



Board Report

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Agenda Number: 23.

SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE FEBRUARY 21, 2019

SUBJECT: SECURE BICYCLE PARKING MOTION RESPONSE

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE secure bicycle parking assessment report in response to September 2018 Board Motion item 22.

ISSUE

At the September 2018 board meeting, Directors Bonin, Solis, and Garcia put forth a motion to assess the Secure Bicycle Parking Program (Program) and evaluate opportunities to improve access through changes to its management practices and/or increasing capacity at high-demand locations and report back in February 2019. Metro staff has performed this analysis in the attached Secure Bicycle Parking Program Assessment Report (Assessment).

BACKGROUND

In July 2018, Metro Parking Management and Shared Mobility assumed administration for the operation of the Secure Bicycle Parking Program ("Program"). This Program manages secure bicycle parking lockers and bicycle hubs at multiple of Metro transit stations. As Metro expands its transit network and makes mobility across LA County more feasible without an automobile, an increase in bicycle use to access stations is anticipated. Metro encourages using alternative modes of transportation to access transit stations and needs to provide a safe and secure place to park bicycles. The Assessment outlines the existing conditions and performance of the Program today and recommendations for improvements, both in the interim and for the longer term.

DISCUSSION

Due to the immediate need, Metro staff performed the assessment promptly and focused heavily on four critical components: (1) the business model, (2) increasing utilization, (3) security, and (4) increasing facility options for secure bicycle parking. Staff reviewed rental and utilization rates as well as placement of bicycle lockers and security elements used for deterrence. In the process of performing this assessment and subsequent recommendations, Metro staff consulted with program managers of Bay Area Rapid Transit (BART) bicycle program in San Francisco, who recently piloted

a new bicycle parking program at their stations. Metro also consulted Metro Transit Security and Los Angeles Police Department (LAPD) regarding security of the bicycle locker program and the challenges the program has faced.

Inventory, Utilization and Demand

Currently, there are three different types of bicycle parking facilities that LA Metro offers across the transit system: (1) The traditional bicycle rack, (2) bicycle locker, (3) bicycle hub. The traditional bicycle rack is offered virtually at every station. They tend to be moderately utilized at most stations, depending on their placement. However, being that it is the least secure of LA Metro’s parking options, where demand warrants, one of the other two types of secured bicycle parking is available.

Bicycle lockers are deployed at 53 stations across the transit system, spanning each of Metro’s transit lines. The total number of lockers deployed at each station varies according to demand and the availability of suitable real estate in and around the station to place them due to their large footprint. Many stations do not have real estate available for additional lockers, limiting the ability to increase capacity when warranted.

Although the average rental subscription rates of bicycle lockers are high, nearly 80% system-wide, daily utilization of bicycle lockers is relatively low, averaging less than 20% during peak transit hours. The subscription demand for bicycle lockers is extremely high at some transit corridors where requests are exceeding 100% of total available lockers and have created sizable waiting lists. The table below illustrates average demand and utilization at sample stations with fully subscribed bicycle lockers.

Bicycle Locker Utilization - Sample Stations					
Line	Station	# Lockers	Waitlisted	Demand %	Avg. Utilization
Green	Norwalk	32	37	115.63%	21.88%
Green	Lakewood	12	20	166.67%	68.06%
Red	North Hollywood	52	140	269.23%	13.46%
Red	Universal City	32	30	93.75%	4.17%
Gold	APU/Citrus	24	48	200.00%	24.31%
Gold	Memorial Park	16	16	100.00%	5.21%
Expo	Bundy	16	66	412.50%	3.13%
Expo	La Cienega/Jefferson	24	64	266.67%	23.61%
Blue	Wardlow	16	26	162.50%	23.96%

Alternative Rental Models

The current bicycle locker program offers a bi-annual payment model with auto renewals every six months. On the surface, the high rental rates at stations imply the program is successful and

operating efficiently, however, the security issues that have been identified during the transition of the program have made clear that the model itself is exacerbating some of the security concerns.

On a daily basis, many bicycle lockers are used by customers as long-term storage rather than as a first/last mile connection. The use of the bicycle lockers for long-term storage has resulted in an increase in theft issues across the system. Thieves have targeted lockers with bicycles that are stored overnight and on the weekends.

In consultation with the bicycle program manager from BART, a daily use model has increased utilization of their program substantially. BART's pricing model is .05 cents per hour and accelerates after 10 hours to encourage removal of the bicycle. Staff recommends a similar pricing model to yield a similar outcome.

Adjusting the business model from prepaid monthly rentals to daily rentals would greatly increase utilization and reduce security issues. The recommended daily rental business model would make bicycle lockers available on a first-come-first-served basis, promote more turnover, discourage overnight and long-term storage, and reduce the number of bicycles brought on Metro buses and trains.

High Demand Locations

Where Metro has retail space and funding, bicycle hubs will continue to be the option deployed for high demand locations. Currently, there are three bicycle hubs in operation: LA Union Station, El Monte Station on the Silver Line, and Hollywood and Vine Station along the Red Line. There are three additional bicycle hubs in the pipeline for operations: Culver City (Ivy Station) on the Expo Line, Willowbrook/Rosa Parks Station which serves the Green and Blue Lines, and the Airport Metro Connector (AMC) which will open upon completion of the Crenshaw LAX Line.

The Culver City bicycle hub will open in the next 45 days and is expected to be heavily utilized. The demand for secure bicycle parking is high along the Expo Line with over 500 people on the waitlist for the bicycle locker program. However, there is not enough real estate to deploy additional lockers to meet that demand.

Creation of a service option that is between bicycle hubs and bicycle lockers that takes up less of a footprint at stations than the current program is recommended. For example, a hybrid, scaled down, automated version of bicycle hubs could be designed with an enclosed area with secure bicycle parking that allows for increased capacity and improved line of sight. This area could be fenced or caged in with TAP card access control, allowing only transit users accessing the area to securely park their bicycles. The new facility type would increase capacity and potentially replace the existing bicycle lockers by better utilizing the real estate that is available.

Interim Changes

There are immediate interim improvements that can enhance the efficiency and security of the Program. The first priority to improve the security is to evaluate the placement of lockers, station by station, and relocate or remove as necessary. Staff will work with Transit Security to ensure new

placements are within camera views and are ideal for theft deterrence. Metro staff will investigate alternative mechanisms and locations to deter theft and continue to research potential solutions.

Community engagement and performing outreach to the bicycle community is another priority for Metro staff, as understanding the needs of the users will enable Metro to implement the most effective strategy and contribute to long term solutions in addressing many of the security concerns. Staff will perform outreach and incorporate feedback into further recommendations for improving the Program.

Equity Platform

Program security refinements and increasing availability of secure bicycle parking will encourage more patrons to utilize the Program. These program improvements are in alignment with the first pillar of the platform: Define and Measure. Patrons will have equal opportunity to access secure bicycle parking measurable by increased Program utilization through higher turnover.

FINANCIAL IMPACT

There is no immediate impact to Metro's expense budget. Staff will work with Chief Planning Officer through the annual budget process to accomplish Program changes and recommendations.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Improvements to the Program align with goal 2 of the Strategic Plan. These enhancements will "deliver outstanding trip experiences for all users of the transportation system" by promoting resources for safe and secure parking and shrink the number of bicycles transported on Metro.

NEXT STEPS

Metro staff will work with internal departments to design and conceptualize a new automated facility type that expands capacity of secure bicycle parking using the same real estate as the current bicycle locker program. At stations where there is appropriate space and demand, Metro staff will also explore the potential for piloting a daily bicycle locker rental program. Staff will consult with BART regarding their recent pilot program, as well as review input from the bicycle community during Metro's outreach.

Staff will report back in 180 days on the progress of the Secure Bicycle Parking Program with the results of the outreach with the bicycle community and more specific recommendations on changes to the pricing model.

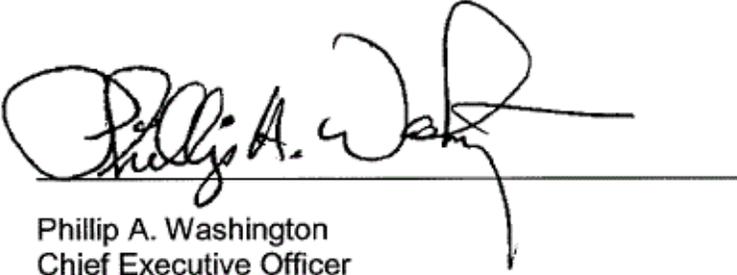
ATTACHMENTS

Attachment A - Secure Bicycle Parking Program Assessment Report

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Secure Bicycle Parking

Program Assessment Report

Prepared By:
Parking Management





Background

In July 2018, Parking Management and Shared Mobility assumed responsibility for the operation of the Secure Bicycle Parking Program (“Program”). This Program manages secure bicycle parking lockers and bicycle hubs at many of Los Angeles Metro’s transit stations. As Metro expands its transit network and makes mobility across LA County more feasible without an automobile, an increase in bicycle use to access stations is anticipated. LA Metro encourages using alternative modes of transportation to access transit stations and it is necessary to provide a safe and secure place to park bicycles. This assessment outlines the conditions of the Program as they exist today and recommendations for improvements both in the interim and for the longer term. Due to the urgency of the situation, rather than solicit and procure a consultant, staff performed this assessment internally to evaluate the state of the program.

Existing Conditions

Facilities

Today, there are three different types of bicycle parking facilities that LA Metro offers across the transit system.

1. Traditional bicycle rack
 - The standard traditional bicycle rack is free of charge for transit patrons. They are available on a first come first served basis and require the user to provide and utilize their own locking mechanisms.
2. Bicycle Locker
 - These are metal container like boxes that users can store their bicycles for a fee. These are rented out in six month increments for a cost of \$24, or \$48 for the year. They have keyed access control and require a \$50 deposit from the user to ensure key return at the end of the agreement.
3. Bicycle Hub
 - These are secure indoor facilities where bicycle parking is offered for a fee. The bicycle hub facilities offer controlled access in which, staff is available during



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certain hours to assist with repairs and purchasing of bicycle accessories.

Pricing options range from \$5 for a seven day pass, \$12 a month, or \$60 a year.

These are typically located at stations with extremely high demand.

The traditional bicycle rack is offered virtually at every station. However, being that it is the least secure of LA Metro’s parking options, where demand warrants, one of the other two types of secured bicycle parking is offered.





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Utilization and Demand

Demand for secure bicycle parking is on the rise. As mobility evolves in LA County, more and more users are turning to bicycles as a mode of accessing Metro transit stations. For stations with current or projected high demand, bicycle hubs are Metro’s present solution. Since not every station has the demand that warrants the operation of a large bicycle parking facility like a bicycle hub, bicycle lockers serve as the key secure alternative to the traditional bicycle rack.

Current demand for bicycle lockers is high. Currently, lockers are deployed at 53 stations across the transit system, spanning each of Metro’s transit lines. Total number of lockers deployed at each station varies according to demand and the availability of suitable real estate in and around the station to place them due to their large footprint. Therefore the demand generates waitlists at these locations, exceeding 100% of the total available lockers at many stations. Many stations do not have real estate available for additional lockers, limiting the ability to increase capacity when warranted.

Although the subscription rate of bicycle lockers is high, averaging nearly 80% across all transit lines, actual utilization of lockers on a daily basis is relatively low. On average, less than 20% of lockers are utilized for bicycle storage during peak transit hours, resulting in many rented lockers sitting vacant due to their infrequent use.

Bicycle Locker Utilization					
Line	Station	# Lockers	Waitlisted	Demand %	Avg. Utilization
Green	Norwalk	32	37	115.63%	21.88%
Green	Lakewood	12	20	166.67%	68.06%
Red	North Hollywood	52	140	269.23%	13.46%
Red	Universal City	32	30	93.75%	4.17%
Gold	APU/Citrus	24	48	200.00%	24.31%
Gold	Memorial Park	16	16	100.00%	5.21%
Expo	Bundy	16	66	412.50%	3.13%
Expo	La Cienega/Jefferson	24	64	266.67%	23.61%
Blue	Wardlow	16	26	162.50%	23.96%



Bicycle Locker Demand					
Transit Line	# Lockers	# Rented	Rented %	Waitlisted	Demand +/-
Blue	38	34	89.47%	65	171.05%
Expo	136	129	94.85%	569	418.38%
Gold	220	165	75.00%	279	126.82%
Green	110	75	68.18%	181	164.55%
Orange	159	96	60.38%	31	19.50%
Purple	16	14	87.50%	55	343.75%
Red	134	95	70.90%	163	121.64%
Silver	16	9	56.25%	8	50.00%

*waitlists accepted even at stations without lockers

Safety and Security

For many, secure bicycle parking gives a sense of convenience and assurance that their bicycle is secure, permitting them to ride Metro without having to take their bicycle on their commute. However, there are many challenges to ensuring the safety and security of bicycles within the secure bicycle program.

1. Theft and Break-Ins

One of the initial challenges faced by staff within weeks of assuming administration of bicycle locker operations, were a string of break-ins that occurred across the system, mainly during the overnight hour. At various locations and on multiple occasions, thieves were able to access and remove bicycles from the lockers. Customers affected appeared to have been utilizing the lockers as a storage for their bicycles rather than for daily use as first/last mile option. Staff explored the possibility of retrofitting the lockers to further secure them, however the retrofit was ultimately unsuccessful as they too were breached. Bicycle hubs have also experienced similar security challenges as thieves were able to disengage door locking mechanisms at facilities, gaining access to bicycles secured on the racks. Reinforced and upgraded secure access controls which corrected the issue.



2. Line of Sight and Secure Bicycle Parking Placement

Being able to maintain a line of sight is an important factor in bicycle parking security. At several of the stations affected by break-ins, the line of sight was a key issue identified as contributing to theft occurrences. In order to mitigate the incidence of theft, bicycle lockers need to be placed in highly trafficked areas, close to the station entrance and in view of dedicated security cameras. However, due to the relatively large footprint of the infrastructure, bicycle lockers are often placed where space is available, outside the ideal line of sight or in ‘dead space,’ to maintain a clear path of travel. How they are arranged also matters. Doors of lockers should be visible from all angles and never arranged in ways that create blind spots that can be hidden behind. Ideally, where there is opportunity to place lockers in high pedestrian traffic areas such as heavy rail mezzanines, this should be considered.

3. Security Cameras and CCTV

While bicycle lockers may be within visual range of security cameras, they may not always be the primary purpose for positioning them. This means if secure bicycle parking happens to fall within the visual frame of station security cameras; it may not be the principal focus of those cameras. Thus, if thieves do not see localized, visible cameras pointing at a locker, the ability to deter the break in is reduced. Bicycle hubs are well covered with security cameras and are a good example of using cameras to deter. Inside hubs, not only are cameras visible, but so are monitors displaying the video of those cameras.

4. Secure Access Control

Secured bicycle parking is dependent on controlling access by providing the customer with an electronic key card or a standard key. This is what makes the Program more secure from the standard bicycle rack, in which the customer provides their own locking mechanism.



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Currently, to acquire and access a bicycle locker, the customer must register online before they are provided a physical key to open their assigned locker. A \$50 deposit is required for the key and refunded upon its return. These keys are stored in a large bag and are verified by program staff as to whether they work on which locker. The process of cancelling the locker involves the customer mailing the key back and staff traveling on-site to check the locker to verify the key still works. Once verified, the deposit is refunded to the customer. The management of the key system is cumbersome and poorly tracked at best because each step is extremely manual and prone to inaccuracies.

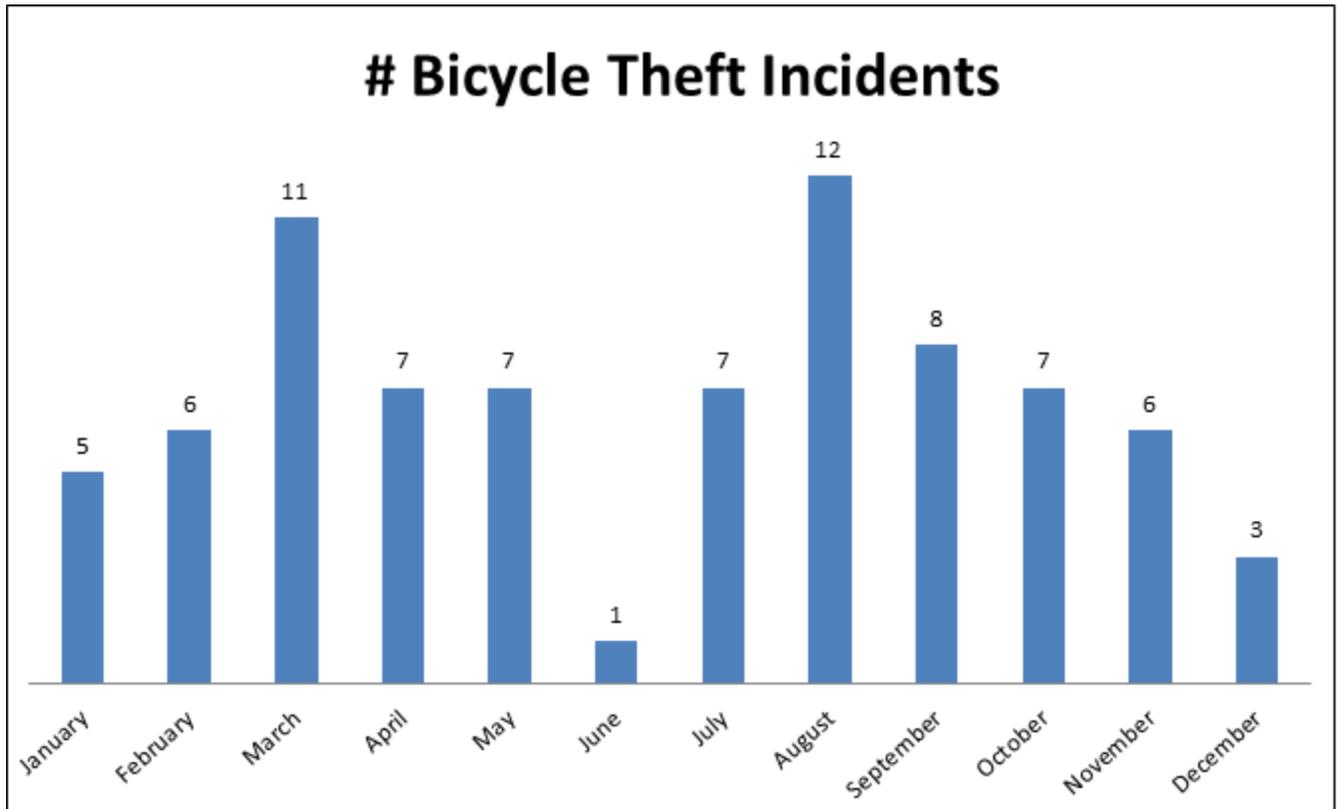
5. Patrols and Stings

Providing safe and secure bicycle parking is important for Metro, but when it comes to life versus property, life is always more important. Program staff works with Transit Security and law enforcement that patrol and provide enforcement for stations. Sting operations where bicycles are left unattended are designed to attract thieves and have been successful, but may not always lead to capturing the perpetrators, nor do they fully deter the behaviors from happening again. The ability to patrol bicycle lockers proactively also depends on other types of criminal activity occurring in the system as crimes against persons take priority over theft of property.

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Totals
Blue	-	-	-	1	-	-	1	1	-	1	-	-	4
Expo	1	1	5	2	1	1	4	9	6	4	4	-	38
Gold	1	-	2	-	-	-	1	1	2	1	1	-	9
Green	-	-	-	2	2	-	-	-	-	-	-	-	4
Orange	-	4	1	1	3	-	1	-	-	-	-	2	12
Red	2	1	3	1	1	-	-	-	-	-	1	1	10
Silver	1	-	-	-	-	-	-	1	-	1	-	-	3

*The table depicts the number of reported bicycle theft incidents per transit line by month

**December incidents based on incidents reported to customer service as KPI from security not yet available



Business Model

The current business model for secure bicycle parking is a prepaid or recurring model whereas customers of bicycle hubs have several choices including weekly, monthly, and annual options. The current bicycle locker program offers a bi-annual payment model with auto renewals every six months. A major focus of this report is to assess whether or not the models in place for operating secure bicycle parking are appropriate and facilitate utilization. On the surface, seeing high rental rates at stations gives the impression that the program is successful and operating efficiently. However, the security issues that have been identified during the transition of the program, has made clear that the model itself is exacerbating some of the security concerns, especially within the bicycle locker program. Although bicycle lockers rentals are nearly at capacity, the actual utilization of those lockers is below 20%. On a daily basis, many bicycle lockers are used by customers as long term storage rather than as a first/last mile connection. That fact alone has led to an increase in theft issues across the



system. Thieves have targeted bicycles that are being left overnight and on the weekends, which typically are those of users who store their bicycles.

The six month rental model is inexpensive and automatically renews at the end of the term. Many renters may not remember they have a rental agreement, or they may not mind the \$24 charge every six months just to secure the locker in case they need it. Waitlists are long for bicycle lockers at many stations, so those lucky enough to obtain a locker hold on to them as long as possible. The current model offers no incentive for utilization or to promote turnover.

Recommendations

Staff recommends overhauling the bicycle locker program in order to increase utilization and to make bicycle parking more secure for the everyday user. In order to increase utilization, the Program must promote and incentivize turnover and incorporate new facility types where demand warrants. Four critical components were driving forces in developing recommendations for improving the Secure Bicycle Parking program: (1) the business model, (2) increasing utilization, (3) security, and (4) increasing facility options for secure bicycle parking.

In the process of performing this assessment and subsequent recommendations, Metro consulted with program managers of the bicycle program for Bay Area Rapid Transit (BART) in San Francisco who recently piloted a new bicycle parking program at their stations. Metro also consulted Metro Transit Security and Los Angeles Police Department (LAPD) regarding security of the bicycle locker program and the challenges the program has faced. Both Transit Security and LAPD are supportive of revamping the bicycle locker program to improve security elements.

Removal/Relocation of Current Lockers

Staff recommends removing or relocating lockers from stations that have lowest rental rates and highest security issues including poor line of sight. Metro has asked customers to vacate bicycle lockers at several stations due to on-going security concerns until alternative solutions



can be put into place such as placing lockers in closer proximity to the station to reduce bicycle theft and encourage higher utilization.

Daily Use Business Model

Changing the prepaid monthly model to one that is for daily use and eliminating monthly bicycle locker rentals all together would greatly increase utilization and reduce security issues. This new model, on a first come first served basis, would promote turnover and encourage users to utilize the secure bicycle parking facilities on a daily basis, reducing the number of bicycles brought on Metro. In consultation with program managers from BART, the daily use model has increased utilization of their program substantially. BART's pricing model is .05 cents per hour and accelerates after 10 hours to encourage removal of the bicycle. Staff recommends a similar pricing model to yield a similar outcome. This pricing strategy is anticipated to reduce bicycle thefts by eliminating long term storage of bicycles all together.

New Technology & Facility Type

Staff recommends the creation of a service option that is between Bicycle Hubs and Bicycle Lockers that take up less of a footprint at stations than the current program. For example, a hybrid, scaled down version of Bicycle Hubs would be designed with an enclosed area with secure bicycle parking that allows for increased capacity and improved line of sight. This area could be fenced in with TAP card access control, allowing only transit users into the area to securely park their bicycle. Inside the fenced in facility, staff recommends placing newly procured secure bicycle racks which are of similar footprint to standardized racks, but utilize technology to secure the bicycle rather than a user's own locking mechanism. This can be done via smartphone or kiosk. Staff will continue evaluating multiple options for secure bicycle parking and deploying the ideal solution for each station. The current bicycle locker program operates under a 'one size fits all' type of program, which is ineffective. Space availability, station security, and bicycle parking demand all factor in determining the right solution. Adding a new facility type would increase capacity at some locations that do not have the space to add additional lockers by better utilizing the space that is available.

Daily Use Bicycle Lockers



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Where feasible, lockers that can be rented daily on a first come first served basis would be deployed so long as the placement meets or exceeds line of sight recommendations. New daily lockers would be outfitted with digital locking technology which can be accessed at a kiosk or by smartphone. This would eliminate program inefficiencies such as key exchanges and reduce the amount of maintenance required when a renter vacates their locker and Metro has to re-core it. Daily rates would be established to encourage users to remove their bicycles each day, promoting turnover and increasing availability of secure bicycle parking for all who need it. A key area where the current program falls short is the siting of lockers. Daily lockers should only be placed at stations that have positive line of sight from highly trafficked areas to ensure lockers are not tampered with. Staff does not recommend that there be a one to one replacement of the current lockers in the system as space availability is essential in determining the correct solution for the station. Based on conversations with BART, retrofitting current lockers is not recommended, especially if the current locker type has been compromised. Metro retrofitted added security elements to lockers that were compromised, but they too were breached. Other options, such as secure bicycle racks, should be considered as an alternative for secure bicycle parking when space is limited. Bicycle Hubs will continue to be the option deployed for high demand locations where Metro has retail space and funding.

Access Controls and Security Cameras

Staff recommends that secure bicycle parking be located at stations that have fixed cameras for monitoring bicycle parking assets. These cameras should be visible and in close proximity to the secure bicycle facility and act as a deterrent to theft. Relocation of lockers in coordination with security to provide better coverage is recommended. Implementing access controls wherever possible will add an additional layer for secure bicycle parking and to identify those using the facility which will aid in investigating bicycle thefts.

Interim Improvements and Next Steps

Staff will work on incorporating and implementing a daily use option as part of its billing model to increase utilization at bicycle hubs and within the locker program. Metro will explore the potential for a daily locker rental pilot program at stations with higher demand



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and secure space to place them. Staff will begin scope of work and consult with BART regarding their recent pilot program.

The bicycle locker program will be overhauled and evaluated station by station. Staff will evaluate station siting at all locations and remove lockers from areas that have had security issues, but replace with an alternative secure parking solution. Staff will also perform outreach and engage the bicycle community for input on improving the secure bicycle parking program.

An unsolicited proposal for a technologically advanced secure bicycle rack is currently underway with procurement. These bicycle racks use advanced technology by way of a digital locking mechanism that secures both the bicycle tires and bicycle frame. The footprint of the digital rack is smaller than bicycle lockers and takes up about the same space as a traditional bicycle rack. Metro will implement this new rack at 5 stations beginning in July 2019. Upon success of this rack, Metro will expand to 10 stations. These racks should be used as an alternative to bicycle lockers where space is limited or security warrants.