - Straight	CSJ-TG6.1		At discontinuous portions of trail or junctions with secondary trails. To be used to identify preferred "commute" route.	
Trail Continues - Right	CSJ-TG6.2			
Trail Continues - Left	CSJ-TG6.3			
Trail Continues - Curve Right	CSJ-TG6.4			
Trail Continues - Curve Left	CSJ-TG6.5			
Main and Minor Trail - Left	CSJ-TG7.0A		At approach to split in trail	
Main and Minor Trail - Right	CSJ-TG7.0B		At approach to split in trail	
Main and On-Street Route - Left	CSJ-TG7.1A	X	At approach to split in trail for main trail and street trail	
Main and On-Street Route - Right	CSJ-TG7.1B	X	At approach to split in trail for main trail and street trail	
Straight Main Trail and On-Street Route - Right	CSJ-TG7.2A	X	At approach to split in trail for main trail and street trail	
Straight Main Trail and On-Street Route - Left	CSJ-TG7.2B	X	At approach to split in trail for main trail and street trail	
Straight Main and Minor Trail - Right	CSJ-TG7.3A		At approach to split in trail	
Straight Main and Minor Trail - Left	CSJ-TG7.3B		At approach to split in trail	
Use Traffic Signal	CSJ-TG8		At intersection with road; to direct trail user to actuate crossing signal to continue	
Restroom - Left	CSJ-TG9.1		At intersection or point that is near public restroom facilities	
Restroom - Right	CSJ-TG9.2			

Trail Signs Index

Sign Name	Sign Code	Site-Specific Customization Required	Where to Install	Thumbnail
Food - Left	CSJ-TG10.1		At intersection or point that is near market or restaurant facilities	
Food - Right	CSJ-TG10.2			
Points of Interest - Customization Required	CSJ-TG11	X	At approach to multiple points of interest locations	
Regulatory Signs				
Trail Rules and Regulations	CSJ-TR1A		At all trailheads	
Trail Rules and Regulations	CSJ-TR1B		For use along Rural Trails; Alum Rock Park and Guadalupe Oak Grove	
Trail Rules and Regulations	CSJ-TR1C		For use at trailhead of Penitencia Creek Trail where fishing is not permitted	
No Motor Vehicles	CSJ-TR2		At trail entry points wide enough to fit a vehicle	
No Trespassing	CSJ-TR3		At edge of trail right-of-ways where recurring law enforcement incidents have occurred	
Dog Ordinance	CSJ-TR4		With dog mitt dispenser at trailheads	
Bicycles Yield to Pedestrians	CSJ-TR5		At narrow or congested areas where conflicts are more likely	
Pass Left/Keep Right	CSJ-TR6		At narrow or congested areas where conflicts are more likely	
Stop	CSJ-TR7		At approach to trail intersection with road or another trail	
Trail Closed	CSJ-TR8.1		Option A - At portion of trail that is closed for repair or other temporary condition. (Used in conjunction with trail closure process)	
Trail Closed	CSJ-TR8.2			
Do Not Pass	CSJ-TR9		At narrow or congested areas where conflicts are more likely	
Speed Limit	CSJ-TR10		At every entry and 1/2 mile	
Share the Trail	CSJ-TR11		At locations of high traffic volume	
Warning Signs				
Bikeway Narrows	CSJ-TW1		At approach to reduction in travel lane width	

Trail Sign Index

Sign Name	Sign Code	Site-Specific Customization Required	Where to Install	Thumbnail
Curve Ahead - Right	CSJ-TW2.1		At approach to curve in trail	
Curve Ahead - Left	CSJ-TW2.2			
Curve Ahead - Compound Right	CSJ-TW2.3			
Curve Ahead - Compound Left	CSJ-TW2.4			
Curve Ahead - U-Turn	CSJ-TW2.5			
Curve Ahead - U-Turn	CSJ-TW2.6			
Cross Traffic	CSJ-TW3		At approach to an at-grade crossing	
Dead End/Trail Ends Ahead	CSJ-TW4		At end of trail, if not an inter-connected trail	
Dip Ahead	CSJ-TW5		At approach to an unexpected low point on trail	
Bump Ahead	CSJ-TW6		At approach to an unexpected high point on trail	
Steep Grade Ahead	CSJ-TW7	X	At approach to steep (generally >10%) uphill or downhill segment of trail	
High Water	CSJ-TW8		At approach to undercrossing prone to seasonal flooding	
Slow	CSJ-TW9		At approach to an area requiring cautious movement	
Bikeway Xing	CSJ-TW10		At approach with cross traffic	
Cross At Intersection	CSJ-TW11		At approach to street where cross walk at intersection is to be used	
Slippery Tracks	CSJ-TW12		At approach to railroad tracks	
Clearance	CSJ-TW13	X	At approach to underpass or bridge	
Loop Trail	CSJ-TW14		At approach to loop trails	
Surface Change	CSJ-TW15		At approach to change of trail surfacing	
Custom Sign				
A template for signs not addressed above	CSJ-TC	X	Use Adobe Illustrator as the recommended software to create custom signs.	

Trail Sign Details

Trail sign details have been organized by category for ease of use. Each sheet represents an individual trail sign template and provides specifics on size, layout, colors, and fonts. Digital files of all sign details are available from the City's Trail Program Manager to assist in project development.

All construction documents prepared for trail projects shall include the Trail Sign Installation Detail and a completed Trail Sign Schedule, both included in this section. The schedule will be completed by the project designer and will list each sign to be installed on the trail, its sign code, quantity, and any applicable custom features.

Notes for each detail should be followed, but are subject to change based on architectural or engineering judgement.

Incorporation into Existing Trails

As the first step in the deployment of these signage guidelines, field visits of existing trail systems will be undertaken to document:

- directional signage at trailheads and intersections
- warning and regulatory signs at relevant points
- damaged or non-compliant signage
- redundant or superfluous signage
- consolidation/relocation of sign poles when feasible

Existing signage that doesn't conform to the signage guidelines will be replaced as funding becomes available or as a particular sign requires replacement. Over time, existing signage will become compliant with these signage guidelines.

Signs that are found to be redundant or excessive will be removed, and signs that can be combined onto one pole or lowered will be modified without replacement of each sign. Independent signage designs for trail projects currently in the design or construction phase will be changed to fit with the guidelines.

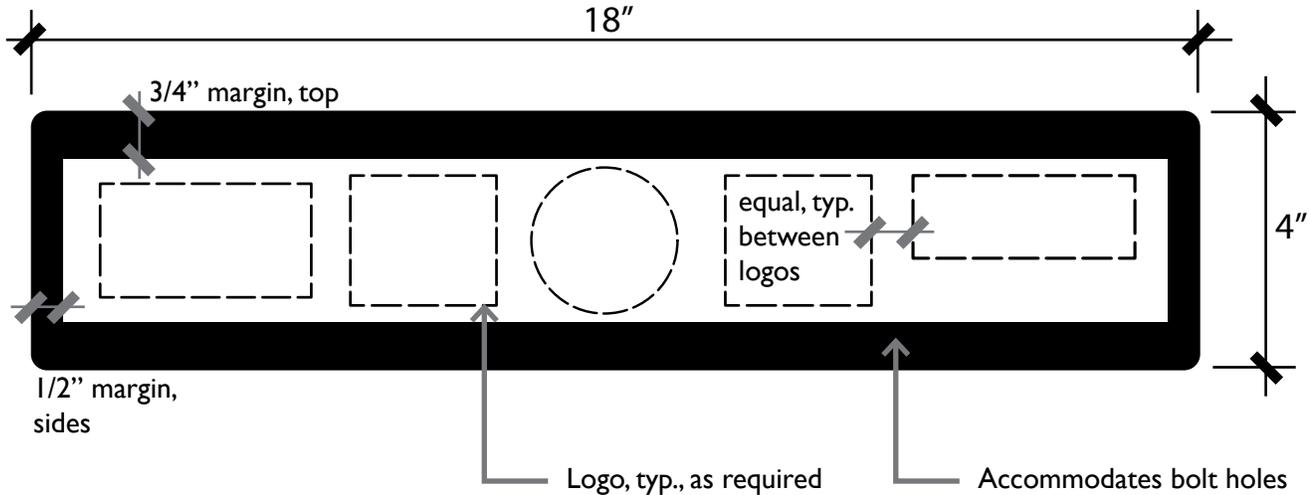
Colors are only noted in CMYK format; some vendors may have issues with this system. An equivalent Pantone number system can be found at: <http://www.thegraphicmac.com/quickly-find-cmyk-equivalent-pantone-color>.

All signage installations outlined in this guideline are exempt from City Policy Section 23.02.1300 because they are for safety and directional purposes.

See page 75 for guidance on Trail System Name Signs.

Trail Sign Details - Guidance Signs

CSJ-TG2: Jurisdictional Logos *Customization required*



Notes:

1. Incorporate partnership agency or regional Trail Network logos as relevant to a particular trail system. Placeholder silhouettes of logos are shown here; replace with relevant logos or remove as necessary.
2. Do not alter original logo's proportions, color palette, or font. Acquire digital logo/icon and permission to use said logo/icon from participating agency or organization.
3. Mount directly beneath CSJ-TG1, Trail Name Sign. Do not use independently of CSJ-TG1.
4. 1/4" radius corners, typical.
5. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
6. Unless otherwise specified on plans, locate sign 10' beyond beginning of trail.

Color Palette:



Black (C-0, M-0, Y-0, K-100)

White (C-0, M-0, Y-0, K-0)

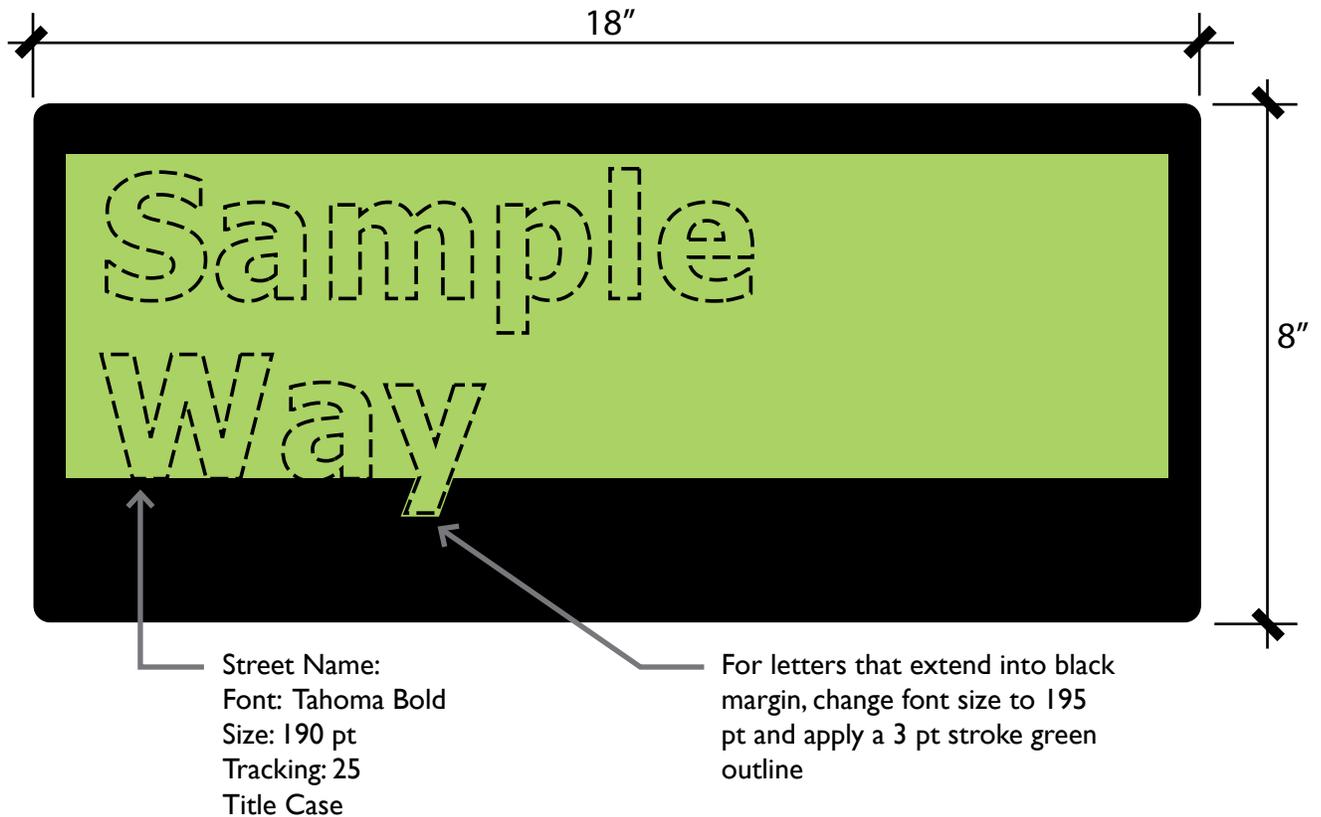
Logo Colors: To Be Determined

Example:



Trail Sign Details - Guidance Signs

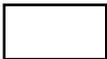
CSJ-TG3: Intersection Street Names *Customization required*



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' back from edge of street to which the sign refers. Alternatively, sign may be affixed to bridge structure at trail undercrossing to identify road that is being crossed, as approved by the City.

Color Palette:

	Green (C-37, M-0, Y-79, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

CSJ-TG3: Intersection Street Names *Customization required*

Notes (*continued*):

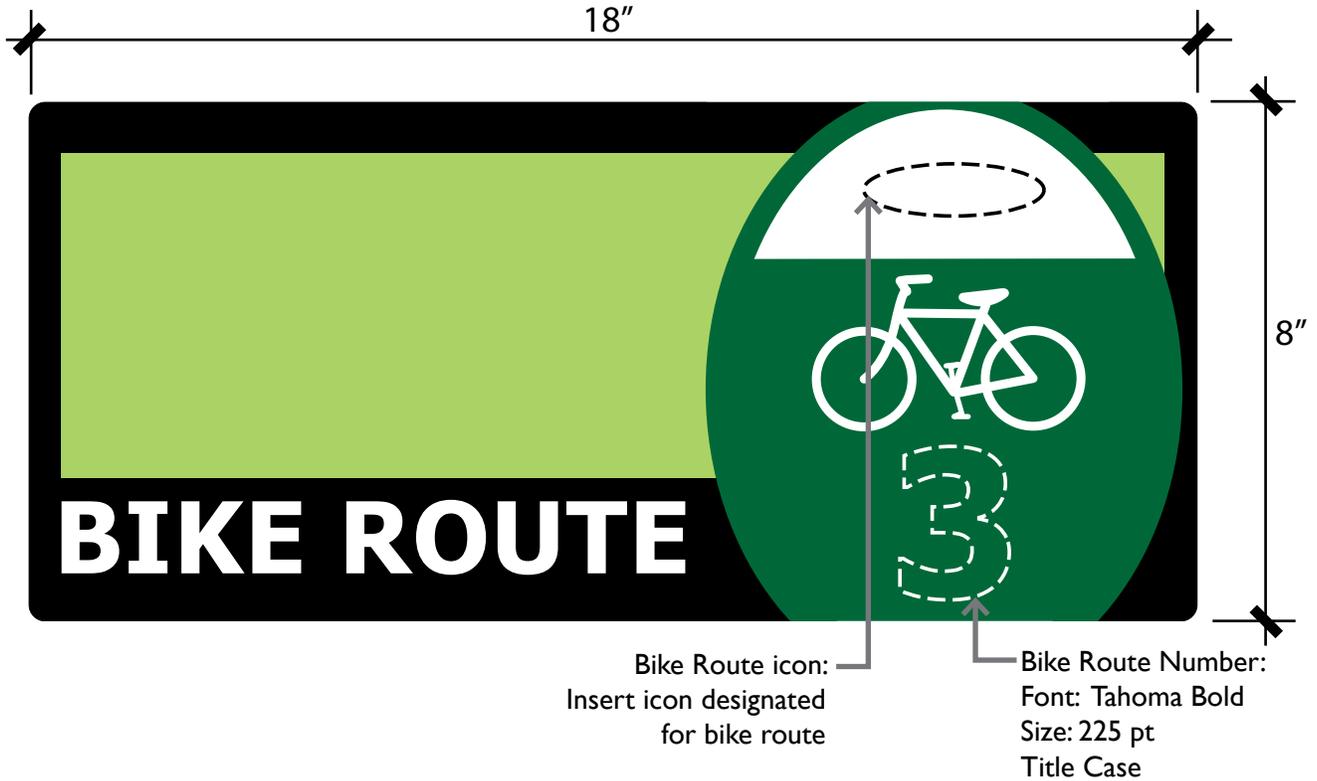
4. May be mounted beneath CSJ-TR7, Stop Sign, at approach to roadways as applicable.
5. Sign text to be modified for individual intersections and undercrossings. Short street names such as “Woz Way” may be on the bottom line only. Adjust tracking of longer names as necessary to fit sign width.

Example:



Trail Sign Details - Guidance Signs

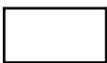
CSJ-TG4: Bike Route Number *Customization required*



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified in plans, locate sign 10' back from edge of route/street to which it refers.
4. May be mounted beneath CSJ-TR7, Stop Sign, at approach to roadways as applicable.

Color Palette:

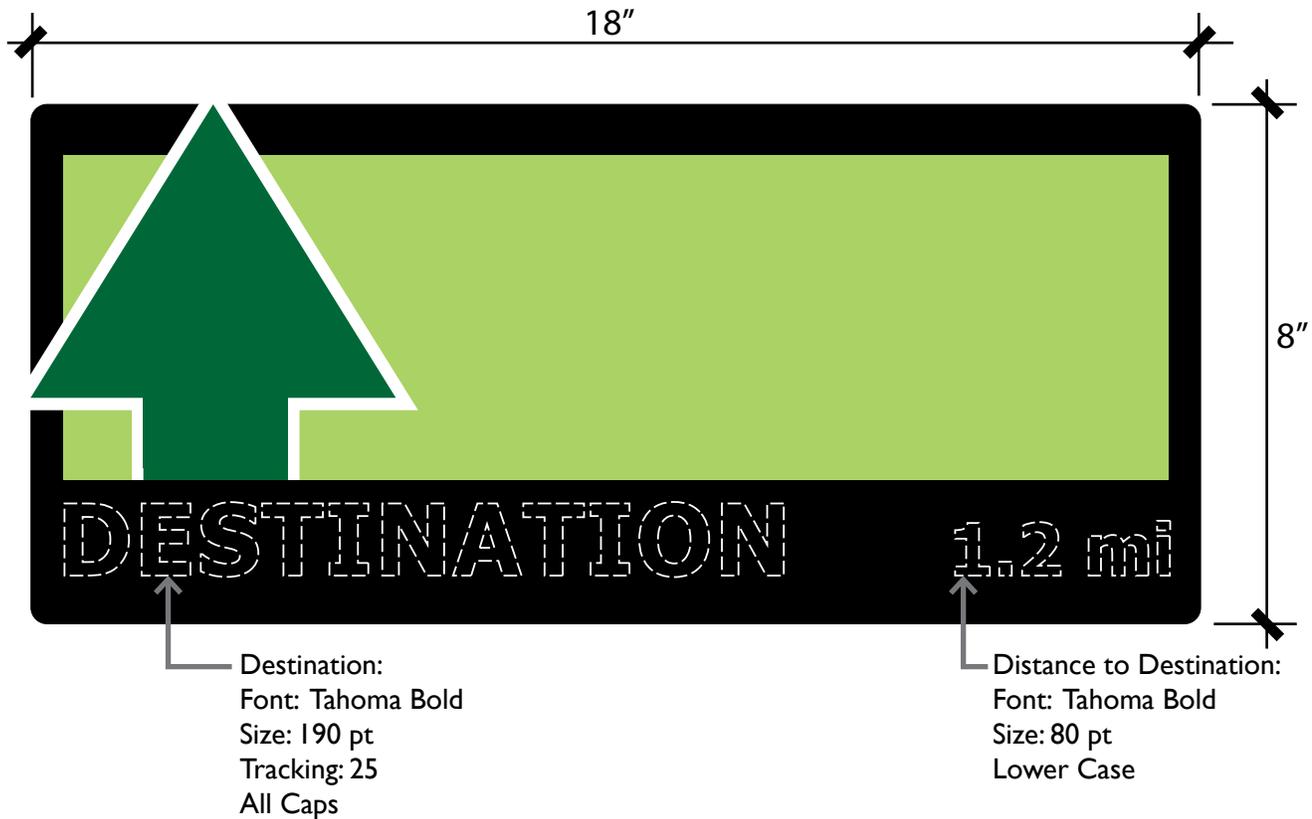
	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Example:



Trail Sign Details - Guidance Signs

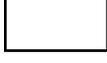
CSJ-TG5.1: Directional Arrow - Straight *Customization required*



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. Sign may be grouped with other guidance signs as applicable.
4. For private services or venues, signage should offer a generic description, ie. "mall", "museum", "arena", etc. Points of historical interest should be identified by name.

Color Palette:

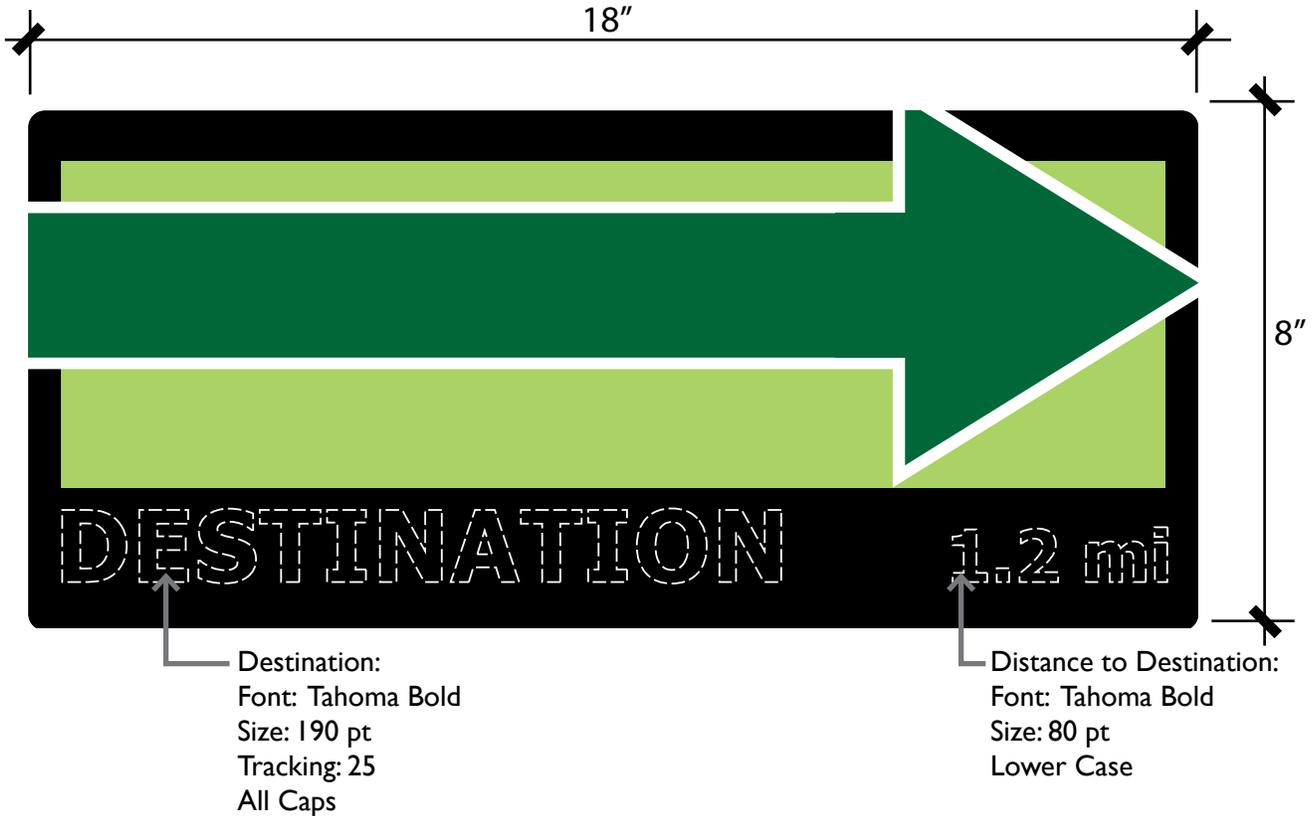
	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Example:



Trail Sign Details - Guidance Signs

CSJ-TG5.2: Directional Arrow - Right *Customization required*



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. Sign may be grouped with other guidance signs as applicable.
4. For private services or venues, signage should offer a generic description, ie. "mall", "museum", "arena", etc. Points of historical interest should be identified by name.

Color Palette:

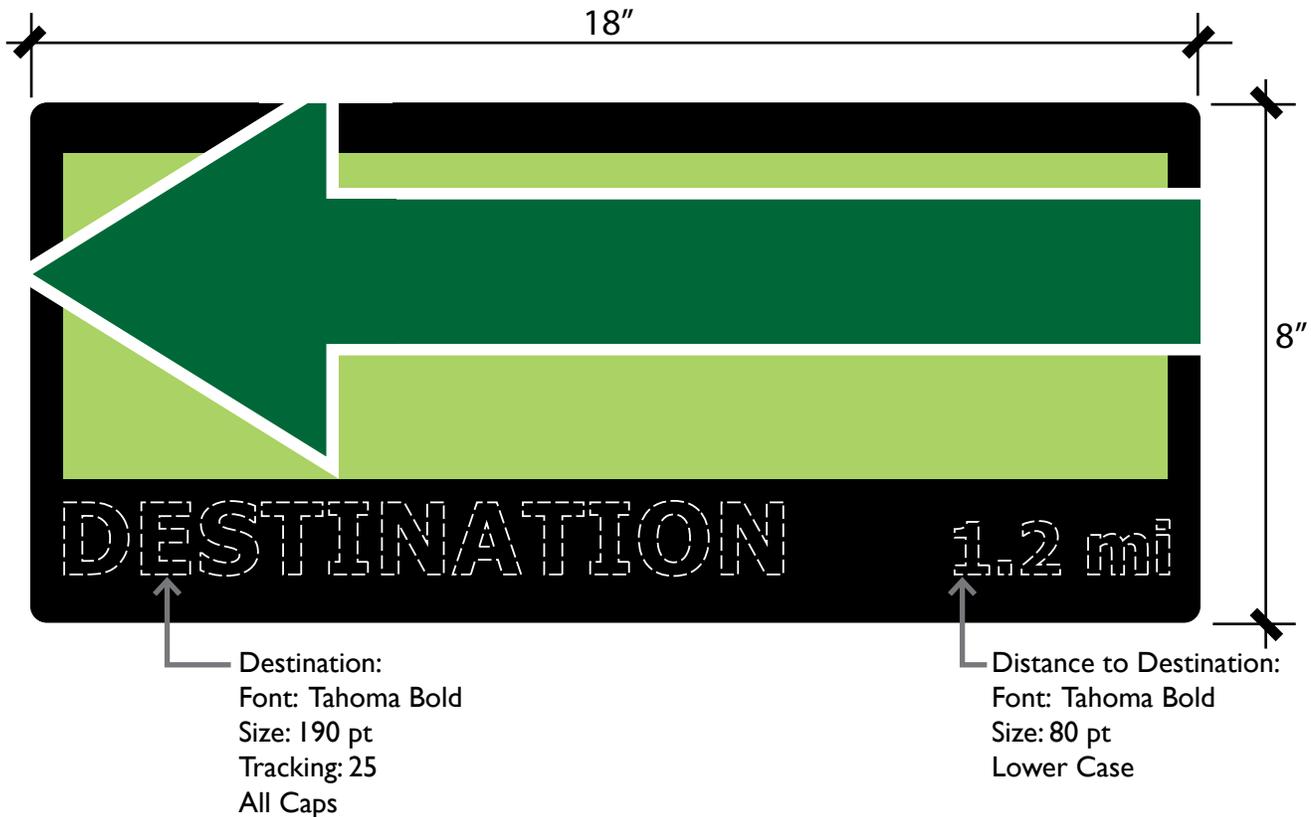
	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Example:



Trail Sign Details - Guidance Signs

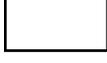
CSJ-TG5.3: Directional Arrow - Left *Customization required*



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. Sign may be grouped with other guidance signs as applicable.
4. For private services or venues, signage should offer a generic description, i.e. "mall", "museum", "arena", etc. Points of historical interest should be identified by name.

Color Palette:

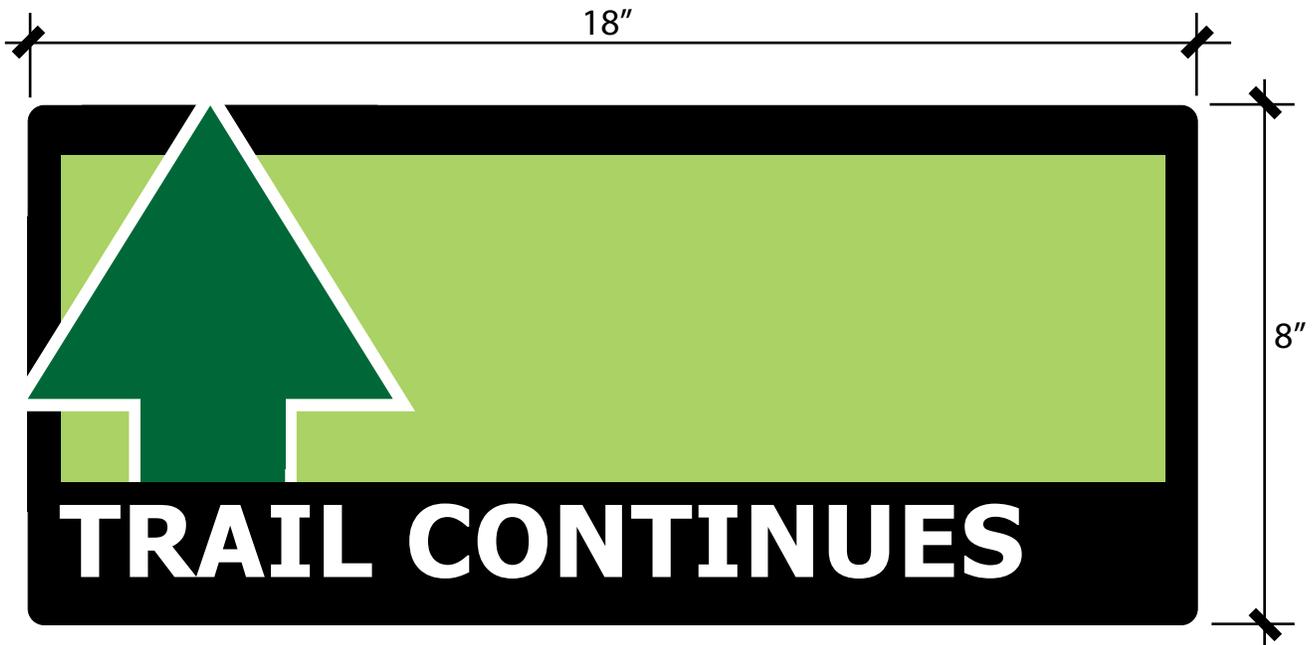
	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Example:



Trail Sign Details - Guidance Signs

CSJ-TG6.1: Trail Continues - Straight



Notes:

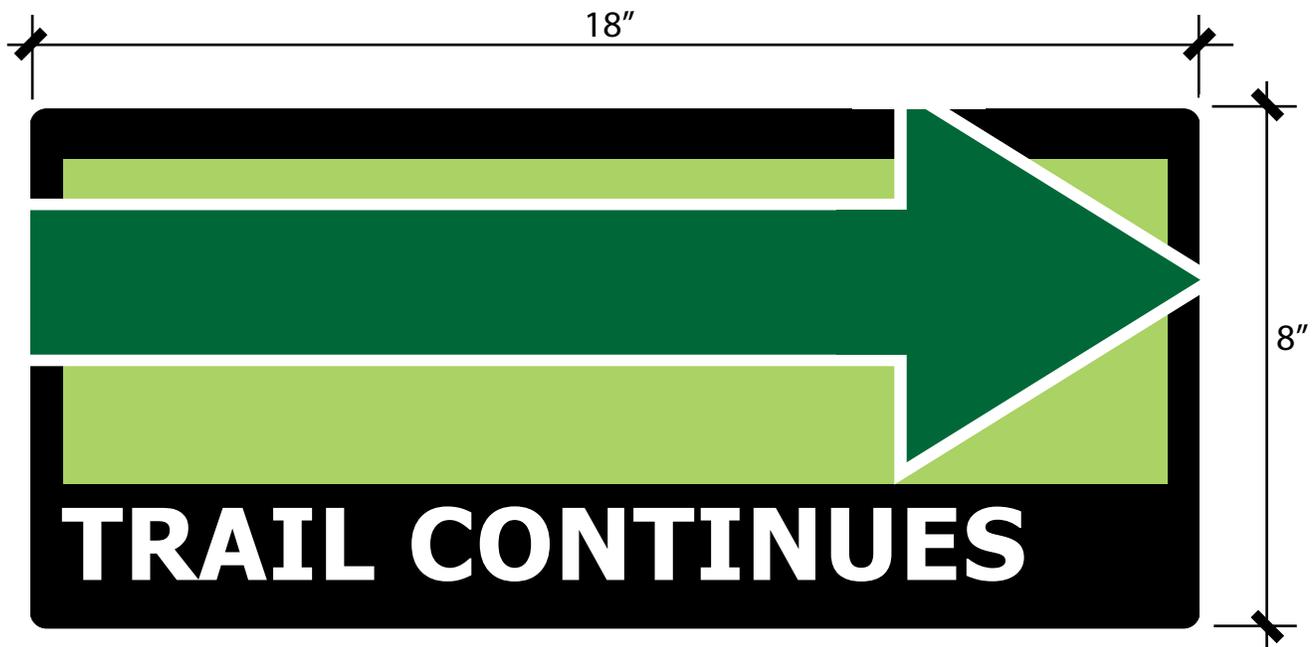
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. Sign may be grouped with other guidance signs as applicable.

Color Palette:

	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

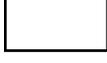
CSJ-TG6.2: Trail Continues - Right



Notes:

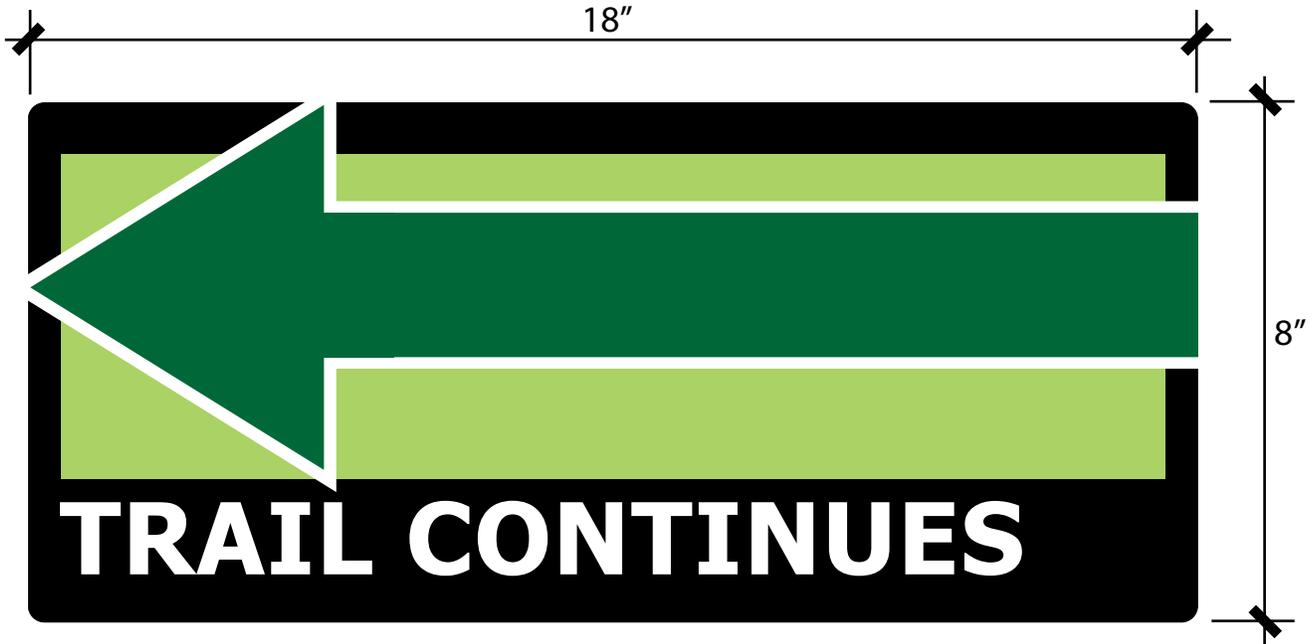
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. Sign may be grouped with other guidance signs as applicable.

Color Palette:

	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

CSJ-TG6.3: Trail Continues - Left



Notes:

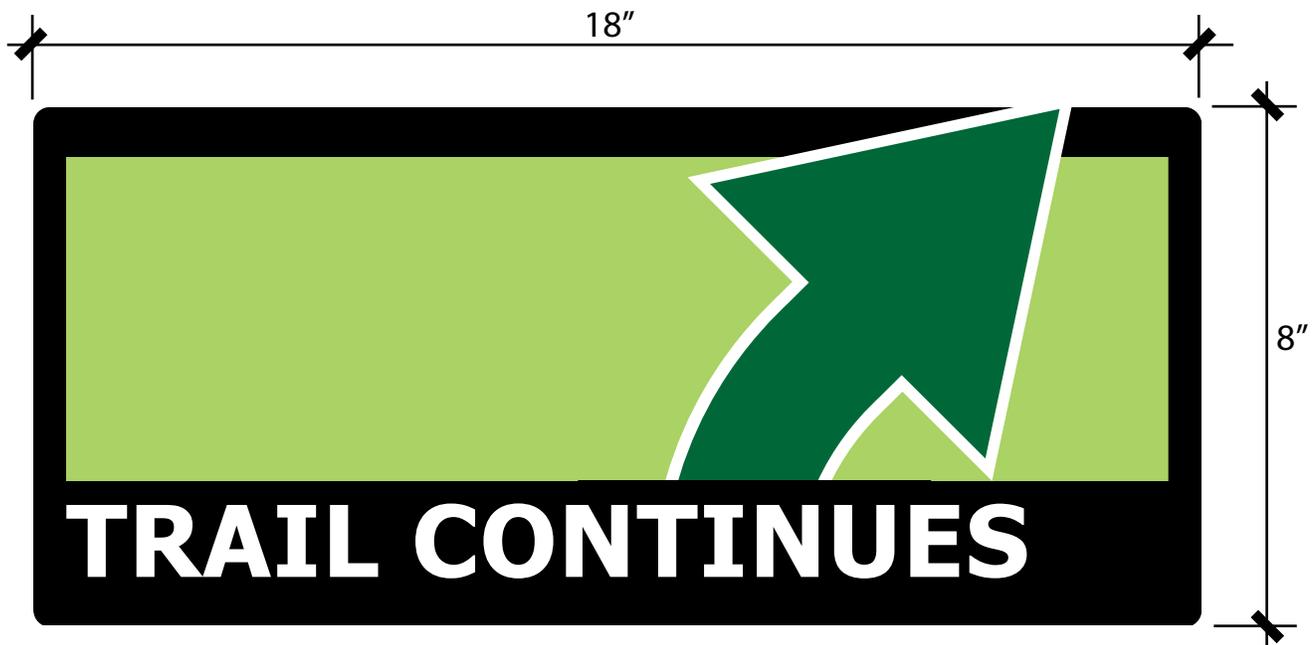
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. Sign may be grouped with other guidance signs as applicable.

Color Palette:

	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

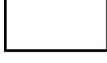
CSJ-TG6.4: Trail Continues - Curve Right



Notes:

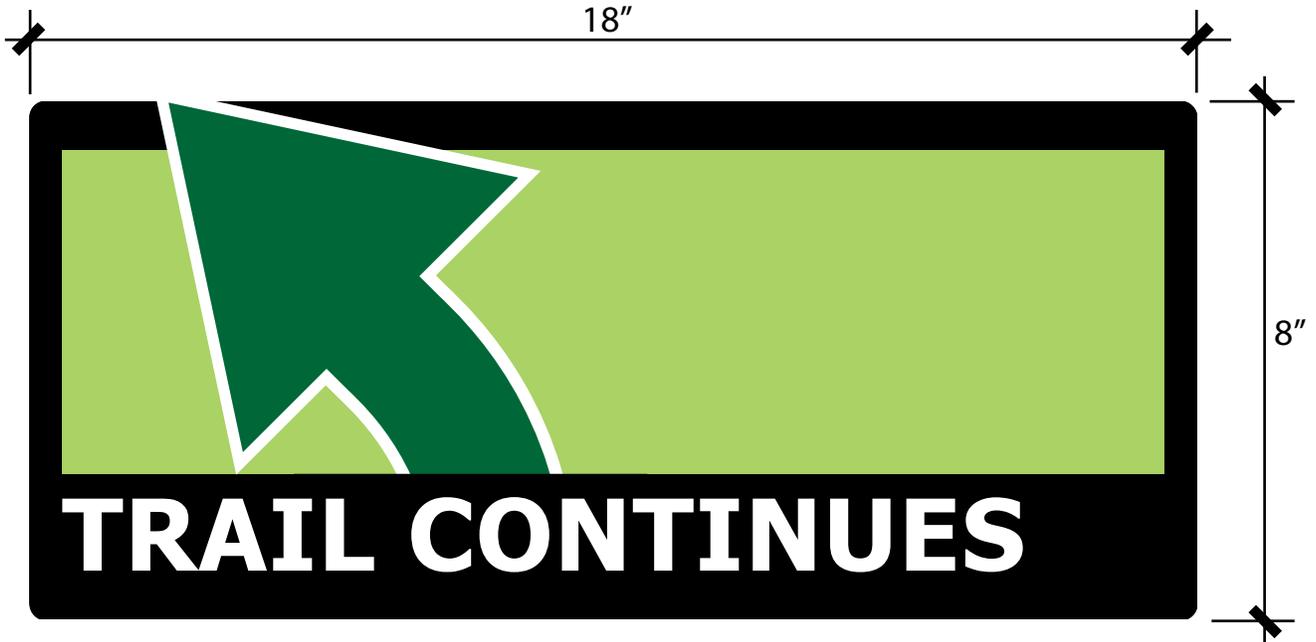
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. Sign may be grouped with other guidance signs as applicable.

Color Palette:

	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

CSJ-TG6.5: Trail Continues - Curve Left



Notes:

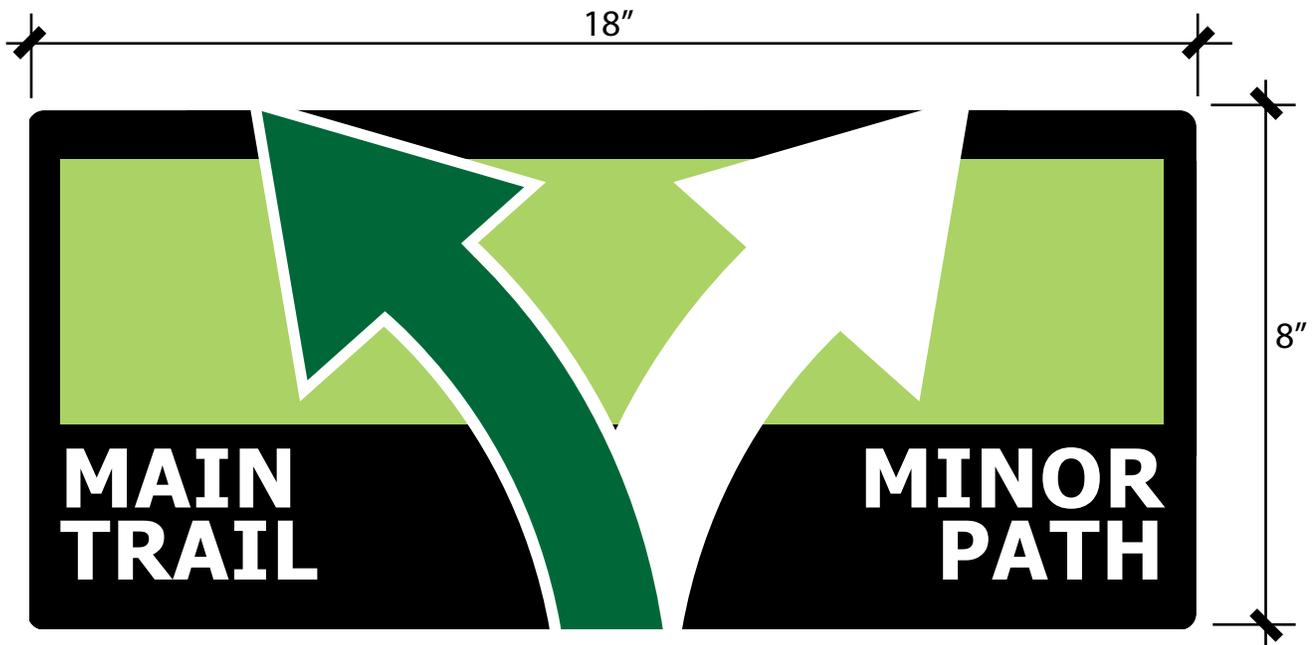
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. Sign may be grouped with other guidance signs as applicable.

Color Palette:

	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

CSJ-TG7.0A: Main and Minor Trail - Left



Notes:

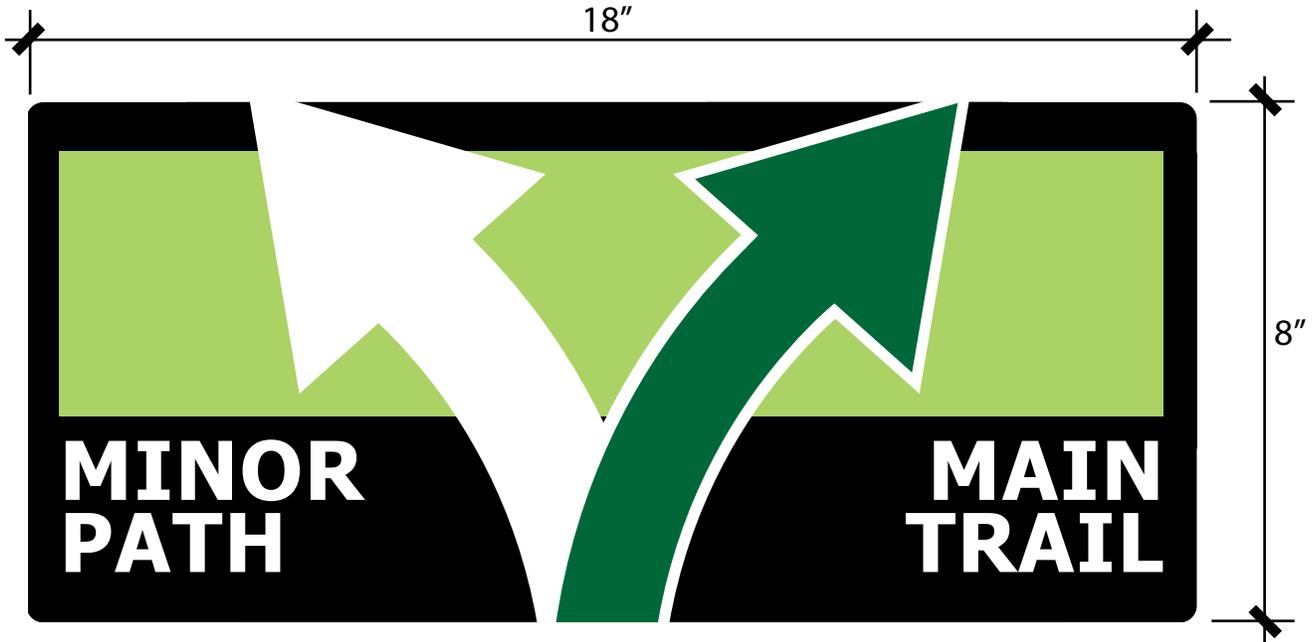
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign a minimum of 50' before split in trail.

Color Palette:

	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

CSJ-TG7.0B: Main and Minor Trail - Right



Notes:

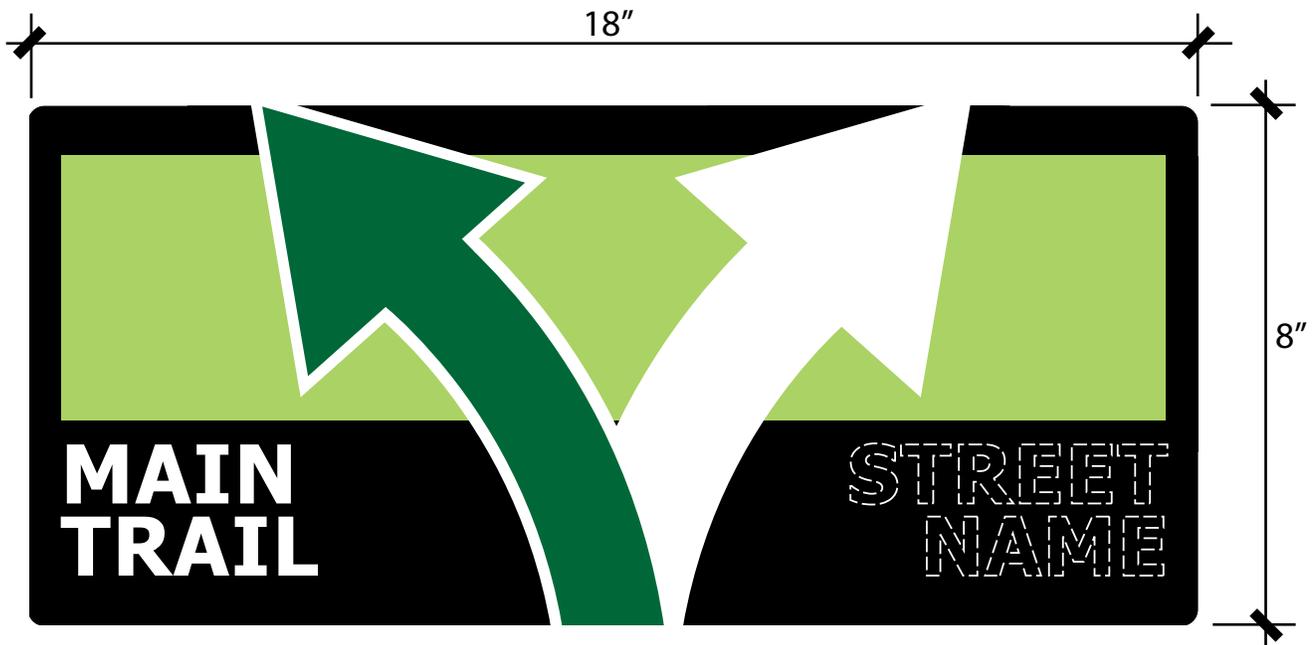
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign a minimum of 50' before split in trail.

Color Palette:

	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

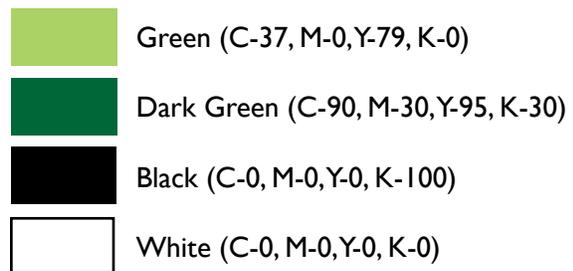
CSJ-TG7.1A: Main Trail and On-Street Route - Left
Customization required



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign a minimum of 50' before split in trail.

Color Palette:

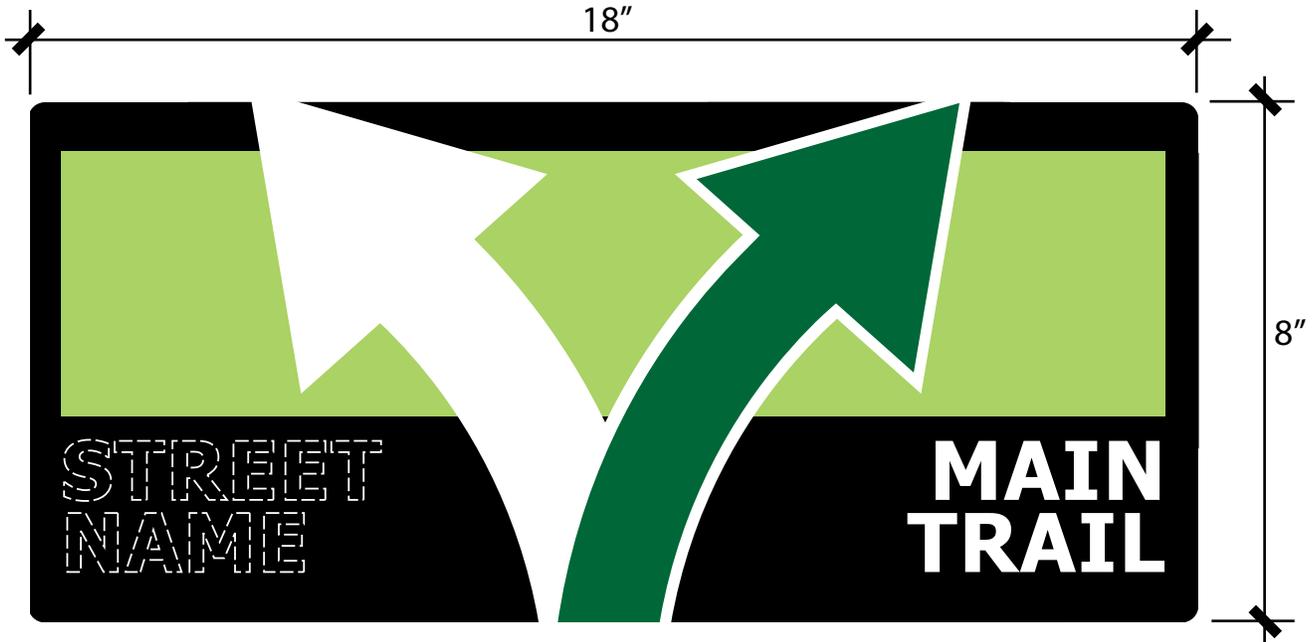


Example:



Trail Sign Details - Guidance Signs

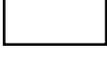
CSJ-TG7.1B: Main Trail and On-Street Route - Right *Customization required*



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign a minimum of 50' before split in trail.

Color Palette:

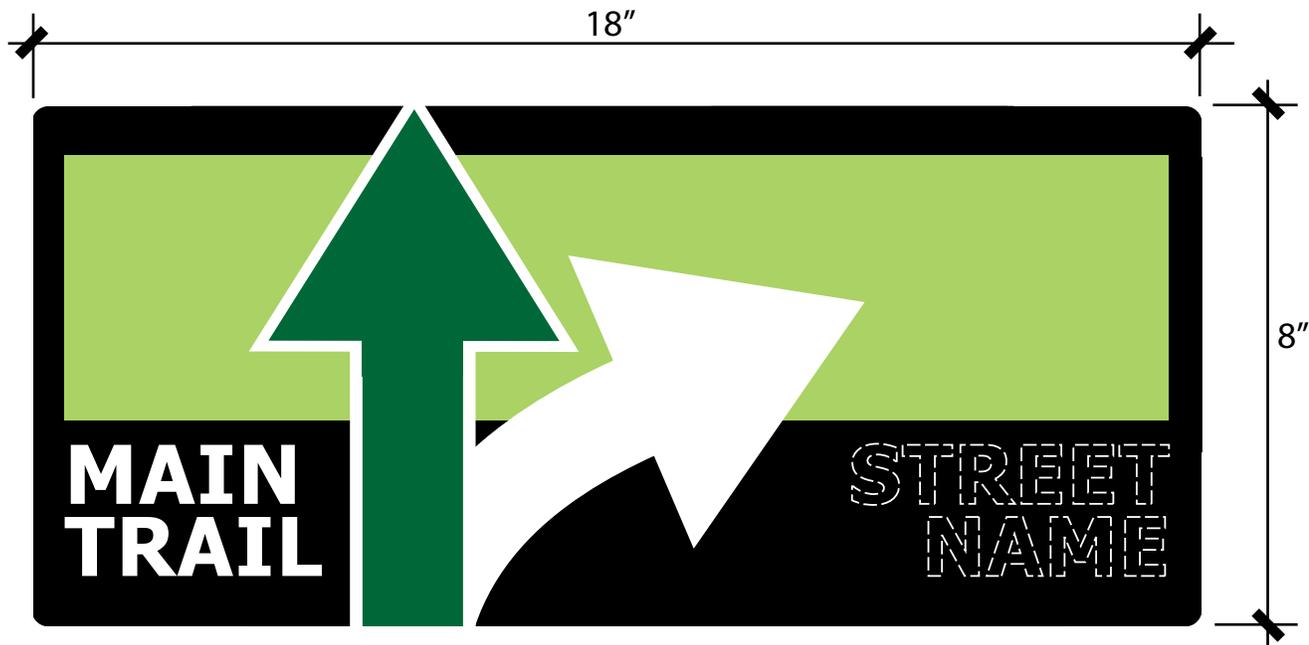
	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Example:



Trail Sign Details - Guidance Signs

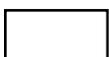
CSJ-TG7.2A: Straight Main Trail and On-Street Route - Right
Customization required



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign a minimum of 50' before split in trail.

Color Palette:

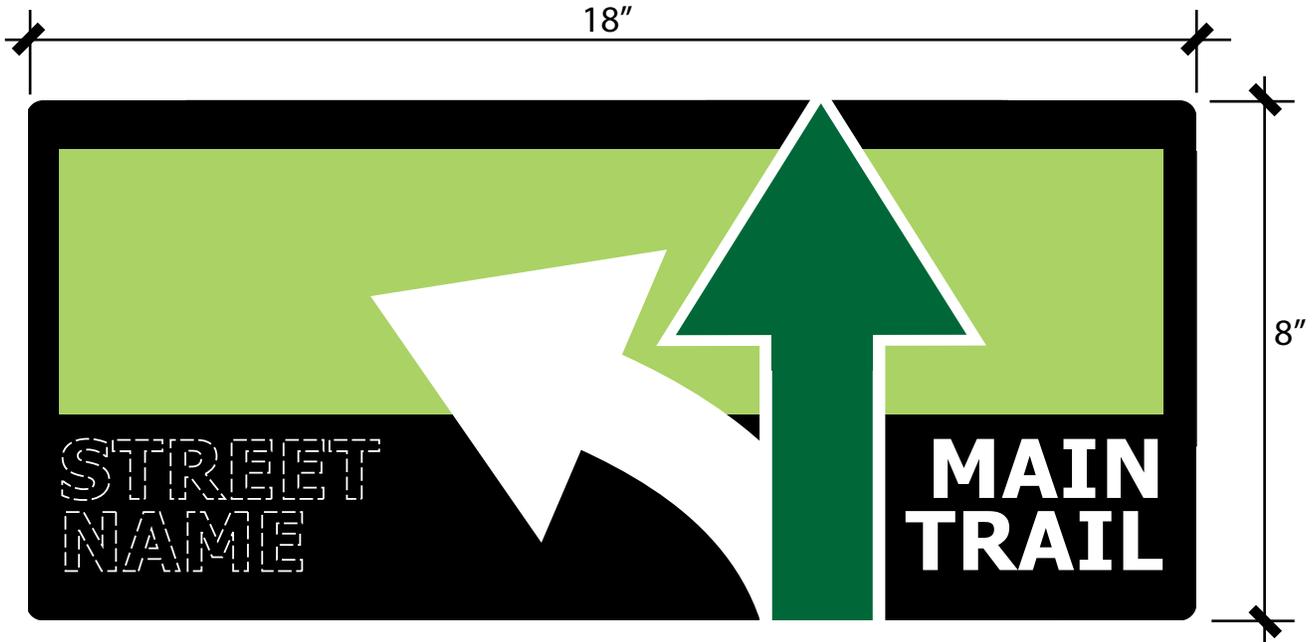
	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Example:



Trail Sign Details - Guidance Signs

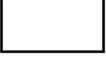
CSJ-TG7.2B: Straight Main Trail and On-Street Route - Left *Customization required*



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign a minimum of 50' before split in trail.

Color Palette:

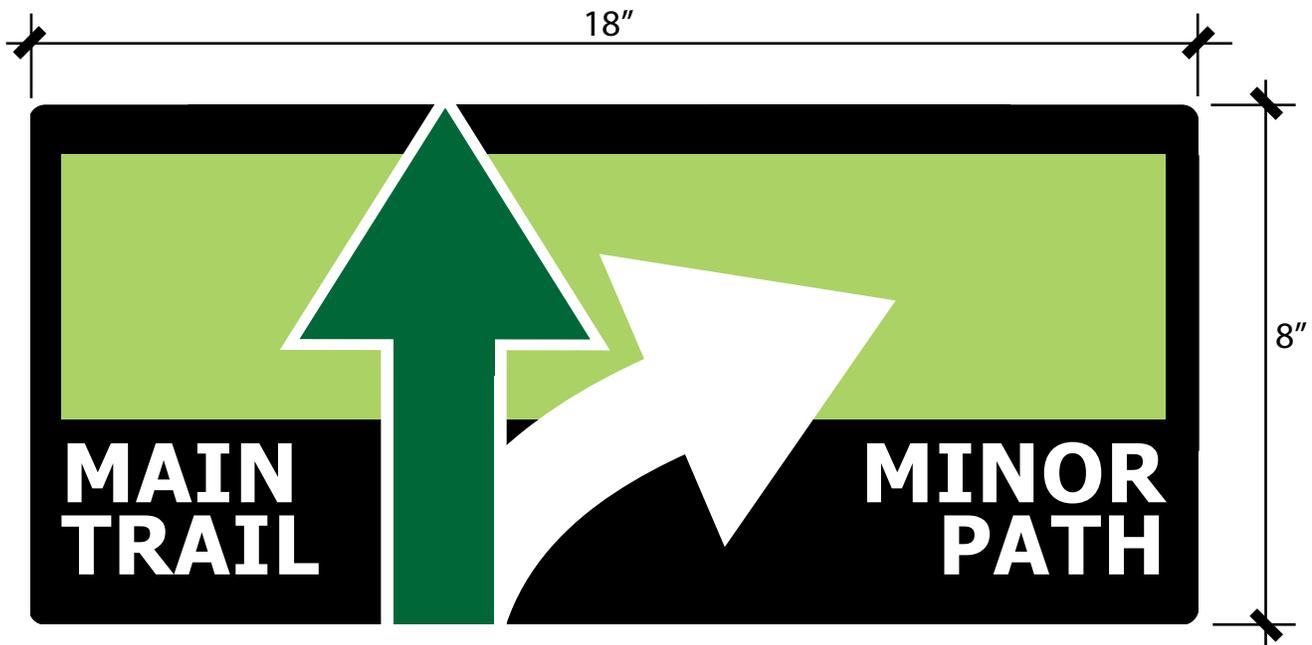
	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Example:



Trail Sign Details - Guidance Signs

CSJ-TG7.3A: Straight Main and Minor Trail - Right



Notes:

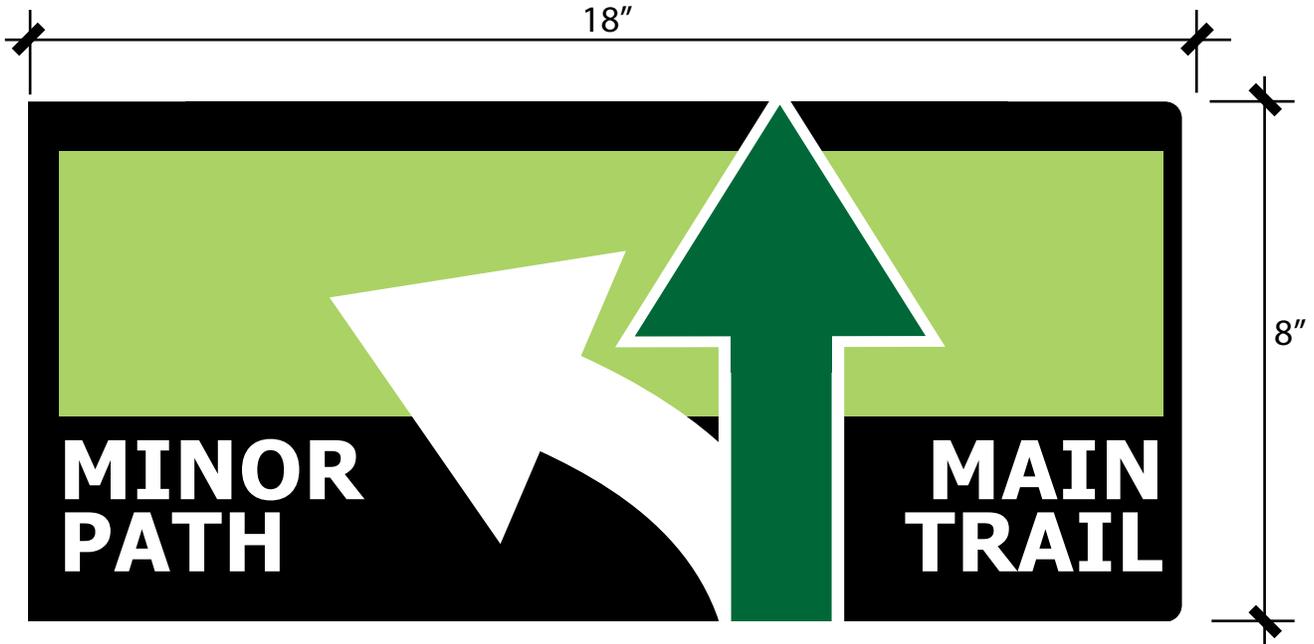
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign a minimum of 50' before split in trail.

Color Palette:

	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

CSJ-TG7.3A: Straight Main and Minor Trail - Left



Notes:

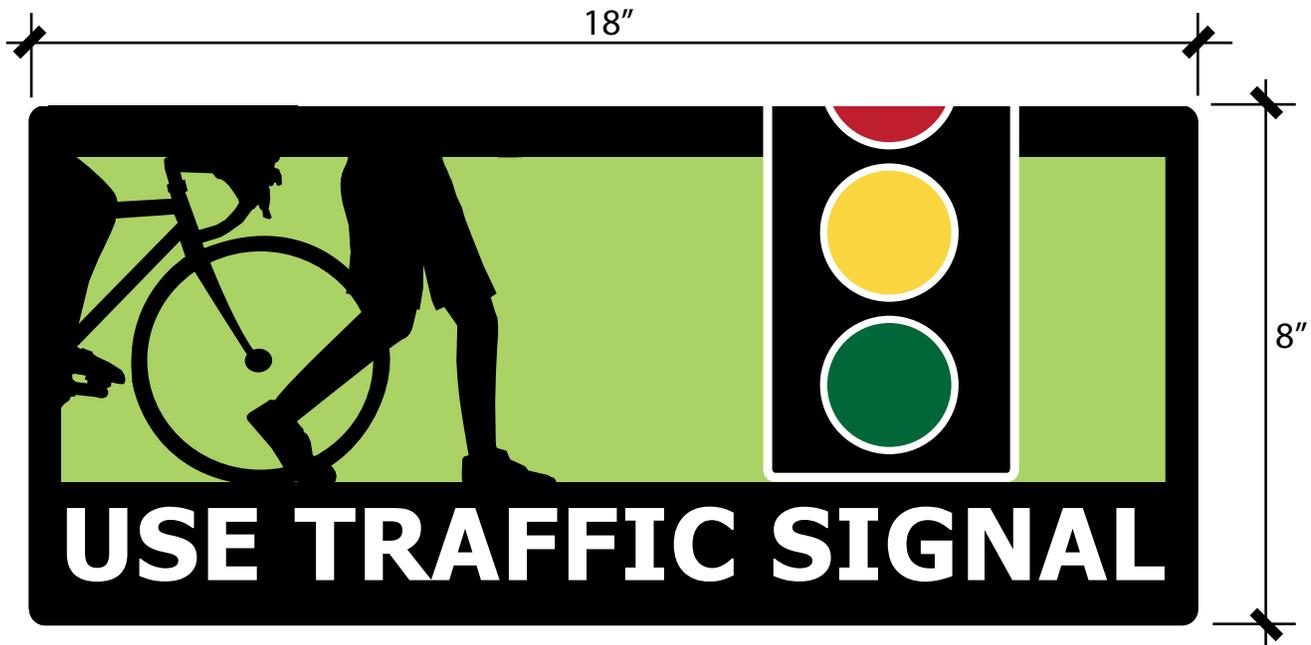
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign a minimum of 50' before split in trail.

Color Palette:

	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

CSJ-TG8: Use Traffic Signal



Notes:

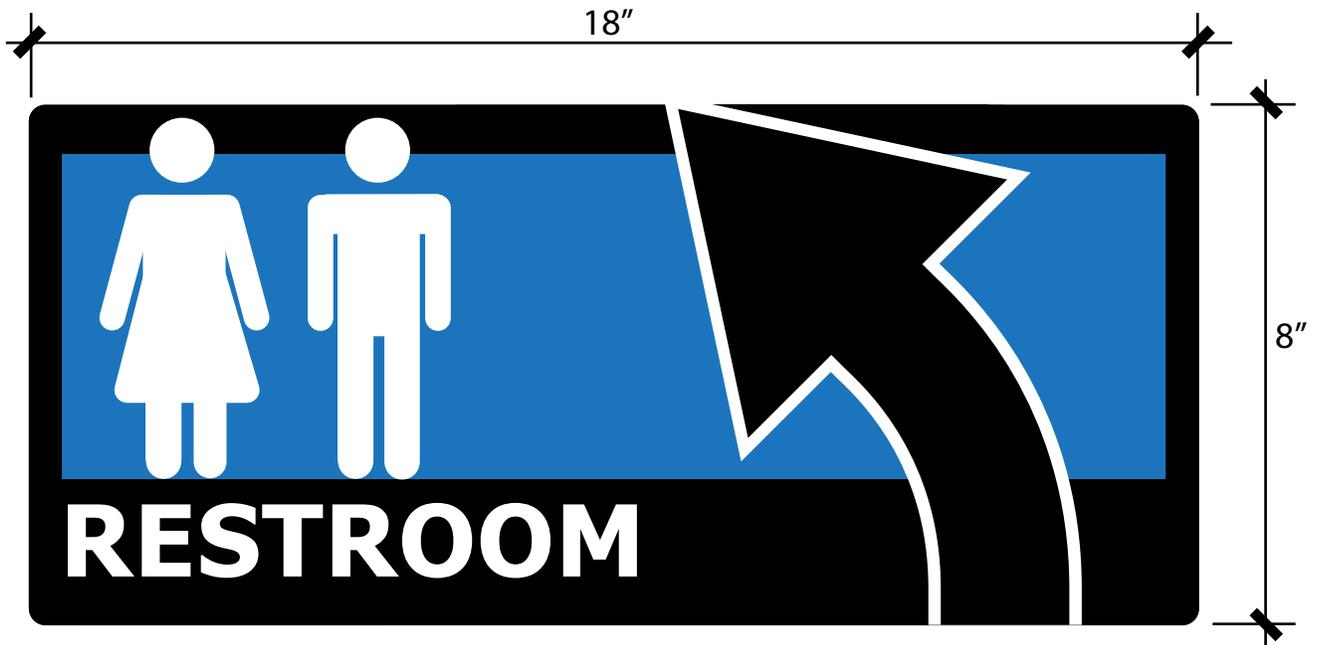
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before the intersecting road. May be grouped with other guidance signs or CSJ-TR7 as applicable.

Color Palette:

	Green (C-37, M-0, Y-79, K-0)
	Dark Green (C-90, M-30, Y-95, K-30)
	Red (C-15, M-100, Y-90, K-10)
	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

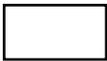
CSJ-TG9.1: Restroom - Left



Notes:

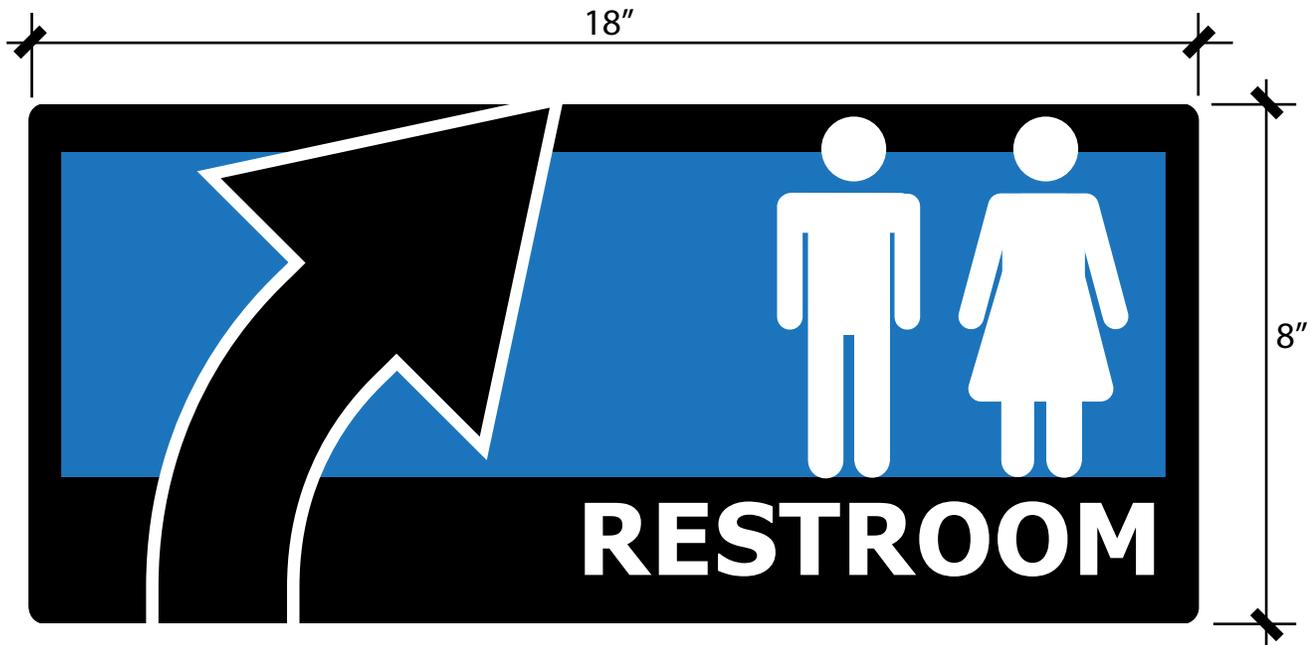
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. Sign may be grouped with other guidance signs as applicable.

Color Palette:

	Blue (C-85, M-50, Y-0, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

CSJ-TG9.2: Restroom - Right



Notes:

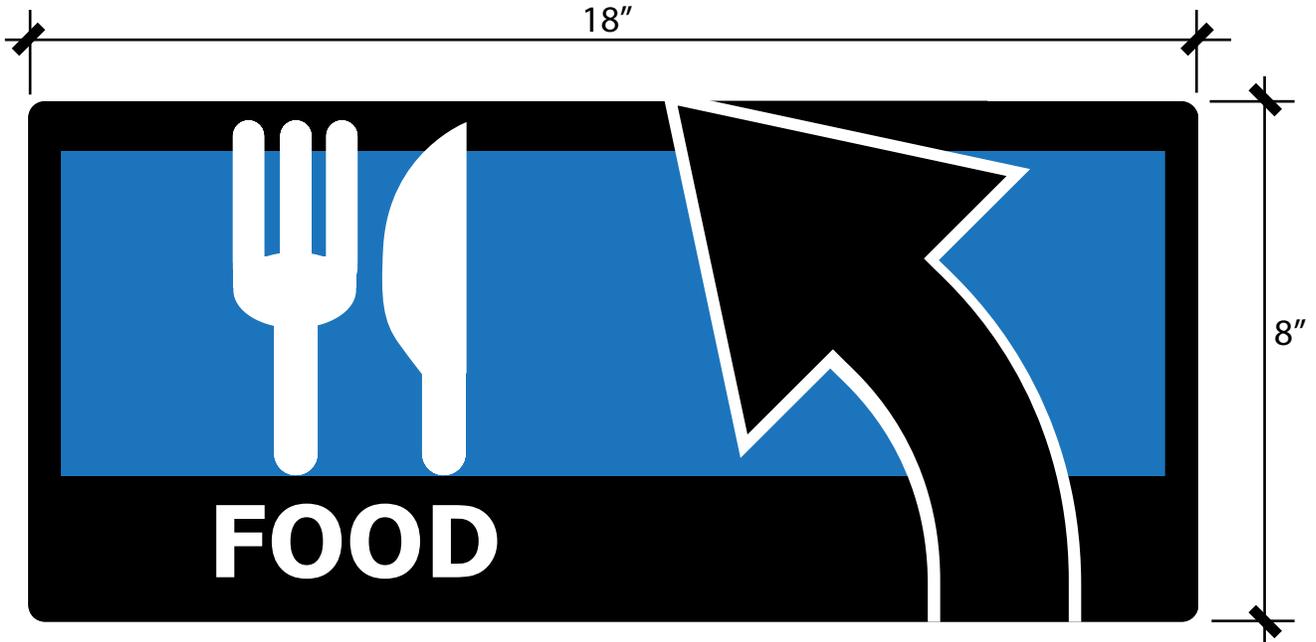
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. Sign may be grouped with other guidance signs as applicable.

Color Palette:

	Blue (C-85, M-50, Y-0, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

CSJ-TG10.1: Food - Left



Notes:

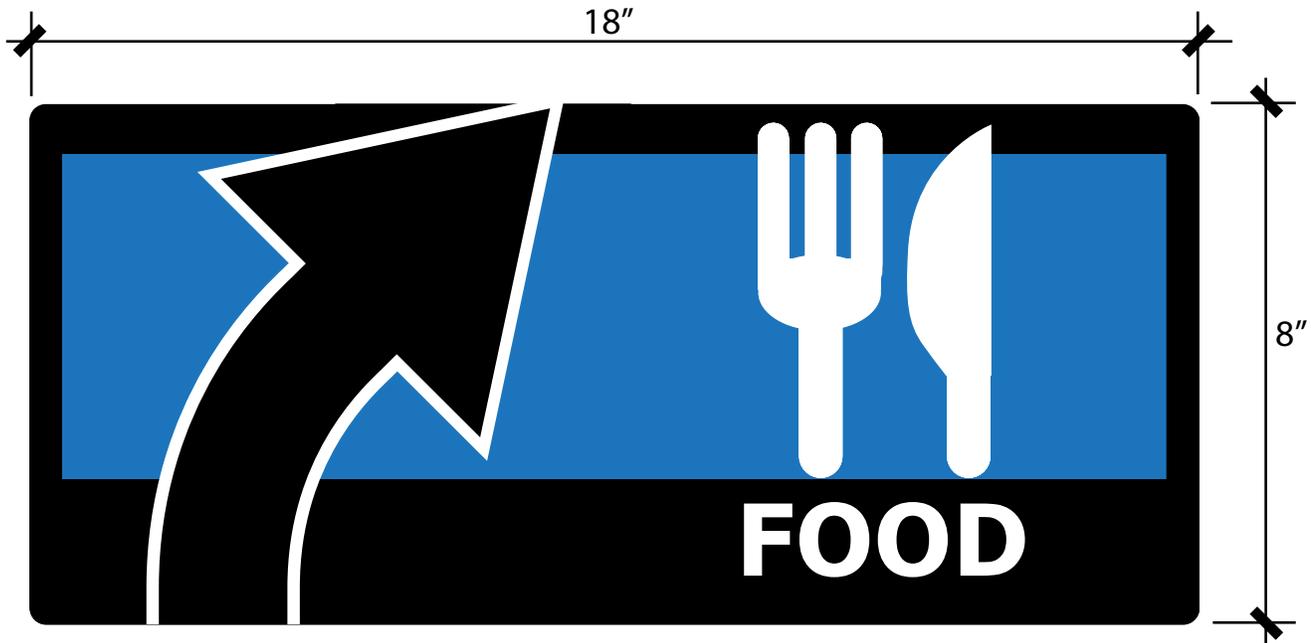
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. Sign may be grouped with other guidance signs as applicable.

Color Palette:

	Blue (C-85, M-50, Y-0, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

CSJ-TG10.2: Food - Right



Notes:

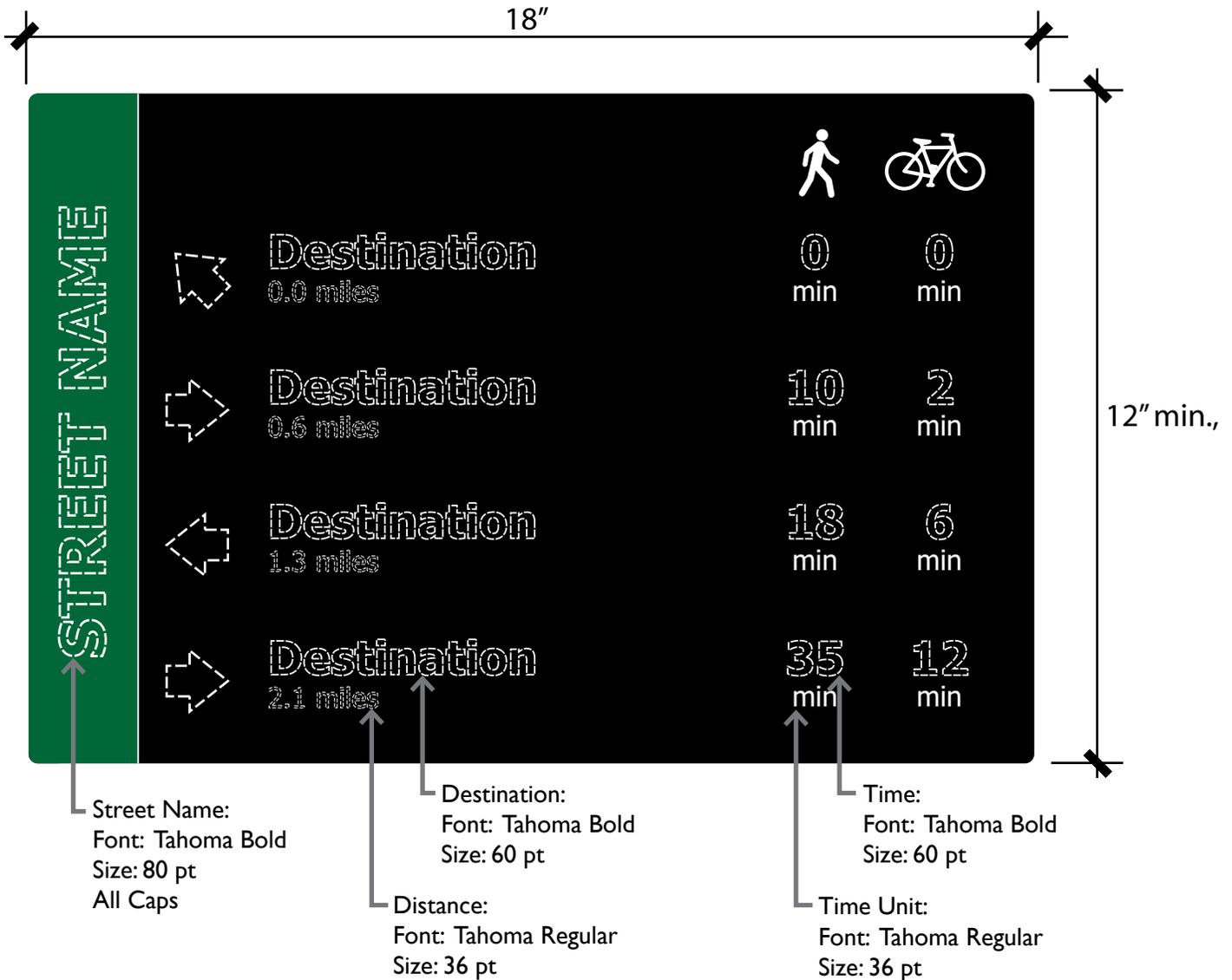
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. Sign may be grouped with other guidance signs as applicable.

Color Palette:

	Blue (C-85, M-50, Y-0, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

CSJ-TGI I: Points of Interest
Customization required



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Sign may be grouped with other guidance signs as applicable.

Color Palette:

	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Guidance Signs

CSJ-TG I I: Points of Interest *Customization required*

Notes (*continued*):

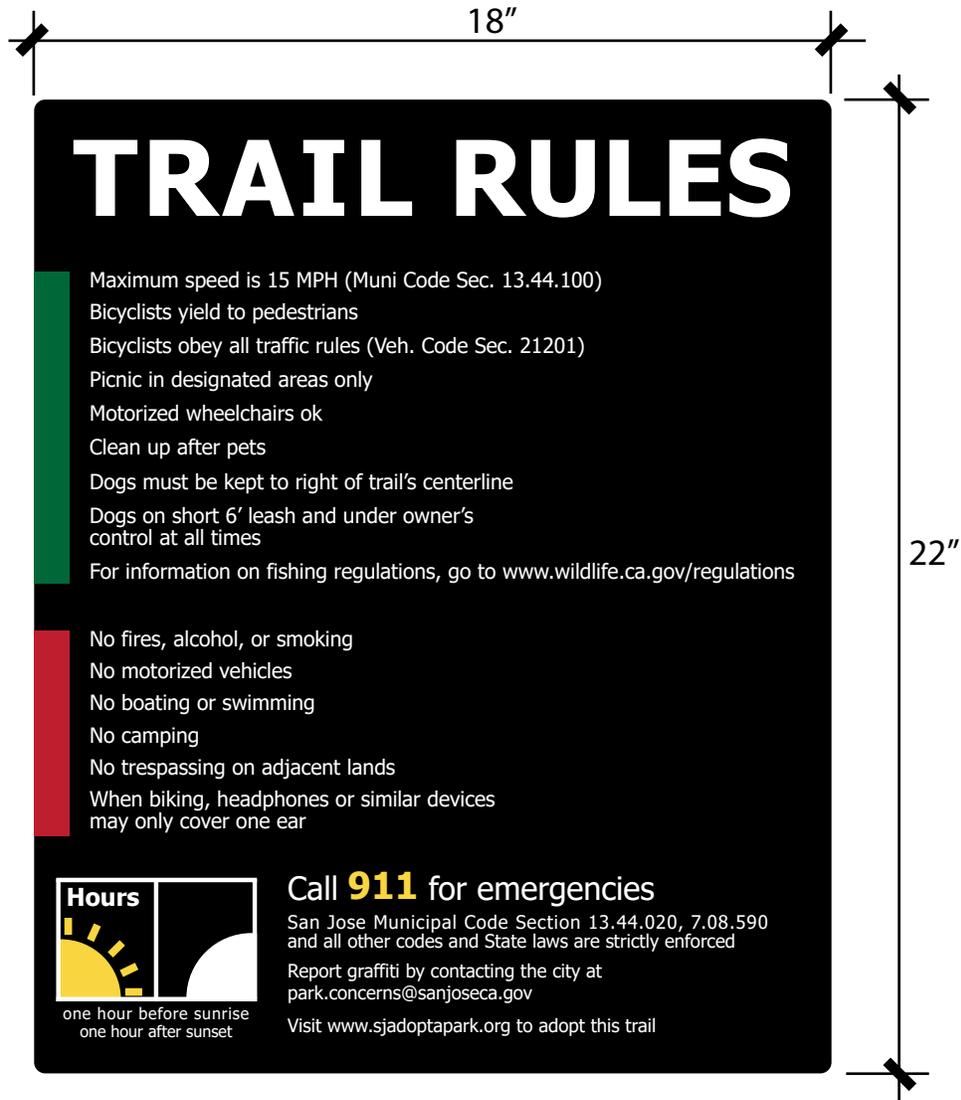
- For private services or venues, signage should offer a generic description, ie. “mall”, “museum”, “arena”, etc. Points of historical interest should be identified by name.
- Color Palette:
- Height can get larger with additional destinations.

Example:

			
	Trail Continues 0 miles	0 min	0 min
	Visitor Center 0.6 miles	10 min	2 min
	Rotary PlayGarden 1.3 miles	18 min	6 min
	Ryland Park 2.1 miles	35 min	12 min

Trail Sign Details - Regulatory Signs

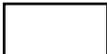
CSJ-TRIA: Trail Rules and Regulations



Notes:

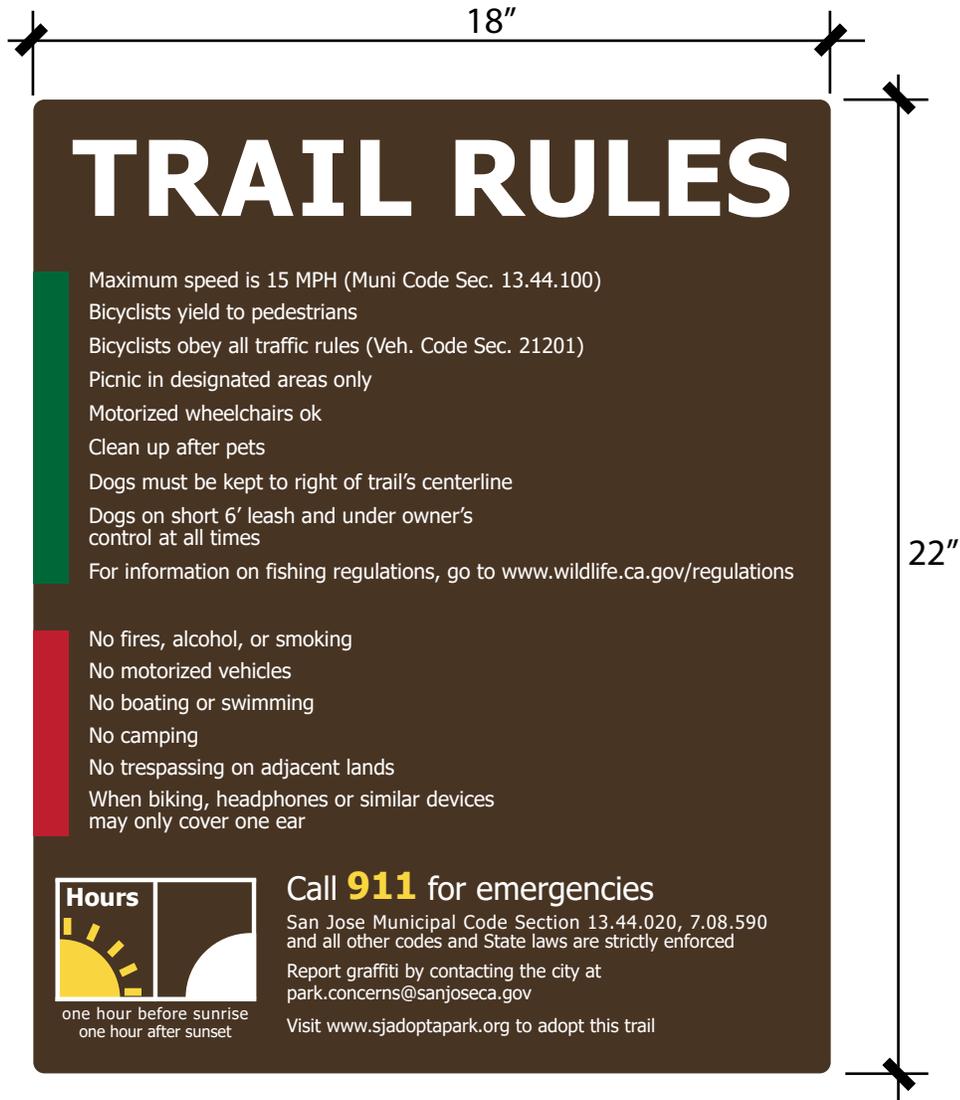
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified, locate sign 10' beyond beginning of trail. Mount directly beneath CSJ-TG2.

Color Palette:

	Dark Green (C-90, M-30, Y-95, K-30)
	Red (C-15, M-100, Y-90, K-10)
	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Regulatory Signs

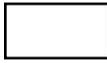
CSJ-TRIB: Trail Rules and Regulations



Notes:

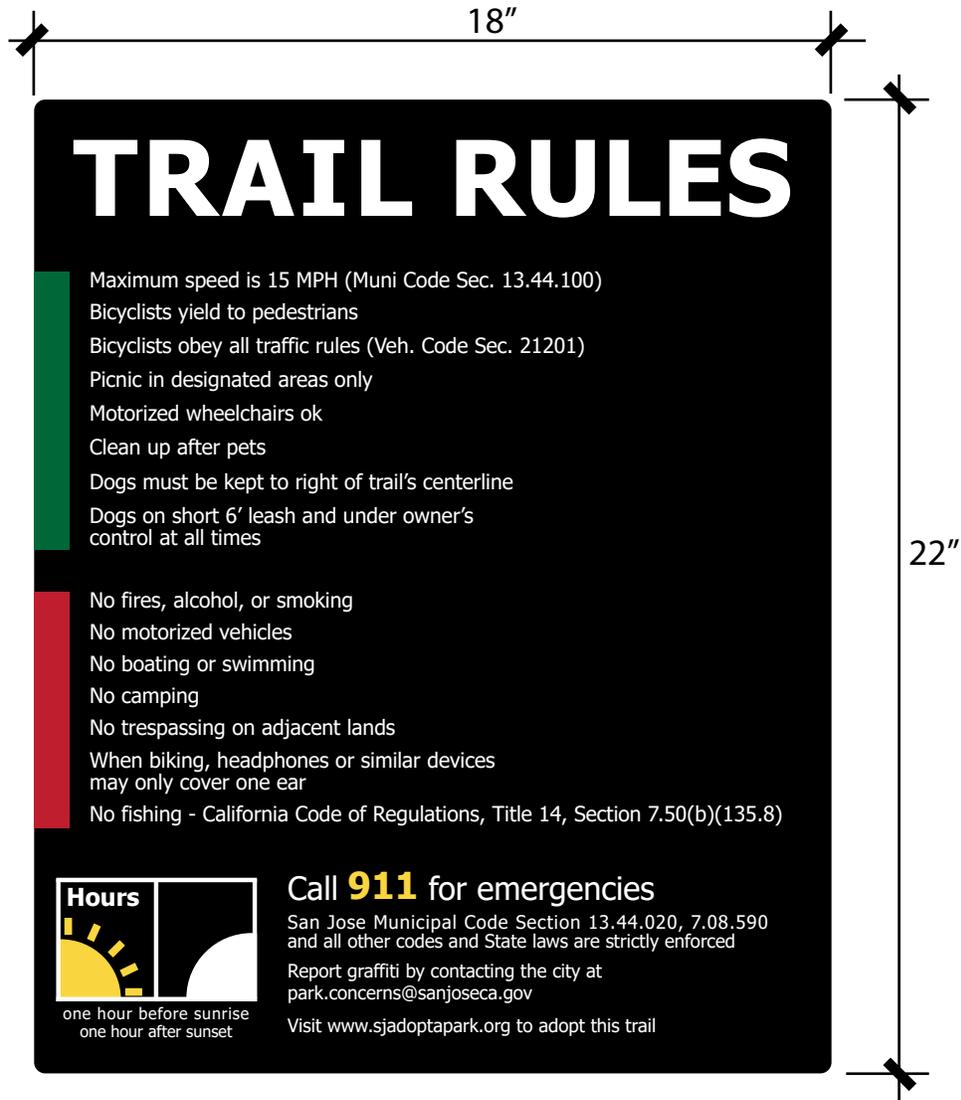
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified, locate sign 10' beyond beginning of trail. Mount directly beneath CSJ-TG2.
4. Color change, no change in rules.

Color Palette:

	Dark Green (C-90, M-30, Y-95, K-30)
	Red (C-15, M-100, Y-90, K-10)
	Yellow (C-3, M-13, Y-86, K-0)
	Brown (C-52, M-65, Y-78, K-59)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Regulatory Signs

CSJ-TRIC: Trail Rules and Regulations



Notes:

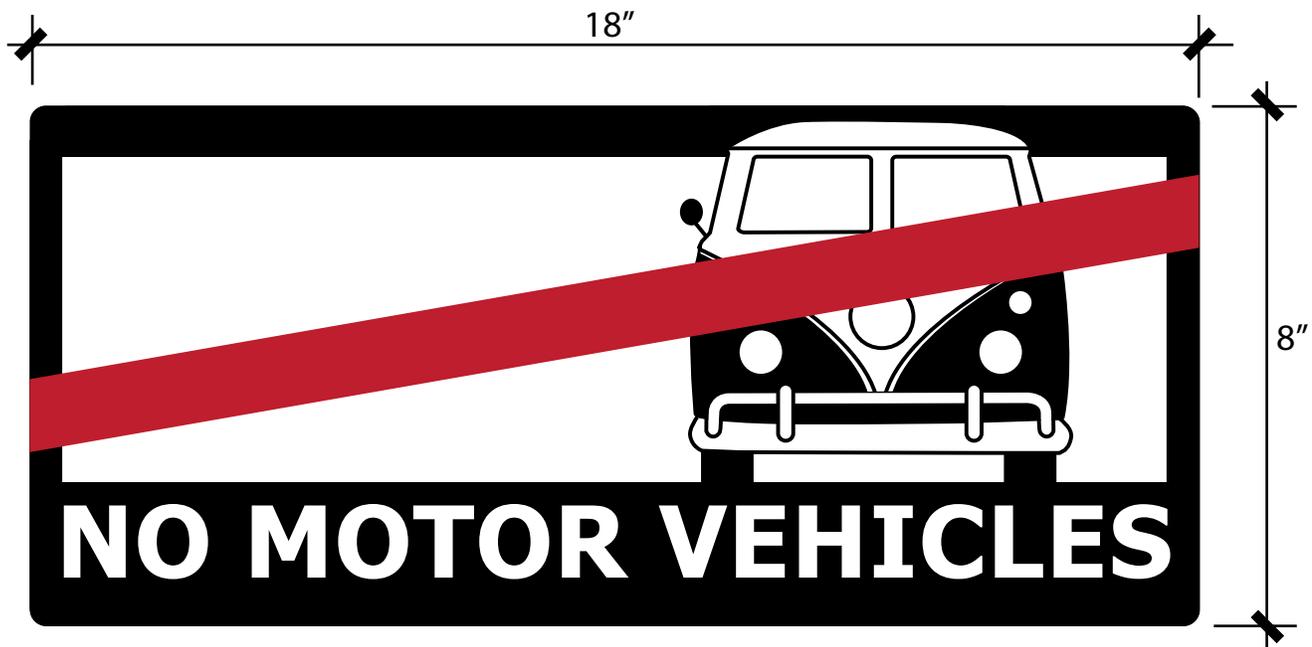
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified, locate sign 10' beyond beginning of trail. Mount directly beneath CSJ-TG2.
4. Altered fishing rule to reflect guidance from California Code of Regulations.

Color Palette:

	Dark Green (C-90, M-30, Y-95, K-30)
	Red (C-15, M-100, Y-90, K-10)
	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Regulatory Signs

CSJ-TR2: No Motor Vehicles



Notes:

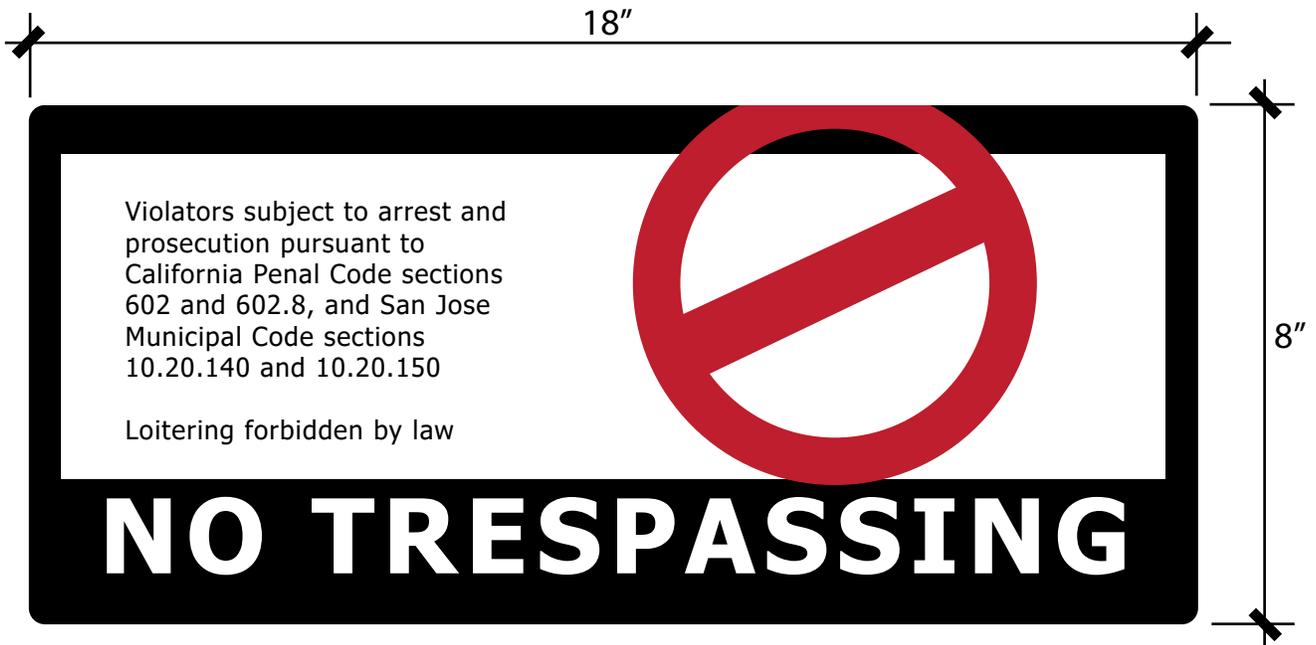
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. May be grouped with CSJ-TG1, CSJ-TG2, and CSJ-TR1 as applicable

Color Palette:

	Red (C-15, M-100, Y-90, K-10)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Regulatory Signs

CSJ-TR3: No Trespassing



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Sign may be affixed to fence or structure rather than freestanding post, as appropriate and as approved by City.

Color Palette:

	Red (C-15, M-100, Y-90, K-10)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Regulatory Signs

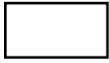
CSJ-TR4: Dog Ordinance



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.

Color Palette:

	Dark Green (C-90, M-30, Y-95, K-30)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Regulatory Signs

CSJ-TR5: Bicycles Yield to Pedestrians



Notes:

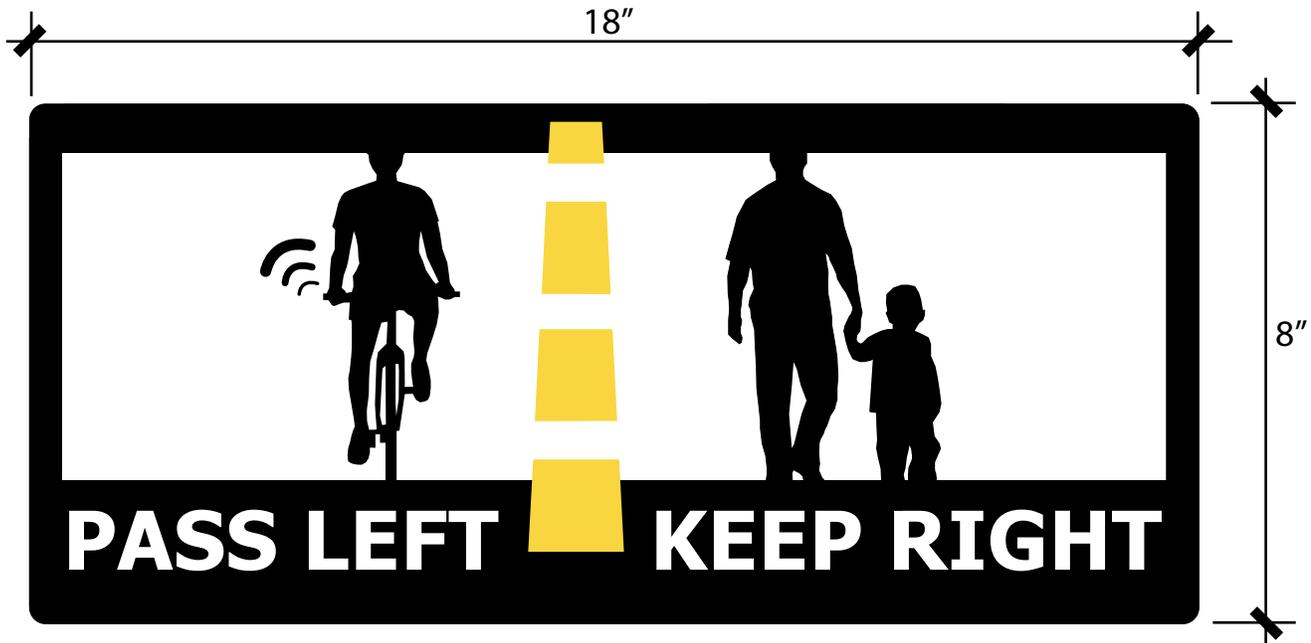
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.

Color Palette:

	Red (C-15, M-100, Y-90, K-10)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Regulatory Signs

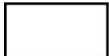
CSJ-TR6: Pass Left/Keep Right



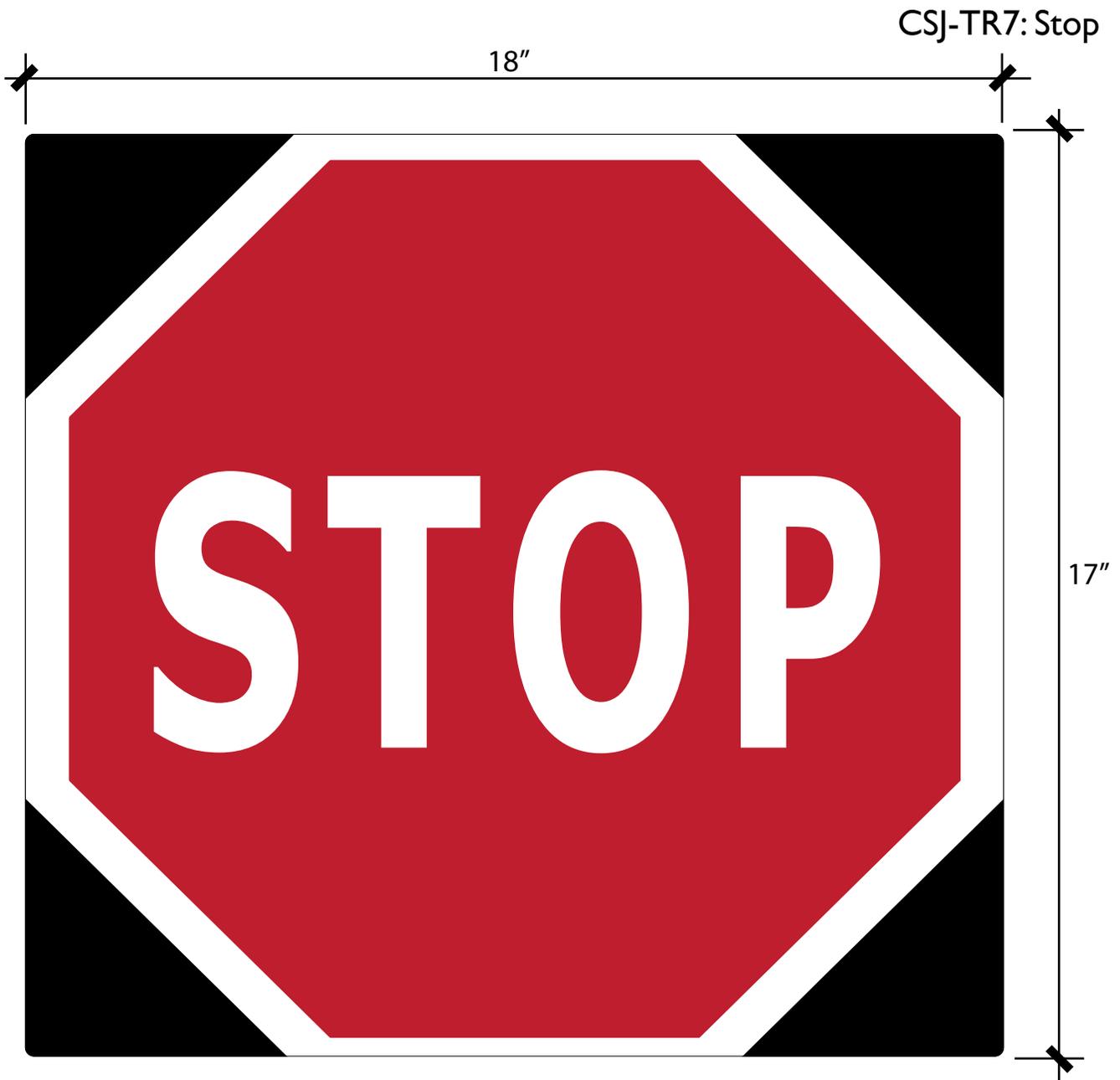
Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

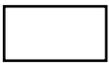
Trail Sign Details - Regulatory Signs



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before intersection or end of trail. May be grouped with guidance and warning signs as applicable.

Color Palette:

	Red (C-15, M-100, Y-90, K-10)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Regulatory Signs

CSJ-TR8.1: Trail Closed Temporarily



Notes:

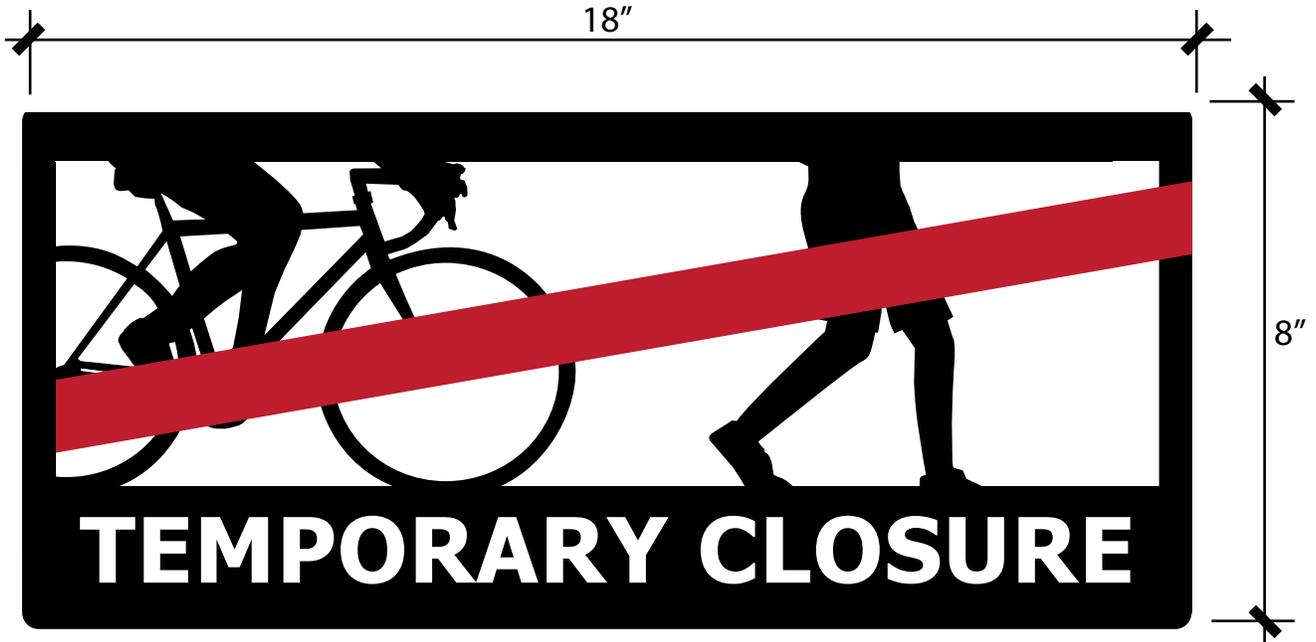
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Sign may be affixed to fence or structure rather than freestanding post, as appropriate by City.

Color Palette:

	Red (C-15, M-100, Y-90, K-10)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Regulatory Signs

CSJ-TR8.2: Trail Closed Temporarily



Notes:

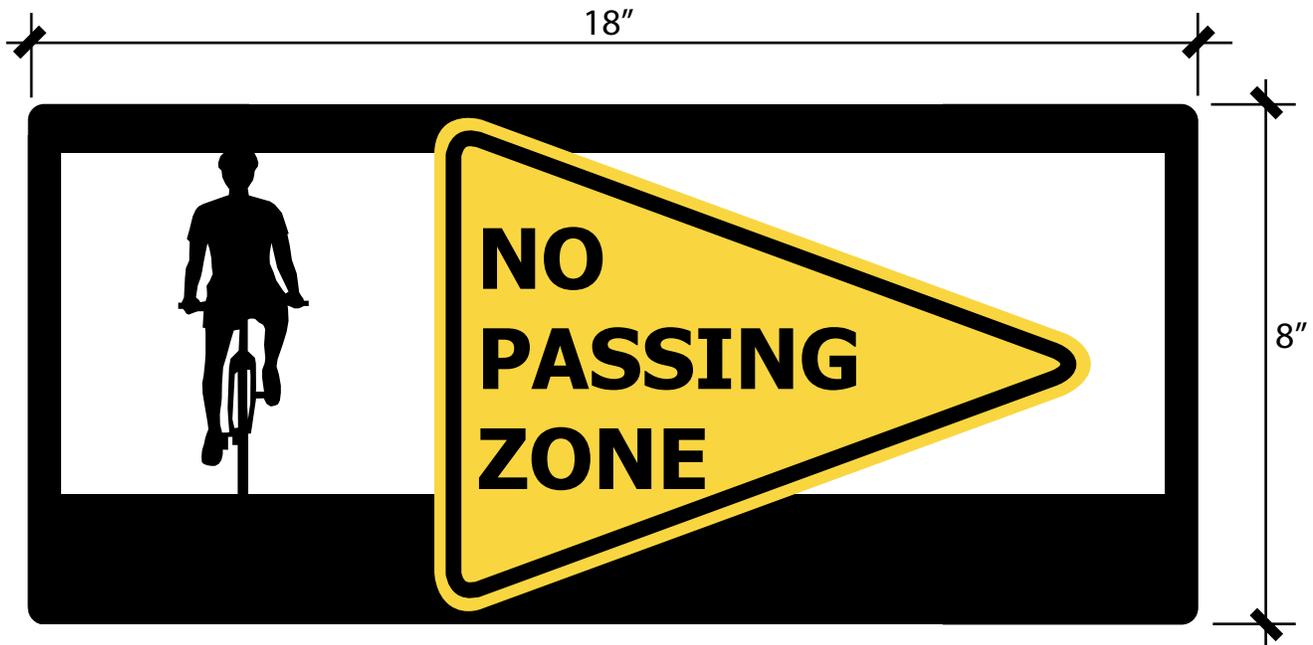
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Sign may be affixed to fence or structure rather than freestanding post, as appropriate by City.

Color Palette:

	Red (C-15, M-100, Y-90, K-10)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Regulatory Signs

CSJ-TR9: Do Not Pass



Notes:

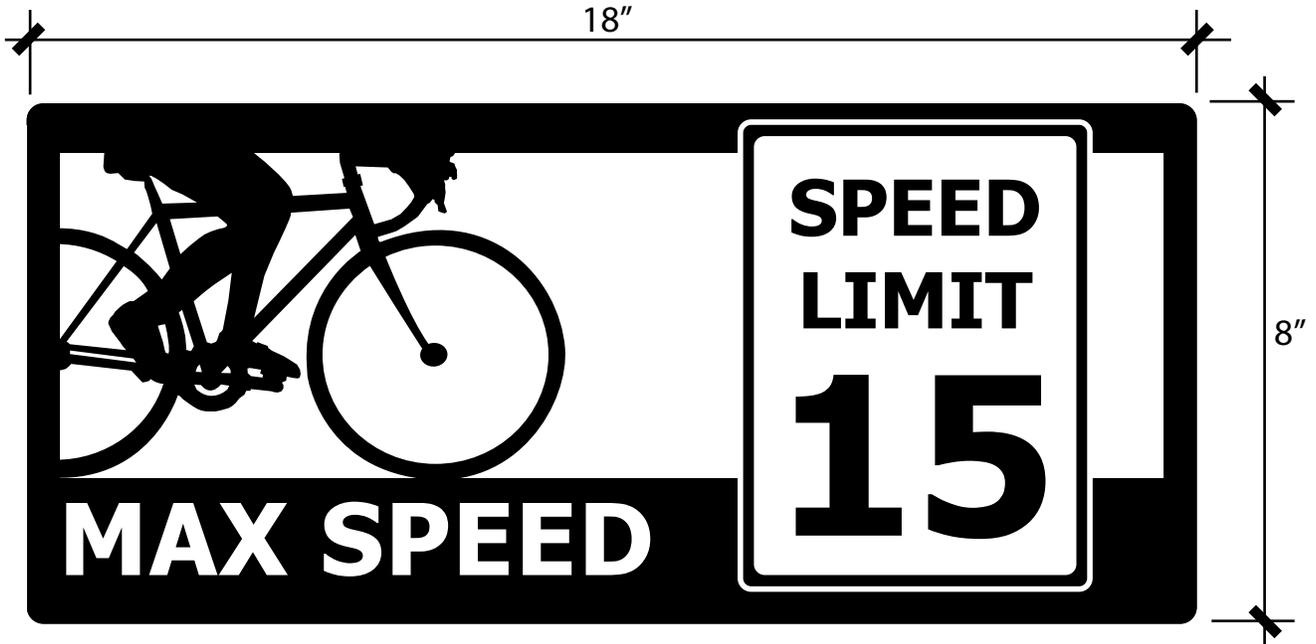
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Regulatory Signs

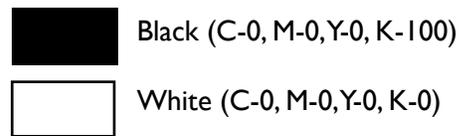
CSJ-TR10: Speed Limit



Notes:

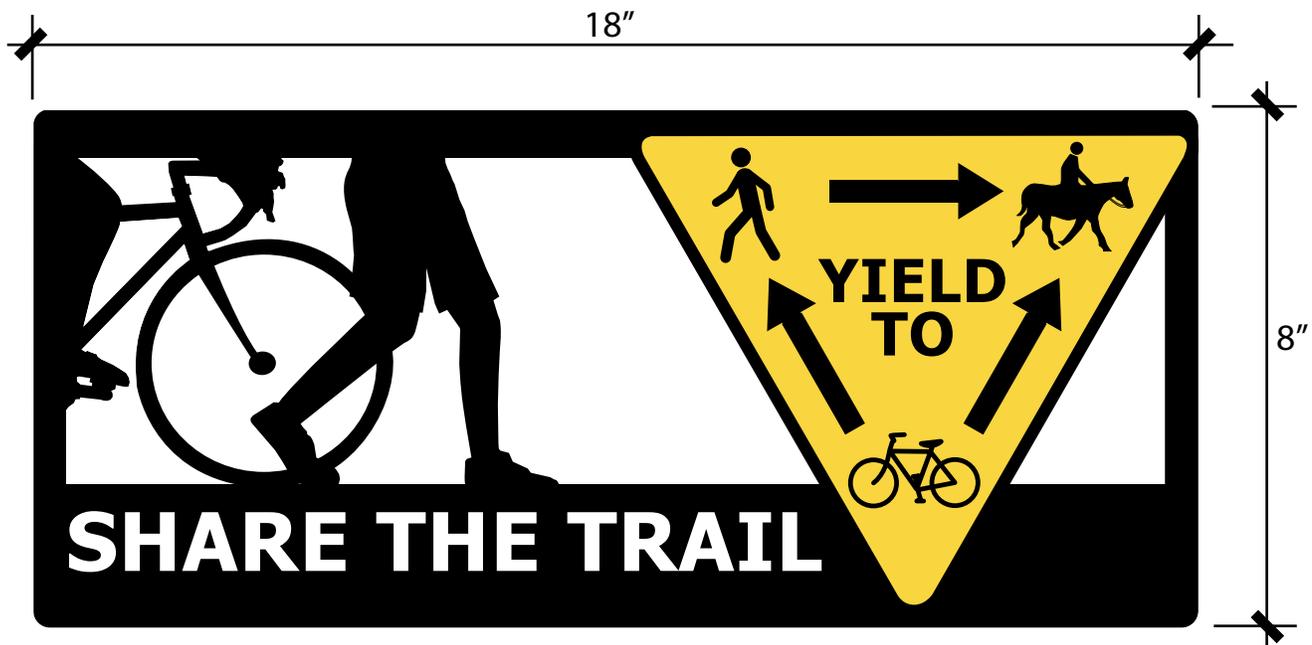
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.

Color Palette:



Trail Sign Details - Regulatory Signs

CSJ-TR1 I: Share the Trail



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TWI: Bikeway Narrows



Notes:

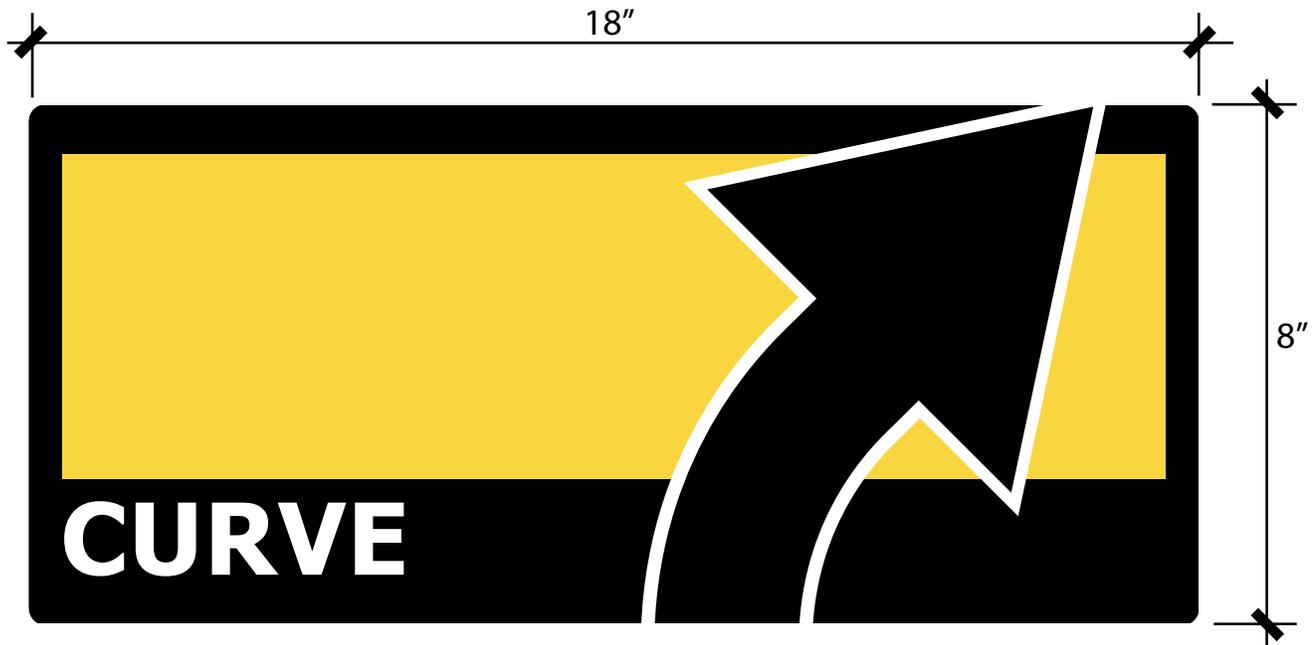
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign no less than 50' in advance of the beginning of the change in width.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TW2.1: Curve Ahead - Right



Notes:

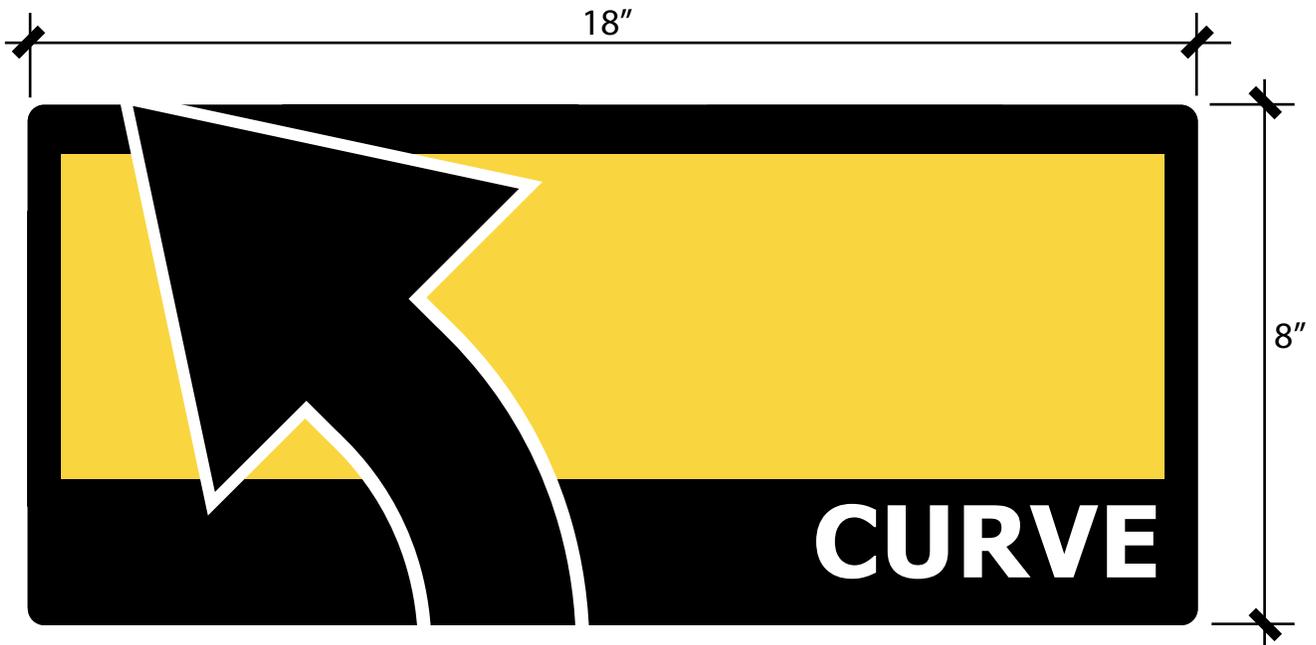
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign no less than 50' in advance of the beginning of the change of alignment.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TW2.2: Curve Ahead - Left



Notes:

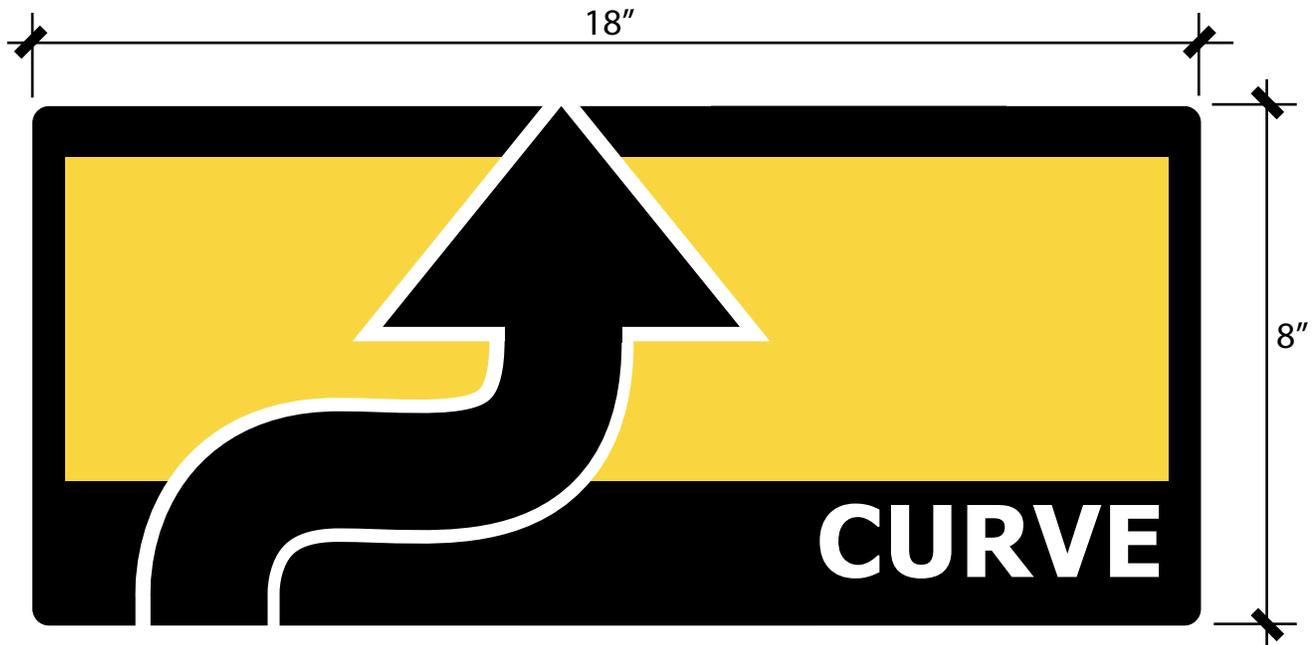
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign no less than 50' in advance of the beginning of the change of alignment.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TW2.3: Curve Ahead - Compound Right



Notes:

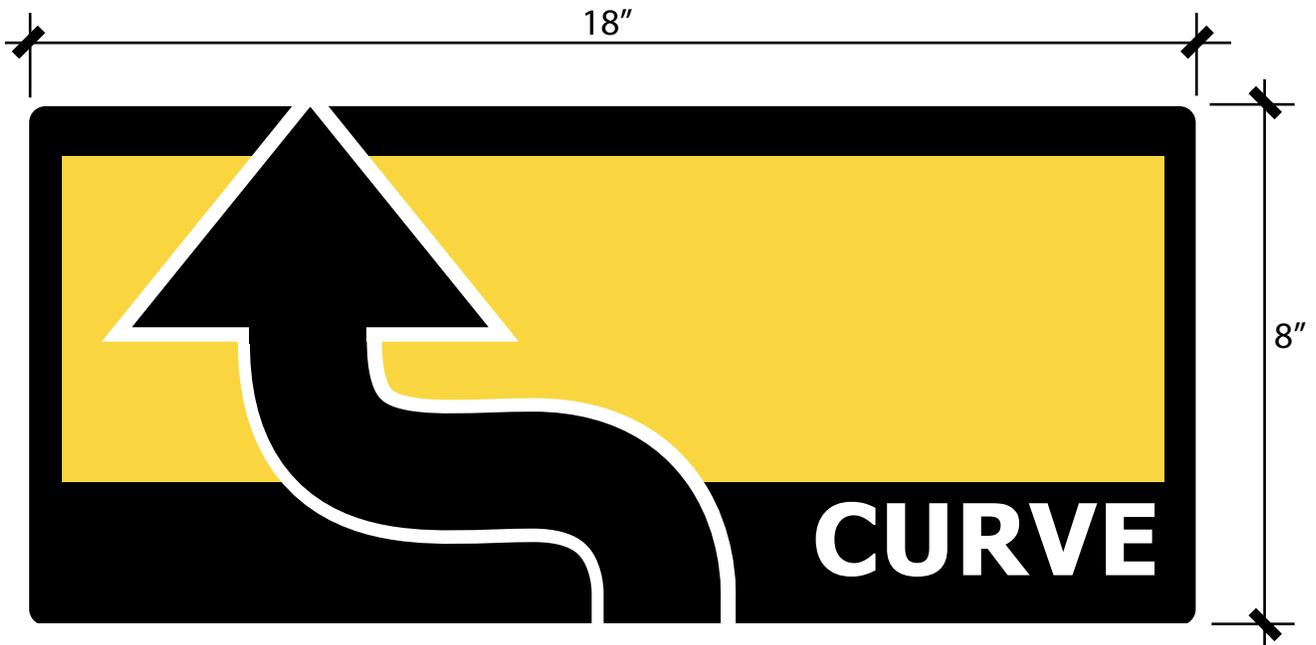
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign no less than 50' in advance of the beginning of the change of alignment.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TW2.4: Curve Ahead - Compound Left



Notes:

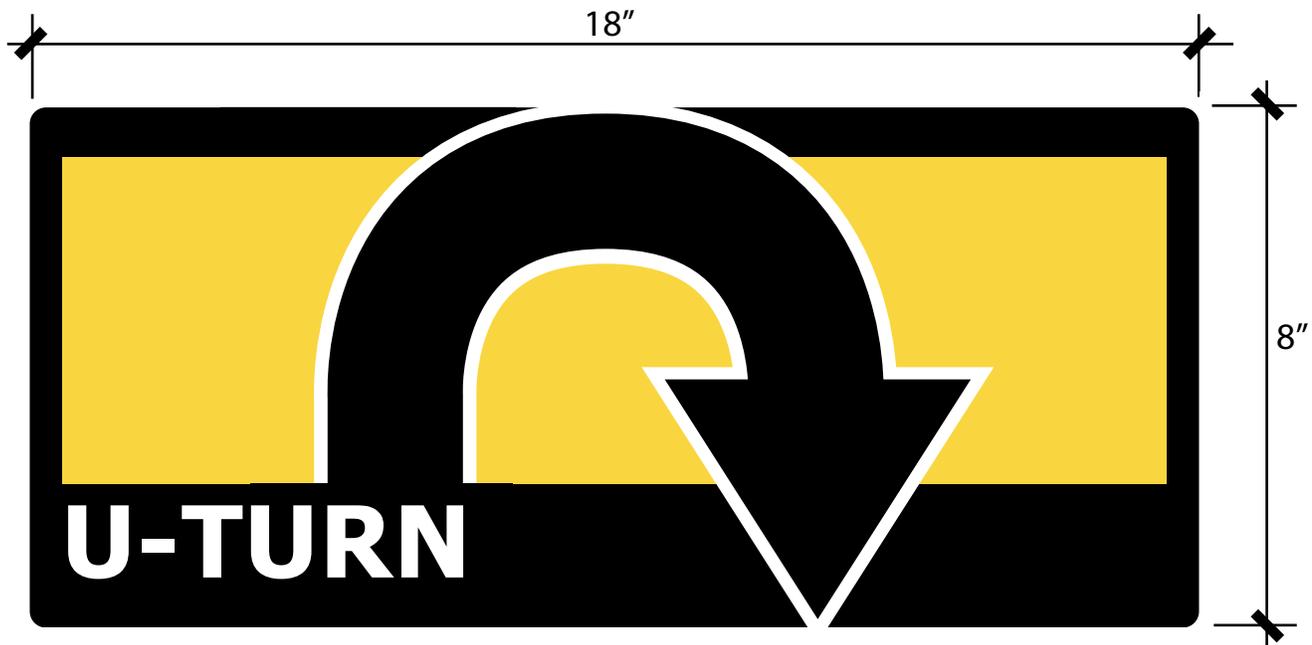
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign no less than 50' in advance of the beginning of the change of alignment.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TW2.5: Curve Ahead U-Turn



Notes:

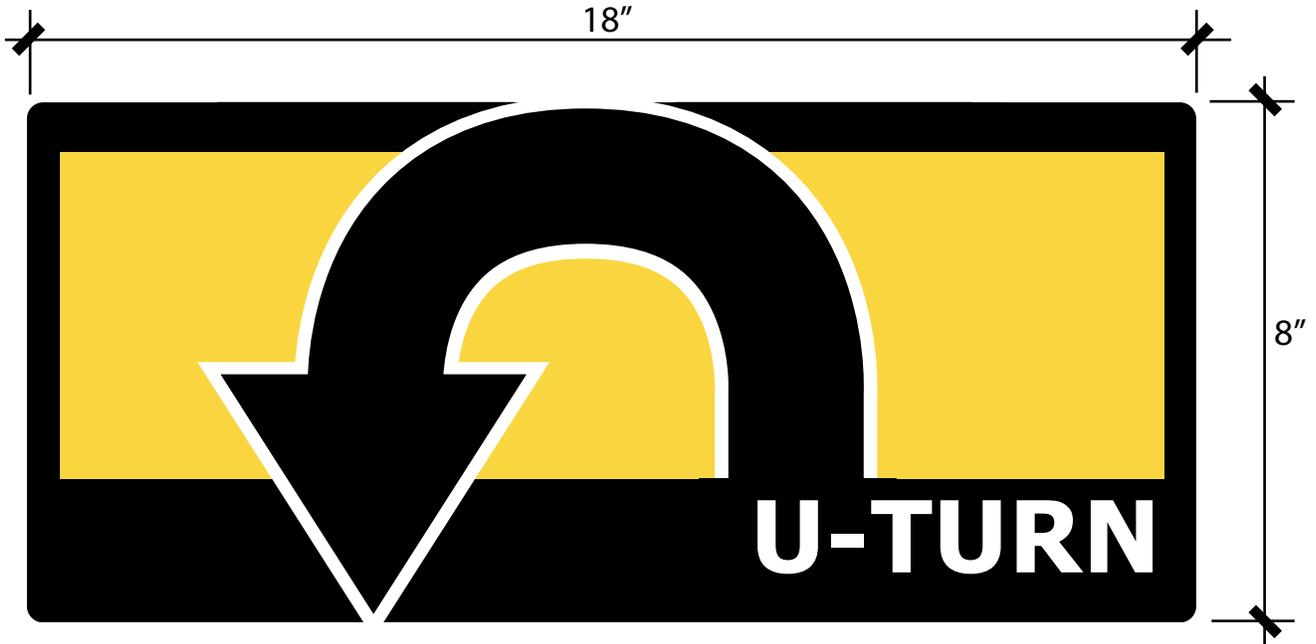
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before mid-block crossing. May be grouped with other signs as applicable.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TW2.6: Curve Ahead U-Turn



Notes:

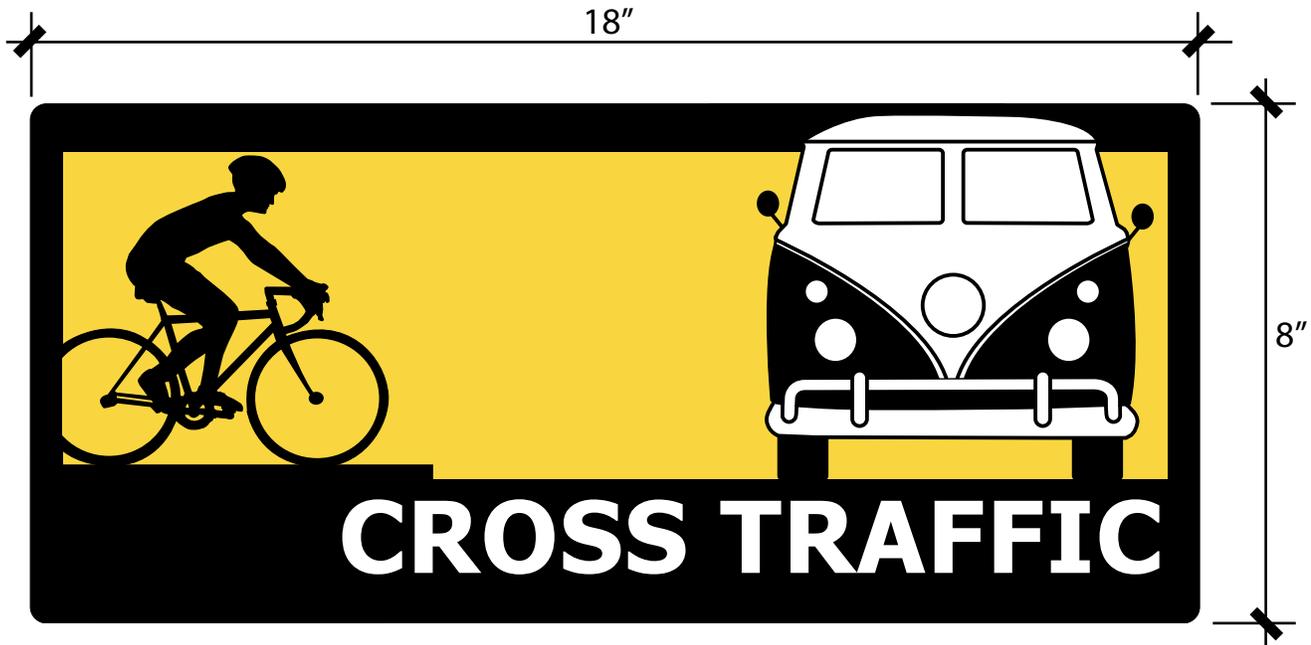
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign no less than 50' in advance of the beginning of the change of alignment.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TW3: Cross Traffic



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before mid-block crossing. May be grouped with other signs as applicable.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TW4: Dead End/Trail Ends Ahead



Notes:

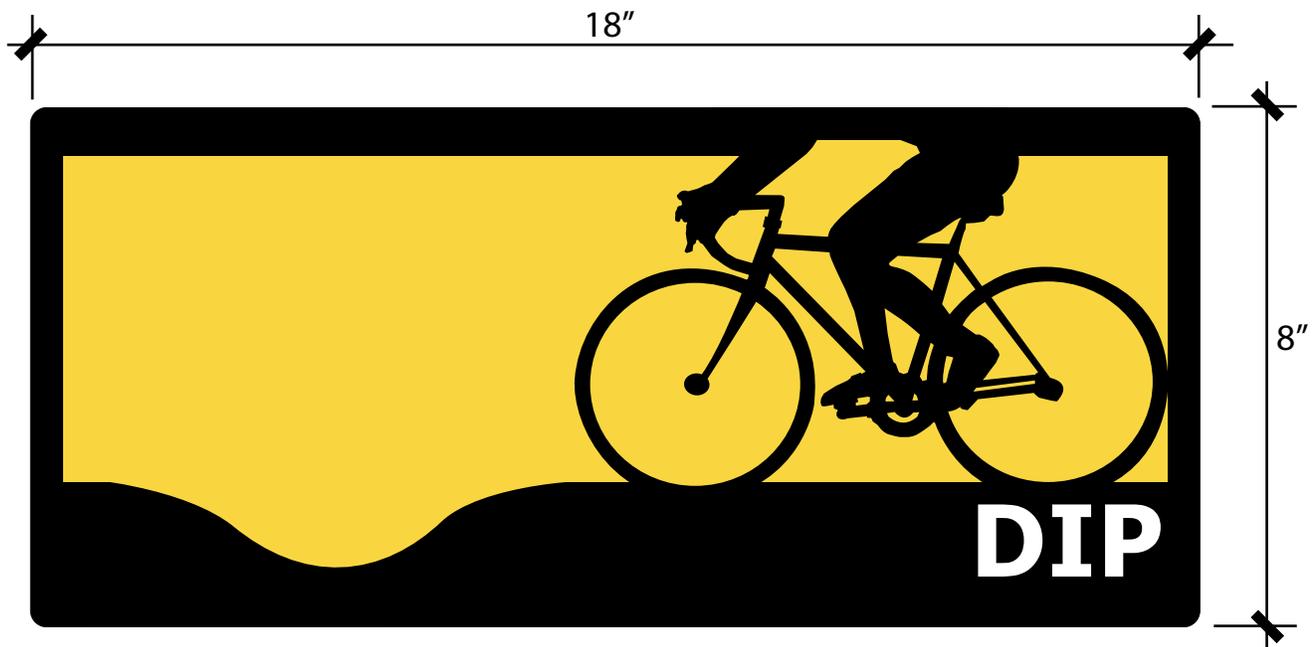
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 10' before end of trail.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TW5: Dip Ahead



Notes:

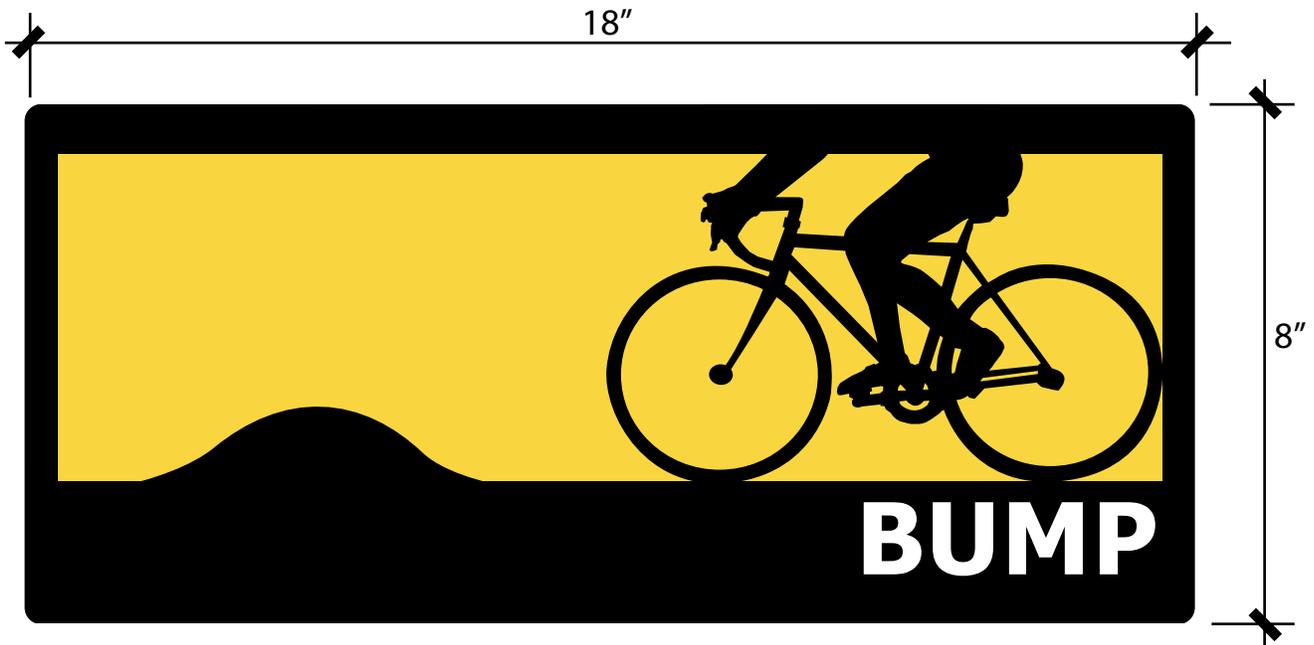
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign no less than 100' in advance of the potential hazard.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TW6: Bump Ahead



Notes:

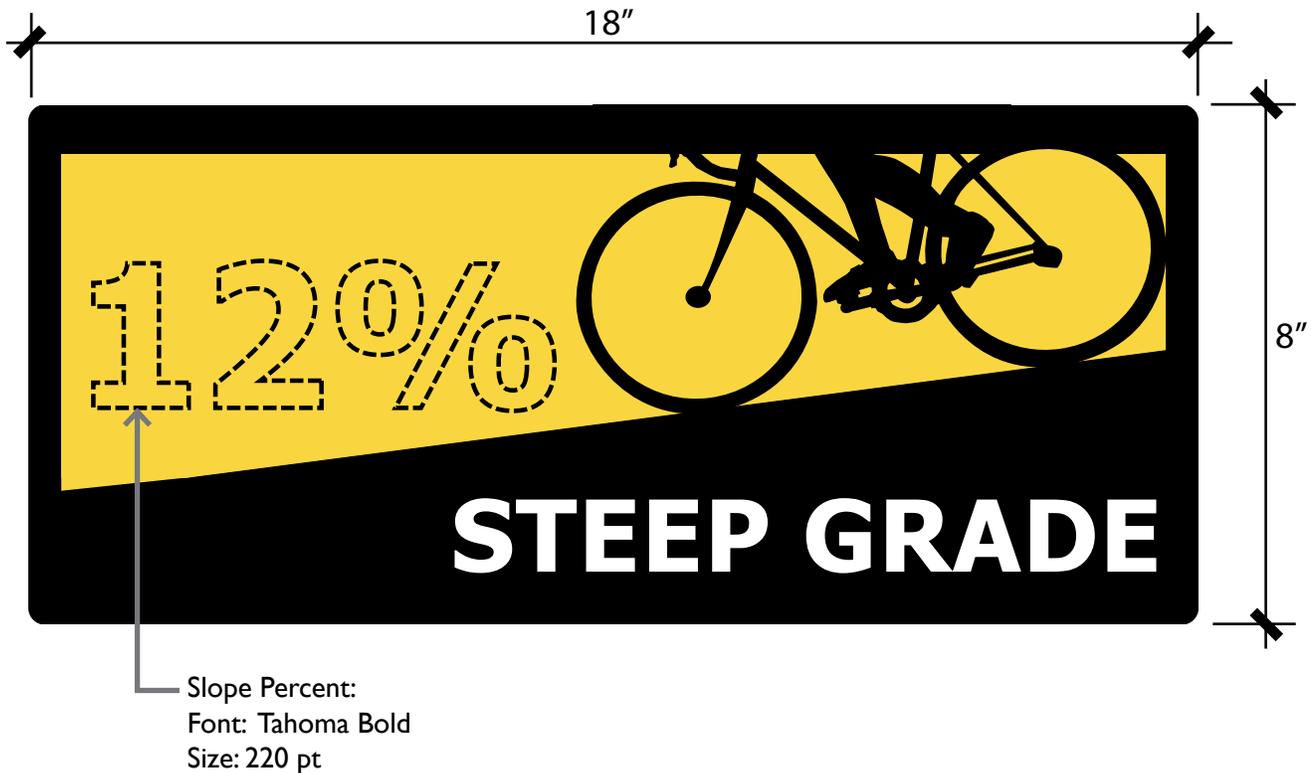
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign no less than 100' in advance of the potential hazard.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TW7: Steep Grade Ahead
Customization required



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign no less than 50' in advance of the potential hazard.

Color Palette:

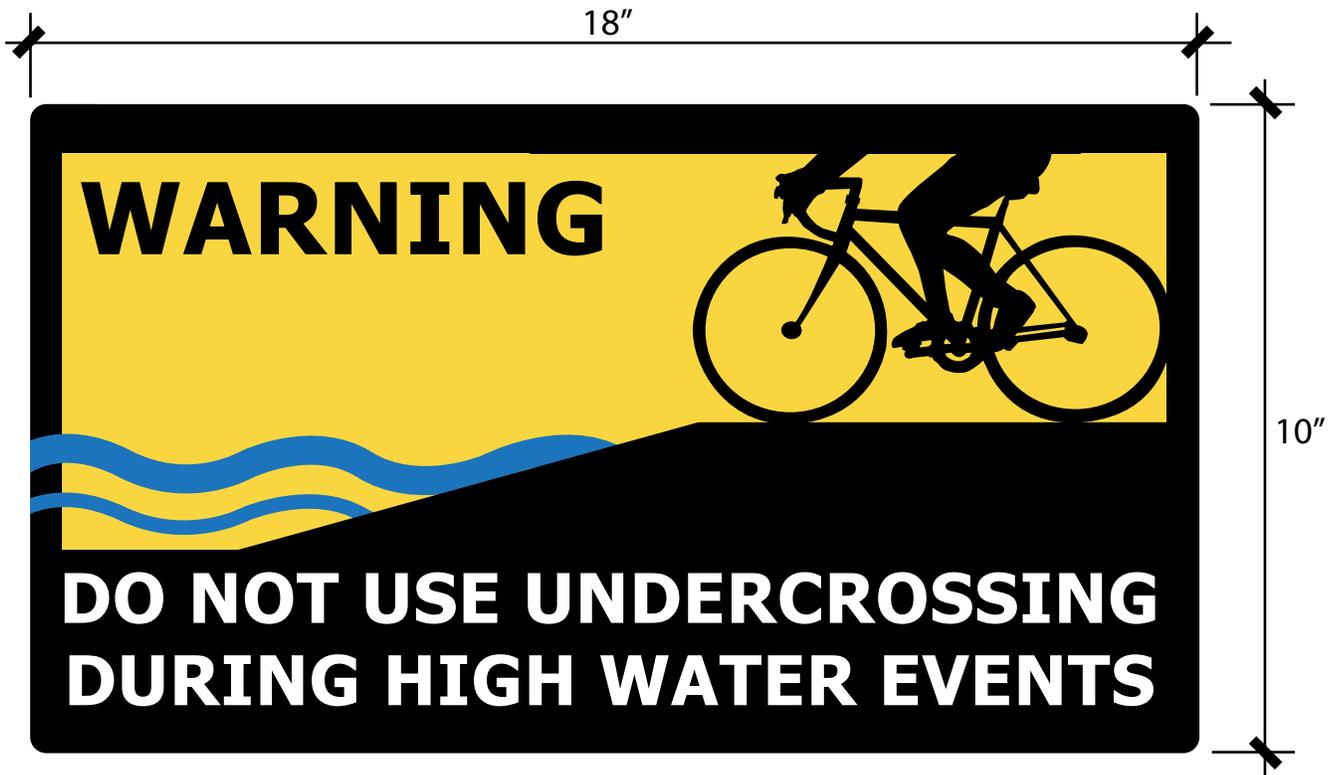
	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Example:



Trail Sign Details - Warning Signs

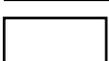
CSJ-TW8: High Water



Notes:

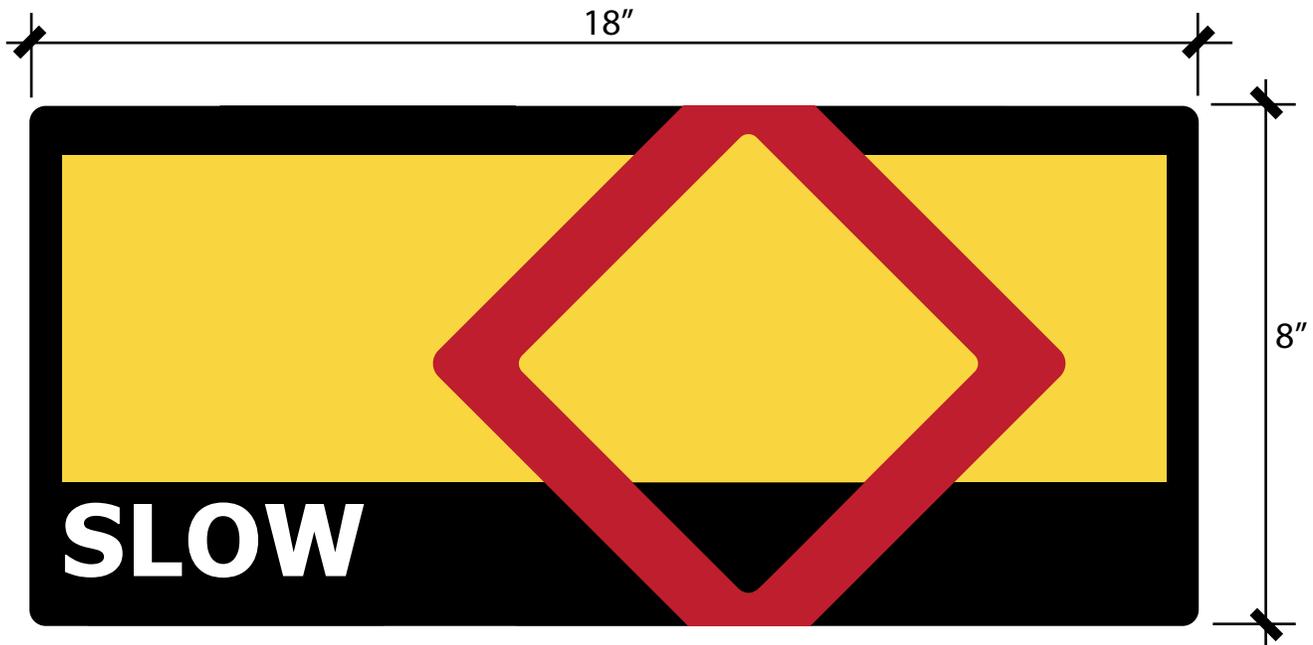
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 50' in advance of undercrossing.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Blue (C-85, M-50, Y-0, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

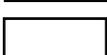
CSJ-TW9: Slow



Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 50' in advance of potential hazard.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Red (C-15, M-100, Y-90, K-10)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

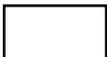
CSJ-TW10: Bikeway Xing



Notes:

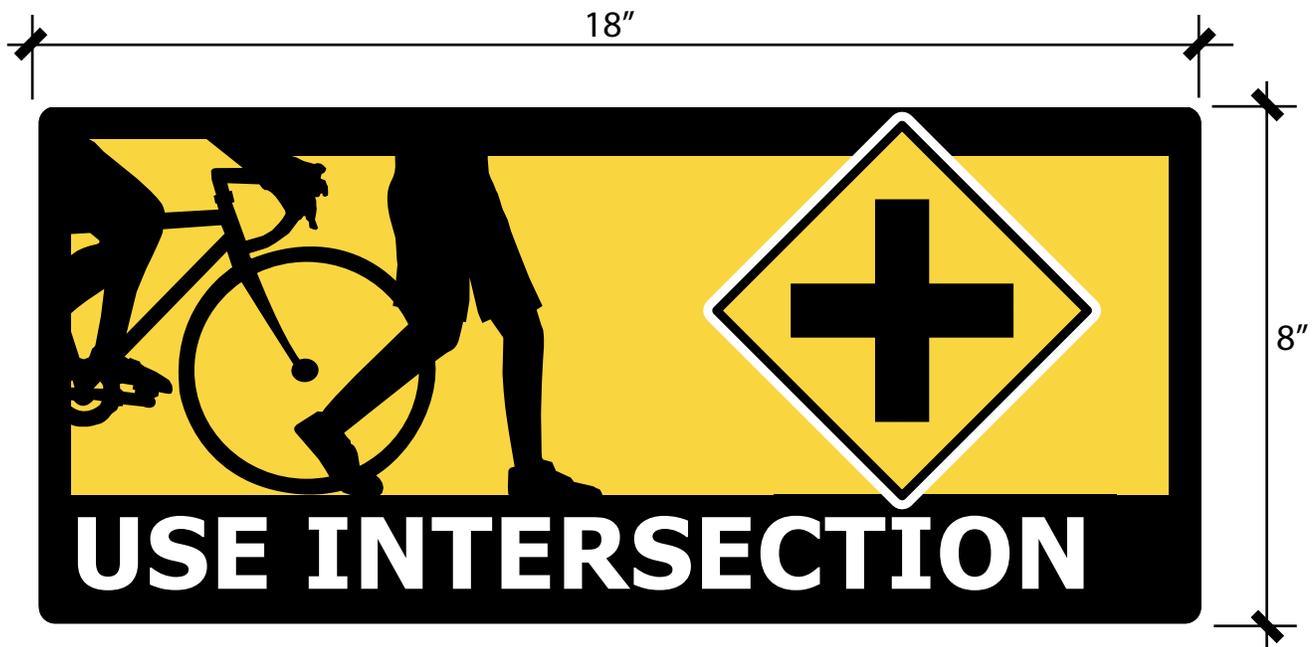
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 50' in advance of potential hazard.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Red (C-15, M-100, Y-90, K-10)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

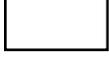
CSJ-TW1 I: Cross At Intersection



Notes:

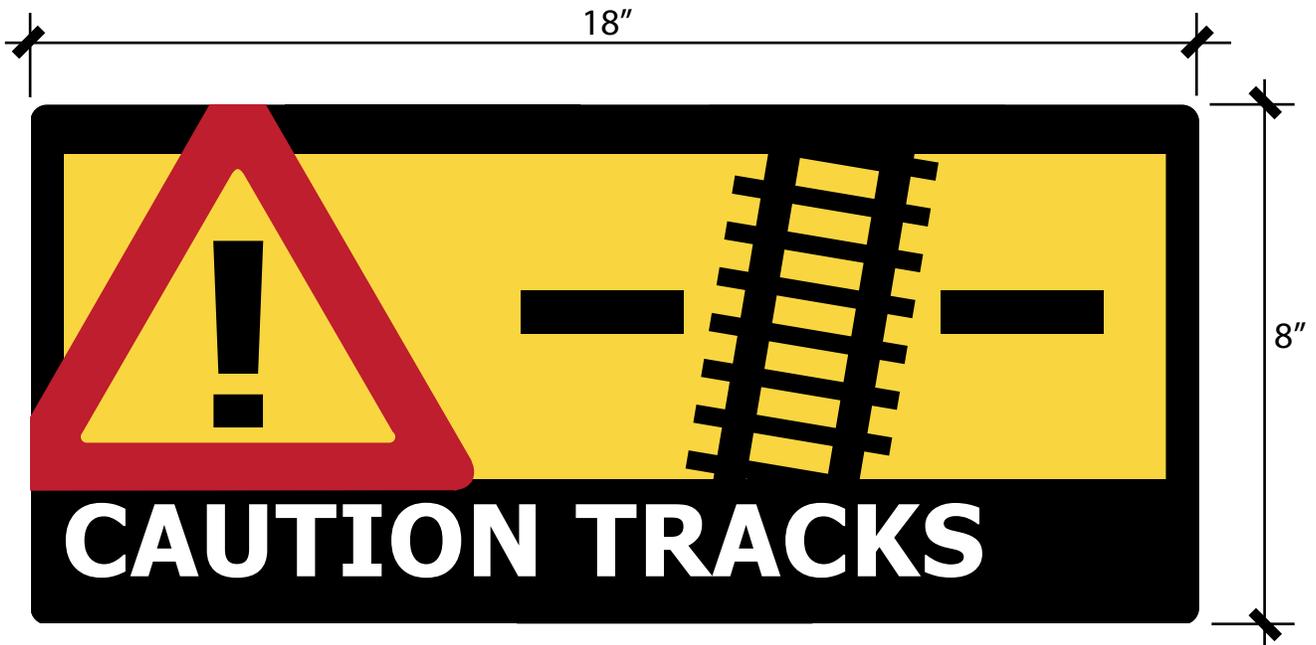
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 50' in advance of potential hazard.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Red (C-15, M-100, Y-90, K-10)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

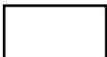
CSJ-TW12: Slippery Tracks



Notes:

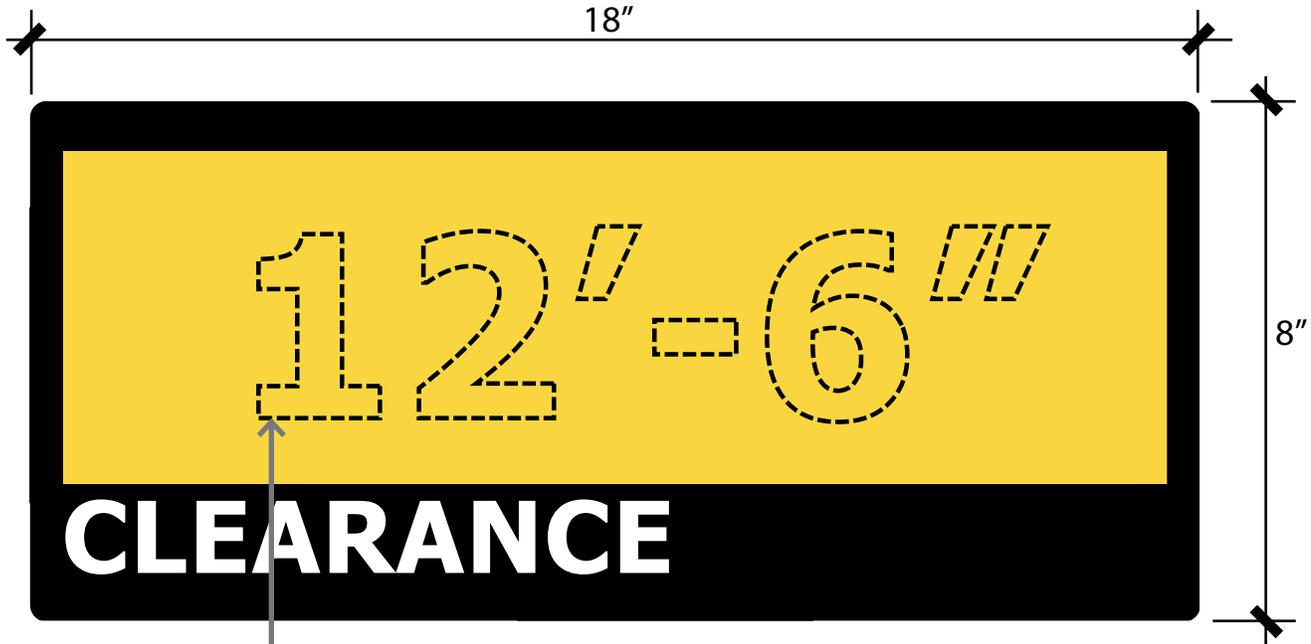
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 50' in advance of potential hazard.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Red (C-15, M-100, Y-90, K-10)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

CSJ-TWI3: Clearance
Customization required



Clearance Height:
Font: Tahoma Bold
Size: 280 pt
All Caps

Notes:

1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 50' in advance of underpass.

Color Palette:

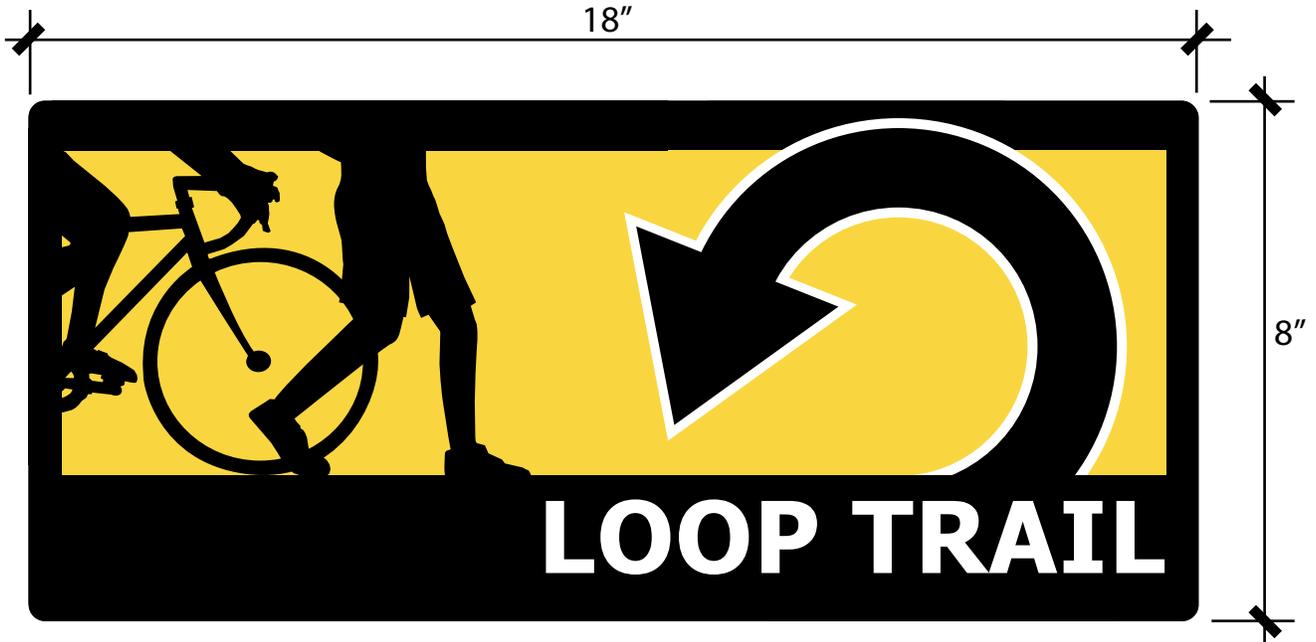
	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Example:



Trail Sign Details - Warning Signs

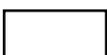
CSJ-TWI4: Loop



Notes:

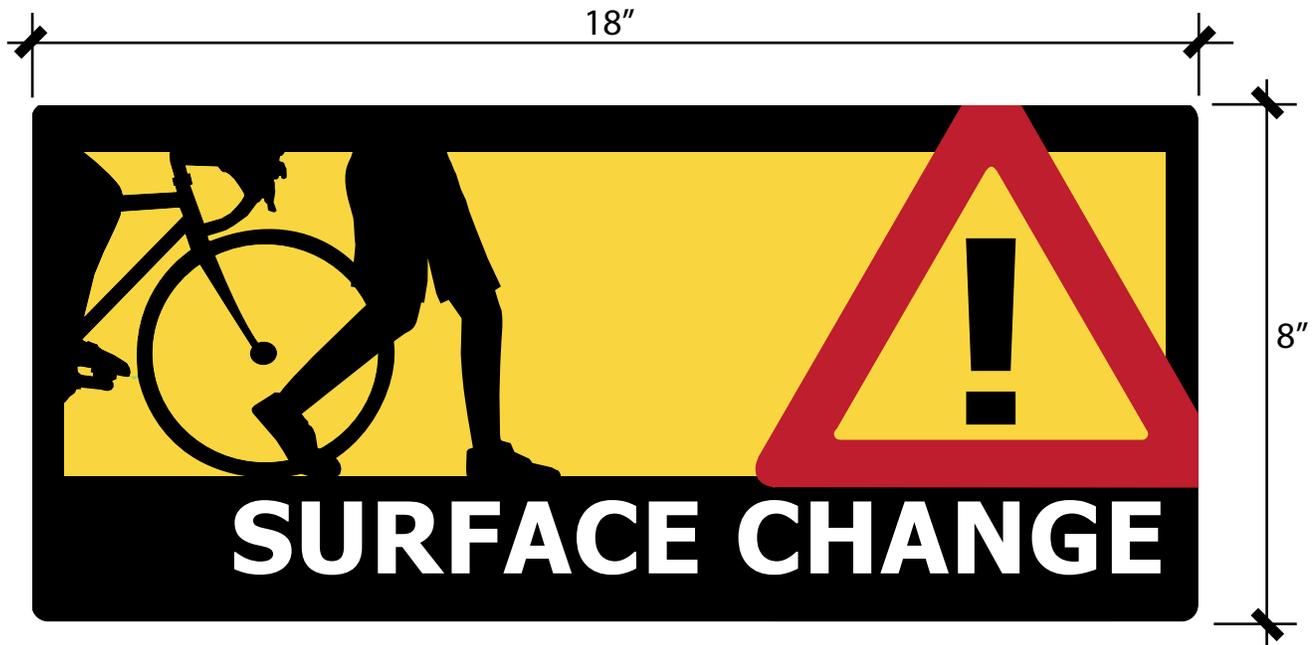
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 50' in advance of trail head.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Warning Signs

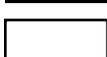
CSJ-TWI15: Surface Change



Notes:

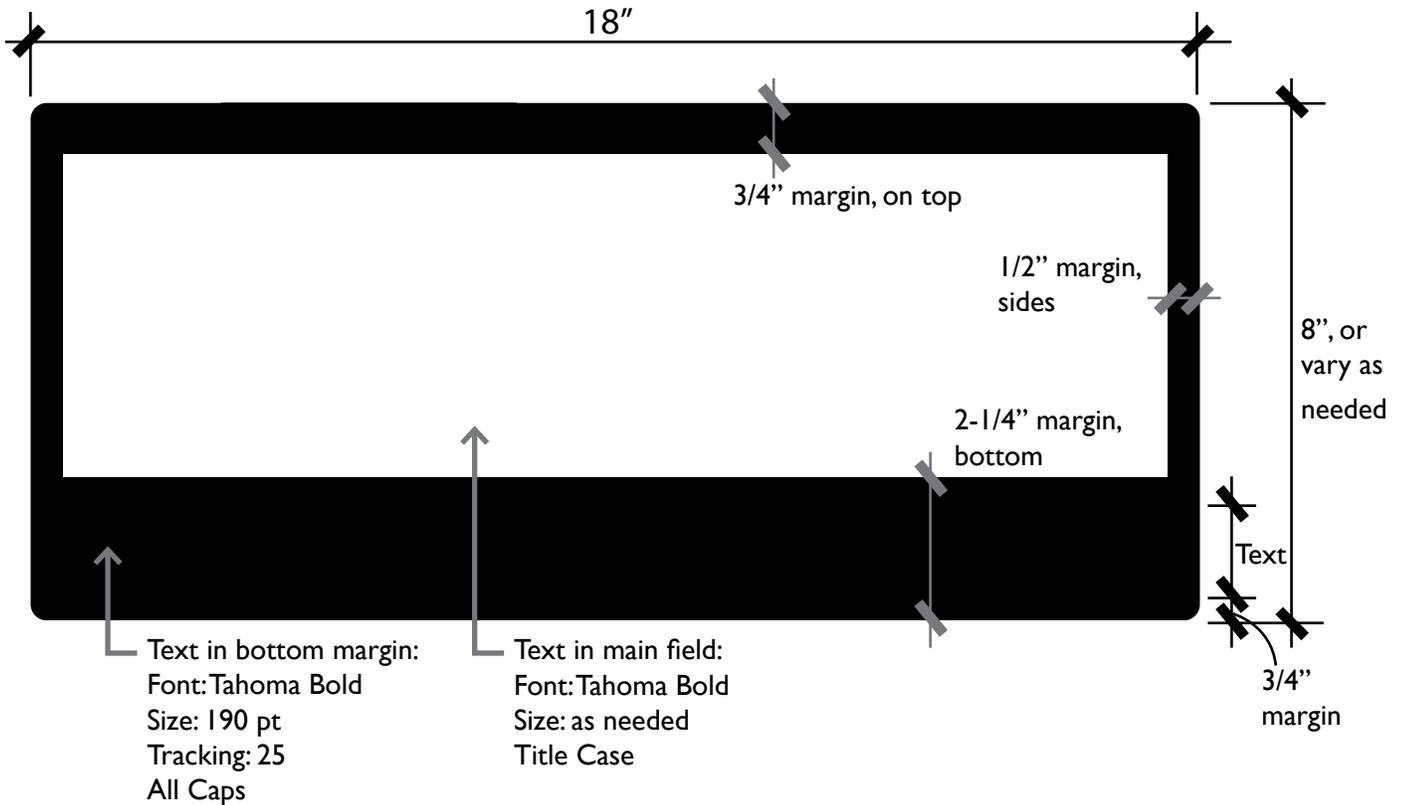
1. 1/4" radius corners, typical.
2. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.
3. Unless otherwise specified on plans, locate sign 50' in advance of potential hazard.

Color Palette:

	Yellow (C-3, M-13, Y-86, K-0)
	Red (C-15, M-100, Y-90, K-10)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Sign Details - Custom Sign Template

CSJ-TC: Sign Template
Customization required



Notes:

1. For additional signs not addressed by the trail signage package, use the standard dimensions, proportions, text styles, and color palette.
2. 1/4" radius corners, typical.
3. Sign design to be submitted in EPS digital format to sign fabricator, printed on vinyl, applied to 12 gauge aluminum, as available from a custom sign manufacturer located in San José.

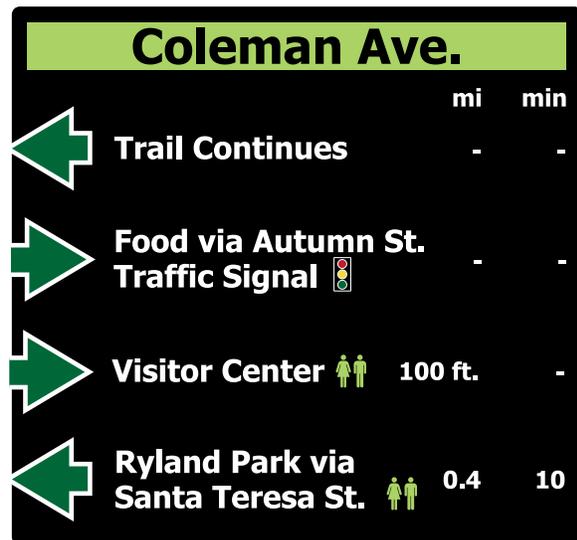
Color Palette:

	Green (C-37, M-0, Y-79, K-0) for directional signs
	Red (C-15, M-100, Y-90, K-10) for regulatory signs
	Yellow (C-3, M-13, Y-86, K-0) for warning signs
	Blue (C-85, M-50, Y-0, K-0) for information signs
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

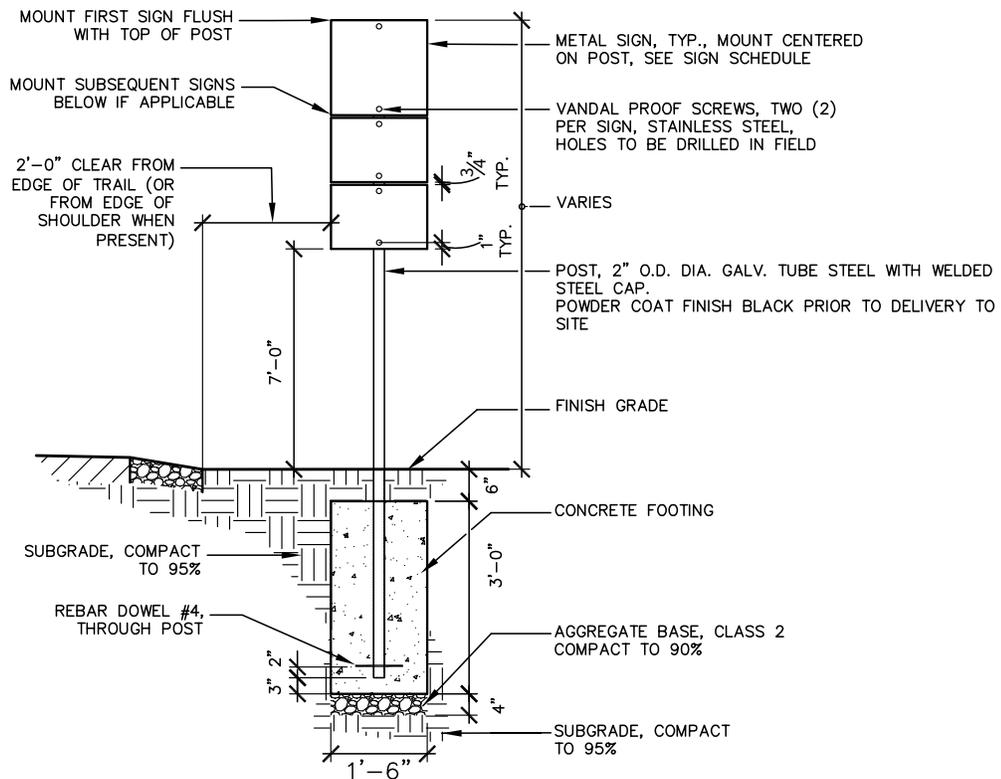
Create Custom Signs

The large library of signs for San Jose Trails cannot anticipate all guidance, warnings, and directional needs along the Trail Network. From time to time, the Project Manager will need to create a special sign. The following approach should be used:

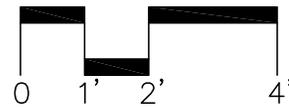
- Adhere to graphic style and quality of the signage library.
- Use colors, line weights, and graphic elements consistently.
- Question if a new sign is required – always seek to minimize signage.
- Favor graphics over words.
- Present text in the most succinct manner possible.
- Field verify sign placement and graphics prior to installation.



Trail Sign Installation Detail



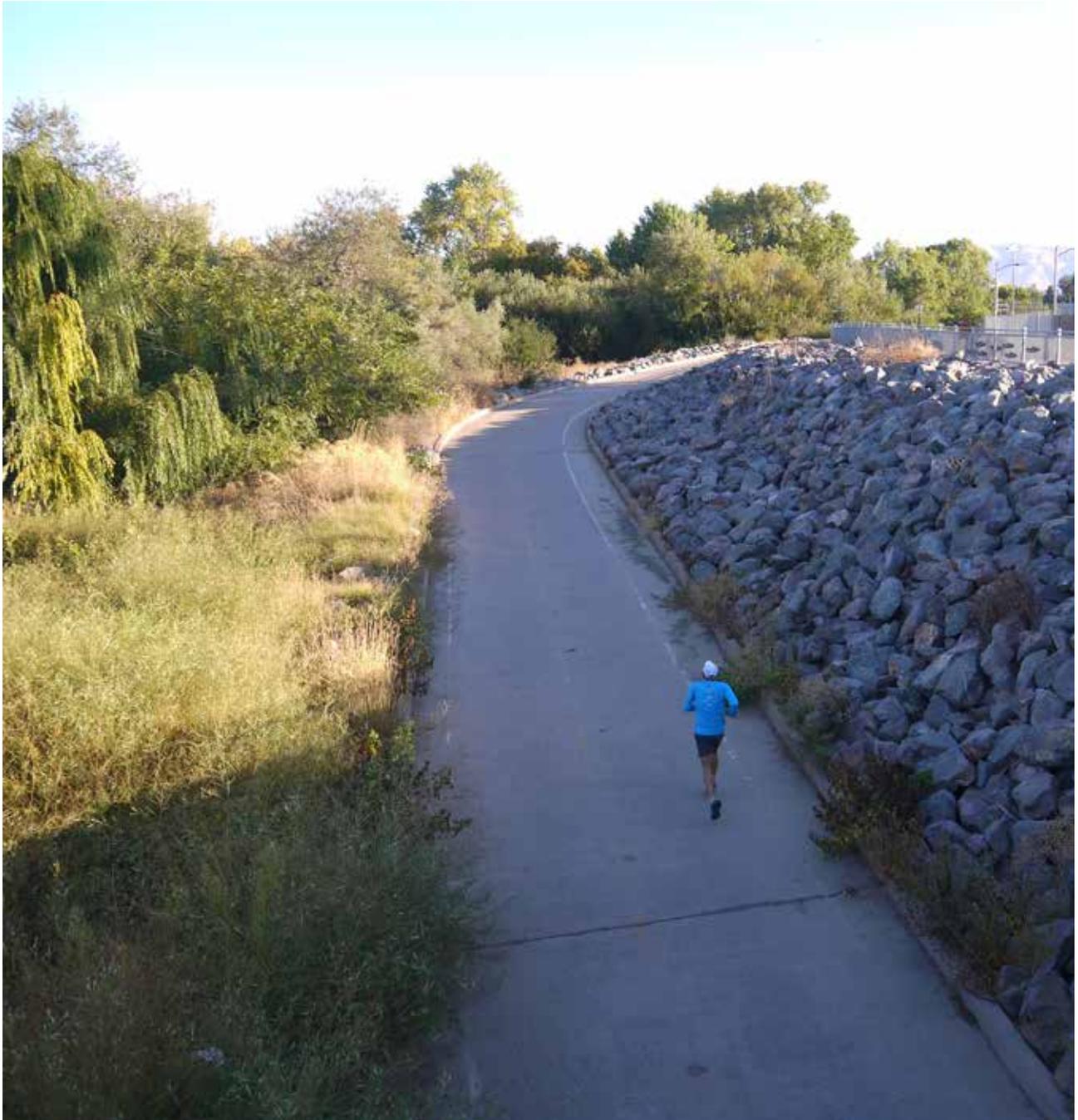
- NOTES:
1. SEE PLANS FOR SIGN LOCATIONS.
 2. SIGN TYPES AND LOCATIONS TO BE REVIEWED BY CITY PRIOR TO INSTALLATION
 3. DETAILS AND INSTALLATION OF ALL SIGNS SHALL FOLLOW THE REQUIREMENT OF "THE TRAIL SIGNAGE GUIDELINES, CITY OF SAN JOSE TRAIL PROGRAM" DATED APRIL, 2010.
 4. ALL SIGNS SHALL BE APPLIED WITH GRAFFITI-RESISTANT COATINGS.



Include this detail in construction documents for all trails projects that include signage.

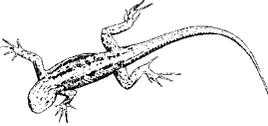
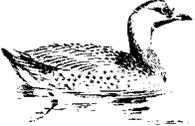
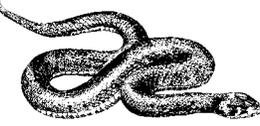
Trail System Name Signs

Individual trail system name signs have been developed to give each trail a unique identity while maintaining its relationship with the larger San José Trail Network. These trail system name signs, with their distinctive icon and color combinations, will be installed at all trailheads. Each name sign consists of the name of the trail and a graphic icon on a colored background. The trail icons were selected and assigned to correspond to each trail's unique history, characteristics, or location.

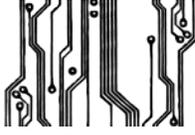


Matrix of Trail Systems, Icons, and Colors

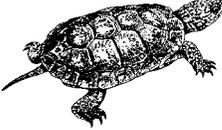
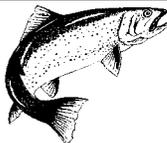
This matrix lists the trail system names, codes, icons, and colors for 40 open and planned trail systems. This matrix is a reference tool to help designers select the appropriate sign for a particular trail system.

Trail System	Code	Icon	Thumbnail of Icon	Color	Color Swatch
Open and Partially Open					
Albertson Parkway	ALB	oak tree		green	
Alum Rock Park	ALR	golden eagle		green	
Bay Trail	BAY	bay trail logo		beige	
Barberry Lane Pathway	BAR	lizard		green	
Berryessa Creek	BER	western screech owl		beige	
Calero Creek	CAL	water bird		green	
Canoas Creek	CAN	snake		green	
Coyote Creek	COY	coyote		beige	
Coyote-Alamitos Canal	COA	checkered spot butterfly		green	

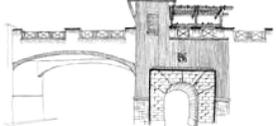
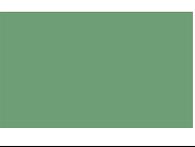
Matrix of Trail Systems, Icons, and Colors

Trail System	Code	Icon	Thumbnail of Icon	Color	Color Swatch
Component Parkway	COM	Microchip		beige	
Doerr Parkway	DOE	hiking boot		beige	
Edenvale/Great Oaks	EDG	rose		green	
Evergreen Creek	EVR	lupine		beige	
Fisher Creek	FIS	dill flower		green	
Five Wounds	FIV	church window		beige	
Fowler Creek	FOW	squirrel		green	
Guadalupe Creek	GUC	frog		beige	
Guadalupe River	GUA	egret		green	
Hetch-Hetchy	HEH	water droplet		beige	

Matrix of Trail Systems, Icons, and Colors

Trail System	Code	Icon	Thumbnail of Icon	Color	Color Swatch
Highway 87 Bikeway	H87	bicyclist		beige	
Highway 237 Bikeway	237	bicyclist		green	
Lake Almaden	LKA	turtle		beige	
Lake Cunningham	LKC	bike trick		green	
Los Alamitos Creek	LAC	wildflowers		beige	
Los Gatos Creek	LGC	water tower		beige	
Lower Silver Creek	SCL	Mayfair architecture		green	
Montgomery Hill	MON	glider		green	
Penitencia Creek	PEN	steelhead trout		beige	
River Oaks Parkway	RIV	willow tree		green	

Matrix of Trail Systems, Icons, and Colors

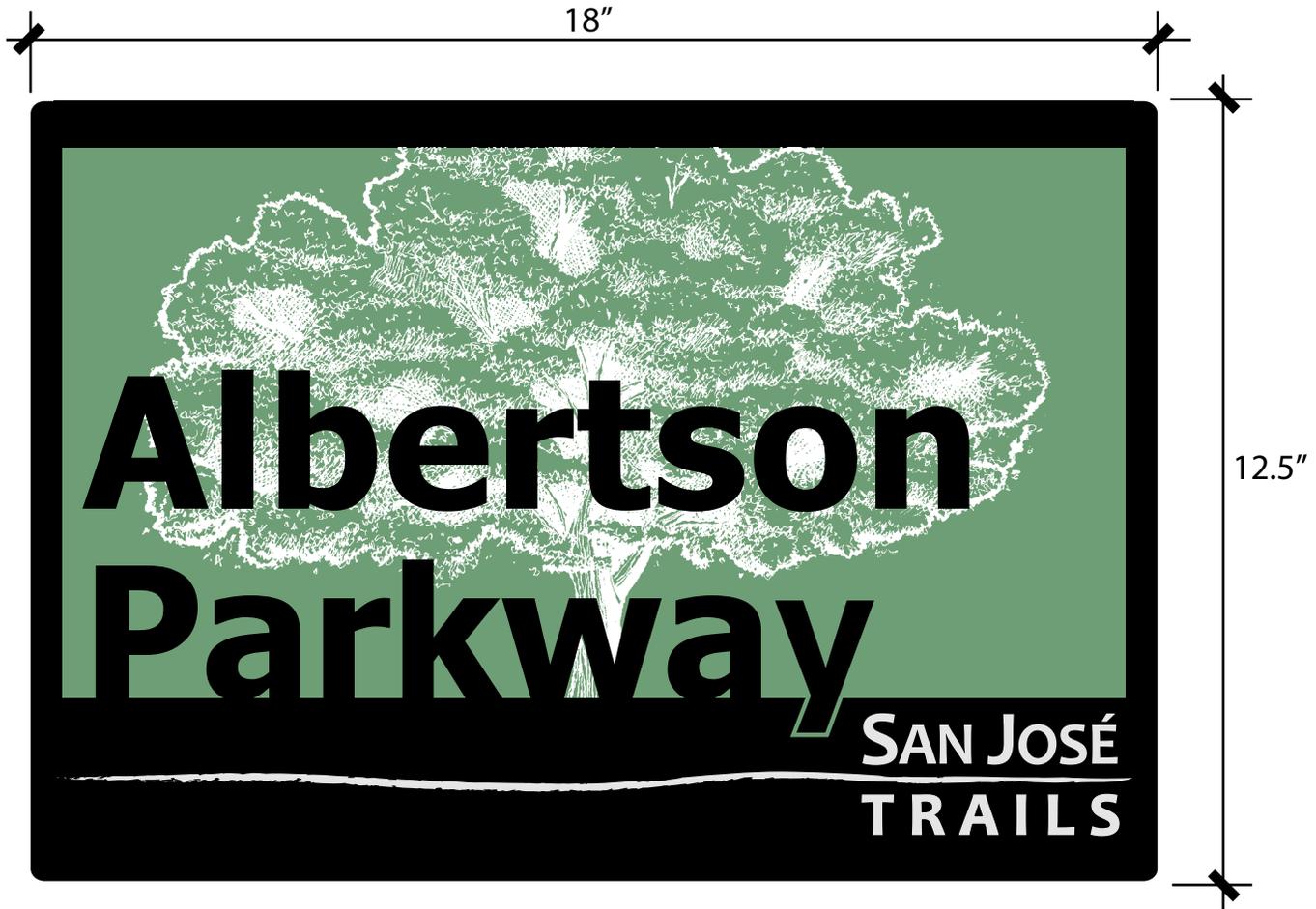
Trail System	Code	Icon	Thumbnail of Icon	Color	Color Swatch
Ryland Parkway	RYL	ornamental pear tree		beige	
Odette Morrow Trail	ODM	coyote		green	
Saratoga Creek	SAR	fence		beige	
Silver Creek Valley	SCV	trellis		beige	
Thompson Creek	THO	coast live oak leaf		green	
Umbarger Road Parkway	UMB	bench		beige	
Upper Silver Creek	SCU	hills		green	
Three Creeks	3CR	train		green	
Yerba Buena Creek	YBC	valley oak leaf & acorn		beige	
To Be Determined					
To Be Determined					

Total Trail System Names: 40

Total Trail Icons: 40

Note: four images (frog, water bird, rose, turtle) developed by Ellipsis for use in Guadalupe River Park interpretive signage, will be repurposed for trail name signs.

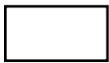
Trail Name Sign Details



Notes:

1. See "Matrix of Trail Systems, Icons, and Colors" for text, icon, and background color selection for a specific trail system.
2. 1/4" radius corners, typical.
3. Unless otherwise specified on plans, locate post 10' beyond beginning of trail.

Color Palette:

	Green (C-61, M-21, Y-65, K-3)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

Trail Name Sign Details

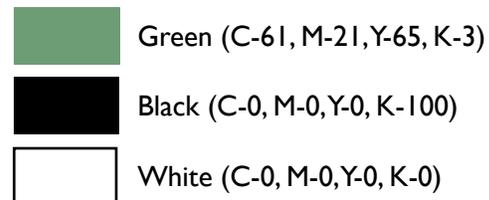
Customization required



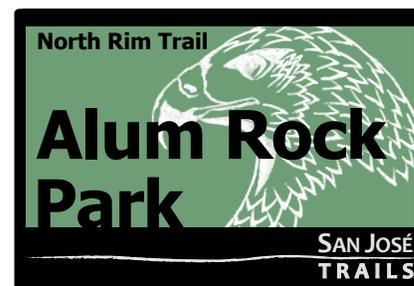
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4. Insert one of the following trail name:
Penitencia Creek Trail, North Rim Trail, South Rim Trail, Eagle Rock Trail, Woodland Trail, Peacock Gap Trail. Remove dashed line after inserting trail name.

Color Palette:



Example:



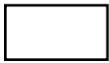
Trail Name Sign Details



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	Beige (C-27, M-35, Y-58, K-11)
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	White (C-0, M-0, Y-0, K-0)

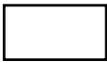
Trail Name Sign Details



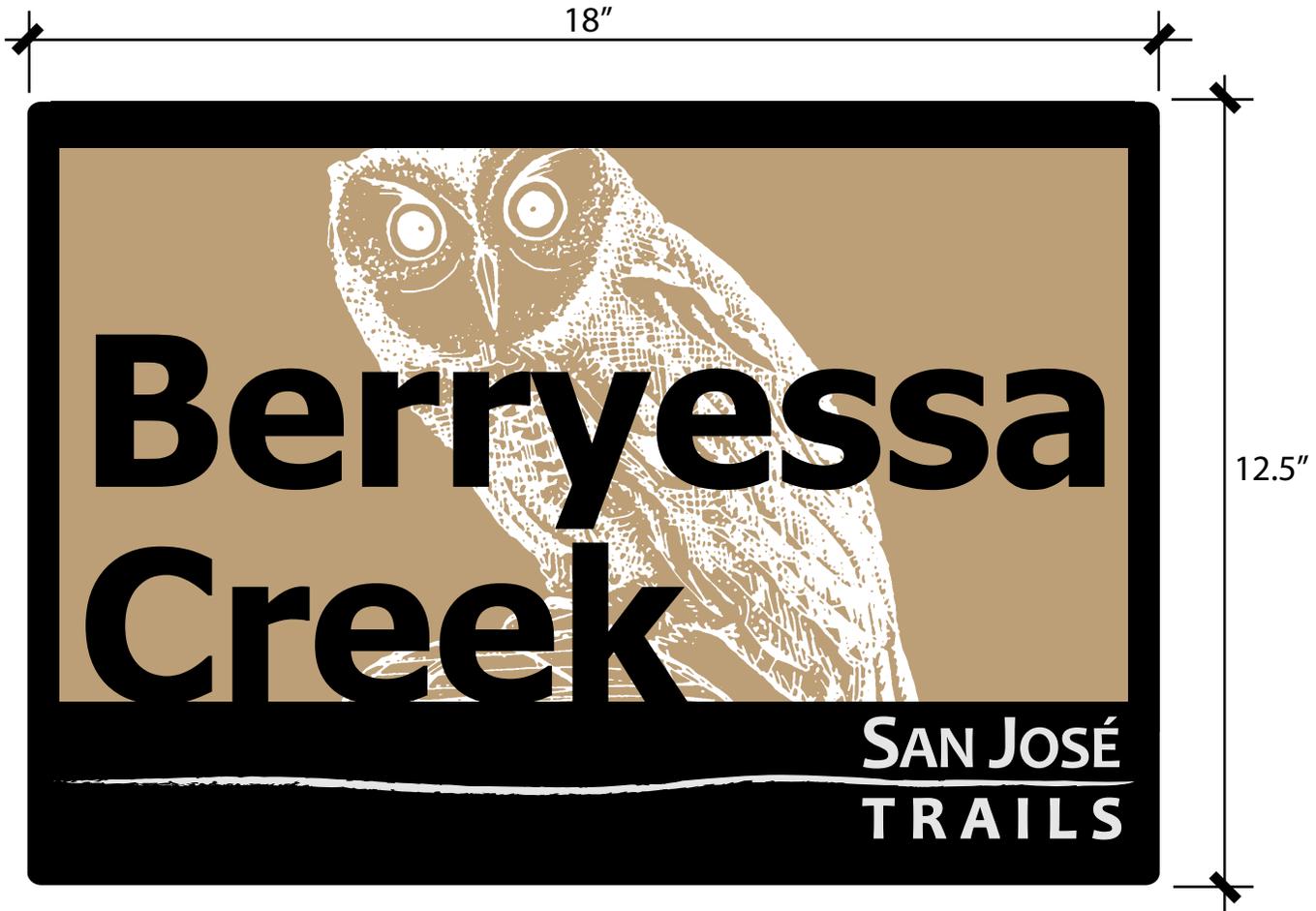
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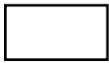
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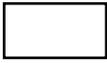
Trail Name Sign Details



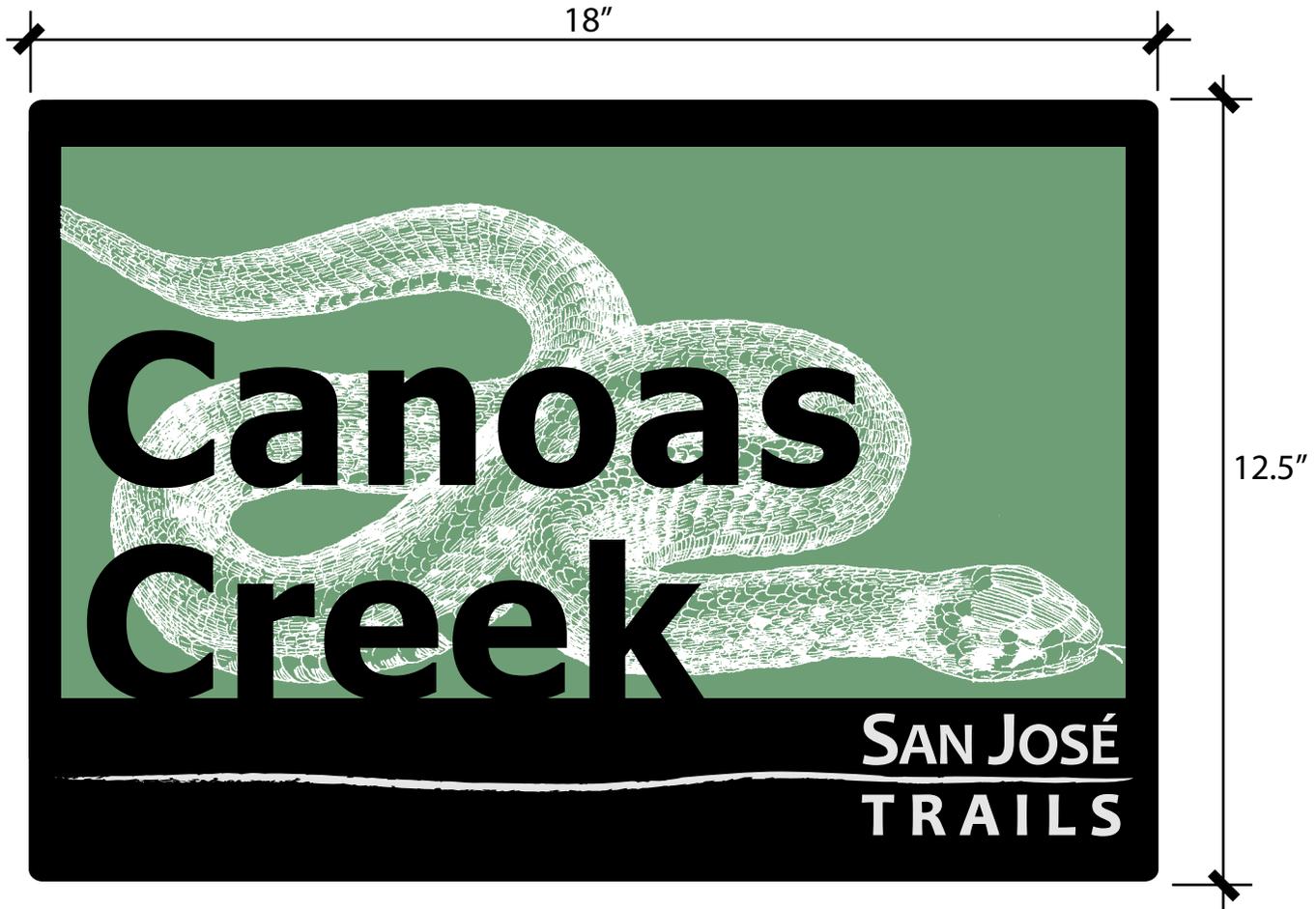
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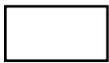
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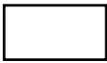
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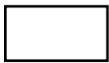
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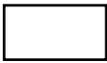
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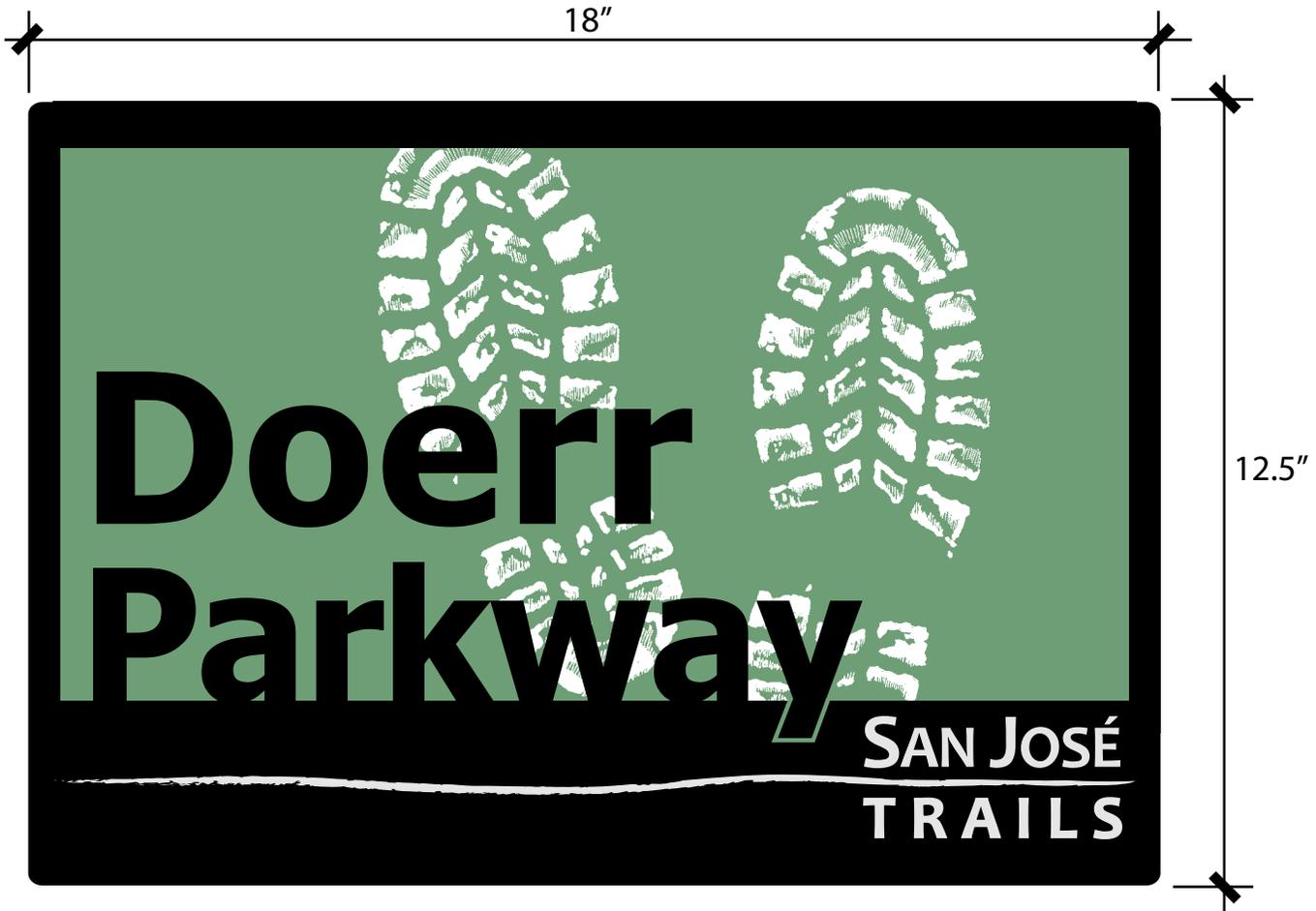
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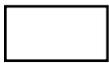
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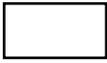
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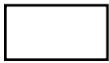
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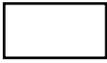
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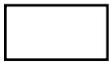
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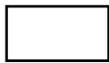
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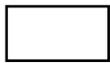
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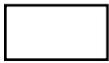
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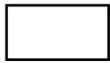
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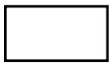
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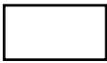
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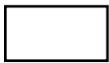
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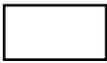
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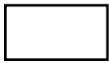
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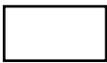
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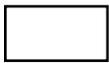
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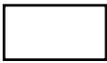
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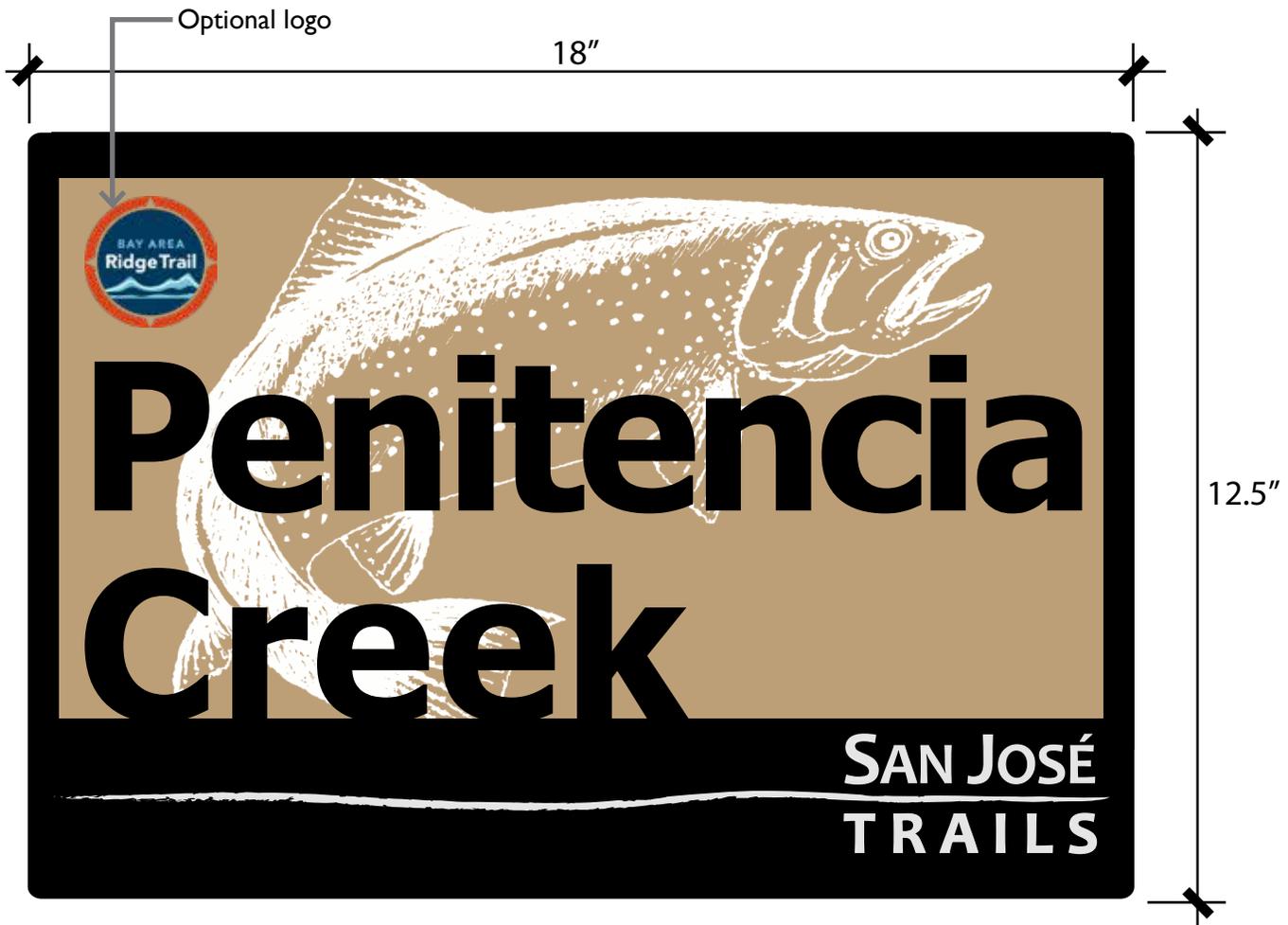
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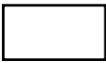
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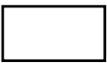
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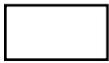
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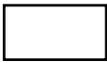
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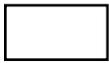
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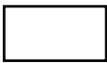
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	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

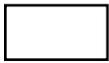
Trail Name Sign Details



Notes:

1. See "Matrix of Trail Systems, Icons, and Colors" for text, icon, and background color selection for a specific trail system.
2. 1/4" radius corners, typical.
3. Unless otherwise specified on plans, locate post 10' beyond beginning of trail.

Color Palette:

	Beige (C-27, M-35, Y-58, K-11)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

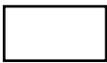
Trail Name Sign Details



Notes:

1. See "Matrix of Trail Systems, Icons, and Colors" for text, icon, and background color selection for a specific trail system.
2. 1/4" radius corners, typical.
3. Unless otherwise specified on plans, locate post 10' beyond beginning of trail.

Color Palette:

	Green (C-61, M-21, Y-65, K-3)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

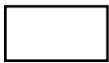
Trail Name Sign Details



Notes:

1. See “Matrix of Trail Systems, Icons, and Colors” for text, icon, and background color selection for a specific trail system.
2. 1/4” radius corners, typical.
3. Unless otherwise specified on plans, locate post 10’ beyond beginning of trail.

Color Palette:

	Green (C-61, M-21, Y-65, K-3)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

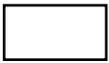
Trail Name Sign Details



Notes:

1. See “Matrix of Trail Systems, Icons, and Colors” for text, icon, and background color selection for a specific trail system.
2. 1/4” radius corners, typical.
3. Unless otherwise specified on plans, locate post 10’ beyond beginning of trail.

Color Palette:

	Beige (C-27, M-35, Y-58, K-11)
	Black (C-0, M-0, Y-0, K-100)
	White (C-0, M-0, Y-0, K-0)

3. Milestone Markers

Introduction

The following pages present a cohesive program to install and map milestone markers on existing and future trails. A detailed methodology for the installation and documentation of markers, and a strategy for effectively deploying the program are presented in Appendices E and F.

As future trails are designed, milestone marker locations will be referenced on site construction or striping and signage plans generated as part of the construction documentation process.

Chapter At-A-Glance

- Network Map with “Zero” Points for Trail Systems

- Sample Trail System Map

- Milestone Marker Details



Network Map with "Zero" Points for Trail Systems

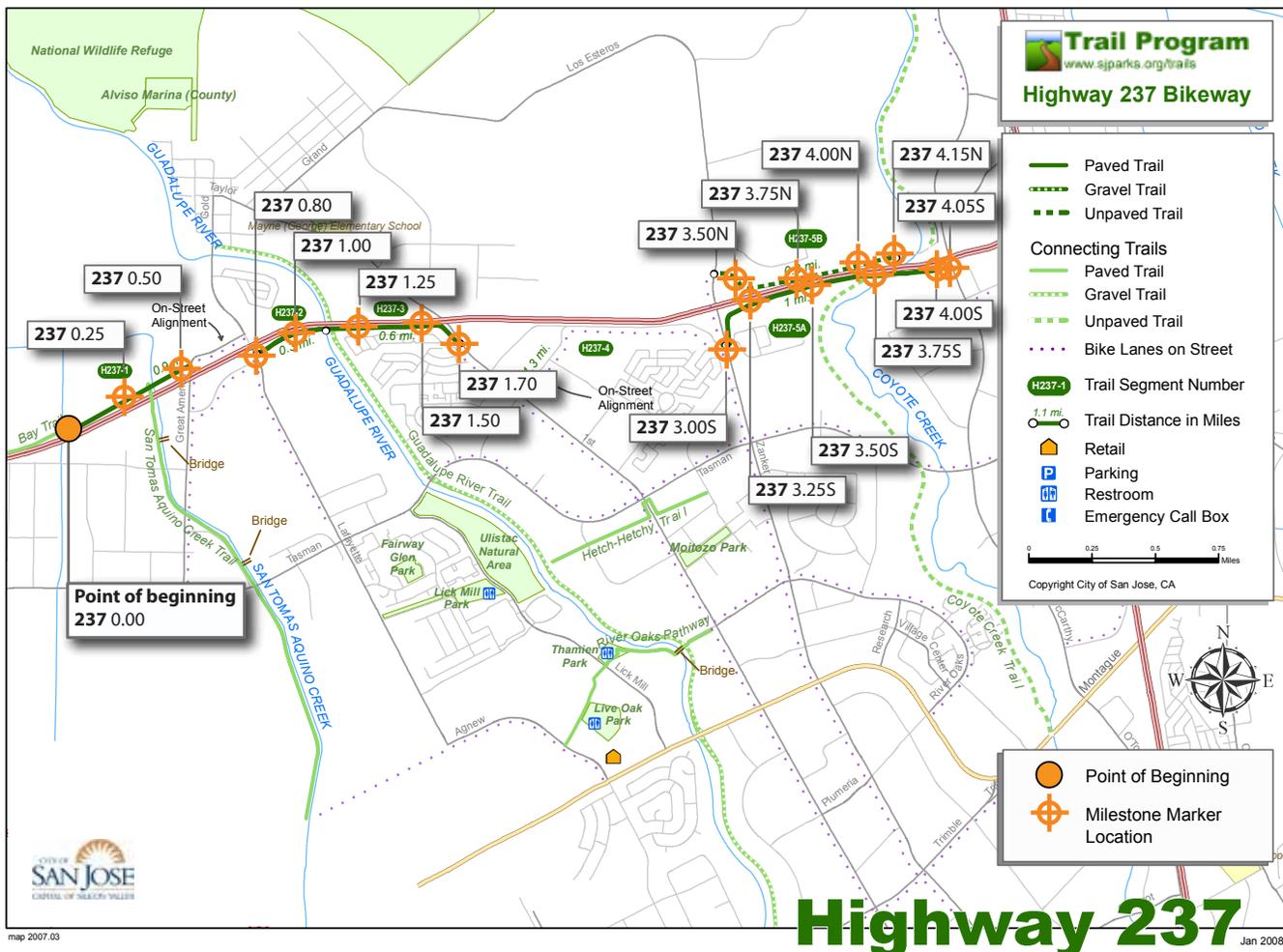
• Trail Names and Points of Beginning •

ALB	Albertson Parkway Trail Point of Beginning: Cresta Vista Way at Dondero Way	DOE	Doerr Parkway Trail Point of Beginning: Curtner Ave at Parquet Court	H87	Highway 87 Bikeway Trail Point of Beginning: Hwy 87 at Willow Street	SAR	Saratoga Creek Trail Point of Beginning: Bollinger Road at Lawrence Expy.
ALR	Alum Rock Park Trail Point of Beginning: Penitencia Creek Road near Poppy Lane	EDG	Edenvale Parkway/Great Oaks Trail Point of Beginning: Branham Lane at Discovery Avenue	LAC	Los Alamitos Creek Trail Point of Beginning: Winfield Blvd. near Almaden Lake Dr.	SCU	Upper Silver Creek Trail Point of Beginning: Yerba Buena near Silver Creek
BAY	Bay Trail Point of Beginning: San Tomas Aquino Creek near Lafayette Street	EVR	Evergreen Creek Trail Point of Beginning: San Felipe Road at Falls Creek	LKA	Lake Almaden Trail Point of Beginning: Coleman Avenue near Almaden Expy.	SCL	Lower Silver Creek Trail Point of Beginning: Wooster Avenue near Eggo Way
BAR	Barberry Parkway Trail (aka Silver Creek) Point of Beginning: Barberry Lane at Dina Lane	FIS	Fisher Creek Trail Point of Beginning: Monterey Hwy. at Fisher Creek	LKC	Lake Cunningham Trail Point of Beginning: Cunningham Ave. at Capitol Expy.	SCV	Silver Creek Valley Trail Point of Beginning: Silver Creek Valley Road at Hassler Parkway
BER	Berryessa Creek Trail Point of Beginning: Morrill Avenue near Cropley Avenue	FIV	Five Wounds Trail Point of Beginning: Trade Zone Blvd. near Morriset Way	LGC	Los Gatos Creek Trail Point of Beginning: Guadalupe River Confluence	UMP	Umbarger Parkway Trail (aka Silver Creek) Point of Beginning: Umbarger Road at Tuers Road
CAL	Calero Creek Trail Point of Beginning: Camden Avenue at Los Alamitos Creek	FOW	Fowler Creek Trail Point of Beginning: Classico Avenue at Cortona Drive	MON	Montgomery Hill Trail Point of Beginning: Falls Creek at Mackin Woods	THO	Thompson Creek Trail Point of Beginning: Capitol Expy. near Tully Road
CAN	Canoas Creek Trail Point of Beginning: Capitol Expy. at Narvaez Avenue	GUC	Guadalupe Creek Trail Point of Beginning: Lamaden Expy. near Via Monte Dr.	ODM	Odette Morrow Trail Point of Beginning: Coyote Road at Broderick Drive	WGS	Willow Glen Spur Trail Point of Beginning: Lonus Street near Lincoln Avenue
COM	Component Trail Point of Beginning: Component Dr. near the Component Light Rail Station	GUA	Guadalupe River Trail Point of Beginning: Gold Street at Guadalupe River, near Moffat Street	PEN	Penitencia Creek Trail Point of Beginning: Mabury Rd. at Creekland Circle	YBC	Yerba Buena Creek Trail Point of Beginning: Yerba Buena at San Felipe Road
COA	Coyote Alamitos Canal Trail Point of Beginning: Miracle Mountain Dr. near Bowen Ave.	HEH	Hetch-Hetchy Trail Point of Beginning: Rio Robles near Guadalupe River	RIV	River Oaks Parkway Trail Point of Beginning: Lick Mill Blvd. at Park View Drive		
COY	Coyote Creek Trail Point of Beginning: Coyote Creek at Hwy. 237 Bikeway	237	Highway 237 Bikeway Trail Point of Beginning: Hwy 237 near Old Mountain View Alviso Rd.	RYL	Ryland Parkway Trail Point of Beginning: Ryland Parkway at Coleman Avenue		

Sample Trail System Map

Maps similar to this one will be created for each new trail system and will be included in the trail's signage program during the construction documentation phase. These maps will also be generated for existing trails to indicate the location and quantity of milestone markers to be installed.

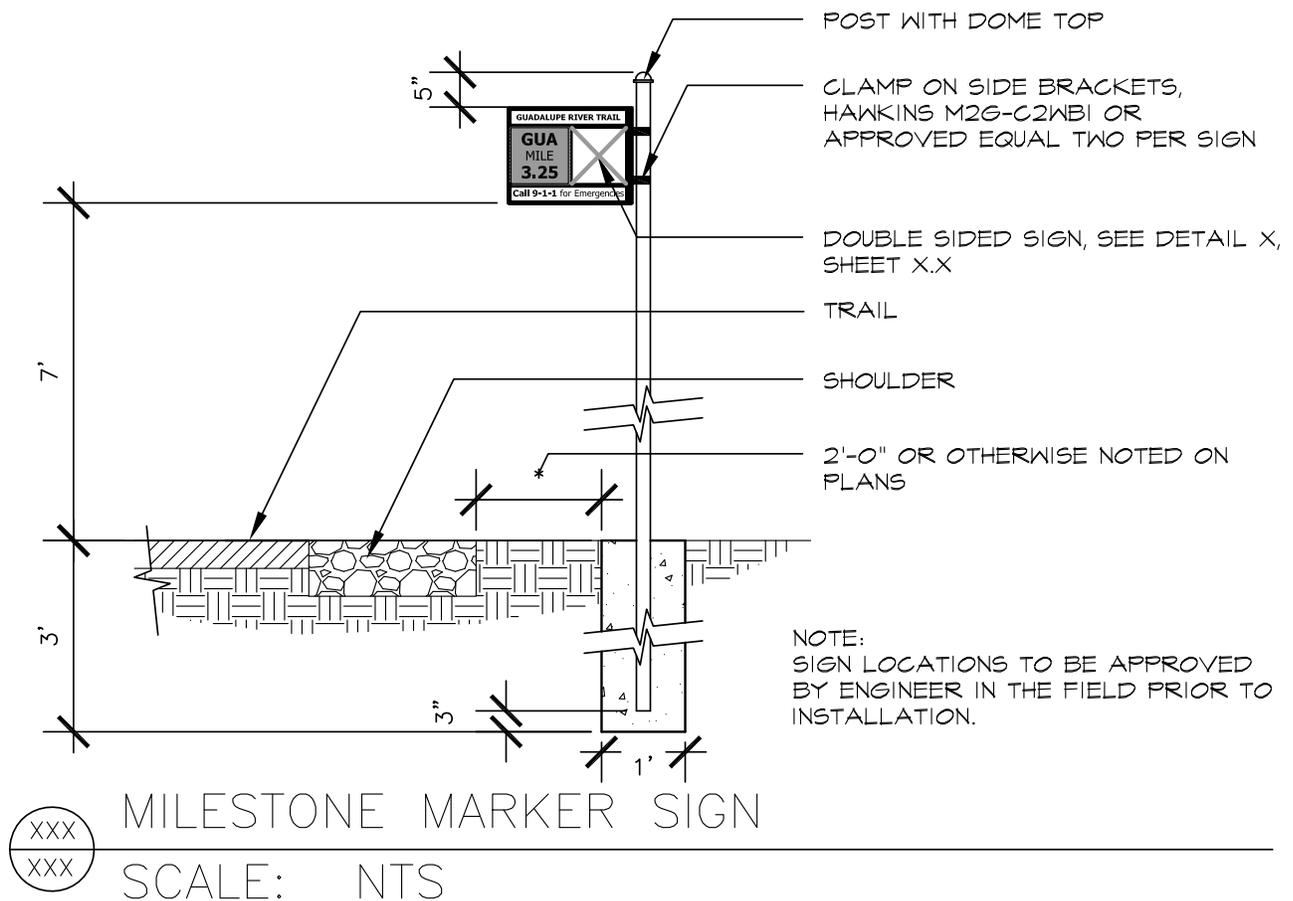
Starting at the designated "zero" point, the trail will be marked at trailheads and in 1/4 mile increments along the trail. In areas where the trail changes to an on-street alignment, the distance is added to the overall length of the trail, but not marked. For example, at the 0.50 mile mark on the Highway 237 bikeway, the trail changes to an on-street alignment. When the alignment moves back onto the trail, the next milestone marker will be 1.00, indicating that there was approximately 0.50 miles of on-street alignment. In the areas where a trail is developed on both sides of a river (or creek, highway or the feature), the marker will define the mileage and will include a geographic reference. For example, markers deployed along a north-flowing river at the 1-1/2 mile mark should be coded "1.5E" and "1.5W". Note, a bikeway sign (CSJ-TG4) should be used to reinforce continuity of systems when appropriate. This will help reinforce that a trail exists on both sides of the river at this location and help dispatchers know on what side to deploy resources.



Milestone Marker Details

All construction documents prepared for trail projects with milestone markers will include the Milestone Marker Detail. Mileage numbering, icon, and color will be listed in the Trail Sign Schedule that is completed by the designer and included in the project's construction documents. Digital files of the icons and color swatches for milestone markers are available from the City's Trail Program Manager to assist in project development. The Mileage Marker should not be combined with other TRAIL signage on a pole. Exceptions should be approved by the Trail Program Manager.

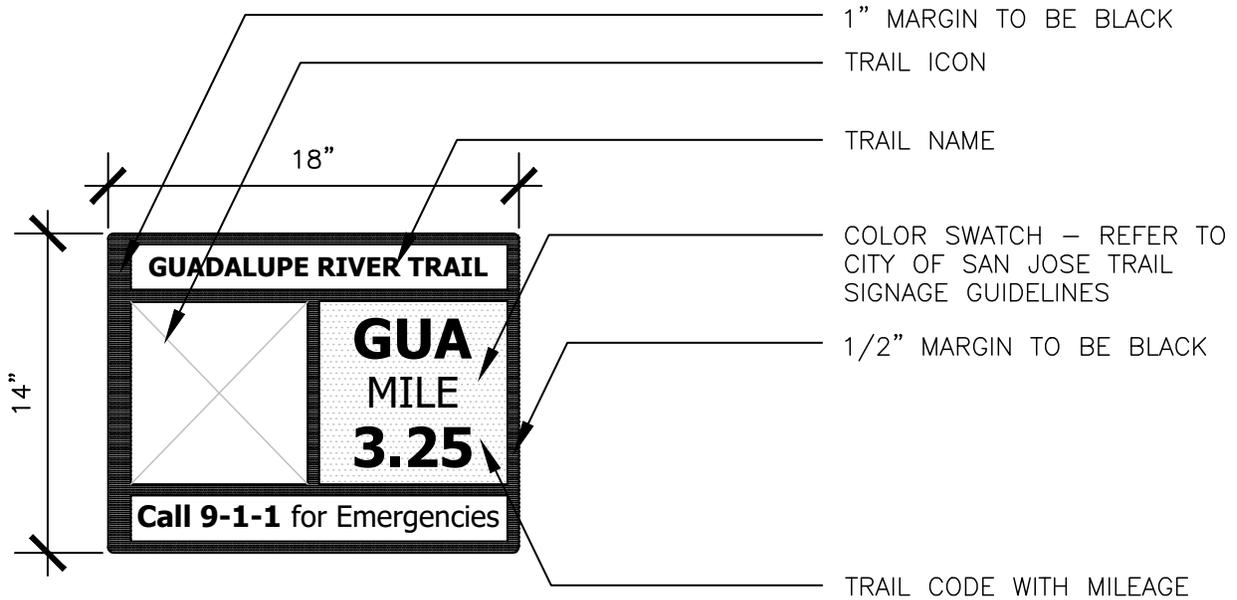
For contact information, please visit <https://sanjoseca.gov/index.aspx?NID=585>



Milestone Marker

Include this detail in construction documents for all trails projects that include signage.

Milestone Marker Details



1. TEXT IN SIGN SHALL BE TAHOMA
2. 1/4" RADIUS CORNERS, TYPICAL
3. SIGN TO BE MOUNTED WITH TAMPER PROOF HARDWEAR
4. SIGN DESIGN TO BE SUBMITTED IN EPS DIGITAL FORMAT TO SIGN FABRICATOR, PRINTED ON VINYL, APPLIED TO 12 GAUGE ALUMINUM, AS AVAILABLE FROM A CUSTOM SIGN MANUFACTURER LOCATED IN SAN JOSÉ


 MILESTONE MARKER SIGN
 SCALE: NTS

Milestone Marker

Include this detail in construction documents for all trails projects that include signage.

4. Acknowledgements and References

Project Contributors and Acknowledgements

Initial funding to support the design and installation of signage and milestone markers was available through a \$451,000 grant through the Robert-Z'berg-Harris Open Space and Recreation Program under the 2002 Resource Bond Act for funds available through State Proposition 12. Local city funds and trail development grants have supported ongoing development.

Project Team

City of San José Department of Parks, Recreation and Neighborhood Services:

Yves Zsutty, Trail Program Manager

Maricela Avila, Senior Analyst

City of San José Public Works, City Facilities Architectural Services:

Han-Lei Wang, Project Manager

Jane Wu, Acting Senior Landscape Architect

Jan Palajac, Senior Landscape Architect

Trail Signs Package - Technical Review:

Development of the initial set of guidelines included input and technical review by:

City of San José Department of Parks, Recreation, and Neighborhood Services

City of San José Department of Transportation

City of San José Police Department

City of San José Fire Department

City of San José Parks and Recreation Commission

Silicon Valley Bicycle Coalition

Consultant Team:

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Marie Mai, Project Manager, Callander Associates Landscape Architecture Inc.

Grant Huang, Project Assistant, Callander Associates Landscape Architecture Inc.

Acknowledgements and References

References

California Highway Design Manual, (Bikeways, Chapter 1000). 5th Edition

California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2003 Edition, as amended for use in California). Sept. 26, 2006

Flink, Charles. Trails for the Twenty-First Century. Planning, Design, and Management Manual for Multi-Use Trails. Washington, DC, 2001

Improving Multi-Use Recreational Trail Safety through a Coordinated 911 Sign Project. *Proceedings of the 2005 Mid-Continent Transportation Research Symposium*, Kevin Blanshan, Dan Schlichtmann, Barbara Berquam, Ames, Iowa, Aug. 2005.

Standard Specifications, City of San José Department of Public Works. July 1992

Trulove, James. This Way: Signage Design for Public Spaces. Rockport Publishers, Massachusetts, 2000

Uniform Interjurisdictional Trail Design, Use, and Management Guidelines, Santa Clara County Interjurisdictional Trails Committee, A Program of the Santa Clara County Trails Master Plan. Apr. 15, 1999

5. Appendices

Introduction

Several documents are included in the Appendix to provide further background about the development and testing of the project. Planners, designers, and installers wishing to gain a fuller understanding of the project should review them. Additionally, Appendix F contains a template and instructions for documenting new milestone markers to be used by the City's Trail Program personnel during test deployment of the milestone marker program, and Appendix H suggests questions to be asked by personnel in the post-implementation surveys.

Appendices At-A-Glance

- A Scope Development
- B Goals and Objectives
- C Signage Categories and Existing Signs
- D Strategies for Improvement
- E Milestone Marker Deployment Strategy
- F Template for Milestone Marker Documentation
- G Mock Milestone Marker Deployment
- H Post-Deployment Surveys
- I Retroreflectivity Technology and Specifications
- J Anti-Graffiti Coating Specification
- K Bollard-style Milestone Marker Details



Appendix A

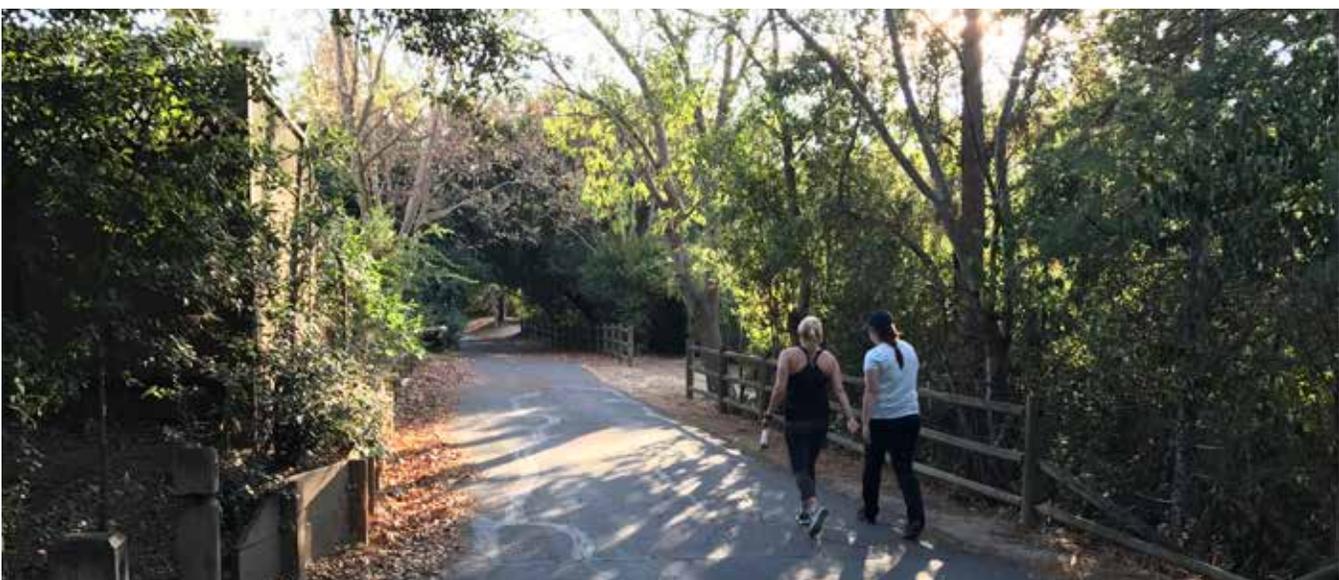
Scope Development

In 2008, a project advisory team was formed to define the challenges and craft the development approach and preferred means of deployment for all funded elements. Interviews were conducted with technical staff from the following City departments:

- Parks, Recreation, and Neighborhood Services
- Police
- Fire
- Transportation

A meeting with Santa Clara County staff was conducted to review the initial concept and obtain input on a preferred approach for county-wide deployment should neighboring agencies choose to adopt the approach. Interviews with the Department of Transportation's Geometrics Team staff were conducted to determine optimum signage design, spacing, warranted crosswalks, pedestrian-activated traffic signals and installations of signs for on-street alignments. Additionally, a meeting occurred with the Department of Transportation's Bicycle Coordinator to define the needs of commuting trail users and to determine how to integrate the Milestone Marker project with the developing on-street Bikeway Signage System.

The goals and objectives for this project were arrived upon by a process of identifying and responding to current challenges related to recreational trail use, commuter trail use, and public safety. These trail signage guidelines will identify successes and opportunities for improvement within the current trail system and develop a coordinated signage design package and milestone marker program to implement in future trail projects.



Other Milestone Marker Systems

In order to define a Milestone Marker system for the City of San José, the project advisory team studied relevant examples from Caltrans, the Santa Clara Valley Transportation Authority (VTA), and government agencies around the country. The following is a summary of what the team discovered.

Caltrans

Caltrans has implemented a highway marker program of Postmiles which is used for maintenance purposes, for emergency reports used by the CHP (California Highway Patrol), public or emergency services personnel, and as a reference in the recordation of contract plans and other documents.

The Postmile is a numeric value based upon the mileage measured from the county line or from the beginning of a route. The Postmile, when used in combination with the district, county, and route make each location of the state highway system unique. Postmile “0” begins from the west in highways that run east-west and at north in highways that run north-south. The post mile values are developed by Caltrans’ Headquarters, Office of Traffic and they identify major landmarks such as bridges, structures, ramps and intersections; changes in the highway characteristics or geometrics due to construction or realignments; limits of route adoptions or relinquishments; and city limits and county boundaries. The markers are spaced every 0.2 miles, or more frequently if needed to identify a landmark.

Text on Postmiles identifies the State Route (for example, SR87 is State Route 87), the County (SC represents Santa Clara County), and an optional Postmile Prefix to address highway length changes due to construction or realignment. To differentiate the new values from the old, an alpha code is added before the postmile for the new values. Postmile Prefix codes are as follows:

- C – Commercial lanes
- D – Duplicate postmile at meandering county line
- G – Reposting of duplicate postmile at the end of a route
- H – Realignment of D mileage
- L – Overlap postmile
- M – Realignment of R mileage
- N – Realignment of M mileage
- R – First realignment
- S – Spur
- T - Temporary connection



Postmile marker indicates route, county code, and postmile number (photo: wikipedia.org)

Appendix A

Additionally, Caltrans has applied mileage numbers to highway exits which are usually posted overhead with the name of the exit. Exits are numbered from south to north, and west to east. Each exit number is determined by the number of miles it is from the beginning of the route. For example, on Interstate 5, exit No. 1 is just north of the Mexican border. Numbers are followed by “A” or “B” if there is more than one exit within a mile length of highway.

Santa Clara Valley Transportation Authority

The VTA uses a 6-digit numbering system along designated bus stops. The first two digits are the “northing” coordinate, the second two digits are the “easting” coordinate, and the final two are the specific location within the previous coordinate grid. Each coordinate represents about 1200 feet on a side. 1:600 scale base maps with 600-scale grid coordinates are currently being used. The VTA recommends that signs be reflective.

Other Agencies

Several cities and park operators around the country have installed milestone markers on trails, but until recently none have been linked to municipal GIS to provide supporting data for emergency dispatch and response services. The City of Dallas has recently deployed an emergency locator system on two of its trails that utilizes pole-mounted markers indicating the trail’s code and unique number. These markers are installed every 1/8th mile, and each is entered as a location in the City’s emergency response GIS mapping database. Notes about vehicle and walk-in access routes are linked to the pole marker’s location to assist emergency dispatchers. This system does not provide distance-tracking measurement for recreational trail users, does not incorporate a trail-specific graphic icon and color for orientation, and is not part of a visually cohesive trail signs package.



Trail post marker, Dallas emergency locator system (photo: City of Dallas Park and Recreation Department)

Appendix A

Another notable project that is currently underway is the Cedar Valley Trails 911 Signs Project, encompassing 95 miles of paved rural trail within Black Hawk County, Iowa. In this system, trail locations are geo-referenced on a map grid system that communicates a location to within one-tenth of one square mile (about 500'). 911 signs, with a specific alphanumeric ID code for location reference, are attached to the georeferenced trail features such as benches or signs. The ID code correlates with a grid point in a GIS database, helping to locate a caller. This system does not, however, provide access instructions for emergency responders, and does not provide a mileage distance for recreational users to track their progress. Additionally, the unique codes at each marker are not memorable, an important attribute when people call for help.



GPS location marker, Cedar Valley Trail System
(photo: americantrails.org)

Appendix B

Goals and Objectives

The City of San José has developed these trail signage guidelines to enhance public safety and enjoyment of trails for both recreational and commute users. Implementation will help trail users track their fitness objectives, reach various city-wide destinations, gauge commute travel time, and efficiently receive emergency response aid.

The objectives listed below all contribute to the main goal of **effective communication through unified signage design and implementation.**

- Easily legible and comprehensible
- Applicable to the entire trail system
- Aesthetically pleasing
- Graphically identifiable as a city-wide program
- Encourages positive behavior
- Helpful in informing or warning trail users
- Easily deployable for standardized trail expansion
- Supports tracking fitness objectives
- Assists in reaching various city-wide destinations
- Helpful in gauging commute travel time
- Increases emergency response efficiency



As shown in the examples above, the project advisory team studied local and international signage examples as it developed the trail signage guidelines.

Challenges: Recreation and Commuting User Needs

Studies show that residents of neighborhoods in close proximity to trails have a 25% greater likelihood of exercising at least three times per week (Guide to Community Preventative Services, Center for Disease Control and Prevention, December 2002). Recreational trail users who walk or bike for exercise can track their fitness progress by referring to trail milestone markers. With the exception of some mileage markers along portions of Los Gatos Creek Trail, however, there are currently no markers within the City's Trail Network.

Many points of interest including parks, retail developments, government services, museums, and transit hubs exist on or near the City's trail systems. Presently, in most instances, no signage directs the user to these opportunities. Maps posted on the trail program website do direct users to some points of interest and reference retail destinations in a general manner.

San José's trails serve as a destination for visitors and can contribute to a positive impression of the country's 10th largest city. The San Jose Business Journal reports that the Guadalupe River Trail is one of the city's top attractions (San Jose Business Journal – San Jose City Guide). As each trail segment of the Guadalupe River Trail and all other trails throughout the city have been constructed, signs for guidance, warning, and regulatory messages have been deployed with no standard design guideline or installation specifications. The resulting discordant sizes, placement, graphics, and wording contribute to an inconsistent experience and may cause trail users to miss nearby services or attractions. Trail signs and milestone markers that guide recreational and commute trail users can help ensure an enjoyable, safe trail experience that also contributes to a visual identity for the trails and the City as a whole.

Successful deployment of this project will be complicated by the large number of physical markers and signs to be installed and by site-specific decisions that are anticipated for each unique trail setting.



Appendix B

Challenges: Safety Enhancement

In the City of San José's 911 Call Center (CSJ 911), trails are not currently recognized in the automated dispatch system as roadways and do not have addresses assigned to them. As a result, it is difficult to determine a precise location along a trail or to approximate the distance between two points. Even when an emergency call is made from call boxes currently located along trails, there is no accompanying information about emergency access for the CSJ 911 operator's reference. If trails were entered into the dispatch system as roadways, though, emergency response vehicles might inappropriately be guided onto these off-street facilities for incidents that can be more readily and safely accessed via the traditional roadway system. To address this challenge, milestone markers will be entered into the automated dispatch system as "special addresses" based on their latitudinal and longitudinal coordinates so that they appear as specific, off-road locations.

With no milestone marker system in place and few recognizable landmarks, trail users who call CSJ 911 often struggle to identify their location along a trail. Callers may say, "I'm near a creek" or "I can see a bridge ahead". This level of detail is often inadequate for a CSJ 911 operators to identify the incident location. Most trails are aligned beneath, over, or through roadway intersections and lack of identifying signage can leave the trail user unaware of their location.

Emergency calls made from a trail user's cell-phone may be received by the California Highway Patrol (CHP) dispatch center in Vallejo if the call originates near a state highway. The CHP does not have the mapping resources to precisely locate callers and appropriately dispatch personnel, so the call will be transferred to a CSJ 911 if it is determined that the caller is on a trail.

A caller using a cell phone can be roughly located using triangulation via cellular transmitters or satellites to provide positioning data. The accuracy of this positioning can range from less than 100' to about 1/4 mile, depending on satellite configuration and signal clarity. Cell phones equipped with a Global Positioning System (GPS) may offer more accurate positioning data if the GPS is turned on and the phone can communicate with satellites.

Additionally, police reports that are filed for medical emergencies or criminal activity on a trail are currently linked to the nearest street intersection or address, so there is no way to monitor activity along a particular portion of trail. Linking police records to the nearest milestone marker on a trail could help track crime statistics and identify specific areas of concern that may require additional security and safety measures.

Existing trail maps may not offer the CSJ 911 operators sufficient data to precisely locate callers or appropriately dispatch services. Hard-copy maps are available to CSJ 911 operators and maps are available through in-vehicle systems for responding police and fire personnel. In both cases, though, the maps are not linked to online data systems and are only updated periodically.

Signage Categories and Existing Signs

The three major categories of trail signs are:

- **Guidance Signs,**
to convey orientation, direction, and welcome information
- **Regulatory signs,**
to convey information about trail rules
- **Warning signs,**
to indicate a potential hazard on the trail

This guideline does not direct the design or placement of site-specific interpretive signage, architectural gateway features, or sponsorship recognition signage.

Examples of signs that are currently being used within the San José Trail Network are shown here in their respective category. Every trail system in San José has a varying degree and type of trail signage. Currently, only the Los Gatos Creek Trail system has mileage markers. This trail system extends through San Jose, and southwesterly through the City of Campbell and the Town of Los Gatos. The markers are made of concrete and have a recessed, painted number indicating half-mile increments (the 9 1/2 marker is shown below. The markers are in various stages of disrepair, with several being illegible. The markers were installed about 20 years ago as part of an Eagle Scout project. The starting point (Marker “0”) is near Lexington Dam, but work completed over the past several years makes the initiating point no longer accurate since the trail now extends beyond that point.

The City of San José maintains a multi-layer mapping inventory to accurately inventory public infrastructure as part of its Geographic Information System (GIS). The GIS is managed by multiple departments. The Department of Parks, Recreation and Neighborhood Services manages the “Parks” layer that contains information on all trail alignments currently open to the public. At this time, data contained in GIS does not accurately represent the trail alignments. The alignment positioning is based on site visits and in some instances a review of construction documents. The mapped alignments are accurate in reflecting the bank upon which the trail is developed but do not necessarily show the meandering course inherent in facilities that follow natural areas.



Appendix C

Existing Guidance Signs



Existing Regulatory Signs

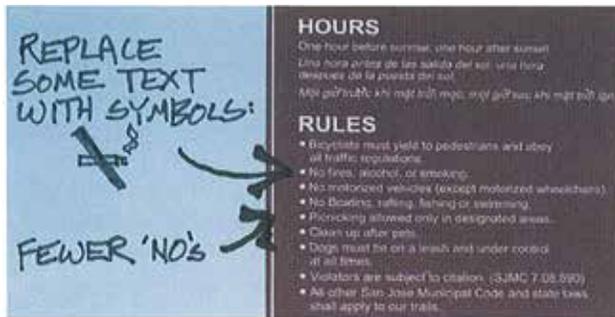


Existing Warning Signs



Strategies for Improvement

Existing signage throughout the Trail Network was assessed regarding four factors: graphic style and approach, physical placement, communication of information, and standardization. Observations of current conditions are shown in the photographs and goals for the trails package are listed below for each of these factors.



Style/Approach

Uniquely San José – an integrated, iconic theme that identifies a trail system as part of the San José Trail Network through the use of a distinctive font, logo, watermark graphic, and/or accent color.

Positive Approach - where possible, signs should offer positive guidance rather than lists of “don’ts”

Symbology - intent communicated through the use of pictographs instead of, or in addition to, words. Municipal code can be referenced in smaller text in addition to symbols as necessary.

Placement

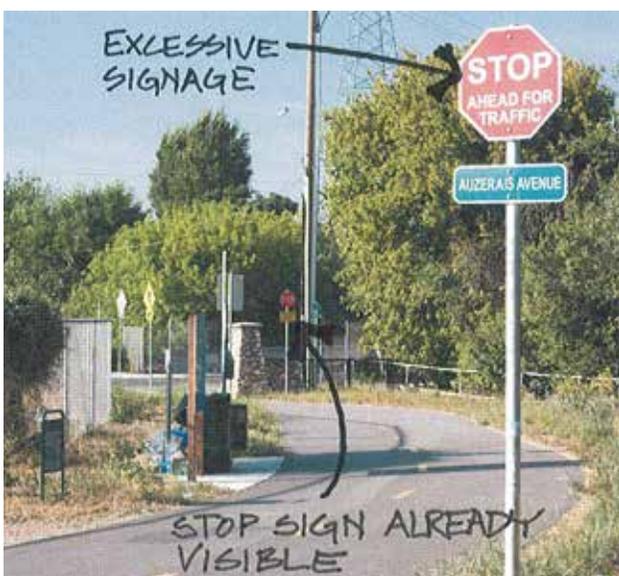
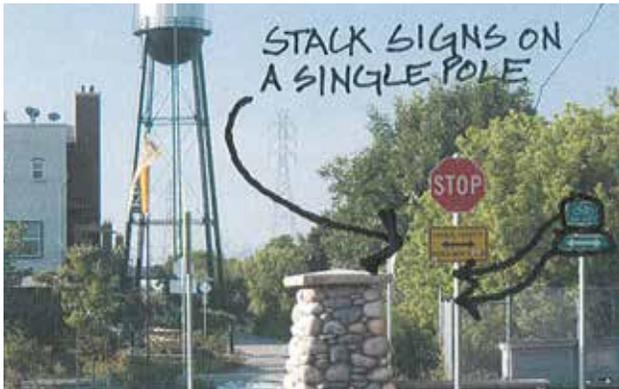
Height – approximately at eye level

Distance from edge of trail – far enough away to avoid accidental conflicts with trail users, but close enough to be legible

Distance before the item that the sign is referring to – far enough back to allow ample time to react, but close enough for the message to be clear and relevant.



Appendix D



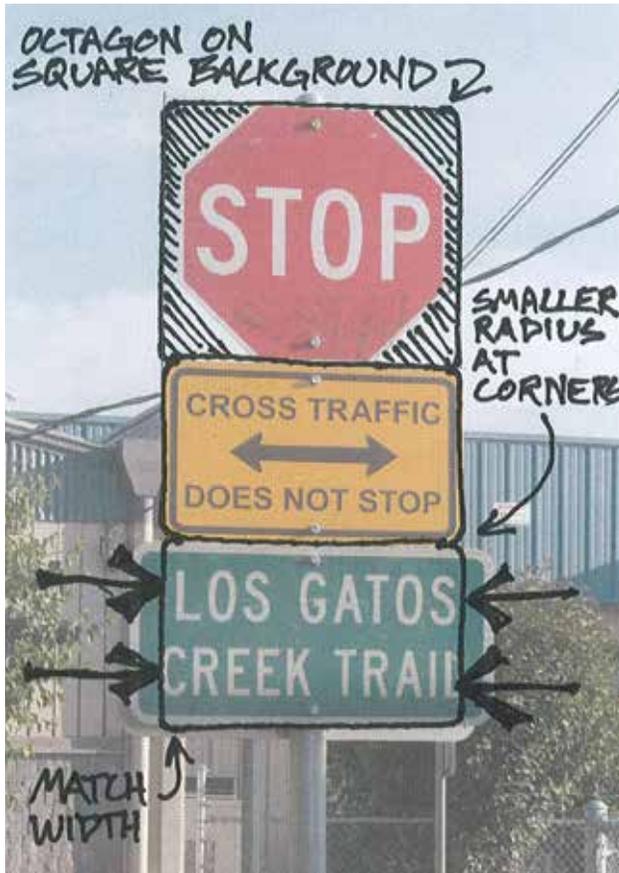
Distillation of Information

Clutter – several signs arranged vertically on a single pole instead of multiple poles that each support one sign. In the process of developing trail signage guidelines, some of these sign types may be combined, reconfigured, or eliminated.

Redundancy – information that is noted on one main Rules and Regulations sign, for example, need not have its own sign elsewhere

Verbiage – wording can be simplified to avoid excessive words that are less likely to be read

Unneeded/Excessive Signage – information overload can be avoided by eliminating unneeded signs such as a 'Stop Ahead' sign in advance of a 'Stop' sign or a 'Hill Ahead' sign at every grade change



Standardization

Shape

- generally limited to rectangles/squares. Symbols or logos with other shapes (such as a stop sign or a circular trail identity badge) should be set on a background color within a rectangular sign.
- standard corner radius size, just big enough to avoid sharp corners

Size

- common width for signs that would typically be grouped together, allowing uniform vertical stacking on a pole
- appropriately sized for pedestrian and bicycle viewing speeds and distances, smaller than standard roadway signage

Color Palette

- Manual on Uniform Traffic Control Devices (MUTCD) standards for background colors generally followed:
 - Yellow = warning
 - Red = regulatory, prohibitive
 - White = regulatory, permissive
 - Green = direction/guidance
 - Brown = recreation/amenity/parks

Text

- sized appropriately for pedestrian/bicyclist viewing distance and speed
- single consistent font for all rules and regulations, directional, and traffic signs. Fonts for trail identification signs may vary to accommodate trail-specific design concepts.

Appendix E

Milestone Marker Deployment Strategy

Guidance for Stationing and Installing a Milestone Marker

Stationing a Milestone Marker

1. Refer to Trail Network-Milestone Marker map to locate approximate marker location. Maps will be posted on the Trail Program website under each appropriate trail system page.
2. Note existing markers that are on the trail, if applicable. If markers have not already been installed at two nearest trailheads (roadway entries), include new marker(s) at these sites as well. Markers will be installed at all trailheads and at 1/4 mile increments along each trail, measured from point 'zero' for each trail system. Mileage will be shown in decimal miles with hundredth-mile accuracy (13.00, 13.25, 13.50, etc.). Once installed, each marker's location and access point information will be recorded and transmitted for entry into the City of San José emergency dispatch system. Markers at trail heads will show mileage with hundredth-mile accuracy. If trailhead is less than 0.10 mile away from the next 1/4 mile increment, it is acceptable to skip that next 1/4 mile marker.
3. Measure spacing from existing marker or trail's zero point along the trail's centerline using a GPS device that can track distance traveled in addition to recording a coordinate point.
4. If able to locate an installation site precisely as defined by Trail Network-Milestone Marker map, confirm points with the Trail Program Staff. If not able to do so precisely, identify the best location possible and provide those GIS points to the Trail Program staff. A marker should be placed no further than 50' from its labeled location.
5. Mark proposed post location with a stake. Write location's mileage designation and trail name code on the stake. For new construction, require that the contractor field locate the marker and the inspector confirm GPS coordinates prior to installation.

Installing a Milestone Marker

1. Send submittal (including fabricator, marker's mileage designation, trail name code, color and icon) to project manager. Do not order posts until submittal has been accepted.
2. Notify the Trail Program Manager and, if applicable, the project manager of the specific trail project to field-confirm marker placement.
3. Install post and footing at location previously marked with a stake.

Appendix E

4. After installation, complete a Milestone Marker Data Sheet for each marker. A digital camera and GPS device with distance tracking capability will be needed to complete the data sheets.
5. Send all data sheets as Microsoft Excel spreadsheets to Trail Program manager, who will coordinate entering the marker in the GIS Parks Layer and update the Trail Network-Milestone Marker map. The Trail Program team will also submit the sheets to the 911 Dispatch Coordinator to be entered into the 911 dispatch system.

In cases where pole-mounting the mile marker sign is not feasible, alternative installation approaches may be incorporated to accommodate such conditions.



Wall-mounted signs were adhered to a flood wall because obstructions were not permitted within a flood control channel.

Success of a milestone marker system depends on careful development and refinement of a strategy for deployment. Data gathering before and during installation will be required to identify existing signage, note site conditions, document new milestone marker locations, and gather other pertinent data. Careful planning and observation during the test deployment will ensure that common issues are addressed and lessons are learned prior to a larger scale deployment throughout the entire trail system. Towards this end, a six-phased approach will be used:

Phase 1: Incorporation into Trail Signage Guidelines

Phase 2: Mock Deployment

Phase 3: Test Deployment

Phase 4: Effectiveness Surveys

Phase 5: Final Guidelines

Phase 6: Network-wide Deployment

Appendix E

Roles and responsibilities within these six phases are described here:

The Department of Parks, Recreation & Neighborhood Services' Trail Program is responsible for:

- Reviewing proposed milestone marker installations.
- Maintaining a GIS Park Layer indicating the exact location of existing milestone markers and anticipated placement of regularly spaced milestone markers.
- Coordinating an update of the GIS Park Layer and 911 dispatch system if a location change is required.
- Producing a Trail Network-Milestone Marker map and posting on the program's web site as a resource for City staff, emergency services personnel, consultants, private developers and interested members of the public.

The Department of Public Works, City Facilities Architectural Services Division is responsible for:

- Including milestone markers on new or renovated trail projects.
- Preparing construction documents for the accurate placement of new milestone markers consistent with the GIS Park Layer.
- Inspecting built trail projects to ensure accurate placement.
- Obtaining GIS field data and communicating it to the Trail Program staff for input in GIS Park Layer and 911 dispatch system.

The Department of Planning, Building and Code Enforcement is responsible for:

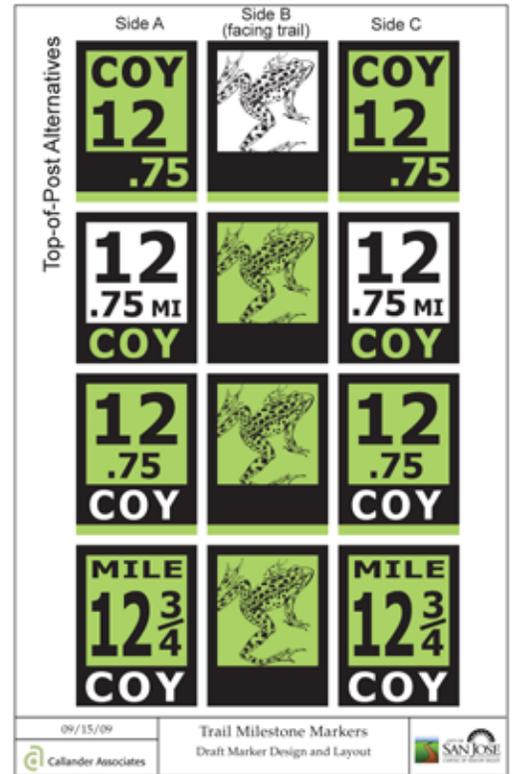
- Directing private developments to include milestone markers on newly built or restored trails when an installation is defined by the Trail Network Map.

The 911 Dispatch Coordinator is responsible for:

- Inputting data for Milestone Marker location.
- Training and educating of 911 dispatchers on an ongoing basis on the availability and use of Milestone Marker data.

Phase I: Incorporation into Trail Signage Guidelines

1. A chapter in the Trail Signage Guidelines document was developed that defines the appearance, installation method, and placement of milestone markers.
2. Input from City, County and VTA Bicycle Pedestrian Advisory Committees (BPACs), parks maintenance and trail planners was incorporated to ensure future use and support by agencies and individuals throughout the county.
3. Information that needs to be documented for each milestone marker was identified. Essential data to be collected includes:
 - Trail name, icon and color
 - Trail code and mileage designation
 - Photo of marker and environs
 - GPS coordinates
 - Nearest public street (and its nearest cross street) that intersects the trail
 - Substandard trail conditions (vertical or horizontal clearance, paving type)



Alternative designs were presented for feedback

Secondary or supporting data was discussed and it was deemed to be too extensive, not helpful, and/or not uniform enough to be entered into the dispatch system. This data includes:

- Approximate walking distance/time from nearest street access
- Brief description of location (side of creek, type of vegetation, paving, etc.)
- Keys needed for access to bollards or fences, if applicable
- Description of best accessible route to marker location (if response requires gurney or wheelchair access to marker location)
- Description of fastest route to marker location (if different from accessible route)
- Description of best parking/idling location for emergency response vehicles
- Land ownership/jurisdiction

Appendix E

4. Understand the City's 911 dispatch system by discussing the following questions and considerations.

How is the data provided to Dispatch?

- File formats
- Software requirements
- Type of database used
- Maximum file size

How will calls be recorded and data transferred back to City for record-keeping and analysis?

- Is every emergency call logged? How long are the logs kept?
- Can the call log be searched for calls that referenced a trail marker?
- If a police report resulted, would the report include a notation of the milestone marker?

What further questions should be answered about dispatch and response techniques?

- Are responders willing/able to go 'cross-country' to reach a destination; i.e. run down an embankment or through trees? What about crossing private property?
- What is the range around highways within which 911 calls will be transferred to CHP dispatch?
- What can be seen from an emergency response helicopter? How big does a reflective mark need to be? How big must text be to be legible?
- How are calls routed that are made from non-local cell phones?

5. Develop a Milestone Marker Data Sheet Template to be completed for every milestone marker. The data sheet could then be used to document the marker's existence and to enter its location and description into the City's 911 dispatch system. The data sheet template is included in Appendix F.



Phase 2: Mock Deployment

To test and evaluate the proposed system, a mock deployment was organized. In late September 2009, mock markers were installed at three points along the Coyote Creek Trail between Tully Road and Capitol Expressway. A full description of this mock deployment is described in Appendix G.

Phase 3: Test Deployment

1. Prepare construction documents in the form of work orders, using standard details for signage design and installation from the Trail Signage Guidelines document.
2. Bid and award (as necessary) a construction contract, with a Notice to Proceed that is phased to accommodate test deployment and final deployment as two separate endeavors. Note: It may be determined that city staff can conduct part or all of the deployments as part of their regular workload. That determination would be made prior to awarding a construction contract.
3. Install select milestone markers in a test deployment.
4. Complete a Milestone Marker Data Sheet for each installed marker and transfer the data to the 911 Center for entry into the city-wide dispatch system as well as to the City GIS coordinator for entry into the Parks GIS layer. Coordinate dispatcher training for the milestone marker program.
5. With the findings of this test deployment, refine the Trail Signage Guidelines document to reflect impacts of site conditions or unexpected outcomes. The refined document will be used as guidance for a network-wide deployment.

Phase 4: Effectiveness Surveys

After the test deployment has been installed for a period of several months, it will be important to perform post-occupancy assessments in the form of effectiveness surveys so the program can be refined based on findings. Survey templates are included in Appendix H.

1. Develop on-line and in-field survey documents for relevant groups:
 - Recreational and commute trail users
 - Emergency services personnel (Fire, Medical, and Police representatives)
 - 911 Center dispatchers and supervisors
 - Trail managers and maintenance supervisors
2. Gather and analyze findings to suggest recommended refinements.

Appendix E

Phase 5: Final Guidelines

1. Adjust Trail Signage Guidelines to incorporate findings from test deployment and effectiveness survey.
2. Develop “Draft Final” Guidelines to secure Council input and to acknowledge future incremental cost to capital improvement projects and related operations and maintenance expenses.
3. Finalize Trail Signage Guidelines to post on Trail Program website, distribute to trail design staff and consultants and City, County and VTA BPACs.

Phase 6: Network-wide Deployment

1. Finalize construction documents for deployment along existing trail systems.
2. Incorporate cost estimate information into DPW’s estimate template.
3. Produce final grant report that describes major project outcomes and goals.
4. Post report on the Trail Program website for distribution to the public and other agencies.
5. Pursue funding for network-wide deployment.
6. Deploy as part of all future capital improvement trail projects.
7. Maintain milestone markers. Trail Program staff will:
 - Quarterly
 - Send data spreadsheets for all milestone markers installed in the last 3 months to the 911 dispatch coordinator and GIS coordinator to be entered into databases.
 - Arrange ‘tabletop deployment’ tests of markers as necessary to verify effectiveness.
 - Annually
 - Compile data on all calls that referenced a milestone marker.
 - Associate data regarding time, date, reason and outcome of call to GIS points in citywide milestone marker map layer.
 - Field check each milestone marker to note any necessary repairs or changed conditions that would require a database update.

Template for Milestone Marker Documentation

The following is a template spreadsheet to be completed for each new milestone marker installed.

San Jose Milestone Marker Program

Marker Data Sheet

Date of Documentation:

		<i>Data</i>	<i>Notes/Instructions</i>
Milestone Marker			
Trail Name Code and Mileage Designation			See network map for three-letter trail name codes
Trail Name			Full trail name
Trail Icon			Refer to the matrix of trail names to determine which icon has been assigned to this trail. All markers along the entire trail will have the same icon
Trail Color			Refer to the matrix of trail names to determine which color has been assigned to this trail. All markers along the entire trail will have the same color
GPS Coordinates (decimal)			Use decimal degrees. Use map datum NAD83 / WGS84
			Use decimal degrees. Use map datum NAD83 / WGS84
GPS Coordinates (hours-minutes-seconds)			Use decimal seconds. Use map datum NAD83 / WGS84. Round to hundredth decimal place.
			Use decimal seconds. Use map datum NAD83 / WGS84. Round to hundredth decimal place.
Alternative Access Routes			Note any streets or parks that are near, but do not intersect, trail
			Include more than one route if necessary
Trail Access Points			
Trail Access Point A			nearest trail intersection with a public road to the south (or east) of the marker
Trail Name Code and Mileage Designation			See network map for three-letter trail name codes. measure distance along trail. Round to nearest 10'
GPS Coordinates (decimal)			Use decimal degrees. Use map datum NAD83 / WGS84
			Use decimal degrees. Use map datum NAD83 / WGS84
GPS Coordinates (hours-minutes-seconds)			Use decimal seconds. Use map datum NAD83 / WGS84. Round to hundredth decimal place.
			Use decimal seconds. Use map datum NAD83 / WGS84. Round to hundredth decimal place.
Street			street that access point is physically on
Nearest Cross Street			

Appendix F

<i>Data</i>		<i>Notes/Instructions</i>
Milestone Marker		
Standard Trail Conditions		
trail width 12'+?		only make a note here if conditions are substandard. No note indicates that conditions meet or exceed standard.
vertical clearance 12'+?		
asphalt paving?		

Trail Access Point B		nearest trail intersection with a public road to the north (or west) of the marker
Trail Name Code and Mileage Designation		See network map for three-letter trail name codes. measure distance along trail. Round to nearest 10'
GPS Coordinates (decimal)		Use decimal degrees. Use map datum NAD83 / WGS84
		Use decimal degrees. Use map datum NAD83 / WGS84
GPS Coordinates (hours-minutes-seconds)		Use decimal degrees. Use map datum NAD83 / WGS84. Round to hundredth decimal place.
		Use decimal degrees. Use map datum NAD83 / WGS84. Round to hundredth decimal place.
Street		street that access point is physically on
Nearest Cross Street		
Standard Trail Conditions		
trail width 12'+?		only make a note here if conditions are substandard. No note indicates that conditions meet or exceed standard.
vertical clearance 12'+?		
asphalt paving		
Additional Notes?		any relevant observations about barriers, potential hazards, etc.
Site Photo File Name		Paste typical site photo below for general reference. Photo should show marker and adjacent trail. Max. file size 250 KB. Photo for PRNS records only; not to be included in Special Addresses notation

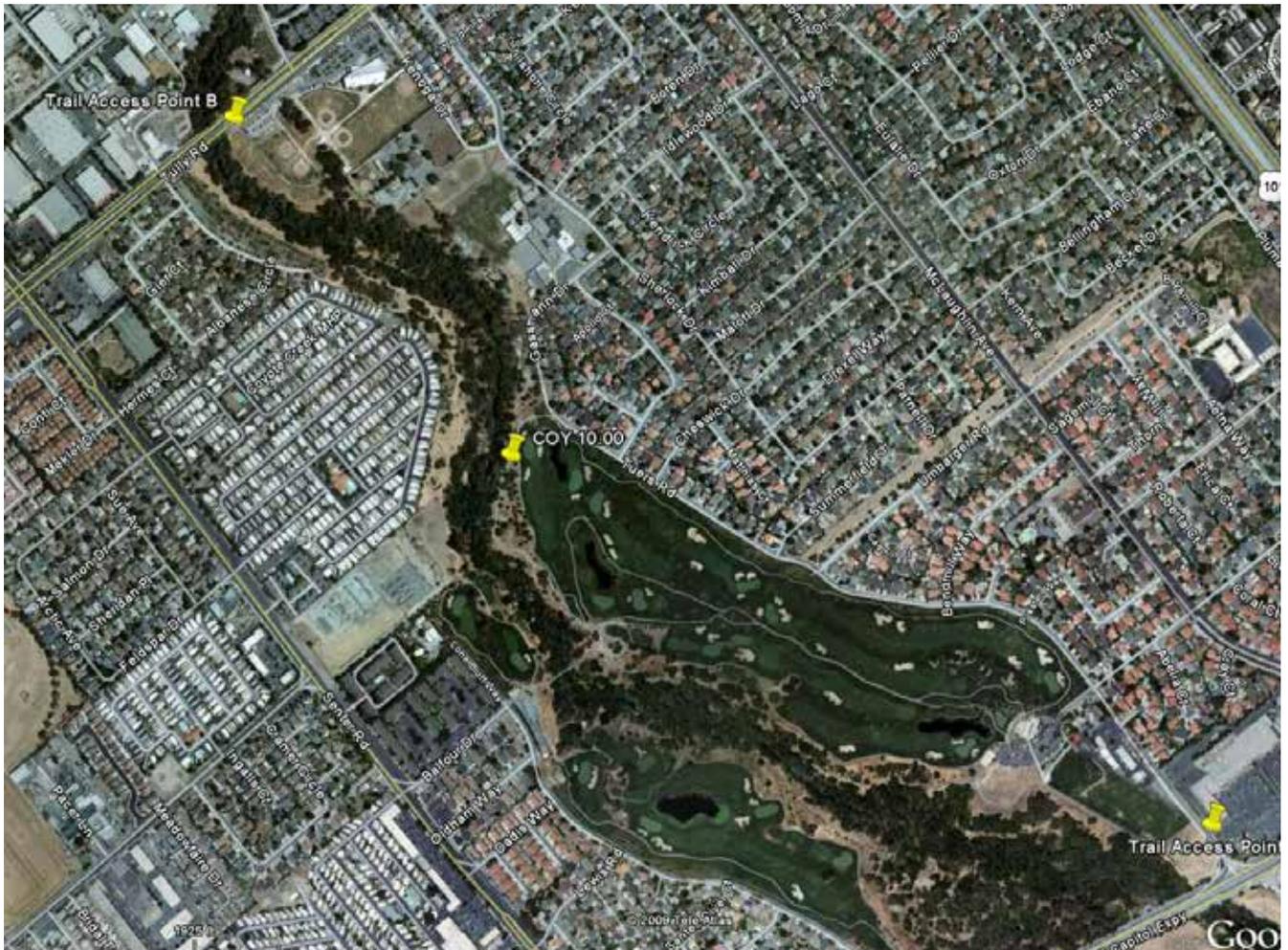


Mock Milestone Marker Deployment

One marker location was arbitrarily selected along the trail near the south end of Stonegate Park and the north end of the municipal Los Lagos Golf Course, and was assigned an arbitrary mileage designation of 10.25. GPS coordinates, site photos, and trail observations were recorded. The spot was marked with a wood stake pounded into the ground near the trail, and with a small fluorescent paint dot sprayed on the trail itself.



Temporary stake and paint dot indicate mock marker location



Vicinity Map

Appendix G

Two other marker locations were placed at the nearest trail entry points to the north and south of that first marker and were assigned mileage designations measured from the 10.25 marker. Corresponding data was collected and the locations were marked for each of these locations.

A Milestone Marker Data Sheet was created for the 10.25 mock marker location and is shown on the following pages. Instructions and notes for completing the data sheet are included.

		<i>Data</i>	<i>Notes/Instructions</i>
Milestone Marker			
Trail Name Code and Mileage Designation	COY 10.00		See network map for three-letter trail name codes
Trail Name	Coyote Creek Trail		Full trail name
Trail Icon	Coyote		Refer to the matrix of trail names to determine which icon has been assigned to this trail. All markers along the entire trail will have the same icon
Trail Color	Brown		Refer to the matrix of trail names to determine which color has been assigned to this trail. All markers along the entire trail will have the same color
GPS Coordinates (decimal)	37.30518 ° N		Use decimal degrees. Use map datum NAD83 / WGS84
	121.83819 ° W		Use decimal degrees. Use map datum NAD83 / WGS84
GPS Coordinates (hours-minutes-seconds)	37° 18' 18.65" N		Use decimal seconds. Use map datum NAD83 / WGS84. Round to hundredth decimal place.
	121° 50' 17.48" W		Use decimal seconds. Use map datum NAD83 / WGS84. Round to hundredth decimal place.
Alternative Access Routes	off-road access through Stonegate Park, on Gassmann Drive		Note any streets or parks that are near, but do not intersect, trail
	off-road access along golf cart path in Los Lagos Municipal Golf Course		Include more than one route if necessary
Trail Access Points			
Trail Access Point A			nearest trail intersection with a public road to the south (or east) of the marker
Trail Name Code and Mileage Designation	COY 11.07		See network map for three-letter trail name codes. measure distance along trail. Round to nearest 10'
GPS Coordinates (decimal)	37.29935 ° N		Use decimal degrees. Use map datum NAD83 / WGS84
	121.8248 ° W		Use decimal degrees. Use map datum NAD83 / WGS84
GPS Coordinates (hours-minutes-seconds)	37° 17' 57.66" N		Use decimal seconds. Use map datum NAD83 / WGS84. Round to hundredth decimal place.
	121° 49' 29.28" W		Use decimal seconds. Use map datum NAD83 / WGS84. Round to hundredth decimal place.

Appendix G

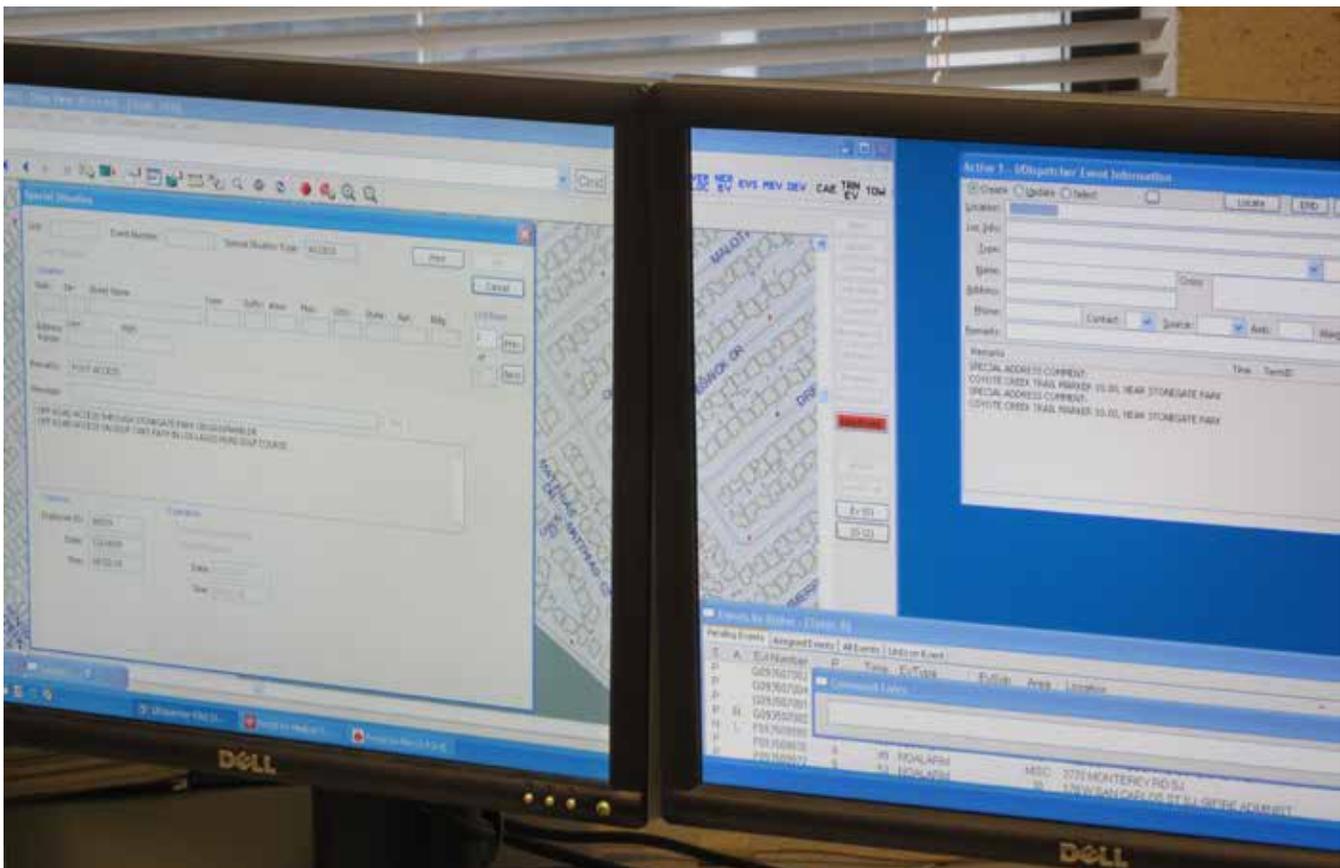
Street	Tuer Road	street that access point is physically on
Nearest Cross Street	E. Capitol Expressway	
Standard Trail Conditions		
trail width 12'+?		only make a note here if conditions are substandard. No note indicates that conditions meet or exceed standard.
vertical clearance 12'+?		
asphalt paving?		
Trail Access Point B		nearest trail intersection with a public road to the north (or west) of the marker
Trail Name Code and Mileage Designation	COY 9.46	See network map for three-letter trail name codes. measure distance along trail. Round to nearest 10'
GPS Coordinates (decimal)	37.31043 ° N	Use decimal degrees. Use map datum NAD83 / WGS84
	121.84347 ° W	Use decimal degrees. Use map datum NAD83 / WGS84
GPS Coordinates (hours-minutes-seconds)	37° 18' 37.55" N	Use decimal degrees. Use map datum NAD83 / WGS84. Round to hundredth decimal place.
	121° 50' 36.49" W	Use decimal degrees. Use map datum NAD83 / WGS84. Round to hundredth decimal place.
Street	Tully Road	street that access point is physically on
Nearest Cross Street	Senter Road	
Standard Trail Conditions		
trail width 12'+?	trail narrows to 8'-10' in sections	only make a note here if conditions are substandard. No note indicates that conditions meet or exceed standard.
vertical clearance 12'+?		
asphalt paving		
Additional Notes?		any relevant observations about barriers, potential hazards, etc.
Site Photo File Name	Coyote 10.00.jpg	Paste typical site photo below for general reference. Photo should show marker and adjacent trail. Max. file size 250 KB. Photo for PRNS records only; not to be included in Special Addresses notation



Appendix G

In December 2009, the Milestone Marker Data Sheet that was created for the mock marker was entered into the 911 Center's dispatch system by creating a Special Address, which is a customized location not associated with a standard parcel-based street address. A 'tabletop' deployment was arranged to demonstrate how the trail name code and mileage designation could be entered into the system to recall the exact location of the Special Address. When the Special Address icon was called up, the relevant data for emergency response such as nearest cross street and any sub-standard trail conditions were also available to dispatchers. This creation of a Special Address was a success, so then a mock 911 call was arranged in January 2010:

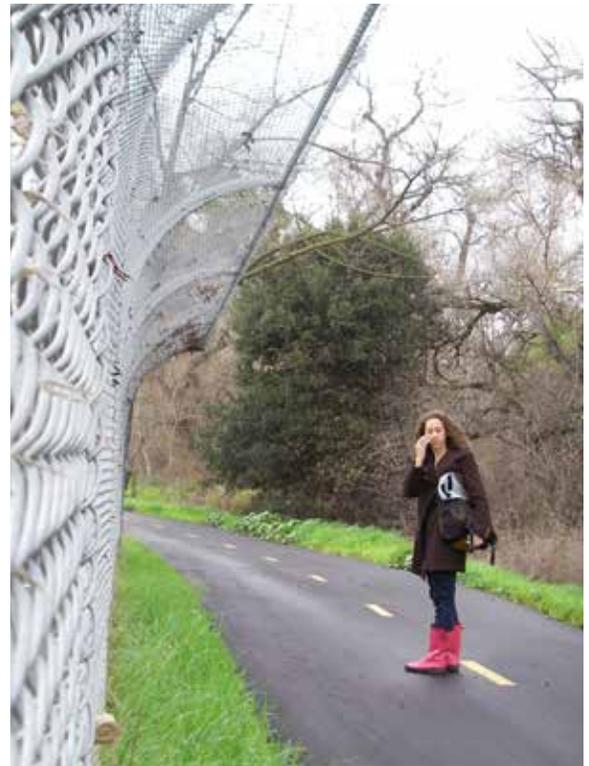
1. A date and time for a test of the system was arranged such that disturbance to emergency operations would be minimized. Typically, the 911 Center experiences lighter call volume on weekdays between 10:00 and 11:00 a.m.
2. The dispatch supervisor notified the 911 dispatch team on staff that a test call would be made during a pre-arranged time date and time period to be sure everyone was aware that the call is only a test of the system. The location of the mock marker that was being tested was not announced.



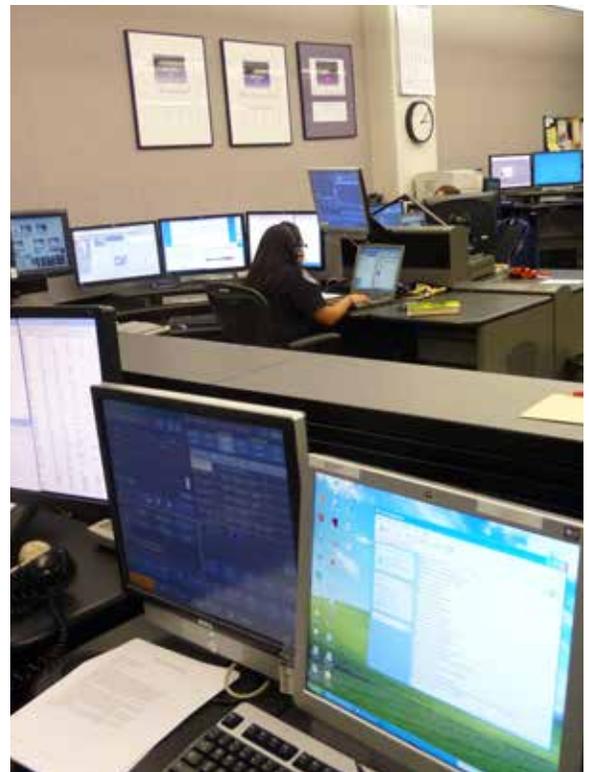
Tabletop deployment demonstrated the creation and recall of a Special Address

3. At the prearranged time, a consultant went to the mock marker's location and called 911 using a cell phone that uses a non-local number (415 area code) and does not have GPS or other 'smart phone' capabilities.
4. Upon connection to a dispatcher, the caller announced that this was part of the prearranged test of milestone marker program and relayed the trail name code (COY) and mileage designation (10.00) to the dispatcher.
5. The dispatcher first attempted to locate the caller's position by mapping the satellite signals automatically triangulated by the cell phone. The result of this triangulation method was accurate to about 50', and the dispatcher was able to describe the caller's location.
6. To test the entry of the mock marker as a Special Address in the 911 dispatch system, the dispatcher then entered the trail name code and mileage designation into the dispatch system. This operation successfully located the milestone marker and called up the associated data that had been entered from the Milestone Marker Data Sheet (nearest cross street, trail conditions, site photo, etc.)

An actual emergency response was not able to be tested for this mock deployment because dispatchers and responders typically require up to three months of training for these types of specialized response techniques. After proper training, a dispatcher would be prepared to prompt a confused caller to look for a milestone marker or for helpful information such as the color of the trail icon.



Location of mock 911 call



Dispatch Center

Appendix H

Post-Deployment Surveys

Survey A - To be administered by project team member to emergency services personnel:

Have you ever received an emergency phone call from along a trail?

Which trail?

What was the approximate date and time of the call?

Was the caller able to identify a mileage marker sign?

Was the user-provided data helpful in identifying his/her location?

Was supporting data available on your terminal related to the location along the trail?

If no, what was missing?

If yes, would more data been helpful? Please describe additional data.

Survey B – To be administered by project team member to a recreational or commute trail user:

Which trail(s) have you used recently?

Have you noticed the milestone marker signs posted along a trail in San José?

The signs have letters and numbers like the following: COY 10.25 (provide graphic sample if possible).

Please indicate what you believe each means.

Markers are spaced at about 1/4 mile increments and at trailheads. For commuting or recreation, does this spacing seem adequate? If no, please explain why spacing should be modified.

Retroreflective Thermoplastic Pavement Striping Specifications

SECTION 321720 RETROREFLECTIVE SPRAYABLE THERMOPLASTIC PAVEMENT STRIPING AND MARKING

PART I - GENERAL

I.01 SUMMARY

A. Section Includes: All labor, materials, equipment, tools, accessories, transportation, and services as required for Retroreflective Sprayable Thermoplastic Pavement Striping and Marking. This specification covers a cold spray applied, retroreflective, thermoplastic traffic marking material that is suitable for producing durable traffic stripes and pavement markings on Portland cement concrete or asphalt concrete pavements. This material is applied to road surfaces in a cold state using a standard airless spray equipment with stainless steel components. Within 5 minutes of the application, reflectorizing glass beads are applied to the surface of the applied thermoplastic striping material. This material shall produce durable, adherent, retroreflective traffic stripes and pavement markings that are capable of resisting deformation by traffic.

- B. Related Requirements
Section 321200, Flexible Paving
Section 321300, Rigid Paving

I.02 PRICE AND PAYMENT PROCEDURES

- A. Refer to Section 012000, Price and Payment Procedures.

I.03 REFERENCES

- A. Section 84, Traffic Stripes and Pavement Markings of the City Standard Specifications.
B. State of California Specifications Designation: 8010-004, Inspection, Testing and Other Requirements for Protective Coatings.
C. California Test Methods (CTM); No. 423 and No. 660 (latest revision).
D. California Department of Transportation, Standard Specifications, May 2006.
E. Federal Standard Designation: No. 595b, color #33538.
F. U.S. Environmental Protection Agency (EPA), SW-846, Methods 3052 and 6010B.
G. American Association of State Highway and Transportation Officials, (AASHTO) Designation: M 247 and AASHTO Designation: T 250.
H. American Society for Testing and Materials, (ASTM) Designations; D 476, D 2794, D 3335, D 3718, D 4563, D 4764, D 5380, D 5381, D 6359, D 6628, E 11, E 28, E 313, E 1710, and G 155.
I. Commission International de l'Eclairage (C.I.E.) 1931 Chromaticity Diagram.
J. California Code of Regulations: Title 22.

Appendix I

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Sequencing: Per Manufacturer's Recommendations

1.05 SUBMITTALS

- A. Product Data: Submit a complete list of all materials proposed for use. The list shall show the specific label name of each product for each coat of finish. After review by the Engineer, no deviation from the list will be permitted without further approval.
- B. Glass beads: Submit proposed glass beads before use. Only reviewed and approved glass beads can be used.
- C. Samples: Provide sample finishes on the actual surfaces to be sprayed to verify appearance. Approved samples will become the standard for the work. Sample should be 1ft long minimum.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Materials: Attention is directed to Section 6, Control of Materials of the City Standard Specifications and these Special Provisions. All materials required to complete the work under this contract shall be furnished by the Contractor.

1.07 SITE CONDITIONS

- A. Ambient Conditions
No paint shall be applied when moisture is present on the surface to be painted or when the air temperature is below 50 degrees or above 120 degrees F. Painting shall not be done when winds are sufficient to cause spray dust.

1.08 WARRANTY

- A. Final Guarantee: Contractor shall provide guarantee per Section 7-1.23, Final Guarantee of the City Standard Specifications.

PART 2 - PRODUCTS

2.01 RETROREFLECTIVE SPRAYABLE THERMOPLASTIC PAVEMENT STRIPING AND MARKING REQUIREMENTS

- A. SealMaster Liquid Thermoplastic Traffic Marking Paint
 - 1. Manufacturer: Shall be SealMaster, or approved equal.
 - 2. Product: Shall be SealMaster Liquid Thermoplastic Traffic Marking Paint.
 - 3. Finish: Shall be Glass Beads:
Glass beads to be applied to the surface of the molten thermoplastic material shall be 1.9 IOR high-index virgin glass beads, from Potters Industries Inc (1-800-552-3237). or approved equal. Gradation, drop rate and coating shall be per manufacturer's specification. Drop rate shall not be less than 8 pounds per 100 square feet.

B. **Other Requirements:**

3. Shelf Life:

The material shall maintain the requirements of this specification for a minimum period of one (1) year from the date of manufacture. Any materials failing to do so shall be replaced at the expense of the manufacturer. Ordered thermoplastic shall be no more than 120 days old (based on date of manufacture) upon delivery to the project site. The date of manufacture shall be clearly marked on each bag of thermoplastic.

4. Air Pollution Compliance:

This material shall comply with all applicable air pollution control rules and regulations. The thermoplastic material shall not emit fumes that are toxic or injurious to persons or property when it is heated to application temperature. The material shall not emit excessive smoke during heating or application.

C. Material Safety Data Sheets:

Material Safety Data Sheets shall be provided by the manufacturer to include health hazard information on the material when it is heated to application temperature.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verification of Conditions

Verify that the work to be striped is clean and dry to receive each coat of thermoplastic per manufacture specification. Should the Contractor find surfaces and conditions unacceptable, he shall at once report such conditions to the City and cease operations on the portion of the work affected. Application of thermoplastic shall occur only upon acceptance of surface and working conditions, and the Contractor shall be held responsible for the results. Clean all surfaces before striping by compressed air or other effective means. Pavement surfaces to receive thermoplastic shall be in condition to insure complete bonding of the applied material, and shall be subject to inspection and approval before such work commences.

B. Inspections

On delivery, the thermoplastic will be sampled for compliance to specification. Material not meeting the specification shall be removed and replaced by the manufacturer at their expense, including all costs for handling, testing, and shipping.

C. Testing

All tests shall be performed according to the specified test methods, latest revision.

The retroreflectivity of the thermoplastic striping shall be measured as specified in ASTM D6359-99 using a retroreflectometer meeting ASTM E1710-97 by Contractor in 30 minutes and in one week after the thermoplastic striping is applied. Results of the readings shall be submitted to the City and project manager for approval.

Appendix I

3.02 PREPARATION

A. Protection of In-Place Conditions

Surrounding areas, surfaces and appurtenances already in place shall be protected during installation of pavement markings.

Take special care to prevent spilling paint materials on surfaces not intended to receive them.

3.03 PREPARATION FOR DELIVERY

B. Markings

Each individual unit/container of product shall be labeled. This label shall include: State Specification number (#PTH-02SPRAY), color, type of binder, manufacturer's name and address, date of manufacture and batch number. Lead-free yellow materials shall be marked "Lead-Free". All markings on containers shall be legible and permanent. Markings shall not smear or rub off container. Containers failing to meet marking requirements will not be accepted. The containers and labeling shall meet all applicable US Department of Transportation and Interstate Commerce Commission regulations. Concerning the content, each container shall be labeled with the warnings or precautions required by Local, State and Federal laws and requirements.

3.04 INSTALLATION

A. The installation of the retroreflective sprayable thermoplastic pavement striping and marking shall be per the manufacturer's recommendations.

3.05 CLEANING

A. Take special care to keep surrounding surfaces clean as the work progresses, and upon completion carefully remove all thermoplastic from surfaces not intended to receive it. Use no materials or methods that will damage surfaces.

B. All excess glass beads shall be vacuumed from the surface. Surrounding surfaces shall be clean of ANY glass beads.

END OF SECTION

Graffiti-Resistant Coating Specifications

SECTION 099650 GRAFFITI-RESISTANT COATINGS

PART I - GENERAL

1.01 SUMMARY:

- A. Section Includes: Surface preparation and field application of high – performance coating systems to items and surfaces scheduled.
- B. Related Sections include the following:
 - 1. Section 051200, “Structural Steel” for shop priming structural steel.
 - 2. Section 055000, “Miscellaneous Metals” for shop-primed ferrous metal.

1.02 PRICE AND PAYMENT

- A. Refer to Section 012000, Price and Payment Procedures

1.03 SUBMITTALS

- A. Quality Assurance/Control Submittals: Submittal procedures and quantities for the following are specified in Section 013000.
 - 1. Product Data: For each coating system indicated. Include block fillers and primers.
 - a. Material List: An inclusive list of required coating materials. Indicate each material and cross-referenced the specific coating, finish systems, and application. Identify each material by manufacturer’s catalog number and general classification.
 - b. Manufacturer’s Information: Manufacturer’s technical information, including label analysis instructions for handling, storing, and applying each material specified.
 - 2. Samples for Verifications: For each color and material to be applied, with texture to simulate actual conditions, on representative samples of the actual substrate.

1.04 QUALITY ASSURANCE

- A. Application Qualifications: Engage Manufacturer to provide an experienced applicator who has completed anti-graffiti coating system applications similar in material and extent to those indicated for Project, and whose work has a record of successful in-service performance.
- B. Source Limitations: Obtain base coatings, top coatings, and removal agent from the same manufacturer.

1.05 PERFORMANCE REQUIREMENTS

- A. Provide anti-graffiti coating system complying with the following:
 - 1. Permanent coating system. Coatings shall not require re-application regardless of number of graffiti taggings during the life of the 10 years performance guarantee period.
 - 2. Show no signs of deterioration or change of appearance after graffiti removal during the warranty period. No ghosting staining or shadowing.
 - 3. Capability of removing 100% of all types of paint and graffiti materials from treated surfaces without damaging the coating or the substrate.

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4. Upon graffiti removal, no evidence of graffiti shall remain.
5. Capable of withstanding a minimum of 120 over the cleaning cycles over the same area without measurable coating deterioration.
6. Shall not increase dirt pick-up of substrate.
7. Meet the following test results for the following chemicals:
 - a. MEK No effect after 5 days
 - b. Carboxylic Acid No effect after 5 days
 - c. 75% Phosphoric Acid No effect after 5 days
 - d. 37% HCL 3 hour blister
 - e. 50% Sulfuric Acid No effect after 5 days
 - f. 20% NIT 68 hours blister

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver to the site in original sealed containers bearing manufacturer's label, batch number and date of manufacture.
 - I. Store at the site in a location protected from the weather, and away from excessive heat and flames.

1.07 PROJECT CONDITIONS

- A. Do not apply coating materials when ambient or surface temperature is below 40 degrees F, during rainy conditions, or within 3 days after surfaces have become wet from rainfall or other moisture.
- B. Protect shrubbery and other plant life, asphaltic based materials, or any other materials which may be damaged from contact with the anti-graffiti coating materials.
 - I. Observe recommended safety precautions as directed by governing agencies and the manufacturer.

1.08 EXTRA MATERIALS

- A. Furnish extra graffiti removal materials in quantities described below. Package coating materials in unopened, factory-sealed containers for storage and identify with labels describing contents.
 - I. Quantity: three (3) 16 ounce bottles but not less than 1 percent of total quantity applied.

1.09 WARRANTY

- A. System Warranty: Provide written warranty signed by manufacturer, agreeing to repair or replace work that exhibits defects in materials or workmanship. Defects are defined to include failure to withstand complete graffiti removal, ghosting, shadowing, chemical staining, yellowing, and normal environmental effects.
 - I. Warranty Period: 10 years from date of completion.

PART 2 - PRODUCTS

2.01 ANTI-GRAFFITI SYSTEM/MANUFACTURER

- A. Products Approved: Provide the following basis for design product or equal product approved according to Section 016000.
 - I. Graffiti Masters distributed by Kelly-Moore or equal. Any other non-sacrificial type.
- ### **2.02 ANTI-GRAFFITI COATING MATERIALS**
- A. VOC Classification: Provide materials that comply with South Coast Air Quality Management District's VOC classification.
 - B. Coating shall meet requirements of the following:
 - 1. ASTM B 117-03 and ASTM D 714-02 (salt spray minimum acceptable of 8000 hours).
 - 2. ASTM D 530 (hardness).
 - 3. ASTM D 412-98a(2002) (tensile strength and elongation).
 - 4. ASTM D 522-93a(2001) (pass 3/8 inch mandral)
 - 5. ASTM D 968-93(2001) (abrasion test).
 - 6. ASTM E 96-00 (vapor transmission).
 - 7. Water clear, non-yellowing, free of waxes and urethanes.
 - 8. Non-toxic, non-flammable, biodegradable, with a PH 7 – 8.5.
 - 9. Shall allow moisture vapor transmission.
 - C. Undercoating: GSS Barrier; water-based undercoating used as a sealer over porous surfaces.
 - 1. Provide high-solids version for use over porous or uneven surfaces.
 - D. Top coating: GSS-10; permanent anti-graffiti top coating.
 - 1. Finish: Matte. (Matte is defined as the finish of the top coating reading less than five degrees on a Gardner Gloss Meter).
 - 2. Color: Clear or tinted, as indicated.
 - E. Graffiti Remover: GSS Erasol; non-caustic, biodegradable and recyclable, allowing graffiti removal without the use of blasting equipment, not water, or high-pressure wash equipment.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. With Applicator present, examine substrates and conditions under which anti-graffiti coatings will be applied, for compliance with coating application requirements.
 - 1. Apply coatings only after unsatisfactory conditions have been corrected and surfaces to receive coatings are thoroughly dry.
 - 2. Start of application is constructed as Applicator's acceptance of surfaces within that particular area.
- B. Coordinate of Work: Review other Sections in which primers or other coatings are provided to ensure compatibility of total systems for various substrates. On request, furnish information on characteristics of specified finish materials to ensure compatible primers.

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1. If a potential incompatibility of primers applied by others exists, obtain the following from the primer Applicator before proceeding:
 - a. Confirmation of primer's suitability for expected service conditions.
 - b. Confirmation of primer's ability to be top coated with materials specified.
2. Notify Architect about anticipated problems before using the coatings specified over substrates primed by others.

3.02 PREPARATION

- A. General: Remove plates, machined surfaces, and similar items already in place that not to be coated. If removal is impractical or impossible because of size or weight of item, provide surface applied protection before surface preparation and coating.
 1. After completing coating operations, reinstall items that were removed; use workers skilled in the trades involved.
- B. Cleaning: Before applying coatings, clean substrates of substances that could impair bond of coatings. Remove oil and grease before cleaning.
 1. Schedule cleaning and coating application so dust and other contaminants from cleaning process will not fall on wet, newly coated surfaces.
- C. Surfaces Preparation: Clean and prepare surfaces to be coated according to manufacturer's written instructions for each substrate condition and as specified.
 1. Provide barrier coats over incompatible primers or remove primers and re-prime substrate.
 2. Cementitious Substrate: Prepare concrete, brick, concrete masonry block, and cement plaster surfaces to be coated. Remove efflorescence, chalk, dust, grease, oils, and release agents. Roughen as required to remove glaze. If hardness or sealer have been used to improve curing, use mechanical methods to prepare surfaces.
 - a. Do not coat surfaces if moisture content exceeds that permitted in manufacture's written instructions.
 3. Metal Substances: Clean ferrous-metal surfaces that have been shop coated; remove oil, grease, dirt, and other foreign substances
- D. Material Preparation: Carefully mix and prepare coating materials according to manufacturer's written instructions.
 1. Maintain containers used in mixing and applying coatings in a clean condition, free of foreign materials and residue.
 2. Stir materials before applying to produce a mixture of uniform density. Stir as required during application.

3.03 APPLICATION

- A. General: Apply coatings according to manufacturer's written instructions.
 1. Use applicators and techniques best suited for the material being applied.
 - a. Do not apply coatings over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable coating film.
 - b. Allow sufficient time between successive coats to permit proper drying. Do not re-coat surfaces until coating has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and application of another coat does not cause undercoat to lift or lose adhesion.

- B. Application Over Cementitious Surfaces:
 - 1. Base: Minimum of 2 coats (or as many coats as necessary to achieve a pinhole free surface) of GSS Barrier undercoating as specified by manufacturer; 3 to 4 mils minimum (or more if required by manufacturer) dry film thickness.
 - 2. Finish: Minimum of 2 coats of GSS-10 top coating; 3 to 4 mils minimum dry film thickness (or as many coats as necessary to satisfy warranty requirements)
 - 3. Application Over Primed metal Surfaces:
 - 4. Finish: 2 coats of GSS-10 top coating; 3 to 4 mils minimum dry film thickness.
 - C. Completed Work: Match approved Samples for color, texture, and coverage. Remove, re-finish, or re-coat work that does not comply with specified requirements.
- 3.04 FIELD QUALITY CONTROL
- A. Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when coatings are being applied:
 - 1. Owner will engage the services of a qualified testing agency to sample coating material being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
 - 2. Testing agency will perform appropriate test for the following characteristics as required by Owner:
 - a. Quantitative materials analysis.
 - b. Absorption.
 - c. Accelerated weathering.
 - d. Accelerated yellowness.
 - e. Alkali and mildew resistance.
 - f. Abrasion resistance.
 - g. Washability.
 - 3. Owner may direct Contractor to stop applying coatings if test results show materials being used to do not comply with specified requirements. Contractor shall remove non-complying coating materials from Project site, pay for testing, and re-coat surfaces coated with rejected materials. If necessary, Contractor may be required to remove rejected materials from previously coated surfaces if, on recoating with specified materials, the two coating are not compatible.
 - B. Demonstration: Apply alkyd-based graffiti to a 2ft. sq. treated area selected by the Owner. 5 days minimum after application, demonstrate complete removal of the graffiti in the presence of the Owner.
- 3.05 CLEANING
- A. Cleanup: At the end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
 - B. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

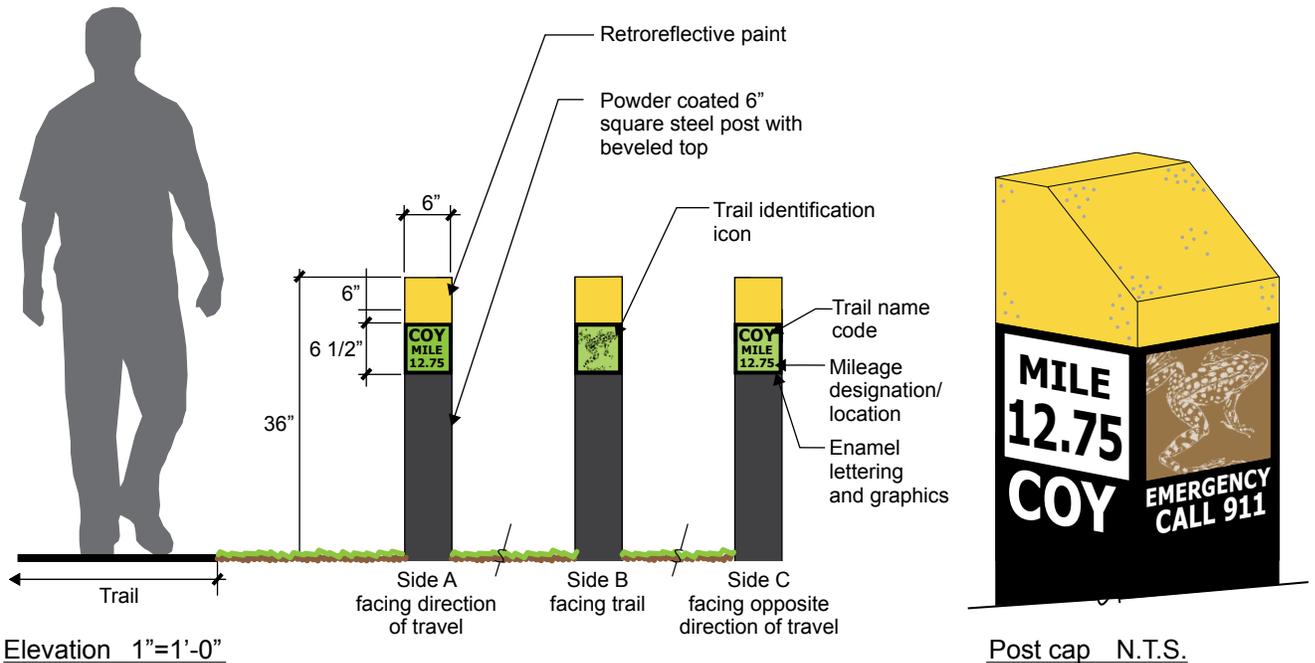
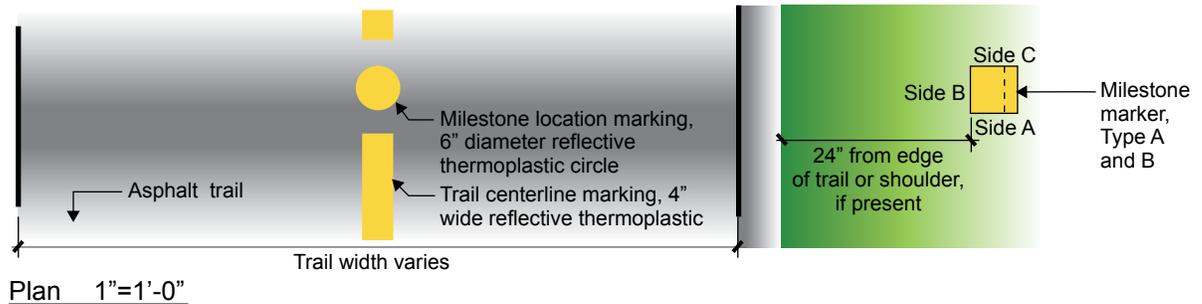
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3.06 PROTECTION

- A. Protect work of other trades, whether being coated or not, against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as approved by Owner, and leave in an undamaged condition.
- I. Provide “Wet Paint” signs to protect newly coated finishes. After completing coating operations, remove temporary protective wrappings provided by others to protect their work.
- B. At completion of construction activities of other trades, touch up and restore damage or defaced coated surfaces. Comply with procedures specified in PDCAPI.

END OF SECTION

Bollard-style Milestone Marker Details



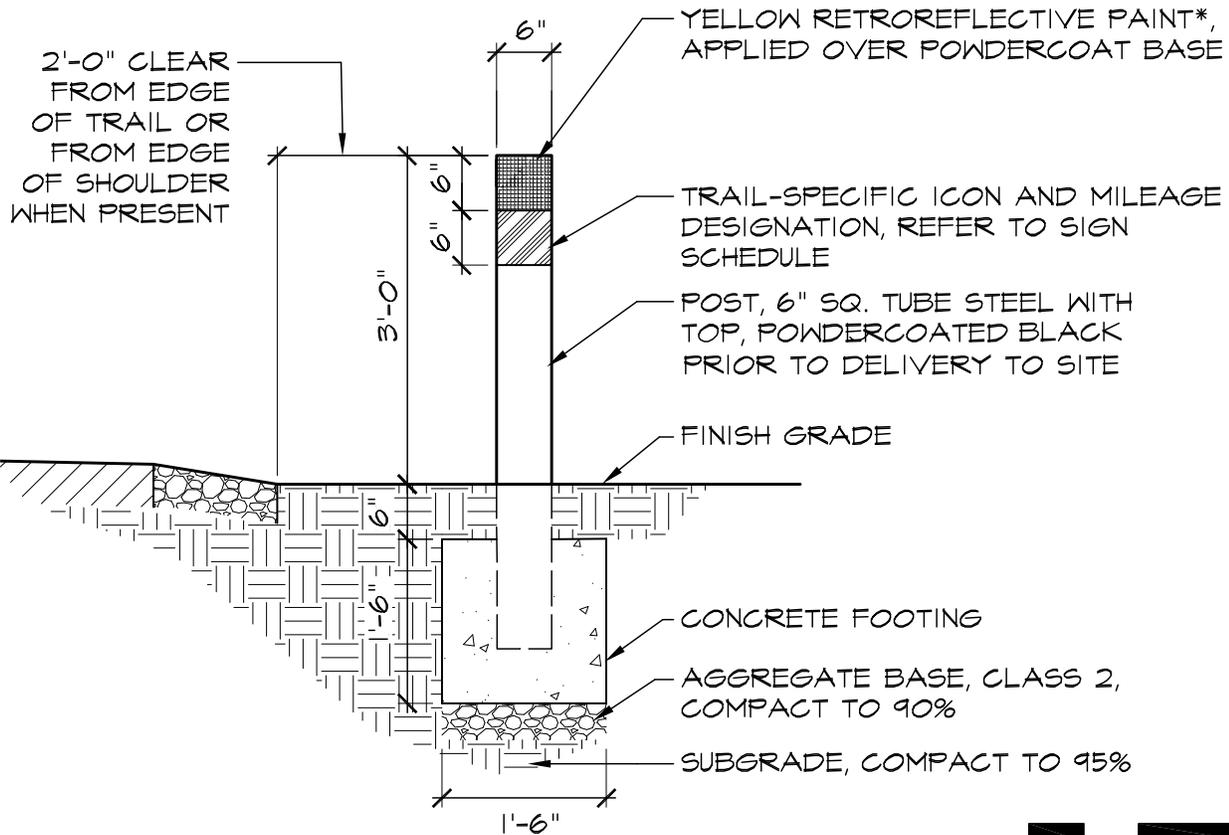
Milestone Marker Type A

Milestone marker design and layout.

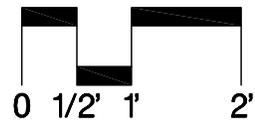
*Note: Bollard-style marker was installed along a limited number of trails. The details is included in the guidelines for replacement/repair purposes only for those existing installations. All new installations will use a sign-based marker.

Appendix K

Bollard-style Milestone Marker Details



*PAINT SHALL MEET CITY SPECIFICATIONS, SECTION 321723.01 (APP. J)



09037_milestonemarker.dwg

Milestone Marker Type A

*Note: Bollard-style marker was installed along a limited number of trails. This detail is included in the guidelines for replacement/repair purposes only for those existing installations. All new installations will use a sign-based marker.