

## **Design Standard**

### **Bicycle Racks and Storage**

#### **Purpose:**

Bicycling is an important component of ESUHSD's transit strategy. Sustainable development and healthy lifestyles come in part through a reduction in auto dependency and the support and development of alternative modes of transportation. Bicycling is one of those modes.

San Jose is a city with relatively consistent elevations, free of the challenges associated with large hills and valleys. Bicyclists can reach each of our schools via surface streets. In addition, Santa Clara Valley Transportation Authority - the county public transit agency - provides bicycle racks on their buses. This gives visitors, staff, and students the ability to add bicycling to their transit choices.

Once on campus, cyclists require conveniently located racks or cages to secure their bicycles. This design standard has the purpose of creating a consistent application of bicycle racks and cages throughout East Side Union High School District, therefore achieving a standard of quality for functionality, aesthetics and maintenance.

#### **Design Standard:**

##### **1. Placement:**

- a. Multiple storage options distributed throughout the campus and located close to individual destinations are preferable to a smaller number of large racks, which may not be as convenient. Cyclists prefer to park very close to their destinations and will lock the bicycle to anything available, including lampposts and fencing, unless a rack is immediately nearby. Multiple cyclists traveling together often lock their bikes together at a small bike rack. A higher concentration of bicycle parking may be needed near major building entrances.
- b. Racks should be in public view with high visibility and good lighting. Avoid placing racks where a thief or vandal could work without fear of being immediately noticed.
- c. Racks should be covered by building roof or other overhangs, where possible, in order to protect bicycles from precipitation.
- d. Bicycles should not block pedestrian ways by jutting out into a walkway. Racks should be sited to allow parked bicycles adequate clearance from walkways.
- e. Provide adequate paved area for the bicycle to park in the rack and still have its front tire rest on paved surface. Do not impede into landscaped areas.
- f. Allow adequate pavement to allow the cyclist to move around the rack.
- g. Optimize space by design vertical bike storage, where possible and desired.

## 2. Cages

- a. Cages can provide enhanced security for stored bicycles. Walls should be constructed of tight, strong mesh to prevent attempts to cut through the cage or to reach through and trip the door latch or inside handle. Cage doors and roof should fit tightly against the cage walls. The cage and bicycle racks inside should be firmly secured to the ground or floor.
- b. A single cage of 18 ft. x 9 ft. can accommodate approximately 10 bicycles. A cage of this size occupies approximately the same areas as 1 vehicle parking space.
- c. Appearance of a cage should not detract from the aesthetics of the overall campus. There may be opportunities to tuck cages against buildings in ways that provide weather protection, security lighting, and ease of access, using only economical materials. Bike racks that orient bicycle storage vertically can optimize use of space.



Conversely, there could be an opportunity to celebrate the bicycle with design and installation of a bolder bicycle storage statement, more prominently located on a campus site. These design decisions must be considered on a case-by-case basis.

## 3. Racks

- a. Good rack design provides for two points of contact between the bicycle and the rack. This allows both the frame and at least one wheel to be locked to the rack, and supports the bicycle.
- b. Bike Racks should accept both U-Locks and Cables passed through the frame of the bike. The U-lock is the most secure solution but requires a very short distance between the frame and the rack. Old-style parking racks that hold the bike at the front tire are undesirable because the bicycle frame cannot be placed close enough to the rack to use the U-lock without parking the bike sideways and using up the entire rack.
- c. Freestanding bike racks should not hold the bike by the wheel because application of force to the bike can bend the wheel.
- d. ESUHSD's standard wall-mounted vertical bicycle storage rack is the Wirecrafters Wall Rider Bicycle Storage. Individual wall-mounted bike holders can be arranged in a modular fashion. Specify inclusion of the attached cable, so that cyclists only need a lock to secure their bikes. Regardless of the wall substrate, include a black

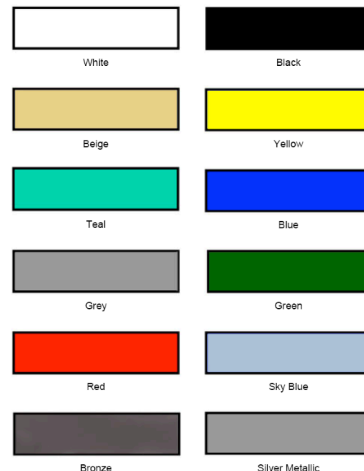
painted horizontal header board, which will provide a unified appearance, hide wheel scuffmarks, and ease wall repainting in the future.

- e. ESUHSD’s standard freestanding bicycle rack style is a loop style tubular steel rolling rack. It is preferred because it allows the cyclist to attach the bicycle by the frame to a robust steel tube. The racks are compact, require few fastening points to the ground, do not feature any sharp corners to injure pedestrians, and can be offered in multiple capacities. Specifically, the rack should comply with the following:

- Pipe thickness: 2-3/8” O.D.
- Bend radius: 12”
- Minimum number of Bends: 3
- Minimum capacity: 5 bicycles
- Height: 36”
- Ground fastening (preferred): In ground, secured with 3/8” x 6” horizontal rod, embedment depth, 10” minimum
- Ground fastening (retrofit only): Set onto concrete only. No surface mount installations allowed on asphalt concrete or in dirt. Surface mount units have a 3/8” x 5” welded flanged plate with 4 holes. Fasten with 1/2” concrete wedge anchor. Tack weld nut to anchor for theft prevention.
- Finish Color choices:
  - Galvanized (preferred)
  - Grey
  - Silver Metallic
  - Green
  - Black
  - Bronze



Note: This is a guide. Actual colors may vary slightly.  
Other colors available but could entail additional cost depending on stock.

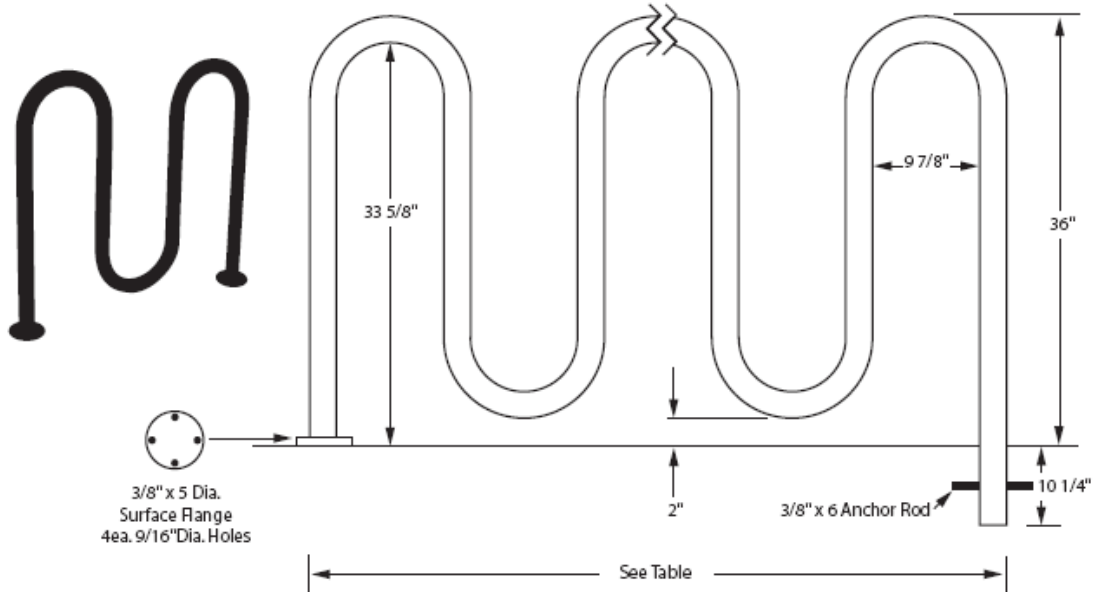




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**[ Welle™ Multiple  
Bend  
(Round Pipe)**



WELLE™ MULTI BEND ROUND PIPE RACKS						
Item		# of Bends	Bike Capacity	Rack Length		Model
				Common	Wide loop	
<b>MATERIAL</b> 2 3/8" O.D. Pipe Schedule 40 Pipe .154" Wall Thickness Mandrel - Bent	H3605	3	5	38"	59"	
	H3607	5	7	62"	97"	
	H3609	7	9	86"	135"	
<b>OPTIONAL</b> 1 5/8" O.D. Pipe Available Stainless 304 Alloy Available	H3611	9	11	110"	173"	
	H3613	11	13	134"	211"	
	H3615	13	15	158"	249"	
	H3617	15	17	182"	287"	

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### **Approved Manufacturers**

- Welle
- Palmer Group, San Francisco (bikeparking.com)
- Wirecrafters

### **Substitutes Allowed?**

Yes, if performance and quality equivalency can be evidenced.

### **Associated Design Standards and Construction Specifications**

- 32 00 00 Campus Exterior Design Standard
- Sustainability Design Standard

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