



# Station Maintenance & Cleaning



Engineering & Operations Committee, March 10, 2016

# Station Maintenance: Maintenance & Engineering



## ▪ Station Equipment

- Elevator Escalator – Separate Presentation
- Fare equipment
- Communications System
- Lighting
- Pigeon Abatement
- Security Grilles
- Landscaping
- Homeless Encampment (BPD & M&E)
- Graffiti Removal
- Structures

## ▪ Contracted Services

- Sweeping Services
- Power Wash
- Glass Replacement
- Glass Cleaning
- Pest Control

# Station Maintenance: Fare Equipment



## ■ **Current Availability**

- Ticket Vendors – 95.9%
- Add Fare Machines – 97.9%
- Parking Validation – 99.8%
- Gates – 99.1%

## ■ **Preventive Maintenance**

- All Equipment, All Stations – Every 10 weeks

## ■ **Upgrades**

- Asset Refresh
- Clipper

# Station Maintenance: Communications System



## ■ Preventive Maintenance

### ■ *Quarterly*

- Emergency Phones
- PBX Phones
- White Courtesy Telephones
- TIMS (Train Information Systems)
- Real Time Displays
- Agents Console (alarms, controls & indications)
- Station BARTNet (equipment, network, fiber optic cable)
- Parking Lot/ Garage Call Boxes
- Fire Radio System (underground stations)

# Station Maintenance: Station Lighting



- **Preventive Maintenance**
  - Lights – Bi-Monthly
  - Emergency Lighting – Bi Monthly
  - Timers & Photocells – Bi-Monthly
  - Emergency Generators – Bi-Monthly
- **Parking Lot, Garage, Park & Ride Lots**
  - Three Times/Year
- **Upgrade Plans**
  - LED
    - Montgomery

# Station Maintenance: Pigeon Abatement



- **Last year:**
  - El Cerrito Del Norte Station- completed
  - El Cerrito Plaza Station - free areas completed, paid area 70%
  - South Hayward Station - completed
  - Coliseum Station Substation completed
  - Bay Fair Station - Train Control Room completed
  - West Oakland Station - area around new break room
- **This Year :**
  - San Leandro Substation
  - Hayward Station
  - West Oakland Station completion
  - San Leandro Station
- **Most Likely Next:**
  - 16<sup>th</sup> Street Station, 24<sup>th</sup> Street Station, Concord Station and Berkeley Station,
  - Rockridge Station parking lot, Bay fair Station

# Station Maintenance: Security Grilles



- Preventive Maintenance:
  - Once Month
- Replacement
  - 48 Total Security Grilles
  - 28 Scheduled for replacement
  - 20 completed
  - Expected Completion: April 2016

# Station Maintenance: Landscaping



## ▪ **Weekly**

- Large Trash Removal
- Shopping Cart Removal
- Broken Glass Clean Up

## ▪ **Seasonal**

- Storm Drain Clearing
- Tree Trimming / Removal

## ▪ **Quarterly**

- Every Stations Landscaping eg; Pleasant Hill, Las Juntas Park
- Pruning for décor
- Weed Abatement
- Mulching
- Mowing Grass
- Soil Erosion Control
- Irrigation System inspection/repair



# Station Maintenance: Containing Large Homeless Encampments



- El Cerrito Del Norte - north of station, behind Home Depot
- MacArthur - 40<sup>th</sup> at MLK Blvd
- Hayward Whipple Yard - north end near golf course
- 45<sup>th</sup> Ave at San Leandro Blvd, Oakland - under aerial
- Coordinate homeless notifications through BART Police

# Station Maintenance: Smaller Homeless Encampments



- **Balboa Station(north & south) – Clear every Saturday**
- **ANA substation (south of A15)**
- **Concord Parking Structure**
- **C54 ( in culvert, directly below our tracks, south end of Concord Yard)**
- **Lafayette Station (in bushes on City Side lot)**
- **Below our bridges at 29<sup>th</sup> St, 30<sup>th</sup> St, 52<sup>nd</sup> St and Shattuck, Oakland**
- **MW09 (in bushes out side C2 side)**
- **Richmond between yard and station R-2 side, near Rail Road Tracks**
- **North Berkeley Station (bushes by substation)**
- **Ashby Station (Ed Roberts lot, near houses)**
- **Fremont Station (East lot in bushes)**
- **Jackson Street, Hayward ( below aerial)**
- **Hayward Station ( in bushes along Rail Road Right of Way that splits station)**
- **Halcyon Blvd, Hayward (below Aerial)**
- **Union City Station (south end, in bushes at culvert)**
- **San Bruno Station (under ramp to parking structure)**
- **West Oakland Station (around station, moves around a lot)**
- **Millbrae (under pass, Millbrae Ave)**
- **Colma Station ( below bridge to south end of station at bus zone)**
- **Daly City Station (north end lot at Caltrans property)**

# Non Station Graffiti Removal



- **Hot Spots – Bi- Weekly Removal**
  - Substation South of Lake Merritt Station under the aerial
  - Hayward Station Substation at transfer to L Line and Western Blvd
  - All Columns A-line
  - All Columns West Oakland Station to Martin Luther King Blvd
  - Chabot Rd, Rockridge & Ashby BART Parking Lots
  - Gilman Ave Berkeley
- **Other Hot Spots: (require coordination)**
  - Oakland 23rd St Portal
  - Richmond Station Union Pacific Track Wall
  - W-Line Cal Train Wall
- **All others on an as-reported basis**

# Station Maintenance: Structures



## Preventive Maintenance Inspections (every 8 weeks) & Repair (as needed):

- Roof & Drains
- Structural Steel (paint as necessary)
- Platform edge surface
- Benches
- Map cases, signs, railings & kiosks
- Windscreens
- Emergency gates
- Partitions
- Wall hydrants
- Stairs, stair treads and handrails
- Walk off rubber mats and aluminum landings
- Grille man-doors & chain barriers
- Restroom components
- Water heaters
- Sump pumps
- Drains
- Doors, door handles, locks
- Floors, pavers, tiles, concrete terrazzo

# Contracted Services: Sweeping



## ■ **Contract**

- Monthly
  - All Park & Ride Lots
- Weekly
  - All Parking Lots / Garages
- Twice a Week
  - Fruitvale Station Plaza, Garage, Parking Lot
  - Coliseum Station Plaza, Parking Lot
  - Hayward Station Plaza, Garage, Parking Lot
  - Bay Fair Station Plaza, Garage, Parking Lot

# Contracted Services: Power Washing



## ■ Daily

- 16<sup>th</sup> Street Station Plaza
- 24<sup>th</sup> Street Station Plaza

## ■ Twice a Week

- Fruitvale Station Plaza, Bus Shelters
- Coliseum Station Plaza, Bus Shelters
- Hayward Station Plaza, Bus Shelters
- Fremont Station Plaza, Bus Shelters
- Walnut Creek Station Plaza, Bus Shelters, Parking Garage Stairwells
- Pleasant Hill Station Plaza, Bus Shelters
- MacArthur Station Plaza, Bus Shelters, Parking Garage Stairwells
- Dublin/Pleasanton Station Plaza, Bus Shelters
- El Cerrito Plaza Station Plaza
- Richmond Station Plaza, Bus Shelters, Parking Garage Stairwells
- Rockridge Station Plaza
- Daly City Station Plaza, Bus Shelters, Parking Garage Stairwells

## ■ All Others Once a Week

# Contracted Services: Glass Replacement 2015



January 2015	February 2015	March 2015	April 2015	May 2015	June 2015
Walnut Creek Walnut Creek Walnut Creek Concord	Concord South SF Embarcadero Embarcadero Embarcadero Dublin/Pleasanton Berkeley West Oakland Concord Embarcadero	Embarcadero El Cerrito Del Norte El Cerrito Del Norte Civic Center Embarcadero Lake Merritt San Leandro 24th Street 24th Street	Hayward Yard Lake Merritt Powell Walnut Creek West Oakland Concord Fruitvale Concord Hayward Fruitvale	12th Street North Berkeley W Dublin/Pleasanton W Dublin/Pleasanton Union City Fruitvale Lafayette Rockridge Fruitvale Fruitvale Fruitvale	Rockridge Lake Merritt El Cerrito Del Norte Lake Merritt Fruitvale Fruitvale Berkeley Montgomery Powell Daly City Embarcadero Fruitvale Fruitvale
July 2015	August 2015	September 2015	October 2015	November 2015	December 2015
Embarcadero Coliseum Embarcadero El Cerrito Del Norte Daly City Powell San Bruno South Hayward 16th Street	Fruitvale Civic Center Dublin/Pleasanton Hayward Lake Merritt Hayward Yard	Civic Center Civic Center Berkeley Richmond	Richmond Daly City Fruitvale BayFair Powell Embarcadero Lafayette El Cerrito Del Norte	Embarcadero Lafayette El Cerrito Del Norte Powell South SF	Montgomery Coliseum MacArthur Concord Hayward

# Contracted Services: Glass Cleaning



- Elevator Exterior Door Glass – Quarterly
- Skylights – Quarterly
- Bus Shelters - Monthly



# Contracted Services: Pest Control



- **Contract**
  - Monthly Inspection & Treatment
  - As Needed – On Call
- **Targets**
  - Bees, wasps, hornets and yellow jackets
  - Rodents; mice and rats
  - Ants
  - Spiders
  - Fleas
  - Gnats
  - Flies
  - Cockroaches

# Station Brightening (In House): Scope



- Station Thorough Cleaning
- Station Painting
- Upgrade lighting
- Plumbing fixture and pipe/valve replacements
- Tile and Concrete Floor repairs
- Stair Tread replacements
- Hand Rail Repairs
- Replace Some Signs
- Decluttering
- Fare Evasion Hardening
- Station Specific Work; construction of break rooms, paramedic report location, special fencing, erecting wall systems, and street gate Installations

# Station Brightening (In House): Progress



## ■ **Complete / In Progress:**

- Coliseum
- Civic Center
- Powell
- Montgomery
- Embarcadero
- San Leandro

## ■ **Needs Based**

# Station Cleaning

## Transportation & System Service



### ■ **Cleaning**

- Daily station and facility cleaning
- Deep Cycle Cleaning by the Special Project Crews (SPC)
- Entryway cleaning
- Graffiti Removal (contractor)

# Daily Station Cleaning: A & B Station Assignments



A/L Line AM	A/L Line PM	R Line AM	R Line PM	C/K Line AM	C/K Line PM	M/W Line AM	M/W Line PM
Lake Merritt Primary	Lake Merritt	Ashby Secondary	Ashby	Oakland West Secondary	Oakland West Secondary	Embarcadero	Embarcadero
Fruitvale	Fruitvale	Berkeley Primary	Berkeley	12th St.	12th St.	Montgomery	Montgomery
Coliseum/OC	Coliseum/OC	N. Berkeley Primary	N. Berkeley Secondary	19th St Primary	19th St. Primary	Powell	Powell
San Leandro Primary	San Leandro	El Cerrito Plaza Secondary	El Cerrito Plaza Primary	MacArthur Primary	MacArthur Primary	Civic Center	Civic Center
Bay Fair	Bay Fair	El Cerrito del Norte	EC del Norte Primary	Rockridge Secondary	Rockridge Secondary	16th St Secondary	16th St Primary
Hayward Primary	Hayward Secondary	Richmond	Richmond Secondary	Orinda Secondary	Orinda Secondary	24th St Primary	24th St Secondary
S. Hayward Secondary	S. Hayward Primary			Lafayette Secondary	Lafayette Secondary	Glen Park Secondary	Glen Park Primary
Union City Secondary	Union City			Walnut Creek Primary	Walnut Creek Primary	Balboa Secondary	Balboa Primary
Fremont Primary	Fremont Secondary			Pleasant Hill Secondary	Pleasant Hill Secondary	Daly City Primary	Daly City Secondary
Castro Valley Secondary	Castro Valley Primary			Concord Primary	Concord Primary	Colma Primary	Colma Secondary
W. Dub/Pleas Primary	W. Dub/Pleas Secondary			North Concord Secondary	North Concord Secondary	South SF Primary	South SF Secondary
E. Dublin Pleasanton	E. Dub/Pleas Primary			Bay Point Primary	Bay Point Primary	San Bruno Secondary	San Bruno Primary
OKS/OSA						Millbrae	Millbrae
CHB Secondary						SFIA TM OFC Secondary	SFIA TM OFC Secondary
	MET/LMA						

**“A” Station (Green)**  
Staff stays at their assigned station all day

**“B” Station (Red)**  
Staff is responsible for cleaning two stations. The secondary station receives a reduced cleaning program

Powell and Civic Center have some shifts with double coverage

# Daily Station Cleaning: “A” Station Assignments



## Comprehensive Cleaning Duties:

1. Thoroughly clean all restrooms.
2. Thoroughly clean elevators.
3. Sweep and degum entrances, stairs and gutters.
4. Police concourse and platform as needed.
5. Empty trash, clean receptacles in station.
6. Thoroughly clean station agent's booth and break room.
7. Dustmop and degum concourse and platform.
8. Scrub or wet mop concourse and platform. Mop stairs.
9. Clean escalator handrail, ledges and landings.
10. Clean phones, handrails, ledges and water fountains.
11. Thoroughly clean TM zone, restrooms, offices, lunch room, and locker rooms.
12. Bring dumpster to street.
13. Empty recycling cans.
14. Clean dumpster area.
15. Clean fare gates, AFC machines and other metal.
16. Monitor for and clean any wet spills throughout day.
17. Clean parking garage elevators and sweep stairwells.
18. Clean, sweep and police patios, curbs, bus zones and sidewalks.
19. Empty all trash bins on patios, walkways, bus/taxi zones and sidewalks.
20. Clean janitor's room, all equipment, and organize supplies

Only 28 of 91 stations assignments have a dedicated System Service Worker

# Daily Station Cleaning: B Station Assignments



The shared duties are split with two types of responsibility. The primary station has a more comprehensive cleaning program and the secondary station receives a reduced cleaning program.

## **Limited cleaning activities at the “B” Secondary Stations:**

1. Thoroughly clean all restrooms.
2. Thoroughly clean elevators.
3. Police concourse and platform as needed.
4. Empty trash, clean receptacles in station.
5. Thoroughly clean station agent’s booth and break room.
6. Monitor for and clean any wet spills throughout day.
7. Clean janitor’s room, all equipment, and organize supplies.

# Deep Cycle Cleaning: Special Project Crew (SPC)



A/L Line SPC	R Line SPC	C/K Line SPC	M/W Line SPC
<b>14 Special Project Crews</b>			
Lake Merritt <b>Team 1 Cycle Time 8 -10 Weeks</b>	Ashby <b>Team 4 Cycle Time 16-17 Weeks</b>	Oakland West <b>Team 5 Cycle Time 11-14 Weeks</b>	Embarcadero <b>Team 8 Continuous</b>
Fruitvale Team 1	Berkeley Team 4	12th St. Team 5	Montgomery <b>Team 9 Continuous</b>
Coliseum/OC Team 1	N. Berkeley Team 4	19th Team 5	Powell <b>Team 10 Continuous</b>
San Leandro <b>Team 2 Cycle Time 13 – 15 Weeks</b>	El Cerrito Plaza Team 4	Mac Arthur <b>Team 6 Cycle Time 9 – 11 Weeks</b>	Civic Center <b>Team 11 Continuous</b>
Bay Fair Team 2	El Cerrito del Norte 4	Rockridge Team 5	16th St Team 12
Hayward <b>Team 3 Cycle Time 9-12 Weeks</b>	Richmond Team 4	Orinda Team 6	24th St <b>Team 12 Cycle Time 4- 5 Weeks</b>
S. Hayward Team 3		Lafayette Team 6	Glen Park Team 13
Union City Team 3		Walnut Creek Team 6	Balboa Team 13
Fremont Team 3		Pleasant Hill <b>Team 7 Cycle Time 10-12 weeks</b>	Daly City <b>Team 13 Cycle Time 7-10 Weeks</b>
Castro Valley Team 2		Concord Team 7	Colma <b>Team 14 Cycle Time 10-12 Weeks</b>
W. Dublin Pleasanton 2		North Concord 7	South San Francisco 14
E. Dublin Pleasanton 2		Bay Point Team 7	San Bruno Team 14
OKS/OSA/LMA Team 1			Millbrae Team 14

M/W Line – SF Stations now have dedicated resources for the four Downtown Stations and 16<sup>th</sup> and 24<sup>th</sup> St Stations share one crew. This will have an immediate effect on cleanliness.

SPC Crews on other Lines will take months before they return. The R –Line is an example. One crew for 6 stations.

Each station takes 3-5 weeks depending on size

Each color represents a different 3 person team



# Deep Cycle Cleaning: SPC - Scope of Activities



**Special Project Crews use heavy equipment to do deep cleaning for the entire station. This includes use of mechanized equipment on the platform and cleaning of the yellow strip at the edge of the platform during non-revenue.**

Comprehensive station cleaning duties:

1. Use chemicals to strip and buff floors. Wax and Seal.
2. Use heavy equipment to perform deep cleaning on floors (during the non-revenue hours on platform)
3. Steam clean stairs
4. Scrub, and clean stairs, walls, pillars, handrails, and gutters, and landings
5. High dust, clean, and polish beams
6. Thoroughly clean elevators and escalators inside and outside elevators.
7. Clean trash cans. Detail clean trash cans, benches, maps, signs, phones
8. De- gum, sweep/dust-mop, light scrub, and wet mop all floors
9. Detail clean, strip floor, rinse, and seal and wax agent booth's floor and break-room floor. Wash and polish metal outside of booth. Clean and wash glass in/out of agent booth
10. Steam clean restroom walls, toilets, sinks, urinals. Wash and clean metals.
11. De- gum, steam clean yellow safety strips (non-revenue hours only)
12. Detail clean and polish all metal including walls, emergency gates, TVM Machines, AFC Gates and other metal surfaces.
13. Detail clean and wash glass, ledges and baseboards
14. Vacuum, shampoo and clean carpets in offices. Strip, and rinse, clean wax and seal office floors
15. Strip, clean and rinse train control room floors. Wax and seal floors
16. Police station including: sweeping and mopping any wet or sticky spills and police stairs
17. Clean all equipment and handle any emergencies at stations that may occur on your shift.
18. Lay winter carpets and replace carpets as deemed necessary for special events

# Entryway Cleaning Entrance Crew



**The Entrance Crew is comprised of 3 System Service Workers that work in a team primarily in the Downtown San Francisco and Oakland Stations to ensure the staircase are power washed to maintain a clean look and smell.**

Comprehensive station cleaning duties:

1. Steam clean stairs
2. Seam clean escalator, gutters, rails and landings
3. Squeegee stairs dry
4. Dry-mop stairs
5. Clean eight feet in front of stairs
6. Steam clean walls adjacent to stairs
7. Replace and re-tape rugs

# Graffiti Removal Graffiti Contractor

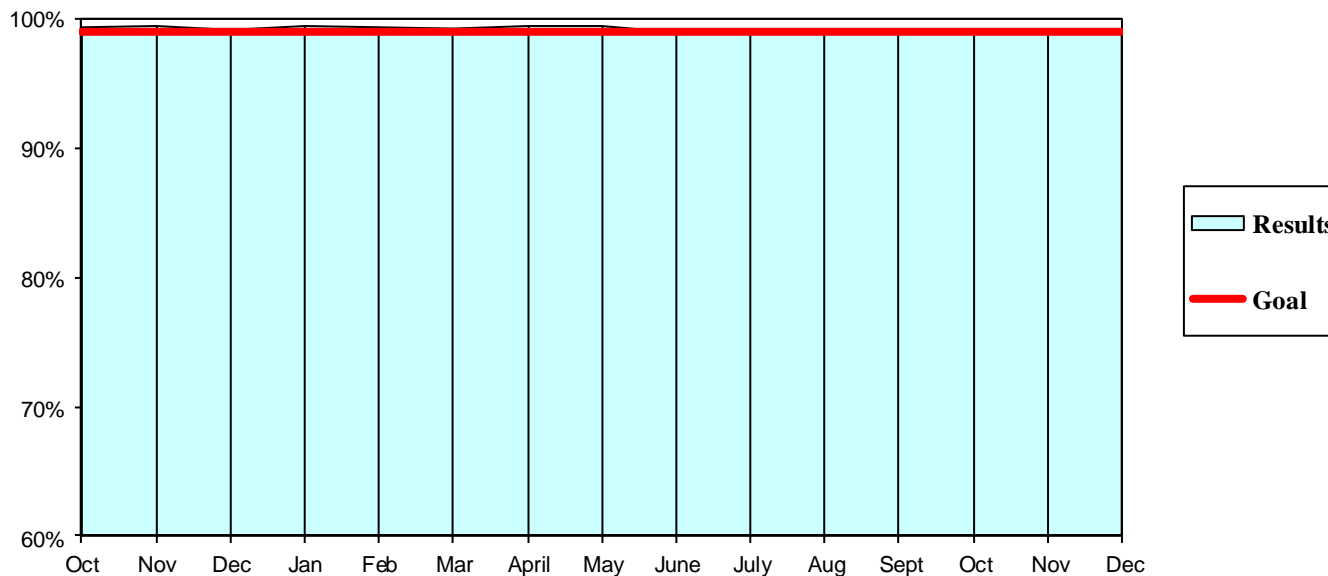


**The Contractor performs graffiti removal services in accordance with the requirements and standards as described in the scope of services of the contract with the District. These services consist of the following:**

1. Daily inspection of each station.
2. Removal of graffiti that include unauthorized markings, drawings, scribbling, writings, signs, posters, or labels from inside BART stations followed by an inspection of the station.
3. Monitor BART's Graffiti Hotline at least four (4) times daily.
4. Clean all graffiti reported from hotline and graffiti found while performing daily inspections.
5. Produce and email reports that include pictures of graffiti prior to and after cleanup and cleaning logs.



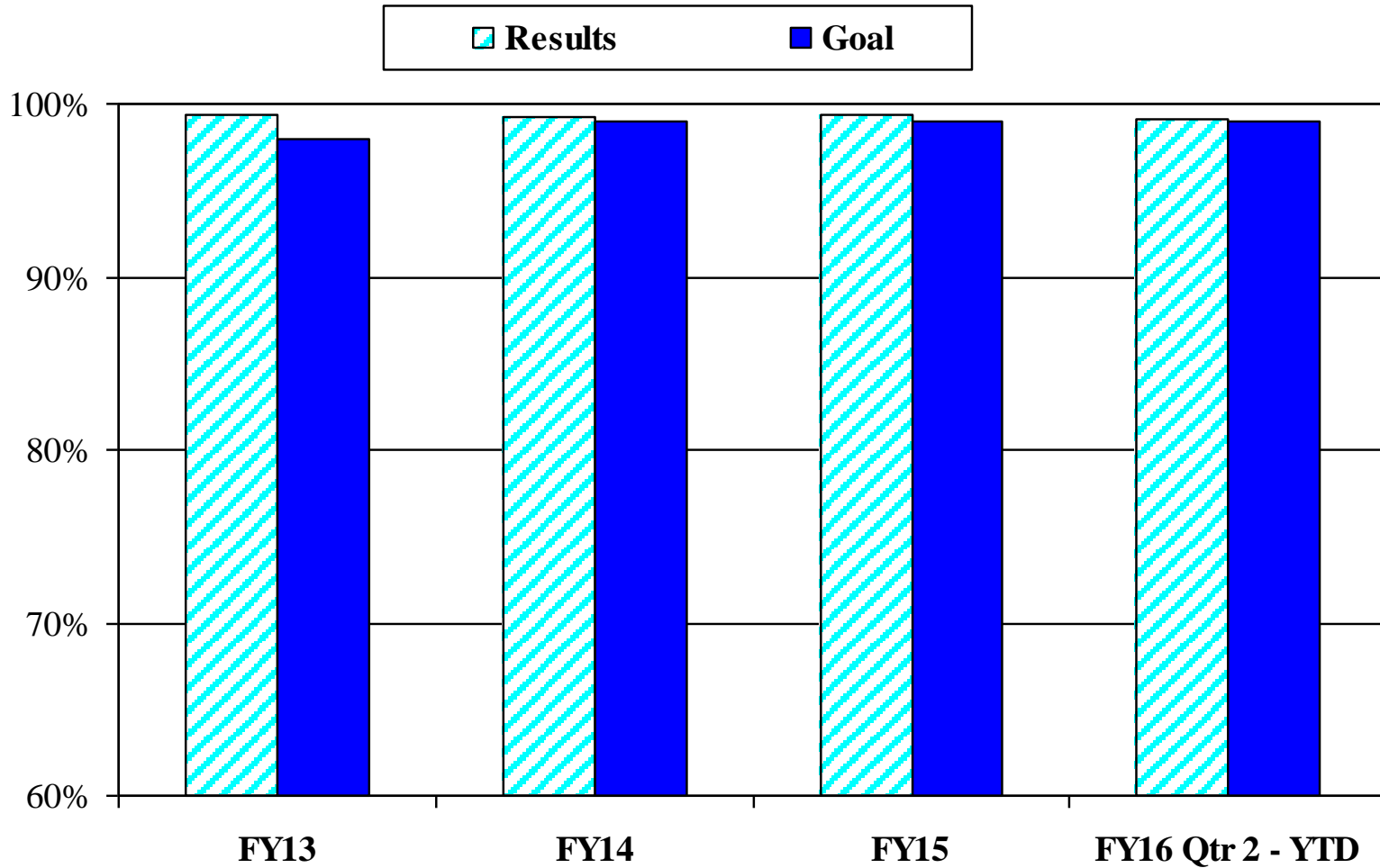
# AFC Gate Availability



✓ 99.14%, 99.00% goal exceeded

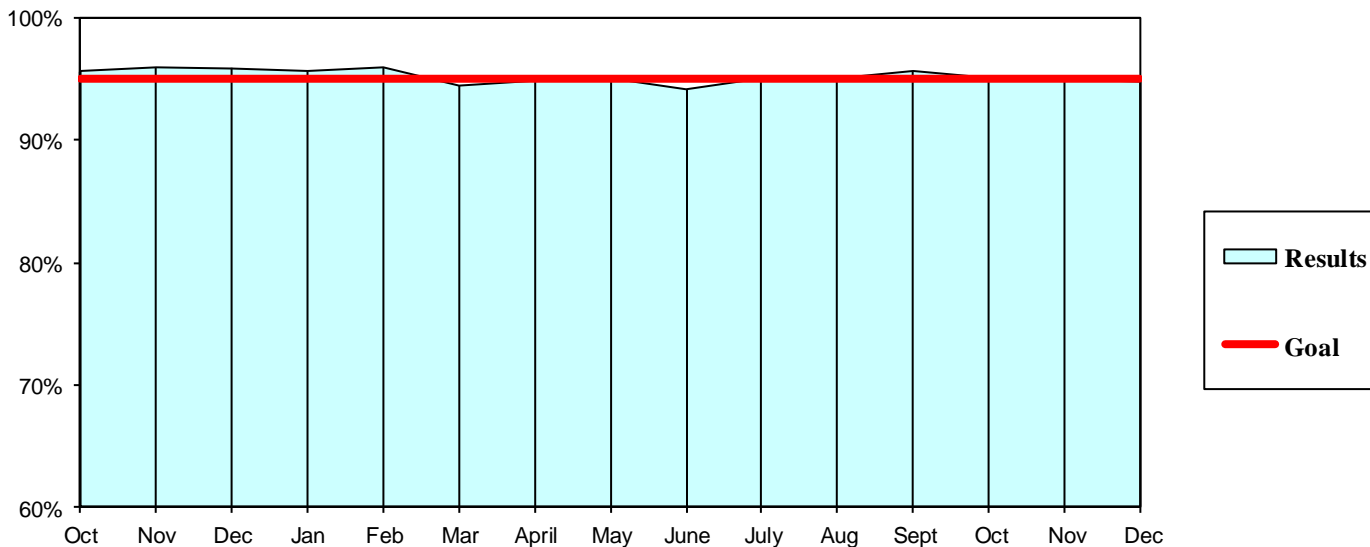


# AFC Gate Availability Historical Performance





# AFC Vendor Availability

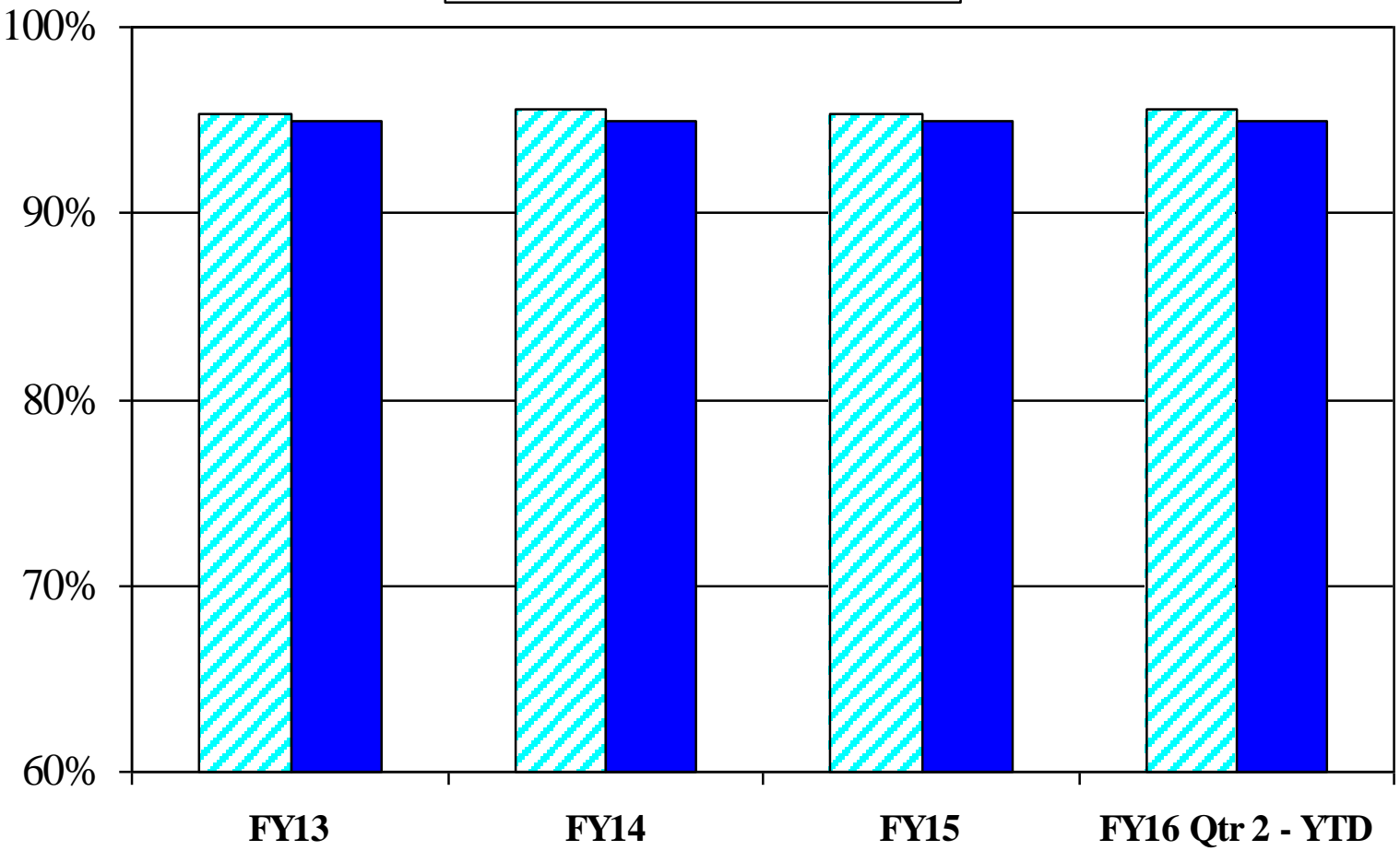


- ✓ Ticket Vendor Availability - 95.9% - exceeded goal
- ✓ Add Fare Availability – 97.9%
- ✓ Add Fare Parking Availability – 97.7%
- ✓ Parking Validation Machines Availability – 99.79%



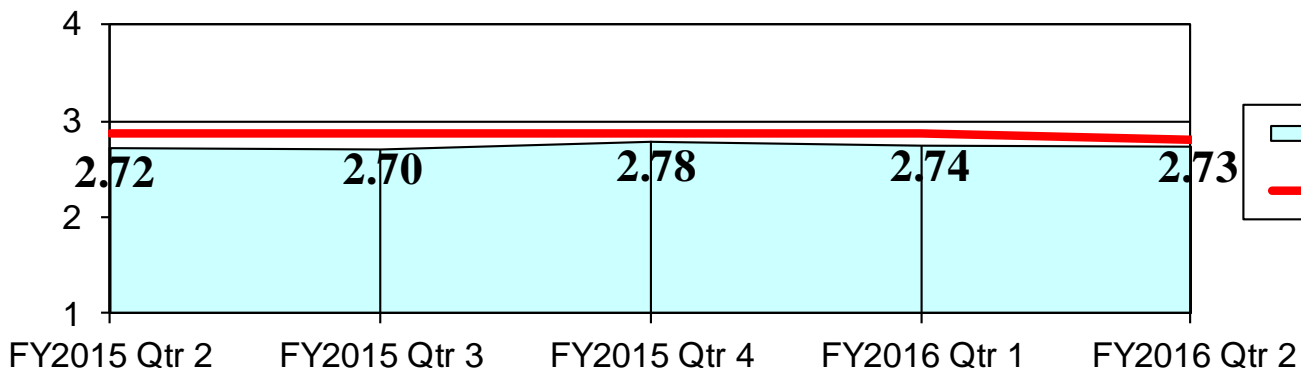
# AFC Vendor Availability

## Historical Performance



# Environment - Outside Stations

Ratings guide:  
 4 = Excellent  
 3 = Good  
 2.80 = Goal  
 2 = Only Fair  
 1 = Poor

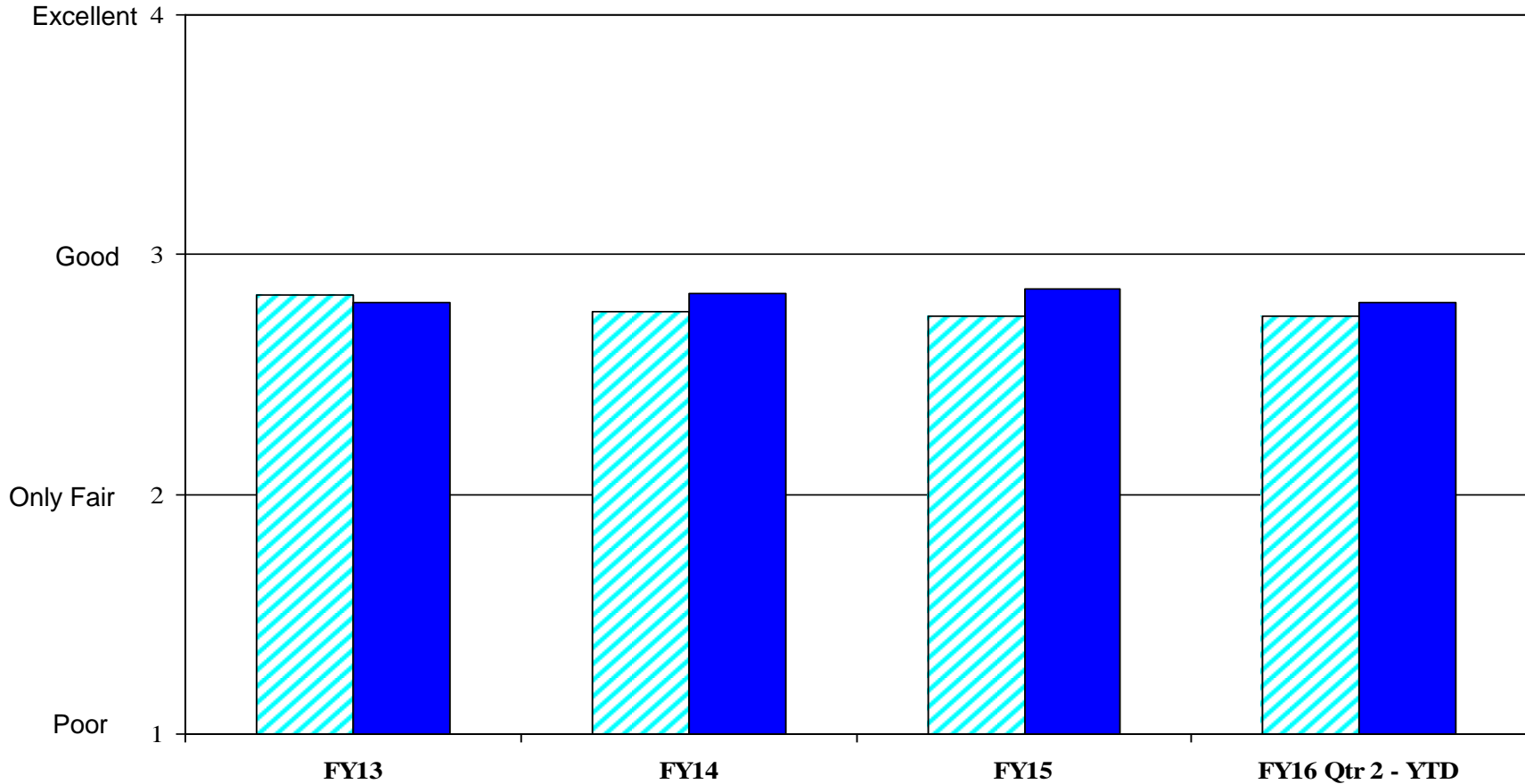


Composite rating of:	
Walkways & Entry Plaza Cleanliness (50%)	2.64
BART Parking Lot Cleanliness (25%)	2.95
Appearance of BART Landscaping (25%)	2.70

- ✓ Overall goal not met, although Landscaping sub-category improved slightly and met its sub-goal
- ✓ Cleanliness ratings of either Excellent or Good:
  - Walkways/Entry Plazas: 61.6%
  - Parking Lots: 77.1%
  - Landscaping Appearance: 63.7%



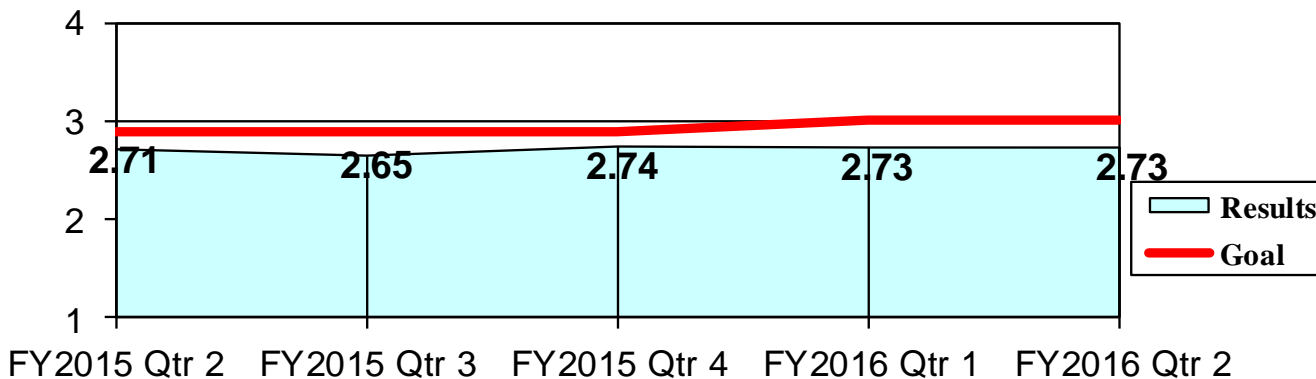
# Environment - Outside Stations Historical Performance



\* Composite rating of: Walkways & Entry Plaza Cleanliness (50%); BART Parking Lot Cleanliness (25%); Appearance of BART Landscaping (25%)

# Environment - Inside Stations

Ratings guide:  
 4 = Excellent  
 3 = Good  
 3.00 = Goal  
 2 = Only Fair  
 1 = Poor

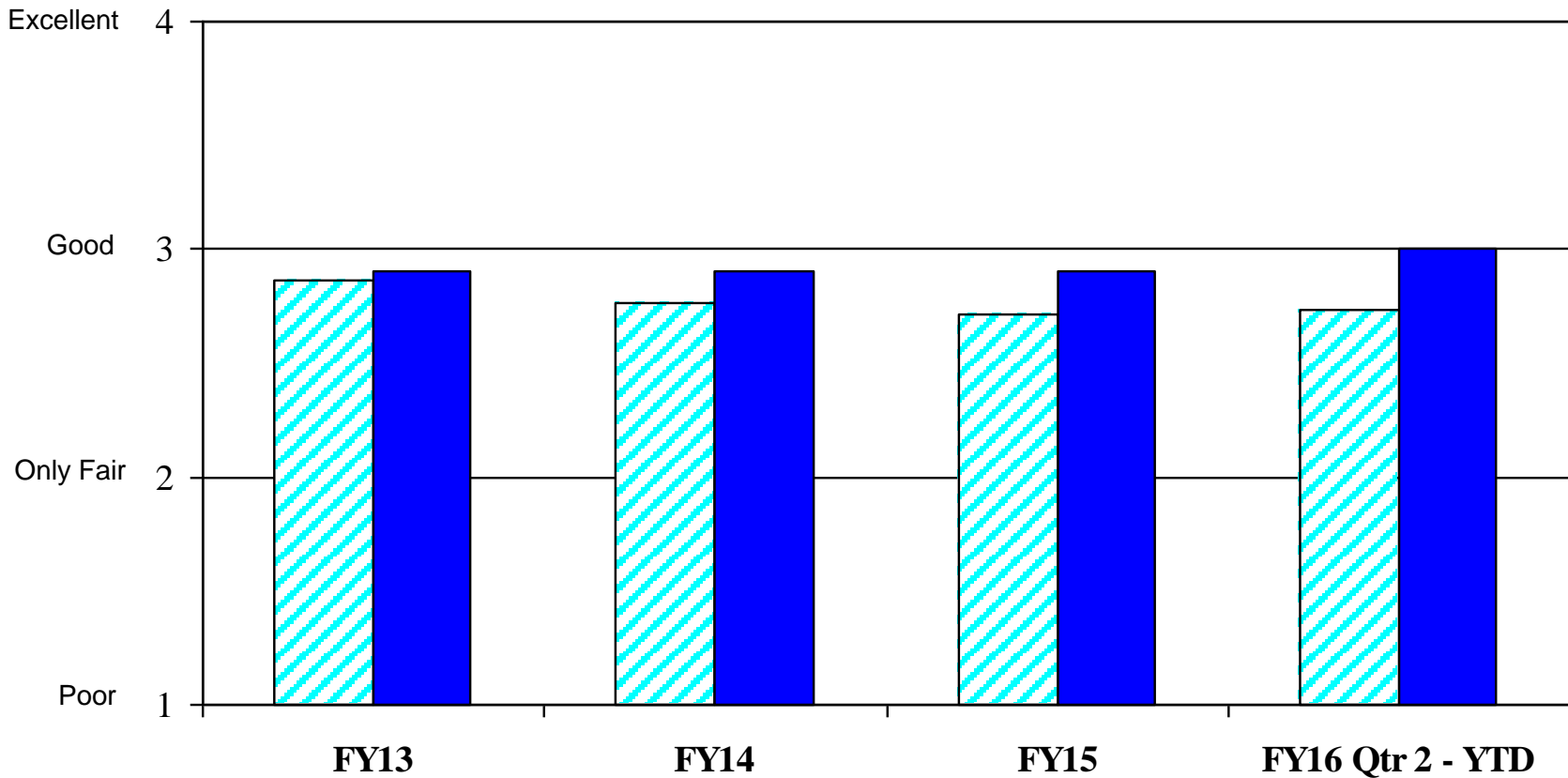


Composite rating for Cleanliness of:	
Station Platform (60%)	2.87
Other Station Areas (20%)	2.68
Restrooms (10%)	2.25
Elevator Cleanliness (10%)	2.47

- ✓ Goal not met
- ✓ Cleanliness ratings of either Excellent or Good:
  - Station Platform: 73.1%
  - Other Station Areas: 62.7%
  - Restrooms: 42.7%
  - Elevators: 53.9%
- ✓ Focus on downtown San Francisco stations showing some results, 3 of 4 M Line indicators improved

# Environment - Inside Stations

## Historical Performance

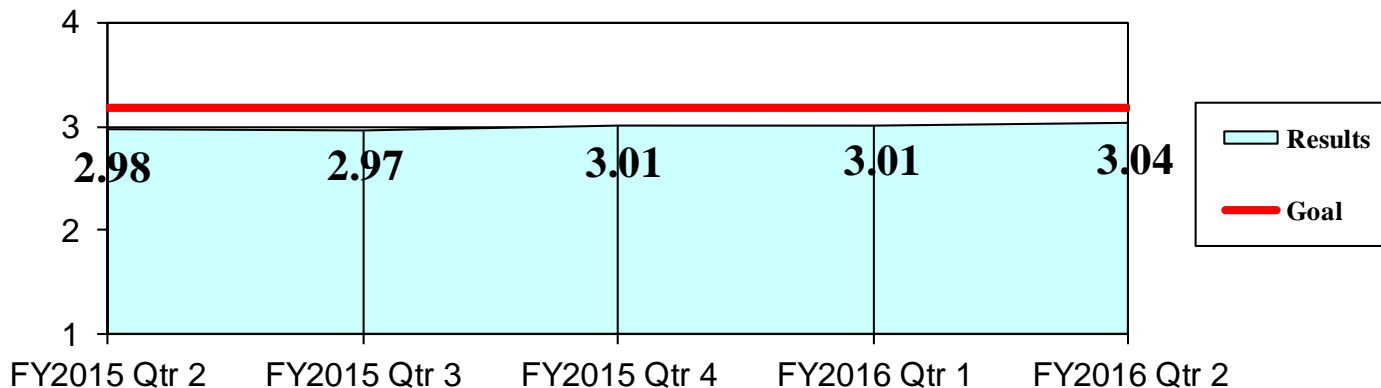


\* Composite rating for Cleanliness of: Station Platforms (60%); Other Station Areas (20%); Restrooms (10%); Elevators (10%)



# Station Vandalism

Ratings guide:  
 4 = Excellent  
 3.19 = Goal  
 3 = Good  
 2 = Only Fair  
 1 = Poor



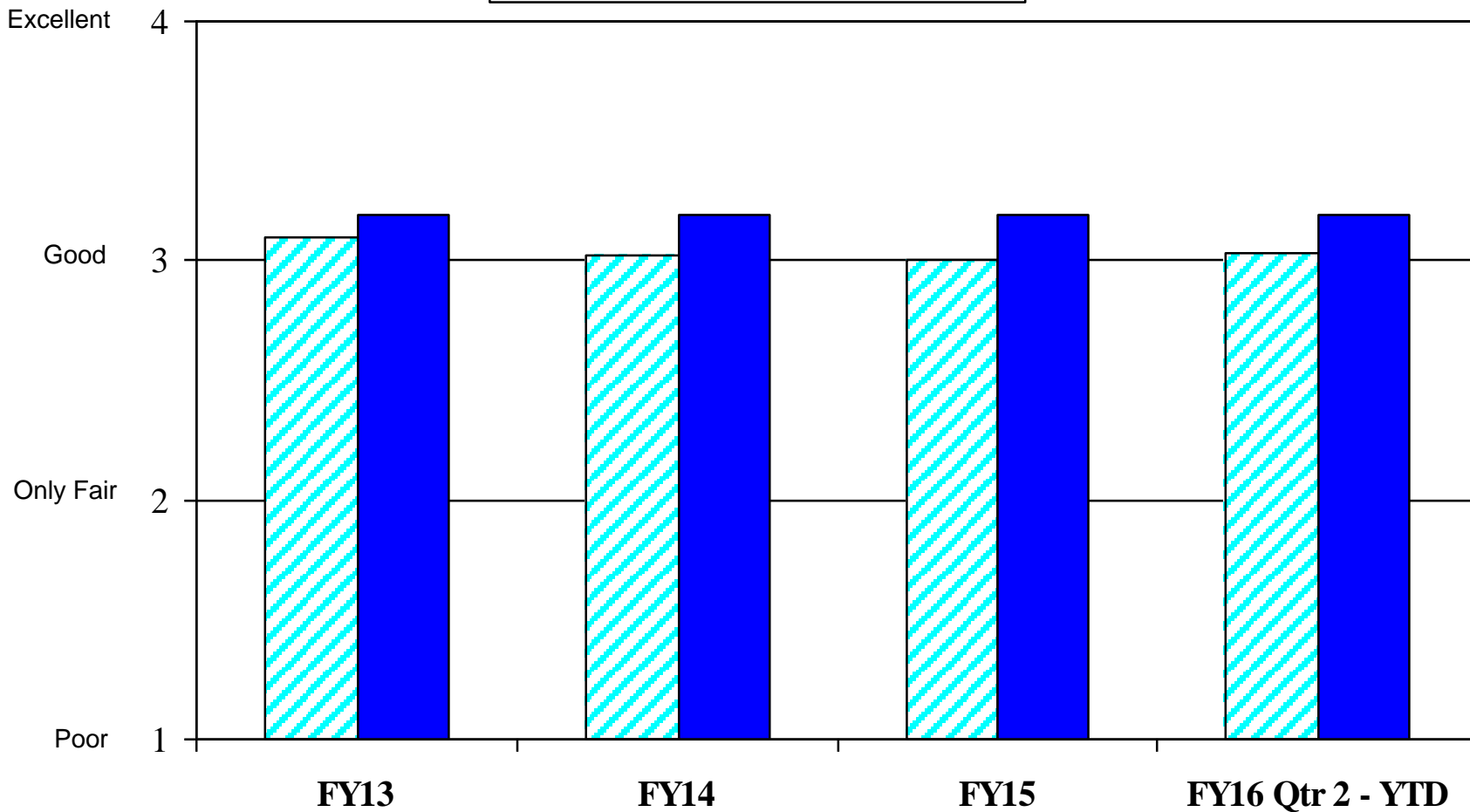
Station Kept Free of Graffiti

- ✓ Goal not met, improved rating
- ✓ 80.3% of those surveyed ranked this category as either Excellent or Good



# Station Vandalism

## Historical Performance



\* Station Kept Free of Graffiti